
**International Conference on Water Reuse and Recycling**

**Program Outline – Invited Speakers**

(Content as of March 17, 2016)

The **International Desalination Association (IDA)** is holding its inaugural International **Water Reuse and Recycling** Conference. The two-day conference themed *"Turning Vision into Reality,"* will be a combination of panels, plenary sessions and technical papers focusing on advanced technologies for water reuse and recycling that will make water available to municipal and industrial users.

A **Call for Papers** has opened. Topics related to the technical sessions will result in additional speaker presentations in each session.

**Preliminary program:**

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## Sunday, September 25

**OPENING CEREMONY** (Late Afternoon)

**Keynote Speakers:**

**Dr. Emilio Gabbrielli,** IDA President, Brazil

**H.S.H. Prince Albert II** of Monaco *(Invited)*

**Ms. Dianne d'Arras**, Executive Vice President, SUEZ environnement, France (*Confirmed*)

**Dr. Benedito P. F. Braga**, President, World Water Council, Brazil *(Confirmed)*

**Mr. Masagos Zulkifli**, Singapore Minister for the Environment and Water Resources, Singapore *(Invited)*

**Ms. Blanca Jiménez-Cisneros**, Director of the Division of Water Sciences, UNESCO, The Netherlands (*Confirmed*)

**Ms. Pamela Tshwete**, MP, Deputy Minister of Water and Sanitation, South Africa *(Invited)*

**Mr. Christian Estrosi**, Mayor of Nice, France *(Invited)*

**Mr. Paddy Padmanathan,** President and CEO, ACWA Power, Saudi Arabia (*Confirmed*)

**WELCOME RECEPTION**

## Monday, September 26

**PLENARY SESSION** (Morning)

***Global Water Reuse Advances and Success Stories***

**Moderator: Mr. Leon Awerbuch**, IDA Director and Conference Co-chair, USA

**Keynote Speakers:**

**Dr. Mark W. LeChevallier**, Director, Innovation and Environmental Stewardship, American Water, USA *(Confirmed)*

**HE Dr. Mohammed Al Saud**, Deputy Minister for Water Affairs, Kingdom of Saudi Arabia *(Invited)*

**Prof. George Tchobanoglous**, Professor Emeritus, University of California, Davis, USA (*Confirmed*)


**TECHNICAL SESSIONS** (Morning)

***Cutting Edge Technologies for Water Reuse-Part 1***

This session will feature leading experts in water reuse science, technology and equipment presenting the latest developments in this field. The session will focus on the application of advanced water treatment technologies such as forward osmosis; membrane distillation; MBR; ultra- and nanofiltration; and selective ion exchange for cost-effective water reuse and for waste discharge minimization. Session presentations will incorporate case studies illustrating the successful implementation of cutting-edge technologies for production of high-quality reclaimed water at a reasonable cost and reduced carbon footprint. Seasoned veterans in the water reuse field will share valuable insights on how to improve energy efficiency of existing and new water reuse plants and use of renewable energy in production of reclaimed water.

**Co-Chairs:** **Mr. Nikolay Voutchkov**, **Dr. Valentina Lazarova**, USA/France
**Keynote Speaker:** **Dr. In S. Kim**, Professor, Gwangju Institute of Science & Technology, Director, Global Desalination Research Center, Korea *(Confirmed)*

***Non-Potable and Agricultural Water Reuse: Challenges and Successes***

At present, non-potable and agricultural reuse are the two most commonly practiced methods for combating growing water shortages worldwide. This session will offer insights into maximizing water reuse potential in urban environments and the most common practices for planning and implementing successful projects for beneficial agricultural reuse. One of the key challenges facing agricultural irrigation today is how to manage the drainage water released from the field. Leading experts on agricultural drainage management will share their most recent experiences and work in this area. The session will also include valuable know-how on how to develop regulatory incentives for non-potable reuse.

**Co-chairs:** **Mr. Ghassan Ejjeh,** Belgium, **Mr. Wade Miller**, USA
**Keynote Speaker:** To be announced

**TECHNICAL SESSIONS** (Afternoon)

***Direct and Indirect Potable Reuse (DPR, IPR): Global Issues and Advances-Part 1***

Indirect and most recently direct potable reuse have attracted the water industry's attention, resulting in accelerated acceptance and application in many drought-stricken regions of the world. While the challenges facing mainstream application of direct potable reuse are far from over, the innovative problem-solvers presenting in this session will demonstrate the incredible capacity and impetus of the water industry to overcome seemingly intractable technological, perceptional and institutional issues, and pave the way for making indirect and direct potable reuse a reality. The outstanding speakers participating in this session will share their experience on how to make indirect and direct potable reuse key components of the water supply portfolio of forward-looking utilities worldwide. This session will feature some of the latest indirect and direct water reuse and resource recovery projects to come online, and the dynamic utility leaders that have made them happen.

**Co-chairs:** **Mr. Maurice Neo**, Singapore, **Mr. Udi Tirosh**, Israel
**Keynote Speaker:** **Mr. Wade Miller,** Water Strategies Consulting, LLC, USA

***Industrial Water Reuse and Recycling***

This session will focus on the latest developments and technological advances in industrial water reuse. The session will feature speakers covering diverse applications of reclaimed water in the oil and gas industry, and in water recycling in the pulp-and-paper, pharmaceutical and food and beverage industries. The session will offer insights from industry leaders on how to structure sustainable industrial water reuse programs and minimize costs associated with the production of reclaimed water for diverse industrial applications.

**Co-chairs:** **Mr. Michel Canet**, France, **Mr. Doug Eisberg**, USA

**Keynote Speaker:** **Dr. Josef Lahnsteiner**, Director, Technology, Research & Development, VA TECH WABAG GmbH, Austria *(Confirmed)*

**PANEL DISCUSSIONS**

***Regulations, Tariffs and Funding for Reuse and Public Acceptance***

This panel will feature open, multifaceted discussion among worldwide leaders, decision-makers and problem-solvers on the main institutional challenges facing the implementation of water reuse projects at present such as complexity or lack of streamlined government regulations; limited availability of funding; challenges of incorporating water reuse in the water tariff structure; and gaining public acceptance and support for large-scale municipal water reuse projects. Panelists will provide a national perspective and worldwide view on the trends, challenges and opportunities in advancing sustainable and well-accepted water reuse programs. The panel discussion will also highlight cutting-edge initiatives and policies driving a paradigm shift in water management where water reuse becomes an essential component of a well-balanced water portfolio along with conservation and desalination. Educating and engaging community stakeholders and winning support from public officials for the funding and implementation of water projects require a comprehensive communications strategy. The panelists will share their experience and most effective tactics for winning public support and acceptance of water reuse and conservation projects.

**Moderator:** **Dr. Valentina Lazarova**, France

**Panelists:** **Dr. Abdullah M. Al Shehri, Governor** Electricity & Co-Generation Regulatory Authority, KSA
**More to be announced**

## Tuesday, September 27

**PLENARY SESSION** (Morning)

***Key to Success of Water Reuse and Vision for the Future***

**Moderator:** **Mr. Nikolay Voutchkov**, IDA Director and Conference Co-chair, USA/France

**Keynote Speakers:**

**HE Dr. Loay Al Mussalam**, Executive Chairman and CEO, National Water Company, Kingdom of Saudi Arabia *(Confirmed)*

**Mr. Domingo Zarzo**, AEAS/AEDyR Spain *(Confirmed)*

**Mr. Harry Seah**, Chief Technology Officer, Public Utilities Board, Singapore *(Confirmed)*

**Mr. Michael R. Markus**, General Manager, Orange County Water District, USA *(Confirmed)*


**TECHNICAL SESSIONS** (Morning)

***Water Quality Monitoring: Control and Solutions***

Water quality monitoring plays an essential role in protecting public health and securing reliable and safe operation of water reclamation and reuse facilities. This session will spotlight the most advanced equipment, methods, technologies and parameters for monitoring of reclaimed water quality and treatment process performance. Session speakers will share a wide range of innovations in flow and sampling data collection and analysis; monitoring of emerging pollutants; and use of surrogate parameters for assessment of the removal efficiency and integrity of key processes and equipment, including membrane integrity monitoring.

**Co-chairs:** **Mr. Guillaume Clairet**, Canada, **Mr. Devesh Sharma,** USA
**Keynote Speaker:** **Dr. Adriano Joss**, Eawag, Switzerland *(Invited)*

***Technologies for Joint Desalination and Water Reuse***

The water sector is moving into a new paradigm of "One Water" where fresh water production by desalination and generation of reclaimed water are combined into one multifaceted "water factory" in which components of desalination and water reuse treatment processes are intertwined into one system designed to take advantage of the energy and cost benefits that combined processes such as pressure retarded osmosis offer. This session will feature leading experts and practitioners in the development and implementation of technologies and equipment that enable the harnessing of the osmotic power released from co-processing of desalination concentrate and reclaimed water; innovative methods for combined processing of wastewater effluent and ambient seawater to produce drinking water; hybrid membrane-thermal desalination systems; materials and mineral recovery for zero liquid discharge; and direct osmosis membrane cleaning for seawater and reuse. The session will also cover technologies that are suitable for both desalination and water reuse such as advanced post-treatment with high purity chemicals; energy recovery systems; and source water screening and conditioning equipment.

**Co-chairs:** **Mr. Fady Juez**, UAE, **Mr. Miguel Angel Sanz,** France
**Keynote Speaker:** **Dr. Boris Liberman**, Chief Technology Officer, IDE Technology, Israel *(Confirmed)*

**TECHNICAL SESSIONS** (Afternoon)

***Direct and Indirect Potable Reuse (DPR, IPR): Global Issues and Advances-Part 2*** **~ IWA SPONSORED SESSION ~**

This session will explore new approaches for planning, designing and implementing projects for direct and indirect potable reuse. The session speakers will highlight key issues related to selecting the most appropriate treatment scheme, technologies and equipment for the site-specific conditions of a specific project. Experts from around the world will share their experience with the development of regulatory frameworks for indirect and/or direct potable reuse in their countries – the main roadblocks, challenges and solutions. The session will spotlight state-of-the-art direct potable reuse practices and will include lessons learned from the design and operation of indirect potable reuse projects for aquifer recharge and drinking water supply augmentation. This session will feature speakers on the trends around water affordability challenges associated with indirect and direct water reuse. They will also highlight innovative approaches to tackle this problem and discuss successfully implemented public private partnership models.

**Co-chairs:** **Prof. Dr. Jorg Drewes,** Germany, **Dr. Josef Lahnsteiner,** Austria


**Keynote Speaker:** **Dr. Jorg Drewes**, Technische Universität München, Chair of Urban Water Systems Engineering/ International Water Association (IWA) Chairman of the Water Reuse Committee, Germany *(Confirmed)*

***Cutting Edge Technologies for Water Reuse-Part 2***

This session will focus innovative brine treatment and zero liquid discharge technologies; application of ceramic membranes for advanced wastewater treatment and seawater pretreatment; the latest know-how in the area of membrane fouling monitoring, control and cleaning; advances in MF, UF and RO technologies for reuse applications; evaluation of full-scale membrane bioreactors; and monitoring of membrane aging during water treatment.

**Co-chairs:** **Dr. Boris Liberman**, Israel, **Dr. Corrado Sommariva**, UAE

**Keynote Speaker:** **Dr. Greg Leslie**, Professor, University of New South Wales, Director, UNESCO Centre for Membrane Science and Technology, The Netherlands *(Invited)*

**PANEL DISCUSSIONS**

***Role of Water Reuse in Solving the Systems, Water-Energy and Food Nexus***

The links between water, energy and food production are undeniable, and water infrastructure sits at the confluence of the three. Desalination and water reuse have significant power demand. However, the latest treatment and energy recovery technologies in this field provide tremendous opportunity to cut global emissions created through the wastewater treatment and desalination processes. By replacing outdated equipment and adopting high energy efficiency technologies, wastewater and desalination plant designers and operators could cut the carbon footprint of water reuse and desalination dramatically and enjoy significant cost savings. This panel will feature utility directors, technology experts, planners and operators working on the water-energy-food nexus as they discuss their view on the opportunities, challenges, and needs of the exciting breakthroughs new technology and innovative planning and design offer to close the water cycle and make water reuse and desalination less dependent on outside sources of power supply. The panel will provide a forum for peer exchange, discussions on policy development, developing joint advocacy positions, and working together to advance integrated approaches to water resource management and solving the water-energy and food nexus.

**Moderator:** **Mr. Christopher Gasson,** UK

**Panelists:** **Ms. Shannon McCarthy**, Partner, United4Water, Italy
**More to be announced**

**CLOSING CEREMONY**

**Dr. Emilio Gabbrielli,** IDA President, Brazil
**AECOM Rep,** Austin, Texas, USA
**Mr. Leon Awerbuch**, IDA Director and Conference Co-chair, USA
**Mr. Nikolay Voutchkov**, IDA Director and Conference Co-chair, USA/France
**IDA 2016 Water Reuse and Conservation Awards**

- Outstanding Professional
- Exceptional Utility Leader
- Industry Technology and Innovation Leader

## Wednesday, September 28

**SITE VISIT - *Acquaviva Water Plant***