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## Coordination Meeting

### **The Impact of Glacier Retreat in the Andes: International Multidisciplinary Network for Adaptation Strategies**

**3-4 September, Santiago, Chile**

#### **Introduction**

The UNESCO IHP project “The Impact of Glacier Retreat in the Andes: International Multidisciplinary Network for Adaptation Strategies” foresees in a set of deliverables related to diagnostics of current conditions of glaciers in Andean countries, the identification of their vulnerability to climate change, as well as current and future opportunities for the implementation of policies on climate change adaptation strategies. To identify these strategies, a set of regional activities were organized since 2012, strengthening the science-policy dialogue in the Andean Region on these topics.

Following up on these activities, a two day meeting will be held in Santiago de Chile, to present ongoing activities of the Glacier Melt project, as well as to discuss follow-up activities and to identify possible linkages with other regional activities on climate change adaptation strategies.

#### **Project Deliverables and Products**

During project execution a set of deliverables were produced that will be presented and discussed during the meeting. In particular, four background papers were developed to identify the current gaps and opportunities related to climate change and adaptation potential. The first policy brief dealt with ‘Mapping of vulnerability of water resources to global changes in the Andean Region’ and focused on the physical environment. The second brief was oriented towards ‘Policy needs for adaptation strategies in water resources management’, and addressed current policies in different countries identifying possible gaps in addressing changing conditions. The third paper dealt with ‘Education and curriculum needs’ on water resources, and snow and glacier aspects, showing current gaps. The last paper documented ‘Climate Change Adaptation local practices in the Andean Region’ and showed the way forward.

Complementary to this effort, a regional assessment of the vulnerability of Andean natural resources (water and environmental resources) to glacier melt was finalized. This has led to the identification of areas with higher vulnerability to glacier retreat, and focal areas for follow-up activities targeting the development of adaptation strategies in those regions. A website was created to present these outcomes (<http://unesco.envisim.com/>) and a final document is being developed for public diffusion, in collaboration with GRID-ARENDAL. A scientific paper has also been submitted for peer review titled “Tracing the white water: Tropical glacier melt contribution to human water use” (Buytaert et al., 2015).



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Based on the capacity building realized as part of the project, and in collaboration with the project partners and the ACCION (Andean Climate Change Interamerican Observatory Network) project in particular, a manual for glacier mass balance analysis is currently under development and will be printed in 2015.

## Network Coordination

The coordination meeting will also strengthen network interaction between the different partners involved in the project. As the project collaborated closely with the ACCION project, the coordination meeting will allow to exchange experiences and novel developments, in order to define a work plan for the final part of the project implementation.

Additionally, it will be the first meeting of the Regional Working Group on Snow and Ice (GTNH-LAC) since it was converted into a Regional IHP Programme in 2014, allowing to define activities and an action plan for further implementation of the programme.

## Agenda

<b>Wednesday 2 September</b>	<b>Arrival of participants in Santiago, Chile</b>
<b>Thursday 3 September</b>	
9:00 – 10:00	<p><b>Welcome</b></p> <ul style="list-style-type: none"> <li>- Jorge Sequeira, Director UNESCO Santiago</li> </ul> <p><b>Opening Session</b></p> <ul style="list-style-type: none"> <li>- Patrick De Beyter, Belgian Ambassador in Chile</li> <li>- Gert Verreet (Flemish Government)</li> <li>- Anil Mishra (UNESCO)</li> </ul>
10:00 – 10:30	Coffee Break
10:30 – 13:00	<p><b>Advances of the Glacier Retreat Project / ACCION Project</b></p> <ul style="list-style-type: none"> <li>- General Overview of the project: Koen Verbist, UNESCO IHP</li> <li>- IHP activities: Responses to Climate Change Impacts on Glaciers, Snow and Water Resources: Anil Mishra, UNESCO IHP</li> <li>- Vulnerability mapping of glacier melt impact in Andean Countries – Bert De Bievre, CONDESAN</li> <li>- Background paper on ‘Climate change and Tropical Andean Glacier Retreat (Update)’ – Mathias Vuille, UAlbany</li> <li>- Proposed UNESCO Publication: “Balance de masa glaciar con el método glaciológico - Andrés Rivera/Francisca Bown, CECS, Valdivia</li> <li>- Background paper on ‘Vulnerability and threats to snow and glaciers in the Southern Andes’ – Gino Casassa, Geoestudios and Universidad de Magallanes</li> </ul>
13:00 - 14:00	Lunch
14:00 – 16:00	<ul style="list-style-type: none"> <li>- Draft background paper on ‘Existing climate change adaptation policies and challenges and opportunities for their implementation’ – Elma Montaña, IAI</li> <li>- Group discussion on the Background Paper - Elma Montaña, IAI</li> </ul>

	<ul style="list-style-type: none"> <li>- An overview of activities of the Working Group on Snow and Ice – Francisca Bown, CECS &amp; Wilson Suarez, SENAMHI</li> <li>- Past and foreseen exhibitions at COP 20/21 – Anil Mishra</li> </ul>
16:00 - 16:30	Coffee Break
16:30 - 18:30	<p><b>Linkages with National and Regional Projects</b></p> <ul style="list-style-type: none"> <li>- Current Advances in Glacier Legislation in Chile – H. Senador Antonio Horvath, Chile</li> <li>- Advances and challenges of glaciohydrological modelling and its integration into watershed models: the case study of the Rio Maipo - Sebastian Vicuña, UC and James McPhee, UChile</li> <li>- Vulnerability assessment of water resources in Chile to climate change – Maisa Rojas/Rene Garread, UChile</li> <li>- Climate change action in developing countries with fragile mountainous ecosystems from a sub-regional perspective - UNEP-Grid Arendal / CONDESAN – Miguel Saravia</li> <li>- Glacier Monitoring Programme of IRD - GINOT Patrick</li> <li>- The WMO Global Cryosphere Watch – Gino Casassa</li> <li>- Watershed management in mountainous catchments - Alexandra Nauditt, ITT-UKöln</li> </ul>
<b>Friday 4 September</b>	
09:00 – 09:30	Advances in glacier protection legislation in Chile – Daniel Melo, Diputado del Congreso de Chile
09:20 – 11:00	<p><b>Round Table Discussion - Mercedes Meneses</b></p> <p>Political sector: Daniel Melo, Diputado Academic Sector: Francisco Ferrando, UChile Civil Sector: Flavia Liberona, Fundación TERRAM; Matías Asun, Greenpeace</p> <ul style="list-style-type: none"> <li>- Are messages emerging for policy?</li> <li>- How can the project contribute to the current glacier legislation process in Chile?</li> <li>- What are the possible further actions to make the project results most useful in policy and practice context?</li> </ul>
11:00 – 11:30	Coffee Break
11:30 – 12:00	<p>Presentation of project activities foreseen in 2015/2016</p> <ul style="list-style-type: none"> <li>- Background paper on snow and glaciers in the Southern Andes</li> <li>- Mountainous Watershed Case study</li> <li>- Training course on mountain hydrology and ecosystem services</li> <li>- Strengthening of ongoing mass balance research</li> <li>- Vulnerability assessment in the Andean Region: outreach</li> <li>- Policy assessment in the Andean Region</li> </ul>
12:00 – 12:30	Round table discussion on project agenda and its implementation in 2015 and 2016;
12:30 – 13:00	<p>Working Group on Snow and Ice – Zelmira May</p> <ol style="list-style-type: none"> <li>1) New developments (regional and country level)</li> </ol> <ul style="list-style-type: none"> <li>- El programa de balance de masa del Inventario Nacional de Glaciares de Argentina - Lucas Ruiz, IANIGLA, CONICET</li> </ul>



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	<ul style="list-style-type: none"> <li>- El Programa Glaciológico Ecuatoriano - Bolívar Cáceres, INAMHI</li> <li>- Monitoreo De Glaciares Tropicales Andinos en un contexto de Cambio Climático - Jorge Luis Ceballos, IDEAM</li> <li>- La ley de protección de glaciares y el inventario en Argentina – Pierre Pitte, CONICET</li> <li>- Glacier Monitoring Network in Chile - María Belén Varela/Jorge Huenante/Gonzalo Barcaza</li> </ul>
13:00 - 14:30	Lunch
14:30 – 16:00	<p>Working Group on Snow and Ice – Zelmira May</p> <ol style="list-style-type: none"> <li>1) New developments (regional and country level)</li> <li>2) Planning 2015-2016</li> </ol> <ul style="list-style-type: none"> <li>- Website implementation</li> <li>- Publication of country activities / Brochure</li> <li>- Scientific Conference, Valdivia 2016</li> </ul>
16:00 - 16:30	Coffee Break
16:30 - ...	Travel of participants