ANNUAL REPORT **2013**

INTEGRATION, INNOVATION, IMPACT

ICIMOD 30

THREE DECADES

FOR MOUNTAINS AND PEOPLE

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International Centre for Integrated Mountain Development

Kathmandu, Nepal

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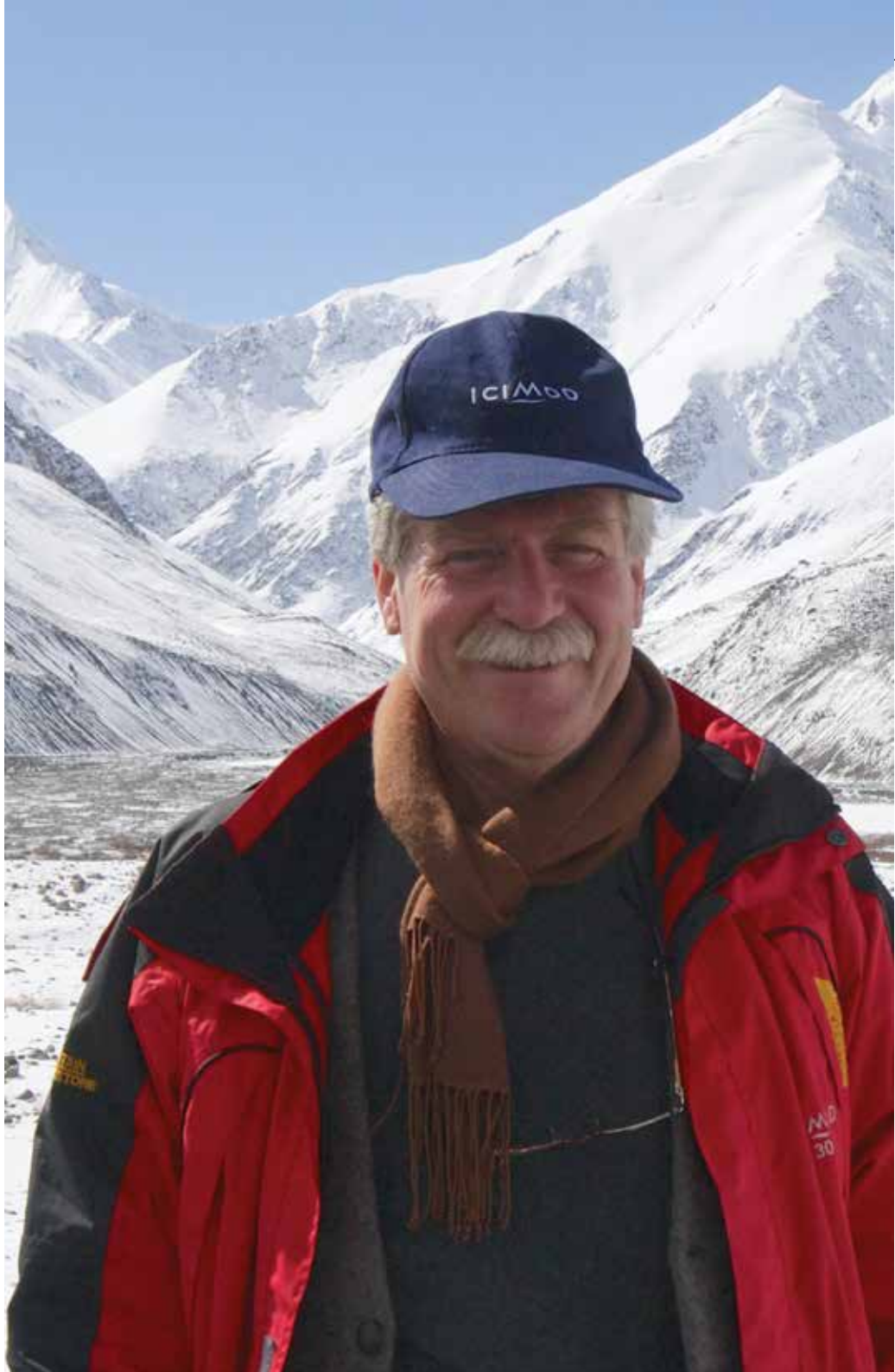
Message from the Director General

In 2013, ICIMOD celebrated its 30th Anniversary. ICIMOD has made remarkable achievements over the last three decades – in improving science and understanding on the Hindu Kush Himalayas, promoting regional cooperation to address common issues, and creating positive impacts on the lives of mountain people. However, the challenges we face today are greater and more urgent than at any moment in ICIMOD's history. Last year, the Centre introduced a new strategy and five-year plan to ensure we are able to respond to these emerging challenges effectively. We continue to work with partners in the region to improve our ability to generate knowledge backed by solid science. This, we hope, will help policy makers, planners, development workers, and local communities to make informed decisions.

> Our progress in the past year was made possible thanks to partnerships we have developed over the last 30 years.

In the past year, ICIMOD made tremendous progress – something that was made possible thanks to the partnerships we have developed over the last 30 years. We appreciate the efforts our partners are making, both in the region and around the globe, to support our mission to improve the lives of women, men, and children in a healthy mountain environment, and look forward to strengthening our collaboration in the coming years.

I hope that you will enjoy this report and the stories it tells about some of ICIMOD's proudest moments of the past year, as well as some of the challenges that lie ahead. I would like to thank everyone who has contributed to ICIMOD's invaluable work, and all of you for your continuing support.



Executive Summary

ICIMOD continues to grow, learn, and work in response to the needs of the people of the Hindu Kush Himalayas.

Over the last three decades, ICIMOD has continued to grow, learn, and work in response to the needs of the people of the Hindu Kush Himalayas. This report presents the progress the Centre made in the past year. It begins with institutional highlights from 2013, followed by features showcasing progress and impact from each of the regional programmes and each of the thematic areas.

Our efforts to improve community-based adaptation proved particularly fruitful in 2013. The landmark initiative – the Himalayan Climate Change Adaptation Programme – moved strongly into its second year, with activities on a range of topics, including work with communities to manage flood risk (p 11). The year, a new initiative on Rural Livelihoods and Climate Change Adaptation in the Himalayas was launched. As part of this initiative, a number of pilots are being designed to test new approaches to climate change adaptation among local communities in Bangladesh, Bhutan, Nepal, and Myanmar (p 10).

The Transboundary Landscapes regional programme continued to foster cooperation between the countries in the region. It also enhanced our capacity to generate the scientific evidence needed to make effective and sustainable plans for the conservation, management, and development of important transboundary landscapes. In 2013, the Kailash Sacred Landscape Conservation and Development Initiative entered its first year of implementation on the ground. Even in a short time, the initiative has made notable progress and learned many lessons, including the need to forge partnerships with diverse stakeholders – from local governments to the private sector (p 15). Initiatives in the Kangchenjunga, Karakoram-Pamir, Brahmaputra-Salween, and Wakhan landscapes are advancing toward the implementation phase. The lessons learned in the Kailash Sacred Landscape can guide the efforts for conservation and sustainable development in these landscapes. The Centre's REDD+ pilot project in Nepal has now become a global learning site. Based on the success of the project and other ongoing REDD+ activities, ICIMOD has developed a regional programme on REDD+ that will create a platform for learning and sharing among six countries in the region (p 16).

New initiatives and activities have been introduced in the River Basins regional programme. Through this, ICIMOD is helping people understand the impact of changes in the water resources and to support them in preparing and adapting to such changes. A flood information system has been established at the regional level, and ICIMOD is working both to enhance the regional capacity to monitor flood risks as well as to ensure that these messages reach communities at risk in a timely manner (p 20). The initiative on the Koshi River basin is building a new perspective on collective management of resources within a common river basin (p 18). Learning from the Koshi River basin can be applied in the Upper Indus basin, where the Upper Indus Basin Working Group formed by ICIMOD is coordinating various activities. In 2013, ICIMOD laid the groundwork

for the Himalayan Adaptation, Water, and Resilience (HI-AWARE) initiative, a consortium that will conduct large-scale research on the impacts of climate change on the poor communities in the Indus, Ganges, and Brahmaputra river basins.

ICIMOD remained committed to improving knowledge of the region's cryosphere and atmosphere. Working with partners in the region, the Centre helped fill gaps in critical scientific data and to improve the regional capacity to monitor the cryosphere and atmosphere. In 2013, the first class of students graduated with a Master's in Glaciology from Kathmandu University, a programme established with support from ICIMOD (p 22). In its first year, the Atmosphere Initiative has worked hard to ensure that policy makers, scientists, and practitioners from various levels are engaged in dialogue on the region's air quality (p 23).

The Mountain Environment Regional Information System (MENRIS) continues to be a mainstay of the organization. It has helped cement the Centre's role as a hub for collecting and sharing knowledge from the region for a global audience and remains focused on building the region's capacity to use geospatial data (p 28). It is also working to make data accessible to diverse audiences, including through data visualization, so that it can be taken up for further research and use in decision making (p 27).

The Himalayan University Consortium, an emerging regional programme at ICIMOD, is gaining momentum, with a new strategy drafted in 2013 and growing interest among universities in the region to jointly strengthen mountain science in the HKH region. In 2013, four students from Pakistan received China National scholarships to pursue PhDs at Lanzhou University through the Consortium. This practice will continue in the coming years.

Within ICIMOD's thematic areas – Water and Air, Livelihoods, Ecosystem Services, and Geospatial Solutions – ICIMOD researchers have made progress in generating solid science (pp 29-43). An increasing number of articles by ICIMOD authors are being published in prestigious peer-reviewed journals. New frameworks have been developed to support the activities that fall under the various thematic areas.

As ICIMOD grows in size and scope, it becomes ever more important to share the Centre's wealth of knowledge with regional and global audiences. To that end, the Centre increased its engagement with the media and the private sector, as well as held a mega exhibition that showcased ICIMOD's work from the last 30 years with a diverse audience (pp 45-46).

Finally, the report summarizes of some of ICIMOD's activities aimed at promoting the Mountain Agenda on the regional and global stages. These include ICIMOD's conference on poverty and vulnerability in the Hindu Kush Himalayas and the creation of new linkages to the Arctic Council (pp 47-49). In the final section, the report provides information about new partnerships, new publications, the people working at the Centre, and a summary of ICIMOD's financial performance, including copies of the Centre's audited reports.

Integration, Innovation, Impact

China

Sustainable Mountain Development in an Interconnected World

We live in an increasingly interconnected world. This couldn't be more true than in the Hindu Kush Himalayan region – home to a diverse wealth of resources that directly support the lives of over 210 million people. The resources flowing from the region indirectly support over 1.3 billion people in Asia – one-fifth of the global population. Given this, it is clear that the effects of climate change in the Hindu Kush Himalayas extend far beyond mountain areas, and the problems that it creates go beyond impacts on the region's unique ecosystems.

Responding to the challenges facing the people and environments of the Hindu Kush Himalayan region requires scientists, policy makers, development planners and practitioners, and local communities to think outside of the box: beyond their area of expertise, across national borders, and at different levels – from grassroots activities to national planning to global policy.

It is in this context that ICIMOD entered its first year of a new strategy in 2013. The new strategy integrates expertise from four thematic competency areas – livelihoods, ecosystem services, water and air, and geospatial solutions – to support six transdisciplinary regional programmes – Adaptation to Change, Transboundary Landscapes, River Basins, Cryosphere and Atmosphere, Mountain Environment Regional Information System, and Himalayan University Consortium.

These programmes act as a platform to bring together a diversity of actors from across disciplines and across the region to address common issues – through cooperation, knowledge sharing, and capacity building – and to have a positive impact on the lives of the women, men, and children of the Hindu Kush Himalayan region.

India

Using Evidence and Experience to Spur Policy Discussion

Informed and effective decision making at the policy level is dependent on strong evidence rooted in solid science. Increasingly, ICIMOD is being called on by policy makers in the region to advise on pressing issues related to sustainable mountain development.

In the wake of devastating floods in Uttarakhand, India and western Nepal in June 2013, ICIMOD was invited by the Indian National Planning Commission to share the Centre's knowledge on ways to strengthen flood risk reduction and improve flood monitoring. The team of scientists from ICIMOD emphasized the need for an end-to-end system that ensures the flow of flood information and warnings from national forecasting agencies to local communities. They shared new technologies being used in ICIMOD activities, such as satellite flood forecasting and localized flood early warning systems, and also highlighted the need for proper infrastructure planning based on scientific understanding of the complex dynamics of the region's water resources. Using examples of two floods that crossed the border between India and China, they illustrated the value of sharing information across borders for flood risk reduction.

Pakistan

"There is a need for data sharing. Organizations like ICIMOD should set the example by making all their data publicly accessible. This will slowly encourage governments to do the same."

Dr Montek Singh Ahluwalia
Deputy Chairman of the Planning Commission,

Convening Experts for a Comprehensive Regional Assessment

In the Hindu Kush Himalayan region, insufficient data and coordination in research have left large gaps in knowledge, which can be a barrier to informed decision making and sustainable development of the region. To address this, ICIMOD launched a collaborative project that will bring together scientists from around the region and the globe to develop a comprehensive assessment of the Hindu Kush Himalayan region, including the current status of knowledge, drivers of changes, possible solutions, and evidence for policy makers to take forward. The assessment will help to advance science in the region and will provide scientific evidence to influence and inform policy about the drivers of change in the region and the challenges and opportunities that change, including climate change, has created.

Guiding the Centre Toward Greater Impact

In 2013, four important documents were approved by the ICIMOD Board of Governors that will help enhance ICIMOD's ability to respond to regional needs, meet global standards for research and development, and deliver greater impact.

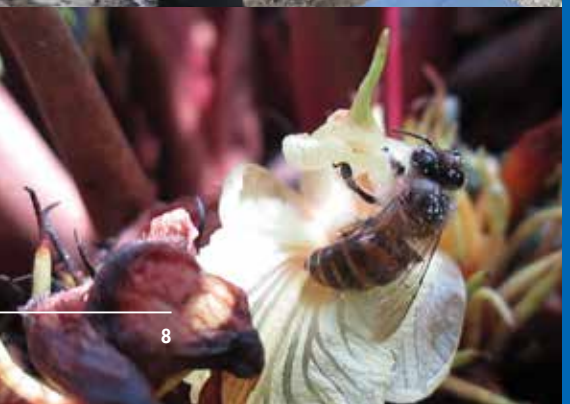
The Centre's Gender and Equity Policy was updated to reflect the important role the gender plays in all of ICIMOD's work. Now in line with the Centre's Strategic Framework, the revised Gender and Equity Policy will help further institutionalize the issue of gender across the Centre and its programmes. A new Data Policy will help guide ICIMOD in its role as a regional knowledge hub and facilitate the sharing of data between countries and institutions in the Hindu Kush Himalayan region.

In line with the Centre's emphasis on growth through partnerships, a Partnership Strategy was endorsed by the Board. This new strategy outlines the roles of different types of partnerships and ways ICIMOD can help build the capacity of partners in the region in monitoring and evaluation as well as in sound financial management and reporting. The Board also endorsed the Centre's first Knowledge Management and Communication Strategy, which integrates knowledge management and communication across the Centre's activities in order to enhance the ability to use communication and knowledge management tools to create impact.

Myanmar

The Sandbox: Encouraging Projects that Drive Innovation

Responding to emerging challenges and seizing new opportunities in the countries of the Hindu Kush Himalayan region require innovative approaches and knowledge from new areas of research that sometimes reach beyond the Centre's current scope. The ICIMOD Innovation Fund was established in 2013 to encourage ICIMOD researchers and experts to 'play' with new ideas, explore new subjects, test new technologies and approaches, and experience new ways of sharing ICIMOD knowledge to address challenges in the region. In its first year, the Innovation Fund awarded small grants to ten projects. Ultimately, many of the learning and tools developed through these programmes have been taken up or extended through the regional programmes. Some of the Innovation Fund projects are described in more detail in the following sections.



2013 Innovation Fund Projects

- Monitoring Himalayan glaciers using unmanned aerial survey system
- Emission and carbon storage assessment of the high-altitude peatland ecosystems of the HKH
- Understanding patterns of transhumance grazing in the Upper Indus Basin through geospatial tools
- Documenting, sharing, and assessing impact of mountain good practices and technologies via multimedia, social media, and crowdsourcing
- Regional women's leadership training
- Trekking guides as multipliers of climate change awareness
- Securing food security for the future – recognizing the role of mountain communities as custodians of mountain agrobiodiversity and enhancing their engagement in the management of mountain agrobiodiversity hotspots
- Agent-based modelling framework for understanding socio-ecological systems of the HKH region (Koshi river basin)
- Indigenous honeybees, ecosystem services and mountain livelihoods
- Analysing the value chains of nuts in the Hindu Kush Himalayas

Regional Programmes

Adaptation to Change

Myanmar

Testing Strategies to Improve Local Livelihoods

As part of a programme on rural livelihoods and climate change adaptation in the Hindu Kush Himalayas, a series of pilot projects was initiated in 2013 to test possible tools and approaches to improve the capacity of communities in Bangladesh, Bhutan, and Myanmar to adapt to changing conditions.

In the western hills surrounding Inle Lake in Myanmar, a three-year pilot project was initiated in five communities to explore customized approaches for improving water resource management and increasing revenue from agriculture. The technologies and approaches being tested build on traditional techniques and are locally appropriate, like a improved rainwater harvesting systems and a microirrigation system being developed using simple construction techniques and locally available resources. In addition to building the capacity of communities around the lake, the pilot is also helping to strengthen linkages between the communities, the local government, and the forest department.

The pilot project intersects with an action research project on tourism, which is focused on promoting responsible tourism in the vulnerable landscape around Inle Lake and creating opportunities for communities in the hills surrounding the lake to benefit from tourism. Findings from the action research will also identify areas for capacity building in the pilot project communities that will help link them to value chains related to tourism, like food supply and handicrafts. For example, the pilot project is promoting home gardens for high-value products like cash crops and culinary herbs, which could eventually link to the supply chain of tourism-related businesses.

Pilot projects in Bangladesh, Bhutan, and Myanmar will explore customized approaches for improving water resource management and increasing revenue from agriculture.

Supporting Community-Based Flood Risk Management

Floods are among the most common natural disasters in the Hindu Kush Himalayan region. In recent years, the frequency and magnitude of extreme weather events and natural hazards has increased, giving rise to higher levels of risk and uncertainty. Implementing community-based flood early warning systems in communities under flood risk can save lives and enhance the capacity of local people to withstand the adverse effects of floods.

In June 2013, two low-tech, cost-effective and user-friendly wireless flood early warning systems were tested in the Jiadhal and Singora river basins of the eastern Brahmaputra in Assam, India. Using wireless technology, the system sends alerts to select mobile devices when the river reaches a critical level, which was determined by communities through a participatory process. The installation and implementation of the flood early warning systems were complemented by flexible flood management planning to enhance the capacity of local communities in flood-related hazard management.

Already the systems have proven effective. In the Jiadhal River, localized flood warnings from the systems have helped the District Disaster Management Authority respond quickly to flood threats and minimize the impact of floods on local communities. During the 2013 flood season, communities in Dihiri, along the Jiadhal River, were able to save assets worth approximately USD 3,000 thanks to the flood early warning system.

During the 2013 flood season, communities along the Jiadhal River in Assam, India were able to save assets worth USD 3,000 thanks to a community-based flood early warning system.

Good Floods and Bad Floods; Rising Uncertainty

When a team of researchers visited Assam, India, they came face to face with farmers facing the realities of rising uncertainty. In Tinsukia, Assam, small floods are an annual occurrence. Farmers have learned to live with and adapt to these floods – building homes on stilts, planting flood-resistant crops, and fishing for livelihood during the flood season. However, one destructive off-season flood in September 2012 has increased insecurity among farmers about their future. This flood was the first destructive flood in 15 years, and the local communities were not prepared to cope with the aftermath, which included prolonged post-flood inundation. After the flood, many farmers did not dare cultivate all of their land in fear of more floods. With large areas facing sandcasting, seed stocks stored in homes swept away, and the loss of livestock that used to serve as a social safety net and food source, many families had no option but to migrate or send male members to nearby towns for daily wage earnings.

Adaptation Learning Highways: Bridging the Gap between Communities and Policy Makers

From 2010-2011, ICIMOD conducted an extensive participatory assessment on the adaptive capacities of communities to climate stress. This was followed by a pilot designed to facilitate communication between local communities and decision makers to improve adaptation in Bhutan, India, and Nepal through Adaptation Learning Highways. This approach introduced a platform for local communities, policy makers, and scientists to identify gaps in knowledge and action by ensuring the two-way flow of knowledge and to develop informed strategies to effectively respond to challenges at the local level.

Following these exercises in the East Garo Hills in Meghalaya, India, the need for improved access to veterinary healthcare was identified. To address this issue, villages chose individuals to receive training on basic and preventative healthcare through the state's veterinary healthcare department. After the training, trained 'paravets' were linked to veterinary technicians, doctors, and government veterinary clinics, through which they were able to merge modern knowledge with conventional wisdom. The paravets successfully bridged the gap between communities and the veterinary extension services, making a significant impact in increasing the number of villages and households covered through vaccination programmes. They also provided valuable feedback to government officials on local needs. After an outbreak of avian flu in Purnipara Village, a trained paravet immediately notified the appropriate authorities, and the outbreak was contained to a single village. The services designed as a result of the Adaptation Learning Highways process have now been taken up by the Government of Meghalaya as a part of its Livestock and Animal Husbandry mission under the Integrated Basin Development Programme, a flagship development programme of the government.

Bridging the flow of information between local communities, policy makers, and scientists can contribute to enhancing the capacity of local communities to manage climate change.

Transboundary Landscapes

China

Supporting Effective Rangeland Management

ICIMOD's work on rangelands and rangelands policy in the Hindu Kush Himalayas spans the last two decades. During this time, ICIMOD has generated a wealth of knowledge on the status of rangelands in the region, as well as effective management strategies. ICIMOD has also facilitated exchange between countries and has provided input and support for the development of rangeland-specific policies. After supporting the promulgation of the Nepal Rangeland Policy in 2012, ICIMOD has continued to support efforts to put the policy into practice.

An essential part of ICIMOD's work on rangelands has been the scaling up of approaches and the promotion of a collaborative decision making process among stakeholders – from local herders to policy makers. In 2004, ICIMOD began collaborating with the Sichuan Grassland Sciences Academy (SGSA) to promote participatory management of rangeland resources in two townships in western Sichuan Province. With ICIMOD's support, SGSA piloted rangeland co-management practices in which herders, researchers, the private sector, and government departments were brought together to collect baseline information, analyse problems, identify solutions, and carry out action plans on ways to reduce pressures on natural rangelands

In 2012, SGSA began upscaling the co-managemnet concepts, modalities and technology in five provinces of western China (Sichuan, Yunnan, Tibet, Qinghai, and Gansu) with funding support from the Chinese Central Government. Through this, the impact of ICIMOD's work on rangelands has sprung out of the two townships of Hongyuan County to reach a much wider region covering more than 2 million square kilometres of rangelands and a pastoral population of nearly 10 million located at the upper reaches of several major rivers of Asia.

"We want to expand what we have learned from the ICIMOD project in Sichuan Province to other pastoral areas of western China to benefit more people."

Zebai
Former Head of the Sichaun Grassland Sciences Academy, China

Diversifying Partners for Long-Term Conservation and Development

A long-term, sustainable approach to conservation and development of these landscapes requires the cooperation and involvement of a wide range of actors – among communities, across sectors and levels, and beyond political borders. In the first year on-the-ground in the Kailash Sacred Landscape – a stretch of land in China, India, and Nepal that is home to Mount Kailash – it has become clear that to ensure the long-term conservation and sustainable development of the landscape, it is essential to engage a diverse group of partners and stakeholders, including the private sector.

> The conservation and sustinable development of important landscapes requires the cooperation of a wide range of actors – among communities, across sectors, and beyond political boundaries.

Tour operators from all three countries have demonstrated their commitment to promoting responsible tourism in the Kailash Sacred Landscape and have called on ICIMOD for greater support. In addition, through a partnership with Reuters Market Light, a pioneering mobile-based agri-information service provider, a tool has been introduced in the Indian part of the landscape that will increase access to markets and information by farmers living in remote areas so that they can make informed decisions.

In India, the efforts of other institutions, like the National Agriculture Bank for Rural Development (NABARD), are also being dovetailed with ICIMOD activities in the Kailash Sacred Landscape. Facilitating the investment of other organizations in the initiative's efforts will help to ensure broader ownership and more sustainable impact in the long term.

Promoting Responsible Tourism to Preserve a Sacred Landscape

The remote southwestern portion of the Tibet Autonomous Region of China – home to Mount Kailash and Lake Manasarovar – and bordering districts of Nepal and India, represent a landscape considered sacred to five major Asian religions – Buddhism, Hinduism, Jainism, Sikkhism, and Bon Po. In 2014, the auspicious Year of the Horse, more than one million pilgrims are expected to visit the landscape.

With a growing number of visitors, negative environmental impacts can already be observed, especially in terms of waste. A waste classification study undertaken in the fall of 2013 found over 23 tons of waste along the popular 53 km route around Mount Kailash, which, when left to decompose, can degrade the quality of the host of ecosystems services and water sources.

The Kailash Sacred Landscape Conservation and Development Initiative is working with private tour operators from China, India, and Nepal to promote activities that help keep the landscape clean and to support the move toward more responsible tourism management, including activities that contribute to heritage preservation, environmental conservation, and local sustainable development. Guidelines are also being developed to encourage tourists to act responsibly while visiting the landscape. Through these activities, ICIMOD hopes to make tourism a force for sustainable development in the Kailash Sacred Landscape.

Putting the Plus in REDD+

In 2013, ICIMOD completed a three-year pilot project in Nepal that demonstrated the potential of a people-centred, inclusive approach to REDD+ (Reducing Emissions from Deforestation and Forest Degradation). It highlighted the importance of emphasizing additional benefits of REDD+ activities that go beyond carbon, including benefits to local livelihoods, improvements in ecological integrity, and improvement in the sustainability of important ecosystems services. The pilot was the first REDD+ project in the world to make payments to local communities, with REDD+ payments corresponding to the carbon stock increments as measured by local communities in their forest.

Learning from this pilot has been taken up at the scientific, practical, and policy levels. The pilot in Nepal has now become a model for other sites around the world, as well as a point of interest for researchers from the region and beyond. Through partners, learning from the ICIMOD project has provided inputs to the development of Nepal's National REDD+ Strategy. Through the success of this pilot, ICIMOD has also initiated a regional REDD+ initiative in Bhutan, India, Nepal, and Myanmar, which will bring together the unique strengths of each country in the context of sustainable forest management and encourage learning across borders. It will also ensure that common operational and performance standards are maintained in the region.

HIGHLIGHTS FROM THE REDD+ PILOT

- 3.53 tonnes per hectare – average annual increment of forest carbon in pilot area
- 216–753 tonnes of CO_2 reduction by switching to biogas in the project sites
- 105 community forest user groups in three watersheds received a total sum of USD 95,000
- Livelihoods of the poor enhanced
- Institutional framework strengthened
- Learning and experience from REDD+ project scaled up nationally and internationally

River Basins

India

Promoting the River Basin Approach for Improved Adaptation

In 2013, ICIMOD launched a programme in the Koshi River basin that promotes an integrated approach to river basin management that looks beyond traditional boundaries – political, social, and disciplinary. The programme has encouraged partners in China, India, and Nepal to look at the Koshi River basin as a whole in order to improve management and enhance informed decision making within the boundary of a common river basin. The results of an integrated assessment – an approach that integrates knowledge from physical and social sciences – will support the preparation of river basin management guidelines that will provide a framework for improved planning in the Koshi River basin.

In addition to promoting a coordinated, holistic approach to the management of river basin resources, the programme has also encouraged the sharing of knowledge and experience across borders. Together with partners in China, action research was undertaken in Zhangmu, a major trade hub along the China-Nepal border, to understand the risk of natural hazards such as landslides, debris flow, and GLOFs. Following this research, a landslide risk reduction plan was prepared in close consultation with provincial authorities, which is now being implemented by the local government. The Koshi Basin Programme is continuing these efforts in a village downstream in Nepal, with additional efforts to initiate a basic hazard early warning system between China and Nepal.

Supporting Improved Local Water Use Management Planning

Communities across the Hindu Kush Himalayas have been facing water shortages. In the mid-hills of Nepal, springs and traditional stone spouts are drying up, and fetching clean water has become a daily struggle, especially for women. With support from the ICIMOD Innovation Fund, a study was undertaken in 2013 to develop a better understanding of the hydrology of springs in the area and their linkages to groundwater and water recharge systems. The study mapped springs, ponds, and wells that supply water to about 500 households in two small watersheds in Nepal. The study mobilized villagers to take part in the research and held discussions with them to understand who uses the springs, how water is used, and the ownership and management system. The study aimed to give the research data social value by making it accessible and understandable and to improve local water management by working to ensure that modern water science is interwoven with the civic science of the local community.

Based on the findings of this study, 11 sites have been selected for the construction of new ponds or rehabilitation of existing ones to enhance the productivity of nearby springs. These efforts represent initial steps in changing the perceptions of villagers toward water conservation and management and improving the water supply of about 500 households.

Learning from this project is being taken forward through the Koshi Basin Programme, which will work with communities to develop local water use master plans in 12 vulnerable Village Development Committees in Nepal. These efforts, the first of their kind in the country, will support more effective local water use and management in about 24,000 households through an approach that also recognizes upstream-downstream linkages.

> Learning from the study on springs and ponds is being taken forward, and ICIMOD is now working with communities to support more effective local water use and management.

Connecting Communities to Flood Information

In 2013, a flood that swept through parts of Uttarakhand and districts in Far Western Nepal highlighted the need for effective flood monitoring and warning systems that connect high-tech methods of data collection and forecasting with communities at risk. An integrated approach that considers both the technology and capacity needed to predict floods and the methods through which vital flood information is communicated and understood at various levels through functional institutions is required to effectively reduce flood risk.

As part of efforts to establish a reliable system to enhance the sharing of flood information between countries in the region, ICIMOD has been working with national partners to bolster the skills and knowledge required for an effective end-to-end system, including the integration of gender-specific considerations in disaster risk reduction activities. A series of studies has been undertaken across the region to assess how different issues for women and men should be considered in the development of early warning systems. Learning from these studies will increase understanding of and sensitization to the needs of women, who are disproportionately affected by disasters and more vulnerable to flood risk. These activities, along with efforts to build the regional capacity to use GIS and remote sensing technology and models for flood outlooks, have contributed toward targets of the Hyogo Framework for Action for building the resilience of nations and communities to disaster.

Towards a regional flood information system

- 32 hydrometeorological stations installed in Bangladesh, Bhutan, Nepal, Pakistan
- Four countries providing real-time data to a regional flood information system
- Quality control measures for data are a priority and are being put in place
- +100 individuals trained in 2013 on the installation, operation, and maintenance of hydromet stations
- Strengthened capacity of national hydrology and meteorology agencies

Engaging Private Telecom In Flood Risk Reduction

One of the most efficient ways to transmit critical flood information from monitoring stations to people who can take immediate action is through mobile services. However, interruptions in mobile service at critical times could have catastrophic results. ICIMOD and its partners have entered into partnership with Tashicell, a private telecom provider in Bhutan, to ensure affordable data transmission for the long-term sustainability of Bhutan's national flood information system. Similar partnerships in Bangladesh and Pakistan are also being explored.

Cryosphere and Atmosphere

Nepal

Enhancing Regional Capacity for Cryosphere Monitoring

Changes in the glaciers of the Hindu Kush Himalayan region have captured global attention. ICIMOD is working to build the capacity of researchers within the region for the long-term monitoring of the glaciers, snow, and permafrost of the region to foster a better understanding of these changes and to fill critical knowledge gaps.

In 2013, four training field trips to glaciers in the Langtang Valley of Nepal provided hands-on learning opportunities for researchers from partner institutes around the region. For the first time, representatives from the Pakistan Meteorological Department joined one of the capacity-building field trips to learn on-the-ground glacier monitoring techniques. Partners from India, Nepal, and Pakistan also participated in a study tour to glaciers in Norway.

ICIMOD is working with partners in the region to build the capacity to monitor the cryosphere of the Hindu Kush Himalayas in order to fill critical knowledge gaps.

In 2013, the first class of students graduated from Kathmandu University with a Master's in Glaciology, through which students from around the region can receive training both in the classroom and in the field. Since ICIMOD helped establish the programme three years ago, it has seen steady attendance, with a growing diversity of students joining the course, including two students from Afghanistan in 2013.

Although most of the Centre's on-the-ground cryosphere monitoring work has been centred on the Langtang and Rikha Samba glaciers in Nepal, these activities are set to expand in the coming year. On the request of the Royal Government of Bhutan and the Government of Pakistan, plans were initiated in 2013 to provide greater support and training to national departments to enhance cryosphere monitoring. Similar discussions in Pakistan will further expand the Cryosphere Initiative's activities at the regional level.

Linking with the Global Science Community

In a short time after the launch of the Atmosphere Initiative in 2013, ICIMOD has been able to carve out a prominent position, both regionally and globally, within the field of atmospheric science. For the first time, over 120 atmospheric scientists from around the world came to Kathmandu to share research on the interactions between air pollution and the Asian Summer Monsoon, and the impacts of pollutants on global climate. Following this meeting, ICIMOD organized the first annual regional atmospheric science workshop. This workshop brought together over 60 atmospheric scientists from the region to discuss potential collaborations and ways to foster data sharing and exchange.

In 2013, over 120 atmospheric scientists from around the world came to Kathmandu, Nepal to discuss the impacts of air pollution on the Asian Summer Monsoon and on global climate.

As an active member of the global Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), ICIMOD has been able to raise awareness among international policy makers of the vulnerability of the Hindu Kush Himalayan region to damage from short lived climate pollutants. In collaboration with the CCAC, ICIMOD organized an international workshop that encouraged South-South exchange on ways to reduce the negative impacts on health, agriculture, and climate caused by much of the brick production around the world. Experts, policy makers, and brick entrepreneurs from 11 countries worked together to identify solutions, including the promotion of modern brickmaking technologies and alternative building materials.

Understanding the Impacts of Air Pollution

Air pollution is a major environmental challenge in many parts of the Hindu Kush Himalayan region. Although studies suggest that the negative impacts of air pollution on human health, the melting of mountain glaciers, and crop productivity are substantial, they are little understood.

From January to June, an intensive study on air quality in the Kathmandu Valley was undertaken – the largest of its kind in the last 14 years. This study represents the first steps of the new Atmosphere Initiative in improving our understanding of the impacts of air pollution on the region's health, climate, and agriculture.

In addition, a pilot programme is underway to investigate the health and climate impacts of different types of cookstoves. Looking forward, the Atmosphere Initiative also laid the groundwork for the establishment of atmospheric observatories in Gedu, Bhutan, and Ichhyakamana, Nepal. These will provide invaluble data to help improve our understanding of the dynamics and potential impacts of air pollution in the Hindu Kush Himalayas.

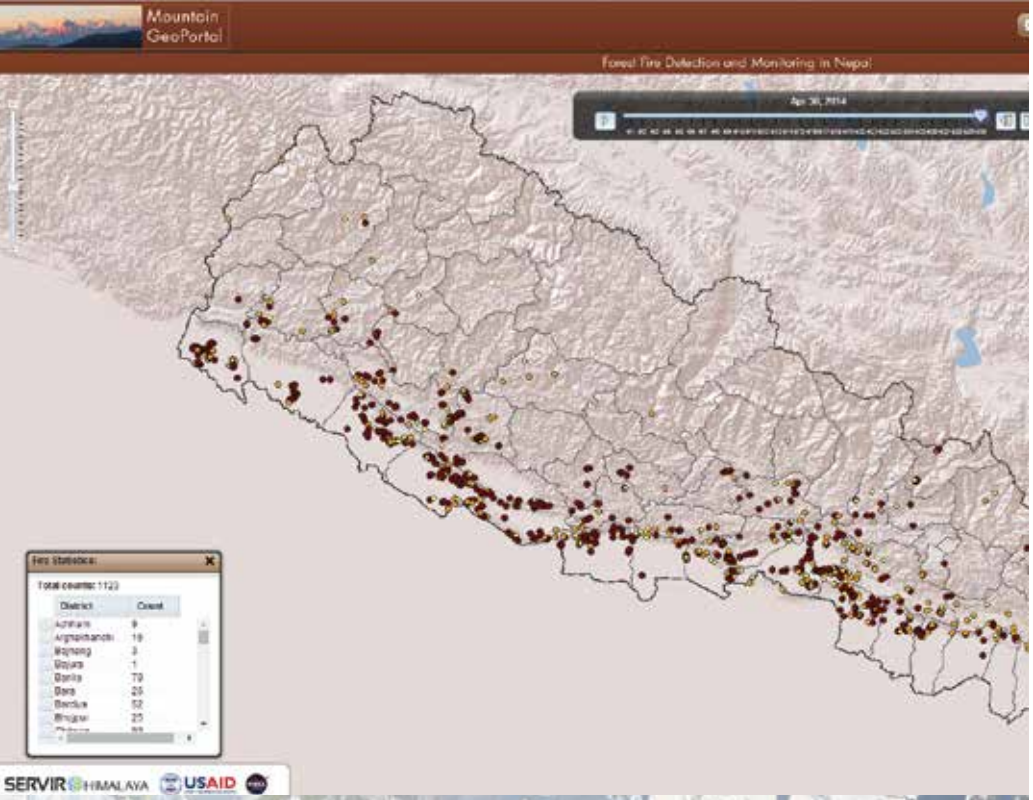
Nepal

Investigating the Connection between Himalayan Glaciers and River Flow

There is growing evidence that glaciers across most parts of the Hindu Kush Himalayas are rapidly retreating. Given the role of the region's cryosphere as the 'water towers of Asia', it is important to understand the implications of changes in terms of downstream water availability. ICIMOD partners at the Swiss Federal Institute of Technology in Zurich have developed a model, called TOPKAPI, to explore the contributions of glacier melt, snowmelt, and precipitation to river flow. ICIMOD researchers have collected data during regular field trips to monitoring stations in the Langtang valley of Nepal. This data is being fed into the TOPKAPI model to make it stronger and to improve hydrological modelling. Once it becomes more robust, this model can be tested and applied in other regions that lack sufficient data. Findings from the model can help provide valuable information to help develop strategies for facing future climatic changes.

Mountain Environment Regional Information System (MENRIS)

Hindu Kush Himalayas from the International Space Station



Monitoring Forest Fires from Space

Forest fires are a growing environmental concern in the Hindu Kush Himalayan region. Reliable information on the location of fires is necessary to reduce the threat of fire to human life and property, as well as to the environment and biodiversity. After a year of testing, in 2013 a forest fire monitoring and detection system was officially launched in Nepal. The system links over 250 users – including District Forest Officers and focal persons from the Federation of Community Forestry Users in all districts of Nepal – to near real-time data on fire locations. This can improve the ability of forest managers to respond to forest fire. Using satellite data generated and processed by ICIMOD's MODIS receiving station, the system pinpoints the location of active fires, and shares notifications to subscribers via email, SMS, and Twitter. Based on the success of the system in Nepal, the system was adapted for Bhutan and launched in 2013.

Looking forward, ICIMOD has plans to enhance two-way communication within the system, including creating a mechanism for facilitating feedback on reported and unreported fires. Efforts are also being made to enhance linkages with local community forestry user groups in Nepal, working with them to outline community forest boundaries using geospatial technology so that information through the forest fire monitoring and detection system is more precise and responses can be swifter. In addition to alerting the concerned authorities about incidents of forest fire, the system has also created a database, through which patterns of forest fires in the region can be analysed.

Creating Data Applications to Support Informed Decision Making

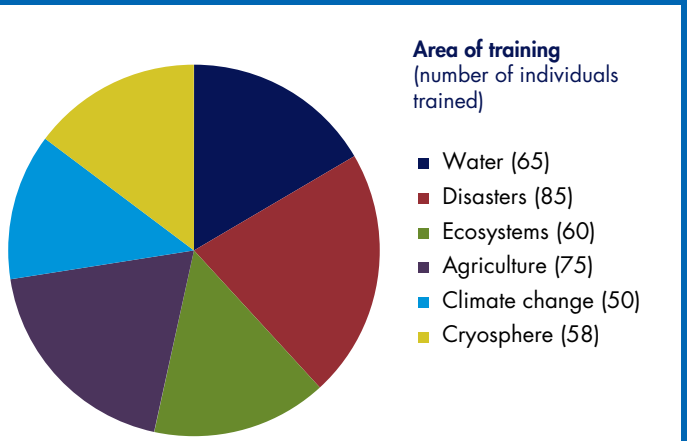
Applications that visualize geospatial data provide immense opportunities to help policy makers, researchers, practitioners and others to make sense of complex data and support informed decision making in the Hindu Kush Himalayan region. Working with the Institute of Water Modelling in Bangladesh, a flood forecasting application has been developed that uses data from the Jason-2 satellite to help predict floods. This application helps increase the lead-time in forecasting floods, thus allowing for improved planning for disaster risk reduction. In Nepal, the Ministry of Agriculture is using an agricultural monitoring application developed through the SERVIR-Himalaya initiative to develop a crop forecast for the country.

The online Mountain GeoPortal now has more than 15 science applications, and this number continues to rise. In 2013, with support from ESRI's ArcGIS Online software, nine interactive story maps were created to add a new dimension to data visualization. Over 10,000 people have viewed the story maps on the Mountain GeoPortal. Through ICIMOD, ESRI has also provided software licences to universities in the region.

Data visualization provides immense opportunities to support informed decision making in the Hindu Kush Himalayan region.

Building Regional Capacity to Use Geospatial Tools

In 2013, over 300 individuals from 28 partner organizations throughout the Hindu Kush Himalayan region were trained in the use of geospatial tools in a variety of subject areas (see figure).



Expanding as a Regional Knowledge Hub

Over the past 30 years, ICIMOD has carved out a niche as a common ground for sharing knowledge across the Hindu Kush Himalayan region. Along with this, it has cemented its role as a hub for sharing data and information in the region and globally through the development of several online portals with various types of data, including biodiversity and geospatial data. Through its various activities, it has been able to generate substantial amounts of data on a range of topics relevant to the sustainable development of mountain areas. It is the Centre's aim to make as much of this data available for broader use and uptake for the benefit of the environments and people of the Hindu Kush Himalayas.

In 2013, through the Regional Database Initiative and in line with the newly minted Data Policy, a system was developed to systematically collect data from all of the Centre's programme activities. The system is now fully operational, and is currently accessible to ICIMOD researchers and partners of the Centre. In the future, this initiative will act as a platform for partners and other agencies outside of ICIMOD to also share their data.

ICIMOD is working to make data available for broader use and uptake to benefit the environment and people of the Hindu Kush Himalayas.

Thematic Areas

Ecosystem Services

India

Bhutan

Promoting Ecosystem-Based Adaptation

Climate change has placed additional stress on both the ecosystems and the communities living in the Hindu Kush Himalayan region. It is increasingly clear that human responses to climate stresses are more effective when they also prioritize the conservation of ecosystems, which rural mountain communities depend on for valuable goods and services. The Convention on Biological Diversity (CBD) defines ecosystem-based adaptation as "the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to negative impacts of climate change". This approach also encouages the integration of local knowledge with broader scientific expertise in designing adaptation measures.

Ecosystem-based adaptation improves understanding of the interface between ecosystems and local livelihoods, which supports the development of effective adaptation measures.

Based on global and regional knowledge on ecosystem-based adaptation, ICIMOD aims to further enhance the concept in the mountain context, in particular to Hindu Kush Himalayan (HKH) perspectives. This approach will help ICIMOD improve understanding of the interface between ecosystems and local livelihoods, thus facilitating the development of more effective local adaptation measures.

In 2013, this approach was applied through the Himalayan Climate Change Adaptation Programme (HICAP) in four river basins in Nepal, India, China, and Pakistan – the Brahmaputra, Indus, and Koshi, Salween-Mekong.

Assessing Carbon Storage in High-Altitude Peatlands

Wetland ecosystems are among the most productive ecosystems in the world. Forming a bridge between terrestrial and aquatic habitats, they support rich agricultural and wild biodiversity as well as the livelihoods of a large number of local communities. Wetlands also help in flood regulation, nutrient and sediment retention, and maintaining the groundwater table. Despite their importance, they are largely understudied, especially in the context of the possible impacts of climate change.

The majority of wetlands are classified as peatlands, which are also described as 'the kidneys of the landscapes' because of the functions they perform in hydrological and chemical cycles and as a storehouse of carbon. When peatlands are degraded or drained for agriculture or other uses, large amounts of greenhouse gases are released into the atmosphere. To better understand the potential detrimental impacts of this in terms of contribution to global warming, a study was undertaken on the southern slopes of the eastern Himalayas – the first of its kind. Over 7,000 gas samples were collected. Analysis of these samples, and comparison with other similar studies from the northern slopes of the Himalayas in China, will help improve understanding of high-altitude peatlands so that mountain ecosystems can be managed in a sustainable way.

Greater understanding is needed of the potential impacts of the degradation of high-altitude peatlands, which are large storehouses of carbon.

Nepal

Water and Air

China

Downscaling Climate Models for Local Action

In 2013, research was undertaken to provide a more nuanced view of the implications of climate change on the region's water resources. Global climate models were downscaled in order to tailor climate change projections for select sub-basins across the Hindu Kush Himalayas. The exercise provided interesting initial insights into possible future water availability scenarios for sub-basins of the Kabul, Indus, Sutlej, Ghaghara, Koshi, Brahmaputra, Saleween, and Mekong rivers.

By improving understanding of the potential impacts of climate change on future water availability at a more localized scale, these studies can be used to inform decisions and planning related to agriculture, hydropower, adaptation, and the environment. Knowledge from this study is already being applied through several of ICIMOD's initiatives, including by the Himalayan Climate Change Adaptation Programme to inform appropriate adaptation strategies and planning.

Monitoring Himalayan Glaciers from a Bird's Eye View

Debris-covered glaciers in the Hindu Kush Himalayas generate a substantial amount of meltwater and are important for downstream water supply. However, they remain largely understudied for several reasons: they are difficult to access, and fieldwork is complicated due to the thick layer of debris. Satellite imagery may remove these difficulties, but the image resolution is often too coarse for detailed investigations and the frequency and timing of overpass of satellites is not always ideal.

To help bridge the gap between cumbersome fieldwork and the inadequacy of satellite imagery, ICIMOD piloted an innovative project that tested the effectiveness of unmanned airborne vehicles (UAV) in monitoring debris-covered glaciers. Flying at an elevation of 4,500 metres over the Langtang catchment in Nepal, a UAV took high-resolution photos, which were later stitched together using advanced processing techniques to produce high-resolution imagery that could be used to monitor changes in the position of glacial snouts and development and behaviour of lakes that form on top of glaciers. The data collected will contribute to research tracking the flow velocity of the glaciers and mass balance of debris-covered glacier tongues in Langtang. The UAV proved to be a successful tool to support glacier monitoring and found that it could be applied to other fields including the monitoring of crops and natural hazards.

Nepal

Permafrost Science Heats Up

Extensive, but barely studied, areas of permafrost exist in the Hindu Kush Himalayan region. For many people living on or near this permafrost, their livelihoods may come to face the effects of widespread permafrost thaw induced by climate change in the decades to come. This is because permafrost thaw influences a broad range of systems including hydrology, vegetation, sediment loads in torrents and rivers, debris flows, rock fall, water quality, and the stability of engineered structures.

To provide an estimate of permafrost distribution in the Hindu Kush Himalayan region, ICIMOD tested a method to assess the distribution of mountain permafrost in remote areas with sparse to non-existent ground data. Using Google Earth, researchers conducted a systematic randomized mapping of rock glaciers. Based on the findings of the study and a review of the current state of knowledge on the region's permafrost, targeted follow-up studies are being planned.

The thawing of extensive, but barely studied, areas of permafrost in the region has the potential to impact the lives and livelihoods of many people, as it could affect hydrology, vegetation, and water quality.

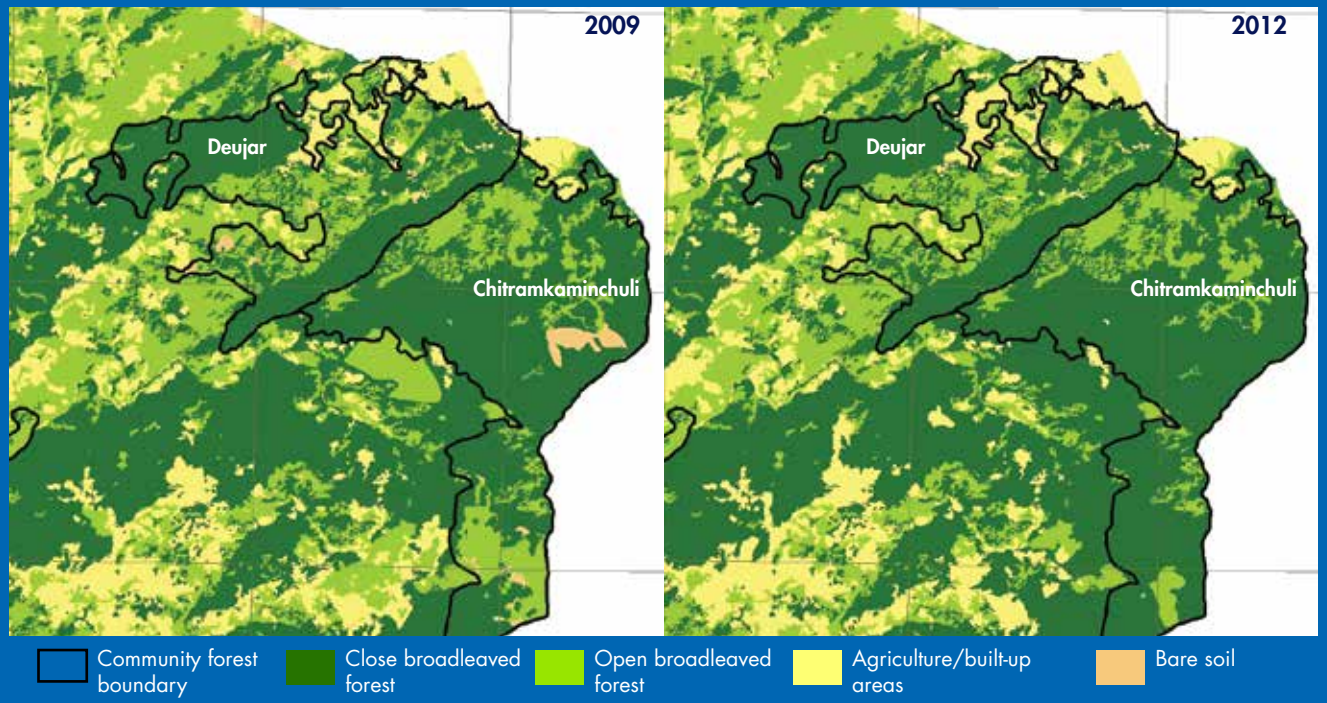
Geospatial Solutions

Using Geospatial Tools to Monitor Forest Carbon

In many parts of the Himalayan region, the conservation of forest resources through community-based programmes has become an integral part of forest management. Effective forest management helps improve the health of forests, which can store large amounts of carbon. However, monitoring changes in forest resources in the Hindu Kush Himalayan region presents several challenges: large parts of the region are inaccessible, and the costs for providing verifiable measurements on the ground are extremely high. This has called for reliable baseline assessment and monitoring strategies at multiple scales to ensure the effective use of forest resources and to leverage carbon mitigation benefits through global mechanisms like REDD+ (Reducing Emissions from Deforestation and Forest Degradation).

In 2013, ICIMOD developed a framework using satellite-based remote sensing techniques to estimate and monitor changes in above-ground biomass – an important indicator of the impact of forest management activities. The framework was designed using data from a REDD+ pilot project from 2009 to 2012. It provides an accurate, low-cost alternative monitoring mechanism to evaluate forest-related carbon mitigation efforts. Through the upcoming Regional REDD+ initiative, ICIMOD is now upscaling this approach and taking it to other regional member countries. Through this new initiative, ICIMOD will also help develop a uniform monitoring framework for the HKH region, which will include the use of this tool.

Changes in forest cover in community forests between 2009 and 2012 measured using geospatial tools



Tracking Grazing Patterns in the Upper Indus Basin

Rangelands occupy approximately 60 per cent of the Hindu Kush Himalayan region. In the Indus River basin, herders rely largely on vulnerable high-altitude rangelands for feed. Many traverse distances of more than hundreds of kilometers in search of grazing pastures, with grazing patterns often dictated by climatic conditions and the availability of seasonal forage. Understanding seasonal migration within the context of the area's environmental setting is important for the management of rangelands.

Research on the relationship between pastoralists and these vast stretches of land have been primarily gathered through surveys and discussion groups with nomadic herders. While this has provided a snapshot of the overall situation, more precise and quantifiable data is needed to generate precise information about livestock movement and how movement is influenced by the impacts of climate change on rangelands. Supported by the ICIMOD Innovation Fund, a study was undertaken to develop and test the use of GPS and GIS navigation systems to track the seasonal movement of nomadic herders. Through this, ICIMOD hopes to develop a greater understanding of how rangelands and pastoral communities respond to climate variability and the implications of this in the context of rangeland management policy.

Understanding the migration of herders across vast expanses of rangelands in the context of environmental conditions is important for the sustainable management of rangelands.

Pakistan

Nepal

Linking Forest Dynamics with Social Conditions

Effective environmental policy and management increasingly demand the integration of knowledge from different disciplines on intertwined socio-ecological systems. Agent-based modelling is an innovative tool that combines biophysical and social data to help decision makers explore the potential implications of different choices in complex situations. With support from the ICIMOD Innovation Fund, a study was undertaken using agent-based modelling to model and explore the potential of the technique in improving understanding of how forest cover changes are linked to the variability of socioeconomic conditions, adaptation scenarios, and policy level interventions at the local level in the Hindu Kush Himalayan region.

The pilot, undertaken in the Kayerkhola watershed in central Nepal, drew together data about the forest and about the surrounding communities, including fuelwood demands and accessibility to forest areas, to develop a model simulating actual decision-making processes under variable environmental conditions. It identified community forest user groups, non-community forest user groups, government officials, and people in the surrounding area as agents that play a key role in the dynamics of forest cover change. Based on this, it explored how their responses to change, for example, a change in policy on subsidies for fuel sources other than fuelwood, could change how they interact with forest resources.

The final product will be a dynamic, interactive tool, which will help decision makers quickly visualize the impact of their decisions on forests. The model developed can be applied to other areas, as well as other situations, for example, water demand.

Agent-based modelling helps to create interactive tools that will help decision makers quickly visualize the impact of their decisions.

Livelihoods

Bhutan

Nepal

Putting the Mountains in the Water-Energy-Food Nexus

In the Hindu Kush Himalayan region, the growing need for food, water, and energy has created a vicious cycle that is threatening the region's limited, and highly interconnected, resource base. To address these issues, it is necessary to look at water, energy, and food within an interconnected nexus, an approach that is now widely accepted and used to improve our understanding of their interlinkages at global, regional and local scales.

Research at ICIMOD has contributed new dimensions to the global dialogue on the water-food-energy nexus, including the critical role that mountains play in supporting food, energy, and water security. The research also highlights the need to consider the policy dimensions that influence the water-food-energy nexus, and to develop an integrated policy approach that looks beyond national borders to respond to emerging challenges. By removing administrative boundaries from the nexus approach, it is possible for policy makers and planners to extend the planning horizon, including looking at ways to ensure the optimal use of resources and increase resource productivity.

ICIMOD has brought global attention to the important role that mountains play in supporting food, energy, and water security.

The ICIMOD approach has brought global attention to the important role of mountains in the water-energy-food nexus. In 2013, ICIMOD's framework on the water-energy-food nexus was referenced by numerous organizations, including in a global report by the International Institute for Sustainable Development, 'The Water–Energy–Food Security Nexus: Towards a practical planning and decision-support framework for landscape investment and risk management'.

Introducing the Gold Standard of Impact Evaluation

In the Centre's push toward more rigorous impact evaluation, ICIMOD partnered with the Abdul Latif Jameel Poverty Action Lab (J-PAL) to test the use of randomized controlled trials in measuring the effects of initiatives related to poverty and development. Working with the Ministry of Agriculture in Nepal, the two-year project will explore cost-effective ways to improve agricultural extension services in Nepal, where agricultural technologies that increase efficiency and productivity have not been able to penetrate remote areas. Over 2,500 households across 168 wards (district sub-units) are involved in the study, which will test different methods of delivering valuable agricultural extension services.

The introduction of randomized controlled trials, often considered the gold standard of impact evaluation, will provide scientific data and hard statistical proof that can later be used to help determine the most effective ways to improve the lives of people in the Hindu Kush Himalayas.

Securing Food for the Future – The Role of Mountain Communities in Preserving Mountain Agrobiodiversity

Mountains are a source of rich agrobiodiversity, with diverse varieties of crops that have been nurtured and developed by mountain communities for generations. In the Hindu Kush Himalayan region, rapid changes in land use and the expansion of commercial crop farming have resulted in a drastic reduction in the production of food crops and threatened the region's rich agrobiodiversity. The challenge remains of ensuring food security for a growing population in a climate-stressed environment, particularly for marginalized and disadvantaged groups.

With support from the ICIMOD Innovation Fund, a study in Uttarakhand, India and Bajhang, Nepal in the western Himalayas and Meghalaya, India in the eastern Himalayas investigated the diversity of agricultural crops in the region, how these crops are traditionally maintained, and ways to support communities in managing agrobiodiversity resources. Through the study, a method was developed to assess these different aspects at the community level. The approach blends traditional and scientific knowledge and provides opportunities for scientists and farmers to work hand-in-hand to develop building blocks needed to ensure food security in the future. In addition, the study generated data to advocate for global recognition of the important role that mountain agrobiodiversity hotspots and the communities that care for them play in global food security.

Strategic Institutional Functions

Integrating Gender at the Institutional Level

Ensuring the equitable and meaningful participation of both men and women at all levels is essential for sustainable mountain development and a key principle at ICIMOD. Because of the importance of looking at how climate change and other changes affect men and women differently, ICIMOD has made it a priority to include gender issues in programme activities. In 2013, gender was further mainstreamed across the Centre and the Gender Equity Policy was updated and brought in line with ICIMOD's new strategic framework.

Over the past year, the gender component has been strengthened within most of the Centre's initiatives. This has helped ensure that gender is considered in all of ICIMOD's activities – from a study on improved cookstoves to the promotion of gender-sensitive livelihood strategies. Gender issues and perspectives are also being included in the design of pilot projects for the Koshi Basin Programme and in the research to inform the development of an effective end-to-end flood information system. In addition to these activities, two frameworks have been developed that will mainstream the integration of gender into the analysis of value chains and into the Centre's work on transboundary conservation and development. ICIMOD is working together with partners to ensure that gender plays a pivotal role in each step of the phase of a project – from the design of research studies and implementation of pilot projects to capacity building activities and in providing evidence to policy makers.

Linking Vulnerability to Development

Poverty levels across the predominantly mountainous Hindu Kush Himalayan region are high compared to other parts of the countries in the region. However, there is a lack of cohesive information that would enable decision makers to understand how poverty and vulnerability manifest and to design effective poverty alleviation programmes.

ICIMOD has developed a method to measure multidimensional poverty in the region. This method aims to identify and describe poor and vulnerable households in a consistent manner and to capture the drivers of poverty and vulnerability, and the interconnections between them.

The multidimensional poverty measure has been demonstrated for 23 districts in Nepal. Analysis of the findings has provided important clues about differences in the intensity and composition of poverty across these districts and socioeconomic groups, which can be used by decision makers to guide interventions to reduce poverty and vulnerability and to develop location-specific poverty alleviation strategies.

Putting a Price on Ecosystem Services

Mountain ecosystems are the source of numerous valuable resources. Ecosystem valuation captures the value of ecosystem services that are not traded in conventional markets, such as the provision of wildlife habitat or the value of a mountain view. Although the value of such goods cannot be easily defined, this does not mean that they have no value, or this value can be captured in monetary terms.

The estimated value can be used in awareness raising, policy formulation, identifying the cost-effectiveness of public policies, and developing mechanisms to facilitate payments for ecosystem services. Through this, ecosystem services valuation can contribute to creating a balance between development and conservation priorities and promoting mitigation measures that make development activities more responsible towards conservation with consideration of public preferences. However, ecosystem valuation in the mountain context, where the majority of people live below or close to the poverty line and most sub-economies are not monetized, is not a straightforward task. It requires specific strategies to account for low levels of income and education among mountain communities while conducting household surveys.

Based on its own earlier experiences and global learning, ICIMOD aims to further enhance the concept and the application of the ecosystem valuation process. This is essential for understanding the value of ecosystem services, both from local perspectives and in economic terms, to develop incentive-based mechanisms for ecosystem management. A concept framework on ecosystem valuation is already in place, and more practical process guidelines have been drafted.

The Himalayan Climate Change Adaptation Programme (HICAP) is currently promoting the valuation of ecosystem services for policy support both at the local and landscape levels in two watersheds of Koshi River basin in Nepal, a large tract of rainforests and its landscape complex in Assam, India, the Dali Wetland Complex in Yunnan Province of China, and Gilgit and Chitral areas in the upper Indus of Pakistan.

Bangladesh

Knowledge Management and Communication

Nepal

Exploring New Ways to Communicate ICIMOD Knowledge

To mark the Centre's 30th Anniversary, ICIMOD, together with GlacierWorks and other partners, launched a dynamic, five-month exhibition entitled Climate+Change on 11 December 2013. The exhibition, which was supported by the ICIMOD Foundation, combined ICIMOD science and knowledge with stunning imagery to showcase the rapidly changing conditions of the Hindu Kush Himalayas and highlight ways in which people from the region are adapting.

Awe-inspiring photography, informative text, and interactive elements invited visitors from diverse backgrounds to investigate challenges being faced by the region's natural landscapes and communities. With a wide range of events and talk programmes held during the exhibition, the exhibition space also became a platform for dialogue on issues relevant to ICIMOD's work.

The exhibition's Education and Arts programme, which developed guided tours, teacher resources, and a series of art workshops, encouraged students and teachers to take learning from the exhibition to their homes and classrooms.

To bring Climate+Change to rural parts of Nepal, the contents were adapted to join a travelling book bus developed by the Embassy of the United States in Kathmandu. The exhibition is planned to travel to other parts of the Hindu Kush Himalayan region, where it will also act as a platform to share learning between communities and across borders.

Climate+Change: By the numbers

- 18 weeks
- +10,000 visitors
- +65 events
- +20 film screenings
- +25 talk programmes
- 3 press tours
- 5 changing exhibitions
- 16 art workshops
- 3 in-depth curricular programmes
- 8 teacher seminars with +200 teachers
- +75 guided tours
- +100 schools
- +4,500 students

Crowdsourcing for the Promotion of Good Practices

Across the Hindu Kush Himalayan region, the impacts of climate change and other drivers of change are challenging traditional livelihoods and adaptation strategies. New approaches and innovative technologies provide sustainable and practical solutions to these emerging challenges. As these solutions are taken up by different individuals and organizations across the Hindu Kush Himalayan region, they are also adapted and improved. However, capturing this feedback remains a challenge.

To help bridge this gap, a system was developed to systematically capture experience and knowledge about these practices and technologies, as well as to allow users to rate their effectiveness and add useful comments. Currently, nine practices that have been promoted by ICIMOD are available on the online platform for users to learn about and review. The platform is also accessible through a mobile application. The online system also provides space for outside users to upload and share their own good practices, stories, and case studies.

Growing Media Engagement

Communicating the Centre's research findings, evidence-based recommendations, and learning is at the core of ICIMOD's mission. With a growing number of ways to share information and knowledge, there is a rising need to connect ICIMOD's work with the global and regional dialogue on pressing environmental and development issues. Media has risen as a key partner in sharing important messages and ICIMOD knowledge on emerging challenges in mountain areas with the broader public. Important steps were taken in 2013 to increase meaningful engagement with media, both by producing timely knowledge products responding to current issues and by creating bridges to connect media representatives with ICIMOD science.

The ICIMOD Media Fellowship, launched in 2013, worked with five junior journalists from northeast India to strengthen their knowledge and capacity to report on issues relevant to ICIMOD's work, linking them with ICIMOD experts and partners as mentors. The fellowship will continue in different parts of the region in the coming years. In addition, over 40 applications were received for the new Media Grant Programme introduced as a part of the Himalayan Climate Change Adaptation Programme. The grant is supporting three professional journalists in reporting investigative stories on climate-related environmental issues, with particular attention to adaptation measures.

Developing a Strategy for Private Sector Engagement

The private sector can be a powerful partner for sustainable mountain development. As a key driver of job creation, poverty reduction, and innovation, it can contribute to the long-term impact of development activities. It has a critical role in ensuring that resources are protected and that mountain communities enjoy the economic benefits these resources create.

In 2013, the active engagement of private sector actors in ICIMOD activities increased substantially, with private sector actors pushing innovation and supporting long-term impact within programmes on river basins, transboundary landscapes, and atmosphere, and outreach activities. In addition, ICIMOD experts are increasingly called upon to speak on the impact of climate change on businesses and the role of business in adaptation.

A comprehensive private sector strategy developed in 2013 will help maximize the private sector's role in addressing pressing issues like climate change, adaptation, and enhancing livelihood opportunities for rural mountain communities.

MOUNTAINS MATTER: ADVOCATING FOR THE HINDU KUSH HIMALAYAS

ICIMOD Conference on Poverty and Vulnerability

In December 2013 ICIMOD, in collaboration with the National Planning Commission, Government of Nepal, organized a four-day international conference on addressing poverty and vulnerability in the Hindu Kush Himalayas. Participants included more than 200 scientists, policy makers, researchers, practitioners, and representatives of governments, international development and non-governmental organizations from across the world. Deliberations focused on various dimensions of poverty in the region and on the centrality of inclusive economic growth for mountain development. ICIMOD's director general Dr David Molden noted that the situation in the mountains has become more complex over the last 30 years owing to migration, urbanization, globalization, and climate change. It is hence necessary to develop practical solutions to problems facing the HKH region. The event also drew attention to other mountain-specific issues like land rights of indigenous communities, outmigration of men, the role of women in mountain development, and the need to recognize indigenous people as knowledge holders, change agents, and co-creators of innovations. Participants agreed that ICIMOD should continue forging regional partnerships to address poverty and vulnerability in the region. They also stressed the need to strengthen the media's capacity to communicate the issues of sustainable mountain development to the broader public.

Taking the Message of the Mountains to the Global Stage

UNFCCC COP-19

From 11 to 22 November 2013, ICIMOD participated in the 19th session of the Conference of the Parties (COP 19) to the UN Framework Convention on Climate Change held in Warsaw, Poland. At the conference ICIMOD representatives drew attention to the impact of climate change on the people and environment of the Hindu Kush Himalayan region. ICIMOD jointly organized two side events during that occasion, titled 'Adaptation without Borders: Building Cooperation for Resilient Regions' and 'Short-Lived Climate Pollutants in South Asia' respectively. The conference also featured a preview of a forthcoming report on food security co-authored by researchers from various organizations including ICIMOD. Further, ICIMOD supported the launch of an important paper produced by the Association of International Research and Development Centres for Agriculture (AIRCA). The paper focuses on how to transform rural livelihoods and landscapes by improving income, food security and the environment.

Arctic Circle Meeting

ICIMOD's Director General Dr David Molden and Director of Programme Operations Dr Ekalabya Sharma participated in inaugural Arctic Circle meetings held in Iceland from 11 to 14 October 2013. Dr Molden emphasized that the Arctic and the Hindu Kush Himalayas have much to learn from each other as the two regions are facing a common problem, namely melting ice and its impact on the livelihoods of diverse populations. At a session titled 'Arctic Lessons for the Himalayan/ Third Pole Region', the Icelandic Climate Research Fund and Skoll Global Threats Fund, Dr Molden and Dr Sharma presented the concept for a comprehensive assessment of the Hindu Kush Himalayas. They also had a fruitful meeting with the University of the Arctic Board, a cooperative network of more than 150 universities, colleges, and other organizations dedicated to education, research, and the promotion of indigenous and local capacities and sustainable development in the circumpolar North. As a result of the meeting, the University agreed to share its knowledge resources with the Himalayan University Consortium.

Mountain Summit at Nagaland

In September 2013 ICIMOD collaborated with partners to organize the Sustainable Mountain Development Summit in Nagaland, India. Participants from different Himalayan states in India discussed development-related issues and ways to influence policy during the two-day event. ICIMOD Director General Dr Molden made a presentation on managing disasters and sustaining development in the Hindu Kush Himalayas.

ICIMOD Foundation Moves Forward

The ICIMOD Foundation, established in 2007, has taken large steps forward in 2013 after the introduction of a new strategy. This new strategy brings the activities of the ICIMOD Foundation in line with the Centre's new five-year plan and strategic framework. It also ensures that the Foundation complements ICIMOD activities through its focus on education and training, climate change, and private sector investment. The Foundation is now an instrument to mobilize funds to support ICIMOD's regional work from diverse sources, including government agencies, other foundations, and corporate social responsibility activities of the private sector.

With guidance from this new strategy, the ICIMOD Foundation supported its first major activity in 2013 – Climate+Change, ICIMOD's first ever mega exhibition. With backing from the Foundation, ICIMOD knowledge on the impacts of climate and other changes in the Hindu Kush Himalayas was shared with an extremely diverse audience – from policy makers to students to business leaders – in a single venue.

Empowering Youth for the Future of Mountains

As future scientists, policy makers, business leaders, and development practitioners, youth can play a large role in building a sustainable future. ICIMOD has therefore been carrying out various initiatives to engage and empower youth. In 2010 it established youth forums in member countries to help youth to learn about critical issues in mountain development. In 2013 a series of national youth forums were organized in ICIMOD's member countries, providing young people an opportunity to enhance their knowledge about various issues such as climate change, eco-friendly lifestyles, eco-agriculture and environmental management.

In keeping with its goal to empower the younger generation, ICIMOD, in collaboration with the Association of American Geographers, launched a ten-month fellowship through the SERVIR-Himalaya initiative. The My Community Our Earth (MyCOE) fellowship was awarded to university students in the region. The programme has enabled them to conduct research on climate change in mountain areas using geographic technologies.

ICIMOD Director of Programme Operations Honoured

Dr Eklabya Sharma, Director of Programme Operations, was elected a Fellow of the Indian National Science Academy, the highest honour for a scientist in India. Dr Sharma's pioneering research on the relationship between development and mountain ecology spans decades, with outstanding contributions in the fields of natural resource management, transboundary biodiversity landscape development, and mountain farming systems, among others. Before his work at ICIMOD, he was founding Scientist In-Charge of the Sikkim Center of the GB Pant Institute of Himalayan Environment and Development in India, and he has served on high-level committees in India, the region, and at the global level.

48 Hours for Innovation

For two days in April 2013, ICIMOD organized 'NASA International Space Apps Challenge: Kathmandu Hackathon', with support from USAID and NASA. Seventeen teams comprising a total of 60 young software developers, engineers, designers, and technologists from Kathmandu took up the challenge of developing and sharing innovative solutions to pressing global problems. The winning team received an honourable mention in the global competition for developing a user friendly tool to teach children programmatic thinking without the need for technical programming skills.

ICIMOD Board Members Recognized

Dr Linxiu Zhang, a former independent board member of ICIMOD, received the TWAS Celso Futado Prize in Social Sciences for 2013.

Dr Pal Prestrud, also a former independent board member of ICIMOD, was appointed director of the Statens Naturoppsyn (the Norwegian Nature Inspectorate), which is responsible for managing protected areas, hunting, and fishing control.

Dr Thomas Gass, former Chair of the ICIMOD Support Group, was appointed UN Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs.

Partners in 2013

Afghanistan

Ministry of Agriculture, Irrigation and Livestock (MAIL) , Kabul (Focal Point)
Aga Khan Foundation
Kabul University (KU), Kabul
National Environmental Protection Agency (NEPA), Kabul
FOCUS Humanitarian Assistance, Kabul

Bangladesh

Ministry of Chittagong Hill Tracts Affairs, Dhaka (Focal Point)
ARANNAYK Foundation, Dhaka
Bangladesh Agricultural Research Council, Dhaka
Bangladesh Centre for Advanced Studies (BCAS), Dhaka
Bangladesh Meteorological Department (BMD), Dhaka
Bangladesh Space Research and Remote sensing Organization , Dhaka
Bangladesh Water Development Board (BWDB) Government of Bangladesh
Center for Environmental and Geographic Information Services (CEGIS), Dhaka
Centre on Integrated Rural Development for Asia and the Pacific, Dhaka
Eco Development, Bandarban
Green Hill, Chittagong
Institute of Water Modeling (IWM), Dhaka
Local Government Engineering Department, Dhaka
Ministry of Environment and Forests, Government of Bangladesh, Dhaka
Ministry of Environment and Forests, Government of Bangladesh, Dhaka
Pajureco, Khagrachari

Bhutan

Ministry of Agriculture and Forest, Royal Government of Bhutan, Thimpu (Focal Point)
Department of Aid and Debt Management Gross Happiness Secretariat, MoF, Thimpu
Department of Energy, MoTI, Thimpu
Department of Hydro met Services, Ministry of Economic Affairs, Royal Government of Bhutan and Real Time Solutions, Thimpu
Department of Livestock, MoA, Thimpu
Gross National Happiness Commission, Thimpu
National Land Commission, Thimpu
Royal University of Bhutan, College of Science & Technology, Thimpu
Sherubtse College, Royal University of Bhutan, Kanglung, Trashigang
The Council for Renewable natural Resources Research of Bhutan, Ministry of Agriculture and Forests, Thimpu
Ugyen Wanchuk Inst. for Conservation and Environment, MoA, Thimpu
Watershed Management Division, Dept. of Forestry, MoA, Thimpu

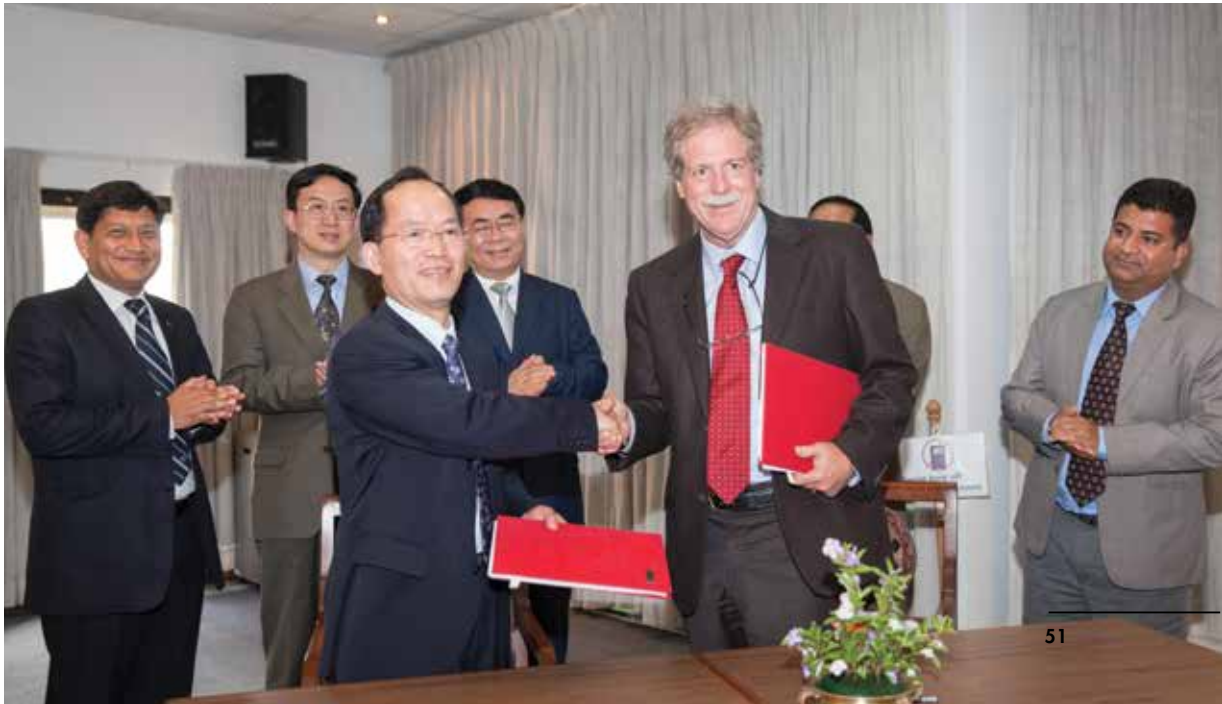
China

Chinese Academy of Sciences (CAS), Beijing (Focal Point)
Asian International Rivers Center Yunnan University, Kunming
Chengdu Institute of Biology (CIB), CAS, Chengdu
China Metrological Administration (CMA), Beijing
Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI), CAS, Lanzhou
Institute of Mountain Hazards and Environment, (IMHE), CAS, Chengdu
Institute of Tibetan Plateau Research (ITPR), CAS, Beijing

Kunming Institute of Botany (KIB), CAS, Kunming
Lanzhou University
Research Centre for Rural Economy (RCRE), Beijing
Sichuan Grassland Sciences Academy (SGSA), Chengdu
Sichuan University, Chengdu
The Institute of Geographic Sciences and Natural Resources Research (IGSNRR), CAS, Beijing
Tibet Academy of Agricultural and Animal Sciences (TAAAS), Lhasa
United Nations Office for Outer Space Affairs, Beijing
Xinjiang Institute of Ecology and Geography (XIEG), Urumqi
Yunnan Academy of Social Sciences, Kunming

India

Ministry of Environment and Forests, New Delhi (Focal Point)
GB Pant Institute of Himalayan Environment and Development, Almora (Designated Lead Agency)
AN Sinha Institute of Social Studies (ANSISS), Bihar
AARANYAK, Guwahati
Appropriate Technologies, Uttarakhand
Ashoka Trust for Research in Ecology and the Environment, Darjeeling
Central Himalayan Environment Association (CHEA)
CSK Himachal Pradesh Agricultural University, Palampur
Dr YS Parmar University of Horticulture and Forestry, Solan
Foundation for Innovation and Technology Transfer, Indian Institute of Technology
GB Pant Institute of Himalayan Environment and Development (Field offices: Sikkim, Arunachal Pradesh)
Himalayan Action Research Center (HARC)
Institute of Economic Growth, University of Delhi Enclave, Delhi
Institute of Himalayan Environment Research and Education (INHERE)
Meghalaya Rural Development Society, Shillong (MRDS)
National Institute for Disaster Management (NIDM), New Delhi
National Institute of Administrative Research, Lal Bahadur Shastri National Academy of Administration, Mussoorie
National Remote Sensing Centre, Hyderabad
NCMRWF, Ministry of Earth Sciences, Noida, UP
North Eastern Region Community Resource Management Project (NERCORMP)
Reuters Market Light
Society for Technology and Development, Mandi, HP
Tata Institute of Social Sciences, Mumbai
The Energy and Resource Institute, New Delhi
The Missing Link, Guwahati
The Mountain Institute, Gangtok
Uttarakhand Livelihood Improvement Project, Dehradun
Wadia Institute of Himalayan Geology (WIHG), Dehradun
Wildlife Institute of India (WII), Dehradun



Myanmar

Ministry of Environmental Conservation and Forestry, Yangon (Focal Point)
Department of Forest
Institute for International Development (IID)
Myanmar Survey Research (MSR)

Nepal

National Planning Commission, Kathmandu (Focal Point)
Asia Network for Sustainable Agriculture and Bioresources (ANSAB), Kathmandu
Asian Institute of Technology and Management (AIT), Kathmandu
Centre for the Study of Labour and Mobility (CESLAM), Kathmandu
Dabur Nepal Pvt. Ltd
Department of Hydrology and Meteorology
Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ), Kathmandu
Environment, Culture, Agriculture, Research and development Society Nepal (ECARDS-Nepal), Kathmandu
Environmental Camps for Conservation Awareness (ECCA), Kathmandu
Environmental Resources Institute (ERI)
Forest Resource Assessment (FRA), Kathmandu
International Water Management Institute (IWMI), Lalitpur
Kathmandu University (KU), Kathmandu
Leasehold Forestry and Livestock Programme (LFLP), Department of Forest
MAW Enterprises Pvt. Ltd – SKODA Division
Ministry of Science, Technology and Environment, Government of Nepal (MoE), Kathmandu
Nepal Development Research Institute (NDRI), Kathmandu
Nepal Institute of Development Studies (NIDS), Kathmandu
Nepal Water Conservation Foundation (NWCF), Kathmandu
South Asian Network for Development and Environmental Economics
Food and Agriculture Organization of the United Nations (FAO)
Research Centre for Applied Science and Technology (RECAST), Kathmandu
Water and Energy Commission Secretariat (WECS), Kathmandu
Western Uplands Poverty Alleviation Project (WUPAP)
World Wildlife Fund, Nepal
Young Innovations Pvt. Ltd, (YIPL), Kathmandu

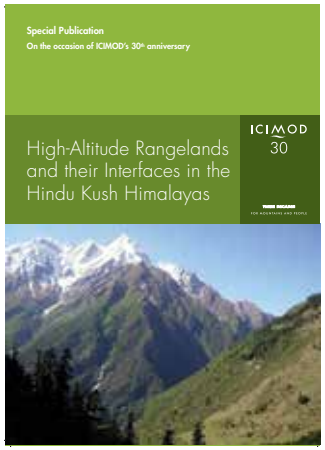
Pakistan

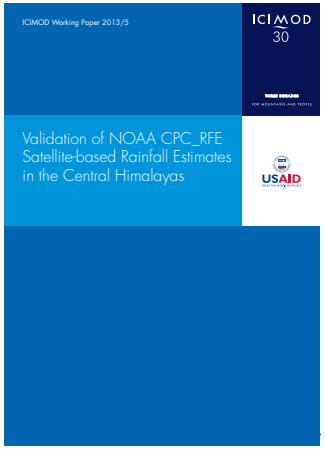
Ministry of National Food Security and Research, Islamabad (Focal Point)
Pakistan Agricultural Research Council (PARC), Islamabad
Climate Change, Alternate Energy and Water Resources Institute (CAEWRI), Pakistan Agricultural Research Council
Department of Forest, Gilgit-Baltistan
FAO-Pakistan
Forest Wildlife Park and Environment Department (FWED), Gilgit
International Water Management Institute (IWMI), Lahore
Karakuram International University
Natural Disaster Management Authority (NDMA)
One UN Joint Programme on Environment (One UNJPE), Islamabad
Pakistan Institute of Development Economics (PIDE), Islamabad
Pakistan Meteorological Department (PMD),
Rural Support Programme Network (RSPN), Islamabad
The Aga Khan Rural Support Programme (AKRSP)
Water and Power Development Authority, (WAPDA)
World Wide Fund for Nature, Gilgit-Baltistan

Non-HKH Partners

Altai Sayan Baikal Alliance (ASBA), Russia
ALTERRA, Institute within the legal entity stichting DLO, Netherlands
Asian Institute of Technology (AIT), Thailand
Australian Agency for International Development (AusAID), Australia
Austrian Development Agency (ADA),
Center for International Climate and Environment Research (CICERO), Norway
Chubu University (CU), Japan
Department for International development (DFID), UK
Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ) GmbH, Germany
Ev-K2-CNR Committee, Italy
Finish Meteorological Institute (FMI), Finland
Food and Agriculture Organization of the United Nations (FAO), Italy
Friedrich Schiller University (FSU), Jena, Federal Republic of Germany
Futurewater (FW), Netherlands
Global Biodiversity Information Facility (GBIF), Denmark
Global Observation Research Initiative in Alpine Environments (GLORIA), Austria
Institut de Recherche pour le Developement (IRD), France
Institute for Advanced Sustainability Studies (IASS), Germany
Institute for Global Environmental Strategies (IGES), Japan
Japan Aerospace Exploration Agency (JAXA), Japan
Ministry of the Foreign Affairs of Finland (MFA), Finland
Molina Center for Strtegic Studies in Energy and the Environment (MCE2), California, USA
National Aeronautics and Space Administration (NASA), USA
Norwegian Agency for Development Cooperation (Norad), Norway
SN Power, Norway
Swiss Agency for Development and Cooperation (SDC), Switzerland
Swiss Fedral Institute of Technology Zurich, (ETH), Switzerland
The Consortium for the Sustainable Development of the Andean Ecoregion (CONDESAN), Peru
The Disaster Prevention Research Institute (DPRI), Japan
The European Union (EU)
The International Fund for Agricultural Development (IFAD), Italy
The International Mountain Society (IMD), Switzerland
The Norwegian Ministry of Foreign Affairs, Norway
The Stockholm International Water Institute, (SIWI), Sweden
The Swedish International Development Cooperation Agency (Sida), Sweden
The World Bank (WB), USA
The World Meteorological Organization (WMO), Switzerland
United Nations Convention to Combat Desertification (UNCCD), Germany
United Nations Environment Programme (UNEP), Thailand
United Nations Environment Programme (UNEP)/GRID-ARENDAL, Norway
University Corporation for Atmospheric Research, USA
University of Central Asia (UCA), Kyrgyzstan
University of Zurich (UZ), Switzerland
World Wildlife Fund Inc. (WWF-US), USA

Publications





From ICIMOD...

ICIMOD disseminates much of the information gathered during programme activities in the form of printed and electronic publications targeted at policy makers, 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 publications can be downloaded free of charge from www.icimod.org/himaldoc. Hard copies are provided free to institutions actively involved in sustainable development of the Hindu Kush Himalayan region.

Books and Booklets

ICIMOD Working Paper

The Value Chain Approach for Mountain Development: Case Studies from Uttarakhand, India - ICIMOD Working Paper 2013/6 44pp Choudhary, D; Ghosh, I; Chauhan, S; Bahti, S; Juyal, M ISBN 978 92 9115 285 8

Validation of NOAA CPC_RFE2.0 Satellite-based Rainfall Estimates in the Central Himalayas : ICIMOD Working Paper 2013/5 42pp Shrestha, MS; Rajbhandari, R; Bajracharya, SR ISBN 978 92 9115 283 4

Policy and Institutions in Adaptation to Climate Change: Case study on flood mitigation infrastructure in India and Nepal - ICIMOD Working Paper 2013/4 24pp Das, PJ; Bhuyan, HK; Pradhan, NS; Khadgi, VR; Schipper, L; Kaur, N; Geoghegan, T ISBN 978 92 9115 288 9

Policy and Institutions in Adaptation to Climate Change: Case study on tree crop diversity in China, Nepal, and Pakistan - ICIMOD Working Paper 2013/3 68pp Su, Y; Lu, J; Manandhar, S; Ahmad, A; Xu, J ISBN 978 92 9115 280 3

Policy and Institutions in Adaptation to Climate Change: Case study on responding to water stress in Chitral, Pakistan - ICIMOD Working Paper 2013/2 32pp Nadeem, S; Younis, M; Ahmed, F ISBN 978 92 9115 271 1

Environmental Stratification of Kailash Sacred Landscape and Projected Climate Change Impacts on Ecosystems and Productivity: ICIMOD Working Paper 2013/1 36pp Zomer, RJ; Trabucco, A; Metzger, M; Oli, KP ISBN 978 92 9115 276 6

Special publication

High-Altitude Rangelands and their Interfaces in the Hindu Kush Himalayas: Special publication on the occasion of ICIMOD's 30th anniversary 202 pp Ning, Wu; Rawat, GS; Joshi, S; Ismail, M; Sharma, E ISBN 978 92 9115 291 9

Case Study

Case Studies on Flash Flood Risk Management in the Himalayas: In support of specific flash flood policies
Shrestha, AB; Bajracharya, SR (eds) 74pp
ISBN 978 92 9115 269 8

Electronic Publication

Natural Resource Management Approaches and Technologies in Nepal: NEPCAT Fact Sheets (updated March 2013)

General publications

Annual Report 2012

A Strategy and Results Framework for ICIMOD

CNICIMOD Newsletter Vol. 7 No. 1, April 2013

CNICIMOD Newsletter Vol. 7 No. 2, October 2013

Information sheets/briefing papers/project brochures/conference flyers

Towards Integrated Ecosystem Management in the Koshi Tappu Wildlife Reserve, Nepal

Newsletter: The REDD+ Project in Pakistan

Transforming Women's Economic Power and Movements in Rural Development: Where Are We Now? : Proceedings: AWID International Forum on Women's Rights and Development

Managing Flood Risks in the Hindu Kush Himalayas

Atmosphere Initiative

Addressing Poverty and Vulnerability in the Hindu Kush Himalayas: Forging regional partnerships to enable transformative change

Black Carbon: Impacts and Mitigation in the Hindu Kush Himalayas

Himalayan Climate Change Adaptation Programme (HICAP): Enhancing resilience of mountain communities through improved understanding of vulnerabilities, opportunities, and potentials for adaptation (updated August 2013)

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

Karakoram-Pamir Landscape Initiative: Promoting transboundary cooperation between China and Pakistan for the Karakoram-Pamir landscape

Mountain Climate Change Thematic Node: Asia Pacific Climate Change Adaptation Network (APAN) (updated March 2013)

Adaptation Learning Highways: Working with Communities to Adapt to Climate Change

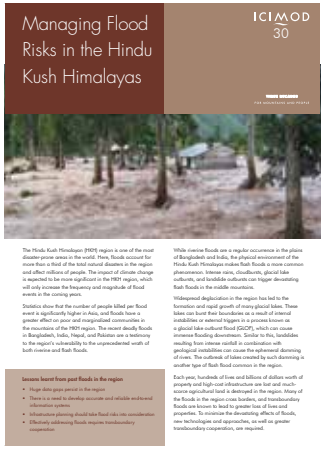
Koshi Basin Programme

Enhancing Resilience and Supporting Adaptation of Mountain People: ICIMOD's strategy for delivering impact

Forest Fire Detection and Monitoring System in Nepal (updated April 2013)

Videos

Better Livelihoods with Indigenous Honeybees, Running time: 8.55 mins



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ICIMOD Board of Governors 2013

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

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Secretary, Ministry of Chittagong Hill Tracts Affairs

Bhutan

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Secretary, Ministry of Agriculture and Forest

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Vice Chairman, National Planning Commission, Government of Nepal

Pakistan

Mr Seerat Asghar*
Secretary, Ministry of National Food Security and Research

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Chief Executive, The Foundation for Strategic Environmental Research (Mistra), Sweden

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Dr Pal Prestrud
Director, CEO, CICERO, Norway

ICIMOD Support Group, Chair

HE Kjell Pettersen
Norwegian Ambassador to Nepal
(Chairpersonship began November 2013)

HE Thomas Gass
Assistant Secretary General, UN Secretariat, New York, USA

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 Kathmandu, Nepal, November 2013

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Directorate
Molden, David
Sharma, Eklabya
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Ahmad, Farid
Basnyat, Ayushma RL
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Shah, Ghulam Muhammad

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Dhakal, Tika Devi

REGIONAL PROGRAMMES

Adaptation to Change
Choudhury, Dhrupad
Agrawal, Nand Kishor
Joshi, Sami
Mazal, Christian
Pradhan, Neera
Shrestha, Krisha
Syangden, Bhawana

Transboundary Landscapes
Kotru, Rajan
Chettri, Nakul
Ismail, Muhammad
Pradhan, Nawraj
Rai, Himaa
Rasaily, Rekha
Shakya, Bandana

River Basins
Shrestha, Arun Bhakta
Bajracharya, Nani Keshari
Khadgi, Vijay Ratna
Manandhar, Smarika
Nepal, Santosh
Shrestha, Mandira Singh
Shrestha, Govinda
Wahid, Shahriar

Cryosphere and Atmosphere
Panday, Arnico K
Ghale, Neetu
Manandhar, Liza
Mool, Pradeep K
Pradhan, Bidya

MENRIS
Shrestha, Basanta R
Bajracharya, Birendra
Shrestha, Anjeli

THEMATIC AREAS

Livelihoods
Rasul, Golam
Banerjee, Soumyadeep
Bisht, Suman
Choudhary, Dyutiman
Gerlitz, Jean-Yves
Ghate, Rucha
Gurung, Min Bahadur
Hoermann, Brigitte
Holmgren, Erling Valdemar
Karky, Bhaskar Singh
Khadka, Manohara
Kumar, Yukta
Nibanupudi, Hari Krishna
Pant, Basant
Partap, Uma
Seddiqi, Omaid Najmuddin
Sharma, Bikash
Shrestha, Anu Joshi
Shrestha, Mamata
Subedi, Nani Ram
Tuladhar, Sabarnee
van Strien, Marjorie
Verma, Ritu

Ecosystem Services
Wu, Ning
Aryal, Kamal Prasad
Bhatta, Laxmi Dutt

Bisht, Neha
Chaudhary, Sunita
Karki, Seema
Oli, Krishna Prasad
Phuntsho, Karma
Rana, Pradyumna JB
Rawat, Gopal
Rijal, Srijana Joshi
Shrestha, Prabha Raj
Thandar, Aye Myat
Tshering, Kuenzang
Yi, Shaoliang
Zhu, Dan

Water and Air

Mukherji, Aditi
Bajracharya, Sagar Ratna
Dangol, Pradeep M
Dhakal, Madhav P
Fleiner, Renate
Ghulami, Masoud
Joshi, Sharad Prasad
Joshi, Sarita
Rai, Sundar K
Shea, Joseph
Shrestha, Rajendra Bahadur
Stumm, Dorothea
Surapipith, Vanisa
Wester, Philippus

Geospatial Solutions

Manchiraju, Sri Ramachandra
Ali, Amm Mostafa
Bajracharya, Samjwal Ratna
Bajracharya, Rajan
Bajracharya, Sameer
Bhandari, Shova
Dangol, Gauri Shankar
Dangol, Bikash
Gilani, Hammad
Gurung, Deo Raj
Joshi, Govinda
Maharjan, Sudan Bikash
Pradhan, Sudip
Pradhan, Suyesh Chandra Singh
Qamer, Faisal Mueen
Shakya, Kiran
Shrestha, Finu
Uddin, Kabir
Wesselman, Sebastian

Knowledge Management and Communication

Rasmussen, Anja Moller
Acharya, Gopilal
Bajracharya, Jitendra Raj
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Jaiswal, Suman
Jha, Anil Kumar
Khatri, Shiva Hari
Maden, Utsav
Maharjan, Dharma Ratna
Mahat, Tek Jung
Manandhar, Bindiya
Mishra, Udayan
Pandey, Sushil Raj
Pradhan, Punam
Sellmyer, Amy
Shakya, Naina
Sharma, Bishwonath
Sherchan, Ujol
Sherpa, Samden Lama
Shrestha, Subasana
Tamang, Jiwan
Tandukar, Deependra
Thaku, Asha Kaji
Thapa, Ram Sharan

Administration and Finance

Kansakar, Chandra Bir Singh
Amatya, Shree Mani
Bajracharya, Pramila
Bajracharya, Narendra
Dabas, Rahul
Gurung, Dipshikha
Jirel, Birkha Bahadur
KC, Rishi
KC, Dhruba
KC, Sudama
Karmacharya, Jay
Lindwer, Miriam
Magar, Bishnu
Maharjan, Kishore
Maharjan, Krishna
Maharjan, Ram
Maharjan, Chini Kaji
Mali, Rajendra Prakash
Manandhar, Prem K
Pradhan, Saisab
Pradhan, Pallavi
Rana, Ganga Bahadur
Ranjit, Rabindra
Sadashankar, Pashupati
Shahi, Rajani
Sharma, Yuvraj
Shrestha, Shyam
Shrestha, Mohan Krishna
Shrestha, Kishore
Shrestha, Kiran Man
Shrestha, Nabindra Raj
Shrestha, Ram Kumari
Shukla, Radheshyam
Singh, Sabak Kumar
Subedi, Jai Bahadur
Tamang, Mik Mar
Thapa, Chomu Prerna
Thapa, Shambhu
Thapa, Rekha Khatri
Upreti, Rajen
Vaidya, Jenny

Visiting Scientist/Advisor,

Bennett, Lynn
Immerzeel, Walter
Jodha, Narpat Singh
Kargel, Jeffery S.
Khan, Ashiq Ahmad
Kniven, Dominic
Mobarak, Ahmed
Mohtadullah, Khalid
Pellicciotti, Francesca
Rupakheti, Maheshwor
Wagnon, Patrick
Vaidya, Ramesh Anand

Country Offices

Doosti, Abdul Azim
Jasra, Abdul Wahid

SANDEE

Shyamsundar, Priya
Joshi, Malvika
Kafle, Anuradha
Lohano, Heman Das
Nepal, Mani
Pradhan, Neesha

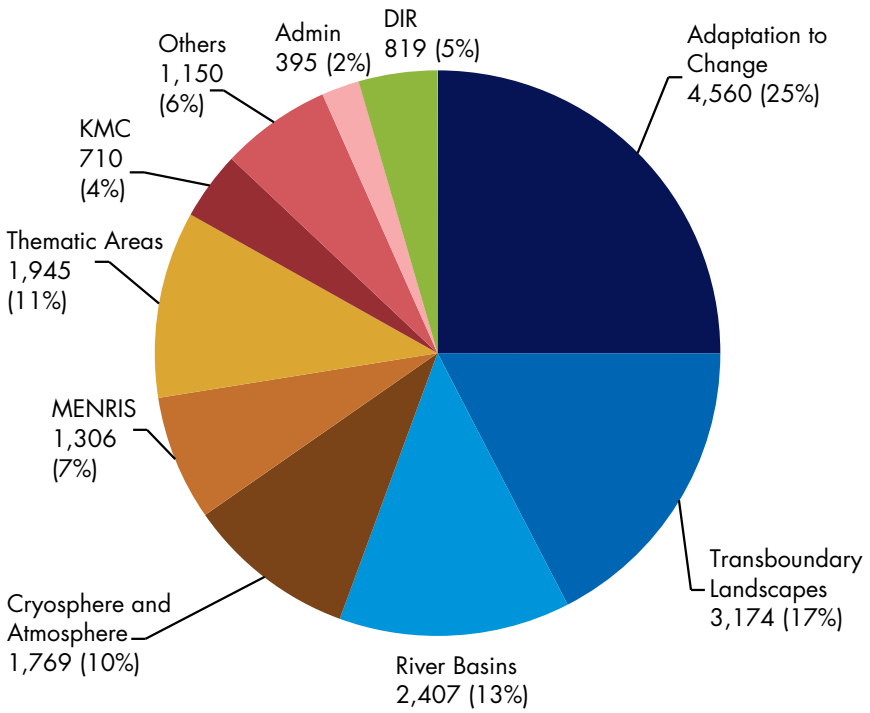
Financial Report

ICIMOD Income and Expenditure Accounts 2004-2013

The Financial management of the Centre is implemented through the establishment of programme and core funds, and cofinancing 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.

ICIMOD Expenses by Programme 2013

(In thousand US Dollars)



Core Programme Funds

(In US Dollars)

SOURCE	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
A. Regional	**220,563**	**344,805**	**276,196**	**245,249**	**359,116**	**334,209**	**630,277**	**539,592**	**830,902**	**1,007,583**
Afghanistan	5,000		10,000	5,770	7,873	10,742	14,658	14,658	35,342	37,000
Bangladesh	28,300	10,000	20,000	10,000	11,240	11,758	-	12,348	12,988	67,000
Bhutan	7,500	15,000	7,500	8,243		32,543	25,651	35,000	30,000	37,000
China	145,000	45,000	100,000	100,000	100,000	100,000	150,000	150,000	150,000	366,000
India	11,284	155,456	113,106	72,075	50,794	149,189	160,223	171,713	292,750	366,000
Myanmar	9,956			19,706	29,223	10,746	35,222	35,222	29,822	36,583
Nepal	13,523	14,154	13,784	21,246	23,566	19,231	20,175	20,819	80,000	98,000
Pakistan		105,195	11,806	8,209	136,420	-	224,348	99,832	200,000	-
B. Non-Regional	**2,703,124**	**2,592,999**	**2,733,819**	**2,860,492**	**4,739,611**	**4,066,646**	**3,858,895**	**3,463,530**	**4,990,609**	**4,917,062**
Austria	125,460	122,349	120,357	137,097	160,883	136,364	94,444	98,124	85,642	795,756
Denmark	400,572	200,901	-	214,264	-	-	-	-	-	-
DFID			-	-	-	-	-	-	1,770,968	831,818
Germany	494,694	630,416	931,632	888,988	1,002,060	1,536,038	1,225,203	1,446,528	1,186,611	544,959
Netherlands	660,438	600,000	600,000	540,000	60,000	-	-	-	-	-
Norway	521,960	539,333	581,830	580,143	1,843,281	817,625	841,652	909,310	882,211	1,632,821
Sweden					779,676	714,550	714,550	-	-	-
Switzerland	500,000	500,000	500,000	500,000	893,711	862,069	983,046	1,009,568	1,065,177	1,111,708
C. Other Income	**175,155**	**130,360**	**334,535**	**632,666**	**1,296,940**	**1,182,790**	**1,105,367**	**1,686,966**	**1,493,387**	**1,540,893**
Total Core(A+B+C)	**3,098,842**	**3,068,164**	**3,344,550**	**3,738,407**	**6,395,667**	**5,583,645**	**5,594,539**	**5,690,088**	**7,314,898**	**7,465,538**
Project Co-financing	2,596,420	3,237,024	3,072,532	4,002,301	5,801,899	6,112,452	7,732,803	14,050,498	15,608,647	13,933,432
GRANDTOTAL	**5,695,262**	**6,305,188**	**6,417,082**	**7,740,708**	**12,197,566**	**11,696,097**	**13,327,342**	**19,740,586**	**22,923,545**	**21,398,970**
EXPENDITURE	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Programme Cost	1,730,067	1,805,625	1,938,261	2,395,461	3,672,008	4,447,710	4,654,126	3,303,616	3,393,004	3,535,127
Project Cost	3,018,022	3,242,531	3,103,868	3,808,778	4,785,076	5,998,834	7,653,146	9,797,169	13,007,025	13,487,150
Support Cost 1	675,486	515,203	493,003	537,721	752,133	541,655	1,067,357	1,050,206	599,401	395,043
Directorate Cost 2	366,075	419,671	523,626	552,520	714,544	701,408	650,827	1,077,021	1,002,101	818,913
Total Expenditures	**5,789,650**	**5,983,030**	**6,058,758**	**7,294,480**	**9,923,761**	**11,689,607**	**14,025,456**	**15,228,012**	**18,001,531**	**18,236,233**

Note : Support cost in 2013 includes exchange gain amounting to $ 499,786

Project Co-financing Funds

(In US Dollars)

SOURCE	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Australia							-	-	1,479,600	1,570,050
Austria	339,977	432,394	523,798	538,037	615,087	586,667	267,555	416,844	127,138	122,372
Finland						602,410	-	1,154,401	-	651,890
Germany	51,826	191	252,528	95,891	214,436	204,378	878,025	209,074	1,350,101	316,863
Netherlands	352,894	169,012					-	-	-	-
Norway		100,630				647,354	1,379,884	4,779,286	4,496,448	5,740,075
Sweden						350,925	343,425	1,845,325	1,736,409	1,907,387
Switzerland	547,166	648,496	420,477	510,690	1,179,487	190,307	271,158	85,481	151,514	-
USA	98,816	158,320	161,641	364,858	742,374	426,354	422,452	513,862	983,088	696,971
ITALY/IUCN	72,441	9,275	152,062	510,381	583,702	200,262	111,832	-	-	-
ADA							228,472	238,755	238,413	-
ADB	20,000	4,000	19,340			57,090	213,737	110,000	12,821	215,794
EU		33,631	429,077	30,717	136,875	71,228	-	60,355	2,786,458	-
CIP	9,000			85,690	31,990	40,000	43,173	65,683	80,407	-
FAO	165,200	83,025	50,425	106,785	101,274	98,700	384,118	686,632	230,165	169,356
ISNAR							-	-	-	-
UNEP	100,558	119,337	101,560	55,500	176,300	270,000	424,534	442,284	358,342	110,280
UNESCO	9,000	8,000	4,000	12,400	14,600	2,000	65,000	48,000		
WWF	24,825				5,000		-	-		
IFAD	127,000	433,000	95,391	469,430	10,000	379,506	573,019	551,348	549,515	138,851
DFID							-	-	74,881	1,281,118
ESA		44,609					-	-		
WI		124,649			69,636		-	-		
FORD	200,000	143,127		100,000	200,000		200,000	-		
IDRC	132,290	338,707	517,383	297,398	784,121	833,867	632,098	682,861	422,503	471,590
MacArthur	75,000	175,000	100,000	150,000	240,000		400,000	-	-	200,000
ICCO	24,021	140,015	168,845	146,790		152,779	164,403	173,938		
CEH, UK	7,248						-	-		
CFC/FAO				301,143			-	-		
APN/START	68,600	13,400					-	-		
ITC	41,991						-	-		
Twente	81,953	30,096	71,209	132,183	172,767		-	70,211	2,688	
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	226,218	32,283
Others	4,645	3,201	4,796	94,408	128,976	230,176	302,753	316,000	301,939	308,552
TOTAL	**2,596,420**	**3,237,024**	**3,072,532**	**4,002,301**	**5,801,899**	**6,112,452**	**7,732,803**	**14,050,498**	**15,608,647**	**13,933,432**

EXPENDITURES	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Expenditure	3,018,022	3,242,531	3,103,868	3,808,778	4,785,076	5,998,834	7,653,146	9,797,169	13,007,025	13,487,150

International Centre for Integrated Mountain Development
Statement of Assets, Liabilities, Loan and Fund Balances
as of 31 December 2013

All amounts in United States Dollars

	Schedule		As at 31 December 2013		As at 31 December 2012
Fund Balances					
General Reserve	1		3,106,274		3,252,113
Operational Reserve	1		2,973,344		963,320
Exchange Equalisation Reserve	1		503,606		503,606
Restricted Programmes Support Fund Balance (net) [Note 3(f) of Schedule 14]					
Government of Germany		76,100			
Austrian Development agency		305,611	381,711		-
Restricted Core Programme Support Fund Balance (net) [Note 3(g) of Schedule 14]					
Department for International Development (DFID)			2,095,688		1,770,968
Special Projects Fund Balance (net)	6D				
Amounts to be incurred on projects		11,771,228		11,605,373	
Amounts to be recovered		(1,584,127)	10,187,101	(1,864,553)	9,740,820
Total Sources of Funds			**19,247,724**		**16,230,827**
Assets and Liabilities					
Fixed Assets	2		2,138,747		1,665,240
Capital Work-in-Progress			-		361,683
Current Assets, Loans and Advances:					
Cash and Bank Balances	3		19,819,056		17,931,363
Loans and Advances	4		2,126,972		1,612,902
			21,946,028		19,544,265
Less: Current Liabilities and Provisions	5		(4,837,051)		(5,340,361)
Net Current Assets			17,108,977		14,203,904
Total Application of Funds			**19,247,724**		**16,230,827**
Notes forming part of the financial statements	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

Place: Gurgaon, India
Date: 4 APRIL, 2014

For International Centre for Integrated Mountain Development

David James Molden
Director General

Shekhar Ghimire
Director, Administration and Finance

Rajendra Prakash Mali
Budget & Finance Officer

Place: Kathmandu, Nepal
Date: 4 APRIL, 2014

International Centre for Integrated Mountain Development
Operating Statement for the Year Ended 31 December 2013

All amounts in United States Dollars

	Schedule			Year ended 31 December 2013		Year ended 31 December 2012
INCOME						
Contribution from Donors						
Restricted Programme Support	6A			1,075,463		1,186,611
Restricted Core Programme Support	6B			831,818		1,770,968
Core and Other Programmes Support	6C			4,017,364		2,863,932
Special Projects	6D			13,933,431		15,608,647
Other Income	7			1,540,893		1,493,387
			(A)	**21,398,969**		**22,923,545**
EXPENDITURE						
Programme Cost						
Restricted	8A			693,752		1,189,104
Restricted Core	8A			507,098		-
Others	9			2,049,392		1,670,196
Special Project Cost	10			13,259,315		12,616,645
Scaling Up Cost	11					
Programmes	11A			284,885		273,072
Special Projects	11B			227,835		390,380
Core Support Cost						
Directorate	12	1,061,969		1,600,188		
Administrative Support	13	1,061,846		869,757		
Depreciation [Note 3(a)(iii) of Schedule 14]		98,570		78,217		
Less: Indirect Cost Allocation [Note 2 (xi) of Schedule 14]		(508,643)		1,713,742	(537,368)	2,010,794
Foreign Exchange (Gain)/ Loss (net)				(499,786)		(148,660)
			(B)	**18,236,233**		**18,001,531**
Surplus of Income over Expenditure			(A-B)	**3,162,736**		**4,922,014**
Less: Surplus of Special Projects' income over expenditure transferred to Special Project Fund Balances (net)				446,281		2,601,622
Less: Surplus/(Deficit) of Restricted Programme Support's income over expenditure transferred to Restricted Programme Support Fund Balances (net)				381,711		(2,493)
Less: Surplus of Restricted Core Programme Support's income over expenditure transferred to Restricted Core Programme Support Fund Balances				324,720		1,770,968
Net Surplus adjusted to Operational Reserve				**2,010,024**		**551,917**
Notes forming part of the financial statements	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

Deloitte Haskins & Sells Chartered Accountants

Place: Gurgaon, India
Date: 4 APRIL, 2014

For International Centre for Integrated Mountain Development

David James Molden
Director General

Shekhar Golmire
Director, Administration and Finance

Rajendra Prakash Mali
Budget & Finance Officer

Place: Kathmandu, Nepal
Date: 4 APRIL, 2014

International Centre for Integrated Mountain Development
Cash Flow Statement for the Year Ended 31 December 2013

All amounts in United States Dollars

Particulars	Year ended 31 December 2013	Year ended 31 December 2012
A. Cash flow from operating activities		
Net Surplus as per Operating Statement	2,010,024	551,917
Adjustment for:		
Depreciation	98,570	78,217
Capital expenditure charged in the programmes	187,460	570,870
Interest on time deposits	(111,284)	(93,382)
Profit on sale of fixed assets	(16,328)	(1,834)
Exchange fluctuation-unrealised	(469,322)	130,568
Operating surplus before working capital changes	**1,699,120**	**1,236,356**
Adjustment for:		
Loans and Advances	(521,024)	(442,185)
Current Liabilities and Provisions	(498,566)	2,016,914
Net cash from / (used in) operating activities	**679,530**	**2,811,085**
B. Cash flow from investing activities		
Purchase of fixed assets	(543,769)	(736,295)
Sale of fixed assets	16,404	1,834
(Increase)/ Decrease in time deposits with bank	711,161	(3,498,050)
Interest received	111,425	99,247
Net cash from/(used in) investing activities	**295,221**	**(4,133,264)**
C. Cash flow from financing activities		
Movements in Special Projects Fund	446,281	2,601,622
Movements in Restricted Programmes Support Fund	381,711	(2,493)
Movements in Restricted Core Programme Support Fund	324,720	1,770,968
Net cash from financing activities	**1,152,712**	**4,370,097**
D. Effect of Foreign Exchange differences on Cash and cash equivalents	140,722	45,797
Net increase in cash and cash equivalents (A + B + C + D)	**2,268,185**	**3,093,715**
Cash and cash equivalents at the beginning of the year	**4,629,571**	**1,535,856**
Cash and cash equivalents at the end of the year (Refer Schedule 3)	**6,897,756**	**4,629,571**

In terms of our report attached

For Deloitte Haskins & Sells
Chartered Accountants

Deloitte Haskins & Sells Chartered Accountants

Alka Chadha
Partner

Place: Gurgaon, India
Date: 4 APRIL, 2014

For International Centre for Integrated Mountain Development

David James Molden
Director General

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Director, Administration and Finance

Rajendra Prakash Mali
Budget & Finance Officer

Place: Kathmandu, Nepal
Date: 4 APRIL, 2014

ICIMOD Members, Sponsors, and Funding Partners

CORE FUNDING

Regional member countries

Afghanistan
Bangladesh
Bhutan
China
India
Myanmar
Nepal
Pakistan

Non-regional countries

Austrian Development Agency (ADA)
Department for International Development (DFID), UK
Norwegian Ministry of Foreign Affairs (MFA)
Swiss Agency for Development and Cooperation (SDC)

PROGRAMMATIC FUNDING

- Austrian Development Agency (ADA)
- Bundesministerium für Wirtschaftliche Zusammenarbeit (BMZ), (German Federal Ministry for Economic Development Cooperation) Germany
- Norwegian Ministry of Foreign Affairs

STRATEGIC AND PROJECT FUNDING

- Association of American Geographers (AAG)
- Asian Development Bank (ADB)
- Australian Agency for International Development (AusAID), now Department of Foreign Affairs and Trade (DFAT)
- Common Fund for Commodities (CFC)
- Consortium for the Sustainable Development of the Andean Ecoregion (CONDESAN)
- Department for International Development (DFID), UK
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- Elsevier Foundation
- European Commission (EC)
- Food and Agriculture Organization of the United Nations (FAO)
- ICIMOD Foundation
- Institute for Global Environment Strategies (IGES)
- Interchurch Organization for Development Cooperation (ICCO)
- International Development Research Centre, Canada (IDRC)
- International Fund for Agricultural Development (IFAD)
- International Potato Center (CIP)
- MacArthur Foundation
- Ministry for Foreign Affairs of Finland
- Norwegian Ministry of Foreign Affairs
- National Aeronautics and Space Administration (NASA)
- Norwegian Agency for Development Cooperation (Norad)
- Royal Norwegian Embassy, Kathmandu
- Swedish International Development Cooperation Agency (Sida)
- The World Bank
- United Nations Development Programme (UNDP)
- United Nations Environment Programme (UNEP)
- United Nations Convention to Combat Desertification (UNCCD)
- United States Agency for International Development (USAID)
- United States Embassy, Kathmandu
- University Corporation for Atmospheric Research (UCAR)
- Universiteit Utrecht
- World Agroforestry Centre (ICRAF)
- World Meteorological Organization (WMO)

About ICIMOD

The International Centre for Integrated Mountain Development, ICIMOD, is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. Globalization and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. We support regional transboundary programmes through partnership with regional partner institutions, facilitate the exchange of experience, and serve as a regional knowledge hub. We strengthen networking among regional and global centres of excellence. Overall, we are working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now, and for the future.

ICIMOD gratefully acknowledges the support of its core donors: the Governments of Afghanistan, Australia, Austria, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Norway, Pakistan, Switzerland, and the United Kingdom.

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