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**GLACIAL FLOODING AND DISASTER RISK MANAGEMENT
KNOWLEDGE EXCHANGE AND FIELD TRAINING**

July 11-24, 2013
Huaraz, Peru

July 11, 2013

Participants arrive in Lima

Dinner on your own

July 12, 2013

Participants travel to Huaraz by bus

Dinner on your own

July 13, 2013 Day 1

8:00 - 8:30 **Registration**

8:30 - 8:40 **Welcome**
TMI – Alton Byers
USAID – John Furlow
MINAM – To Be Determined

8:40 – 9:10 **Keynote speech** – Kenneth Young - *Climate change, people, and mountains*

9:10 – 9:30 Break

Session 1: High Mountain Issues of the Andes

Moderator: Jorge Recharte

9:30 – 9:50 Adam French, University of California Santa Cruz - *Conflict resolution in Paron in context of glacial lakes*

9:50 – 10:10 Jeff La Frenierre, Ohio State University - *Monitoring surface change on debris-covered glaciers, Volcán Chimborazo, Ecuador*

10:10 – 10:30 Laura Read, Tufts University - *Community water management in the Tres Cuencas Commonwealth*

10:30 – 10:50 Raúl Augusto Loayza-Muro, Universidad Peruana Cayetano Heredia – *Hydrology*

and water quality of the Quilcay watershed (Peru)

10:50 – 11:10 Dirk Hoffman, Bolivian Mountain Institute – *Comparison of recently formed glacial lakes in the Bolivian Andes and the Southern Alps of New Zealand - Differences and similarities*

11:10 – 11:30 Break

11:30 – 11:50 Cesar Portocarrero, The Mountain Institute - *Conflict resolution in Laguna Paron in the context of glacial lakes*

11:50 – 12:10 Wilfried Haeberli, University of Zurich - *Glacial lakes emerging risk and water issues*

12:10 – 12:30 Jesus Gomez, Huascarán National Park – *Experiencias científicas en el PNH y sus aportes en el conocimiento del ANP en relación al CC (Scientific Experiments in Huascarán National Park and their Contribution to the Knowledge of Huascarán National Park in Relation to Climate Change)*

12:30 – 12:50 Alejo Cochachin, Glaciological and Hydrological Resources Unit– *Evolution of 10 glacial lakes in the Cordillera Blanca and the relationship to climate change over the past four decades*

12:50 – 2:20 Lunch

Session 2: Recent high mountain projects (Tajikistan, Pakistan, Mongolia)

Moderator: Katalyn Voss

2:20 – 2:40 Vladimir Aizen, University of Idaho - *Modern and past climate and environmental change impact on regional hydrology and water resources stress in Central Asia*

2:40 – 3:00 Muzaffar Shodmonov, State Agency for Hydrometeorology, Tajikistan – *Recent glacier-related projects in Tajikistan*

3:00 – 3:20 Teiji Watanabe, Hokkaido University, Japan - *GLOF risk in Tajikistan*

3:20 – 3:40 Bolot Moldobekov, Central Asian Institute for Applied Geosciences – *Monitoring and research of glacier systems in Kyrgystan under climate change and related georisks*

3:40 – 5:00 Break, Poster Session: Viewing and Question/Answer

7:00 Dinner on your own

July 14, 2013 Day 2

Session 3: Recent High Mountain Projects in the Himalaya

Moderator: Alton Byers

- 9:00 – 9:20 Ulyana Horodyskyj, University of Colorado, Boulder - *Rates of change on Spillway Lake, Ngozumpa glacier, Nepal: 2000 - 2013*
- 9:20 – 9:40 Reinmar Seidler, ATREE - *Climate change in Kanchenjunga TCA: Vulnerabilities and adaptive capacities*
- 9:40 – 10:00 Dinesh R Bhuju, Resources Himalaya Foundation - *Building climate change resilience capacity of mountain people in Nepal*
- 10:00 – 10:20 Karma, Geological Survey of Bhutan – *Reducing lake water level in Thothormi Glacial Lake in Bhutan: An adaptation Project to the adverse impact of climate change*
- 10:20 – 10:50 Break
- 10:50 – 11:10 Alton Byers, The Mountain Institute - *Imja Lake risk reduction: Community-based, Science-driven*
- 11:10 – 11:30 Daene McKinney, University of Texas at Austin - *Mitigation Strategies for Risk Reduction at Imja lake, Nepal*
- 11:30 – 11:50 Gautam Rajkarnikar, Department of Hydrology and Meteorology, Government of Nepal – *GLOF monitoring in Nepal*
- 11:50 – 12:10 Stephanie Spray, Harvard University - *Snow River Film Project, Nepal*
- 12:10 – 1:40 Lunch

Session 4: Recent High Mountain Projects in the Himalaya

Moderator: Daene McKinney

- 1:40 – 2:00 Paribesh Pradhan, Trek4Education - *Great Himalayan Trail*
- 2:00 – 2:20 Ryan Bartlett and Sarah Freeman, WWF - *Climate resilience in the eastern Himalayas: Integrated approaches to assessing vulnerability and developing adaptation strategies*
- 2:20 – 2:40 Sonam Sherpa, Kathmandu University – *Depicting community perspectives: Repeat photography and participatory research as tools for assessing environmental services in Sagarmatha (Mt. Everest) National Park*

- 2:40 – 3:00 Ang Rita Sherpa and Ang Chiri Sherpa, TMI – *Community-based climate change adaptation in the Mount Everest region of Nepal*
- 3:00 – 3:30 Break
- 3:30 – 3:50 Dhananjay Regmi, Himalayan Research Expeditions - *Investigation of the Seti River disaster (May 5, 2012) and assessment of past and future mountain hazards facing Pokhara, Nepal and upstream communities*
- 3:50 – 4:10 Siri Jodha Singh Khalsa, NSIDC, University of Colorado Boulder – *The Contribution to High Asia Runoff from Ice and Snow (CHARIS) Project*
- 4:10 – 4:30 Carl Schmitt, National Center for Atmospheric Research – *Measurements of dust and black carbon on the glaciers of the Cordillera Blanca mountains of Peru*

Dinner on your own

July 15, 2013 Day 3

HMGWP, CoP, and Tajikistan Facilitated Discussions

- 9:00-9:30 John Furlow, USAID – *An Overview of USAID’s Approach to Climate Change*
- 9:30-12:00 HMGWP and Community of Practice
Facilitator: John Harlin
Growth, Participant collaboration, Funding opportunities, and Knowledge exchange
- 12:00-5:00 Pachamanca Lunch and Cultural Show, The Lazy Dog Inn

Dinner on your own

July 16, 2013 Day 4

Field Methods and Modules I (participants chose module 1, 2, or 3)

Modules:

1. **Hydrology and water quality of Quilcay watershed**
End-point water sampling and calculations
Lunch: In the field
Location: Quilcay watershed above Huaraz (~ 3900 m)
Trainers: Raul Loayza, Jeff La Frenierre, Molly Polk, Oliver Wigmore

2. **Conflict resolution in Paron in context of glacial lakes**

Lunch: In the field

Location: Paron Lake and communities (~ 4200 m)

Trainers: Cesar Portocarrero, Laura Read, Rachel Chisolm

3. **Glacial lake and emerging risk and water issues**

History in the CB, emerging glacial lakes, hydrology and contemporary issues

Lunch: In the field

Location: Llaca Lake (~ 4400 m)

Trainers: Wilfreid Haerberli, Marcelo Somos, Daene McKinney

Dinner on your own

July 17, 2013 Day 5

All day

Churup Lake trek

Lunch: In the field

Leader: Alton Byers

Dinner on your own

July 18, 2013 Day 6

Field Methods and Modules II (participants chose module 4 or 5)

Modules:

4. **GPR at Pastoruri**

Design of lake control projects; how good science with local people can lead to sound projects

Lunch: In the field

Location: Pastorouri Glacier (~ 5000 m)

Trainers: Daene McKinney, Marcelo Somos, Rachel Chisolm, Katalyn Voss

5. **V&A, Community Consultations, and Policy Tools for High Mountain Climate Change Management and Adaptation**

How we're engaging people and policy-makers: the process and linking science to policy (LAPAs, NAPAs, CAPAs, and PIPs)

Lunch: In the field

Location: Communities in Quilcay watershed above Huaraz (~ 3900 m)

Trainers: Jorge Recharte, Josepha Rojas, John Furlow, Alton Byers

Dinner on your own

Quilcayhuanca-Palcacocha Expedition (July 19-21, 2013)

July 19, 2013 Day 7

All day **Huaraz to Quilcayhuanca valley and basecamp**
Evening facilitated discussion: “Community and LAPA in Quilcay Watershed”
Leader: Alton Byers
Facilitator: Cesar Portocarrero

July 20, 2013 Day 8

All day **Cross Huapi Pass from Quilcayhuanca valley to Cojup valley, camp at Palcacocha Lake**
Evening facilitated discussion: “Hydrology”
Leader: Alton Byers
Facilitator: Cesar Portocarrero

July 21, 2013 Day 9

All day **Field study of Palcacocha Lake, Cojup valley to Huaraz**
Morning discussion: “Risk Reduction”
Leader: Alton Byers
Facilitator: Cesar Portocarrero

Dinner on your own

July 22, 2013 Day 10

Participants travel to Lima by bus

Dinner on your own

July 23, 2013 Day 11

Participants in Lima

Dinner on your own

July 24, 2013 Day 12

Participants depart Peru