



UNITED NATIONS  
UNIVERSITY  
**UNW-DPC**



**UN WATER**  
UN-Water Decade Programme  
on Capacity Development



**UN-HABITAT**

**International Workshop on**  
**Drinking Water Loss Reduction**  
**Developing Capacity for Applying Solutions**

**3-5 September 2008**  
**UNW-DPC, UN Campus, 19th floor, Room 1916**  
**Bonn, Germany**

***SUMMARY REPORT***

UN-Water Decade Programme on Capacity Development (UNW-DPC) and United Nations Human Settlements Programme (UN-HABITAT) organized from 3 to 5 September 2008 the International Workshop on “Drinking Water Loss Reduction: Developing Capacity for Applying Solutions”, held at the UN Campus in Bonn, Germany. More than 60 participants, including water managers and water decision-makers from various cities around the world confronted with the problem of drinking water losses, met in Bonn to share their experiences regarding technical, political and administrative solutions. Representatives from the following cities came to the workshop:

**Uganda:** City of Kampala

**Zambia:** City of Lusaka

**Brazil:** City of São Paulo

**Colombia:** City of Bogota

**Mexico:** Mexico City

**Nicaragua:** City of Managua

**Peru:** City of Lima

**India:** City of Gwalior

**Nepal:** City of Lalitpur

**Egypt:** City of Alexandria and Sharkia Governorate

**Jordan:** Cities of Amman and Madaba

**Palestinian Authority:** City of Ramallah

**United Arab Emirates:** City of Abu Dhabi

**Bulgaria:** City of Sofia

**Germany:** City of Leipzig and Ruhrgebiet region

**Hungary:** City of Budapest

They discussed the most promising approaches, especially highlighting the need for institutional capacity development and the establishment of cooperation in order to apply the best available technical and managerial solutions.

## Opening session

The welcoming addresses were made by Dr R. Ardakanian, Director of UNW-DPC, and Prof. Dr J. Bogardi, Vice-Rector of UNU in Europe. A statement from UN-HABITAT was also read in the opening session.

Prof. Dr F. Meyer-Krahmer, State Secretary of the German Federal Ministry of Education and Research (BMBF) and Dr M. Konukiewicz, Director for Global and Sectoral Policies of the German Federal Ministry for Economic Cooperation and Development (BMZ) gave the opening speeches of the workshop. The representatives of the two federal ministries supporting UNW-DPC emphasized the quality of the results achieved by the programme in its first year of existence and reiterated their willingness to continue supporting the programme's activities, such as the workshop on Drinking Water Loss Reduction, which are a major contribution to support the work of UN-Water members and partners in achieving the Millennium Development Goals.



## Workshop sessions

The workshop was introduced by two keynote speeches addressing the economic aspects of drinking water loss reduction and solution-oriented capacity development. The structure of the workshop included four plenary sessions addressing (i) technical solutions, (ii) political and administrative solutions, (iii) capacity development tools and (iv) the way forward. In sessions (i) to (iii), case studies from different cities around the world were presented and discussed in plenary with the speakers and the participants. The abstracts of the case studies presented in this workshop were included in the pre-proceedings that were made available to all the participants.

**Session 1: Technical solutions and case studies**, mainly focused on the existing technical and technological solutions for leakage detection and control and their application in water loss reduction. The case studies presented (Alexandria, Budapest, Lima, Mexico City) showed that these technical solutions must be coupled with an efficient management of the water distribution systems in order to prove effective.

**Session 2: Political and administrative solutions and case studies**, emphasized the need to develop appropriate commercial accounting systems and financial management tools (i.e.

profit and loss accounts, balance sheets, fixed assets register) and frameworks to deal with water losses. The case studies presented (São Paulo, Madaba, Amman, Leipzig, Kampala, the Sharkia region and Managua) illustrated the fact that financial and technical assistance must complement each other (infrastructure and capacity development) in water loss reduction programmes.



**Session 3: Tools for capacity development and case studies**, introduced the concept of capacity development and presented some examples of initiatives and programmes aiming at the empowerment and qualification of managerial and technical staff dealing with water losses and water supply management. The case studies presented (Abu Dhabi, Palestinian Authority, Lalitpur, Gwalior, the Ruhrgebiet region) as well as the presentations from institutions working on capacity development illustrated some of the existing tools (training, vocational education, e-learning) that can support capacity development in this specific area.

**Session 4: The way forward**, addressed the challenges to follow up and implement the recommendations made during the workshop sessions, including suggestions as to how to continue to raise awareness on the importance of water loss reduction and maximize the impact of the results of the workshop. Suggestions were made concerning disseminating the outcomes and message from this workshop and facilitating that other countries in different regions can gather and exchange experiences and approaches for water loss reduction.

### **Outcomes and the way forward**

The final **Proceedings** of the workshop including the final report of the workshop and the full-papers of the works presented will be edited and published by UNW-DPC by the end of 2008 and will be made available in the web-site ([www.unwater.unu.edu](http://www.unwater.unu.edu)).

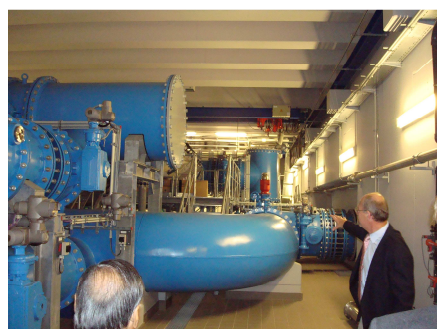
As a follow-up of this international workshop, it was suggested that **Regional Workshops**, to reach out to all continents and to be hosted by participant cities with support from UNW-DPC and UN-HABITAT, could be organized in 2009 in the following regions: South-East Europe, Central Europe, South-East Africa, Latin America, South-East Asia and ACWUA Arab Countries.

## Technical exhibition and side events

Providers of innovative technical solutions for detection and control of unaccounted flow, leakage control and water metering presented their products and approaches in a technical exhibition that was held during the workshop. Representatives from German, Austrian and Italian companies exchanged technological advances with the participants of the workshop.



Two side events, combined with technical presentations, were organized as part of the main programme of this workshop. The participants visited the premises of the German Technical and Scientific Association for Gas and Water (DVGW) and the Wahnbach Reservoir, which supplies drinking water to Bonn and the surrounding area.



## Partners

The preparation of this workshop relied on the support of an Organizing Committee who provided guidance and orientation for the achievement of the organizational aspects of this event. A Scientific Committee comprising of the chairpersons and rapporteurs of the workshop sessions guaranteed the scientific scope and strategic direction which prevailed during the presentations and discussions.

The members of the Organizing Committee were: BMBF (Federal Ministry of Education and Research, Germany), BMZ (Federal Ministry for Economic Cooperation and Development, Germany), IBWS (Water Strategy Initiative Office), PTKA (Projekt Management Agency Forschungszentrum Karlsruhe), GTZ (German Technical Cooperation), InWent (Capacity Building International), DWA (German Association for Water, Wastewater and Waste), DVGW (German Technical and Scientific Association for Gas and Water), Stein & Partner GmbH, German Water Partnership and the University of Karlsruhe.



