

CEOP-RHP session 5, 13 March 2007, 09.00 – 10.30

5. CEOP Contributions to GEWEX Road Map

**5.1 REGIONAL HYDROCLIMATE PROJECTS
(Co-Chairs: H. Berbery, J. Huang)**

AMMA/ BALTEX/ CPPA/ LBA/ LPB
MAHASRI/ MDB/ NEESPI/

The Chairs and Correspondents will organize their groups to respond to what they will contribute for each year (2007-2012) to:

GEWEX Objective 1:

"Produce consistent **research quality data sets** complete with error descriptions **of the Earth's energy budget and water cycle** and their variability and trends on interannual to decadal time scales, for use in climate system analysis and model development and evaluation."

2007-2009:

Complete first regional analysis of the water and energy cycle with existing products

Diagnosis of causes of variations and trends of regional energy and water cycles (from weather to decadal scales)

2008-2010:

Promote regional observations as part of GCOS for the regional energy and water cycle studies

GEWEX Objective 2:

"Enhance the understanding of and quantify **how energy and water cycle processes contribute to climate feedbacks.**"

2008-2009:

Conduct field experiments to understand regional hydrometeorological processes (e.g., LPB, MAHASRI, CPPA)

2008-2010:

Develop information on floods and droughts for the specific RHPs and assessment of the role of land-atmosphere interactions.

2007-2010

Carry diagnostic and modeling studies of land surface-atmosphere interactions feedbacks

GEWEX Objective 3:

"**Improve the predictive capability for key water and energy cycle variables and feedbacks** through improved parameterizations to better represent hydrometeorological processes, and determine the geographical and seasonal characteristics of their predictability over land areas"

2008-2011:

Improvement of the applicability of the prediction models for key water energy and water cycle variables and feedbacks

Develop land surface datasets to be employed for validation and assimilation into regional and global models to improve their predictive skill.

GEWEX Objective 4:

"Undertake joint activities with operational hydrometeorological services, related ESSP projects like the GWSP, and hydrological research programs to demonstrate the value of GEWEX research, data sets and tools for assessing the consequences of climate predictions and global change for water resources."

2010-2012:

Launch pilot projects in RHPs that will utilize hydrological ensemble prediction

Downscale and evaluate seasonal hindcasts over the RHPs

Assist the role of remote sensing to improve regional hydrological modeling

Contribute to assessing past, present and future hydroclimate variability and change and contribute to detection, attribution and vulnerability studies at the regional scales.

Establish collaborations with GWSP to develop assessments of availability of water resources based on climate projections for the 21st century

Evaluate the role of land cover/land use changes on the regional system's climate and hydrology