



# WORLD MOUNTAIN FORUM 2016

## Mountains for our Future

# SPEAKERS BOOKLET



#WMF\_2016

[Http://wmf.mtnforum.org](http://wmf.mtnforum.org)

This booklet was compiled from the presentations' abstracts and speakers' profiles for the World Mountain Forum 2016 (WMF 2016) held on 17-20 October, 2016 at Mbale—Uganda.

**Cover photos (From bottom left to upper left):**

1. Yala Glaciers, Langtang Valley, Nepal.  
**Credit:** Udayan Mishra, ICIMOD
2. Terraced Chiraito farm, Eastern Nepal\_K. Bhutia  
**Credit:** Jesse Chapman-Bruschini, TMI
3. Nor Yauyos, Andes Peru\_  
**Credit:** Andrew Taber, TMI
4. Nepali woman with a basket  
**Credit:** Jesse Chapman-Bruschini, TMI



*Despite their key role as pillars of sustainable development, Mountains are threatened by many global changes including climate change.*

## **I. BACKGROUND**

Mountains cover 22 percent of the world's land surface and are home to some 915 million people, representing 13 percent of global population (FAO, 2015).

Mountains provide indispensable goods and services to a significant proportion of humankind. They supply half of the global population with freshwater for domestic use and lowland irrigation in support of global food security and play an important role in the production of hydropower as a form of green energy. Mountains are centres of cultural and biological diversity, sources of raw materials, and important tourist destinations.

Despite these key goods and services provided by mountains, they still remain among the ecosystems least documented, offering services least accounted for. At the same time, many mountain regions are confronted with multiple risks and hazards, including widespread land degradation, inequitable land rights, resource grabs, and dire poverty.

Globally, approximately 40% of the mountain population in developing countries are vulnerable to food insecurity, and half are chronically hungry. The situation is exacerbated by global climate, environmental and socioeconomic changes. With uncertainties created by climate change, high population growth and land use change, urgent political actions are needed to enable environments at global and local levels and to facilitate the implementation of Sustainable Mountain Development (SMD) activities based on available knowledge and information while promoting investment in SMD.

In order to promote SMD in view of the considerable global challenges ahead, a program funded and led by Swiss Agency for Development and Cooperation (SDC) named “Sustainable Mountain Development for Global Change (SMD4GC)” was initiated with an objective to contribute to sustainable development in mountain regions under uncertain and changing climatic, environmental, and socioeconomic conditions. The programme involves the establishment of SMD policy instruments at different levels; and knowledge management to enable mountain stakeholders and communities to implement knowledge-based SMD activities.

The World Mountain Forum (WMF), as one of the activities supported by this programme, is an outstanding platform for SMD. It brings together mountain stakeholders from around the globe, and provides them with a platform for exchange, promotion of collaborative action and fostering political dialogue among different levels of society. The WMF 2016 held at Mbale, Uganda is the third in a series of other two events that took place in Lucerne and Cusco in year 2012 and 2014 respectively.

The present document gives an overview of the programme of the WMF 2016 and a short presentation of the speakers that will intervene during the event. For thematic sessions, short abstracts of the presentations to be given has also been included.

# **PART I: PROGRAMME OVERVIEW**

## **DAY 1 – Sunday 16/10/ 2016**

### **AGENDA ITEM 1: Arrivals at Entebbe airport and transit at Ridar Hotel, Kampala**

#### **NOTES:**

On arrival at the Entebbe airport, participants are asked to check the sign and logo of the World Mountain Forum. Event officers will be easily recognisable and guide delegates to the cars for transport to Ridar Hotel in Kampala (Mukono).

## **DAY 2 – Monday 17/10/ 2016**

### **AGENDA ITEM 1: Transfer to Mbale and lunch**

#### **NOTES:**

The journey to Mbale takes approximately 4 hours. Buses will leave at 8:00 am sharp from Ridar Hotel. All boarding delegates will need to present their registration badge to the usher. In that regard, please ensure you pass by the registration desk that will be near the reception at the stopover hotel (Ridar Hotel) on 16th October afternoon and 17th October early morning.

### **AGENDA ITEM 2: WMF Core Group Meeting**

#### **NOTES:**

This is a closed meeting between the organizers team. Other delegates may participate in this meeting on invitation basis.

### **AGENDA ITEM 3: Special Africa mountains event**

#### **NOTES:**

This session that will cover the whole afternoon of the day (17th October) will look at the SMD interventions happening on the African continent. Africa is receiving the WMF for its first time but a lot has already been going on the continent in terms of bridging knowledge gaps, building capacities, developing policy and implementing on-ground activities that are aligned with SMD.

Stakeholders like AfroMont (the African wing of the Mountain Research Institute—MRI) will present about what the network is doing in terms of research and knowledge generation on the continent. ARCOS as the African hub of the SMD4GC programme will present the progress so far in Africa, including the organization of the first Africa Regional Mountain Forum (ARMF) whose resolutions were adopted by the 15th session of AMCEN as well as the catalyzing of national mountain policy development where Madagascar and Uganda have been supported to develop national mountain strategies.

UNDP will present about the Ecosystem-based Adaptation initiatives it has been supporting in Uganda as part of a global EbA programme it is implementing in partnership with UNEP and IUCN.

Finally, the Ugandan government and the East-African community secretariat will present on the effort that has been made so far to push the SMD agenda both in the East-African territory and in Uganda.

## **Activities during the special Africa mountains event**

**FACILITATOR: Hon Jesca Eriyo, Deputy Secretary General, EAC**

<b>Time</b>	<b>Activity</b>	<b>Speaker</b>
4:00-14:10	Welcome Remarks	Uganda (Paul Mafabi) & ARCOS (Sam Kanyambwa)
14:10-14:20	Traditional Dance	School Children, Mbale (TBC)
14:20-14:50	Keynote 1: African Mountains and Sustainable Development	Dr Musonda Mumba, UNEP and ARCOS Board Member
14:50-15:50	Advancing Sustainable Mountain Development Agenda in Africa: Knowledge, Community Adaptation and Policy Agenda – key highlights	ARCOS (Africa and SMD4GC – Progress so far); AfroMont (African Mountain Research), UNDP (Mountain Community Adaptation – Lessons); Uganda (National Mountain Strategy); EAC (Sub-regional Mountain Agenda)
15:50-16:20	TEA/COFFEE BREAK	ALL
16:20-17:20	Panel discussion: Community, Public and Private Sector Panel (5' remarks/panellist max.) + plenary discussions	Hussein Matanda (Chairman, Mount Elgon Stakeholders Forum), Justice Sama Nchunu (NGO Representative, Cameroon), Dr Zewdu (Addis Ababa University, Ethiopia); Morocco (government official), Private Sector (Ecobank, Nile Breweries), Guinea, West Africa
17:20-17:30	Conclusions and Closing	Uganda
17:30-17:40	Traditional Dance	Ngoma Group, Mbale
<b>18:00-19:00</b>	<b>Cocktail and Welcome</b>	<b>All</b>
<b>19:00-20:00</b>	<b>Theme Leaders Preparatory Meeting</b>	<b>Theme Leaders</b>

## **DAY 3 – Tuesday 18/10/ 2016**

### **AGENDA ITEM 1: Opening session**

#### **NOTES:**

During this introductory session of the WMF 2016, representatives of the District of Mbale which will host the conference, and the government of Uganda, will say a few remarks to welcome the delegates. After the welcome, selected delegates from different regions (Asia, Europe and North America, Latin America, Africa) will present different perspectives of SMD in their respective regions followed by representatives of co-organizers who will give remarks on the background of the WMF.

The climax of the session will be the opening remarks that will be given by the Minister of Water and Environment of Uganda followed by the speech of H.E. President Yoweri Kaguta Museveni.



*Traditional dance during the opening of the Africa regional Mountain forum, Arusha 2014—The opening ceremony of the WMF 2016 will be cheered by local performers group from Mbale*



## **Activities during the Opening session**

**FACILITATOR: Mr David Ebong, Permanent Secretary,  
Ministry of Water and Environment, Uganda**

<b>Time</b>	<b>Activity</b>	<b>Speaker</b>
08:00-08:10	Introductory Remarks by ARCOS and MWE	Uganda/ARCOS (Paul & Sam)
08:10-08:20	Welcome Remarks by Mbale District	District Chairman
08:20-08:30	Video	Mountains and Climate Change
08:30-09:00	Mountains for our Future: Perspectives by representatives from different regions (5 mins)	<p><u>Africa</u> (Hanta Rabetaliana, Ministry of Environment Ecology and Forest, Madagascar),</p> <p><u>Central Asia</u>: Mr. Emomov, Ministry of Foreign Affairs, Tajikistan</p> <p><u>Europe/Noth America</u>: Eric Nachen, Director, FDDM, Switzerland),</p> <p><u>Latin America</u>: Dr Sonia Salas, TBC,</p> <p><u>South East Asia</u>: His Holiness Skyabgon Chetsang, India</p>
09:00-09:30	Remarks by main event Partners and Regional Representatives	<p>SMD4GC Partners (Dr Eklabya Sharma, ICIMOD)</p> <p>Mountain Partnership Secretariat (Thomas Hofer, Coordinator),</p> <p>UNEP (Frank Turyatunga, Dep. Director, ROA)</p> <p>EAC (Hon Jessica Eriyo, Deputy Secretary General)</p> <p>SDC (Andre Wehrli, Programme Manager, Federal Department of Foreign Affairs (FDFA))</p>
09:30-09:40	Statement by Hon Minister	Hon Minister for Water and Environment, Rep of Uganda
09:40-10:00	Official Opening of the World Mountain Forum	H.E. the President of the Republic of Uganda
10:00-10:10	Traditional Dance	Ngoma Group, Mbale
10:10-10:30	COFFEE/TEA BREAK/ Group Photo	ALL

## **AGENDA ITEM 2: Thematic sessions**

### **NOTES:**

The World Mountain Forum 2016 will look at four themes of utmost importance in SMD at global level in the current context. These are 1) Mountains and climate change, 2) Mountain communities and their livelihoods, 3) Mountain ecosystem services, and 4) Sustainable mountain agriculture.

For each theme, there will be keynote speech to give an overview of the problem to be discussed and its importance in terms of SMD. Two presentations will then follow to give examples or case studies of different initiatives from stakeholders who are working on the problem or parts of it and share lessons on the recommended approaches, tools, resources required to bring a sustainable solution to the problem.

Finally, a panel discussion will build from the highlights of these presentations and draw general recommendations on the action that is needed to be taken to address the problem that underlies the questions posed by the session.



*A plenary during the Africa Regional Mountain Forum, Arusha 2014*

## **Thematic Session 1: Mountains and climate change**

### **FACILITATOR: Arun Shrestha/ICIMOD**

<b>Time</b>	<b>Activity</b>	<b>Speaker</b>
10:30-11:00	Keynote 1.1. Mountains and CC: Overview on global situation with specific focus on HKH region	Dr Eklabya Sharma: Director Programme Operations, ICIMOD
11:00-11:40	Presentation 1.2. Network of Central Asian Climate Resilient Mountain Villages	Akylbek Rakhmanberdi: Secretary General, Alliance of Central Asian Mountain Communities (AGOCA), Kyrgyzstan
11:00-11:40	Presentation 1.3: Climate Change and Human Security	Dr Shazia Chaudhry, University of Nairobi, Kenya
11:40-12:40	General/Panel Discussion 1	TBD
12:40-13:40	LUNCH BREAK	ALL

## **Thematic Session 2: Mountains communities and livelihoods**

### **FACILITATOR: Dr. Eklabya Sharma, Director Program Operations (ICIMOD) and Ms Salome Alweny (ARCOS)**

<b>Time</b>	<b>Activity</b>	<b>Speaker</b>
13:40-14:10	Keynote 2.1. Mountain communities – mountain futures (Provisional title).	Dr Thomas Kohler, CDE, University of Bern, Switzerland
14:10-14:30	Effectiveness of NBCEs for Livelihoods improvement and sustainable development in the Albertine Rift region	Jean Paul Kubwimana, Leader, Landscape Conservation and Community Development, ARCOS
14:30-14:50	Presentation 2.3: Effects of labour migration on wellbeing and sustainable rural livelihoods in Kyrgyzstan	Lira Sagynbekova. Mountain Societies Research Institute, University of Central Asia, Kyrgyzstan
14:50-15:50	General/Panel Discussions 2	TBD
15:50-16:10	COFFEE/TEA BREAK	All

## **Thematic Session 3: Mountains ecosystem services**

**FACILITATOR: Mr Charles Sebukeera, UNEP**

Time	Activity	Speaker
13:40-14:10	Keynote 2.1. Mountain Ecosystem Services Products	Dr Thomas Hofer, Mountain Partnership Coordinator, Italy
14:10-14:50	Presentation 3.2. Improvement of Ecosystem Services through Management Planning and Result Based Monitoring to support livelihood in Qurumber National Park, Pakistan	Dr. Babar Khan Director, World Wide Fund for Nature, Gilgit, Pakistan
	Presentation 2.2: Mountain Ecosystem Services Economic Valuation in the Albertine Rift region	Philbert Nsengiyumva, Conservation and Development Director, ARCOS
14:50-15:50	General/Panel Discussions 3	TBD
15:50-16:00	COFFEE/TEA BREAK	All

## **Thematic Session 4: Sustainable mountain agriculture**

**FACILITATOR: Gabor Figeczky, IFOAM**

Time	Activity	Speaker
16:10-16:40	Keynote 3.1. Ensuring sustainability of investments on land and water management in mountain regions of Africa: gaps in the past and future perspectives	Dr. Gete Zeleke, Director, Water and Land Resources Center, Ethiopia
16:40-17:20	Presentation 3.2. Market connections as a key driver to sustainable mountain food systems	Hannes Van den Eeckhout, Coordinator Boeren & Buren, Belgium
	Presentation 3.3. Sustainable Agriculture intensification in Mountain Areas: a case of Northern Malawi	Mr. MacPherson Nthara. Focal point Mountain Partnership, Malawi
17:20-18:20	General/Panel Discussions 5	TBD
18:20-18:30	Summary and closing of Day 3	TBD
SIDE EVENTS 19:00-20:00	<b>Assessing Sustainable Mountain Development</b>	<b>MRI and SMD4GC Partners</b>
	<b>Waste the Mountains</b>	<b>UNEP, IETC, GRID-Arendal, ISWA</b>

## **DAY 4 – Wednesday 19/10/ 2016**

### **AGENDA ITEM 1: Technical wrap-up session**

**DURATION: 09:30-10:00**

**FACILITATOR: SDC & SMD4GC partners**

#### **NOTES:**

Each of the four technical sessions has defined a number of questions that define the agenda of the session and around which discussions will take place. The technical session chairs will therefore guide these discussions so as to produce a series of recommendations that will be captured as highlights from the technical sessions.

These highlights will be structured in way that they align with the 3 pillars of the World Mountain Forum namely: 1) Knowledge sharing and capacity building, 2) promotion of policy dialogue, and 3) supporting on-ground action.

During this technical wrap-up session, the technical sessions' chairs, working closely with the event's communications team, will present the highlights from their respective sessions to the plenary. Compilation of these highlights is what will form the main bulk of the conference's resolutions to be presented to the subsequent high-level segment session for adoption.

Parallel to this session, a special posters presentation session will be held where a number of selected posters under each of the four themes will be presented outside of the sessions' room.

## **AGENDA ITEM 2: High-Level segment session**

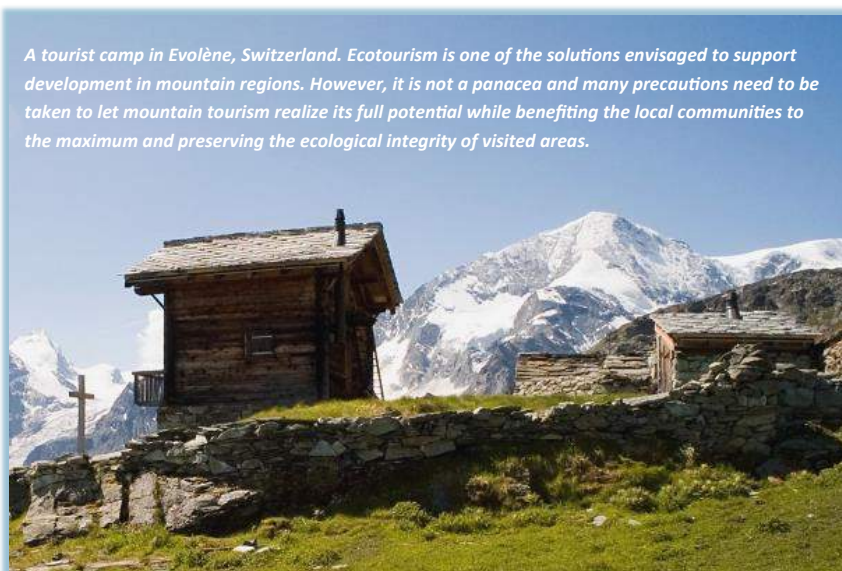
### **NOTES:**

This is the last major session of the forum. It will be a plenary session where high-level dignitaries will give concluding remarks on the work of the forum and its resolutions as a way forward.

The session will also include a panel discussion which will reflect on the different points raised during the different technical sessions and bring those issues into broader scope to see how the recommendations that were drawn can be implemented.

Finally, the session will give a platform to different stakeholders to launch major publications produced by different stakeholders in relation to SMD.

*A tourist camp in Evolène, Switzerland. Ecotourism is one of the solutions envisaged to support development in mountain regions. However, it is not a panacea and many precautions need to be taken to let mountain tourism realize its full potential while benefiting the local communities to the maximum and preserving the ecological integrity of visited areas.*



## **Activities during the high level segment session**

### **FACILITATOR: Eugene Anangwe**

<b>Time</b>	<b>Activity</b>	<b>Speakers</b>
10:00-10:05	Introduction by Facilitator	Eugene Anangwe
10:05-10:15	Welcome Remarks by Host Minister	Hon Minister
10:15-10:30	Briefing from Technical Sessions	Thomas Hofer
10:30-11:30	Panel 6: Mountains and SDGs – High Level Delegate Remarks and discussions	Members for the Panel from High Level Dignitaries, Civil Society and Private Sector TBD (Panel led by Andrew Taber (TMI))
11:30-12:30	Panel 7: Mountains and Climate Change Agenda High Level Delegate Remarks and Discussions	Members for the Panel from High Level Dignitaries, Civil Society and Private Sector TBD (Panel led by ICIMOD)
12:30-13:00	Mountain Publications Launch <ul style="list-style-type: none"><li>◆ Sustainable Mountain Development in East Africa in a Changing Climate; (UNEP, GRID-Arendal, ARCOS, EAC)</li><li>◆ Climate Change Adaptation Strategies, an upstream-downstream perspective (SMD4GC Partners)</li><li>◆ Uganda Sustainable Mountain Development Strategy (Ministry of Water &amp; Environment, Uganda)</li></ul>	
12:50-12:55	Conclusions by the Facilitator	Eugene Anangwe
12:55-13:00	High Level Session Closing by the Host Minister	Hon Minister
13:00-14:00	LUNCH BREAK	ALL

### **AGENDA ITEM 3: Closing ceremony**

This is the session where the forum’s resolutions will be read and adopted in plenary. The concluding remarks by the guest of honour will officially close the sessions and a local dancers’ group will entertain the delegates in a ceremony that will culminate in the closing dinner.

# **PART II: SPEAKERS PROFILES AND SUMMARY**

## **ABSTRACTS**

### **THEME 1: Mountains and climate change**

#### **KEYNOTE 1: Mountains and Climate Change – Knowledge for Action**

##### **Abstract**

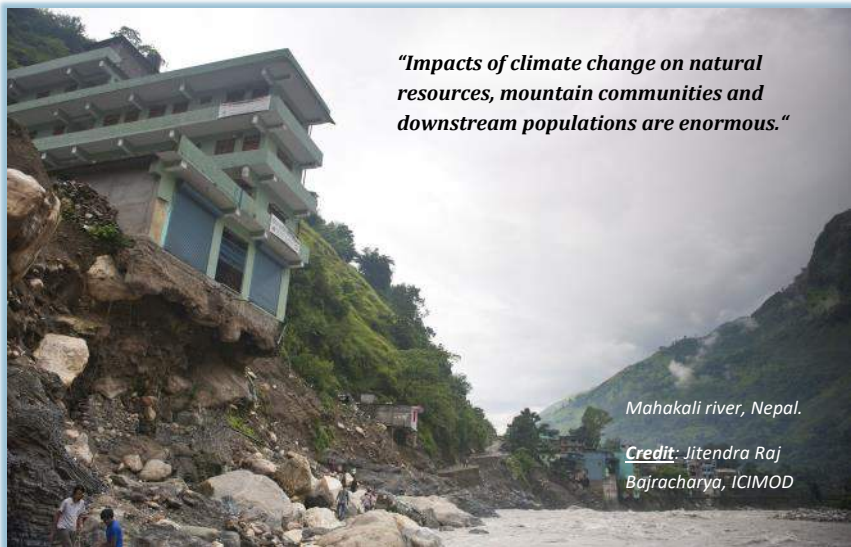
Mountains occupy 27% of the world's land surface area and are home to about 20% of the world's population. More than 1.3 billion people live in mountainous region. Half of all humankind directly depends on mountain resources notably water. Mountains support 25% of world's terrestrial biodiversity and include nearly half of the world's biodiversity 'hotspots'. Mountains provide global goods and services in the form of water, hydroelectricity, timber, biodiversity and niche products, mineral resources, recreation, and flood management. In general, both poverty and ethnic diversity are higher in mountain regions and people are often more vulnerable than people elsewhere.

Mountain ecosystems are exceptionally fragile, and are subject to both natural and anthropogenic drivers of change. Mountains also represent unique areas for detecting climate change and for assessing climate change impacts — especially in that they are now recognized to be a hotspot of climate change.

Impacts of climate change on natural resources, mountain communities and downstream populations are enormous.



The increasing awareness of the impacts of climate change on mountains, mountain ecosystems, and mountain communities, and the consequences for the rest of the world, have recently put mountains at the centre of international debates. There should be strong calls for mountain views to form an integral part in any discussions about the future and any plans for sustainable development under climate change. That means not just highlighting the vulnerabilities and fragilities inherent to mountain locations, but also emphasizing the resilience and strengths that mountain peoples and communities bring when seeking to deal with climate changes. Knowledge development in understanding climate change and impacts, using these knowledge in developing national and regional adaptation strategies and resilience building through appropriate capacity building, policy influence and attracting investments for mountains should be targeted in the way forward.



**SPEAKER: Dr Eklabya Sharma, Director Programme Operations, ICIMOD**



Dr Eklabya Sharma, Director Programme Operations at the International Centre for Integrated Mountain Development (ICIMOD), is an ecologist with over 30 years of experience in developing, managing, and implementing programmes mainly on sustainable

natural resources management in the Hindu Kush Himalayan region. He has a PhD in ecology from Banaras Hindu University, India, where he started his career in 1985 as a postdoctoral fellow. Currently, he is serving as Programme Manager of Farming Systems, Natural Resources Management, and Environmental Change and Ecosystem Services at ICIMOD (International Centre for Integrated Mountain Development).

Dr Sharma has expertise in research and development related to mountain ecology. He has made contributions to diverse fields of work, including mountain ecosystem studies and ecosystem management; participatory mountain development focusing on natural resource management and protected areas; appropriate technology development, demonstration and capacity building of mountain communities on farm productivity and sustainable natural resource management;

biodiversity conservation (scientific and participatory monitoring); transboundary landscape conservation and development; biodiversity and ecotourism in mountain areas; mountain farming systems specializing in linkages such as agroforestry, forests and agriculture; and biogeochemical cycling in ecosystems with a special thrust on nitrogen fixation, phosphorus solubilization and biological maintenance of soil fertility; watershed management including land use and land cover change, hydro-ecological linkages and carbon dynamics; and climate change impact assessments and adaptations.

### **PRESENTATION 1.1: Network of Central Asian Climate Resilient Mountain Villages**

#### **Abstract**

Worldwide, the mountains are considered to be the early indicators of changing climate as the changes occur at higher altitudes with greater extent and speed. The Central Asian region is not an exception with many of the glaciers melting and threatening the availability of water on which depend the livelihoods of 60 million population of the region.

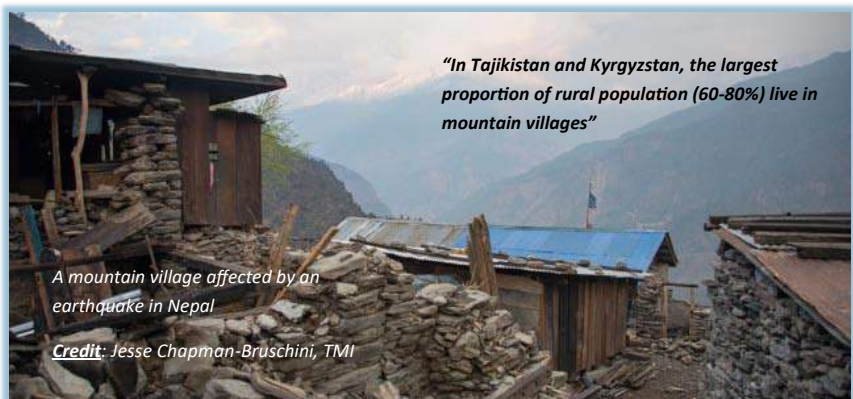
Both of the two most mountainous countries in central Asia, Tajikistan (97%) and Kyrgyzstan (93%) have the largest proportion of rural population (60-80%) living in mountain villages and their very existence depends directly on smart governance of climate risks.

Central Asian Mountain ranges extend over several countries, the mountains serve as water towers for the whole region and provide ecosystems and goods for both up and downstream countries. Glaciers hosted by Tianshan, Pamir and Alay mountain ranges store most of Central Asian water resources and they have been retreating rapidly during the past 2 decades. Over those last 20 years, more than 1000 glaciers (1081 to be precise) have disappeared due to the warming in the Pamir Alay mountain range alone. Due to mountain specificities (remoteness; fragile ecosystems and lack of access to markets), the villages remain in isolation, with the central level decisions and programs often not reaching them while changes are rapidly impacting mountain villages.

The role of this initiative is to contribute to improvement of resilience of mountain communities by supporting adaptive capacities at the village level. Under the pilot activity, to date eight villages in 3 countries have been selected undergoing vulnerability assessments and participatory planning for local community responses. As a result of the project, participatory risk and vulnerability assessments were conducted for 8 select villages in 3 countries, 120 local authorities and community focus groups were trained in participatory and integrated assessment and planning techniques and methodologies for vulnerability assessment and identification of community based responses for increased local resilience. For leading the community-level work a group of 21 people, with 9 women, 5 young people were elected as the Climate-Champions. The total population in these villages made 21, 241 people.

As a result of 16 community and village level consultations, community concerns and priorities were jointly identified for integration and formulation of local adaptation and disaster reduction activities. Each of these 8 villages was assisted with 1) Disaster mapping; 2) Developing seasonal calendars; 3) Livelihood Vulnerability and alternatives assessments; and 4) Institutional mappings. 5 local adaptation practices were supported as demo.

The lessons learned so far include: Much of the adaptation work to date remain at the central level and not reaching out communities and villages, since adaptation is local insight specific endeavor the planning should be done accordingly using the bottom-up approach; There is a need to combine and apply both of the adaptation planning approaches starting with the capacity assessment approach has provided us with strength of stakeholder driven process. However, for designing adaptation responses and concrete follow-up measures for the next steps, it is obvious that the planning needs to be combined with the impact assessment approach by applying the scientifically backed models and data.



*"In Tajikistan and Kyrgyzstan, the largest proportion of rural population (60-80%) live in mountain villages"*

*A mountain village affected by an earthquake in Nepal*

*Credit: Jesse Chapman-Bruschini, TMI*

## **SPEAKER: Akylbek Rakhmanberdi**



Mr Akylbek Rakhmanberdi Uulu studied at Kyrgyz Russian Slavic University where he obtained specialist degree in economics. For the past 2 years, he has been working with AGOCA. The AGOCA is a regional network of mountain villages bringing together 57 mountain villages from 3 Central Asian countries (Kazakhstan, Kyrgyzstan and Tajikistan) for mobilizing local communities to address local challenges.

Mr Akylbek was born and raised in Kyrgyzstan where more than 90% of the country's territory is covered by mountains. He travels a lot throughout the country meeting with the people who live in remote villages high in the mountains and he knows first-hand in what challenging environment they live. This is what lies at heart of his motivation to contribute to the improvement of mountain peoples' livelihood.

## **PRESENTATION 1.2: Climate Change and Human Security: Challenges for the Mount Kenya Communities**

### **Abstract**

Mount Kenya region provides an exceptionally unique ecosystem in Eastern Africa. Being the second highest mountain in Africa and enlisted as a World Heritage Site, Mt. Kenya is one of the most inspiring landscapes in the region. Covering around 2,100 km<sup>2</sup>, the area hosts ample variety of natural flora and fauna. The area plays critical role in promoting national tourism, agricultural production, water catchment and energy generation. However, the ecosystem faces many threats mainly due to anthropogenic activities and climatic changes that endanger human security of the communities around the mountain.

Since the early 1970s, nearly 30 per cent of the indigenous Mount Kenya forest cover has been lost due to heavy encroachment by illegal excisions, land distribution, logging and use of forest fires to clear land for various purposes. Simultaneously, rapidly receding Mount Kenya glaciers pose many threats to the sustainability of Mount Kenya's ecological goods and services. Increased intensity of recurrent droughts and shifting rainfall patterns have serious repercussions for water supply during the dry seasons, thereby affecting agricultural productivity, food security, health, livestock keeping and fisheries. In addition, with population growth and diminishing resources, incidents of crimes, human – wildlife conflicts and resource based clashes are growing day by day.



Against this background, key purpose of this paper, therefore, is to develop the understanding of climate change led human security implications for the mountain communities. Another aim of this paper is to promote climate change and human security policy dialogue for sustainable development of the mountain communities, especially in Kenya. Lastly, this paper evaluates efficacy of the existing mechanisms that have been established to build resilience of the mountain communities against the emerging climate change and human security challenges.



*Being the second highest mountain in Africa and enlisted as a World Heritage Site, Mt. Kenya is one of the most inspiring landscapes in the region*



**SPEAKER: Dr Shazia Chaudhry**



Shazia Chaudhry is a lecturer in the Institute of Diplomacy and International Studies (IDIS), University of Nairobi, Kenya. She is also an associate with the Institute for Climate Change and Adaptation, and Wangari Maathai Institute of Peace and Environmental Studies, University of Nairobi. She holds an MA and Ph.D in International Studies from the Institute of Diplomacy and International Studies, University of Nairobi and a Bachelors of Science degree from University of the Punjab, Pakistan. Her area of concentration is environment, revolving around climate change, human security, ethics, and diplomacy. She takes keen interest in the development of poor and vulnerable communities, specifically the ones who are living in fragile environments like slum areas, forest boundaries, steep hills and mountains.

## **THEME 2: Mountain communities and livelihoods**

### **KEYNOTE 2: Mountain communities – mountain futures**

#### **Abstract**

Mountains cover about 22% of the global land mass, and are home to about 915 million people or 13% of the global population. About 90 % live in mountains of developing countries, mainly in South and South East Asia. As a result of the great diversity of mountain environments and political contexts, mountain communities across the globe are characterized by a rich diversity relating to land and resource use, economy, and socio-culture. What is common to them, though, is the increasing exposure to global change, including economic and cultural globalization, climate change, and the spread of new forms of communication (IT).

Mountain communities are increasingly seen as custodians of key environmental services of global importance such as water, biodiversity, scenic value for tourism. On the other hand, they face a backlog in development, expressed in higher poverty rates and food insecurity, lack of access to infrastructure, and they often have to come to terms with policies and governance regimes not well conceived for mountains. The keynote will present examples how the development backlog can be overcome and how mountain communities can be supported, and how they support themselves for improving their livelihoods while benefitting society at large.



*"About 90 % live in mountains of developing countries, mainly in South and South East Asia"*

Woman caring for her buffalo,  
Darchula Nepal.

Credit: Jitendra Raj Bajracharya/  
ICIMOD

**SPEAKER: Thomas Kohler**



Thomas Kohler is former Associate Director of the Centre for Development and Environment (CDE) at the University of Bern, Switzerland and currently lecturer at the same University.

His field experience includes work in the mountains and highlands of East Africa, the Horn of Africa, South East Asia, Nepal, and of late the Caucasus and Eastern Europe. He is director of the International Mountain Society (IMS), the publisher of the international peer reviewed journal Mountain Research and Development (MRD).

## **PRESENTATION 2.1:**

### **Mountain Communities & Livelihoods: BEST as a suitable approach for sustainable development in mountain landscapes**

#### **Abstract**

More than 50% of mankind benefits from mountains as the world's water towers. In addition, mountains host some of the world's most complex agro-cultural gene pools and traditional management practices which are reducing time to time with climate change and other anthropogenic threats.

Meeting human aspirations in the face of a changing climate and an increasingly resource scarcity requires that resources are used sustainably. In this framework, different resolutions and decisions have been put in place and some of them put the mountains and community livelihoods at the centre of international debates, seeking to gather and share knowledge about suitable programs and approaches to implement the post-2015 agenda for Sustainable Mountain Development.

ARCOS' Nature Based Community Enterprises Program is built on three pillars of sustainable development. The programme uses an approach termed "BEST".

With BEST approach, sustainable community institutions are built and environmental resilience enhanced, through community sustainable nature based businesses that transform and inspire neighbours to deal with climate change impacts while improving their livelihoods.

We recommend a wide adoption of the BEST approach by SMD stakeholders and we would like to call upon everybody to support ARCOS' NBCEs program to continue supporting mountain communities and building resilience in mountain areas in the Albertine rift region and Africa in general.

**SPEAKER: Jean Paul Kubwimana**



Jean Paul holds a Master of Science in Biodiversity Conservation from the University of Rwanda. He has got practical skills in conservation through working with environmental conservation NGOs and

being involved in different field research activities in both ornithology and primatology, and has along his professional work dealt with community conservation, project development and implementation.

As a Leader of Landscape Conservation and Community Development Department at ARCOS, he provides leadership in the development, implementation and management of ARCOS field programs in priority landscapes; works closely with ARCOS management in developing strategic directions for ARCOS' broader engagement and exploring opportunities to implement agreed priorities in the Albertine Rift region and beyond.

## **PRESENTATION 2.2: Effects of labour migration on wellbeing and sustainable rural livelihoods in Kyrgyzstan**

### **Abstract**

The transition from a planned to a market economy has led to degradation of the rural areas and mass outflow of labour age rural population in search of jobs and better living conditions. Today, due to the difficult socio-economic conditions, decline in living standards and especially limited livelihood opportunities many rural residents migrate to big cities and abroad. It is estimated that around one third of the employable population of Kyrgyzstan is working abroad.

Today, under the new conditions of the market economy and the related manifestation of different types of mobility, new forms of regional connectedness have emerged. Mobility of people and the development of social networks across borders have become a crucial factor for the movement of financial capital, information, knowledge, goods, manpower, symbols and others. Communication of migrants with their networks at home through different technologies facilitates exchange of information and encourages further mobility of people. For instance, potential migrants in remote mountain areas of Kyrgyzstan often gain information on job vacancies and salaries through mobile phones. The increased availability of new technologies and improvement of different types of services for instance allow labour migrants working in Russia to easily and very fast recharge balance of mobile phones of their relatives living in remote rural area of Kyrgyzstan.

Questionnaire survey and in-depth interviews with migrants and their families left behind, testified different exchanges and interactions: financial, social, professional, cultural, communicatory, informative and different tangible and intangible exchanges.

Results of my study have shown that the most positive effect of labour migration for households are financial remittances, which are improving the well-being of households through investing not only in consumer goods but also as a more sustainable investment.

In this sense, regular and occasional financial capital (remittances) flows from Russia, Kazakhstan and some other countries contribute substantially to rural development in Kyrgyzstan. Apart from this, financial capital is subsequently transformed into human, physical and natural capitals in the place of migrant's origin. The new knowledge and skills of migrants are applied in self-employment and other activities upon their return.

The main goal of the presented project is to give an insight into the livelihood patterns, i.e. how rural people adopt certain strategies in order to sustain and secure their livelihoods, and understand different relationships, exchanges and linkages that have become possible through the migration of people and shed light on resulting development effects.



**SPEAKER: Dr. Lira Sagynbekova**



Dr. Lira Sagynbekova is a Research Fellow at Mountain Societies Research Institute (MSRI), University of Central Asia (UCA). She holds a Master's in Social and Economic Geography at Kyrgyz National University by J. Balasagyn.

As a Graduate Fellow with the UCA Central Asian Development Program, she received her Ph.D. at the Centre for Development Studies (ZELF), Free University of Berlin.

Through her extensive experience as a lecturer at different universities in German, Russia and Krygzstan, she commands a high degree of familiarity with population migration issues and rural livelihoods.

Ms. Sagynbekova has published more than 10 articles on migration problems in a variety of research journals and a book in Springer International Publishing Company. Currently, she works on a project “Adaptive governance of mountain ecosystem services for poverty alleviation enabled by environmental virtual observatories.” Working closely with mountain communities, she has a great interest in Sustainable Mountain Development.



## **THEME 3: Mountain ecosystem services**

### **KEYNOTE 3: Mountain Ecosystem Services and Quality Products**

#### **Abstract**

Mountains provide ecosystem services that are vital to communities. Perhaps the most noteworthy example is water: 60-80% of the world's freshwater resources originate in mountain areas and some of the world's largest cities - including New York, Rio de Janeiro, Nairobi, Tokyo and Melbourne - are dependent on freshwater from mountains.

Mountain areas have been increasingly recognized for the important provisioning, regulating, supporting and cultural services they provide. The world has deemed their protection and restoration a priority – by citing mountains among the water-related ecosystems in Sustainable Development Goal 6 (in addition to the two targets in Goal 15).

Management of mountain biological diversity is also recognized as a global priority and responsibility. Given the climatic zones compressed on their slopes, their isolation, unique topography and more, mountains host about a quarter of terrestrial biodiversity.

They are rich in endemic species, or plants and animals that occur nowhere else. However, global changes – such as climate change, migration and poor management of natural resources – exact a heavy toll on mountain biodiversity.

Mountain communities are the custodians of the globally important ecosystem services that mountain ecosystems provide. Incentive measures have to be developed to support mountain communities in the implementation of sustainable agricultural practices, which safeguard these ecosystem services and, at the same time, ensure the long-term food security of mountain peoples.

To promote the sound management of mountain ecosystems and conservation of their biodiversity, upon which mountain communities have come to rely for their wellbeing, the Mountain Partnership Secretariat has embarked on an initiative to promote mountain products jointly with Slow Food, an international organization protecting traditional and endangered foods and crops. Although small-scale mountain agriculture cannot compete with the prices and volumes of industrial production, it can focus on niche markets and tap into the rising demand for sustainable, fair trade products.

This initiative aims to conserve precious agro-biodiversity, promote the sustainable management of mountain areas while also boosting local livelihoods for the long-term.



**SPEAKER: Thomas Hofer**



Thomas Hofer is a Swiss National. He studied Geography and Biology at the University of Berne. As assistant of Professor Bruno Messerli he implemented his masters and PhD studies in the overall Himalayan Region with a special focus on watershed management and highland-lowland linkages. His PhD thesis entitled “floods in Bangladesh - a highland-lowland interaction?” was awarded the “First Environmental Research Price” of the University of Berne. In 1997 and 1998 Dr Hofer worked as Watershed Management Advisor at the International Centre for Integrated Mountain Development (ICIMOD) in Kathmandu for a regional watershed management project with field sites in Pakistan, India, Nepal and the Yunnan Province of China. Since 1998 he works at the Food and Agriculture Organization of the United Nations (FAO) in Rome. He is responsible for FAO’s global program on watershed management, sustainable mountain development and forest hydrology. His portfolio includes the technical supervision of field projects in Asia, Africa and Latin America, the coordination of conceptual and applied research activities and the support to international processes. Since August 2012 he also acts as the Coordinator of the Mountain Partnership Secretariat and since September 2015 as the Delivery Manager of FAO’s Major Area of Work on Ecosystem Services and Biodiversity.

## **PRESENTATION 3.1:**

### **Improving Ecosystem Services through Management Planning and Result Based Monitoring to support livelihood in Qurumber National Park, Pakistan**

#### **Abstract**

The focus of this study is on sustained use of ecosystem services available in Qurumber National Park which is located in Ishkoman valley of District Ghizer in Pakistan. The core area of the park extends over 740 Sq Km and can be divided into vegetated part, wetland supported area and glaciated area. The vegetated part supports domestic livestock and wild ungulates like Himalayan Ibex and snow leopard. The wetlands and galciers ensure regular supply of water to the valleys downstream, apart from offering habitat to migratory birds.

The major problems being faced by the park are over exploitation of natural pastures; deforestation of scarce juniper and birch forest; decrease in the habitat and prey of snow leopard and ibex; reduction in wildlife population due to illegal hunting; and reduction of pathway of migratory birds in Qurumber lake. Degradation of natural resources, arid climatic conditions and glacier melting the area is facing loss of vegetation cover, soil erosion, increase in intensity of floods in Qurumber river and loss of biodiversity.

The consequences necessitated to develop plan for this protected area to conserve the existing natural resources and for supporting the livelihood of local population.

The park has immense potential for tourism owing to the Qurumber Lake, Glaciers, pastures, mountain passes and rich culture. The lake provides conducive habitat for the visiting migratory birds, besides developing into a tourist site.

The plan recommends to conserve this unique mountain ecosystem through sustainable use of pastures by implementing grazing plans; regulate flow of water from glaciers through vegetation cover improvement in the catchment area, creating live spurs around villages and agroforestry practices in the valley; conserve wildlife resource through habitat and prey improvement supported with regulated Trophy Hunting Program; and exploit touristic potential of Qurumber lake. The conservation and restoration of vegetative cover, preservation of freshwater ecosystem of migratory birds, conservation of biodiversity by reviving natural habitat and establishing predator-prey relationship of endangered snow leopard directly supports achievement of Sustainable Development Goals besides implementing the provisions of Conventions on Biodiversity, Migratory Species and Climate Change.



## **SPEAKER: Dr. Babar Khan**



Dr. Babar is Director, World Wide Fund for Nature, Gilgit, Pakistan.

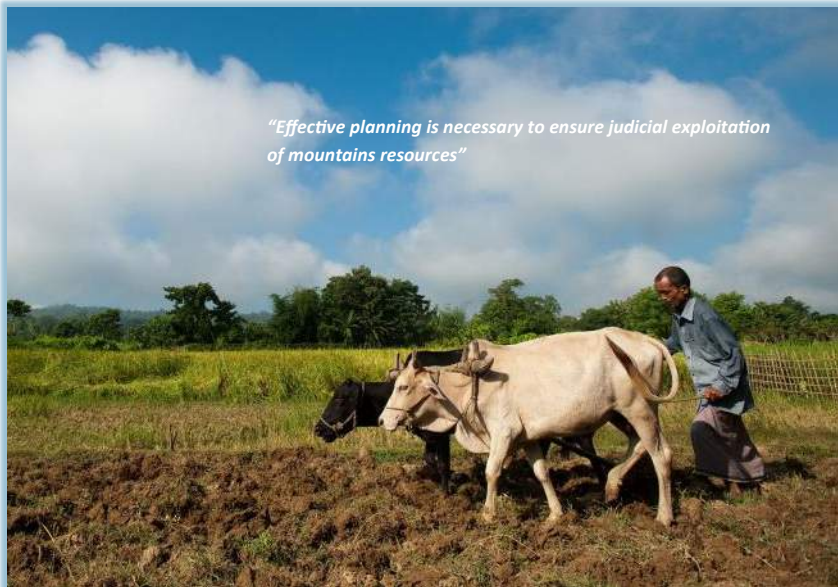
He is leading a team that is implementing the management plan of Qurumber National Park.

Phone: +923125088876

Email 1: bkhan@wwf.org.pk

Email 2: babarwwf@gmail.com

**Note:** Due to travel difficulties, Dr Babar Khan couldn't make it to the venue of the WMF 2012. His slot was has been filled with by **Richard Mwesigwa** of **WWF Uganda** with the topic: "Restoring the Ruwenzori mountain ecosystems using PES approach".



## **PRESENTATION 3.2: Mountain Ecosystem Services Economic Valuation in the Albertine Rift region**

### **Abstract**

The Albertine Rift region is endowed with many Mountain ecosystems ranging from the towering Ruwenzoris and Virungas in western Uganda and northern Rwanda to the Nyungwe-Kibira mountain forests in western Rwanda and Burundi. These mountains are extremely rich in biodiversity, with a variety of ecosystem services to millions of communities, while contributing to economic development of countries. At the same time this region is rich in natural resources including various mineral resources.

While Albertine rift countries are striving to develop economically, natural resources are the fundamental capital to use in that regards. This involves mining and infrastructure development which sometimes collide with the goals of natural environment conservation. Economic valuation is thus one of tools used is to support decision-making when planners try to balance the costs and benefits of new proposed development activities.

Within this framework, ARCOS implemented a project named “Enhancing Ecosystem Services Resilience and Sustainable Benefits to Local Communities in the Albertine Rift region (ESLOC).

One of the project activities was to conduct economic valuation of Ecosystem Services in 3 mountain forests



namely Uchuya (Uganda), Mukura (Rwanda) and Kibira (Rusizi).

Results from the Total Economic Valuation of Echuya landscape estimated the total annual contribution of Echuya forest at US\$ 2.511, Mukura Forest was estimated at 1,443,039 US\$ per year while Kibira forest was estimated \$30,350,580 per year. Values were in form of timber and non-timber forest products, water provision, climate regulation, landslide and flood control, etc. This estimation has raised the attention of decision makers at different levels where monetary values appeared to be of a great contribution to the countries' economy. So far some important conservation decisions were made partly based on these valuations. E.g Mukura forest was upgraded to a national park. It is strongly recommended that, for the sustainable management of mountain forest of Albertine rift, an economic valuation is required and the results should be communicated to be used by decision makers





**SPEAKER: Philbert Nsengiyumva**



Mr Philbert Nsengiyumva holds a Bachelor's degree in Zoology and Conservation from the National University of Rwanda. Currently, he is pursuing Master of Science in Environment and Natural Resources at Makerere University, Kampala-Uganda.

He has experience in Environmental Governance, Environmental Impact Assessment, Ecosystem Services assessment and

Community Conservation.

As Director of Landscape Conservation, Mr. Philbert Leads the development, management and implementation of ARCOS Conservation Programme, ensuring strong delivery on the ARCOS Conservation Strategic Plan. His interests lie in environmental governance and sustainability.



## **THEME 4: Sustainable mountain agriculture**

### **KEYNOTE 4: Ensuring sustainability of investments on land and water management in mountain regions of Africa: gaps in the past and future perspectives**

#### **Abstract**

Unlike mountains in other continents, African Mountains are living places where millions directly depend for their livelihoods in addition to major eco-system services they provide to downstream communities. They are also sources of important biodiversity to the rest of the world such as coffee and other highland plant materials. However, the eco-region suffers from extreme land degradation due to overexploitation of its natural resources without proper management and this drags its inhabitants into extreme poverty trap.

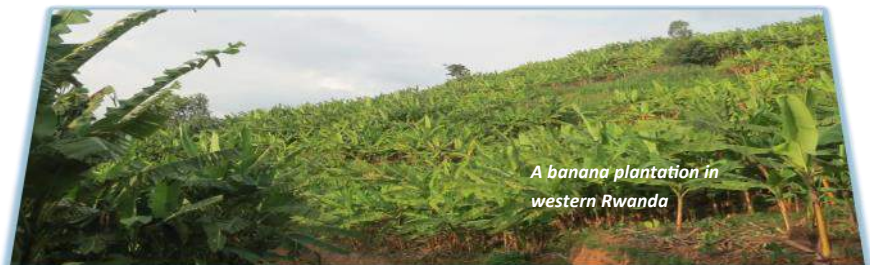
To address this challenge there were many initiatives of different kind on natural resources management since five decades. Some of these initiatives were financed by national governments but most of them were donor driven projects. It is common to see very colorful project sites when the projects are live but most sites returned back to the baseline situation or worse immediately after projects phase-out. This is largely related to the focus of projects to environmental conservation but little to improving livelihoods and failure in making communities beneficiary of any intervention and owners of the project.

It is also linked to lack of tools to help planners and communities to work on sustainability of investments right from the commencement of projects.

Because of these reasons problems of land degradation, siltation of water storage structures and intensified poverty in mountain regions of Africa are still major challenges after five decades of investment on natural resources management. We, therefore, propose a shift in approach for any projects on natural resources management to focus towards benefiting communities and making them owners of the same. Investment for Watershed Services (IWS) can be used as a mechanism to mobilize additional financial resources for the above mentioned approach.

We also develop '*A Guideline for Sustainability*' to help both planners and communities work on sustainability of investments right from the starting phase of projects. The guideline was developed based on situations in the Ethiopian Highlands but can be easily customized to the situations of other African Mountain Regions.

We hope that the combination of these two (i.e., a shift in approach and the application of the sustainability guideline) will change the African Mountain's environmental landscape and poverty profile in the future.



## **SPEAKER: Dr. Gete Zeleke**



Dr. Gete Zeleke is the Director of the Water and Land Resources Center affiliated to Addis Ababa University, Ethiopia. He is also a member of the International Resource Panel of UNEP which is a high-level scientific think-tank group working on resource efficiency and environmental sustainability.

He has over 30 years of solid professional experience from assignments in natural resources management and rural development in Ethiopia and Sub-Saharan Africa on both research and practical development works. His current research focusses on landscape transformation, hydro-sedimentology and sustainable land management. He established learning watersheds and observatories in Ethiopian Highlands, both serving as live learning platforms for communities, planners, policy makers and scientific community at large.

He has also solid experience on leadership in leading national and international programmes and organizations such as Director of Water and Land Resource Centre (WLRC) in Ethiopia and Leader of the Landscape Transformation Project for Horn of Africa (project of University of Bern, Switzerland); African Coordinator of the Global Mountain Programme (GMP) of the CGIAR); Director General and Director for Natural Resources Management Research of Amhara Regional Agricultural Research Institute (ARARI).

## **PRESENTATION 4.1: Market connections as a key driver to sustainable mountain food systems**

### **Abstract**

Commercial market connections are crucial to the analysis and on-ground implementation of sustainable mountain ecosystems. While the variety in altitudinal, climate and soil conditions in these areas allows for the expression of a vast biodiversity, they also present challenges for smallholders' direct delivery of fresh produce to the cities throughout the year.

In Peru, under the flagship of the “Farmer-Cook Alliance”, the gastronomic boom of the last decade provides a real opportunity to develop inclusive organic value chains in Peru, and in Cusco as the epicenter of tourism in particular. The gastronomic connection is presented both as an alternative for the sustainable intensification of smallholder agriculture in the Andes and as a means to maintain Peruvian gastronomy true to its traditions. Restaurants, however, need not only seasonal farm products, dependent on the yearly cycles of rainy and dry, warm and cold seasons, but also a regular supply of fresh produce, particularly vegetables.

This presentation deals with the linkage between a horticulture and low-tech greenhouse organic capacity building program, including participatory guarantee systems (PGS) and the establishment of a commercial collaboration with some of the top-level restaurants in Cusco. Both the practical experience from the AGROECO

Project (2011-2014), aimed at connecting groups of agro-ecological female vegetable farmers with restaurants, and the array of stakeholders that promote or hamper this relation, are analysed based on 35 qualitative interviews and 2 focus groups. A SWOT analysis of the cook-and-farmer interaction is presented and the need to combine seasonal crops of a high biological, cultural and nutritional value with more commercial crops like vegetables that are required all year long, is highlighted. Quality, regularity, organisation, postharvest management, logistics and cost management are key issues. Capacity building, knowledge sharing and policy dialogue are underlying challenges to catalyse these on-ground processes.

Finally, the contribution of this commercial connection to different pathways to food security is analysed in function of five dimensions as developed in the project: availability (new food or more regularly produced), access (additional income to buy food that cannot be produced), stability (greatly enhanced by the methods of protected horticulture), use (PGS as a great method to reinforce collective action, but knowledge and capacities should be reinforced for better nutrition) and institutions (where major challenges can be found). In conclusion, the development of short agro-gastronomic supply chains in mountain areas promotes the production of organic vegetables and contributes directly to improvements of the family diets as a primary objective. However, it is an innovative process that still requires major commitment, capacity building, communication and knowledge sharing between all stakeholders, from farmers to restaurant staff.

**SPEAKER: Hannes Van den Eeckhout**



Hannes Van den Eeckhout is a Master in Business Engineering from the KULeuven (Belgium) with 7 years of experience in working with farmers' networks. He strongly believes in the promotion of local, direct and/or organic value chains as a motor to sustainable rural development.

He lived and worked five years in Peru with the National Association of Ecological Farmers of Peru (ANPE PERU) and collaborated with the National Agrarian University of La Molina (UNALM) as the technical coordinator of the CIFSRF-funded AGROECO Project.

Since the start of 2015, Van den Eeckhout is working with The Food Assembly, an online platform to enhance direct sales in local food communities, and coordinates the start-up of the network in Flanders (Belgium) and The Netherlands. Over the last 15 months, 20 food communities were initiated in Flanders, involving more than 150 local producers and 22,000 customers.

## **PRESENTATION 4.2: Sustainable Agriculture intensification in Mountain Areas: a case of Northern Malawi**

Mountains cover a significant part of the land surface in Malawi. They provide life supporting goods and services for millions of people, including water, food and energy security at national and local level. However these functions are under threat from both climatic and anthropogenic factors.

Smallholder's Mountain farmers who mainly rely on red fed agriculture are most vulnerable to changes in climate that reduce crop productivity and negatively affect their weather-dependent livelihood systems.

The outcomes from some major projects focusing on Mountain areas have shown Sustainable Agriculture Intensification (SAI) is possible in mountains areas. Improvements in productivity can be achieved through appropriate promotion of better agronomic practices, sustainable land and water management practices and crop varieties done as a package, not one element at a time.

Communities were supported in the implementation of various livelihood activities through Capacity building provision of value addition equipment and linkage to key markets in urban areas. Promoting sustainable agricultural intensification (SAI) would improve long-term productivity and reduce pressure on mountain ecosystems.



**SPEAKER: MacPherson Nthara**



MacPherson holds a Master's Degree in Integrated Water Management acquired from the University of Queensland, Australia in 2012. Currently, he works with the Ministry of Agriculture, Irrigation and Water Development of Malawi as Chief Land Resources Conservation Officer.

Over the last 12 years, MacPherson has focused on working with farmers to improve agriculture productivity through sustainable interventions. He has championed a number of projects aimed at improving the livelihoods of farmers through better land and water management practices but also the introduction and promotion of alternative income generating activities.

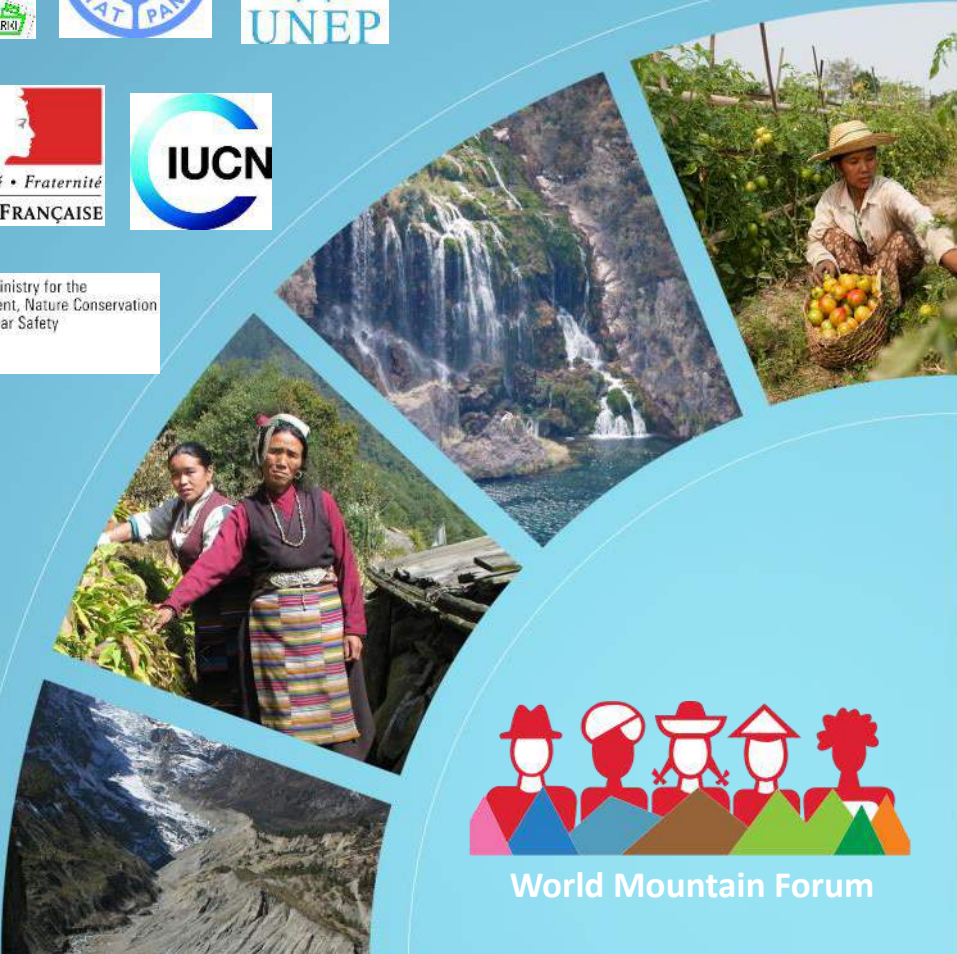
Besides being the Focal Person for Malawi for the Mountain Partnership, MacPherson is also the President of the Rainwater Harvesting Association of Malawi.



*“Great things are done when men  
and mountains meet; This is not  
done by jostling in the street.”  
William Blake*







World Mountain Forum