

*Special Session SS-1-12*

**A NEW VISION FOR INTEGRATED WATER RESOURCE MANAGEMENT: A Systems Approach to Delivering Water to Society**

**Organizers:** World Water Council and Texas A&M University

**Time/Date and Location:** Sept. 14, 11:00-12:30, Room 12

**Description:** This session is aligned with the congress them on *Water-Human-Economy-Ecology Nexus under a Changing Environment*. This session is to present a new study conducted by WWC Transversally of Water Taskforce on A NEW VISION FOR INTEGRATED WATER RESOURCE MANAGEMENT: A Systems Approach to Delivering Water to Society. A new report highlighting the new vision will be presented based on the water, energy, food, health, education system of systems. Applications of the new vision to a case study in Texas will be presented. The session is designed as an opportunity to engage with the water community on a system approach to water management. The outcome of the session is feedback on the way forward towards implementing this new vision. The objectives of this report are to identify and analyze key success stories, facilitate IWRM thinking, and encourage implementation of SDGs at multiple levels (data, finance, institutional arrangement, enabling environments and technologies, research, and education) and globally (Asia, Africa, Americas, Europe, Oceania, Middle East). The goal is to empower and enable the application of system level approaches to implementation in a manner that places greater inter-sectoral emphasis on the achievement of improved water management strategies by offering a systems-vision of clear pathways to equity in water allocation across its related sectors: water, energy, food, health, and education. The introduction to the report includes a brief history of Integrated Water Resources Management (IWRM): its origin, key dimensions (enabling environment, institutions and participation, management instruments, and financing), principles (social equity, economic efficiency, environmental sustainability), and extension over time. The report explores the interlinkages between water and other sectors (food, energy, health, education, agriculture, industry) to better understand those links and promote synergies between the sectors. The status of implementation of IWRM in multiple countries across the globe was studied. Based on the collected success stories of effective implementation of solutions, and in the contexts of the integrated approaches to the linked resource systems (water, energy, food, and health) and the circular economy approaches to achieving the Sustainable Development Goals (SDGs), the report presents a vision and roadmap to optimize IWRM implementation at appropriate scales and to accelerate achievement of the SDGs through improved integration of water and non-water sectors. This is followed with examples of the successes and shortcomings of current water management approaches and the need for a more systems-oriented approach. The report then develops an implementation strategy for identifying and assessing those potential trade-offs and synergies and proposes integrative solutions for the entire system. The concept of a new vision is elucidated with several case studies, one of which, San Antonio, Texas, USA, also focused on the dissemination of the knowledge of systems thinking. This concept was tested through a series of stakeholder dialogues and the development and implementation of graduate courses in systems integration. The lessons 1 / 2 learned encourage the importance of systems thinking to integrated water management (WEFNI 2015-18).

**Program:**

1. Opening and overview: Loic Fauchon, President, World Water Congress
2. Report Highlights, Rabi H. Mohtar, Professor, Texas A&M, AUB, and Governor WWC and Chair of Water Transversality Taskforce.
3. Open Discussion