

WORKSHOP ON THE APPLICABILITY OF CLIMATE RESEARCH FOR WATER RESOURCE MANAGEMENT IN SEMI-ARID AND ARID REGIONS

**18–20 April 2005
Cairo, Egypt**

**Lawrence Martz
University of Saskatchewan
Saskatoon, Canada**

In response to a request from the Arab states to the World Meteorological Organization, a special Workshop was held to examine the applicability of climate research and information for water resource management in semi-arid and arid regions. The workshop was hosted by the World Climate Research Programme (WCRP) and the United Nations Educational Scientific and Cultural Organization (UNESCO), and organized by the GEWEX Water Resources Applications Project (WRAP), and the UNESCO-International Hydrological Programme (IHP) Cairo Office.

The program opened with an official welcome on behalf of the Egyptian Ministry of Water Resources and Irrigation, an introduction from the co-chairs Radwan Al-Weshah (UNESCO) and Lawrence Martz (GEWEX-WRAP), and a welcome from Gilles Sommeria on behalf of WCRP. Mohamed Abdulrazzak, Director of the IHP Cairo Office, and Abdin Salih, Director of the IHP Tehran Office actively participated in the workshop.

The relationship between the Earth climate system and the hydrology and water resources of arid and semi-arid regions of the world is of particular interest to the decision makers and stakeholders in these regions. With the projected population growth in the semi-arid regions and the increasing demand for adequate water resources, these stakeholders wish to know information that is useful for water resources management.

The workshop addressed this overarching issue by bringing together operational hydrology and water management stakeholders from the arid/semi-arid regions of North Africa and the Middle East with hydro climate scientists engaged in observation, modeling, and analysis. Presentations included descriptions of regional water issues and examined the current state of knowledge about the climate system relevant to water management in arid/semi-

arid regions. Specific regional presentations were made on the major water issues in the region, including representatives from Lebanon, Jordan, Sudan, Syria, the United Arab Emirates, Egypt and Iran.

Gaps in understanding, data availability and regional capacity were identified in reviews of hydroclimatological data products and modelling achievements, including activities undertaken under the Water and Development Information for Arid Lands-A Global Network (G-WADI) Initiative.

The principal actions identified in the workshop discussions include:

- Increase awareness of the significance of climate change and variability in water resource planning and management across the region;
- Improve sharing of hydroclimatological data across various national and intra-national jurisdictions;
- Access and develop tools to bring global and regional data into a form suitable to support decision-making;
- Apply climate forecasts and data products to specific water management and planning issues; and
- Improve the interface between regional institutions and the international community, in order to enhance the regional capacity to address the above issues.

The Workshop participants recommended that on a priority basis, a regional network of professional and academic scientists be formed. Existing institutional capacity within the region should be used as much as possible to develop and support such a network and UNESCO was identified as having a lead role in this regard. The initial tasks of the network would be to: (1) inventory expertise within the region; (2) inventory of hydroclimatological observation sites across the region; (3) examine the feasibility of developing a reference site under the CEOP program; and (4) develop a proposal for a demonstration project that applies GEWEX/CLIVAR data products or models to the solution of a specific water management issue.

The workshop established a foundation for future enhanced collaboration and the application of WCRP products to the solution of pressing water management problems.