

GWSP Case Studies

A Portfolio of Regional Research

A GWSP Fast-Track Activity

Background

A rich history of place-based and regional studies can be found in the environmental science and management literature, and is a centerpiece of the global change research agenda. The science of hydrology has a history dating back more than a century and that has been based fundamentally on site-specific research. More recently and among many examples, IGBP instituted a series of regional-scale studies, including under its Biospheric Aspects of the Hydrological Cycle Core Project the major field and modeling campaign in known as LBA--the Amazonian Large-scale Biosphere-Atmosphere campaign. GEWEX, the Global Water and Energy Experiment, while global in scope has organized a successful research effort around a series of Continental Scale Experiments (CSEs), of the scale of the entire Mississippi and Mackenzie River basins. While the Global Water System Project also seeks to forward global perspectives on water, it recognizes the need for regional and site-specific studies from which to draw insights about the communalities and differences in regional water systems across different parts of the world, through which the GWSP global perspectives will be enriched.

Thematic Linkage of Regional Scale Studies and GWSP

The GWSP scientific agenda purposefully recognizes the need for multi-scale perspectives. In fact, the opening paragraphs of the Science Framework document pose the critical question of whether the large number of local-scale changes to the water cycle are fundamentally independent of each other or somehow synergistic and cumulative at the global scale. Regional research projects in many cases will already be underway, and thus represent specific opportunities for the GWSP to partner with affiliates. It is anticipated that such partnerships will yield reciprocal benefits; namely, that regional affiliate projects will help to interpret and verify the global-scale analyses of the GWSP while at the same time the GWSP will provide context and a broader perspective to the more site-specific work.

Ultimate Goal

The primary goal of GWSP regional Case Studies is to develop an ongoing network of international collaborations, with the express aim of understanding how water system changes in different parts of the world are manifested, uncovering similarities, and drawing global-scale conclusions. As for any GWSP activity, these studies should have strong and co-balanced emphasis on the physical, biological, chemical and human dimensions of water system change.

Implementation

To develop a portfolio of regional GWSP case studies, a series of potential partnerships will first be identified, either by SSC members or IPO staffers. When promising potential affiliates are identified, a prospectus for the partnership will be prepared, and then presented to the SSC for approval. Responsibilities for executing the partnership will then

rest with an individual on the SSC or a member of a GWSP national committee. Periodic updates will be provided on each GWSP Case Study. Near the end of the fast-track period (0-2 years) of the GWSP initial phase, a synthesis of all such active Case Studies will be attempted.

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