



The Benefits of Past and Current Regional Hydroclimate Projects to the Third Pole Environment (TPE) Water and Energy Exchanges Studies

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To improve understanding of the various processes at work on spatial and temporal scales from regional to global the Regional Hydroclimate Projects (RHP's) are established as part of the Global Energy and Water Exchanges (GEWEX) Project to link the regional observations and process understanding to the global scale. This is done through exchange of observations, data, modeling, transferability studies etc. In this presentation the series of RHP's that were underway over North and South America, Europe and Asia continuously from the early 1990's up to the present will be examined, the reasons they were established, how they evolved and how they are evolving or are likely to evolve in the future, with an emphasis on where they can and should benefit similar work proposed for the TPE. The results will be presented in the context of the World Climate Research Programme (WCRP) Grand Challenge related to the development of a water strategy that addresses the issue of past and future changes in Water, in general, and the GEWEX science question on global water resource systems, in particular. This material will address issues associated with how changes in land surface and hydrology influence past and future changes in water availability and security, how new observations lead to improvements in water management and how models become better in global and regional climate predictions and projections of precipitation and how these outcomes relate to the TPE Water and Energy Exchanges Studies.