



REGIONAL EXCHANGE FACILITY ON WATER DEMAND MANAGEMENT FOR THE MIDDLE EAST & NORTH AFRICA

Water Demand Management Forums 2001-2004

The WDM Forums elevated WDM on the agenda of policy-makers in the Middle East and North Africa, and facilitated dialogue among regional players to highlight the benefits of WDM practices and policies in comparison to the more traditional supply-driven approaches.

Forum #1

Wastewater Reuse
Rabat, Morocco - March 2002

Forum #2

Water Valuation
Beirut, Lebanon - June 2002

Forum #3

Public-Private Partnerships
Amman, Jordan - October 2002

Forum #4

Decentralization and Participatory
Irrigation Management
Cairo, Egypt - February 2003

These Forums were implemented with the support of IDRC, CIDA, UNDP, IFAD, USAID Morocco, gtz Jordan, Japanese Embassy (Jordan), the Ministry of Water and Irrigation (Jordan), and the Ministry of Energy and Water (Lebanon). The project was completed in mid 2004.



Regional Water Demand Initiative WaDImena 2004-2008

IDRC, with the support of CIDA and IFAD, is coordinating the WaDImena project (June 2004 – March 2008) as a follow-up to the WDM Forums. WaDImena aims to facilitate the adoption and implementation of water demand management strategies, policies and tools in the countries of the MENA region. Specifically, WaDImena plans to:

- Deepen the knowledge of the benefits, opportunities, challenges and incentives of WDM,
- Improve the capacities of policy and research communities, institutions and civil society,
- Provide an inclusive forum to foster dialogue, strengthen partnerships, share experiences and enhance networking,
- Strengthen and complement national, regional and global initiatives.

WaDImena will address basic gaps in knowledge and capacity at the regional level and focus on translating awareness into action with tangible impacts. Activities will be directed at action research, field-level pilots and regional exchange to promote capacity development, experience sharing and knowledge networking.

Since the early 1990s, the International Development Research Centre (IDRC) has warned that the looming water crisis in the Middle East and North Africa would worsen if countries continued to rely exclusively on supply-driven approaches to managing water resources. As a way to mitigate this crisis, a paradigm shift is occurring in the countries of the MENA region toward WDM as a tool to promote efficiency, equitability and sustainability of water use.

The Pilot Regional Exchange Activity

To maintain the momentum from the Forums and during the transition to WaDImena, IDRC and CIDA sponsored two bilateral missions (see page 2) and one trilateral mission (see page 3) among participating countries in the region to transfer experiences and focus on knowledge exchange in priority WDM areas. The missions were organized to harness lessons in methodology, results and capacity development for the establishment of a sustainable Regional Exchange Facility (REF) to be implemented during WaDImena (see page 4).



Program Highlights

The Syrian group met with Egyptian counterparts from the Ministry of Water Resources and Irrigation and participated in two on-site meetings with WUAs in Minia (Beni Obeid) and Beheira (Damanhour). The group observed how WUAs have improved water allocation equity, helped dissipate communal tension over water, and steadily assumed greater responsibility from tertiary and secondary canals to the branch canal level.

Syrian Participants (5)

- Ministry of Agriculture
- Ministry of Irrigation
- University of Damascus

Egyptian Hosts

- Ministry of Water Resources and Irrigation
- University of Minia
- Desert Development Center (AUC)
- WUAs in Minia and Beheira
- USAID/Egypt

From the participants:

*"WUAs in Egypt have improved water allocation equity"
"Syria wants to establish WUAs to control groundwater mining"*

Background

Syria has no formal WUAs, though water groups have existed since the early 1900s. Recognizing the need to establish WUAs to improve water demand management and curb groundwater mining by improving on-farm irrigation efficiency, a government-appointed committee has drafted a law on WUAs. Syria is therefore keen to learn from the experiences of both Egypt and Tunisia. Egypt, with grant funding from several international organizations, began to establish WUAs in the 1980s. These WUAs have proved effective in improving the equitable distribution of water among farmers. Tunisia has more than 20 years of experience with WUAs, Groupements d'Intérêt Collectif (GIC). There are two types of WUAs: those who distribute irrigation water inside government-rehabilitated irrigation perimeters and those who distribute drinking water in low-density rural areas. These WUAs assume full responsibility for the operation and maintenance of the water infrastructure.



Program Highlights

The Syrian group met with their Tunisian counterparts at the Ministry of Agriculture, Environment and Water Resources. They visited Nabeul, Bizerte and Béja over a three-day period and met with six Water Users' Associations to observe how they distribute irrigation and/or drinking water in rural areas, levy water charges, and help conserve precious water resources.

Tunisian Hosts (5)

- Ministry of Agriculture, Environment and Water Resources
- Institut National pour la Recherche en Génie Rural, Eaux et Forêts
- Regional departments of Agriculture
- WUAs (GICs) in Nabeul, Bizerte, and Béja

From the participants:

*"The aim of water valuation is not to recover the full costs of water systems but rather to conserve water"
"I found it interesting how the Tunisian Ministry of Agriculture has developed incentives to encourage farmers to grow specific crops and switch to modern irrigation systems"
"The program was technically diverse and scientifically sound"*



Background

Algeria boasts 45 wastewater treatment plants to handle the country's estimated 600 million m³ of raw wastewater per year; only 16 plants are currently operational with a combined capacity of about 66 million m³ per year. Algeria has limited wastewater reuse experience and therefore would benefit greatly from observing reuse projects in other countries.

Lebanon is implementing a national scheme for wastewater treatment including a dozen large-scale wastewater treatment plants. In recent years, a number of small-scale community-based treatment plants have been implemented but wastewater reuse has not been formally demonstrated.

Jordan operates 19 wastewater treatment plants generating 76 million m³ of treated wastewater per year. The Ministry of Water and Irrigation monitors effluent quality and has developed standards for wastewater treatment and reuse as well as guidelines for mixed water reuse in agriculture. Water reuse is accounted for in Jordan's annual water budget.

Algerian Participants (5)

- Ministry of Water Resources
- Agence pour la Gestion de l'Irrigation et du Drainage
- Centre de Recherche en Economie Appliqué au Développement (NGO)

Lebanese Participants (5)

- Ministry of Energy and Water
- Bekaa Water Authority
- Litani River Authority
- South Water Authority
- Ministry of Agriculture
- Young Men Christian Association (NGO)

Jordanian Hosts

- Ministry of Planning and International Cooperation
- Ministry of Water and Irrigation
- Ministry of Environment
- Inter-Islamic Network for Water Resources Development and Management
- Petra Regional Authority
- Aqaba Special Economic Zone Authority
- International donors: CIDA, USAID, gtz

From the participants:

"I now have the courage to reuse treated wastewater"

"Government plans and works implemented [in Jordan] are mutually consistent"

"I was impressed by the level of cooperation between Jordanian institutions and international organizations"

"Most of the visited projects are still being piloted: we should continue to exchange skills and experiences in water reuse in the future"

Program Highlights

The Algerian and Lebanese group (5 participants from each country) visited the ministries of Planning and International Cooperation, Water and Irrigation, and Environment. The group then headed on a three-day trip to Tafileh, Wadi Musa, Petra, Aqaba, the Dead Sea and Al Ghor to visit greywater units and wastewater treatment plants, and to observe wastewater reuse demonstration sites. These sites offered a mix of water reuse scenarios including reclaimed water from natural and mechanical treatment plants as well as mixed water (reclaimed water combined with freshwater).

THE REGIONAL EXCHANGE FACILITY

Lessons Learned from the Pilot Regional Exchange Activity

- **Bringing together countries with similar contextual situations.** A success story in one MENA country would be of great use to another MENA country only to the extent that the experience is pertinent and may be transferred appropriately.
- **Maximizing cross learning between host and beneficiary groups.** The missions provide opportunities and advantages for both beneficiary and host groups to acquire new knowledge and reflect on diverse experiences. Participants spend considerable time together and are able to share experiences and discuss ideas openly. Adding a cultural visit/event and some free time reinforces networking and dynamic exchange.
- **Achieving gender balance.** Women have a key role to play in water demand management. Regional exchanges should include female participants from both the government and research sectors to maximize opportunities for follow-up and application of lessons learned.
- **Diversifying the program.** The program of the exchange mission must include a mix of meetings with relevant government agencies (e.g., ministries, laboratories) and community-based organizations (water users' associations, cooperatives, NGOs) in the host country, as well as technical visits to a representative selection of project sites.
- **Facilitating information dissemination.** The mission organizers should distribute an information packet containing necessary materials and documents at the beginning of each mission. Additional information including legal texts, standards, project leaflets and CDs are to be made available during the mission.
- **Organizing follow-up activities.** While regional exchanges offer tremendous opportunities for capacity development, follow-up by IDRC is needed through a combination of tools including targeted seminars, technical visits by relevant staff in the host country to the beneficiary country, e-conferencing, action research and demonstration projects.

WaDImena Countries

Algeria – Egypt – Jordan – Lebanon – Morocco - Palestine – Syria – Tunisia – Yemen

Proposed Activities under REF

During WaDImena, IDRC will organize up to four regional exchange missions per year and a selection of follow-up activities to maximize the impact of those missions and encourage the exchange and transfer of good WDM practices.

Potential themes for REF include

- Wastewater treatment and reuse
- Social and gender equity approaches
- Pro-poor WDM tools
- Participatory irrigation management
- On-farm & domestic water-use efficiency
- Increased use of water saving devices
- Groundwater management
- Public awareness of end-users
- Water valuation

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