

<p>1.4 OPTIMISATION OF WATER DISTRIBUTION NETWORKS</p> <p>Chairs: Michael Storey, <i>Australia</i> and Athanasios Serafeimi, <i>Greece</i></p> <p>Migration from materials in contact with drinking water — application of non-target screening analysis, Lone Tolstrup Karlby, <i>Hofoer, Denmark</i></p> <p>Performance evaluation of flow-starved water transmission network, Abhishek Sinha, <i>IIT Bombay, India</i></p> <p>Real-time software for distribution system operations: an operator-focused design approach, Ian Rodgers, <i>Xylem Inc, United Arab Emirates</i></p> <p>Decision for hazard ranking of water distribution network using TOPSIS Method, Haekeum Park, <i>University of Seoul, Republic of Korea</i></p> <p style="text-align: center;">--- POSTERS ---</p> <p>Optimization of electrical energy consumption and reduction of carbon footprint in water supply — AdRA's Case Study, Mafalda Tavares, <i>AdRA-Águas da Região de Aveiro, SA, Portugal</i></p> <p>Vulnerability of water distribution networks, Richárd Wéber, <i>Budapest University of Technology and Economics, Hungary</i></p>	<p>Room B4 d Technical</p>	<p>Thursday 10:30-12:00 Optimisation</p> <p>11:10-11:30</p> <p>11:30-11:50</p> <p>11:50-11:55</p>
<p>2.1.4-1 AEROBIC GRANULAR SLUDGE</p> <p>Chairs: Hallvard Ødegaard, <i>Norway</i> and Thiago Bressani Ribeiro, <i>Brazil</i></p> <p>Could the treatment capacity of a continuous wastewater treatment plant be increased with aerobic granular sludge? Laurence Strubbe, <i>Ugent, Belgium</i></p> <p>Assessing densification performance potential in continuous flow bioreactors — how to predict new hydraulic capacities for WWTPs, Densification Index (DI) and SVI? Zamir Alam, <i>SUEZ WTS, Canada</i></p> <p>Diffusion and enzymatic conversion of polymeric substrate in aerobic granular sludge, Merle de Kreuk, <i>TU Delft, Netherlands</i></p> <p>Results of the first AGS application in the nordic countries, Mark de Blois, <i>H2OLand AB, Sweden</i></p>	<p>Room C3 Technical</p>	<p>Thursday 10:30-12:00 Aerobic granular sludge</p> <p>10:50-11:10</p>
<p>6.13 INTEGRATED ASSESSMENT</p> <p>Chairs: Markus Starkl, <i>Austria</i> and Carmen Snowdon, <i>United Kingdom</i></p> <p>The SADC revised protocol: a tool for an integrated climate action in southern Africa, Thomani Manungufala, <i>Parliament of the Republic of South Africa, South Africa</i></p> <p>Evolving water resources management in response to socio-economical changes: Japanese experience in modernization over the past century, Mikio Ishiwatari, <i>The University of Tokyo, Japan</i></p> <p>Managing stormwater in South African neighbourhoods: when engineers and scientists need social science skills to get their jobs done, Craig Tanyanyiwa, <i>Future Water UCT, South Africa</i></p> <p>Exporting Danish groundwater management to South Africa, Philip Grinder Pedersen, <i>Danish Environmental Protection Agency, Denmark</i></p> <p style="text-align: center;">--- POSTERS ---</p> <p>Reduction of greenhouse gas emissions from WWTPs, Anna Katrine, <i>Vangsgaard, EnviDan, Denmark</i></p> <p>Development of water resources potential map for proper selection of water supply facilities considering regional characteristics in Bangladesh, Kazuyuki Suenaga, <i>Earth System Science, Japan</i></p>	<p>Room C2 Technical</p>	<p>Thursday 10:30-12:00 Integrated assessment</p>

<p>2.4.1 DEDICATED TREATMENT</p> <p>Chairs: Tom Williams, <i>United Kingdom</i> and Pritha Chatterjee, <i>India</i></p> <p>METlands: performance of a new intensified nature-based wastewater treatment system, Carlos A. Ramirez-Vargas, <i>Aarhus University, Denmark</i></p> <p>Factors affecting effluent quality in on-site wastewater treatment systems in cold climate regions, Juho Kinnunen, <i>University of Oulu, Finland</i></p> <p>Removal of perfluoroalkyl substances (PFass) in industrial runoff water, Eilen Arctander Vik, <i>Aquateam COWI, Norway</i></p> <p>Scaling-up the production of volatile fatty acid from dairy wastewater, Celia María Castro Barros, <i>CETAQUA (Water Technology Center), Spain</i></p> <p style="text-align: center;">--- POSTERS ---</p> <p>Pilot-scale recovery of nickel and cobalt from mine drainage water, Małgorzata Szlachta, <i>Geological Survey of Finland, Finland</i></p> <p>Preliminary results of an on-site pilot-scale experiment to improve tertiary agri-food effluent using customized floating treatment wetlands, Rita Abi Hannal, <i>MT Atlantique, France</i></p>	<p>Room B5 a Technical</p>	<p>Thursday 10:30-12:00 Dedicated treatment</p>
<p>1.5 WATER IN CIRCULAR ECONOMY AND RESILIENCE: AN OPPORTUNITY TO TRANSFORM URBAN WATER SERVICES</p> <p>Chairs: Anna Delgado, <i>United States</i></p> <p>The purpose of the workshop is to present the World Bank's Water in Circular Economy and Resilience (WICER) Framework, which aims to establish a common understanding of circular economy and resilience in the urban water sector and to showcase global experiences of different cities in different contexts applying circular economy and resilience principles. The presenters will discuss how to operationalize and mainstream these concepts in urban water, reflecting on their experiences and identifying challenges and opportunities. The purpose of the workshop is also to engage the audience and promote a collaborative discussion to identify challenges and opportunities in the sector and to foster the application of circular solutions in the water sector. The power points and a summary of the workshop will be available on the World Bank's WICER website: www.worldbank.org/wicer.</p> <p>Speakers: Anna Delgado, <i>World Bank (US)</i>, Daniel Nolasco, <i>NOLASCO & Asoc. S.A. (AG)</i>, Jose Luis Valverde, <i>Sociedad Minera Cerro Verde S.A.A. (PR)</i>, Frodo van Oostveen, <i>World Waternet (NL)</i> & Marta Colet Gonzalo, <i>Aguas Andinas (CL)</i></p>	<p>Room B3 g Workshop</p>	<p>Thursday 10:30-12:00 Circular economy</p>
<p>6.13 HOW TO OPERATIONALISE INTEGRATED URBAN WATER MANAGEMENT — A FIVE-STEP GUIDE</p> <p>Chairs: Katharine Cross, <i>Australia</i> and Michael Wilson, <i>Australia</i></p> <p>The workshop will be presented through the lens of a "water sensitive city" to draw on a decade's worth of research in this area, as well as a five-step framework to address the urgent urban water challenges.</p> <p>Speakers: Katharine Cross, <i>Australian Water Partnership (AU)</i> & Michael Wilson, <i>eWater (AU)</i> & Tony Wong, <i>Monash University (AU)</i></p>	<p>Room B3 e Workshop</p>	<p>Thursday 10:30-12:00 Integrated urban water management</p>

<p>REGULATORS FORUM IV — CLOSING PLENARY: REGULATING WATER SERVICES IN TIMES OF INCREASING NATURAL, SOCIAL, AND ECONOMIC UNCERTAINTY</p> <p>Chair: Carlos Diaz, <i>Peru</i></p> <p>The 7th International Water Regulators Forum offers a platform for water sector regulators from all over the world to exchange experiences, transfer skills and build new partnerships. It gathers high-level representatives of regulatory authorities and officials of agencies with regulatory and supervisory functions over the provision of water, sanitation, and drainage services, as well as their peers from public health and environmental regulators. The discussions will focus on how regulatory functions are being supplied in times of increasing natural, social, and economic uncertainty. During the Forum, discussions are structured around highly interactive sessions that combine short inspirational presentations and roundtable discussions led by the speakers.</p> <p>Open for all participants</p>	<p>Room A3 Forum</p>	<p>Thursday 10:30-12:00 Regulators</p>
<p>6.16 HOLISTIC APPROACHES TO SOLVING CONFLICTS ABOUT WATER</p> <p>Chairs: Ulrike Gayh, <i>Germany</i> and Andrea Gerber, <i>Germany</i></p> <p>The objective is to develop innovative and sustainable project ideas to solve the most common conflicts related to water issues while considering the economic, social, and environmental aspects.</p> <p>Speakers: Ulrike Gayh, <i>SRH University Heidelberg (DE)</i>, Andreas Gerber, <i>SRH University Heidelberg (DE)</i> & Belen Zevallos, <i>SRH University Heidelberg (DE)</i></p>	<p>Room B5 b Workshop</p>	<p>Thursday 10:30-12:00 Conflict resolution</p>
<p>3.4 LEADING EDGE SAND FILTRATION</p> <p>Chairs: Doris van Halem, <i>Netherlands</i> and Luis Guillermo Romero Esquivel, <i>Costa Rica</i></p> <p>The objective of the workshop is to identify key opportunities for lifting the design of traditional technologies into the 21st century based on best practises as well as the state-of-the-art in science. Therefore, in this interactive workshop we want to bring together cross-continental practical knowledge and academic insights to formulate the future challenges of sand filters.</p> <p>Speakers: Doris van Halem, <i>Delft University of Technology (NL)</i> & Luis Guillermo Romero Esquivel, <i>Technológica de Costa Rica (CR)</i>, Tanvir Ahmed, <i>BUET (BD)</i>, Frank Schoonenberg Kegel, <i>Vitens (NL)</i>, Brent Pieterse, <i>Dunea (NL)</i> & Inês Breda, <i>Silhorko-Eurowater A/S (DK)</i></p>	<p>Room B4 a Workshop</p>	<p>Thursday 10:30-12:00 Sand filtration</p>

<p>5.5 REACHING OUT FOR THE WATER WISE GENERATION</p> <p>Chairs: <i>Stig Dalum, Denmark</i> and <i>Anna Kristiansson, Sweden</i></p> <p>While we are focusing on how to share knowledge and to communicate with professionals in the water sector, this workshop will focus on how we can engage the youth to share commitment and enthusiasm to contribute to sustainable development in the water sector.</p> <p>This workshop will draw on experienced school services in utilities in Denmark and Sweden to share our experiences in creating learning environments in close cooperation between utilities and public schools.</p> <p>Speakers: <i>Anna Kristiansson, VA SYD and Sweden Water Research (SE), Stig Graeser Dalum, BIOFOS (DK), Emilia Dall'Osso, Kretsum/VA SYD, (SE), Mette Lyng Nielsen, School Coordinator BIOFOS (DE) & Carin Hernqvist, Kretsum/VA SYD, (SE)</i></p>	<p>Room B4 b Workshop</p>	<p>Thursday 10:30-12:00 Schools</p>
<p>1.3 ADVANCING COASTAL RESILIENCY FOR IMPERILED BARRIER ISLAND SYSTEMS</p> <p>Chairs: <i>Linda Åmand, Sweden</i> and <i>Hamred Chungani, Kenya</i></p> <p>The intent of the Resilient Long Beach Island Project, one of four pilot regions within the Mid-Atlantic U.S., was to solidify a shared vision for a resilient barrier island. The project addresses the complexities of striking the delicate balance between protecting coastal communities and enhancing ecosystem services. Technological advancements were made during the course of this dynamic project to best translate complex analyses into user-friendly information to allow stakeholders to make informed decisions. Two specific methods we wish to highlight include the development of an integrated flood model ("Cloudburst"), storm surge and sea level rise, and the preparation of intricate scenario planning typologies illustrating nature-based solutions and community transformation. The project generated several innovative ideas regarding how best to serve a highly vulnerable community as they face present and future climate change related impacts.</p> <p>Speakers: <i>Christian Nyerup Nielsen, Ramboll (DK) & Sophia Ertel, Ramboll Americas (US)</i></p>	<p>Room B4 c Workshop</p>	<p>Thursday 10:30-12:00 Barrier islands</p>
<p>1.3 COLLABORATION OF WATER UTILITIES AND AUTHORITIES IN CRISIS</p> <p>Chairs: <i>Riku Vahala, Finland</i></p> <p>Even in the highly developed Nordic countries with high-level water services, severe failures have challenged the safety of the drinking water services and crisis management processes. Climate change accelerates existing challenges and increases the frequency of disturbances in water production and distribution as well as in wastewater and storm water management. Typical consequences of climate change include flooding, storms, heavy rains, and droughts may lead to uncontrolled discharges of sewage and water contamination, but they also include power and data communication failures.</p> <p>In this workshop, the causes of crisis and outbreak situations as well as the consequences for the reliability of the water services will be analysed and summarised by using four different case examples from the Nordic countries.</p> <p style="border: 1px solid red; padding: 2px;">Short descriptions of new smart tools for risk and crisis management, as well as crisis management processes between authorities, water utilities, and customers, will be presented in a panel discussion by the four countries.</p> <p>Speakers: <i>Riku Vahala, Aalto University (FI), Ilkka Miettinen, Finnish Institute for Health and Welfare (FI), Susanne, Hyllestad, National Health Institute of Norway (NO), Birger, Wallsten, The Swedish Water and Wastewater Association (SE), Dorte, Skraem, Danish Water and Wastewater Association (DK), Heli Härkki, HSY (FI), Riina Liikanen, Vesilaitosyhdistys (FI) & Kjetil Furuberg, Norsk vann BA (NO)</i></p>	<p>Room B3 a Workshop</p>	<p>Thursday 10:30-12:00 Collaboration in crisis</p>

<p>4.4.12 TRANSITIONING TO AND IMPLEMENTATION OF SUSTAINABLE AND WATER WISE CITIES</p> <p>Chairs: Ioannis Alexiou, <i>United Kingdom</i> and Martijn Kuller, <i>Canada</i></p> <p>Long-term performance and geochemical transformations in biochar-amended sand stormwater filtration systems, Maria Dubovik, <i>VTT Technical Research Centre of Finland, Finland</i></p> <p>Grenoble-Alpes Meetropole: a roadmap to a water-wise city, Corinne Trommsdorff, <i>Water Cities, France</i></p> <p>Carbon footprint of drinking water when waterworks transition from traditional to modern waterworks, Berit Godskesen, <i>Fors A/S, Denmark</i></p> <p>Evaluating the water treatment functionality of a retrofitted stormwater detention pond in the Cape Flats, Cape Town, South Africa, Rachelle Schnewley, <i>University of Cape Town, South Africa</i></p> <p style="text-align: center;">--- POSTERS ---</p> <p>How GIS supports digital transformation & sustainable management, Christa Campbell, <i>Esri - CA Redlands, United States</i></p> <p>SaNiTi — New innovative sanitation game changing strategy to meet water security and SDG goals, Jay Bhagwan, <i>Water Research Commission, South Africa</i></p>	<p>Room B3 b Technical</p>	<p>Thursday 10:30-12:00 Water wise cities</p>
<p>2.4 MICROPLASTICS IN WASTEWATER AND BIOSOLIDS</p> <p>Chairs: Stefan Kools, <i>Netherlands</i> and Banu Ormeci, <i>Canada</i></p> <p>In this session we will gather a global overview of the state-of-technology in sampling and analysis for the aquatic environment, with a perspective from both drinking water and waste water treatment.</p> <p>Speakers: Stefan Kools, <i>KWR Water Research Institute (NL)</i>, Jan Hofman, <i>Bath University (UK)</i>, Banu Ormeci, <i>Carleton (CA)</i> & Danence Lee, <i>PUB (SG)</i></p>	<p>Room B3 c Workshop</p>	<p>Thursday 10:30-12:00 Microplastics</p>
<p>6.12 UNFC SYSTEM FOR GROUNDWATER-RESOURCE PROJECTS</p> <p>Chairs: Kevin Parks, <i>Canada</i> and Klaus Hinsby, <i>Denmark</i></p> <p>The purpose of this session is to evaluate the application of the Draft UNFC Specifications for Groundwater through a representative use case based on the GeoERA groundwater projects.</p> <p>Speakers: Kevin Parks, <i>Deep Time Ltd. (CA)</i>, Klaus Hinsby, <i>GEUS (DK)</i>, Peter van der Keur, <i>GEUS (DK)</i> & Marco Petitta, <i>Sapienza Univ. of Rome (IT)</i></p>	<p>Room B3 d Workshop</p>	<p>Thursday 10:30-12:00 Groundwater</p>

6.19 | GOVERNANCE AND TRANSITION TO A CIRCULAR ECONOMY IN PUBLIC WATER SERVICES

Room B3 f
Workshop

Chairs: **Jordi Morató**, *Spain* and **Nicola Tollin**, *Denmark*

The workshop will analyse and compare various cases of small and medium-sized water utilities that have worked on their transition to a circular economy within the context of the SDGs.

Speakers: **Jordi Morató**, *UNESCO Chair on Sustainability - UPC (ES)* & **Nicola Tollin**, *University of Southern Denmark (DK)*, **Jose Luis Martin Bordes**, *Partnership WOPs Expert*, **Carlos A. Arias**, *Univ. Aarhus (DK)*, **Lykke Leonardsen**, *Copenhagen Region Municipality (DK)* & **Rogier van den Berg**,

Thursday
10:30-12:00
Circular economy