



International
Hydrological
Programme



Iranian National
Commission
UNESCO



Forests, Range and
Watershed
Management
Organization of Iran

Regional G-WADI Workshop

on

Climate Change Impacts on Water Resources Management in Arid and Semi-Arid Zones



Tehran, Iran
20 – 23 June 2011

INTRODUCTION

Arid and semi-arid areas face the greatest pressures to deliver and manage freshwater resources globally. It has been estimated that some 40% of the world's population were suffering water shortages by the mid-1990s. In less than 25 years, two-thirds of the world's population will be living in water-stressed countries. Challenges facing water managers in these areas include population growth, food security, salinity increases and pollution from various sources. Superimposed on these pressures, climate change is expected to increase water scarcity and the frequency of floods and droughts in many arid and semi-arid areas. As countries are using their water resources with growing intensity, poor rainfall increasingly leads to national water crises as water tables fall and reservoirs, wetlands and rivers empty. Global warming could cause further changes, further variability and further uncertainty. Eventually, making an accurate assessment and managing the available and renewable water resources is more difficult in semi-arid regions, compared with water-rich countries; while the science base is limited, data are scarce and humid zone experience is inappropriate.

To meet these special needs of arid and semi-arid regions, UNESCO's programme on Water and Development Information for Arid Lands – a Global Network (G-WADI) was established in 2004 by the 15th Session of the Intergovernmental Council of the International Hydrological Programme (IHP) of UNESCO. In line with priorities of IHP- VII (2008-2013) 'Water Dependencies: Systems under Stress and Societal Responses', the G-WADI programme specifically aims at strengthening the capacity to manage the water resources of arid and semi-arid areas through the established G-WADI network.

The Asian branch of this network, composed of 9 countries, was established in 2005 in which a number of Pilot Basins were identified aiming at practicing improved understanding of the special characteristics of hydrological systems in Arid and SemiArid Regions and to promote integrated basin management by use of appropriate decision-support tools. Several activities have been organized under this network providing capacity building and sharing of experience on issues specific to arid zones.

To promote better dialogue and understanding of potential climate change impacts on water resources of arid and semi-arid zones, this workshop is being organized by the Ministry of Energy of Iran and UNESCO Tehran Cluster Office in coordination with the Asian G-WADI Secretariat. The alternative adaptation measures as well as climate change mitigation will be discussed during the workshop including a new paradigm by rethinking the water use with the aim of increasing the productive use of water will have to be adopted. Moreover specific sessions will be allocated to climate change risks and monitoring. Experience of regional countries in the field of climate change adaptation and managing scarce water resources will be shared and discussed by experts attending the workshop from various Asian G-WADI countries.

OBJECTIVES

1. Sharing national/regional experiences in climate change adaptation and scarce water resources management.
2. Providing information on current UNESCO and G-WADI programmes in relation to water, environment and sustainable development in arid and semi-arid zones.
3. Identification of new priorities for Asian G-WADI cooperation in the coming years (2012-2013) and onward, especially related to climate change adaptation, monitoring, and mainstreaming integrated approach in local development agenda;
4. Networking among the water institutions and specialists as well as developing concept proposals for cooperation, particularly on the climate change adaptation initiative developed within the two G-WADI Pilot Basins of Iran.
5. Facilitating meeting of Asian G-WADI members.

PARTICIPANTS

The principal target participants of the workshop are experts involved in the Asian G-WADI network dealing with water resources management or climatic uncertainties. Participants should have adequate working experience in order to benefit from this customized training workshop. Representative of each country is expected to present a country report focused on efforts on better understanding of climate change impacts and adaptation strategies.

There will be approximately 40 participants (15 regional experts, 5 resource persons, 5 UNESCO staff and 5 local authorities) for which the Workshop is expected to provide a platform for the participants to share their practical knowledge and visions on the subject.

ACCOMMODATION AND STAY

The workshop will be convened at the Conference Hall of the Ministry of Energy, Tehran, Islamic Republic of Iran from 20 to 23 June 2011. The workshop will be for two days followed by a one day meeting of the Asian G-WADI network and one day technical tour to Taleghan-Hashtgerd G-WADI Pilot Basin. All resource persons and participants will be accommodated in Tehran with full board accommodation provided by the Ministry of Energy of Iran.

Normally during June, the weather in Tehran is pleasant and sunny with a moderate average temperature ranging between 20 – 30°C. The money currency of I.R of Iran is Iranian Rials and no credit cards are accepted in Iran. Participants are advised to carry sufficient cash with them; the simplest to exchange is US dollar. In all cities of Iran, women should observe Islamic Hejab over their head and shaking hands among men and women is not common.

LANGUAGE

The working language will be English. No simultaneous translation will be provided in other languages. Thus, invited workshop participants should have a good command of the English language in order to benefit from the course.

TRAVEL ARRANGEMENTS AND ACCOMMODATION

The international travel cost of the participants shall be covered by respective UNESCO field Office while all local costs and full board accommodation for 5 nights stay in Iran will be covered by Ministry of Energy of Iran with support from UNESCO Tehran Cluster Office.

FIELD VISIT TO TALEGHAN-HASHTGERD G-WADI BASIN

Taleghan-Hashtgerd Basin is one of the two G-WADI Pilot Basins of Iran located close by to Tehran (only 100 km away) and South to Alborz Mountains. The Catchment area of the Basin is mainly mountainous with relatively steep slope from North to South covering an area of approximately 2,600 km². The basin is composed of two main sub-basins; namely Taleghan (1,135 km²) and Hashtgerd (1,457 km²). The mean annual precipitation of the two Basins is around 600 mm while years with less than 200mm of rainfall have been also recorded.

In the recent years, construction of Taleghan Dam over Taleghan River with the aim of supplying drinking water to the growing population of the Capital, Tehran, has caused numerous ecological as well as water allocation problems within the Basin. Moreover over-grazing and relatively steep slope of the Basin have resulted in significant soil erosion and sedimentation. The basin could be an interesting site for practice of holistic water resources management; particularly under the growing uncertainties imposed by the Climate Change.

CONTACT

For any further information or question, please contact the Workshop secretariat at:

Hoda Rahmati (Ms)

Ministry of Energy of Iran

Address: Ministry of Energy, Valiasr Ave, Neyayesh, Tehran,
1996832611, Iran,

Tel: +98.21.8160.6320

Fax: +98.21.8160.6322

Cellphone: +98.912.783.9032

Email: h.rahmati@moe.org.ir, hoda_rahmati_1985@yahoo.com

WORKSHOP PLAN

Time	20 Jun. (Monday)	21 Jun. (Tuesday)	22 Jun. (Wednesday)	23 Jun. (Thursday)
09:00 -12:00	• Opening ceremony • Keynote Lecture	Session 2: Risk Management —Uncertainty on hydrological models in climate change scenarios; —Reliability of hydraulic structures in climate change condition.	Asian G-WADI Meeting — Presentation of country reports from Asian G-WADI; focused on climate change	Post Workshop Technical Tour to Taleghan-Hashtgerd G-WADI Pilot Basin
12:30 - 14:00	Lunch Break			
14:00 -17:00	Session 1: Monitoring and Adaptation —Detection and attribution of trend in meteorological and hydrological data; —Policies, strategies and economy measurements for adaptation and mitigation of climate change impacts.	Session 3: Impacts of Climate Change on Water Resources Assessment —GCM models and downscaling of results —Impact of climate change on water resources assessment and management: rethinking the water use to increase the productive use of water	Continued: Asian G-WADI Meeting — continued: country report presentations —Group discussion: identification of region specific issues for cooperation in 2012-2013 — Resolution of meeting and wrap-up	
18:00 -20:00	Welcome Dinner	Workshop Dinner	Farewell Dinner	