GEWEX Hydroclimatology Panel Meeting

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The GEWEX Hydroclimatology Panel (GHP) Meeting was held at the University of New South Wales (UNSW) in Sydney, Australia, and was hosted by Drs. Jason Evans and Matt McCabe of the UNSW Centre of Excellence for Climate System Science. The meeting focused on results from the past year, the continued restructuring of GHP science elements, and planning for the GHP contribution to the climate research challenges and questions posed for Phase III of GEWEX.

The organization of GHP has been simplified into two main activities—Regional Hydroclimate Projects (RHPs) and crosscutting projects that are research topic based. Current and proposed crosscutting project topics are: (1) extremes (e.g., drought and high frequency precipitation); (2) water and energy exchanges studies; (3) high elevation science; and (4) seasonal stream flow forecasting.

Regional Hydroclimate Projects (RHPs)

New criteria for defining and evaluating RHPs and their contributions to GEWEX were endorsed by the GEWEX Scientific Steering Group, and provides a framework for GHP to assign the designations of "former, current, or prospective" to the RHPs (see the figure on the next page). Using these criteria, GHP approved the continuation of four regional studies and their proposed end dates: (1) the Baltic Sea Experiment (BALTEX) 2013; (2) the Northern Eurasian Earth Science Partnership Initiative (NEESPI) 2015; (3) the Monsoon Asian Hydro-Atmospheric Science Research and prediction Initiative (MAHASRI) 2015; and (4) the HYdrological cycle in the Mediterranean Experiment (HyMeX) 2016. Of the regional studies designated as "Prospective," the Saskatchewan River Basin Project was shown to be the most mature in its planning and was endorsed by the Panel as an Initiating RHP.

GHP Crosscutting Projects

The goals for GHP crosscutting activities are: (1) to generate interactions between RHPs; (2) maintain links with completed RHPs; (3) advance the GHP contributions to the GEWEX Science Questions (GSQs); and (4) address issues of common concern with the other GEWEX Panels and WCRP projects. Crosscutting projects are limited to a duration of 2–3 years with the possibility of extension. Proposals for these projects follow a prescribed template with specifics related to the GHP science objectives, the relationship of the project to the RHPs, and to the GEWEX Imperatives and GSQs. A desig-

nated project leader will report to the GHP on the progress of the initiative during quarterly phone conferences and at the annual meetings. Once the Panel agrees that a proposal has reached a significant level of momentum, steps may be taken to broaden participation in the project within other GEWEX panels and related communities.

Two new crosscut proposals were submitted during the GHP meeting, one on short time-scale precipitation extremes and the other on droughts. Other potential crosscut projects discussed include: (1) high-elevation precipitation; (2) climate change and water resources; (3) hydrological seasonal forecasting that would have linkages to the Working Group on Seasonal to Interannual Predictions and the Hydrologic Ensemble Prediction EXperiment (HEPEX); (4) regional modeling with linkages with the Coordinated Regional Climate Downscaling Experiment (CORDEX); (5) land surface model validation with linkages to the GEWEX Land Atmosphere System Study (GLASS); and (6) validation of global data sets to be undertaken in concert with the GEWEX Data and Assessments Panel (GDAP).

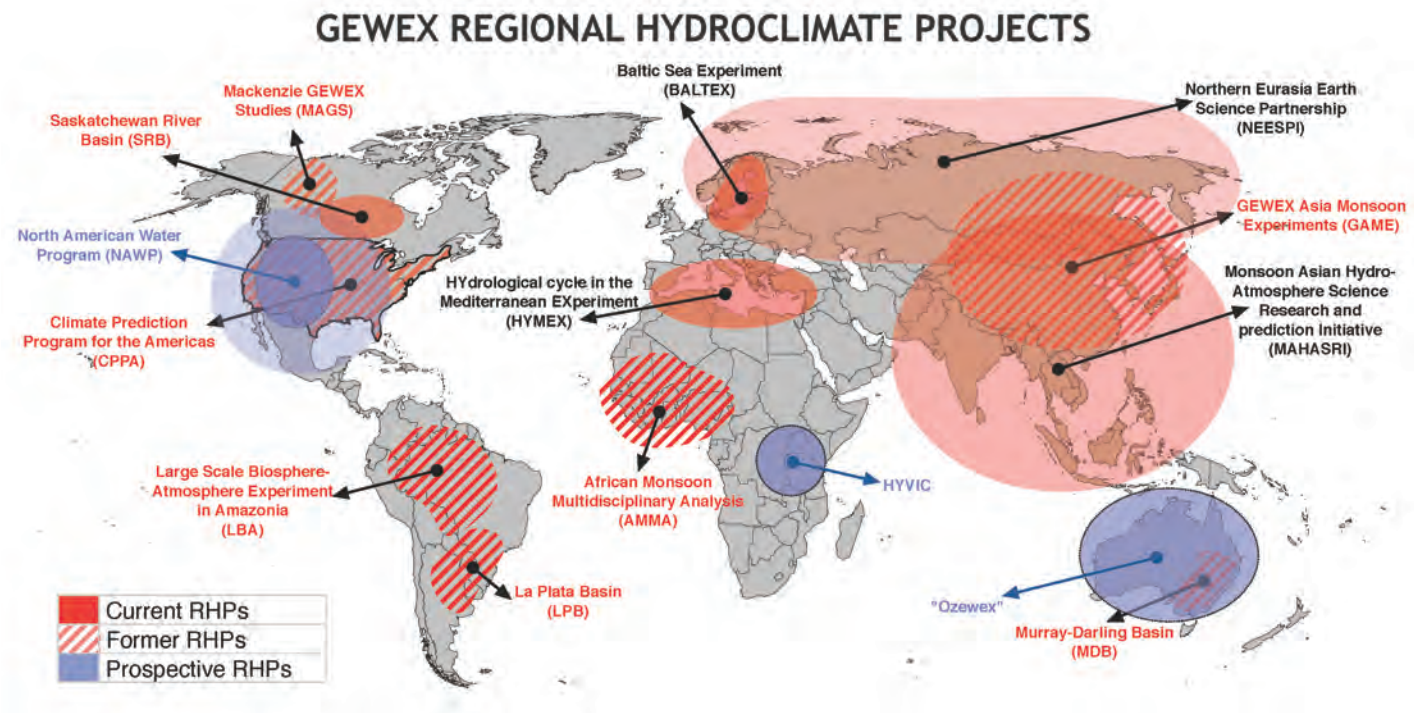
To be responsive to the GEWEX SSG Rapporteur's Report on GHP, the development of a crosscut project to address the continuing need for high quality data and products to be made available to GHP and the broader community is being considered. This includes not just raw data but, for example, integrated water and energy budget term products within the RHP regions. Opportunities to cooperate with and benefit from the Future Earth Initiative, the WCRP Working Group on Regional Climate, and other global impacts communities are also being investigated. As it is important to better understand the progress and requirements with regard to hydrological modeling, it was agreed to summarize this knowledge across the RHPs and cross cuts. In this context, the action was accepted to undertake a synthesis in the form of an article in an appropriate publication (e.g., *BAMS, EOS*).

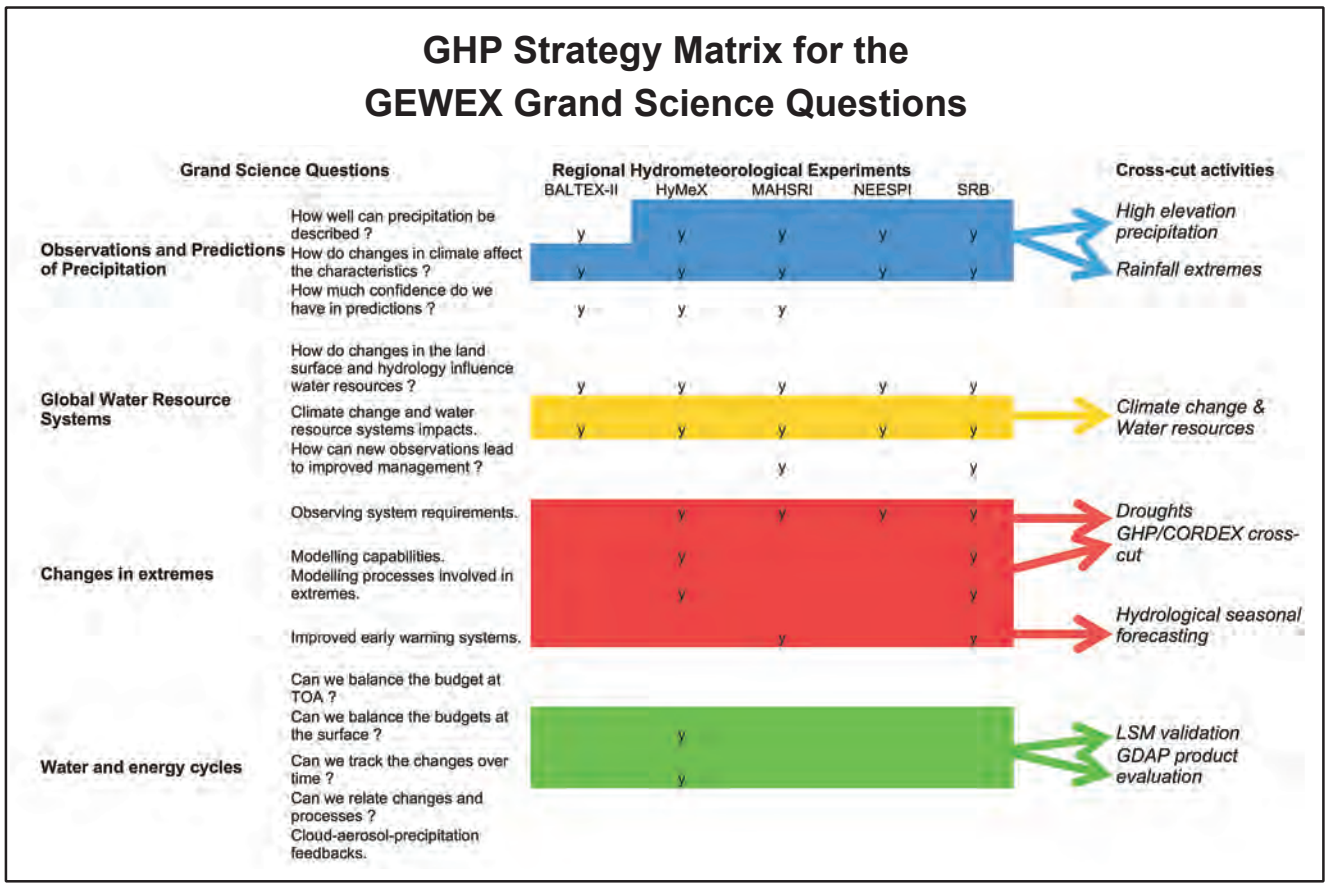
GHP Strategy to Address the GEWEX Science Questions

The GEWEX Science Questions (GSQs) pose issues that are central to the regional activities of GHP and these are included in the new criteria for a regional study to achieve full RHP status. The crosscutting projects are being developed to focus the attention of the GHP community on the issues raised by the GSQs and will enable assessments to be carried out across regions. The Panel encourages regional studies be developed in areas likely to yield results of special importance to the GSQs science foci. The figure on the next page provides an overview of the GHP strategy for responding to the GSQs.

Summary

During its annual meeting, the GEWEX SSG noted that "...it has been a challenging but productive year for GHP..." By choosing to focus on a more narrow set of science questions with regional, crosscutting features it has been possible to simplify the GHP organizational structure. Several RHPs are concluding, which creates gaps in regional coverage. This presents challenges for GHP, particularly when important geographical regions are not represented in GEWEX, such as Africa, South America, and the Caribbean. However, a promising African regional study associated with the Lake Victoria Basin and its effort to hold its 2013 meeting in South America may act as a catalyst to re-energize activities in those regions.





An overview of the GEWEX Hydroclimatology Panel (GHP) strategy for addressing the GEWEX Science Questions. *See article on page 18.*