

GHP panel meeting within ANDEX-GHP-INARCH workshop Santiago 24-26 October 2018

The workshop was organized by René Garreaud with the local support of the Center for Climate and Resilience Research and the Faculty of Physical and Mathematical Sciences at the Universidad de Chile in Santiago. A variety of scientists from across South America came together to discuss future directions of Hydroclimate research for the Andes that could be brought together under the ANDEX project led by Germán Poveda and René Garreaud. INARCH presented on their recent activities in Alpine research catchments, showing clearly synergies with work being proposed in ANDEX. GHP panel members and action representatives discussed the current status of the active Regional Hydroclimate Projects (RHPs), Crosscut actions (CCs) and Data Centers (DCs). The workshop has been a good opportunity to tighten the links between the three communities.

The GHP meeting has revised the status of the ongoing activities. The running RHPs HyMeX and Baltic Earth, respectively studying the Mediterranean Basin and the Baltic Sea region, progress steadily and are generating new actions for the coming years. The Changing Cold Regions Network (CCRN) has completed as a successful RHP, providing a solid basis for the new Global Water Futures (GWF) initiative to build on. GWF expands the scope of CCRN to cover seven major river basins in Canada and the USA, and has been granted RHP status. PannEx, the Initiating RHP centered in the Pannonian Basin in Europe, continues to develop in the initiating phase after finalising the white book and the science and implementation plans. Two Initiating RHPs, OzEWEX in Australia and HyVic in Eastern Africa, have stalled in their progress towards full RHP status. Those involved in the projects are commended on their efforts to date, and it is hoped that they can continue in some fashion into the future. The running Crosscut actions report very significant advances, INARCH on mountain hydrology, INTENSE on subdaily precipitation and Precipitation near 0°C in the changing climate. The current actions in global data centers are described for the Global Runoff Data Centre (GRDC), and Global Precipitation Climatology Centre (GPCC) on precipitation data.

New initiatives are being proposed. Joint actions between Third Pole Environment (TPE) and GEWEX may be organized on Water Security in the Third Pole, a proposal that may see TPE become a RHP in due course. A study of the Hydroclimate of the Andean region – ANDEX - may take the form of an RHP in the near future. Another initiative being led from Japan is focused on the hydroclimate of monsoon regions of south and south-east Asia. The WCRP Water for food Baskets of the World grand challenge includes a focus over the great plains of the USA with a proposed regional climate experiment at convection permitting resolution to examine the role of agriculture in the regions climate.

This effort may also form part of a prospective RHP over the Western USA which continues to be discussed. This initiative intends to develop into a RHP in the next year. A Crosscut on Water Management in Models intends to explore how to deal with anthropic action in numerical models and is being pursued jointly with GLASS. Another on the Determining Evapotranspiration is in early discussions with a likely workshop to be held in a year's time. Other actions are being explored but not yet to the point of having been proposed formally to the Panel.

While existing RHPs produce consistent science advances, and a number of "prospective" RHPs continue to progress toward formal RHP status, it is recognised that not all initiatives will reach full RHP status despite being successful in collaboration and capacity building activities relevant to GEWEX. It is also recognised that RHPs upon completion often have a great network of scientists that may continue collaboration and capacity building activities, such as workshops and summer schools. In order to keep these scientific communities engaged with GEWEX, a new GHP activity, GHP networks, are proposed. These networks are required to maintain collaboration and capacity building activities relevant to GEWEX science, and are offered the opportunity to be directly involved in Cross-cut projects and other GEWEX initiatives.

The conclusions of the present meeting will be presented for approval to the SSG at their 31st meeting early 2019.

J.P. Evans and J. Cuxart, GHP co-chairs