



Hydrology Seminar



The La Plata Basin (LPB) in South America – A GEWEX/CLIVAR Continental Scale Experiment

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The La Plata Basin (LPB) is the fifth largest basin in the world and second only to the Amazon Basin in South America. La Plata basin presents a large diversity of challenges, from its vulnerability to notable positive trends in precipitation and streamflow, to the management of hydropower production. The scientific community is thus confronted with aspects that are of significant magnitude, as important natural resources and the quality of life of a large population are at stake. The uniqueness of the basin's climate and hydrology has been recognized in the recent years, and a concerted international effort by scientists has led the World Climate Research Programme GEWEX and CLIVAR Panels to name the LPB a Continental Scale Experiment (CSE). CSEs are major basins that have been identified because the study of their distinct features can lead to significant improvement of the world's water resources.

The fundamental issues to be addressed in LPB can be summarized in three main questions:

- What climatological and hydrological factors determine the frequency of occurrence and spatial extent of floods and droughts?
- How predictable is the regional weather and climate variability and its impact on hydrological, agricultural and social systems of the basin?
- What are the impacts of global climate change and land use change on regional weather, climate, hydrology and agriculture?

An LPB Implementation Steering Group is elaborating the activities that need to be performed to address the above questions. This interdisciplinary group is working with research and operational centers on an Implementation Plan that will articulate the most efficient ways of addressing the activities to be developed. The implementation plan envisions two main activities: monitoring of hydroclimate variables and a field experiment to develop a set of unique data that will (a) help understand the land surface-atmosphere processes that may lead to persistent events, and (b) to calibrate and improve parameterizations in regional and global models employed for forecasting and prediction up to seasons. The two activities will be complemented with modeling and diagnostics of the coupled system. The implementation plan will become available in the coming months.

Date: Tuesday, August 25, 2006

Time: 1:00 P.M.

Location: NWS Headquarters
1325 East West Highway, SSMC#2, Room 8246
Silver Spring, Maryland

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