

Workshop Proceedings Report



**SOUTH ASIA MEDIA WORKSHOP
ON ADAPTATION TO CLIMATE CHANGE**

18-20 May 2011
Dhulikhel and Kathmandu, Nepal

Acknowledgements

The **South Asia Media Workshop on Adaptation to Climate Change** in Dhulikhel and Kathmandu, Nepal was held from 18-20 May 2011. The workshop was organised by the **Regional Climate Change Adaptation Knowledge Platform for Asia (AKP)**, the **Asia Pacific Adaptation Network (APAN)**, and the **International Centre for Integrated Mountain Development (ICIMOD)**, **Nepal and its Asia Pacific Mountain Network (APMN)**.

The organizers of the media workshop would like to acknowledge the support of the facilitators and resource persons from ICIMOD, AKP, APAN, the **Third Pole Project**, the **Stockholm Environment Institute (SEI)**, the **Center for Environmental and Geographic Information Services (CEGIS) - Bangladesh**, the **Southeast Asia START (Global Change System for Analysis, Research and Training)** and **Regional Center (SEA START)-Thailand**, and the **Himal Media** for sharing their activities and providing insights, inputs to the discussions.

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- Federation of Community Forest Users, Nepal (FECOFUN): **Rajendra Sapkota and Binod Sapkota**
- The Third Pole Project, a joint project of the Internews earth Journalism Network and China Dialogue: **Joydeep Gupta**

Special thanks goes to twenty-four media representatives from the South Asian countries of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

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Twenty-four media representatives from the South Asian countries of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka called for better understanding on the science behind climate change and increased attention on adaptation to climate change. The journalists had an opportunity to network and enhance their knowledge of regional climate change issues at the three-day South Asia Media Workshop on Adaptation to Climate Change, held in Dhulikhel and Kathmandu from 18 to 20 May.

The workshop, organised by the Regional Climate Change Adaptation Knowledge Platform for Asia (AKP), the Asia Pacific Adaptation Network (APAN), and the International Centre for Integrated Mountain Development (ICIMOD) and its Asia Pacific Mountain Network (APMN), was designed to facilitate awareness raising on the increasing impacts of climate change, related vulnerabilities, and strategies for adaptation by mountain and downstream populations through strengthening food, water, energy, environmental, and biodiversity security. The workshop also served to bring into focus the upcoming issues and agenda for UNFCCC and RIO+20 conferences and others.

At the opening of the workshop, Dr Young-Woo Park, Regional Director and Representative for Asia and the Pacific, United Nations Environment Programme Regional Office for Asia and the Pacific, stressed that the basis of the three-day media workshop was harnessing the power of media and their influence on public opinion in South Asia to raise awareness on climate change and the need to adapt to it. Dr Andreas Schild, Director General of ICIMOD, asserted that the workshop served as an effective means of providing media persons with the necessary information on the ongoing changes in different ecosystems, how such changes affect the resident population and how such effects translate to the global scale. He seconded Dr. Park's statement and emphasized on the role of media persons as a link between knowledge institutions and the public and as important role players in spreading the 'right message' to the people.

Resource persons from ICIMOD, AKP, APAN, the Third Pole Project, the Stockholm Environment Institute (SEI), the Center for Environmental and Geographic Information Services (CEGIS)-Bangladesh, and the Southeast Asia START (Global Change System for Analysis, Research and Training) Regional Center (SEA START)-Thailand familiarised the participants with the impacts of climate change on the water and agriculture sectors in mountain and coastal regions and the role of the media in sharing knowledge on climate change impacts and possible adaptation measures. During a day-long field visit to Panchkhal and Bhotekoshi, the participants visited community forests and questioned community members about issues related to reducing emissions from deforestation and degradation (REDD) and water scarcity. They also observed the extent of structural damage in the Upper Bhotekoshi area, where major glacial lake outburst flood incidents were noticed in 1964 and 1981.

The workshop came to a close at ICIMOD headquarters with closing remarks from the Director of Programmes, Dr Eklabya Sharma, followed by Vote of Thanks by Dr Young-Woo Park and a certificate distribution ceremony.

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GENERAL CONTEXT AND OBJECTIVES

News reporting on climate change has become one of the most effective means to educate people on what is happening in different ecosystems, how the situation is changing, and what the changes mean to people living there and to the global community. Lack of understanding of the issues often leads to serious misreporting of the facts adding further confusion to climate discourses.

The objective of the media workshop was to provide updated scientific information on environmental issues, particularly with regard to increasing impacts and vulnerability due to growing climate and socioeconomic changes and adaptation needs of the people in South Asia.

WORKSHOP COMPONENTS

The workshop contained briefings from climate change specialists followed by question and answer sessions; interactive discussions between participants on how best to cover the subjects, facilitated by experienced journalists; and offered networking opportunities, specifically tailored to the situation in South Asia. Additional resources that journalists need for sustained coverage of climate change, especially how to adapt to it, were provided.

The programme included presentations from experts and interactive sessions on the first day, a whole-day field visit on the second day, and more presentations and discussions on the third day, especially on the lessons learned from the field visit.

PARTICIPANTS

Journalists from Print, TV, Radio or online media who regularly cover environmental issues, especially climate change and its effects, from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

24 media person were selected through an open announcement in the region which attracted over 175 applications. They were selected based on relevance of their work, coverage and quality of reported work submitted along with the application.

WELCOME ADDRESS



Ms Roopa Rakshit
Adaptation Knowledge
Platform

In her welcome address, Ms Roopa Rakshit maintained that the workshop had an enthusiastic group of media persons representing seven countries in South Asia. They were formally invited after a careful screening process. Over 100 applications and several requests to join as observers were also received. Partners involved included Adaptation Knowledge Platform, Asia Pacific Adaptation Network, ICIMOD and its Asia Pacific Mountain Network, and Interpress.

Roopa said the workshop participants would deliberate on their respective roles, scope, possibilities and challenges towards effective communication of adaptation to climate change. Besides the learning, they would deliberate on fostering a network and nurture an evolving relationship between the media community and adaptation practitioners and knowledge organisations. How such networks and forums can establish an e-community of practice taking advantage of social media tools needs to be considered. A platform by the media, for the media, and with the media working or interested in adaptation to climate change is the way to go.

In closing, Roopa shared that the Asia Pacific Climate Change Adaptation Forum (Adaptation Forum) 2010 attracted some 600 climate change adaptation stakeholders from the Asia Pacific region and extended an invitation to media persons to the “Mainstreaming Adaptation Into Development: ADAPTATION in ACTION” Forum in 2011 in Bangkok, and acknowledged the full support and cooperation of ICIMOD, the host partner.

OPENING REMARKS I: "IMPORTANCE OF MEDIA COMMUNITY TO RAISE AWARENESS AND IMPROVE DISCUSSIONS ON CLIMATE CHANGE ADAPTATION"



Dr Young-Woo Park
Regional Director and
Representative for Asia
and the Pacific, UNEP
Regional Office for Asia
& the Pacific

In his opening remark, Dr Young-Woo Park stressed that the basis of the three-day media workshop is harnessing the power of media and their influence on public opinion in this region for raising awareness on climate change adaptation.

It is difficult to communicate climate change effectively as the science behind it is very complex. It occurs on a global scale over a long period.. Scientists insist that extreme weather events cannot be ascribed to climate change alone although many such events are likely to be influenced by climate change. And the future consequences, although likely dire, remain shrouded in varying degrees of uncertainty. It is difficult to mitigate the impacts of climate change. The frustration of individuals or even countries who feel their efforts can do very little to stem this global threat, the lack of political progress toward a strong international treaty – which tends to generate apathy- and the challenge of communicating climate change in an effective way to a wider audience become clear. .

There is no doubt that climate change is the ultimate challenge of our time, it is a challenge for all countries in the world and particularly for developing countries in Asia and the Pacific; especially here in Nepal, a country often referred to as climate change “hot spot.” The Himalayas supply crucial water to about 40 percent of the world’s population. However, melting of the Himalayan glaciers continues to pose a significant threat to the people in the region.

Adaptation is a silent revolution. Slowly, but surely, the term “climate change adaptation” is entering both the lexicon and the policy realm in developing countries of the Asia-Pacific region, be it Thailand, where adaptation to climate change is being practiced by the people of Sapanhin sub-district or the Binh Dinh province of Viet Nam, where it is all set to be integrated into local development planning. Adaptation to the changing climate is fast becoming a reality.

There is no doubt that climate change is the ultimate challenge of our time, it is a challenge for all countries in the world and particularly for developing countries in Asia and the Pacific; especially here in Nepal, a country often referred to as climate change “hot spot.”

Journalists need to remain objective and balanced; they should avoid taking an advocacy position on issues. They should gain ideas on how to obtain better cooperation from press officers and scientists; how to improve the appeal of their stories, make them more understandable and prominent, and distribute them to a wider audience.

The whole basis of the three-day media workshop is harnessing the power of media and their influence on public opinion in this region for raising awareness on climate change adaptation. Media is a key vehicle for delivering messages among different interest groups. Voices from communities are having difficulties in reaching policy makers and information from agencies and academia is not trickling down to the grassroots. How do we go about filling this communication gap?

Media professionals have a crucial role to play in disseminating useful climate information to effectively guide public debate and understanding about climate change and ultimately convince people and policy makers in our region to change their behaviours and adopt climate friendly lifestyle.

This workshop is an opportunity to take stock of where we are and how we can contribute in securing a sustainable future and also reflect on the crucial role of the media.

OPENING REMARKS II: “CLIMATE CHANGE IN THE HIMALAYAS: NEW VULNERABILITIES, NEW OPPORTUNITIES”



Dr Andreas Schild
Director General,
ICIMOD

Dr Andreas Schild talked about challenges and opportunities posed by climate change in the Himalayas and highlighted priority issues in terms of how climate change is affecting this region?, how global systems are affecting the local processes? And how can we find solutions from the mountain systems themselves?

The Himalayan region is the “water tower” of Asia down which flow ten major rivers of Asia. About 1.3 billion people depend on the Himalayan waters for various purposes. The region is the most irrigation-intensive area in the world. The Himalayan region boasts of incredible biodiversity richness, incredible sacred and other types of landscapes that have tremendous tourism potential. However, the Himalayan region is also a climate change ‘hot spot’. Some of the key drivers driving changes in the region are the economic rise of India and China; infrastructural development; globalisation with its associated features such as transport, information and communication technologies, outmigration, and urbanisation. Other visible changes are happening in the Himalayan cryosphere – overall, deglaciation is rapid in the Himalaya. Water demand is rising relative to supply, and this is going to be a point of contention, resulting in social conflicts. This could also have adverse impact on the food security situation of the region.

For planning and decision making to tackle these myriad challenges, data are needed. The Intergovernmental Panel on Climate Change Assessment Report 4 called the Himalayan region a “blank spot”, implying that it is largely a data-deficient region. Research, data, and generation of new knowledge will be required to reduce climate uncertainty. This calls for more research on changing monsoon behaviors, cryospheric change, study of hydrological balance, etc, and their implications on the lives and livelihoods of the people living in and around the mountains and downstream.

The Himalayan region is the “water tower” of Asia down which flow ten major rivers of Asia.

While climate change will continue for a very long time, adaptation has to begin right now. Water storage and rainwater harvesting, early warning system, integrated watershed development, monitoring of major river basins, landscape approach to biodiversity conservation, greater regional cooperation, and diversification of livelihoods should be part and parcel of the adaptation strategy of the region.

ICIMOD, as a regional facilitator and broker of knowledge with a mountain perspective, is already supporting adaptation. It is contributing to its regional member countries through knowledge generation and uptake; downscaling and customising global knowledge; promoting community-led to transboundary approaches to biodiversity conservation and management; engaging in training and capacity building; making regional knowledge and data accessible to partners; developing tools and methodologies, and engaging in monitoring of cryosphere in the region. It is also looking at livelihoods from multiple perspectives such as value-chain development, niche products, and remittances; it is developing regional flood information system; it is looking to leverage autonomous adaptation while contributing to planned adaptation, and also looking into valuation of ecosystem services, among other things.

In the lead up to Rio+20, ICIMOD is also looking to use this global platform to position the Himalayan agenda. ICIMOD has been contributing to the UNFCCC and CBD processes. As “Green Economy” is going to be on the



**Mr Suppakorn
Chinvanho**
Southeast Asia System
Global Change System
for Analysis, Research
and Training (SEA
START), Thailand

Rio+20 agenda, ICIMOD is already grappling with that critical question: What does 'green economy' mean for the mountain and human systems of the Himalayan region and how we maintain already existing green economy in this part of the world?

"SCENARIO-THINKING AND CLIMATE CHANGE ADAPTATION PLANNING"

Mr Chinvanho talked about future uncertainty and its implications for adaptation.

Future is a long time, and lots of things can unfold in many ways. The past trend is not necessarily a proper guide to the future trend.

Everything starts from a storyline – a set of assumptions. Under the IPCC's 4 major SRES emissions scenarios -A1, B1, A2, and B2 – global temperatures are projected to increase by varying rates in future. As future greenhouse gas emissions scenarios change, so will future climate scenarios. However, these climatic scenarios generated by climate modeling do not represent the truth.

Various plausible futures are possible. We have to ask, which future scenario is most likely to occur and test our resilience? What circumstances will prevail under that scenario? If we think we cannot cope, then we have no choice but to plan for adaptation.

Climate change is a storyline about vulnerability, risk, and what to do about it. We need to be aware that climate risks may change over time, so our coping strategies may not work in future. Enhancement of capacities and innovations are needed to prepare for future. When scenario planning, we have to make a leap from "What will happen to us?" to "What will we do if A happens to us, what will we do if B happens to us?" Not only climatic factors, but also non-climatic factors will be changing over time. Hence, the dilemma: If this plausible future may or may not happen, how can we justify action needed for adaptation? How can we be certain about what will happen in the future?

Adaptation in reality must look at enhancing community resilience through community based adaptation rather than try to fix the problem of the future. Community based adaptation is also about mainstreaming climate change into local development

So we need to shift from impact-based assessment to risk-based assessment, put climate change into context (e.g. socio economic or development context) and try to link present and future, which is what adaptation is about. Different development directions bring different risks under climate change conditions, as shown by the case study of annual crop production cycle from Chu –Min river basin. Different crops (sugar cane, cassava, and maize) may be suitable for different areas; cropping wise, there will be a bio-fuel vs. food security trade off. Different cropping patterns in future will make different water demands – based also on the mix of food bowl or bio fuel scenarios? How to provide water for agriculture will be an adaptation challenge. Context specific and holistic view is required for adaptation planning. Sectoral and cross sectoral assessments at relevant scales will be necessary. Although overlaps may exist, there will also be a need for an area or community-based assessment approach that looks at vulnerability, climate risk and adaptive capacity aspects of the community for developing sustainable adaptation

A Krabi case study shows that shorter rain season means longer tourism season but also less water for agriculture. Tourism needs more water, so higher water demand. This means availability of less fresh water to maintain the coastal community, which may trigger outmigration of locals.

Melting of glaciers and snow cover has far reaching consequences ranging from droughts, hydrological shifts, flash floods, and changes in monsoon patterns with wider sectoral impacts.



Dr Arun Bhakta Shrestha
ICIMOD

Adaptation in reality must look at enhancing community resilience through community based adaptation rather than try to fix the problem of the future. Community based adaptation is also about mainstreaming climate change into local development, as the case study from Lao-Oi District, Kalashin province (Thailand) shows. The farming community located along the river and dependent on wet-season rice is very vulnerable: they are frequently exposed to floods before harvest time, the rice they grow is highly sensitive to floods (i.e. has low tolerance for floods), and for coping, they depend on dry season rice or partial government compensation or practice seasonal migration. They could switch to dry season rice (with higher heat tolerance), use irrigation facilities to bring water from the main river. If this works, they will not have to out-migrate seasonally. Or practice mixed cropping, using both wet-season and dry-season rice varieties. Warmer and longer summer time means reduced river flow, which in turn means higher water demand to compensate for higher evapo-transpiration whereas increased rainfall in the rainy season means higher flood risks. The current response to climate risks is not adequate for adaptation, especially under the scenario of warmer and longer summertime in future. So the farmer could think of harvesting rainwater during rainy/flooding season for use in agriculture during dry season.

Journalists reporting on climate change adaptation issues need to play with “what if?” scenarios, look at the impacts of climate change on the society and what adaptation measures may be necessary now and in future, and also conduct cost-benefit analysis of different adaptation options under different socio-economic scenarios. They must remember that “imagination is more important than knowledge.”

“THE STATE OF THE HIMALAYAN GLACIERS”

Dr Shrestha began with a primer on the glacier and glacial dynamics: what it means when the scientist says glaciers are advancing or retreating. He explained various types of glaciers such as piedmonts, ice fields, hanging glaciers, ice caps, and outlets, including mountain and valley glaciers. He contrasted V-shaped river valleys with U-shaped glacial valleys.

As to whether Himalayan glaciers are retreating, he gave examples of Rika Samba glacier, Glacier AXO10, EB050 glacier, and Gangotri glacier all of which have been retreating. However, he was quick to point out that although deglaciation is widespread in the Himalayan region, some glaciers in the Hindu Kush and Karakoram are actually stable or even advancing. This probably has something to do with the winter westerlies at high altitudes.

As to whether glacial retreats and advances tell the complete story, he clarified that changes in the position of the snout of the glacier are a good indicator of changes in the mass balance of the glacier; however, the relationship is not direct. There is more to it than meets the eye. Terminus shift, area change, volume change and mass balance are some of the common methods for assessing glacial dynamics – with terminus shift method being the least reliable and mass balance method being the most scientifically rigorous and accurate. Only the mass balance study of glaciers can confirm whether the glacier is advancing or retreating with high confidence level.

He also highlighted the climate debate created by a Down to Earth article that reported that glaciers in Central and Eastern Himalayas would completely disappear by 2035, tracing the origin of the story back to a WWF-Nepal Report 2005 and from there going further back to the original

source. Climate change skeptics picked up on this and tried to discredit the Intergovernmental Panel on Climate Change for including erroneous information in its Assessment Report 4. Damage was done.

He said the claim that Himalayan glaciers are retreating faster than in any other part of the world is refuted by the mass balance study undertaken by Lemke et al. in various mountain regions of the world. It showed that glaciers in Patagonia are retreating faster than those in the Himalayas. However, more mass balance studies with larger sampling size are needed. Melting of glaciers and snow cover has far reaching consequences ranging from droughts, hydrological shifts, flash floods, and changes in monsoon patterns with wider sectoral impacts. Changes in runoff, for instance, could impact water availability, leading to social conflicts.

There are challenges associated with cryospheric research in the region. Cryosphere is a challenging environment to work in. There is limited baseline information available and inadequate research capacity in the region. Despite these limitations, cryospheric research is slowly but surely yielding critical insights into glacial dynamics in the Himalayas, thereby attracting the attention of researchers from all over the world.



**Dr DhruPAD
Choudhury**
ICIMOD

“COMMUNITY PERCEPTIONS AND RESPONSES TO CLIMATE CHANGE IMPACTS: FINDINGS FROM BHUTAN, INDIA AND NEPAL”

Dr DhruPAD Choudhury gave a talk on the community perceptions and responses to climate change impacts, with examples from Bhutan, India and Nepal.

Using vulnerability and capacity assessment framework and related participatory rural appraisal tools such as seasonal calendar, livelihoods calendar, hazard severity ranking, and Venn diagram of institutions, information on impacts of climate change and coping/adaptive mechanisms of the participating communities in the three countries was generated and analysed.

The Participatory Rural Appraisal (PRA) results show that in Uttarakhand, India, delayed and reduced snowfall is impacting winter crops and resulting in increased pests (grubs). Delayed rainfall and prolonged dry spell is resulting in delayed sowing, wilting of seedlings, and reduced forage. The communities are also experiencing severe scarcity of water for drinking and irrigation. Farmers are responding to these impacts through crop replacements, exploiting new opportunities presented by warmer weather, and reducing the numbers of livestock, opting for smaller-size ruminants. They have also shifted to alternative livelihoods such as carpentry and masonry, wage-earning labor work, and migration. In the case of Nepal, delayed rainfall, increased temperatures and increased water scarcity are delaying sowing and transplantation, reducing yields, and resulting in wilting of seedlings. Hailstorms and storms are damaging standing agricultural and horticultural crops, and reducing yields. Pests are affecting vegetables and cereals. All these impacts are exacerbating the food insecurity situation and affecting income. People are responding to the changes through crop replacements, opting for more stress-resistant wheat and rice varieties, and reducing the numbers and size of livestock. Many have diversified their livelihood options by going into carpet weaving and carpentry, migrating to India during the lean months and to Gulf countries on a long term basis.

All these impacts are exacerbating the food insecurity situation and affecting income. People are responding to the changes through crop replacements, opting for more stress-resistant wheat and rice varieties, and reducing the numbers and size of livestock.

Overall their responses have been reactive and are inadequate for effective long term adaptation. This calls for further appraisal of systems dependency, resource bases and availability and institutional dependency as well as service delivery mechanisms.

Comparison of resources availability (food and income) from various systems in Nepal and North East India showed that Nepal is worse off with higher forest dependency, more reliance on rainfed agriculture and more limited income opportunities.

More in-depth study of forest systems (vis-à-vis food and income availability) showed that they are not a source of food in Uttarakhand and Western Nepal. In sharp contrast, forests are a critical support system for food resources in North East India. Duration of income availability from forest resources increases significantly as one goes from west to east - from Nepal to Bhutan to North East India.

The objectives of AKP/APAN is to foster generation and exchange of knowledge and good practices on climate change adaptation; ensure their integration in planning and decision-making; and build partnerships for transformative actions.

Likewise, average diversity of resources (from multiple systems such as rain-fed agriculture, wet terrace, home garden, forest, livestock, fishery, and orchard) for both food and income increases from west (semi-arid) to east (wet, monsoon).

A study of institutional dependency in Uttarakhand and Nepal showed that whereas the former is dependent on government for post-disaster relief, on banks for credit, and on government for food support, Nepal is dependent on local NGOs for relief, on money lenders and shopkeepers for credit and on donors (USAID and WFP) for food support.

In general high dependency of support systems that are sensitive to weather-induced stress factors (water stress, pests, dry spells, etc) indicates high vulnerability. The prevailing support systems are important but not adequate for enhancing adaptive capacities in the case of Nepal; limited income opportunities and extremely poor social capital are resulting in labour migration of able-bodied boys and men, and also increasingly women.



Ms Kim Jihyun
Adaptation Knowledge Platform

“REGIONAL CLIMATE CHANGE ADAPTATION KNOWLEDGE PLATFORM FOR ASIA (AKP) & ASIA PACIFIC ADAPTATION NETWORK (APAN)”

Ms Kim said that the overall objective of AKP/APAN is to foster generation and exchange of knowledge and good practices on climate change adaptation; ensure their integration in planning and decision-making; and build partnerships for transformative actions.

She then walked the participants through the main features and functionalities of the AKP web portal (www.climateadapt.asia/): latest news in the form of web stories, announcements, and news archive, not to mention events calendar. Browsing/searching resources is possibly by country, region, theme and organisation.

The knowledge/information cycle involves gathering of local knowledge and good practices from knowledge partners and vetted by experts and sharing them – in the form of projects, information resources and knowledge products – with the world at large through the interactive climate adaptation web portal.



Mr Joydeep Gupta
Director Third Pole
Project

Climate change is probably the biggest story of the 21st century... it is a business story... an energy story... and also a political story.

Also, the weADAPT adaptation layer has been added to the web portal (in collaboration with Google Earth), thereby enabling the user to find out who is working on what and where, and share his/her work with a wider audience and raise awareness on important issues.

“SOUTH ASIA MEDIA WORKSHOP ON ADAPTATION TO CLIMATE CHANGE”

Mr Gupta underscored the importance of looking for stories on climate change from various angles.

Climate change is probably the biggest story of the 21st century. Increase in green house gas emissions resulting in global warming and impacts of climate change are not the whole story. Development and diffusion of transformational technologies as well as clean energy sources needed to transition to a low-carbon pathway to sustainable development and adaptation are the main plot lines of this story. Climate change is not just an environmental story – it is also a human story.

Climate change is a business story. Global environmental services are estimated at a whopping USD 33 trillion. Agriculture, forestry, and mountains provide valuable ecosystem services. Global carbon trade was estimated at USD 50 billion in 2008. It will only grow.

Climate change is also an energy story. Not just about coal, oil and fossil fuels. Venture capital and research funding is pouring into development of clean energy sources and technologies. These transformational technologies can help the world transition to a low-carbon global economy. Hydropower generation and nuclear energy are being looked at in an emerging context. Decentralised energy systems – for example, home installation of renewable energy technologies – are already happening.

Climate change is also a political story. Negotiations in global climate summits are full of intriguing politics and behind-the-scenes lobbying. It is not just about emission-reduction targets, adaptation funding, REDD+, and technology transfer. It is also about domestic politics, protecting national interests and industries. It is about environmental justice, human rights, migration, security and health.

As media professionals, when reporting on climate change, let us be careful and give a human dimension to these stories. Let us use peoples’ testimonials and data, not jargon. Let us use different multimedia. Let us do investigative reports, use poll figures, and cite probabilities and confidence levels to give our stories credibility. Let us also share good practices and suggest climate friendly lifestyle changes.

Measures such as irrigation facilities and water harvesting technologies for food production enhancement; responsive food distribution system to address food insecurity; diversification of livelihoods and organised access to market; and effective insurance and credit mechanisms are needed to enhance adaptive capacities of vulnerable people in these countries.



INTERACTIVE SESSION



facilitated by
Mr Joydeep Gupta
and Mr Ramesh Bhusal

Group 1: Impacts of climate change in agriculture in coastal areas

Group members: Anshul Ojha, Chhatra Bahadur Shankar, Parvez Babul, Samia Saleem, Salahuddin Bablu, Sudarsha De Silva, Ahmadul Hassan, Elizabeth Colebourn and Sanam Aksha

The group discussed different prevalent issues in South Asia. Each member provided a glimpse into their country's problems and how people are adapting.

However, the group decided to pick up a story from Bangladesh for presentation on impact of climate change on agriculture in coastal areas. Due to climate change, sea level is rising which has resulted salinity intrusion in agricultural land in coastal areas. Because of this, traditional rice varieties have lost their appeal, thereby accelerating food insecurity. To address this problem, the government has introduced a salinity tolerant rice variety - BR47 - which is giving good yield.

The group also deliberated that stories should focus on problems and how communities adapted and suggested some key considerations:

- focus should be on impacts of climate change on water and agriculture,
- news stories should be topical
- news stories should influence policy makers
- stories need to be news-focused, not feature articles



Group 2: Impact of climate change in agriculture and adaptation measures

Group members: Dhurba Sapkota, Hassan Ziyau, Md. Saleem Shaik, Ninglun Hanglal, Pragati Shahi, Andrea Perlis, and Pavitra Rana

The agricultural sector is vulnerable to climate change as food production depends upon weather patterns. Farmers worldwide are encountering problems brought about by climate variability and one of them is shift in the rainfall pattern. Examples abound: In Sindh, a province in Pakistan, farmers used to cultivate crops between March and October; however, now the cropping season starts in May and ends in October. Because of delayed monsoon, these farmers are finding it difficult to adapt to the changing monsoon pattern.

Media has a significant role to play in communicating climate change effectively and shaping public opinion on climate issues. Stories should be free of prejudices and personal biases. Adequate research through investigation and interrogation is required to check these biases. Scientific information needs to be disseminated in a way the general public can relate to it. The message of the stories should be evidence-based, so that it catalyses action to formulate policy on climate change adaptation. The content of the story should be descriptive of the everyday challenges farmers are facing so that it leads to the identification of the problem sources. It is also important to identify the effective means of communication to make the information reach the target audience. In case of farmers, regional radio stations are the most appropriate means to send the message across.



Group 3: Farmer driven adaptation measures in South Asia

Group members: Meena Menon, Surjaman Thapa, Jayshree Nandi, Md. Towhid Hassan, Pitamber Sigdel and Utsav Maden.

The group was assigned to work together to bring out stories on adaptation measures to climate change being taken by farmers in South Asia.

The group worked on presenting stories about ongoing adaptation measures taken by farmers in India, Bangladesh, Nepal and Bhutan to adapt to climate change. The group presented examples of farmer led intervention in Gorakhpur, India, Panchkal, Nepal and Bumthang, Bhutan where staple crops were being replaced by crop variants suitable to changing weather patterns.

Some of the examples showcased were.

- Increased salinity in water in coastal areas in Bangladesh
- From potatoes/buck wheat to rice in Bumthang, Bhutan (a govt. Promoted initiative)
- Deteriorating quality of Coorg, Kudremuall in India because of erratic rainfall, people do not grow conventional crops, planting creepers and vegetables in flood plains in Uttar Pradesh, India.

Presented as a mockup of a live TV reportage, each participant foretold stories from their country where adaptation in agriculture was being carried out by farmers. They even solicited expert views (resident expert on community forestry Mr Eak Bahadur Rana) during the presentation to shed light on the possible measures that were being taken by farmers in South Asia to adapt to climate change.



Group 4: Rice in the time of climate change

Group members: Athar Parvaiz, Dilrukshi Handunetti, Faisal Raja Khan, Papiya Bhattacharya, Rubab Saleem, Tashi Dorji, Tandim Pem and Ujol Sherchan

The group was assigned the task of assessing political process as a driver in combating climate change. This group worked together and identified the decreasing productivity of traditional rice varieties in South Asia as a potentially disturbing trend from the regional food security point of view. Rice is the major staple of South Asia.

Their presentation entitled “Rice in the time of climate change” recommended the following action points as potential adaptive measures that could be undertaken at the farmer level to adapt to climate change while boosting the productivity and spread of rice varieties.

- Grow rice at altitudes higher than 2000 masl also, bring more high altitude land area under cultivation;
- Promote genetically modified crops, but cautiously;
- Adopting stress-resistant rice varieties, e.g. drought resistant, flood resistant, heat-resistant, etc.
- Protect genetic resources associated with rice varieties and seeds;
- Promote protection of intellectual property rights based on indigenous and local knowledge;
- Provide incentives to farmers;
- Promote “rice festival” by showcasing rice varieties and various cuisines based on rice and culture associated with it;
- Effective farming;
- Aim for regional self sufficiency in rice and other staple crops;
- Managing water resources.

The group stressed the need for such regional scale adaptation to be backed by policy and political consensus.

“Community Based Forest Management and Climate Change Adaptation: From Principle and Policy to Practice”

Mr Eak Rana, and Mr Tek Jung Mahat, ICIMOD and Mr Rajendra Sapkota and Mr Binod Sapkota, FECOFUN

Mr Mahat opened the floor highlighting need of systematic and systemic interaction between climate science, community, natural system and different governance structures. He emphasised the role of community forest users groups in Nepal who have for last more than three decades set a unique model in conserving and managing forests as well utilising sustainability those resources to improve people’s livelihood.

Mr Rana talked about participatory forest management in the context of climate change, including related issues and challenges.

The term “forest” is defined differently by UNFCCC, UNEP/CBD and FAO but all definitions share something in common – certain minimum hectares of land area, out of which a certain percentage of that area is covered by trees. However, forestry is not about only trees but also about people who depend on them and manage them. Forests have productive, protective and socio-economic functions. Forests are highly exposed to climatic factors such as precipitation, temperature, and winds. Some 1.6 billion people depend on forests for food, energy and medicine, so the importance of forests cannot be emphasised enough. Forests act as a natural sink, storing up to 1 trillion tonnes of carbon. Degradation and deforestation alone contribute 17% of GHG emissions to the atmosphere. Forests are also home to an incredible range of biodiversity.

Participatory forest management is practiced in Bhutan, Bangladesh and Nepal. In India it is called Joint Forest Management. In Bhutan, Bangladesh and Nepal, it is called community forestry. Various rules, Acts, policy and regulations govern the forestry sectors of these countries. Community based forest management has so far yielded positive results: local institutions have been strengthened, good governance has followed, economic diversification has come about in the form of non timber forest products (NTFPs) and timber, local rights have been recognised, and self esteem has gone up considerably. Afforestation and reforestation in a degraded land, for instance, offer tremendous scope in terms of carbon stock enhancement and sequestration.



VIDEO SCREENING “TOO MUCH, TOO LITTLE WATER”

Two video films, each of 10-12 minute running time, were screened to show the impacts of the phenomenon of “too much, too little water” and how the affected people are coping with water stress.

Video 1: In the Grip of Drought

About the video: Panchkhal lies in a rainshadow area in the mid-hills of Nepal, 40 km east of the capital, Kathmandu. As of 2009, Paanchkhal has been suffering from a draught for five years. What used to be Kathmandu’s vegetable basket is turning into a waste land. The Jhikhu Khola (river) which used to irrigate the fields through canals is now a dry riverbed. As weather patterns change, traditional agricultural calendars are failing and farmers are responding in individual ways – by digging trenches in the dry river beds. But farmers need to turn these short term responses into long term sustainable adaptation practices. What are the options?

Video 2: Living with Floods

About the video: The people of Matmora and Majgaon villages in the Brahmaputra basin in Assam, India belong to the Assamese and Mishing communities. Both communities have mechanisms for coping with floods. However, in recent times floods have become more intense and have overwhelmed the traditional coping approaches. Increased deposition of sand and regular breaching of the embankments have disrupted the economic base. People must live with the floods, and while finding solutions for their problems, they are forced to challenge their traditional cultural practices.

In terms of adaptation, sustainable management of forest resources, improvement of degraded habitats, integrated watershed development, and sustainable land management are important. Social capital, proper social security mechanism, technical assistance, capacity building, and communications are needed to enhance adaptive capacities of forests and forest dependent people. Community based forest management means local communities stimulating natural regeneration of forests, and restoring degraded lands to enhance not only their own adaptive capacity but also the resilience of forests.

In the context of climate change, “Adaptation for forests” and “Forests for adaptation” are needed. There are several forestry related mitigation and adaptation policies and plans that can help not only reduce green house gas emissions (say, through avoided deforestation and degradation) but also adapt to climate change. Examples include but are not limited to Afforestation/Reforestation CDM, REDD+, CBD, payment for ecosystem services, climate change policy, National Adaptation Programme of Action to Climate Change (NAPA) and Local National Adaptation Programme of Action to Climate Change (LAPA). Climate change adaptation policy initiatives should be informed by integration of science with traditional/indigenous knowledge, appropriate technology, scaled up financing, participatory approaches and monitoring.

FIELD VISITS

Gaukureshwor Community Forest, Dhulikhel, Kavre District

facilitated by Mr Eak Rana, Mr Ujol Sherchan and Mr Tek Jung Mahat

Gaukureshwor Community Forest located east of Dhulikhel is spread over 24 hectares of land.

In the 1980s, there was no forest on this government land. Due to illegal harvesting of forest resources, overgrazing, landslides, runoff, and mismanagement, the earlier forest had been totally wiped out and the land had degraded and become barren.

Gaukureshwor Community Forest was established in 1992 with the help of the then District Forest Officer. Since then, the community forest has come a long way. About 60 households are currently associated with this community forest. The dried up water sources of the past are now recharged, thanks to the regeneration of the forest. Orchids, medicinal plants, and various species of non-timber forest products trees grace the forest floor.

Badri Prasad Jangam, aged 77, Chairman of the Community Forestry User Group (CFUG), who has been heading up the management of the forest for the past 19, is a living testimony to what is possible when community joins hands to practice community forest on a once barren land. There is no doubt that the forest has already mitigated climate change to some extent by functioning as a carbon sink.

Some emerging climate change issues affecting the forest are changes in monsoon rainfall patterns. Often monsoon brings high-intensity short-duration rainfall. Also the CFUG said they are no longer sure when monsoon season begins and ends – as there have been perceptible shifts in the timing of monsoon in recent years. This necessitates adjustments in their traditional agricultural calendar- affecting the timing of planting, transplanting, harvesting, etc. Also during non-rainy season, it gets very dry. The forestry users make fire-lines to prevent the spread of forest fires, in case they break.



Executive Members of the Community Forestry User Group



Participants congregate outside the CFUG office



Participants listening to the Chairperson speak



Forestry group representative and facilitators briefing about Gaukureshwor Community Forest



Locals going up a slippery trail



Workshop participants returning down the same slippery trail



Mr. Badri Prasad Jangam, aged 77, Chairman of the CFUG

Ratomate Community Forest, Ratomate, Kavre District

facilitated by Mr Eak Rana, Mr Ujol Sherchan and Mr Tek Jung Mahat

The Ratomate community forest - spread over 108.12 hectares of land in Kavre District - has a different story to tell. It concerns the shortage of water, owing to a long dry spell, going on in its fifth or sixth year. The people around here tend to blame pine trees - legacy of the AusAid project of the 1970s - for the drying up of natural water sources and streams. However, more scientific studies are needed to confirm this.

Mr Khilbahadur Nuitel, Chairperson of the Ratomate Forest Community User Group (CFUG), walks us to his village. He says water is an issue. There is a community tap - but water comes only one hour per day. Women have to line up at the community tap to wait their turns. Further down, a younger member of the CFUG points to a traditional water spout, which in the past was used for bathing, doing laundry, washing livestock and drinking, and tells us that it ran dry some years back. Luckily an NGO helped with the financing of a 250-foot deep bore well nearby. Water is now being pumped up from the well and piped to the households in the village, for which they have to pay a certain amount per month. However, this can only be an interim solution.



Mr. Khilbahadur Nuitel explaining the community forest situation



Water doesn't flow down this traditional water spout anymore!"



Relative shortage of water in the community tap



Observing the biogas plant - an alternative energy source



Heading for the reception ground of the Ratomate Community Forest



Participants listening to the Chairperson speak



Interviewing a woman member of the Ratomate CFUG

Panchkhal Demonstration site

facilitated by Mr Eak Rana, Mr Ujol Sherchan and Mr Tek Jung Mahat

With the technical assistance of ICIMOD, Ms Saraswoti Bhetwal has set up a demo centre in her backyard to showcase water and agricultural technologies for use as climate adaptation measures in her community in Lamdihi village in the Jhikhu Khola watershed in Paanchkhal, Kavre district. On her property, she shows other farmers technologies such as rooftop rainwater harvesting, conservation pond, drip irrigation, composting and terracing, biogas plant, etc. Her income has gone up considerably since she started using these technologies on her farm.

On 11 July, 1981, the diversion weir at the Sun Koshi Hydroelectricity project, Nepal, was struck by a large flood and significant damage ensued. The flood also destroyed two bridges and extensive sections of the Arniko Highway. The total economic loss was in the order of US\$ 3.0 million. At the time, the cause of the disaster was unknown. Only later, was it understood that the flood was the result of the drainage of the Zhangzangbo glacial lake north of the Nepal-China border in Tibet Autonomous Region (China). The triggering mechanism had been an ice avalanche which produced a surge wave large enough to overtop the end moraine.



Ms. Sarashwoti Bhetwal explaining her demo centre to the participants



Rain (roof) water harvesting



Water storage



Conservation pond



Rain (roof) water harvesting



Composting. Photo: Meena Menon



Mr. Sharad Joshi, ICIMOD, explaining glacial lake outburst floods to participants

Bhote Koshi River: GLOF- inundated sites of yore

facilitated by Mr Sharad Joshi

On 11 July, 1981, the diversion weir at the Sun Koshi Hydroelectricity project, Nepal, was struck by a large flood and significant damage ensued. The flood also destroyed two bridges and extensive sections of the Arniko Highway. The total economic loss was in the order of US\$ 3.0 million. At the time, the cause of the disaster was unknown. Only later, was it understood that the flood was the result of the drainage of the Zhangzangbo glacial lake north of the Nepal-China border in Tibet Autonomous Region (China). The triggering mechanism had been an ice avalanche which produced a surge wave large enough to overtop the end moraine.



Traffic held up in the pre-monsoon rain north of Barabise, Sindhupalchowk district



Posing on Phulping bridge, some 6 km from the Nepal-China border



A 19-meter tall Bhimsen boulder sits on the bank of the Sun Koshi river in Sindhupalchowk District, Nepal; it is believed to have been brought down by glacial lake outburst floods over 100 years ago

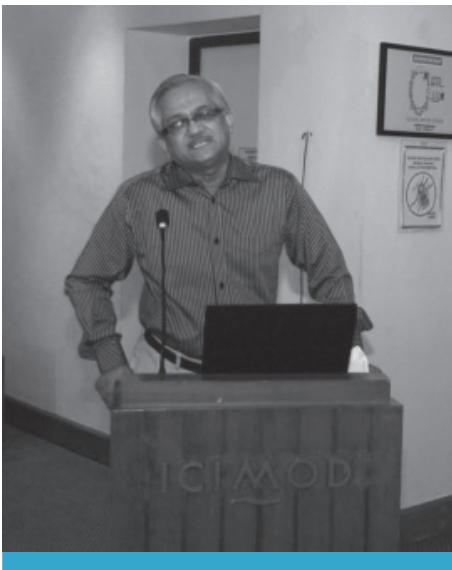


A remnant of the small stone bridge (on the left) destroyed by the glacial lake outburst flood of 1981 –the Zhangzangbo glacial lake lies about 27 km upriver in the Tibetan Autonomous Region of China

“EFFECTS OF CLIMATE CHANGE ON WATER SUPPLY AND AGRICULTURE IN THE COASTAL REGIONS, THE STEPS BEING TAKEN AND THE STEPS NEEDED”

Dr Hassan made a presentation on the effects of climate change on agriculture and water resources in the coastal areas of Bangladesh.

The Brahmaputra, Ganges and Megna are the three major rivers that flow through Bangladesh eventually draining into the Bay of Bengal. Agriculture contributes 20% of GDP and some 50% of the population is engaged in agriculture. Boro is the dominant crop. Now agricultural practices are also changing with farmers preferring low risk crops to high risk crops and switching from traditional to high yielding varieties. Also they are building embankments to bring more areas originally submerged in water – the so-called polders - under cultivation. New Aman area is a shining example. It is estimated that a sea level rise of 50-100 cm can bring 2700 – 7700 sq km of land area under net inundation. So embankments are necessary to provide protection from salinity intrusion and tidal flooding.



Dr Ahmadul Hassan
Director, R&D and
Training Division at Center
for Environmental &
Geographic Information
Services, Bangladesh

In spite of the protection provided by embankments at some places, the coastal region – covering an area of 42, 500 km² with population of 38 million - is susceptible to inundation. Apart from that, coastal areas are constantly threatened by cyclones, storm surges, salinity intrusion and sea level rise. For instance, Cyclone Sidr that hit the coastline in 2007 with wind speed of 240 km/hr and storm surges up to 10 m height caused tremendous damage estimated at USD 1647.9 million.

In Bangladesh, Boro, Aman, and Aus productions are projected to decrease by 4.75%, 0.62%, and 1.52% respectively by 2050. Anywhere from 22 to 27 million people are estimated to face safe drinking water shortages between 2050 -2080 under the A2 scenario. Mortality due to water-borne diseases will likely go up significantly.

Since the coastal region is vulnerable to climate change, it has to adapt now. In agriculture, new research on flood-, drought- and salinity-resistant crop varieties is ongoing. Submergence-tolerant varieties such as BR 11 sub 1, IR 64 sub 1, and swarna sub 1 are being tried and tested in the field. Adaptation also calls for land zoning, climate resilient cropping pattern and improved irrigation efficiency through optimal use of water. Rainwater harvesting, pond sand filter, desalinisation plant, advocacy and awareness campaign can become part of the adaptation to guarantee water security in the time of climate change.

It goes without saying that enhanced regional cooperation is important to ensure food and water security.

“CLIMATE FOR CHANGE”

Mr Dixit made a presentation on climate change in the Himalayan region from a media perspective.

Visible impacts of climate change can be seen in the form of melting glaciers, as well as formation and expansion of glacial lakes in the Himalayan region. The before (1950) and after (2008) pictures of the Imja glacier dramatise this change. Disaster risk reduction measures have been undertaken in Nepal and Bhutan, for instance, to reduce the volume of water in the potentially dangerous glacial lakes to reduce risks associated with glacial lake outburst floods (GLOFs). Because of melting snow, mountaineers say it is becoming difficult to climb Everest, and walk on glaciers. A preliminary mass balance study done of glaciers in various mountain regions of the world has shown that the Himalayan glaciers are melting at a relatively fast rate. Flash floods, landslides, and wildfires have become all too common in the recent past.



Mr Kunda Dixit
Chief Editor, Nepali Times

The holding of cabinet meeting by the Nepal government at Everest Base Camp and by the Maldivian cabinet on the sea floor in the lead up to the Copenhagen Climate Summit was a big publicity stunt that helped draw attention to the climate threats faced by South Asia.

When flooding struck Pakistan some years back, media was there in full force, but after the event. Media should strive to function as an early warning system. It can support disaster preparedness by alerting the public to potential climate risks. In the event of post-disaster management, it can help mobilise community to the cause. However, it should not ‘cry wolf’, and create mass hysteria or media frenzy.

The media coverage of disasters is not adequate. The media is not geared to slow emergencies. It is a pity that the media’s public service role is eroding. War in Afghanistan gets more coverage than climate change reporting from the Himalayas. It is a rich man’s world.

The message is the medium. It has to get out to policy makers, scientists and academics, vulnerable populations, domestic public opinion, and outside world. Media people decry that the information “gate keepers” (editors) do not give adequate priority to their reporting. Frankly, environmental reporting is not on the editor’s priority. Therefore, media professionals should package their contents as pieces with political and economic ramifications. Economic and political news grab headlines, where as purely environmental reporting is often relegated to the back pages of print media.

Also the media cannot afford to be complacent. It has to do its homework. It has to be able to explain science to policymakers and the public, including what policy options are out there and alternatives. It should become a partner in disaster preparedness and post-disaster relief efforts. Media is not just journalism. To that extent, media professionals have a huge responsibility and work cut out for them.

CLOSING SPEECH

Dr Eklabya Sharma

Director of Programme Operations,
ICIMOD

Dr. Sharma giving overview of environmental process and recent changes in Himalayan mountain ecosystems, highlighted unique role they are playing in securing sustainable livelihood of more than a billion people in the region and contribution it makes to global sustainability by providing homes to thousands of species of plants and animals. Carefully analysing the recent trends in ecosystem changes, that are exaggerated by climate change process, he underscored media can play significant role in making community aware of the developments and prepare them to adapt to the unexpected climatic and environmental adversities.

VOTE OF THANKS

Dr Young-Woo Park

Regional Director and Representative
for Asia and the Pacific, UNEP
Regional Office for Asia & the Pacific

Dr. Park thanked all the partners involved in organising the workshop, the facilitators and the participants for very these days spent in learning and sharing climate change adaptation issues in South Asia. He foregrounded Rio +20 meeting next year, where representatives from almost all countries will gather in Rio de Janeiro to debate on sustainability of planet earth. UNEP is very much involved in the process since the very beginning and one of the key components of the Rio +20 meeting – debate on Green Economy is led by them. He emphasised on need of better understanding of systems rather than only few components to develop more accurate solutions.

A blue-tinted photograph of a rural landscape. In the foreground, there is a body of water reflecting the sky. The middle ground shows a large field of tall grasses or reeds. In the background, there is a line of trees and some buildings. The word "ANNEXES" is written in white capital letters in the lower-left quadrant of the image.

ANNEXES

PROVISIONAL AGENDA

Time	Event	DAY 1
17 May 2011, Himalayan Horizon Hotel, Dhulikhel		
Evening	Participants arrive at Kathmandu airport and are taken by bus to Dhulikhel; followed by welcome dinner, introductions	
18 May 2011, Himalayan Horizon Hotel, Dhulikhel		
08.30-09.00	Registration	
09.00-09.10	Welcome Address by Ms Roopa Rakshit , Adaptation Knowledge Platform	
09.10-09.20	Workshop outline by Mr Joydeep Gupta , Third Pole Project	
09.20-10.00	Opening Remark I: Importance of media community to raise awareness and improve discussions on climate change adaptation, by Dr Young-Woo Park , Regional Director and Representative for Asia and the Pacific, United Nations Environment Programme Regional Office for Asia & the Pacific. Opening Remark II: by Dr Andreas Schild , Director General of the International Centre for Integrated Mountain Development (ICIMOD)	
10.00-10.40	Scenario-based planning for climate change adaptation and the role of media by Mr Suppakorn Chinvanno , SEA START, Thailand	
10.40-11.40	Community perceptions and responses to climate change impacts – Findings from Bhutan, India and Nepal – Dr Dhrupad Choudhury , ICIMOD	
11.40-12.00	Group photo session, followed by Tea/Coffee break	
12.00-13.00	The state of the Himalayan glaciers by Dr Arun Bhakta Shrestha , ICIMOD	
13.00-13.10	Introduction to AKP (web portal)	
13.10-14.10	Lunch	
14.10-15.10	Interactive session led by Mr Joydeep Gupta , assisted by Mr Ramesh Bhushal (Flip charts etc will be used during all interactive sessions)	
15.10-15.40	Tea/Coffee break	
15.40-16.30	Continuation of interaction session followed by a short presentation by Mr Daan Boom and Mr Tek Jung Mahat on regional water initiatives in the Himalayas and roles ICIMOD is playing	
16.30-17.30	Effects of climate change on water supply and agriculture of local communities in the Himalayas, by Mr Eak Rana , ICIMOD and FECOFUN/Local Forest User Group representative (session facilitated by Mr Tek Jung Mahat , ICIMOD)	
19.00-20.00	Documentary	
20.00-onwards	Dinner & briefing on the field trip	
19 May 2011 (refer the attached itinerary)		
06.45	Departure for field trip (facilitated by Community Forestry representative, Sharad Joshi , Eak Rana , Ujol Sherchan and Tek Mahat) and participants taken to hotel in Kathmandu	
20 May 2011, ICIMOD Headquarters, Kathmandu		
09.00 -10.00	Effects of climate change on water supply and agriculture in the coastal regions, the steps being taken and the steps needed by Dr Ahmadul Hassan , CEGIS, Bangladesh	
10.00-11.00	The subject from the journalist's point of view by Mr Kunda Dixit, Chief Editor, Nepali Times	
11.00-11.30	Tea/Coffee break	
11.30-12.30	Interactive session based on field trip and presentations, followed by discussions on networking and resource availability by Mr Joydeep Gupta , assisted by Mr Ramesh Bhushal	
12.30-13.00	Effects of climate change on water flows in South Asia, the steps being taken and the steps required by Dr Claudia W. Sadoff , Leader, South Asia Water Initiative, the World Bank	
13.00-13.15	Closing remarks by Dr Eklabya Sharma, Director of Programmes Operations, ICIMOD	
13.15	Lunch	

Time	Event
06.00-06.45	Breakfast
06.45-07.05	Drive to Community forest A
07.05-08.05	Briefing by CF community members – 30mins Media-community interaction – 30mins
08.05-08.15	Drive to Community forest B
08.15-09.15	Briefing by CF community members – 30mins Media-community interaction – 30mins
09.15 – 09.25	Drive to Water scarcity and alternative technologies demonstration centre, Panchkhal, Kavre district
09.25-10.25	Briefing about demonstration centre – 30mins Media-community interaction – 30m
10.25-12.30	Drive to Bhotekoshi river valley, Sindhupalchowk district
12.30-13.30	Lunch (Pack-lunch)
13.30-14.30	Briefing about GLOF effects
14.30-16.45	Back to Hotel, Dhulikhel

1 Day II recommended gear : Hat/Cap, Water bottle, Sunscreen lotion, Sunglasses, Hiking shoes, Rain gear

VISIT TO GLACIAL LAKE OUTBURST FLOOD (GLOF) IMPACTED AREAS ALONG THE BHOTEKOSHI RIVER.

facilitated by **Mr Sharad Joshi**

According to the information available, Nepal has experienced at least 24 GLOF events in the past. Of these, 14 are believed to have occurred in Nepal itself, and 10 were the result of flood surge overspills across the China (Tibet AR)-Nepal border (Figure 1).

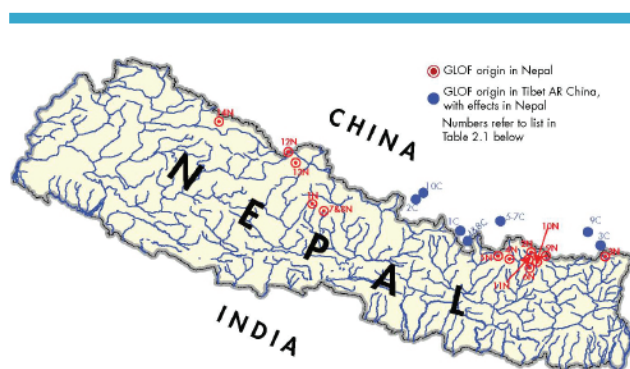


Figure 1. location of GLOF events recorded in nepal, and in Tibet AR, China, that caused damage in Nepal

Originated in TAR/China and caused damage in Nepal

Between 1935 and 1995, there are records of ten GLOF events that originated in Tibet AR (China) and crossed into Nepal. For five, the triggering mechanism is unknown and the amount of damage incurred was also either slight or not known. Two events, in 1935 and 1964, were caused by collapse of the end moraines as a result of piping (seepage of water through the unconsolidated moraine material). Two, on 21 September 1964 and 27 August 1982 were triggered by glacier advance; one of these damaged a road and 12 trucks were destroyed. The GLOF event of 11 July 1981 was caused by an avalanche. It produced by far the most significant damage and is discussed in more detail below.

Sun Koshi, 11 July 1981 – Zhangzangbo Lake

On 11 July, 1981, the diversion weir at the Sun Koshi Hydroelectricity project, Nepal, was struck by a large flood and significant damage ensued. The flood also destroyed two bridges and extensive sections of the Arniko Highway. The total economic loss was in the order of US\$ 3.0 million. At the time, the cause of the disaster was unknown. Only later, when a report by Xu Daoming (1985) was published, was it understood that the flood was the result of the drainage of the

Zhangzangbo glacial lake north of the international border in Tibet AR (China). The triggering mechanism was described by Xu and Feng (1994) as an ice avalanche which produced a surge wave large enough to overtop the end moraine.

For more information: ICIMOD (2011) Glacial lakes and glacial lake outburst floods in Nepal. Kathmandu: ICIMOD. Please collect your copy from ICIMOD, by sending your request to distri@icimod.org

VISIT TO COMMUNITY FORESTS, KAVRE DISTRICT, NEPAL

facilitated by **Mr Eak Rana, Ujol Sherchan and Tek Jung Mahat**

Range post	Janagal	Mahadevsthan
VDC & Ward	Dhulikhel Mc.	Panchakhal
Name of CFUG	Gaukhureshor Ban	Ratomate Pakha Khawa
Handover Date	3/30/2051	11/20/2050
Area	21.50 hectare	108.12 hectare
Households	43	235
Total Committee Members	9	11
Women in Committee	5	1
Special features relevant to media w/s	Disappearing NTFP species from the forest because of change in climatic pattern	Drying water sources due to CC impact (suffering drinking water problem)

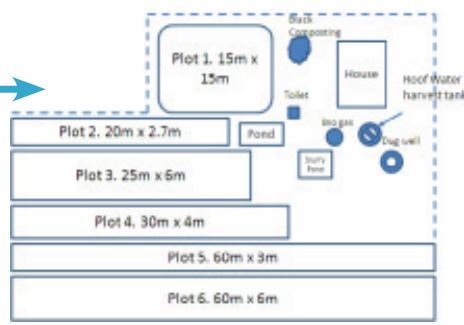
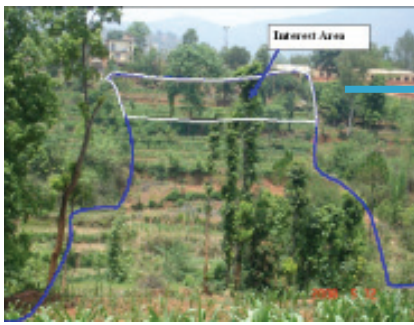
DEMONSTRATION FARM AT JHIKHU KHOLA WATERSHED, NEPAL

facilitated by **Mr Eak Rana, Mr Ujol Sherchan and Mr Tek Jung Mahat**

“Exchanging ideas and knowledge”

Background

Sustained production has always been a key concern to a farmer. For which improvement of soil fertility and proper land management through integrated farming practices is essential. Farmers in the upland around the Panchkhal of the Jhikhu Khola watershed suffer from the water and compost shortage to maintain the production. Mrs. Saraswoti Bhetwal from the Lamdihi



village of Panchkhal Village Development Committee of the Jhikhu Khola has proved to be a successful leader farmer in the area.

Mrs. Saraswati owns a piece of Bari (sloping agriculture) of about 14 ropanies (about 0.7 hectare of terrace land with red soil). The site is at an altitude of about 860m with sub-tropical climate and an average annual rainfall of 1200 mm. There are 14 numbers of terraces in the slopes within the farm unit, where these technologies are demonstrated.

Until 2002 Mrs. Saraswati could only grow one maize crop a year in the monsoon and had to leave the land fallow for the rest of the year. Now she grows 3 crops a year. Rice-Potato-Vegetable are grown in lower part of the land where river irrigation facilities exit and Maize-Potato-Vegetable are grown in the upper part where

river irrigation is not possible. Beans, lady fingers, bitter gourd, chilly, tomato, etc are the different vegetable crops grown in the land. She is very pleased with the results and now she earning additional 60,000 rupees per year from her farm as compare to 2002 and before.

In 2002, while attending an interaction meeting at the local horticultural research centre organised by ICIMODs' Watershed Management Project (PARDYP) together with Spices Crop Development Centre, she saw different technologies related to Sustainable Land Management (SLM). She realised that integrated approach of land management is essential to bust the agriculture production and adopted different technologies. This includes water harvesting including roof water, drip irrigation, leveling the terraces, planting grass and trees on the raiser, black plastic composting, biogas, using ground water and vegetable farming.

Many farmers and organisations from the surroundings and from different districts of Nepal visit her farm to see the how technologies function and discuss on its pros and cons.

Activities:

Water Harvesting Pond



Description: Surface runoff is collected in the Plastic lining pond.
 Size: 3.8m x 2.6m x 1.25m.
 Source: Irrigation channel, Roof rain water, whenever the jar is filled
 Frequency of Filling: 2-3 times
 Water Utilisation: Vegetable farming with drip
 Tentative Cost: Plastic sheet: NRs. 3,600 (2008)

Roof Water Harvesting



Description: Rain water from the roof is collected in the water jar. Roof Area: 8m x 5m = 40 square meters
 Size of Jar: 2,000 litres
 Frequency of Filling: 3 times during monsoon 2065 (Srawan 10 – Bhadra 30)
 Water Utilisation: Washing and household use
 Tentative Cost: Nrs. 10,000 (Water jar and pipes)

Drip Irrigation



Description: Vegetable farming is carried out by using water efficient drip irrigation. 3 drip set are used (8, 12 and 20 lines)
 Command Area: About 500 sq. m.
 Crop: Vegetable such as bean, lady fingers, bitter gourd, chilly, tomato, etc
 Tentative Cost: Approx. NRs. 7,000

Sprinkler Irrigation



Description: Vegetable farming is carried out by using 4 sprinkler heads.
 Command Area: 60 sq. m.
 Crop: Bean
 Tentative Cost: NRs. 1,200 (2008) for 4 sprinkler heads and connecting pipes.
 Tentative Benefits: NRs. 15-1600 (42 Pathi beans)

Black Composting



Description: Traditionally heaped compost is covered with black plastic to enhance the decomposition.

Plastic Size: 5m. x 5m.

Time Consumption: Compost decomposes within 45-50 days, whereas in the traditional method it takes 3-6 months. Also compost is well cooked.

Remarks: Black plastic is light, easy to use/handle and durable. It is less time/labor consuming method.

Biogas



Description:

Size/Capacity: 6 cu. m.

Source of Materials: Cow dung and urine from 1 cow /2 calves, 4-5 goats and toilet from toilet.

Tentative Cost: NRs. 6000 for gravel, sand, and labor. Love Green NGO provided cement, iron rods, stove and pipes.

Expected Benefits: Gas for cooking meal (two items in winter and 4 items in summer) for 3-5 persons

Dug Well



Description: Dug well for irrigation

Depth: 50 feet

Tentative cost: NRs. 30,000 including pump

Water Utilisation: Washing, cooking, drinking water for school students,

Terracing



Description: The area is terraced (level).

Area: 0.7 hectare

Crop grown now and before: Before terracing mainly maize is grown. After terrace 3 crops a year.

Grass Planting



Description: Grass planting on all terrace raiser.

Area: 1 raiser with Flemingia, 1 raiser with Stylo and rest with Napier grass.

Expected Benefits: Adequate fodder for 1 cow, 2 calves and 4-5 goats during the scarcity period.



right : Visitors at the farm

above : Many farmers and scholars visit the farm site every year.



ICIMOD PUBLICATIONS ON AGRICULTURE, CLIMATE CHANGE, GLACIERS, GLACIAL LAKES AND GLACIAL LAKE OUTBURST FLOODS (GLOFS), AND WATER

A list of ICIMOD publications relevant to climate change, glaciers, Glacial Lakes and Glacial Lake Outburst Floods (GLOFs), and water, available for download for free from ICIMOD books-online www.icimod.org/publications

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PRESS RELEASE

South Asia media workshop calls for better understanding and increased attention on adaptation to climate change

20 May 2011

Dhulikhel and Kathmandu

Twenty-four media representatives from the South Asian countries of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka called for better understanding on the science behind climate change and increased attention on adaptation to climate change. The journalists had an opportunity to network and enhance their knowledge of regional climate change issues at the three-day South Asia Media Workshop on Adaptation to Climate Change, held in Dhulikhel and Kathmandu from 18 to 20 May.

The workshop, organised by the Regional Climate Change Adaptation Knowledge Platform for Asia (AKP), the Asia Pacific Adaptation Network (APAN), and the International Centre for Integrated Mountain Development (ICIMOD), was designed to facilitate awareness raising on the increasing impacts of climate change, related vulnerabilities, and strategies for adaptation by mountain and downstream populations through strengthening food, water, energy, environmental, and biodiversity security. The workshop also served to bring into focus the upcoming issues and agenda for UNFCCC and RIO+20 conferences and others.

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

Resource persons from ICIMOD, AKP, APAN, the Third Pole Project, the Stockholm Environment Institute (SEI), the Center for Environmental and Geographic Information Services (CEGIS)-Bangladesh, and the Southeast Asia START (Global Change System for Analysis, Research and Training) Regional Center (SEA START)-Thailand familiarised the participants with the impacts of climate change on the water and agriculture sectors in mountain and coastal regions and the role of the media in sharing knowledge on climate change impacts and possible adaptation measures.

During a day-long field visit to Panchkhal and Bhotekoshi, the participants visited community forests and questioned community members about issues related to reducing emissions from deforestation and degradation (REDD) and water scarcity. They also observed the extent of structural damage in the Upper Bhotekoshi area, where major glacial lake outburst flood incidents were noticed in 1964 and 1981.



"There has not been enough focus on the effects of climate change on water supply and agriculture, though this is what affects most people. By providing scientific information and credible evidence to journalists, this workshop is equipping them to produce more effective reports in this critical area."

"This workshop serves as an effective means of providing media persons with the necessary information on the ongoing changes in different ecosystems, how such changes affect the resident population and how such effects translate to the global scale. Journalists have a key role as a link between knowledge

institutions and the public. They help to transform science-based information into practical actionable knowledge. Therefore, media persons have an important role in spreading the 'right message' to the people", said Dr Andreas Schild, Director General of ICIMOD, in his welcome remarks.

Ms Roopa Rakshit of the Adaption Knowledge Platform, one of the organising partners, noted that the workshop would serve as a stepping stone towards a sustainable network of 'climate change adaptation aware' media persons from South Asia advocating for climate change adaptation and the mountain agenda. She also emphasised better linkages and coordination between the media community and adaptation practitioners. She suggested and urged fostering an e-community of practice for the media with a focus on climate change adaptation, using one of the many existing social media tools.

Mr Joydeep Gupta of the Third Pole Project, the facilitator of the workshop, said, "There has not been enough focus on the effects of climate change on water supply and agriculture, though this is what affects most people. By providing scientific information and credible evidence to journalists, this workshop is equipping them to produce more effective reports in this critical area."

Ms Meena Menon, a participant representing The Hindu, Mumbai, said, "The workshop has addressed fundamental concerns of journalists covering climate change with detailed presentations based on studies on climate change adaptation, impacts on glaciers and field visits to get a first hand feel of communities engaged in forestry, and also the impacts of glacial lake outburst floods. The workshop has contributed to a better understanding of the basic issues that people are confronted with due to changing climate patterns. It has also given us access to numerous resource persons, research and networking opportunities for our continuing work."

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NOTES TO EDITOR

ICIMOD www.icimod.org

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. Globalisation 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

The Asia Pacific Mountain Network, APMN, is a knowledge sharing platform connecting mountain regions and communities through dialogue and networking. APMN captures, enriches, and disseminates information on mountain development issues in and for the Asia-Pacific region. APMN also works as communication arm of ICIMOD dedicated to Link Mountain communities in the Himalayas with those in others part of Asia Pacific and beyond. www.icimod.org/apmn/

Regional Climate Change Adaptation Knowledge Platform for Asia and Asia Pacific Adaptation Network

<http://www.asiapacificadapt.net>

The Regional Climate Change Adaptation Knowledge Platform for Asia (Adaptation Knowledge Platform) and Asia Pacific Adaptation Network (APAN) are fostering generation and sharing of information, best practices and knowledge on climate change adaptation, and facilitating integration of knowledge into decision making processes.

Adaptation Knowledge Platform and APAN aim to build climate resilience of vulnerable human systems, ecosystems and economies and working as a catalyst towards building bridges between knowledge providers and users on climate change adaptation. It includes research institutes and centre of excellences both in governments and nongovernments sectors, development partners and agencies, practitioners and communities, all need adaptation knowledge.

Partners: AIT-UNEP RRCAP, SEI, UNEP, IGES, Ministry of Environment-Japan, ADB and SIDA.

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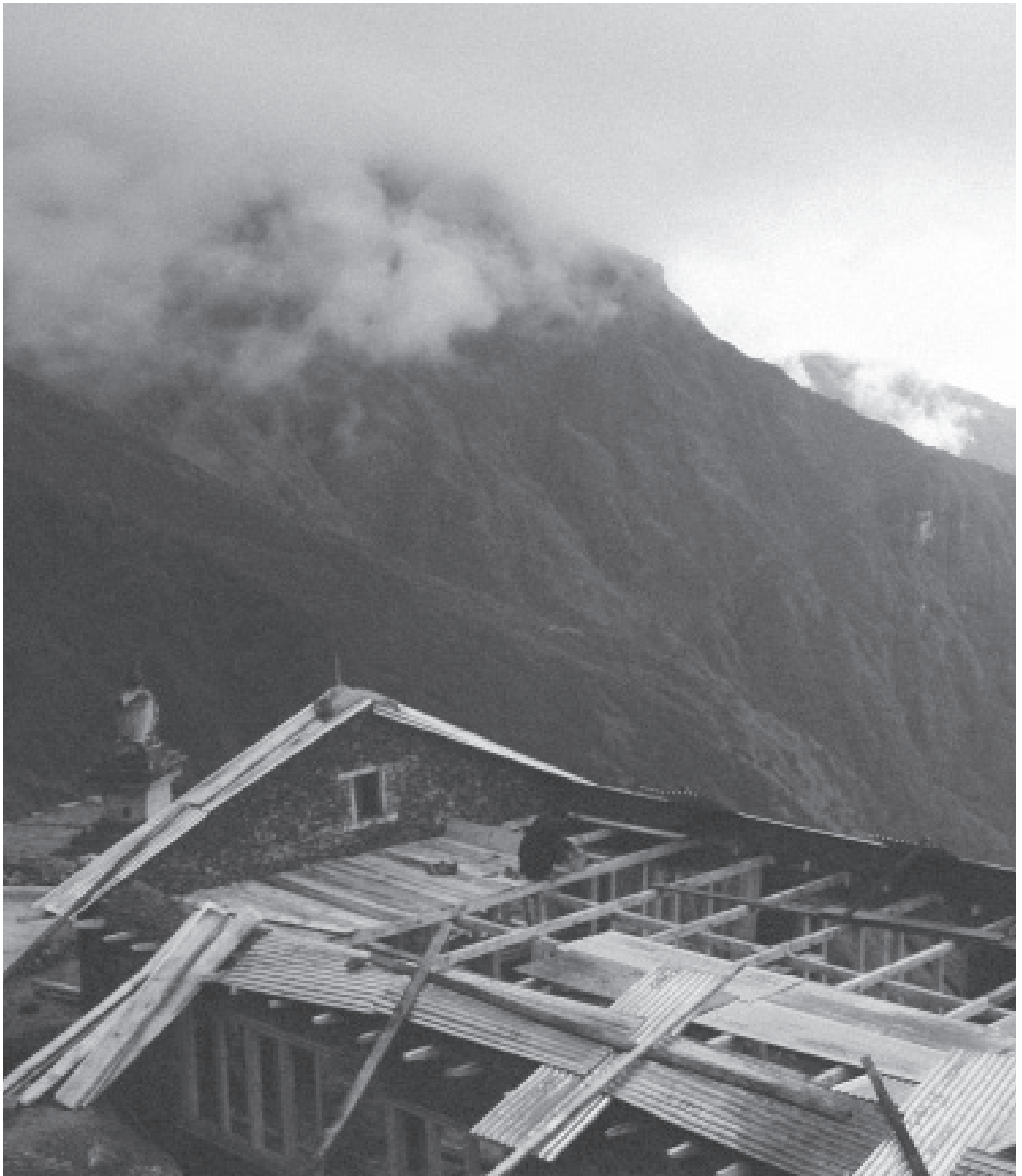
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