



**ISTANBUL
INTERNATIONAL
WATER FORUM**

An Istanbul Perspective on **REGIONAL WATER PROBLEMS and SEARCH for SOLUTIONS**

*Outcomes of
the 2nd Istanbul International Water Forum*



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Theme 5 – Urban Water Management

The aim of this theme was to underline the significance of Urban Water Management for bringing solutions to the problem of water scarcity caused by population growth and climate change in cities, where the majority of the world's population lives. Within this scope, Urban Water Management Plans that aim to supply the water needs of the cities and the benefits of the SCADA (Supervisory Control and Data Acquisition) system that is used in Urban Water Management Planning were tackled. It was also highlighted that cities that are in need for alternative water resources should have wastewater treatment plants in accordance with the EU standards. It was also suggested that these wastewater treatment plants should be constructed collectively by the private sector, public sector and universities with a build-operate-transfer (BOT) model.

Session 5.1. Urban Water Challenges around the World and in Turkey

The session tackled water scarcity challenges around the world with regard to the increasing global population. It was mentioned that 1.1 billion of people lack access to fresh water and this number is expected to raise into 3 billion in 2025 and 4 billion in 2050. Cities facing a high risk of future water scarcity should either increase their supplies or decrease their demands to sustainably manage their water resources. The significant impacts of climate change on water resources were also highlighted. It was referred that the increasing temperature, changing rain patterns, rising sea levels and corresponding changes in the hydrologic cycle will lead to greater water demand. Some precautions for a better urban water management were presented especially for the regions with the potential of future water shortage.

Moderator:	Ahmet SAMSUNLU, Istanbul Technical University (ITU), Turkey
Keynote Speaker:	Pierre LACONTE, Foundation for the European Environment (FFUE), Belgium <i>"Water Resources as Part of the Resource Availability Issue"</i>
Presenters/ Panellists:	Şeyma CİNGÖZ, Istanbul Water and Sewerage Administration (ISKI) <i>"Impacts of Climate Change on Water Resources"</i> Burak KÖROĞLU, Turkish Court of Accounts <i>"Domestic Water Management"</i> Ömer ÖZDEMİR, General Directorate of State Hydraulic Works (DSI) <i>"Domestic Water Supply in Watershed Based Applications"</i>

Session 5.2. Solutions Related to Wastewater

This session discussed wastewater management practices around the world and across the region. In developing countries, 90% of wastewater is discharged directly into rivers, lakes and oceans without treatment. This session focused on how wastewater can be reused in the most effective way in order to prevent water scarcity and degradation in the quality of freshwater. It was mentioned that many methods and strategies like desalination and segregation are developed to improve the efficiency of Wastewater Treatment Plants (WWTPs) with respect to nutrient removal according to the EU standards. Various WWTP examples were given from Turkey and abroad. Environmental legislations and regulations for preventing water pollution were also discussed. Sustainable solutions were put forward for water supply and wastewater management.



Session 5.4. Urban Wastewater Management II

This session discussed the administration of wastewater applications and finance resources, reuse of treated water and effective use of energy within the scope of wastewater policy and management. The "Energy Saving with Deammonification for Nitrogen Removal" model was presented as an example of improving the total energy balance. The consequences of floods caused by mismanagement of urban water were discussed and some illustrations were given. Preparation of risk maps was identified as crucial for reducing flood losses and precautions were explained with sample risk maps.

Moderator:	Cumali KINACI , Ministry of Environment and Forestry of Turkey
Keynote Speaker:	Karl Heinz ROSENWINKEL , Leibniz Universität Hannover, Germany <i>"Energy Saving with Deammonification - Process for Nitrogen Removal - Full Scale Experiences"</i>
Presenters/ Panellists:	Necati AĞIRALIÖĞLU , Istanbul Technical University (ITU), Turkey <i>"Flood Management in Istanbul"</i> Recep AKDENİZ , Ministry of Environment and Forestry of Turkey <i>"Urban Wastewater Management and Policies"</i>

Session 5.5. Urban Domestic Water Management I

The focus of this session was urban domestic water management that aims at the efficient use of existing water resources. The panellists underlined the impacts of drought on urban water supply-demand management and examined the impacts of climate change, fast population growth, infrastructure problems and misuse of water resources on urban domestic water. Case studies were given from arid and semi-arid areas. The technology of SCADA (Supervisory Control and Data Acquisition) and its benefits for reducing water losses were explained. The panellists supported the purpose of constituting a convenient communication, coordination and control system and establishing an organization among the public and private sectors in order to protect, evaluate and improve water resources for all living creatures to live in a sustainable, healthy and balanced environment.

Moderator:	Hidayet ATASOY , Bank of Provinces, Turkey
Keynote Speaker:	Pierre LACONTE , Foundation for the Urban Environment (FFUE), Belgium <i>"Managing Water Resources in Urbanized Areas – Experiences of Consequences to Istanbul Water Challenges"</i>
Presenters/ Panellists:	Canan KARAKAŞ ULUSOY , Bank of Provinces, Turkey <i>"The Problem of the Water Management in the Metropolitan Areas"</i> Habib MUHAMMETOĞLU , Akdeniz University, Turkey <i>"Management of Water Losses from Water Distribution Systems Using SCADA, DMA, GIS and Modelling: Case Study of Antalya City- Turkey"</i> Alireza SALAMAT , UNESCO Regional Centre on Urban Water Management, Iran <i>"Impact of Droughts on Urban Water Supply; Introduction to International Drought Initiative"</i>



Pierre LACONTE speaking in Session 5.5. Urban Domestic Water Management I

Session 5.6. Urban Domestic Water Management II

This session emphasized the importance of urban domestic water management with examples from across the world. Most notable among these was about the co-management of Palestine's water resources with Israel. Palestine's challenges of high population, pollution, water shortage, drought and unequal allocation of transboundary water resources were discussed. Utilization of alternative water resources were also tackled. Providing quality water resources through moving ports and industrial zones outside the cities and rediscovering the socio-economic, cultural and environmental value of waterfronts through regeneration projects were other remarkable issues discussed during the session.

Moderator:	Bilsen BELER BAYKAL , Istanbul Technical University (ITU), Turkey
Keynote Speaker:	Marta MORETTI , International Centre Cities on Water, Italy <i>"Valorisation of Waterfronts for Sustainable Development in Cities on Water"</i>
Presenters/ Panellists:	Necdet ALPASLAN , Dokuz Eylül University, Turkey <i>"Alternative Water Resources for Urban Uses"</i> Osman FINDIK , Istanbul Water and Sewerage Administration (ISKI) <i>"Importance of SCADA System in Water Management in Istanbul"</i> Hazem KITTANI , Palestinian Water Authority, Palestinian National Authority <i>"Water in the West Bank: Quantity and Quality in Palestine"</i>

Theme 5 Wrap-Up Session

Moderator:	Ahmet SAMSUNLU , Istanbul Technical University (ITU), Turkey
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