IWA World Water Congress & Exhibition 2016













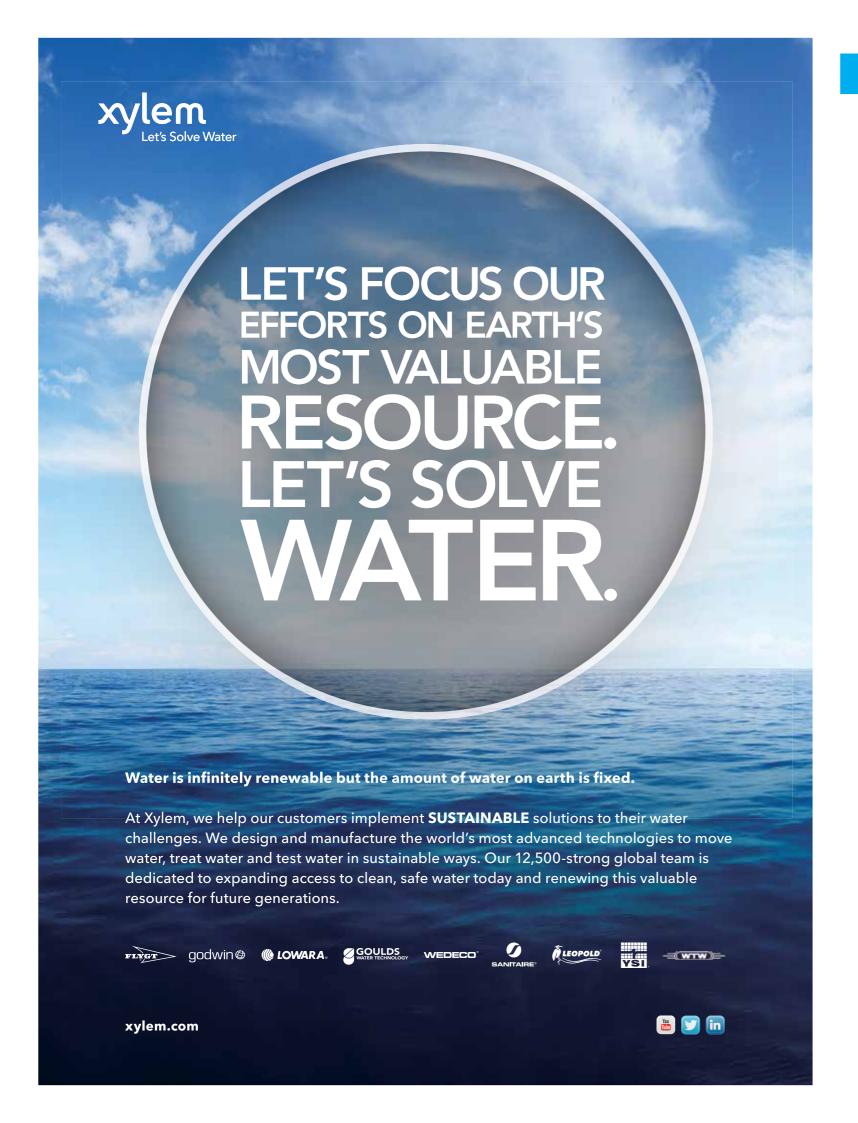


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Welcome to Brisbane





Welcome to Brisbane, Queensland and Australia

We are delighted to welcome you to the IWA World Water Congress & Exhibition, being held for the first time in the vibrant and dynamic city of Brisbane, an Australian powerhouse of water related research, development and practice and the capital of the state of Queensland

During the coming week, water professionals, and those with a professional interest in water, from around the world will meet, greet and exchange new ideas about the latest innovations, best practices, leading science and emerging trends in the water sector and beyond. There will be opportunities, both formal and informal, to connect with other water professionals, build your networks and form partnerships to address the steadily growing challenges facing the water sector around the world.

Brisbane has built a worldwide reputation as a leader in science and technology, the perfect host city for a conference and exhibition that brings together the foremost experts, specialists and thought leaders from industry, government, utilities, regulators, scientists and research organizations, the entire community leading the debate and finding the solutions that will deliver the water wise world of the future.

During four days, the critical debates shaping our water future will take place in six Leadership Forums, eight Plenary Sessions, 38 Workshops, 86 Technical Sessions, 344 Presentations and over 500 Posters. This exciting program will help you to update your knowledge, and provides a unique opportunity for networking, and to share knowledge on the latest trends in best practice, innovative technologies, pioneering research and science.

The Congress constantly seeks to innovate and to build on the successes of previous years. A first this year is the Water Scarcity and Drought Summit. This will engage and challenge 200 leaders from the private and the public sector including ministers, business leaders, scientists and civil society on new ways of collaboration between countries,

industries and sectors to address water scarcity and drought.

In Brisbane, we have expanded the number of dedicated Leadership Forums. Bringing leaders of specific thematic or geographic areas together facilitates in-depth discussion of the major issues, explores cross-disciplinary collaboration and enables solution finding. Similarly, Keynote Speakers are thought leaders from within and beyond the water sector; they will spark debate and set the daily agenda.

For exposure to technology and to connect with the people with the solutions, the IWA World Water Exhibition is the place to be. A one-stop-shop showcasing over 200 world-leading companies and institutions, the Exhibition provides a unique opportunity to network and learn about innovative applications, integration of solutions and new business opportunities.

The IWA World Water Congress & Exhibition is primarily about bringing people together in an environment that is creative and productive. Our sponsors and partners, including the Brisbane organising committee, make this possible. We would like to thank them for their continued support, and their leadership and commitment to the water sector and its professionals.

The IWA, and the World Water Congress, are ready to address the water challenges we collectively face. We come together in Brisbane, Queensland, to innovate and shape a better water future for all. We hope you will enjoy and benefit from joining us on this journey.

Helmut Kroiss

President, International Water Association

Paul Greenfield

President, World Water Congress and Exhibition

Join the conversation on Twitter: #iwa2016brisbane www.worldwaterco



Brisbane, Queensland: a world-class water destination



Welcome to Brisbane, Queensland for the 2016 World Water Congress & Exhibition at the Brisbane Convention & Exhibition Centre.

The Palaszczuk Government is proud to support the 2016 World Water Congress & Exhibition through Tourism and Events Queensland.

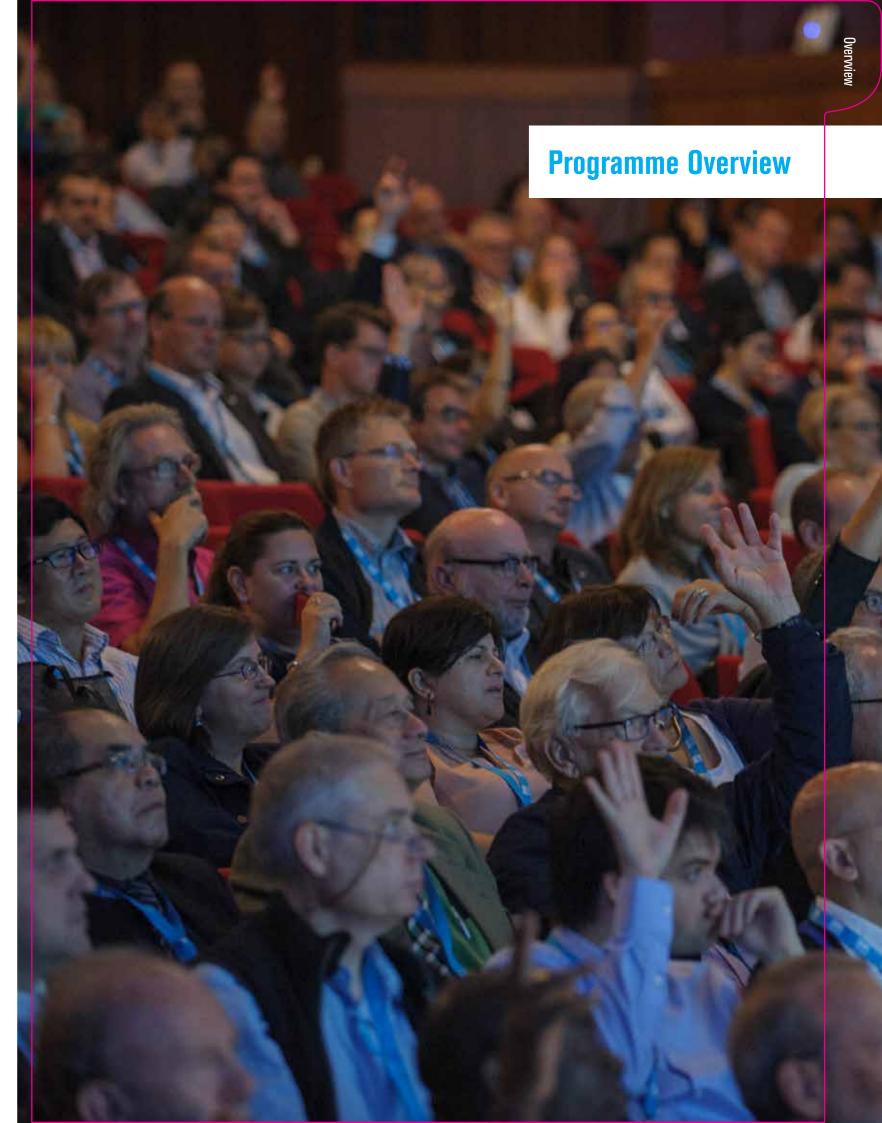
This conference will give delegates the opportunity to collaborate, share ideas, and engage with other industry professionals surrounded by some of the world's most beautiful scenery.

With beautiful South Bank across the street and some of the world's best beaches a short drive away, South East Queensland has so much to offer.

For those delegates visiting Brisbane, I hope you enjoy your time here and take the opportunity to stay on and explore all that Brisbane and Queensland have to offer.

The Honourable Kate Jones MP

Queensland Minister for Tourism and Major Events





Programme Overview Pre-congress trainings, workshops and learning sessions

Saturday 8	
	Room M5 / M6
08:30 - 10:30 session 1	TRAINING: Modelling Activated
	Sludge Plants
10:30 - 10:45	Coffee Break
10:45 - 12:30 session 2	TRAINING: Modelling Activated
	Sludge Plants
12:30 - 13.30	Lunch
13:30 - 15:30 session 3	TRAINING: Modelling Activated
	Sludge Plants
15:30 - 15:45	Coffee Break
15:45 - 17:00 session 4	TRAINING:
	Modelling Activated Sludge Plants
Q vehru2	

Sunday 9							
	Room M5 / M6	Room M7 / M8	Room P3	Room P5	Room P2		
08:30 - 10:30 session 1	TRAINING: Modelling Activated Sludge Plants	TRAINING: Assessing Climate & Energy Performance of Water and Wastewater Utilities	TRAINING: NRW Assessment and Management in Low and Middle Income Countries	TRAINING: Crisis Management at Water Utilities: Concept, Preparedness and Latest Technology Development in Decision Support System using Artificial Intelligence	WORKSHOP: Performance-Based Contracts - PBCs for Improving Utilities Efficiency	D	
				Artificial intelligence		Room M1 / M2	
10:30 - 10:45	Coffee Break					12:30 - 14:30	
10:45 - 12:30 session 2	TRAINING: Modelling Activated Sludge Plants	TRAINING: Assessing Climate & Energy Performance of Water and Wastewater Utilities	TRAINING: NRW Assessment and Management in Low and Middle Income Countries	TRAINING: Crisis Management at Water Utilities: Concept, Preparedness and Latest Technology Development in Decision Support System using Artificial Intelligence	WORKSHOP: Performance-Based Contracts - PBCs for Improving Utilities Efficiency	LEARNING: Global Water Shapers: a Networking Event to Stat the Congress	
12:30 - 13:30	Lunch					14:30 - 15:30	
13:30 - 15:30 session 3	TRAINING: Modelling Activated Sludge Plants	TRAINING: Assessing Climate & Energy Performance of Water and Wastewater Utilities	TRAINING: NRW Assessment and Management in Low and Middle Income Countries	TRAINING: Crisis Management at Water Utilities: Concept, Preparedness and Latest Technology Development in Decision Support System using Artificial Intelligence		LEARNING: Make the Most Out of the Congress: First Time Attendees	
	OPENING CEREMONY						
16:00 - 18:00	OPENING CEREMONY						

Programme Overview

Monday 10									
	Sky Room	Room \$1	Room GH Q2	Room M1	Room M2	Room M3	Room M4		
09:00 - 09:45	KEYNOTE PLENARY Water and the Future W John Thwaites	e Want - How Water Can	Contribute to Achieving the	ne Global Sustainable De	velopment Goals		Great Hall Q2		
09:45 - 10:30	Coffee Break								
10:30 - 12:00 session 1	WATER SCARCITY AND DROUGHT SUMMIT	WATER REGULATORS FORUM	TECHNICAL / PROCESSES & TREATMENTS: Biosolids	TECHNICAL / PROCESSES & TREATMENTS: Technology for Energy Efficiency	TECHNICAL / PROCESSES & TREATMENTS: Drinking Water I: Nanofiltration	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Climate Change: Adaptation and Resilience	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Transition to Sustainable Cities of the Future I		
12:00 - 13.30	Lunch								
13:30 - 15:00 session 2	WATER SCARCITY AND DROUGHT SUMMIT	WATER REGULATORS FORUM	TECHNICAL / PROCESSES & TREATMENTS: Activated Sludge Processes	TECHNICAL / PROCESSES & TREATMENTS: Energy Efficient Integrated Plant Design	TECHNICAL / PROCESSES & TREATMENTS: Drinking Water II: Physical Processes	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Targeting and Measuring Resilience in Water Service	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Transition to Sustainable Cities of the Future II		
15:00 - 15:30	Coffee Break								
15:30 - 17:00 session 3	WATER SCARCITY AND DROUGHT SUMMIT	WATER REGULATORS FORUM	TECHNICAL / PROCESSES & TREATMENTS: Membrane Bioreactors	WORKSHOP / PROCESSES & TREATMENTS: Carbon Recovery from Water	TECHNICAL / PROCESSES & TREATMENTS: Drinking Water III: Physical Biosolid Treatment	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Drought Resilient Water Management	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Water Sensitive Urban Infrastructures		
17:00 - 17:15	Break								
17:15 - 18:00	KEYNOTE PLENARY Ending Extreme Poverty, Barbara Frost	What to Do the SDGs Mo	ean for Access to Water,	Sanitation and Hygiene			Great Hall Q2		
evening	POSTER RECEPTION	POSTER RECEPTION							
Tuesday 11									
Tuesday 11	Sky Room	Room \$1	Room GH Q2	Room M1	Room M2	Room M3	Room M4		
Tuesday 11 09:00 - 09:45	KEYNOTE PLENARY	Room \$1 elopment Outlook 2016, V				Room M3	Room M4 Great Hall Q2		
ĺ	KEYNOTE PLENARY ADB's Asian Water Deve					Room M3			
09:00 - 09:45	KEYNOTE PLENARY ADB's Asian Water Deve Yasmin Siddiqi					ROOM M3 WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Reuse for Sustainable Agriculture, Regulation and Technology			
09:00 - 09:45 09:45 - 10:30 10:30 - 12:00 session 1	KEYNOTE PLENARY ADB's Asian Water Deveryasmin Siddiqi Coffee Break UTILITY LEADERS	elopment Outlook 2016, V	Vater Management in the TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment I:	Context of Rapid Urbanisa TECHNICAL / PROCESSES & TREATMENTS: Alternative WWT	TECHNICAL / PROCESSES & TREATMENTS:	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Reuse for Sustainable Agriculture, Regulation	Great Hall Q2 TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Utilities and		
09:00 - 09:45 09:45 - 10:30 10:30 - 12:00 session 1	KEYNOTE PLENARY ADB's Asian Water Deveryasmin Siddiqi Coffee Break UTILITY LEADERS FORUM	elopment Outlook 2016, V	Vater Management in the TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment I:	Context of Rapid Urbanisa TECHNICAL / PROCESSES & TREATMENTS: Alternative WWT	TECHNICAL / PROCESSES & TREATMENTS:	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Reuse for Sustainable Agriculture, Regulation	Great Hall Q2 TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Utilities and		
09:00 - 09:45 09:45 - 10:30 10:30 - 12:00 session 1 12:00 - 13:30 13:30 - 15:00	KEYNOTE PLENARY ADB's Asian Water Deveryasmin Siddigi Coffee Break UTILITY LEADERS FORUM Lunch UTILITY LEADERS	elopment Outlook 2016, V CITY LEADERS FORUM CITY LEADERS	TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment I: Mainstream Amx TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment II: Novel Biological	TECHNICAL / PROCESSES & TREATMENTS: Alternative WWT Concepts TECHNICAL / PROCESSES & TREATMENTS: Wastewater	TECHNICAL / PROCESSES & TREATMENTS: Disinfection TECHNICAL / PROCESSES & TREATMENTS: Advanced Oxidation	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Reuse for Sustainable Agriculture, Regulation and Technology WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Conflicts and Collaborations, a Dialogue on Water, Fisheries and	Great Hall Q2 TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Utilities and Economics TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Climate Change: Adaptation and		
09:00 - 09:45 09:45 - 10:30 10:30 - 12:00	Coffee Break UTILITY LEADERS FORUM Lunch UTILITY LEADERS FORUM	elopment Outlook 2016, V CITY LEADERS FORUM CITY LEADERS	TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment I: Mainstream Amx TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment II: Novel Biological	TECHNICAL / PROCESSES & TREATMENTS: Alternative WWT Concepts TECHNICAL / PROCESSES & TREATMENTS: Wastewater	TECHNICAL / PROCESSES & TREATMENTS: Disinfection TECHNICAL / PROCESSES & TREATMENTS: Advanced Oxidation	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Reuse for Sustainable Agriculture, Regulation and Technology WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Conflicts and Collaborations, a Dialogue on Water, Fisheries and	Great Hall Q2 TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Utilities and Economics TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Climate Change: Adaptation and		
09:00 - 09:45 09:45 - 10:30 10:30 - 12:00	Coffee Break Lunch UTILITY LEADERS FORUM Coffee Break Lunch UTILITY LEADERS FORUM	CITY LEADERS FORUM CITY LEADERS FORUM CITY LEADERS CITY LEADERS	TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment I: Mainstream Amx TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment II: Novel Biological Treatment Concepts TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment III: Biotreatment of	TECHNICAL / PROCESSES & TREATMENTS: Alternative WWT Concepts TECHNICAL / PROCESSES & TREATMENTS: Wastewater Reclamation	TECHNICAL / PROCESSES & TREATMENTS: Disinfection TECHNICAL / PROCESSES & TREATMENTS: Advanced Oxidation Processes TECHNICAL / PROCESSES & TREATMENTS: Photo-catalytic	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Reuse for Sustainable Agriculture, Regulation and Technology WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Conflicts and Collaborations, a Dialogue on Water, Fisheries and Biodiversity WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Asset Management Leading Practices and	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Utilities and Economics TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Climate Change: Adaptation and Resilience WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Water, Human Rights and the Affordability		
09:00 - 09:45 09:45 - 10:30 10:30 - 12:00	Coffee Break Lunch UTILITY LEADERS FORUM Coffee Break EMERGING WATER LEADERS EMERGING WATER LEADERS COFFEE BREAK EMERGING WATER LEADERS BREAK OXFORD DEBATE	CITY LEADERS FORUM CITY LEADERS FORUM CITY LEADERS CITY LEADERS	TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment I: Mainstream Amx TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment II: Novel Biological Treatment Concepts TECHNICAL / PROCESSES & TREATMENTS: Biological Treatment III: Biotreatment of Textile/Chemical WW	TECHNICAL / PROCESSES & TREATMENTS: Alternative WWT Concepts TECHNICAL / PROCESSES & TREATMENTS: Wastewater Reclamation TECHNICAL / PROCESSES & TREATMENTS: Water Reuse	TECHNICAL / PROCESSES & TREATMENTS: Disinfection TECHNICAL / PROCESSES & TREATMENTS: Advanced Oxidation Processes TECHNICAL / PROCESSES & TREATMENTS: Photo-catalytic	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Reuse for Sustainable Agriculture, Regulation and Technology WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Conflicts and Collaborations, a Dialogue on Water, Fisheries and Biodiversity WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Asset Management Leading Practices and	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Utilities and Economics TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Climate Change: Adaptation and Resilience WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Water, Human Rights and the Affordability		

Track 1: Cities, Utilities & Industries Leading Change Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Room M9	Room M0	Room P1	Room P2	Room P3	Room P4	Room P5	Career Development Hu
Water and the Future John Thwaites	We Want - How Water Car	n Contribute to Achieving t	he Global Sustainable De	velopment Goals			Great Hall Q
TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Water and Waste Management in Agroindustries	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Resource Efficiency	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Drinking Water Quality and Health	WORKSHOP / ENABLING PROGRESS: Putting the Community at the Centre of Decision Making	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Climate Change, Floods and Droughts on Watershed Scale I	TECHNICAL / ENABLING PROGRESS: Instrumentation, Control and Automation	SESSION / Emerging Technologies & Innovation	LEARNING/ Building Leadership the Water Sector
TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Advances in the Supply Chain, Environmental and Industrial Biotechnology I	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Water and Waste Management in Chemicals and Pharmaceuticals I	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Drinking Water & Chemical Risk Assessment	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Building Climate Resilience in Coastal Areas	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Climate Change, Floods and Droughts on Watershed Scale II	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Water and Energy Nexus	TECHNICAL / ENABLING PROGRESS: Data and Information Technology	LEARNING / The Curious Power of Story: How to Wi Friends, Persuade Heroes, and Influenc Outcomes With Narrative
TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Advances in the Supply Chain, Environmental and Industrial Biotechnology II	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Water and Waste Management in Chemicals and Pharmaceuticals II	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Diffuse Pollution and Cyanobacterial Blooms	WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Quantitative Microbiological Risk Assessment for Safe Water (Re)use	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Water Quality Restoration	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Biogas, Co-digestion and Co-generation	TECHNICAL / ENABLING PROGRESS: Modelling and Systems Analysis	
KEYNOTE PLENARY							Great Hall O

POSTER RECEPTION

Room M9	Room MO	Room P1	Room P2	Room P3	Room P4	Room P5	Career Development Hub		
Great Hall Q2 ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation fasmin Siddiqi									
TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Water and Waste Management in Energy and Petrochemicals	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Urban Water Infrastructure Rehabilitation	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Micropollutants	TECHNICAL / ENABLING PROGRESS: Regulation-Finance	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Integrated Water Resources Management- Governance Aspects	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Resource Recovery I	SESSION / Emerging Technologies & Innovation	LEARNING / To Publish You Must Review: A How to Discussion		
TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Reticulations and Distribution Systems	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Water and Waste Management in Food Industries	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Micropollutant Treatment Technologies I	TECHNICAL / ENABLING PROGRESS: Water-Finance	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Integrated Water Resources Management- Case Studies	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Resource Recovery II	LECTURE / CITIES, UTILITIES & INDUSTRIES: Rainwater Harvesting	LEARNING / The Art of Scientific Publishing for Scholars		
TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Utilities and Benchmarking	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Unlocking Financial Resources to Decarbonize the Water Sector	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Micropollutant Treatment Technologies II	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Reverse Osmosis in Direct Potable Reuse	TECHNICAL / ENABLING PROGRESS: Regulation- Governance / Sustainability	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Rainwater Harvesting				

OXFORD DEBATE

Re-use of Wastewater as a Drinking Water Source: Technically Feasible but Socially Unacceptable?

Great Hall Q2

Enjoy an Evening of Art, Food and Networking Set in Brisbane's Queensland Gallery of Modern Art Precinct

Programme Overview

Wednesday 12									
	Sky Room	Room S1	Room GH Q2	Room M1	Room M2	Room M3	Room M4		
09:00 - 09:45		KEYNOTE PLENARY PANEL Solutions to Shape Our Water Future: a Voice for Our Waterways Eva Abal Great Hall Q2							
09:45 - 10:30	Coffee Break								
10:30 - 12:00 session 1	BASIN LEADERS FORUM	UTILITIES OF THE FUTURE FORUM	TECHNICAL / PROCESSES & TREATMENTS: Biofilm Processes	TECHNICAL / PROCESSES & TREATMENTS: Metagenomics of Water Systems	TECHNICAL / PROCESSES & TREATMENTS: Adsorption	WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: WHO Sanitation Safety Planning, from Concept to Implementation	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Asset Management I		
12:00 - 13.30	Lunch								
13:30 - 15:00 session 2	BASIN LEADERS FORUM		TECHNICAL / PROCESSES & TREATMENTS: GHG Emissions from WWTP	WORKSHOP / PROCESSES & TREATMENTS: Applying Molecular Tools in the Real World	TECHNICAL / PROCESSES & TREATMENTS: Ion Exchange	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Water's Strategic Role in the Resources Industry	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Asset Management II		
15:00 - 15:30	Coffee Break								
15:30 - 17:00 session 3	JOINT REGULATORS, BASINS, UTILITIES AND CITIES FORUM	WATER CAREER OPPORTUNITIES AND DEVELOPMENT	TECHNICAL / PROCESSES & TREATMENTS: Anaerobic Processes	TECHNICAL / PROCESSES & TREATMENTS: Nanotechnology/ Nanomaterial Applications	TECHNICAL / PROCESSES & TREATMENTS: Membrane Processes	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: The Purpose of Benchmarking: Operational Improvement or Regulatory Intervention?	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Customer Management and Communication		
17:00 - 17:15	Break								
17:15 - 18:00 evening	Ben Schouten	Creating New Challenges f					Great Hall Q2		
Thursday 10									
Thursday 13	01	B 04	B 011.00		B	B 440			
00.00.00.45	Sky Room	Room S1	Room GH Q2	Room M1	Room M2	Room M3	Room M4		
09:00 - 09:45	KEYNOTE PLENARY Can the Water Microbiome Save the Biohealth of the Planet? Joan Rose Great Hall Q2								
		ome Save the Biohealth of	the Planet?				Great Hall Q2		
09:45 - 10:30	Coffee Break	me Save the Biohealth of	the Planet?				Great Hall Q2		
09:45 - 10:30 10:30 - 12:00 session 1	Coffee Break SCIENCE & TECHNOLOGY LEADERS FORUM	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Pathogen Occurence Sources at the Watershed Scale I	TECHNICAL / PROCESSES & TREATMENTS: Modelling Wastewater Processes	TECHNICAL / PROCESSES & TREATMENTS: Water-Energy- Carbon Connections in The Urban Water Environment	TECHNICAL / PROCESSES & TREATMENTS: Seawater Desalination	WORKSHOP / PROCESSES & TREATMENTS: Is The Future Decentralised?	Great Hall Q2 WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Bringing Liveable Cities to Life I		
10:30 - 12:00 session 1	SCIENCE & TECHNOLOGY	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Pathogen Occurence Sources at the	TECHNICAL / PROCESSES & TREATMENTS: Modelling Wastewater	PROCESSES & TREATMENTS: Water-Energy- Carbon Connections in The Urban Water	PROCESSES & TREATMENTS:	PROCESSES & TREATMENTS: Is The Future	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Bringing Liveable		
10:30 - 12:00 session 1	SCIENCE & TECHNOLOGY LEADERS FORUM	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Pathogen Occurence Sources at the	TECHNICAL / PROCESSES & TREATMENTS: Modelling Wastewater	PROCESSES & TREATMENTS: Water-Energy- Carbon Connections in The Urban Water	PROCESSES & TREATMENTS:	PROCESSES & TREATMENTS: Is The Future	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Bringing Liveable		
10:30 - 12:00 session 1 12:00 - 13:30 13:30 - 15:00	SCIENCE & TECHNOLOGY LEADERS FORUM Lunch SCIENCE & TECHNOLOGY	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Pathogen Occurence Sources at the Watershed Scale I TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Pathogen Occurence Sources at the	TECHNICAL / PROCESSES & TREATMENTS: Modelling Wastewater Processes TECHNICAL / PROCESSES & TREATMENTS: Modelling Drinking	PROCESSES & TREATMENTS: Water-Energy- Carbon Connections in The Urban Water Environment WORKSHOP / PROCESSES & TREATMENTS: Intermitted Water Supply: The Challenge of Transitioning to	PROCESSES & TREATMENTS: Seawater Desalination TECHNICAL / PROCESSES & TREATMENTS: Novel Desalination	PROCESSES & TREATMENTS: Is The Future Decentralised? WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Utilities sharing knowledge on sustainable urban	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Bringing Liveable Cities to Life I WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Bringing Liveable		
10:30 - 12:00 session 1 12:00 - 13:30 13:30 - 15:00 session 2	SCIENCE & TECHNOLOGY LEADERS FORUM Lunch SCIENCE & TECHNOLOGY LEADERS FORUM	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Pathogen Occurence Sources at the Watershed Scale I TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Pathogen Occurence Sources at the Watershed Scale II	TECHNICAL / PROCESSES & TREATMENTS: Modelling Wastewater Processes TECHNICAL / PROCESSES & TREATMENTS: Modelling Drinking	PROCESSES & TREATMENTS: Water-Energy- Carbon Connections in The Urban Water Environment WORKSHOP / PROCESSES & TREATMENTS: Intermitted Water Supply: The Challenge of Transitioning to	PROCESSES & TREATMENTS: Seawater Desalination TECHNICAL / PROCESSES & TREATMENTS: Novel Desalination	PROCESSES & TREATMENTS: Is The Future Decentralised? WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Utilities sharing knowledge on sustainable urban	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Bringing Liveable Cities to Life I WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Bringing Liveable		

Track 1: Cities, Utilities & Industries Leading Change Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Room M9	Room MO	Room P1	Room P2	Room P3	Room P4	Room P5	Career Development
EYNOTE PLENARY PASSIMPLIFYING THE COMPLET FOR Abal	ANEL xities of Water Resources	Management					Great Hall
ECHNICAL / CITIES, UTILITIES I INDUSTRIES: Vater and Industrial nnovation - Pollution Control	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Urban Drainage and Sewerage	TECHNICAL / ENABLING PROGRESS: Regulation-Future Planning	WORKSHOP / ENABLING PROGRESS: Smart Plants, Smart Network: Water Operations Go Digital	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: The Future of Direct Potable Water Reuse	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Groundwater Management I	SESSION / Emerging Technologies & Innovation	LEARNING / Building Leadersh the Water Sector
ECHNICAL / CITIES, UTILITIES LINDUSTRIES: Vater Management Ind Urban Planning I	TECHNICAL / CITIES, UTILITIES & INDUSTRIES: Water and Industrial Innovation - Recovery and Reuse	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: The Workforce of Tomorrow, a Global Responsibility	WORKSHOP / ENABLING PROGRESS: Communications in a Crisis Situation	WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Water Safety Plans, a Lifeline for Climate Change and Extreme Events	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Groundwater Management II - ASR Applications	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Powering the Wastewater Renaissance: the Path to Cutting Emissions and Saving Billions in Wastewater Sector	LEARNING / How to Bring you idea to the Marker With Using the Le Startup and Rapid Prototyping
ECHNICAL / CITIES, UTILITIES LINDUSTRIES: Vater Management and Urban Planning II	TECHNICAL / CTIES, UTILITIES & INDUSTRIES: Water and Industrial Innovation - Efficiency Improvement	TECHNICAL / ENABLING PROGRESS: Customer Experience	WORKSHOP / ENABLING PROGRESS: Digital Interactions for the Customer Centric Utility	TECHNICAL / RE-CHARTING THE COURSE OF WATER RESOURCES: Soil Aquifer Treatment in Waste Water Reclamation	WORKSHOP / PROCESSES & TREATMENTS: Water in the Driest Continent - New Sources when Climate is Changing	LECTURE / PROCESSES & TREATMENTS: Granular Systems (Anaerobic and Aerobic)	LEARNING / Sustainable Delta Game – Adaptati Pathways
LENARY DEBATE articipative Societies	Creating New Challenges	for the Water Sector					Great Ha

Room M9	Room MO	Room P1	Room P2	Room P3	Room P4	Room P5	Career Development Hu	
KEYNOTE PLENARY Can the Water Microbiome Save the Biohealth of the Planet? Joan Rose Great Hall Q2								
WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Meeting the Multiple Requirements for Disinfection	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Natural Disasters and Emergency Preparedness	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Assessment, Impacts and Controls of Microbial Pathogens in Wastewater Treatment Systems and Reuse Schemes I	WORKSHOP / ENABLING PROGRESS: Mind the Gap: Building a Prepared, Diverse Workforce	WORKSHOP / RE-CHARTING THE COURSE OF WATER RESOURCES: Sustainable Water Solutions	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Not Waiting for a Crisis: Drawing Lessons from Effective Behaviour Change Communication in Practice	LECTURE / WATER QUALITY, SAFETY & HUMAN HEALTH: Abatement Options for Mixtures of Emerging Contaminants		
WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Low Impact Strategies to Manage Diffuse Pollution and Improve Water Quality	WORKSHOP / CITIES, UTILITIES & INDUSTRIES: Appropriate Technologies for Disasters and Humanitarian Crises	TECHNICAL / WATER QUALITY, SAFETY & HUMAN HEALTH: Assessment, Impacts and Controls of Microbial Pathogens in Wastewater Treatment Systems and Reuse Schemes II	WORKSHOP / ENABLING PROGRESS: Pricing Policies and Human Rights in a Water Scarce World	WORKSHOP / WATER QUALITY, SAFETY & HUMAN HEALTH: Protection of Wetland, Eco-systems Services Form Water Quality Risks	WORKSHOP / ENABLING PROGRESS: Reducing Non- Revenue Water and Energy Costs for Utilities	WORKSHOP / PROCESSES & TREATMENTS: Addressing Complexity in Water through Design Thinking	LEARNING / How to Engage Stakeholders in the Water Sector	

CLOSING CEREMONY Fellows Panel / YWP Panel Great Hall Q2

GALA EVENING
A Truly Fantastic Evening is in Store at the IWA World Water Congress & Exhibition Gala Evening

Programme Overview

Business Forums

Monday 10	Business Forum Room 1	Business Forum Room 2	
10:30 - 11:15	Xylem	Salt Water	
11:15 - 12:00	Suez	SODECI	
12:45 - 13:30	Suez	Africa Pavilion	
13:30 - 14:15	Poten Environment Group	Japan Pavilion	
14:15 - 15:00	Austrade	University of Technology Sydney	
15:30 - 16:15		Netherlands-Australia Coalition on	
16:15 - 17:00	Brisbane City Council	Climate Extremes	
Tuesday 11			
10:30 - 11:15	Pure Technologies	Xylem	
11:15 - 12:00	The University of Queensland	LG Sonic	
12:45 - 13:30	WaterGroup	Hitachi Zosen Corporation	
13:30 - 14:15	Beijing Scinor Water Technology Co., Ltd.	Japan Pavilion	
14:15 - 15:00	Steel Mains	Cardno	
15:30 - 16:15	Murray-Darling Basin Authority	Danish Water Technology Group	
16:15 - 17:00	Calix Limited		
Wednesday 12			
10:30 - 11:15	Queensland Government	Pacific Environment	
11:15 - 12:00	Monash Sustainability Institute	Nairobi City Water & Sewerage Company	
12:45 - 13:30		RMIT University	
13:30 - 14:15	Beijing Scinor Water Technology Co., Ltd.	Griffith University	
14:15 - 15:00	Data 61 / CSIRO	LG Sonic	
15:30 - 16:15	Australian Water Partnership	Salt Water	
16:15 - 17:00	Maric Flow Control	Enagic Kangen Water Technology Africa Ltd	
Thursday 13			
10:30 - 11:15	CSIRO and Bureau of Meteorology	Scalene Energy Water	
11:15 - 12:00	Suez	Seqwater	
12:45 - 13:30	Queensland Government	Sumitomo Electric Industries	
13:30 - 14:15	Suez	Japan Pavilion	
14:15 - 15:00	Suez	Queensland Government	

Information

Practical & Useful

Useful Information

ACCOMMODATION QUERIES

For questions about accommodation, you can go to the registration desk.

There are two ATMs located on the main exhibition concourse on the Merivale Street side of BCEC and one located next to Olio Café & Bar on the Grey Street Ground Level. Additional ATMs are available in the nearby South Bank precinct.

CATERING AND REFRESHMENTS

Morning coffee, lunch and afternoon coffee is served in the exhibition area in Exhibition Hall 1. You can find a lunch voucher per day in your registration envelope.

EXTRA TICKETS

At the registration desk you can book any extra tickets for social events.

MEDICAL ASSISTANCE

24 hour emergency assistance is available at the BCEC. For medical assistance please go to the registration desk.

GETTING AROUND BRISBANE

In your conference bag you can find a flyer with information on how to get around Brisbane.

SIGHTSEEING TOURS

The Ozaccom+ team at the registration desk will be able to assist you with booking sightseeing tours.

TAXI

A dedicated taxi rank is located at the main entrance of the BCEC on the corner of Merivale and Glenelg Streets. There are also taxi's available in other locations in the South Bank Precinct.

WIFI ACCESS

Free wifi will be available throughout the BCEC. To access the wifi you will need a password, which will be advertised around the Convention Centre.

REGISTRATION DESK

The registration desk will be open from: 14:30 - 17:00 / Saturday 08 October

08:00 - 17:00 / Sunday 09 October

08:30 - 17:00 / Monday 10 October

08:30 - 17:00 / Tuesday 11 October

08:30 - 17:00 / Wednesday 12 October

08:30 - 15:00 / Thursday 13 October

Practical information

CONGRESS APP



Want the IWA World Water Congress & Exhibition at your fingertips? Get the official mobile app. Connect with other delegates using the builtin networking tool; navigate around using the interactive floor plan; and share your thoughts and insights using the social media widgets.



DIGITAL PROCEEDINGS

Want to read all the details of the content being presented during the Congress? Visit the Digital Proceedings: Password: WWC2016



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SOCIAL MEDIA

Planning to use social media while at the conference? Join the conversation:



www.facebook.com/





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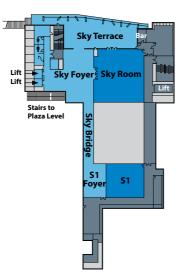
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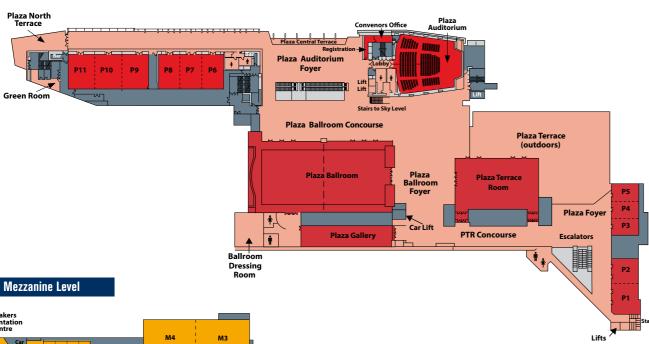
Floor Plan

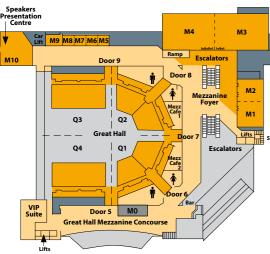
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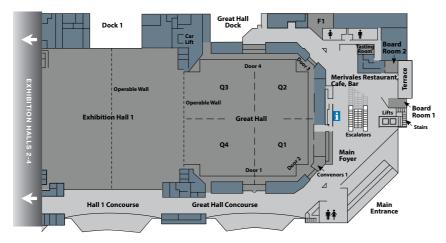
Sky Level

Plaza Level





Foyer Level



MERIVALE STREET



The new magazine from the International Water Association

With an appealing design and informative and holistic information on the water sector, *The Source* brings the important issues to the forefront for water professionals

Harald Kleiven, Head of Business Development, Cambi Group



To subscribe to *The Source* visit www.thesourcemagazine.org or email water@iwahq.org

As an IWA member you will receive *The Source* as part of your membership

To join the IWA, please visit www.iwa-connect.org

The Water Future We Shape



With the adoption of the Sustainable Development Goals, an unprecedented opportunity for 'water' has emerged. The goals are ambitious to say the least, yet provide a new framework for water professionals to lead on its implementation. How are we going to shape the world's water future and create new sustainable and resilient water realities? How do we use this opportunity to create a truly water wise world?

Bringing together leading science, policy and practice, the 2016 World Water Congress & Exhibition is a chance to reflect on the direction and steps to take. The target set for treatment of wastewater tells a story in itself. Today, 80% of wastewater goes untreated. The SDGs demand we halve the amount of untreated wastewater. During the same period the global population is estimated to rise to 8.5 billion people.

Our task is to provide wastewater treatment to another 3.5 billion people by 2030. In the next 14 years we need to build new wastewater treatment facilities for 700,000 people every day. To do so, requires us to train or attract about 1 million professionals per year, every year. This is just one example of what is needed to achieve just one of the targets set for water.

To realize this new agenda, we all need to focus on Reducing water abstractions and use. There simply won't be enough water around to supply current projected use in 2030; major efficiency gains are needed by all waters users. We need to Re-use water, cascading it from one use to another, and combining this with allocations to the highest economic, social and environmental outcomes. We need to turn the tide and start Replenishing the environment, restoring water quality and degraded ecosystems. This 3 R framework provides a clear means to communicate the essentials of creating a water wise world to a broad audience.

During the Congress, we will present new principles for Water Wise Cities. These build on insights and foresights on how to make our cities deliver the services citizens demand, be sustainable in the long run and become resilient to increasing climatic extremes, impacting livelihoods and economies through floods and droughts. Addressing climate change through mitigation and adaptation measures will increasingly shape the water sector's future.

The Water Scarcity and Drought Summit, organised during the Congress, aims to enable sector leaders and decision makers to reflect on a pro-active agenda to address extreme water

scarcity and drought. To tackle this issue will require a portfolio of approaches combining policy, regulation and institutional reforms with the use of new knowledge and technologies. Becoming more knowledgeable about the Australian experience on developing and implementing such portfolios is of particular relevance to all of us. The Summit aims to be catalytic for the development of the action agenda: #DroughtAction.

Major efforts are required to realise universal access to safe drinking water and sanitation as enshrined in the Human Right to Water and Sanitation. This year's winner of the IWA Global Water Award, Catharina de Albuquerque, has been instrumental in promoting this. The new IWA manual on implementing the Human Right to Water and Sanitation will be launched during the Congress. It provides practical guidance for utilities, regulators and NGOs on how to operationalise the right. The challenge for all water professionals is to leave no one behind.

With the new agenda defined, we need to shift our focus more and more to solutions. The Exhibition, presenting more than 250 companies and organisations from around the world, is a great way to learn about the latest available solutions. The Congress Forums, Workshops, Technical Sessions and Posters provide you with opportunities to update yourself on a broad spectrum of new insights and solutions.

Coming together in Brisbane will be a moment to (re) connect with your colleagues and peers. We have made new tools available through the conference app and the IWA Connect app to make it easier for you to find the colleagues you want to meet. I invite you to download the apps and start using them right away to enhance your Congress and Exhibition experience.

We are at a crossroad in our profession. The agenda set out will be transformational and have a positive impact on billions of people around the world in the years to come. I hope the time we will spend together this coming week will make you find the insights, energy, and inspiration needed to contribute to the new agenda and be part of creating the water wise world.

Dr. Ger Bergkamp

Executive Director, International Water Association

Join the conversation on Twitter: #iwa2016brisbane www.worldwatercongress.org

Agenda Setting Plenary Sessions

Thought leadership for the water sector

Opening Ceremony





Gunter Pauli Author, The Blue Economy, Founder





Sanitation and Water for All Executive Chair, winner of IWA Global Water Award 2016 (Portugal)

Irrigate with sea water? Farm and have drinking water as a by-product? Increase water retention with carbon? Innovation and inspiration from Gunter Pauli, the founder of the ZERI Think Tank, ranked as one of the top in the world for innovative policy advise. Starting as an entrepreneur, but influenced by the work of the Club of Rome. he set out on a mission to ensure that business would become a vehicle in society's capacity to respond to its urgent needs. With over \$4billion invested in +200 projects his teams have demonstrated a capacity to translate vision into reality.

Catarina de Albuquerque is the winner of the 2016 IWA Global Water Award. The award recognises the exceptional role she has played as the driving force behind the recognition of the Human Rights to Water and Sanitation. In 2008 she became the first UN Special Rapporteur on the right to safe drinking water and sanitation, having played a pivotal role in the recognition of water and sanitation as human rights by the UN General Assembly.

Monday 10 October / 09:00 - 09:45

Water and the future we want - how water can contribute to achieving the global Sustainable Development Goals



John Thwaites Chair Monash Sustainability Institute and Melbourne Water (Australia)

John Thwaites was Deputy Premier of Victoria from 1999 until 2007, During this period he was Minister for Health, Minister for Planning, Minister for Environment, Minister for Water, Minister for Victorian Communities and Victoria's first Minister for Climate Change. Portfolios responsible for major reforms in social policy, health, environment and water. In 2012, John was named one of the top 100 Global Sustainability Leaders by ABC Carbon and Sustainability Showcase Asia. He chairs a project with the Brotherhood of St Laurence to develop policies to assist low income Australians cope with the impact of climate change.

Plenary Session

Monday 10 October / 17:15 - 18:00

Ending extreme poverty, what do the SDGs mean for access to water, sanitation and hygiene



Barbara Frost Chief Executive Water Aid (United Kingdom)

Barbara Frost has been Chief Executive of WaterAid UK since September 2005. During this time the global organisation has expanded into 37 countries and substantially increased its income from £27 million a year to over £90 million in 2014/15. Barbara oversaw WaterAid's Global Strategy "Everyone Everywhere by 2030", linking the work of teams across the glob with the Sustainable Development Goals. She played a pivotal role in creating WaterAid international. WaterAid's success is due to retaining a clear focus on safe water, improved hygiene and sanitation as essential to poverty eradication and an emphasis on everyone's right to these most basic of services.

Plenary Session

Tuesday 11 October / 09:00 - 09:45

ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation

Principal Water Specialist, Asian Development Bank

With over 17 years experience in the planning, design and implementation of water resources projects in South Asia, Ms. Siddiqi has been ADB project officer for technical assistances, loan processing and administration of diverse water resources projects in Bangladesh and India. Prior to joining ADB, she worked for Halcrow consulting engineers, and as a consultant for the World Bank on irrigation projects in rural Pakistan.

Oxford Debate



Tuesday 11 October / 17:15 - 18:00

Re-use of wastewater as a drinking water source: technically feasible but socially unacceptable?

Water treatment technology has significantly improved. We are now technically able to provide tertiary treatment of wastewater so it can be re-used for drinking water directly. It is one of the drastic alternatives that could revolutionize the way water supply is managed. Yet, public perceptions and political motivations put a firm brake on such developments in many instances. Can social acceptance on direct potable re- use be created or engineered? Supporters and adversaries of the application of direct potable re-use from around the world will outline their arguments for or against the motion in a lively debate.

Plenary Session

Wednesday 12 October / 09:00 - 09:45

Solutions to shape our water future: a voice for our waterways



Eva Abal Director, Sustainab Water Program, Global Change Institute. The University of

Eva Abal is the Director of the recently established University of Queensland (UQ) Water, which aims to coordinate research activities in water across UQ's faculties, institutes and centres. She is also the Strategic Science Director for the Great Barrier Reef Foundation, working to understand and promote resilient reef ecosystems adapting to climate change for investor funding. Eva's scientific expertise and research interests include strategic research framework development towards impact; building partnerships amongst research, government and industry; science leadership; and effective science communication through Ecosystem Report Cards.

Plenary Debate

Wednesday 12 October / 17:15 - 18:00

Participative societies creating new challenges for the water sector



Ben Schouten Professor. Industrial Design University of

Ben Schouten is an advisor for the European Commission on the 'Internet of Things' as well as for the Dutch Cultural Media Fund, responsible for E-culture. He graduated from the Rietveld Art Academy in 1983 and found himself interested in patterns and iconography, and discovered his fascination for mathematics. In August 1995 he received a Master's degree in mathematics, specializing in chaos theory. In 1996 Ben Schouten founded Desk.nl, providing innovative internet related solutions. Together with the Dutch Design Institute (Vormgevings Instituut), Desk was internationally acknowledged with a webby award in gaming.

Plenary Session

Thursday 13 October / 09:00 - 09:45

Can the Water Microbiome Save the Biohealth of the Planet?



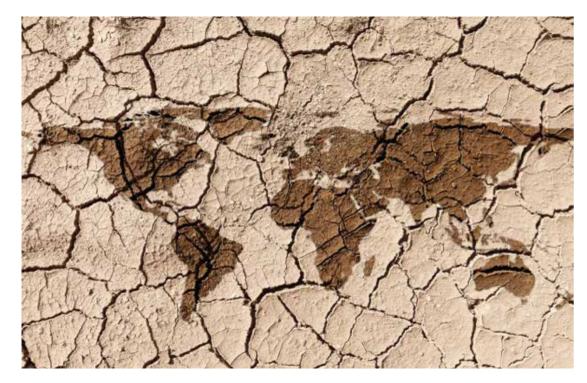
Homer Nowlin Chair in Water Research at Michigan State

Joan Rose recently won the Stockholm Water Prize for her contributions to global public health; in assessing risks to human health in water and creating guidelines and tools for decision-makers and communities to improve global health. She is a Professor at Michigan State University, and holds the Homer Nowlin Chair in Water Research. She serves as the Co-Director of the Center for Advancing Microbial Risk Assessment, which addresses evidence based risk assessments for management of waterborne pathogens. Joan is an international expert in water microbiology, water quality and public health safety, and has been involved in drinking water investigations of water-borne outbreaks for over 20 years.

IWA World Water Congress & Exhibition Brisbane 2016

Summit Water Secreity and

Water Scarcity and Drought



MONDAY 10 OCTOBER, 10.30 - 17.00

Building resilience to drought and scarcity requires global leadership. We have an unprecedented opportunity to act on water scarcity and drought at the world's first multi-stakeholder Water Scarcity & Drought Summit 2016.

The World Economic Forum ranks the water crisis as the top global risk facing societies, economies and businesses over the next decade. Four billion people throughout Africa, Asia and Latin America are affected daily by severe water scarcity and drought.

The world's growing population, economic development and the impact of climate change, such as extreme weather, and inadequate water allocation policy are increasing the demand for water. Climate change also makes long-term water availability forecasting harder. This makes designing and investing in future water infrastructure increasingly difficult.

The chronic problem of water scarcity impairs people, cities, industries, agriculture and the environment.

Historically, public and private sectors have responded to water scarcity and drought by expanding storage infrastructure and by increasing water supply. Water scarcity and drought management needs to go beyond infrastructure and technologies and include water demandmanagement, effective water allocation policies and incentives. It is about building systems resilient to water scarcity and drought and managing demand and improving supply.

The Sustainable Development Goals (SDGs) and the Paris Agreement renew commitment to acting on

water scarcity and drought for the benefit of humanity and sustainable business. We need to learn from one another and share best practices more globally.

"Water scarcity and drought: A problem for 40% of the world's population"

The International Water Association and the Australian Water Partnership will engage and challenge 200 leaders from the private and the public sector including ministers, business leaders, scientists and civil society on new ways of collaboration between countries, industries and sectors to address water scarcity and drought.

The Water Scarcity and Drought Summit is an unprecedented opportunity to shed light on a global risk, bring together public and private sector for much-needed collective action, and create a shared understanding for how we can collectively address this global risk. It will launch the world's first public-private action agenda solely dedicated to water scarcity and drought.

Sustainable Development Goal 6.4: Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

"Today, water scarcity and drought management need to go beyond infrastructure, technologies and create systems resilient to water scarcity and drought, focusing on managing the increasing demand while improving supply"

Dr. Gary Jones, Chief Executive, Australian Water Partnership

Through keynotes, roundtable and plenary discussions, The Water Scarcity and Drought Summit will:

- CREATE CLIMATE PREPAREDNESS AND RESILIENCE
 by discussing effective policy, planning, regulations and
 incentives; evaluating existing institutions and how to
 enforce adaptation to our water scarce situation.
- ESTABLISH PORTFOLIOS OF WATER SUPPLY AND DEMAND MANAGEMENT
- through discussions of best approaches and exposing participants to modern technologies that reduce water demand and losses, reuse water, desalinate, replenish water stores in groundwater and refill reservoirs. These technologies span across energy, agriculture, cities and industrial sectors.
- STRENGTHEN MECHANISMS
- to measure data and exchange knowledge on water scarcity and drought.
- SHARE BEST PRACTICES AND SOLUTIONS to share information; knowledge and experiences

necessary to create a water wise world.

- MOBILISE PUBLIC AND PRIVATE INVESTMENTS:
 focus on resources that can be used to upgrade existing
 institutions and create new ones in addition to improving
 infrastructure to manage water scarcity and drought.
- "Severe water scarcity and drought in Africa, Asia and Latin America impact four billion people daily. The effects of water scarcity and drought will only intensify if we do not act"

Dr. Ger Bergkamp, Executive Director, International Water Association

JOIN US AND BE PART OF BUILDING A NEW GLOBAL ACTION AGENDA TO ADDRESS WATER SCARCITY AND DROUGHT.

www.droughtaction.org

Forums

The IWA World Water Congress includes a number of important Forums and the Water Scarcity and Droughts Summit. This are opportunities to get an in-depth understanding of current trends, latest research, guiding strategies and leading practice.

Regulators Forum

MONDAY 10 OCTOBER

Public Policy and Regulation for Resilient Water Services

The interdependence between regulatory functions and the relationship of regulators to key stakeholders, including service providers, governments and citizens, are of increasing importance in the context of resilient cities and water systems at large. The Regulators Forum offers a platform to bring together leaders of regulatory authorities with economic, quality of service, public health and environmental responsibilities related to water, wastewater and sanitation services.

The Forum aims to progress the principles articulated in the Lisbon Charter to build a strategy for their application in the context of resilient water systems. It is also an opportunity to better integrate public policy and regulation of water services in the framework of the Sustainable Development Goals, UN 2016-2030.

The Forum will provide examples, tools and instruments to build resiliency into regulatory frameworks ensuring that inter-dependent regulatory outcomes, such as safeguarding public health, ensuring eco-system stability and financial viability of services are not compromised in the long-term with care of customers' needs and expectations.

This is a unique opportunity for regulators working across the entire water cycle to gather in an international setting to share their experience and create working relationships that support their vital role in the sector.

Attendance by invitation only.

Please contact Carolina Latorre:
carolina.latorre@iwahq.org

Utility Leaders Forum

TUESDAY 11 OCTOBER

The Changing role of Water Utilities: New Service Models and Innovation for Resource Stewardship

The role of water and wastewater utilities is shifting from a primary focus on resource provision to leading and enabling resource stewardship. This transition requires a greater emphasis on community engagement, industry partnerships and investment decisions that consider the social, economic and environmental costs in an everchanging environment and climate.

The Utility Leaders Forum provides an opportunity for utility C-level executives to share, learn and discuss the pathways in adopting new technologies and practices that enable these transitions – finding ways in the innovation process to navigate political and regulatory constraints and also look beyond their traditional boundaries and play a pivotal role in securing resources.

The Forum will address new service paradigms for water and wastewater utilities that aim to deliver value to a range of stakeholders, with strategies and business models that embrace concepts such as the circular economy and take advantage of the digital revolution. Utilities that have put customers at the centre of strategic and business planning and have taken a leading role in instigating public discourse on the value of water will also be showcased.

Attendance by invitation only.

Please contact Pritha Hariram:

pritha.hariram@iwahq.org

City Leaders Forum

TUESDAY 11 OCTOBER

Fostering Sustainable Urban Water for Resilient and Liveable Cities

The Forum brings together City
Leaders from across geographies
and disciplines to share their water
successes and challenges, while looking
through the lens of the IWA Principles
for Water Wise Cities to identify the
key success factors and bottlenecks
to meeting local the national goals.

The Forum is the place to set an action agenda to develop a shared water vision for sustainable urban water implementation in Cities. The Principles for Water Wise Cities will be endorsed at the Forum, and presented at the UN-Habitat III Conference in Ecuador, promoting water integrated city planning in the New Urban Agenda.

The IWA Principles for Water Wise Cities define Sustainable Urban Water as: all urban waters used and managed by Water Wise communities in cities connected to their basins; and built in a way sensitive to water issues so that short-term risks are minimised, long term resources are preserved, and liveability is increased through Water Sensitive Urban Design and access for all to Regenerative Water Services.

The Forum outcome document will focus on how the Principles can guide cities in implementing the Paris COP agreement on climate change and of the Sustainable Development Goals (SDGs)

The Forum emphasizes lessons from the SDG challenges faced by cities, and how the Principles inspire a vision for solutions.

Attendance by invitation only.

Please contact Corinne Trommsdorff:
corinne.trommsdorff@iwahg.org

Emerging Water Leaders Forum

TUESDAY 11 OCTOBER

Water Leaders of Tomorrow

An opportunity for young water professionals – as the emerging water leaders – to contribute to development of an action agenda required to address water sector challenges. In this session young professionals will discuss solutions, actions and the competencies required to tackle the increasing challenges in cities, utilities and basins around water management.

Attendance is for Young Water Professionals (35 and below) and invited senior professionals only.

Please contact Kirsten de Vette: kirsten.devette@iwahq.org

Water Leaders Forum

WEDNESDAY 12 OCTOBER

Water Security Across Scales: Cooperation and Partnerships

This Forum will include participants from the Basins, Utilities, Cities and Regulators Forum to explore issues concerning cooperation, bottlenecks and enablers for water security across scales arising from their respective forum. Furthermore, an interactive and participatory case study from Australia will enhance participants understanding of influencing decision making across urban-basin scales and reaching outcomes that improve sustainable water management.

Attendance by invitation only.

Please contact Tom Williams:
tom.williams@iwahq.org

Basin Leaders Forum

Resilient Basins for Water Security

WEDNESDAY 12 OCTOBER

The Basin Leaders Forum will provide an opportunity for water resource managers from sectors across river basins (e.g. cities, mining, energy, industry, agriculture, etc) to share knowledge and experiences and explore viable pathways for sustainable economic, social and environmental development of catchment areas.

The Forum will be a stepping stone for development of an "Action Agenda for Sustainable Basin Management" which will provide guidance for a bottom up approach to basin management especially involving urban and industrial areas through their actions at the catchment level. Protecting basins and restoring those that are already degraded should be a priority to ensure a balanced approach to development that sustains cities and industries and the ecosystems they rely on.

Sessions within the Basin Leaders
Forum will have a mix of roundtable
and panel discussions to maximize
knowledge and experience sharing.
The discussions will center on
theoretical and empirical evidence
of proven interventions and current
practical approaches towards building
resilience and fostering sustainability
in basins. Fostering resilience
means supporting innovation and
experimentation – allowing room for
developing innovative management
approaches, learning from the outcomes
and acting on those lessons learned.

Science & Technology Leaders Forum

THURSDAY 13 OCTOBER

A Shared Vision for International Water Research Collaboration and Impact

This Forum will bring together over 100 of the top researchers and technology innovation leaders to discuss and identify shared research agendas and effective application pathways to accelerate innovation and create greater impact across the water sector. This innovation agenda will be informed from key messages from the Utilities, Cities, Basins, and Regulators Leaders Forums, to build on the needs identified by these key sectors/groups to achieve better solutions for sustainable water management into the future. Forum attendees will be fully engaged in the process of identifying top research priorities, developing the innovation agenda and characterising effective collaboration and application avenues.

The outcome of the forum is to provide a shared innovation agenda which incorporates current and emerging applied research needs globally, highlights effective ways to engage science and technology leaders towards improved impact, and illustrates the value of close innovation partnerships between research institutions, industry funding agencies and utilities and technology providers.

Attendance by invitation only.

Please contact Bushra Nishat:
bushra.nishat@iwahq.org

Attendance by invitation only.

Please contact Hong Li:
hong.li@iwahq.org

Thematic Tracks

Shaping the future of water management

Addressing global water challenges for a water wise world demands imaginative approaches and the adoption of new paradigms and technologies. The IWA World Water Congress brings together top water professionals from around the world to challenge the status quo. Thematic Tracks are all about presenting innovative approaches, the latest science, newest technologies and leading practices.

Participating in technical sessions, including oral and poster presentations, brings you the latest findings and allows you to connect to new developments. Attending workshops will provide insight and inspiration for cooperation and collaboration on research and practical applications.

TRACK 1

Cities, Utilities & Industries Leading Change

WATER CENTRED CITIES OF THE FUTURE

Resilience and sustainability are central to the water sensitive urban infrastructure of the future. Case studies and discussions highlight the pros and cons of both centralised and decentralised urban water systems. Critical views are presented on the effectiveness of adapting to climate change and creating urban water resilience through urban storage and drainage, storm water management and rainwater harvesting.

Workshops and technical sessions provide great opportunities to network with specialists focused on the transition of urban systems. The latest modeling and case studies on moving towards sustainability provide the basis for reflecting on how urban water systems can meet new imperatives through to 2050. Can integration of the design of water systems with the long-term planning and development of urban areas be achieved?

LEADING UTILITIES

New management models for utilities, new approaches to asset management and innovative contracting practices are transforming water service delivery. They form a basis for more effective, efficient and sustainable services. Workshops and technical sessions focus on the latest advances in utility performance assessment and benchmarking based on learning from best practices.

Outcomes from new assessments of the capacity gap in the water sector of emerging economies are presented. These facilitate the strategic planning of training and professional learning. At the utility level this translates into better workforce planning and improving the quality of skilled staff. Utility managers from around the world will exchange ideas and share experiences to improve utility management in practice.

INDUSTRIES IN TRANSITION

Industries from all sectors now see eco-efficiency, water and materials recycling as essential to their success. Leading industrial water management practices are minimising environmental impacts by achieving zero waste discharge. Workshops and technical sessions provide examples from agriculture, refineries, automotive manufacturing, mining, food and beverages, and the pharmaceutical industry.

TRACK 2

Water & Wastewater Processes and Treatments

WASTEWATER AND BIO-SOLIDS

Research and practice on the safe and sustainable management of wastewater and derived sludge (bio-solids) continues to develop. Technical sessions highlight latest findings in optimising wastewater treatment processes and the next generation of technologies. A special focus is given to Aerobic Granular Sludge, which has advanced rapidly and is set to become the new standard for aerobic treatment of industrial and municipal wastewater.

NUTRIENT REMOVAL, MEMBRANES AND DESALINATION

The latest findings of nutrient removal in large-scale wastewater plants are presented. The effectiveness of a range of biological phosphorus and nutrient removal processes, including Anammox, are examined with experiences from both temperate and warm climates.

Membranes have transformed the water and wastewater sector in recent years. A series of technical sessions provide deeper insight into past and future membrane experiences, including membrane bioreactors. In addition, speakers elaborate on the future of desalination and the feasibility of biological desalination.

DRINKING WATER TREATMENT

Utilities consistently strive to produce drinking water that meets the quality standards using the most cost-effective approaches. This is an ever-more complex challenge, as new drinking water contaminants are continually being discovered and new technologies and processes are developed. It can be very difficult to keep up with the latest technical information, but it is crucial for everyone to be aware of emerging water quality issues and the good practices that may be appropriate for addressing these issues into the future. Research and practice on the most effective and efficient drinking water treatment technologies and processes will be presented.

TRACK 3

Re-Charting the Course of Water Resources

RESOURCE RESILIENCE

Building resilience into resource management strategies requires institutional and technological development. New strategic frameworks are being introduced, enabling successful management of resources across political boundaries: connecting watersheds and urban centres. These new approaches focus on managing the current state of the resource base, but also support the restoration of damaged or over-exploited ecosystems.

Latest research findings of the underlying physical, chemical and ecological processes are presented. These findings have the potential to substantiate new risk-based assessment approaches for sustainable resource management. A variety of new methods, applied to different ecosystems from coastal zones, wetlands and groundwater, to lakes and reservoirs, are presented.

ALTERNATIVE RESOURCES

Competing water demands and water scarcity are driving the development of alternative water resources. A series of workshops highlight where and how new technologies are shaping the future of alternative water resource development. Special attention is given to how the interactions between regulation and stakeholders significantly impacts on the development of these resources.

Technical presentations, that underpin the development of alternative water resources, highlight the latest findings of advanced membrane technologies including ultrafiltration and reverse osmosis.

RESOURCE AND ENERGY RECOVERY

Water and wastewater are valuable sources of nutrients, materials and energy. The latest developments in capturing nitrogen and phosphorus are featured in technical presentations and a series of posters. These focus on solutions in both the municipal and industrial sectors. Full-scale programmes that meet environmental discharge standards and recover nutrients effectively are highlighted.

Technologies are now being developed that enable energy to be captured from wastewater. Biogas production through co-digestion and co-generation schemes, microbial electrolysis, fuel cells and pressure-retarded osmosis are amongst the technologies that could dramatically change the energy profile of our industry. A number of technical sessions and workshops highlight how the focus on energy is combined with real progress in understanding and tackling the production of greenhouse gases in the water cycle.

TRACK 4

Enabling Progress

GOOD GOVERNANCE

Effective institutions and regulation are essential to enable the reliable and sustainable management of water services and water resources. Through technical presentations and discussions we examine how regulation is impacting water and wastewater services and water reuse. Other sessions analyse the effectiveness of different national and transboundary water- sharing governance arrangements. You can examine stakeholder engagement, customer relations and whether the water sector can learn from other sectors.

SUSTAINABLE FINANCE

Sound finances are critical for the water sector. Taxes, tariffs and transfers together form the basic ingredients for sustainable financing. In reality, utility managers, regulators and other practitioners must address a number of (competing) objectives when establishing tariff structures and pricing levels. What tariffs are most appropriate in terms of sustainability, affordability and equitability? A range of speakers and panellists review the use of different sources of finance to cover capital and operational costs in different settings.

SMART WATER

The continuing rapid development of Smart Water is driving radical change in the water sector. The impacts of implementing new algorithms, monitoring technologies and decision support systems on service delivery and resource management effectiveness are examined. Finally, the potential of "big data" and analytics for transforming the water sector and overcoming critical challenges in water management are reviewed.

TRACK 5

Water Quality, Safety & Human Health

WATER SAFETY AND HUMAN HEALTH

Safety is at the heart of water supply services. A number of sessions demonstrate that Water Safety Plans are increasingly widespread. More and more the conversation focuses on the assessment of effective implementation of these plans and on the development of Sanitation Safety Plans.

The safety of water supplies based on traditional disinfection has encountered several problems, such as disinfectant by- products. Bromates, chlorates and nitrosoamines are now being assessed far more accurately, with potential health impacts better understood and new techniques for their removal advanced.

MONITORING AND MANAGING WATER QUALITY

Developing an approach to establish 'water cascades' for different purposes is dependent on identifying the correct water quality for the specific water use. A series of sessions will explore differentiated standards for uses such as irrigation and cooling, which can be done with non-potable water. Technical sessions demonstrate that improved detection and better assessments can deliver a "fit for purpose" approach to water quality management.

Leading specialists elaborate on how new molecularbiological tools are expanding our knowledge about environmental conditions and tracing pollution sources, leading to improved resource management. Learn how powerful analytical techniques are enabling the detection of pharmaceuticals and priority pollutants throughout the water cycle, including in distribution systems.

IWA Learning Events

Pre-congress Trainings*

These are technical trainings that are offered by IWA's Members and or partners and aim to enhance professional competence in the specific topic, hence improve abilities to perform professional tasks or functions.

Room M5/M6

Saturday 8 and Sunday 9

08:30 - 15:30

Room M7/M8

MODELLING ACTIVATED SLUDGE PLANTS

Organiser: IWA Good Modelling Practices Task Group

How to use Activated Sludge Models in Practice?

There is an ample need for hands on practice of mathematical modelling of Activated Sludge plants. The two day modelling course provides detailed instruction on mathematical models, their structure and use in practice such as design, operation and control in activated sludge plants, and ample hands-on opportunity to use these models in a class-room setting. The learner will gain an understanding of structure of the IWA Activated Sludge Models (ASMs) and get a hands-on opportunity to use these models. The target audience is consultants, plant managers/operators, water boards and academics in modelling wastewater treatment

** Sunday until 15:30

Sunday 9

08:30 - 15:30

Room P3

Sunday 9

08:30 - 15:30

NRW ASSESSMENT AND MANAGEMENT IN LOW AND MIDDLE INCOME COUNTRIES

Organiser: Water Loss SG

Chair: Roland Liemberger Miya, Austria
Contributers: Dr. Ronnie McKenzier Chair WLSG, South Africa
Bambos Charalambous Past Chair, WLSG, Cyprus

One of the major challenges facing water utilities is the high level of Non-Revenue Water (NRW). While the benefits of reducing NRW are well known, decades of effort have not delivered much improvement in low and middle income countries (LAMIC). While there are many explanations and excuses, much of the failure is due to underestimating the technical difficulties and complexity of NRW management, along with the potential benefits of taking action. The participants will gain in-depth knowledge on NRW assessn using the IWA methodology, and get a good overview of the available NRW reduction interventions. Finally, they will get an update on latest trends and developments in the use of performance based NRW management contracts In this interactive training, groups will work on a case study and participants are encouraged to bring their laptops or tablets. Target audiences are those dealing with urban water supply in low and middle income countries in particular: water utility managers, water sector key decision makers,

Sunday 9

Room P2

PERFORMANCE-BASED CONTRACTS FOR **IMPROVING UTILITIES EFFICIENCY**

Moderator: Didier Carron Nalded

The workshop presents the IWA Book on Performance-Based Contracts (PBC). The book is a compendium of case studies and contributions written by members of the IWA PBC Task Group, addressing innovative approaches in public-public and public-private partnerships, including WOPs, service and management contracts, and the alliance approach. The book finds that great progress has been made with the design of these contracts in the past 10 years, but concludes that results are uneven and there are still many challenges. Speakers including Tom Williams (IWA) Philip Giantris (Valuadd), Silver Mugisha (NWSC) examine recent experiences with PBCs in

CRISIS MANAGEMENT AT WATER UTILITIES: CONCEPT, PREPAREDNESS AND LATEST TECHNOLOGY DEVELOPMENT IN DECISION SUPPORT SYSTEM USING ARTIFICIAL INTELLIGENCE

ASSESSING CLIMATE AND ENERGY

PERFORMANCE OF WATER AND

research, and possibly train others to follow.

Organiser: IWA Water Security and Safety Management SG

Organisers: IWA and GIZ on behalf of the German Federal Ministry

for the Environment, Nature Conservation, Building and Nuclear

How can urban water utilities assess and reduce their carbon

Participants will learn to use the Energy performance and Carbon Emissions Assessment and Monitoring (ECAM) tool via interactive lectures, hands-on

tool, you will be able to better assess your baseline GHG emissions and highlight water utility inefficiencies and areas that can be improved. The tool

is a critical component of an international roadmap guiding decision makers

applying this tool, integrate it into their current practice, decision making, and

through the process of actually doing something about climate change and implementing measures to mitigate it. The target audience is water professionals (practitioners, academics etc.) who want to lead the sector in

computer sessions, and game-based learning. With this free, web-based

emissions and improve their energy performance?

How can water utilities get operations ready for crisis situation throug preparedness, Decision Support Tools, and Smart Water

In a context of global change, population growth, and increase of environmental risks, water utilities need to share experience and best practices in order to be best prepared against upcoming crisis situations, and to develop efficient resiliency for water services. Trainees will understand through practical cases and simulated exercise how they can be prepared and respond to extreme events, and how they can make use of the latest development in Smart Water Systems. Beyond the concepts and recommendations, special attention will also be given on how to improve mitigation and response by regularly practicing drills, and on the need for appropriate communication under stressed situations. The target audiences are: Engineers in charge of urban water services; Technicians in charge of urban water services; Decision-makers in charge of urban water services. And Anyone who would want to know more about crisis management and



*The trainings are subject to change or cancellation and are offered at an additional cost, requiring separate registration. Please check at registration desk

Soft Skill Learning Sessions and Career Development

In the Programme as well as the Exhibition area - Career Development Hub - IWA, its members and partners will host sessions that are aimed at providing guidance in career development or development of soft skills relevant for diverse audiences of water professionals.

Sunday 9

12:30 - 14:30

Room M1/M2

GLOBAL WATER SHAPERS: A NETWORKING EVENT TO START THE CONGRESS

Organiser: International WaterCentre

Chair: Dr. Brian S. McIntosh International WaterCentre, Australia

How should we respond to the key challenges and opportunities facing the water sector?

Shaping our water future is the central theme of the 2016 IWA World Water Congress. What are the key challenges and opportunities facing the water sector from your perspective? How can and should we seek to respond to those challenges and opportunities? Join us on the opening day of the Congress to answer these questions and be part of a group of (young) water professionals to shaping the conversation about our water future. The Global Water Shapers session will be a structured, light-hearted and engaging evening providing you with an opportunity to meet, discuss and create collaborative opportunities with professionals from around the world.

Sunday 9

14:30 - 15:30

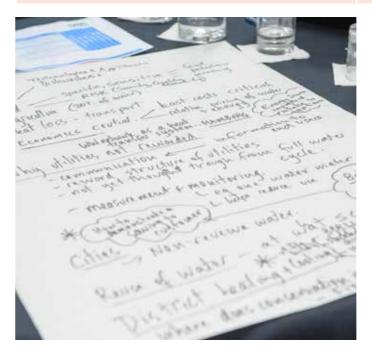
MAKE THE MOST OUT OF THE CONGRESS: **FIRST TIME ATTENDEES**

Organiser: IWA

Chair: Kirsten de Vette /WA

How can you make the most out of attending the Congress?

First time attendees, and those that are interested to learn more about attending the Congress and making the most of the congress. The key persons behind the Congress - Keith Robertson, the programme - Joa Grilo, exhibition - Roy Agterbos, learning events - Diana Guio, and social events - Chrysa Triantafyllidou, together with IWA members and knowledgeable congress attendees will be providing tips and tricks and share lessons learned. This session will teach participants how to make a success of their attendance, and help them reach their goals for attending.



Soft Skills Learning Sessions

- Building Leadership in the Water Sector (Monday and Wednesday) IWA Career Development Hub
- The Curious Power of Story: How to Win Friends, Persuade Heroes and Influence Outcomes with Narrative (Monday) IWA Career Development Hub
- To Publish You Must Review: A How To Discussion IWA Career Development Hub
- The Art of Scientific Publishing for Scholars (Tuesday) IWA Career Development Hub
- · How to Bring Your Idea to the Market With Using the Lean Startup and Rapid Prototyping (Wednesday) /WA Career Development Hub
- Sustainable Delta Game Adaptation Pathways (Wednesday) IWA Career Development Hub
- Water Career Opportunities and Development (Wednesday)
- How to Engage Stakeholders in the Water Sector (Thursday) IWA Career Development Hub

Master Lectures

1. RAINWATER HARVESTING

When: Tuesday 11 Time: 13:30 - 15:00 Place: Room P5

Lecturer: Mooyoung Han Seoul National University- Korea

IWA Rainwater Harvesting and Management Specialist Group Chair

Time: 15:30 - 17:00 Place: Room P5

> Lecturers: Prof. Mark van Loosdrecht Delft University of Technology -

2. GRANULAR SYSTEMS

When: Wednesday 12

(AEROBIC AND ANAEROBIC)

The Netherlands IWA Management Committee member on SG Biofilms, SG Microbial ecology and Water Engineering,

SG Nutrient removal and recovery **Prof. Damien Batstone** *University*

of Queensland - Australia IWA Anaerobic Digestion Specialist Group Chair, Generalized Physicochemical Framework Task Group Chair

3. ABATEMENT OPTIONS FOR **MIXTURES OF EMERGING** CONTAMINANTS

When: Thursday 13 Time: 10:30 - 12:00 Place: Room P5

Lecturer: Stefan Kools KWR Watercycle Research

Institute- Netherlands

If you have any questions contact Kirsten de Vette: kirsten.devette@iwahq.org

Join the conversation on Twitter: #iwa2016brisbane 26 IWA World Water Congress & Exhibition Brisbane 2016

Specialists Groups

IWA specialist groups, task groups and clusters

Schedule for open meetings

IWA Specialist Groups are central to IWA's work and mission. Group members are engaged in activities such as organising conferences, seminars and workshops; writing books, reports, newsletters and journal papers. Working groups also produce scientific and technical reports, manuals of best practice and position papers.

During the IWA World Water Congress, many specialist Groups (SG), task groups (TG) and clusters have open meetings to which all congress delegates are welcome.

This provides a unique opportunity to connect and network with specialists and leaders in their respective fields, and to update your knowledge on the issues that interest you.

Monday 10 October

PUBLIC CUSTOMER COMMUNICATION 12:00 - 13:30 / Room M7

How do water services effect society? How to raise awareness? Why public participation? The specialist group on Public & Customer Communications is all about sharing and developing best practices. At our meeting on Monday during lunch we will look back on the work the Specialist has done the last two years and discuss the priorities for the coming year.

Tuesday 11 October

WATER SECURITY AND SAFETY MANAGEMENT

10:30 - 12:00 / Room M5+M6

This meeting aims at giving the attendees some examples of what is being done through illustrations on recent crisis management case studies lived at water utilities; as well as latest report on researches focusing on technology solutions for early warning systems. Presentations will open for discussion

ALTERNATIVE WATER RESOURCES **CLUSTER**

15:30 - 17:00 / Room M7

This meeting will focus on the review of the current Cluster's progress, but also on the planning of future steps towards the final aim of proposing New Water Solutions. Besides, we will review the main conclusions obtained at the Workshop in order to identify new opportunities and possible areas of interest.

SUSTAINABILITY IN THE WATER SECTOR

10:30 - 12:00 / Room M7

The SG performs the role of making sure that economic, social, and environmental aspects are addressed in every aspect of water use. Working groups of the Specialist Group are applying sustainability principles to workforce sustainability; the inter-relationships between water quality and the environment; energy and water in the urban environment; and industrial use of water. Please attend our open meeting; we would welcome your participation.

WATERSHED AND RIVER BASIN MANAGEMENT

15:30 - 17:00 / Room M8

The SG promotes the understanding, benefits and utilisation of integrated catchment management approaches for the beneficial and sustainable use of rivers, lakes and groundwater basins worldwide. This informal session will explore opportunities for networking and sharing knowledge including programmes exploring different water resource options for a growing global population within the constraints of climate change.

BEST PRACTICES FOR CONTROL OF 15:30 - 17:00 / Board Room 2 ARSENIC IN DRINKING WATER

Arsenic in drinking water has been recognized as a major public health concern, affecting more than 200 million people around the world. The best practices to control arsenic from source to tap will be outlined and elaborated in the open meeting of IWA Specialist Group on Metals and Related Substances in Drinking Water.

INTERMITTENT WATER SUPPLY TG

10:30 - 12:00 / Room M8

The open meeting will provide an opportunity to inform participants of the purpose, objectives and deliverables of the Group and to exchange ideas and thoughts on the way forward in assisting water utilities and governments in improving the level of service to the consumers and water supply conditions in general reflecting on technical, financial, institutional, social and

PRETREATMENT OF INDUSTRIAL **WASTEWATER**

10:30 - 12:00 / Board Room 1

This SG meeting will provide a place for older and new members to discuss the future and evolution of our strategic objectives; debate areas presented by the Committee in the report on SG trends; discuss our conference for 2018; and find new regional Committee members to enhance our annual activities.

INDUSTRIAL WATERS AND WASTEWATERS

This meeting aims to brainstorm with Congress participants on how IWA can better work on industrial waters: which pressing problems and challenges from industries IWA can tackle, who to involve (both within and beyond IWA's network), how to work on it, etc.

DESIGN, OPERATION AND COSTS OF LARGE WASTEWATER TREATMENT

The meeting will highlight the last specialist conference of the group and will give an outlook to the next conference. As a new format it has been decided that in between the regular conferences of the group (every four years) an additional event will be organized, preferably in Asia or in the Americas. It is now planned to have a conference in China in November 2018 together with the SG on Nutrient Removal and Recovery. New information concerning this event will be given.

Tuesday 11 October

INSTRUMENTATION, CONTROL AND **AUTOMATION**

12:00 - 13:30 / Room M8

This meeting will provide you with the latest updates on our upcoming conferences (IT&Water 2016, ICA2017), management committee elections and other activities. We look forward to interacting with you on how to make ICA SG a true forum for all members

BENCHMARKING AND PERFORMANCE ASSESSMENT

12:00 - 13:30 / Board Room 1

The Benchmarking Specialist Group welcomes any IWA World Water Congress attendant to join us for the SG meeting. During the meeting, topics to be discussed will include the upcoming SG conference in Vienna, Austria, the publication of the new IWA Performance Indicators Manual and the options to actively participate in our group.

SLUDGE MANAGEMENT

During our group open meeting, the Specialist Group on Sludge Management (SGSM) will discuss our future conferences and workshops, and also new projects that are in the planning phase

WATER REUSE

Topics to be discussed include organizational issues and planning of special sessions for the 2017 11th IWA Water Reclamation and Reuse Conference in Long Beach, update from members of the editorial board of our newsletter, and topics brought forward by members of the WRSG.

MEMBRANE TECHNOLOGY

15:30 - 17:00 / Room M8

This meeting will be the opportunity to meet fellow Membrane Professionals and to hear about the latest activities of the IWA's Membrane Specialist Group, including the next IWA Membrane Technology Conference (Singapore, September 2017), and next Regional conference in 2018, the upcoming renewal of the Committee next year, and the selection of membrane representatives in the Young Water Professional Group.

DESIGN, OPERATION AND MAINTENANCE OF DRINKING WATER TREATMENT PLANTS

The open group meeting will start with an introduction of the scope of the SG activities, priorities, general trends and key challenges. In a second part we will focus the discussion on a specific issue such as plant operation data management and share experience on what data is needed and gathered, for which purpose, how it is used and what tools can be recommended.

Wednesday 12 October

MODELLING AND INTEGRATED ASSESSMENT

12:00 - 13:30 / Room M5+M6

The MIA SG will present the new Management Committee and its associated YWPs and how the MC intends to work to move the MIA group forward and further strengthening its role during the upcoming years. Ongoing activities relating to MIA Task Groups and Working Groups, upcoming group events and conferences will be revealed. The group's new communication policy will also be discussed. As always, it will be possible for SG members to bring up their own topics and ideas for discussion during the open meeting. Welcome

HOT TOPICS IN RESOURCE RECOVERY FROM WATER

12:00 - 13:30 / Room M7

The cluster open meeting aims to summarize the overall goal, strategic objective and expected outcomes of the 'resource recovery from water cluster. Second, the activities conducted and progress made in the last year will also be reviewed. Finally, activities and objectives outlined for the coming

EFFICIENT URBAN WATER MANAGEMENT

12:00 - 13:30 / Room M8

The Efficient Urban Water Management Specialist Group promotes knowledge, research, best practices and programs regarding efficient management and use of water in urban zones. We focus on topics like end use efficiency, customer demand management, water losses management. performance assessment, water resource planning, and technological innovation. All stakeholders are welcome

DIFFUSE POLLUTION AND EUTROPHICATION

12:00 - 13:30 / Board Room

The objective of the SG is to understand and solve contamination and eutrophication of natural water resources by diffuse or non-point sources By organizing biennial worldwide and regional conferences ("DIPCON"), the Group exchanges knowledge about the state-of-art research, monitoring/ modelling/management approaches, innovative solutions and policy development. Please join us at this meeting. We would welcome your participation

SMALL WATER AND WASTEWATER

15:30 - 17:00 / Room M5+M6

This meeting will update you about the last SG conference in Athens, Greece and the election of new Management Committee. Challenges and future activities of the SWWS SG will be discussed, and more detailed information about the proposals and announcements of the next specialized Conference will also be introduced.

STRATEGIC ASSET **MANAGEMENT**

15:30 - 17:00 / Room M7

The SAM SG is pleased to invite you to our open meeting where we will engage you in the groups' latest developments and future events, namely a joint-conference on infrastructure asset management and utility bankability in Chile, the next LESAM in Norway, and many more.

Thursday 13 October

ASSESSMENT AND CONTROL OF HAZARDOUS SUBSTANCES IN WATER

12:00 - 13:30 / Room M7

This specialist group focuses on analytical methods, bioassays, occurrence, fate and effects of substances in in water and the environment, risk assessment, management and communication and regulatory aspects to improve water quality for a safe environment. This meeting will share and update the audience about the future events on micropollutants and hot topics for micropollutants.

IWA World Water Congress & Exhibition Brisbane 20 Join the conversation on Twitter: #iwa2016brisbane

Technical Tours

Connecting you to leading practice and large scale applications

Book your place for one of the Friday 14 October full or half day Technical and Walking Tours

Please note numbers to tours are limited and bookings will be taken on a first in basis.



GOLD COAST DESALINATION PLANT AND THE SMART WATER RESEARCH CENTRE

The Gold Coast Desalination Plant, located at Tugun, Gold Coast, Australia, uses reverse osmosis to produce drinking water for the Gold Coast, Logan and Brisbane. Desalinated water is a climate-resilient source of drinking water and ensures a consistent supply of safe and reliable drinking water. The plant was completed in 2009, and can produce up to 125 million litres of drinking water a day.

The Smart Water Research Centre: From their hub on the Gold Coast, their state-of-the-art research facility offers cutting-edge water research focused through core capabilities. The Smart Water Research Centre also provide a program of education and training directed towards emerging industry needs as well as commercial laboratory services with their major partners, Gold Coast Water.

SEQWATER CATCHMENT MANAGEMENT PROGRAMME - PINE VALLEY CATCHMENT

Water gives and sustains life and helps to create prosperity. It's a vital service that Seqwater delivers to 3.1 million people in South East Queensland.

Taking action in our drinking water catchment to reduce the risks to water quality and increase the resilience of our source waters is critical to the delivery of a safe, secure, resilient and reliable water supply. Seqwater is one of the few bulk water providers in Australia that manages open catchments. People live, farm, work and play on and around our dams. We must maintain a careful balance between community access to our lakes and catchment land and protecting the quality of the region's bulk drinking water supply.



MALENY SEWAGE TREATMENT PLANT AND IRRIGATED WETLANDS

In 2015, Unitywater's Maleny Sewage Treatment
Plant and its associated wetlands won the prestigious
business award for Best Specific Environmental
Initiative at the UN World Environment Day Awards.

This \$17 million upgrade project showcases a membrane bioreactor to treat effluent to a very high standard before sending it to an irrigated rainforest and wetlands in the Maleny Community Precinct. This process of natural filtration further disperses and removes nutrients from the nearby creek.



WESTERN CORRIDOR RECYCLED WATER SCHEME

An indirect potable reuse scheme which was commissioned at the height of South East Queensland's Millennium drought. The drought, which ran from 2005 to 2008, resulted in the region's major ground water supplies reached an all-time low of 17% of total water storage capacity and severe water restrictions for the businesses and householders. The scheme has never been used to supply drinking water as the drought broke soon after commissioning. It did supply recycled water for power generation for several years.



WIVENHOE DAM AND MT CROSBY WATER TREATMENT PLANT TOUR

As the key drinking water lake for Brisbane, Wivenhoe Dam was built on the Brisbane River approximately 80 kilometres from Brisbane. It was designed by the Water Resources Commission and built in 1984.

Wivenhoe Dam has a total storage capacity of 3.132 million megalitres. At full supply level, it will hold 1.165 million megalitres, or about 2,000 times the daily water consumption of Brisbane. Wivenhoe Dam is a 50 metre high, zoned earth and rock embankment separated into two parts by a concrete gravity spillway. The spillway is controlled by five radial gates, each 12 metres wide by 16 metres high.



PROTECTING MORETON BAY, NORTH STRADBROKE ISLAND

Moreton Bay is a Ramsar listed site and receives the waters of a number of catchments including the Brisbane River. This tour will showcase both the impact of catchment management on the Bay and the resource management issues impacting upon North Stradbroke Island, one of the largest sand islands in the world.

Delegates will have the opportunity to travel across Moreton Bay to the Moreton Bay Research Station on North Stradbroke Island and hear from leading experts in the fields of regional catchment management before visiting the island's recreational sites of North Gorge and Cylinder Beach.



BUILDING A FLOOD RESILIENT BRISBANE

Following the devastating January 2011 flood, Brisbane City Council has taken a strategic approach to building a more resilient city. Brisbane's Floodsmart Future Strategy sets out a vision for a city that is "safe, confident and ready" for flooding. Council is improving both the resilience of the Brisbane community and the city's built form through an integrated mix of flood management measures including disaster management, community education and awareness, hazard-based land use planning and structural flood mitigation.

This tour will showcase examples of those measures, including a visit to the State Disaster Coordination Centre, Council's newly constructed Backflow Prevention Devices and examples of recent flood resilient development.



URBAN RENEWAL. NORMAN CREEK CATCHMENT

Norman Creek is a historic area in Brisbane covering 30 square kilometres and is home to approximately 100,000 people.

In 2014, Brisbane City Council adopted the Norman Creek Master Plan 2012-2031 and is working to create Australia's most water smart catchment with a sustainable built environment for a community enjoying an active and connected lifestyle.

This tour will give delegates a behind the scenes tour of key areas within the catchment including stormwater harvesting sites, the development of new parks and current community engagement activities.

Join the conversation on Twitter: #iwa2016brisbane www.worldwatercongress.org



QUEENSLAND URBAN UTILITIES INNOVATION **CENTRE TOUR**

Queensland Urban Utilities converted an empty heritage-listed building at our biggest sewage treatment plant, Luggage Point, to an Innovation Centre housing world-leading research. Apart from an unlimited supply of samples from our plant, research scientists have access to the perfect tools, like the world's largest replica sewer main. We're also the first utility in Australia to nurture baby Annamox bugs into a booming farm.



COMMONWEALTH GAMES 2018 VENUES

Meeting the demands of a growing city - a guided tour of major infrastructure projects on the Gold Coast that will broadcast this city to the world, and the impacts this has on a water and sewerage service provider.

A WALKING TOUR OF SOUTHBANK. A WATER SMART PRECINCT

Date: 11, 12, 13 October 2016

Requirements: delegates must wear fully enclosed footwear

Southbank is Brisbane's premier lifestyle and cultural destination. Located on the southern banks of the Brisbane River, the precinct offers visitors 17 hectares of lush parklands, world-class eateries, stunning river views and hundreds of events year round. In 1988 Southbank was the site of World Expo 88' and is now Brisbane's most highly visited parkland and cultural precinct with over 10 million visitors per year.

This tour will provide delegates a behind the scenes look of the award-wining urban water management practices used within the precinct including demonstrations of the innovative storm water harvesting operations that create urban amenity.

A WALKING TOUR OF SOUTHBANK, A WATER SMART PARKLAND

Date: 11, 12, 13 October 2016

Southbank is Brisbane's premier lifestyle and cultural destination. Located on the southern banks of the Brisbane River, the precinct offers visitors 17 hectares of lush parklands, world-class eateries, stunning river views and hundreds of events year round. In order to maintain its subtropical parklands, beach and water features, Southbank utilises stormwater harvesting and reuse.

With a focus on parkland planning, this tour provides a behind the scenes look at how urban water management practices are helping to achieve a lush and welcoming environment built above an inner city carpark. Delegates will visit the epicurean garden, Nepalese pagoda, mangroves, state of the art playgrounds and Streets Beach.



A WALKING TOUR OF BRISBANE - AUSTRALIA'S NEW WORLD CITY, SOUTHBANK AND ROMA STREET PARKLANDS

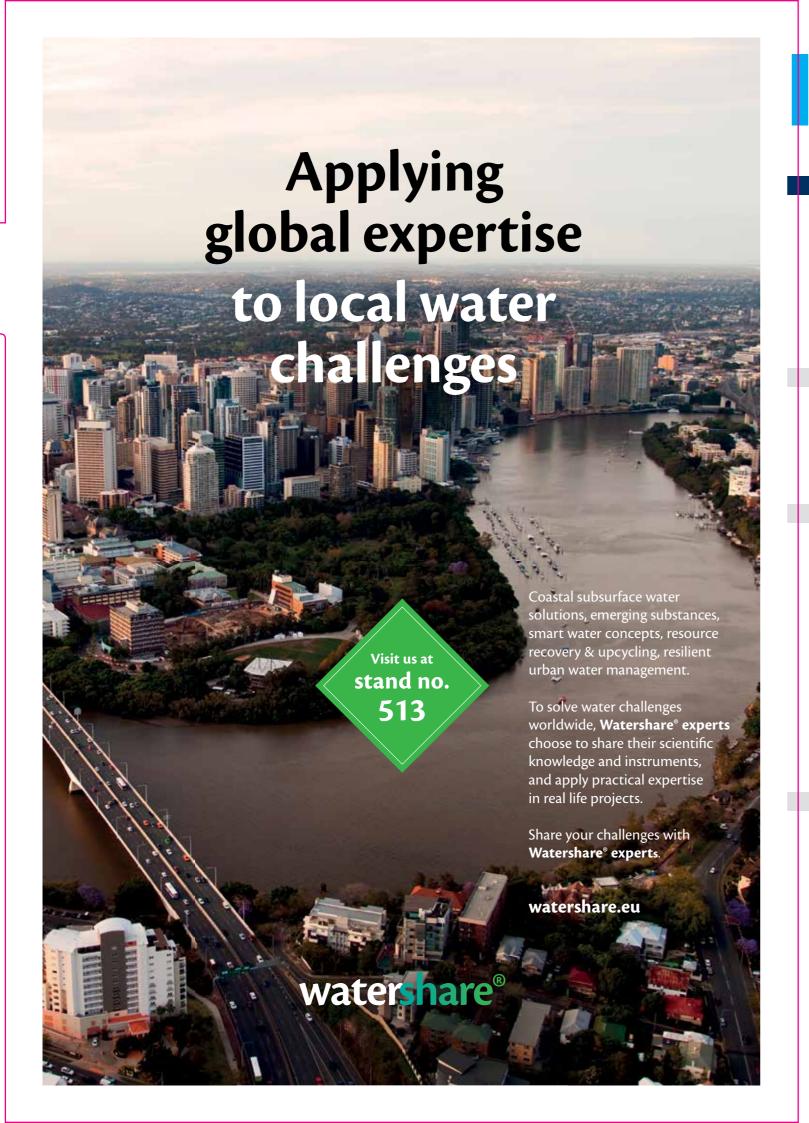
Brisbane is a sub-tropical city with the highest diversity of native plants and wildlife of any capital city in Australia. This tour provides delegates the opportunity to visit Southbank and Roma Street Parklands, two of Brisbane's innercity parks utilising innovative urban water management practices while providing urban social amenity.

Located on the southern banks of the Brisbane River, Southbank is Brisbane's most highly visited parkland and cultural precinct with over 10 million visitors per year.

Roma Street Parkland is an oasis in the heart of Brisbane offering spectacular surrounds for leisure, recreation and events. The Parkland is set over 16 hectares of green space and features historic artefacts and state of the art technology in water infrastructure.

The tour will conclude at the Museum of Brisbane in King George Square in Brisbane's CBD.





Reception & Awards

Opening Ceremony, IWA Leadership Awards & Welcome Reception

Opening Ceremony / Sunday, 16:00 - 18:00 / Great Hall Q2

Start building your networks early at the Opening Ceremony and Welcome Reception. The IWA World Water Congress & Exhibition Opening Ceremony is a must see event. With water at the heart of the new Sustainable Development Goals, the opening ceremony aims to inspire and inform the critical debates that will take place over the week of the Congress.

The Opening Ceremony will begin with a special message of welcome from the Government of Australia.



Master of Ceremonies



Robyn Wiliams
Renowned science
journalist and
broadcaster

Robyn is a science journalist and presenter of Radio National's Ockham's Razor and The Science Show, one of the longest running programs on Australian radio. A fascinating and engaging presenter, he became the first journalist elected as a Fellow of the Australian Academy of Science. He is a Visiting Professor at the University of NSW and an Adjunct Professor at the University of Queensland.

Keynote Speakers



Author, The Blue Economy, Founder the ZERI think tank, chairman of the board of Novamont (Switzerland)



Catarina de Albuquerque Sanitation and Water for All Executive Chair, winner of IWA Global Water Award 2016 (Portugal)

Starting his career as an entrepreneur, Guner Pauli set out on a mission to ensure that business would become a vehicle in society's capaicty to respond to its own urgent needs. He combines creative solutions with action on the ground. Currently with over \$4billion invested in +200 projects his teams have demonstrated a capacity to translate vision into reality. He has published 16 books in over 30 languages. His next book, published this year, is From Deep Ecology to Blue Economy: 21 Principles of the New Business Model.

The driving force behind the recognition of the Human Rights to Water and Sanitation. Catarina became the first UN Special Rapporteur on the right to safe drinking water and sanitation, having played a pivotal role in the recognition of water and sanitation as human rights by the UN General Assembly.

IWA Leadership Awards

The IWA Global Water Award is one of the water sector's most prestigious prizes. It recognises outstanding achievement, vision, leadership and knowledge in driving change within the water sector.

Global Water Award

Presented to:

Catarina de Albuquerque

Young Water Professionals Award

Presented to:

Rianna Gonzales

Women in Water Award

Presented to:

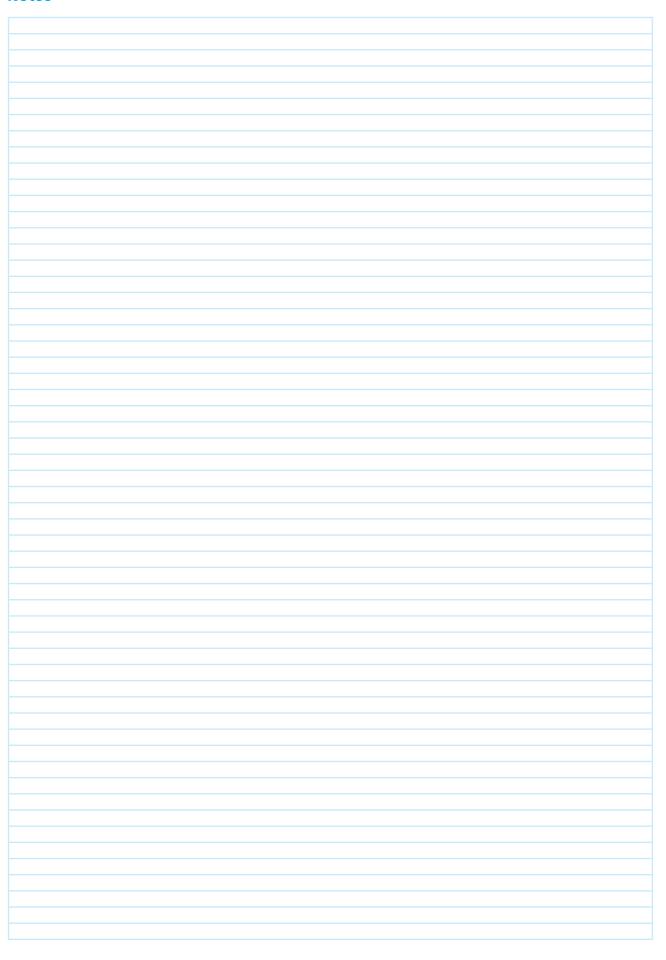
Rose Christine Kaggwa



Welcome Reception / 18:00 - 19:30 / Plaza Ballroom Foyer

The Welcome Reception is an early opportunity to connect with other water sector professionals and discuss current trends, latest research, guiding strategies and leading practice in a relaxed and informal environment.

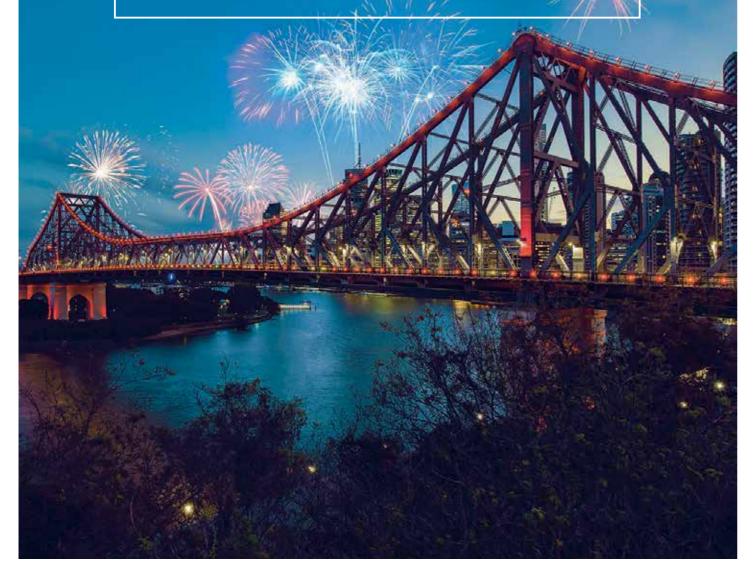
Notes







SEE AUSTRALIA'S BEST LIVE EVENTS IN AUSTRALIA'S BEST DESTINATIONS





Monday Spotlight

Plenary Session / 09:00 - 09:45 / Great Hall Q2

Water and the future we want - how water can contribute to achieving the global Sustainable Development Goals



John Thwaites
Professorial Fellow,
Chair Monash
Sustainability Institute
and Melbourne
Water (Australia)

Introduced by Paul Greenfield

President World Water Congress & Exhibition

Moderator: Tom Williams, IWA

Panel members:

- Marie-Ange Debon (Suez Environment, FR)
- Steve Leung (Xylem, CH)
- Anders Baeckgaard (VCS, DK) (tbc)

Plenary Session / 17:15 - 18:00 / Great Hall Q2

Ending extreme poverty, what do the SDGs mean for access to water, sanitation and hygiene



Barbara Frost
Chief Executive
Water Aid,
(United Kingdom)

Introduced by Jaime Baptista (LNEC, PT)

Moderator: Mark Pascoe (International Water Centre, AU)

Panel members:

- Kumar Renganathan (Millennnium Challenge Corporation, US)
- Arlinda Ibrahimllari (Korça Water Works Utility, AL)

Water Scarcity and Drought Summit / 10.30 - 17.00 / Sky Room

Building resilience to drought and scarcity requires global leadership. We have an unprecedented opportunity to act on water scarcity and drought at the world's first multistakeholder Water Scarcity and Drought Summit 2016.



Forums, Learning Sessions & Poster Reception

Regulators Forum / 10.30 - 17.00 Room S1

The Forum provides examples, tools and instruments to build resiliency into regulatory frameworks ensuring that inter-dependent regulatory outcomes, such as safeguarding public health and financial viability of services, are not compromised with customers' needs and expectations.

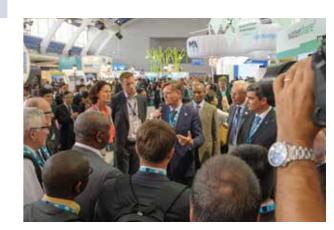
Soft Skill Learning Session / 13.30 - 15.00 IWA Career Development Hub, Great Hall Q2

The Curious Power of Story: How to Win Friends, Persuade Heroes, and Influence Outcomes With Narrative with James Workman, Editor of The Source magazine

Poster Session & Reception / 18:00 - 19:30 Exhibition Fover.

Brisbane Convention & Exhibition Centre

An exciting opportunity to have a special preview of the IWA World Water Congress Poster Presentations. Meet, connect and network with the presenters as they explain their work and have your questions answered in person. Drinks will be served.



IWA World Water Exhibition / 09:00 - 18:00

Exhibition Hall 1

Join the world's leading companies working in sustainable water management. The IWA World Water Exhibition is a one-stop-shop where you can connect and do business with the leading industry and technology providers.

Keynote Plenary

09:00 - 09:45

Water and the Future We Want - How Water Can Contribute to Achieving the Global Sustainable Development Goals

Great Hall 02

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

WATER SCARCITY AND DROUGHT SUMMIT

Sky Room Forum

Building resilience to drought and scarcity requires global leadership. We have an unprecedented opportunity to act on water scarcity and drought at

The Summit will engage and challenge 200 leaders from the private and the public sector including ministers, business leaders, scientists and civil society on new ways of collaboration between countries, industries and sectors to address water scarcity and drought.

the world's first multi-stakeholder Water Scarcity & Drought Summit 2016.

WATER REGULATORS FORUM

Room S1 Forum

Master of Ceremonies: Seamus Parker Queensland Treasury Regulatory and Enforcement regimes for future quality service

Chair: David Cunliffe South Australia Department of Health, AU

The session will explore why economic regulatory frameworks, enforcement regimes and better asset management practices are needed to encourage long-term infrastructure resilience to services running. It also looks at the tools being used to deal with financial challenges, incentives for non-infrastructure solutions, tariff design and value sharing infrastructure investments. The session will open with Helmut Kroiss (IWA President) and be followed by presentations and roundtable discussions led by Maria Sonabel S. Anarna (Department of Health, PH); Alan Sutherland (Water Industry Commission for Scotland, UK); Dan Spiller (Seqwater, AU); Pranav S. Joshi (National Environment Agency, SG); concluding with an open plenary discussion and key messages for resilient cities and water systems at large.

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

WATER SCARCITY AND DROUGHT SUMMIT

Sky Room Forum

Building resilience to drought and scarcity requires global leadership. We have an unprecedented opportunity to act on water scarcity and drought at the world's first multi-stakeholder Water Scarcity & Drought Summit 2016.

The Summit will engage and challenge 200 leaders from the private and the public sector including ministers, business leaders, scientists and civil society on new ways of collaboration between countries, industries and sectors to address water scarcity and drought.

WATER REGULATORS FORUM

Room S1 Forum

Balancing resilience while ensuring affordable services

Chair: Darryl Day Northern Territory Water Directorate, AU

Mitigation measures and environmental regulations are increasing costs and challenging sustainable, reliable services, as well as public trust. Connecting regulations for drinking water and sanitation, and those for environmental safeguarding of water sources is needed, but building resilience cannot become an obstacle to the progressive realization of these human rights. The session commences with *Hon. Mlungisi Johnson* (Chairperson of Portfolio Committee on Water and Sanitation, Parliament of the Republic of South Africa, SA), and continue with presentations and roundtable discussions led by David Johnston (Queensland Treasury Corporation, AU); Richard Khaldi (OFWAT, UK); Alberto Biancardi (AEEGSI, IT and WAREG); Peter Njaggah (WASREB, KE); concluding with an open plenary discussion.

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

Building resilience to drought and scarcity requires global leadership. We

have an unprecedented opportunity to act on water scarcity and drought at

the world's first multi-stakeholder Water Scarcity & Drought Summit 2016.

The Summit will engage and challenge 200 leaders from the private and the

public sector including ministers, business leaders, scientists and civil society on new ways of collaboration between countries, industries and sectors to

WATER SCARCITY AND DROUGHT SUMMIT

address water scarcity and drought.

Sky Room

WATER REGULATORS FORUM

Room S1 Forum

Governance for sustainable urban environments

Chair: Jaime Baptista National Laboratory of Civil Engineering, PT

This session will review different approaches taken at various governance levels to build resilience in their systems, the gaps and the opportunities with other sectors and stakeholders. The session commences with Paulo Marcelo (ERSAR, PT), and continue with presentations and roundtable discussions led by Kelvin Chitumbo (NWASCO, ZM and ESAWAS); Kevin Parks (Alberta Energy Regulator, CA); Kazuhisa Matsuda (Ministry of Health, Labour and Welfare, JP); Zelmira Mackova (Ministry of Agriculture, CZ); concluding with an open plenary discussion and key messages for resilient cities and water systems at large.

The day will conclude with a closing panel and closed by Diane D'Arras (IWA President Elect).

Break

17:00 - 17:15

Keynote Plenary

17:15 - 18:00

Ending Extreme Poverty, What to Do the SDGs Mean for Access to Water, Sanitation and Hygiene

Great Hall 02

Programme

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary

09:00 - 09:45

Water and the Future We Want - How Water Can Contribute to Achieving the Global Sustainable Development Goals

Great Hall 02

Session 1

09:45 - 10:30

10:30 - 12:00

BIOSOLIDS

Coffee Break

Chair: Richard Tsang CDM Smith Inc., NL

- 10:30 Introduction
- 10:35 Dewatering Optimization With In-Line And Real-Time Measurement Of Polymer Dose: Results From Full-Scale Treatment Plants Banu Orm
- 10:55 Carbon Footprint Analysis Of Biosolids Disposal In The United States Daniel
- 11:15 Future Proof Decentralised Sludge Recycling: Pyreg Bert Geraats, Eliquo Nater & Energy B.V. (NL)
- 11:35 Free Nitrous Acid Pre-treatment Enhances Degradation Of Anaerobically Digested Sludge In Post Aerobic Digestion Qilin Wang, The Univ
- 11:55 Closing summary

Room GHQ2 Technica

TECHNOLOGY FOR ENERGY EFFICIENCY Chair: Stuart White Institute for Sustainable Futures ALL

Room M1 Technica

- 10:35 A Key Issue In Developing Constructed Wetland-Microbial Fuel Cell (CW-MFC): Is The Separator Necessity? Yaqian Zhao, University College
- 10:55 Inducing Biomass Granulation To Achieve Improved Settleability In Biological Nutrient Removal (BNR) Processes Jul
- 11:15 Energy Efficiency At Belgian Demo Cases Within The EU-project R3water
- 11:35 Smouldering: A Revolutionary Approach To Sludge Management Ilje Pikaar, The School of Civil Engineering, The University of Quee
- 11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

ACTIVATED SLUDGE PROCESSES

Chair: Guoren Xu Harbin Institute of Technology, CN 13:30 Introduction

- 13:35 Influence Of Silver Nanoparticles On Nutrient Removal And Microbial Communities In SBR Process At Long-term Exposure
- 13:55 Effect Of Foam On Temperature Prediction And Heat Recovery Potential From Biological Wastewater Treatment Eveline Volcke, Gh
- 14:15 Primary Treatment To Optimize Secondary Biological Processes And Anaerobic Digestion Dang Ho, Tr
- 14:35 Proliferation Of Legionella Pneumophila In Activated Sludge Systems: Stimulating Factors And Control Strategies Reg
- 14:55 Closing summary

Room GHQ2 Technical

ENERGY EFFICIENT INTEGRATED PLANT DESIGN

Room M1 Technica

Chair: Nobert Jardin Ruhrverband, DE

- 13:30 Introduction
- 13:35 From Wastewater To Bioenergy: Reaching Energy Self-sufficiency In WWTPs
- 13:55 Rebuilding a WWTP into a Circular Economy Theis Gadegaard, Krüger A/S
- 14:15 Management Tool To Assess, Benchmark And Support Energy Efficiency Actions In More Than 800 WWTP Nuno Brôco, AdP S
- 14:35 Evaluating Environmental Performance Of Operational Strategies At WWTPs
- 14:55 Closing summary

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

Room GHQ2 Technical

CARBON RECOVERY FROM WATER Chairs: Willy Verstraete Ghent University, BE

Olaf van der Kolk Aqu

the whole water sector?

Room M1 Workshop

MEMBRANE BIOREACTORS Chair: Roger Ben Aim Ifts, FR

15:30 Introduction

- 15:35 Soluble Microbial Products (SMPs) In A Submerged Anaerobic Membrane Bioreactor (SAMBR) Under Transient Load Conditions David Stuckey, NTU,
- 15:55 Cell Entrapment As An Effective Way To Reduce Fouling In Membrane
- The Research Activities Behind The Australian Validation Guidelines Of 16:15 Membrane Bioreactors Used For Water Recycling Pierre Le-Clech, UNSW
- 16:35 Can Bio-entrapped Marine Sediment Membrane Bioreactor Improve The Treatment Of High Saline Pharmaceutical Wastewater? How Yong Ng,
- 16:55 Closing summary

Exploring academic, utility, and technology provider experiences and

Can carbon recovery from water become a model for

approaches to carbon recovery, this workshop looks at technical issues, but also social, economic, market and other external factors influencing the successful uptake of innovative solutions. The speakers Marc Caligaris (SUEZ, FR): Chris Hertle (GHD, AU), Paul Jensen (University of Queensland, AU); Xiaohu Dai (National Engineering Research Center for Urban Pollution Control, CN); Nuno Brôco (Águas de Portugal Serviços, PT) will highlight inspiring success stories of value retention beyond carbon to energy within the water sector. Their insights on the 'roadmap' ahead will set up an interactive discussion to identify 'out of the box' solutions.

Break

17:00 - 17:15 17:15 - 18:00

Keynote Plenary

Ending Extreme Poverty, What to Do the SDGs Mean for Access to Water, Sanitation and Hygiene

Great Hall Q2

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Keynote Plenary

09:00 - 09:45

Water and the Future We Want - How Water Can Contribute to Achieving the Global Sustainable Development Goals John Thwaite

Great Hall 02

Coffee Break Session 1

09:45 - 10:30 10:30 - 12:00

DRINKING WATER I: NANOFILTRATION

Chair: Josef Klinger TZW, DE 10:30 Introduction

10:35 Production Of Biostable And Taste & Odor Free Drinking Water - A Multibarrier Concept Pilot Testing In Singapore Louis Wiart, Xylem Services

10:55 Office Building Drinking Water Microbiome Characterization By DNA- And RNA-based Methods *Jenni Inkinen, Aalto University (FI)*

11:15 Simulation Of NOM Events In Pilot Plant Evaluation Of DAF/Ozone/BAC For Drinking Water Treatment Yaode Yan, Hunter H2O Holdings Pty Limit

11:35 Investigation Into The Potential For Introducing Granular Activated Carbon Treatment When Updating Purification Plants Taro Watanabe, Yoko

11:55 Closing summary

Technical

Room M2

CLIMATE CHANGE: ADAPTATION AND RESILIENCE

Room M3 Technica

Chair: Ioannis Alexiou Scientists International, UK

10:30 Introduction

10:35 An Interdisciplinary Approach To Identify Adaptation Strategies That Enhance Flood Resilience And Urban Liveability Briony Rogers, M

10:55 Cities: Survival Of The Resilient John Batten, Arcadis (US)

11:15 Building A Flood Resilient Brisbane Mark Tinnion, Brisbane City Council

TARGETING AND MEASURING RESILIENCE

Chair: Francisco Cubillo Canal de Isabel II Gestión ES

How can alternative water resources enhance resilient planning

should be supported by specific goals for resilience and efficiency. Speakers will explore approaches for resilience from different points of view, and then

management practices. Presentations by Helena Alegre (LNEC, PT); Greg Claydon (Western Australian Government, AU); Francisco Cubillo (Canal de Isabel II Gestión, ES); Mary Anne Dickinson (Alliance for Water Efficiency,

(Seoul National University, KR); Roland Liemberger (Miya, AT); Xiaochang C. Wang (Xi'an University of Architecture & Technology, CN); Stuart White

Resilience should be accurately defined and quantified. New solutions to

the audience will be invited to participate in reaching a redefinition of the new opportunities to implement resilience assessments in planning and

guarantee an appropriate supply service and contingency manager

DROUGHT RESILIENT WATER MANAGEMENT

How are current planning practices and tools used to ensure drought

resilient? Can they be improved? Drought is a critical issue for integrated

water resources management. Decision Support Systems for drought planning and management give decision makers an effective, systematic

means of assessing current and future drought conditions, developing

losses, and social hardship. The workshop includes presentions from Paul Belz (QUU, AU), Dr. Sutat Weesakul (HAII, TH), and David Dreverman

mitigation and response options to minimize economic stress, environ

(Murray-Darling Basin Authority, AU), discussing how current planning

practices and tools are used to ensure drought resilient solutions. The

workshop concludes with a discussion with the audience on improving

Flood and drought management across scales,

11:35 Joint Efforts To Create The Waterproof Recipe For Climate Adaptation In An Existing Urban Area Gerda Hald, VCS Denmark (DK)

11:55 Closing summary

IN WATER SERVICE

(Institute for Sustainable Futures, AU)

Chair: Raül Glotzbach /WA

what is the road to resilience?

drought management in the future.

and management?

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

DRINKING WATER II: PHYSICAL PROCESSES

Room M2 Technical

Room M3 Workshop

Chair: Marco Sheurer TZW, DE

13:30 Introduction

13:35 Rapid And Complete As(III) Oxidation In A Rapid Sand Filter Bed Jink Gude,

13:55 Optimizing Nitrification In Biological Rapid Sand Filters For Drinking Water Production Hans-Jørgen Al

14:15 Optimisation Of Conventional Groundwater Treatment Systems For Achieving <1 $\mu g/L$ Effluent Arsenic Concentration: Tips And Tricks From The

14:35 An Integrated System Approach To Operating Australia's First Iron And Manganese Removal Biological Treatment Plant Eric Vanweydeveld, Power

14:55 Closing summary

Coffee Break 15:00 - 15:30

Session 3

15:30 - 17:00

Room M2

DRINKING WATER III: PHYSICAL BIOSOLID TREATMENT

Technical

Chair: Guoren Xu Harbin Institute of Techn

15:30 Introduction

15:35 A Nitrosamines Survey In Drinking Water Systems Around China Chao 15:55 Proposition Of A Water Treatment Plant Quality Index Basing On The Fuzzy

16:15 Autonomous Intake Selection Optimisation Model For A Dual Source Drinking

Water Treatment Plant Edoard 16:35 THM And HAA Formation From NOM In Raw And Treated Surface Waters Dan Golea, Cranfield University (UK)

16:55 Closing summary

Break 17:00 - 17:15

Keynote Plenary 17:15 - 18:00

Ending Extreme Poverty, What to Do the SDGs Mean for Access to Water, Sanitation and Hygiene

Great Hall 02

Room M3

Workshop

Programme

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments

Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress Track 5: Water Quality, Safety & Human Health

Keynote Plenary 09:00 - 09:45

Water and the Future We Want - How Water Can Contribute to Achieving the Global Sustainable Development Goals

Great Hall 02

Coffee Break Session 1

09:45 - 10:30 10:30 - 12:00

TRANSITION TO SUSTAINABLE CITIES

OF THE FUTURE I

10:35 The Climate Laboratory In Middelfart -- Urban Development By Climate Adaptation In Denmark Allan Bruus, Midd

10:55 Beyond Benchmarking: A Water Sensitive Cities Index Chris Chest

11:15 The Location Choice Of Water Sensitive Urban Design Within A City: A Case Study Of Melbourne Martijn Kul

11:55 Closing summary

Room M4

Technical

Room M4

Room M4

Technical

WATER AND WASTE MANAGEMENT IN **AGROINDUSTRIES**

Room M9 Technica

Chair: Günter Hauber-Davidson Water Group, AU

10:30 Introduction

11:35 Rainwater Harvesting In Australia For Water Supply And Urban Stream

Chair: Therese Flapper ARUP, AU

10:30 Introduction

10:35 What Happened To Antibiotic Resistance Genes During Anaerobic Codigestion Of Food Waste And Sewage Sludge Based On Microwave

10:55 Multi-phase Distribution Of Polycyclic Aromatic Hydrocarbons (PAHs) In The Songhua River, Northeastern China Fansheng Meng, Chinese

11:15 Pressure Assisted Forward Osmosis For Treating Reverse Osmosis Concentrate From Water Reclamation Plant Shahzad Jamil, Ur

11:35 Beneficial Use Of Coal Seam Water For Agriculture In Queensland, Australia David Monckton, University of Queensland (AU)

11:55 Closing summary

Lunch

Session 2

12:00 - 13:30 13:30 - 15:00

TRANSITION TO SUSTAINABLE CITIES OF THE FUTURE II

Technical

Chair: Günter Hauber-Davidson Water Group, AU

13:30 Introduction

13:35 Transforming Stony Creek: Delivering Livability In Melbourne Dan O'Halloran

13:55 Whether South-to-North Water Diversion Project Is A Sustainable Choice To Resolve Water Shortage In Northern China Xiong Wei, Hohai Unit

14:15 An Economic Model To Identify The Economic And Lifestyle Benefits That Brisbane Derives From Its Creeks, River And Bay Greg Tucker, Br

14:35 How Has Urban Metabolism Been Interpreted And Communicated? Suzann

15:00 - 15:30

14:55 Closing summary Coffee Break

ADVANCES IN THE SUPPLY CHAIN, **ENVIRONMENTAL AND INDUSTRIAL BIOTECHNOLOGY I**

Room M9 Technica

13:30 Introduction

13:35 A Holistic Approach To Water Supply Network Operation - Using Desalination To Improve Cost Efficiency Amelia Jewell, Seqwater

13:55 The Improvement Of The Supply Chain Performance Of The Société
Wallonne Des Eaux Leads To Optimised Operational Cost Control Phi

14:15 Benefits Of Implementing Water Safety Plans In A High Resource Setting Such As The Netherlands Ans Ve

14:35 Distribution Of Microbes Among Different Phases In An Unchlorinated Drinking Water Distribution System Gang Liu, Tu Delft / Oasen DrinkWater

14:55 Closing summary

Session 3 15:30 - 17:00

WATER SENSITIVE URBAN **INFRASTRUCTURES**

Chair: Rob Skinner Monash University, AU

15:30 Introduction

15:35 Application Of Low Impact Stormwater Mitigation Techniques In Adapting To Climate Change Marla I

15:55 Urban Landscape Infrastructure Design In Water Sensitive Cities Taneha

16:15 Aura, The City Of Colour - Australia's Shining Example Of Widescale Integrated Water Cycle Management Tony M

16:35 A Selection Of Innovative Watercycle Management Projects In Brisbane Alan

16:55 Closing summary

ADVANCES IN THE SUPPLY CHAIN. **ENVIRONMENTAL AND INDUSTRIAL BIOTECHNOLOGY II**

Room M9 Technica

Chair: Ana Lahnam University of BATH, UK

15:30 Introduction

15:35 Treatment Of Selenite-containing Wastewater With High Salinity By The Activated Sludge Process Sa

15:55 Assessing The Impact Of Water Treatments On Microbial Ecology In Pilot Drinking Water Distribution Systems Gang Liu, Delft Un

16:15 Global Perspectives On Activated Sludge Community Composition Analyzed Using 16S RRNA Amplicon Sequencing *Marta Nierychlo*,

16:35 Treatment Of Wastewater By Pond Technology Using Granular Sludge Rania

16:55 Closing summary

17:00 - 17:15 Break **Keynote Plenary**

17:15 - 18:00

Ending Extreme Poverty, What to Do the SDGs Mean for Access to Water, Sanitation and Hygiene

Great Hall Q2

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Keynote Plenary 09:00 - 09:45 Water and the Future We Want - How Water Can Contribute to Achieving the Global Sustainable Development Goals Great Hall 02 **Coffee Break** 09:45 - 10:30 Session 1 10:30 - 12:00 Room MO Room P1 **DRINKING WATER QUALITY AND HEALTH RESOURCE EFFICIENCY** Technical Technica Chair: Hamanth Kasan Rand Water, ZM Chair: Stanley Liphdazi WRC, ZM 10:30 Introduction 10:30 Introduction 10:35 GISMOWA - GIS Assisted Monitoring Of Drinking Water Quality Martin 10:35 Comparison Of Struvite And Hydroxyapatite Precipitation For Phosphate Removal In Wastewater From Potato And Vegetable In Bou 10:55 Enhancing Biological Stability Of Drinking Water By Using Membrane Filtration As A Post-treatment Step Bert van der Wa 10:55 Performance Of Anammox On Anaerobically Pre-treated Sewage: A Pilot Study On The Influence Of The Pretreatment Maxi 11:15 Evaluating The Chemical Stability In Drinking Water Distribution System By Corrosivity And Precipitation Potential Baoyou Shi, Chinese Acad 11:15 The Role Of Water In The Hydrogen Economy Frank Oesterholt, KWR 11:35 High-Efficient And Green Phosphate Scavengers For Phosphorus-Starvation Antibacteria Jiaojie He, State Key Laboratory of Urban Water Resource and Environment (SKLUWRE) (CN) 11:35 Macro-scale Urban Hydrological Performance Indicators Marguerite Renouf, 11:55 Closing summary 11:55 Closing summary 12:00 - 13:30 Lunch 13:30 - 15:00 Session 2 Room MO Room P1 **WATER AND WASTE MANAGEMENT IN DRINKING WATER & CHEMICAL RISK** Technical Technical **CHEMICALS AND PHARMACEUTICALS I ASSESSMENT** Chair: Jiangyong Hu National University of Singapore, SG Chair: Hamanth Kasan Rand Water, ZM 13:30 Introduction 13:30 Introduction 13:35 Evaluation Of Resource Recovery Potential From Industrial Wastewaters 13:35 Formation Of Toxic Iodinated Moieties From Degradation Of Iodinated Contrast Media By Combination Of UV And Chlorinated Sebastien Allard, 13:55 Coupling Of Mg0/Pd0 Mediated Reduction And Bacterial Oxidation For Detoxification Of Endosulfan Sumathi Suresh, Indian Institute of Teo 13:55 Investigating Mechanism Underlying Removal Of Trichloramine With Superpowdered Activated Carbon Miki Sakuma, National Institute of Tech 14:15 Distribution Of Pharmaceutically Active Compounds In Clinical Wastewater From Hospital Effluent In Japan 7 14:15 Reframing Risk: A New Method For Identifying Improvement Through Control And Threat Analysis Shona Fitzgerald, Sydney Water (AU) 14:35 Quantification Of Flame Retardants From Environmental Samples And Evaluation Of Its Effect On Zebrafish By Metabolomics Ryan De Sotto 14:35 Bow Tie Analysis In The Water Industry Annalisa Contos, Atom Consulting 14:55 Closing summary

14:55 Closing summary

BLOOMS

16:55 Closing summary

15:30 Introduction

DIFFUSE POLLUTION AND CYANOBACTERIAL

15:35 Toxic Cyanobacteria In Source Water: A Global Treatment Challenge Arash

15:55 Monitoring, Predicting, Preventing And Controlling Of (toxic) Cyanobacteria

16:15 Probabilistic Fugacity Modelling Of Cyanobacterial Toxins In A Drinking Water

Blooms In Lakes And Reservoirs Lisa Brand, LG SONI

16:35 A Pollution Source Assessment Tool For Sydney's Drinking Water

Chair: Mi-Hyun Park UMassAmherst, US

Catchments Ben Scott, WaterNSW (AU)

Room MO

Technica

Coffee Break 15:00 - 15:30 Session 3 15:30 - 17:00

WATER AND WASTE MANAGEMENT IN **CHEMICALS AND PHARMACEUTICALS II**

Chair: Bruce Jefferson Cranfield University, UK

- 15:30 Introduction
- 15:35 Accelerated Establishment Of Biocathode By Polarity Inversion For Efficient Degradation Of Nitrobenzene And Azo Dye AO7 Hui Yun, Chinese A
- 15:55 Optimization Of Cost By HRT For Membrane Bioreactor (MBR) Treating Antibiotic Production Wastewater Dawei Yu. Chin
- 16:15 In-sewer Biotransformation Of Common Pharmaceuticals Ludwika Nieradzik.
- 16:35 Simulating Pesticides In Urban Runoff: Model Development And Evaluation
- 16:55 Closing summary

Break 17:00 - 17:15

Keynote Plenary 17:15 - 18:00

Ending Extreme Poverty, What to Do the SDGs Mean for Access to Water, Sanitation and Hygiene

Great Hall 02

Room P1

Technical

Programme

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary 09:00 - 09:45

Water and the Future We Want - How Water Can Contribute to Achieving the Global Sustainable Development Goals

Great Hall 02

Room P3

Technical

Room P3

Technical

Coffee Break

Lunch

09:45 - 10:30

Session 1

10:30 - 12:00

PUTTING THE COMMUNITY AT THE CENTRE OF DECISION MAKING

Chair: Alan Hoban Bligh Tanner, Austral

Citizens Juries - can (and should) water professionals trust the community to make good water management decisions?

Water professionals are increasingly being asked to listen to what the community wants, and many utilities are moving to 'customer-led' strategies Some cities are using participatory democracy approaches such as citizens' juries to make decisions about everything from capital budget programs to waste management strategies. How effective have these programs been? Should they be used in decision making about water planning? What impact does this have on the role of the water expert? The workshop will provide an overview of participatory decision making strategies; examine the shift to a customer focus in water utilities; consider benefits and challenges of applying these practices. Speakers include Professor Kelly Fielding (University of Queensland, AU).

CLIMATE CHANGE, FLOODS AND DROUGHTS ON WATERSHED SCALE I

Chair: John Riddiford John Riddiford & Associates, AU

10:30 Introduction

Room P2

Workshop

Room P2

Workshop

- 10:35 An evidence based approach to a national climate change adaptation policy for water - implementation and progress Trevor
- 10:55 Managing the worst drought in 100 years for London and the SE England lessons for the future in an unstable climate Trevor Bishop,
- 11:15 Dry And Wet Spell Durations Of Daily Rainfall Analysis For Jeddah City, Western Saudi Arabia Ali Sub
- 11:35 Strategies To Address The Impacts Of Climate Change On Water Resources - Lessons From Western Australia Greg Clay
- 11:55 Closing summary

12:00 - 13:30

Session 2 13:30 - 15:00

BUILDING CLIMATE RESILIENCE IN COASTAL AREAS (PEARL)

Chairs: Zoran Vojinovic UNESCO-IHE
Pritha Hariram /WA

How do we improve resilience to disaster for coastal regions?

Carefully planned and implemented adaptative risk management strategies are a valuable way of reducing disaster risk, while protecting socio-economic and environmental assets by using a holistic approach. This workshop will share experiences and knowledge from the PEARL project (Preparing for Extreme And Rare events in coastaL regions) that better inform management and policy frameworks. Roundtable discussions will provide an opportunity to identify common ground on the perception of extreme events to guide the planning and preparedness; and show how resilience measures can be applied effectively in coastal communities to address the cascading effects of floods. These discussions will be initiated by presentations from *Prof. Zoran Vojinovic* (UNESCO-IHE), *Prof. Christos Makropoulos* (NTUA, Greece) and *Dr. Sutat Weesakul* (Hydro and Agro Informatics Institute, TH)

CLIMATE CHANGE, FLOODS AND DROUGHTS ON WATERSHED SCALE II

Chair: John Riddiford John Riddiford & Associates, AU

13:30 Introduction

- 13:35 Adapting To A Changing Climate A Best Practice Guidline For The
- 13:55 Adapting To A Changing Climate A Best Practice Guidline For The Australian Water Industry Nicola Ne
- 14:15 Adaptive Management Of Water Supplies And Dams Richard Priman
- 14:35 How To Manage Flood Risk And Prepare The Country For Flood? Krzysztof
- 14:55 Closing summary

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

QUANTITATIVE MICROBIOLOGICAL **RISK ASSESSMENT FOR SAFE WATER** (RE)USE

Chair: Gertjan Medema KWR, NL

QMRA is embedded in the water guidelines of the WHO and of several countries. This workshop will review experiences with applying QMRA, discuss strengths and limitations, best practices and next steps to better support water safety management. To set the scene, Susan Pet erson (Water & Health, AU), discusses lessons learned when applying QMRA from the WHO perspective; Jean Francois Loret (Suez, FR) discusses the utility perspective; and David Cunliffe (Department of Health, AU) addresses the regulatory perspective. Presentations are followed by a facilitated debate between utility and government professionals on how QMRA can be applied today, and to guide the future application and development of the WHO's

Room P2 WATER QUALITY RESTORATION Workshop

Join the conversation on Twitter: #iwa2016brisbane

Room P3 Technical

How does QMRA support water safety management?

Chair: Anik Bhaduri Griffith University, AU

15:30 Introduction

- 15:35 PSI Drentsche Aa: Pesticide Scene Investigation Theodorus Vlaar,
- 15:55 Characteristics Of Adsorption Of Cesium (Cs) In Solution Using Carbonized Rice Hull And Beech Sawdust Asa Miura, University of Fukui (J
- 16:15 Understanding Pollutant Generation To Support Predictions Of Pollutant Hotspots In A Low Intensity Rainfall Climate Aisling O'Sullivan, University of
- 16:35 Retention Of Metals In Various Components Of A Newly Constructed Rootchannel Wetland (China) From Source Water Weidong Wang, Chine
- 16:55 Closing summary

Break 17:00 - 17:15

Keynote Plenary 17:15 - 18:00

Ending Extreme Poverty, What to Do the SDGs Mean for Access to Water, Sanitation and Hygiene

Great Hall Q2

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	Progra	amme							
	Monday								
	Kounete Blanew	00.00 00.45							
	Keynote Plenary	19:00 - 09:45							
	Water and the Future We War John Thwaites	nt - How Water Can Contribute to Ach	nieving the Glob	al Sus	tainable Development Goals	Great Hall Q2			
	Coffee Break	19:45 - 10:30							
	Session 1	10:30 - 12:00							
	INSTRUMENTATION,	CONTROL AND	Room P4		EMERGING TECHNOLOGIES AND	Room P5			
	AUTOMATION		Technical		INNOVATION	Session			
	Chair: Eveline Volcke Ghe	ent University, BE			Chair: Ignaz Worm Isle Utilities, UK				
10:30	Introduction				The Emerging Technologies & Innovation TAG-forum:				
10:35	5 Potential Use Of Fluorescence To Indicate Physicochemical Properties Of DOM In Water And Wastewater Treatment Systems Kang Xiao, University of Chinese Academy of Sciences (CN)				Start-up tech companies specially selected to present cutting edge solutions for the topics 'Water reuse to desalination' & 'Smart networks, making them work'. Chair: <i>Ignaz Worm</i> , Managing Director Isle Utilities Start up's:				
10:55	i Early Non-destructive Fouling Detection In Spiral-wound RO Membranes Using A Portable Low Magnetic Field NMR Einar Fridjonsson, University of Western Australia (AU)				Clear Water Science – Memfree: Removes pollutants from water, be <i>Vivian Robinson</i> ; Emefcy - MABR: Produces electricity directly from the treatment of different types of wastewater, by <i>Ely Cohen</i> ; Hydro-dis: Water disinfection				
11:15		Nitrate, Nitrite And COD In Waste W. Frank Honold, Xylem - WTW GmbH (technique that uses the electrocatalytic break down, by Mark Care	y			
11:35	Clean Water Monitoring (CWN Water (CH)	M) Project Pauline Perdaems, SIG / (Geneva						
11:55	Closing summary								
	Lunch 1	12:00 - 13:30							
	Session 2	13:30 - 15:00							
			Room P4			Room P5			
	WATER AND ENERGY	NEXUS	Technical		DATA AND INFORMATION TECHNOLOGY	Technical			
	Chair: Enrique Cabrera - Universitat Politecnica de Val				Chair: Simon Bunn Suez, NZ				
13:30	Introduction	encia, Lo			Introduction	Halaanat'aa			
	5 Water And Energy Integrated Planning And Capacity Building Steven Kenway, The University of Queensland (AU) 5 Energy Implications Of The Millennium Drought On The Urban Water Cycles In Southeast Australian CitiesSteven Kenway, The University of Queensland (AU)			 13:35 Making Australian Groundwater Data Accessible: The Value Of Collaboration Eloise Nation, Bureau of Meteorology (AU) 13:55 Developing Water Accounts For Australia Using The United Nations System Of Environmental-Economic Accounting (SEEA) Mark Lound, Australian Bureau of Statistics (AU) 					
13:55									
14:15	Reducing Energy Use For Wat	ter Supply To Urban China's High-rise	s Kate	14:15 Updating Australia's Atlas Of Groundwater Dependant Ecosystems <i>Eloise</i> Nation, Bureau of Meteorology (AU)					
14:35		gy In Metropolitan Waterworks Toshih		14:35 Efforts Of System Optimization Of Information Systems In The Bureau Of Sewerage, Tokyo Metropolitan Government Kazunori Harada, Tokyo					
1/1-55	Tanaka, Bureau of Waterwork Closing summary	ks, Tokyo Metropolitan Government (JP)	1/1-55	Metropolitan Government (JP) Closing summary				
14.00	Olosing summary			14.00	Olosing summary				
	Coffee Break	15:00 - 15:30							

Session 3 15:30 - 17:00

BIOGAS, CO-DIGESTION AND CO-GENERATION

Chair: Richard Tsang CDM Smith Inc., NL

- 15:30 Introduction
- 15:35 Effects Of Co-digestion On Biogas Quantity And Quality At An Australian Municipal WWTP Jennifer Dr
- 15:55 Biogas Upgrading And Methanation Projects Facilitates An Energy Producing WWTP Dines Thornberg, BIOFOS (DK)
- 16:15 Effects Of Biomass Addition On Organic Composition Of Supernatant In Sludge Digestion Process Ryoko Ya
- 16:35 Core Fermentative-methanogenic Microbiota Of Biomethane Producing Systems Yu Tao, Imperial College London (UK)
- 16:55 Closing summary

Room P4 Technical

MODELLING AND SYSTEMS ANALYSIS

Room P5 Technical

Chair: Peter Vanrolleghem Université Laval, CA

- 15:30 Introduction
- 15:35 Two-phase Flow CFD Simulation Of Hydrodynamics Coupled With Biological Reactions In An Aerated Biological Reactor Javier Clin
- 15:55 Smoothed Particle Hydrodynamics -- An Innovative Method For Solving Smoothed Particle Hydrodynamics -- All Illilovative Medical Fluid Dynamics Problems In Urban Water Management Wolfgang

 (AT)
- 16:15 DAnCE4Water A Collaborative Decision Support Tool To Test Urban Water Management Strategies Christian Urich, Mo
- 16:35 Integrated Water Distribution System Modelling: Two Case-studies From
- 16:55 Closing summary

Break 17:00 - 17:15 **Keynote Plenary** 17:15 - 18:00

Ending Extreme Poverty, What to Do the SDGs Mean for Access to Water, Sanitation and Hygiene

Great Hall 02

Programme Monday

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

09:00 - 09:45 **Keynote Plenary**

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

BUILDING LEADERSHIP IN THE WATER SECTOR

Career Development Hub Learning

Learning

Organiser: International WaterCentre

Chair: Dr. Andre Taylor International WaterCentre, AU

How to drive positive change through building leadership capacity in the water sector?

Advancing integrated and innovative solutions in the water sector often involves managing complex or wicked problems. Driving positive change in the sector requires skilled leadership; leadership to influence change, build partnerships, anticipate and plan for change, and also to lead high-performing, cross-boundary and multidisciplinary teams. In this session, the International WaterCentre, with its reputation as a global leader in the design and delivery of leadership development products in the water sector, will provide practical guidance on how to build leadership capacity at an individual, team, organisational and/or regional level.

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

Career Development Hub THE CURIOUS POWER OF

STORY: HOW TO WIN FRIENDS, PERSUADE HEROES, AND INFLUENCE **OUTCOMES WITH NARRATIVE**

Organiser: IWA and The Source Magazine

Chair: James Workman The Source Magazine, US

You were trained to write dry, impersonal abstracts for a 3-person peer review panel. Now discover how to reach everyone else. This refreshingly practical workshop will show you how your ideas can draw an audience of tens of thousands. By the end you will grasp the need to create a narrative, write a catchy title, and hook readers on the first sentence, paragraph, and question at the heart of each story. You will be challenged and helped to complete and submit a concise, clear, and compelling blog to IWA for publication in the weeks following the Congress.

Coffee Break

Break

15:00 - 15:30

Keynote Plenary 17:15 - 18:00

17:00 - 17:15

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Business Forums

Monday

D : 5 D :	
Business Forum Room 1 10:30 - 11:15 / XYLEM	Business Forum Room 2 10:30 - 11:15 / SALT WATER
The world's first wastewater pumping system with integrated intelligence; Flygt Concertor. Presented by: Stefan Abelin Customers are asking for more, better, faster and for less cost in wastewater pumping. These challenges can be met by integrating sophisticated power electronics and intelligent software in submersible pumping systems. The result is unprecedented operational flexibility, cutting-edge efficiency, increased reliability, improved asset management and reductions in OpEx and CapEx. Customer pain points, such as system reliability, energy consumption, operational flexibility, footprint, connectivity and lower lifecycle cost can be achieved with integrated intelligence, the ultimate solution for maximum	Forecasting treatment plant performance for compliance and optimisation – AqMB Prophet Presented by: Darren Szczepanski AqMB Prophet forecasts events which allows users to fix problems before they occur. The software models upcoming changes in the feed water and predicts impacts to equipment performance and water quality. Prophet can be integrated with your existing SCADA, with an onsite solution behind your firewall where your SCADA can remain disconnected from the internet. The pre-configured plant model is calibrated by artificial neural networks comprised of a limited set of inputs from online instrumentation. Operators can configure thresholds that can trigger an alert or highlight a
11:15 - 13:30 / SUEZ	11:15 - 12:00 / SODECI
12:45 - 13:30 / SUEZ	12:45 - 13:30 / AFRICA PAVILION
13:30 - 14:15 / POTEN ENVIRONMENT GROUP	13:30 - 14:15 / JAPAN PAVILION
14:15 - 15:00 / AUSTRADE	14:15 - 15:00 / UNIVERSITY OF TECHNOLOGY SYDNEY
15:30 - 17:00 / BRISBANE CITY COUNCIL	15:30 - 17:00 / NETHERLANDS-AUSTRALIA COALITION ON CLIMATE EXTREMES





EXCELLENT TECHNOLOGY *DELIVERING ON OUR PR MISE*

Business Scope







Mho we Are:

We are an integrated corporation with capabilities in membrane research and development, process design, equipment manufacturing, and engineering. Our experience in system integration and engineering applications provides customers with integrated and comprehensive solutions to their water treatment needs.

Mhat We Do:

Our business covers the full spectrum of water treatment including membrane R&D and sales, EPC projects and system optimization/operations. Our market experience includes industrial water treatment and reuse, municipal water supply, advanced sewage treatment and reuse, brackish water and seawater desalination, and zero liquid discharge.

What Is Our Value:

We take great effort to build a world-class advanced treatment technology platform, bringing in the most advanced water treatment technology in the world, promote the development of the local water market, understand the application and practice of leading edge technologies, develop international market for membrane products and technologies, and continuously explore the sustainable development of water resources.

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F8. Xueyuan International Tower, 1 Zhichun Road

Tel: 86-10-69756503

SCINOR (ASIA) PTE, LTD

Tuesday Spotlight

Plenary Session / 09:00 - 09:45 / Great Hall Q2

ADB's Asian Water Development Outlook 2016. Water Management in the Context of Rapid Urbanisation

Yasmin Siddi

Principal Water Resources Specialist, Asian Development Ban Introduced by: Jonathan McKeown, (Australian Water Association, AU)

Moderator: Corinne Trommsdorf (IWA) & Rob Skinner (Monash Water and Livability, Monash University, AU)

Panel members:

Junbiao (David) Ji (Poten, CH)

Mark Fletcher (Arup, UK)

Trine Munk (Rambol, DK)

Plenary Session / 17:15 - 18:00 / Great Hall Q2

Oxford Debate: Re-use of wastewater as a drinking water source: technically feasible but socially unacceptable?

Introduced by: Joerg Drewes (Water Re-use Group, DE)
Moderator: Robert Bos (IWA)

We are now technically able to provide tertiary treatment of wastewater so it can be re-used for drinking water directly. It is one of the drastic alternatives that could revolutionize the way water supply is managed. Yet, public perceptions and political motivations put a firm brake on such developments in many instances. Can social acceptance on direct potable re-use be created or engineered?

Forums & Master Lecture

Rainwater Harvesting Lecture / 13:30 - 15:00

Room P

Mooyoung Han Seoul National University- Korea IWA Rainwater Harvesting and Management Specialist Group Chair

Emerging Water Leaders Forum / 15:30 - 17:00 Sky Room

iky Room his forum for all Yo

This forum for all Young Water Professionals (35 and below) is the place to contribute your thoughts, experiences, and ideas to an action agenda for the future water sector.

PEARL Knowledge Base (KB) Platform Demonstration 15.30-17.30, Room M8.

There will be a presentation of the PEARL KB platform and its functionalities, followed by hands-on demonstration. Please bring your own laptop.



IWA World Water Exhibition / 09:00 - 18:00

Exhibition Hall 1

Join the world's leading companies working in sustainable water management. The IWA World Water Exhibition is a one-stop-shop where you can connect and do business with the leading industry and technology providers.

Brisbane Night: Dinner and Fado Show / 19:30 - 22:00

Queensland Gallery of Modern Art, Stanley Place, South Brisbane

Enjoy an unforgettable evening of art, food and networking set in Brisbane's Queensland Gallery of Modern Art Precinct. The Queensland Art Gallery | Gallery of Modern Art (QAGOMA) is a single institution located across two adjacent river-side buildings in the Cultural Precinct of Brisbane's South Bank.

Keynote Plenary

09:00 - 09:45

ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation

Great Hall 02

Coffee Break Session 1

FORUM

09:45 - 10:30 10:30 - 12:00

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UTILITY LEADERS

Sky Room Forum

CITY LEADERS FORUM

Room S1 Forum

Part 1: Launch of the Principles for Water Wise Cities Invitation only

The City Leaders Forum will host the Launch of the IWA Principles for Water Wise Cities for urban stakeholders to develop a shared progressive water vision. This will underpin the collaborative action of local governments, urban professionals, and individuals actively engaged and finding solutions for sustainably managing all waters of the city. Applying the Principles contributes in many ways to the local implementation of the SDGs, the COP agreement, and the New Urban Agenda. Dr. Ger Bergkamp (IWA Executive Director) will open the Forum and launch the Principles, followed by a welcome message from Councillor David McLach the Brisbane City Council. The Councillor will share Brisbane's inspiring city water story, followed by other cities on their urban water journey, 12:15 - 13:15 Lunch in the Exhibition Hall at the Cities Pavilion to Celebrate the Launch of the Principles for Water Wise Cities / Ro IWA Chair of the Cities of the Future Programme, will give a speech on the

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

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UTILITY LEADERS FORUM

Sky Room Forum

CITY LEADERS FORUM

context of this initiative

Room S1 Forum

Part 2: City Leaders Retreat - invitation only

The afternoon session will be fully interactive, giving cities the opportunity to learn from each other on how to best tackle water challenges and seize the opportunities water offers. The exchange will focus first on the water security challenges for cities - health, floods, droughts. We will than move the discussion to another set of challenges related to liveable, efficient, low carbon cities contributing to global targets and the cities attractiveness.

The afternoon session will be fully interactive, giving cities the opportunity

to learn from each other on how to best tackle water challenges and seize the opportunities water offers. The exchange will focus first on the water

security challenges for cities - health, floods, droughts. We will than move

carbon cities contributing to global targets and the cities attractiveness.

the discussion to another set of challenges related to liveable, efficient, low

Coffee Break

feugiat finibus

15:00 - 15:30

Session 3

Break

15:30 - 17:00

EMERGING WATER LEADERS FORUM

Sky Room

CITY LEADERS FORUM

Room S1 Forum

Chair: Norhayati Binti Abdullah UTM, MY Part 3: City Leaders Retreat - invitation only Arlinda Ibrahimllari UKKO, AL

What actions should we take to achieve a water wise world? In this open platform young professionals aged 35 and under will be challenged with the task to continue to build an action agenda. Building on previously defined key visions – Water sector proactively influences policy, Innovative and adaptive water sector, a resilient and sustainable water sector, Healthy collaboration between research and industry and Customer & Community are at forefront of decision making – the roundtable discussions are aimed at developing a solution, three actions (1) for academia (2) for industry and (3) for themselves and the key competencies needed to make it happen. In plenary this will be presented and discussed with both audience and senior professionals – Diane D'Arraz (SUEZ Water Europe, France), Bruno Nguyen (Independent, France) Simon Griffiths (Who gives a crap Australia), Bushra Nishat (IWA, Bangladesh) Paul Bowen (WEF, USA), via Szalóki (HEA, Hungary).

17:00 - 17:15

Oxford Debate 17:15 - 18:00

Re-use of Wastewater as a Drinking Water Source: Technically Feasible But Socially Unacceptable?

Great Hall 02

Programme

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary 09:00 - 09:45

ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation

Great Hall Q2

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

BIOLOGICAL TREATMENT I: MAINSTREAM AMX

Room GHQ2 Technica

Room GHQ2

Technical

Room M1 Technica

Chair: Mark van Loosdrecht TU Delft, NL

10:30 Introduction

- 10:35 Mainstream Deammonification With AnitaMox Process Hannah Lockie,
- 10:55 Mainstream Deammonification At The Western Treatment Plant Janelle
- 11:15 Systems With Anammox For Mainstream Wastewater Treatment; Pilot Scale
- 11:35 Full-scale Mainstream Deammonification For Sustainable Nitrogen Removal And Energy Optimization In Wastewater Treatment Julian Sa
- 11:55 Closing summary

ALTERNATIVE WWT CONCEPTS Chair: Arash Zamyadi Unsw, AU

- 10:30 Introduction
- 10:35 Novel Process For Removal Of Phosphorus Based On Crystallizationfiltration Using Limestone Material Hyangyoun Chang, University of Science
- 10:55 Performance And Sustainability Of Urban Waste Water Treatment Plants In Four Countries Of The Danube River Basin Marion
- 11:15 Removal Of Anthropogenic Chemicals In Selected Waste Stabilisation Ponds In Western Australia Yo
- 11:35 Large-scale Ozonation For Advanced Treatment Of Municipal Wastewater Design And Dimensioning Christopher Keysers, Wasse
- 11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

BIOLOGICAL TREATMENT II: NOVEL BIOLOGICAL TREATMENT CONCEPTS

Chair: Per Halkjær Nielsen Aalborg University, DK

- 13:30 Introduction
- 13:35 Autotrophic Nitrate Removal In Bioelectrochemical System For Increased Water Reuse In Recirculating Aquaculture Tanks *Elisa Sander, AWMC/*
- 13:55 Evaluation Of The Microalgae-based Activated Sludge (MAAS) Process For Municipal Wastewater Treatment On Pilot Scale
- 14:15 Methane Anaerobic Oxidation Coupled To Sulfate Reduction By Consortium Enrichment From Anaerobic Sludge *Lin Li, Research Center for Eco-*
- 14:35 Assessment Of Wastewater Treatment And Energy Recovery Through Cultivation Of Microalgae Ignacio De Godos, FCC
- 14:55 Closing summary

WASTEWATER RECLAMATION

Room M1 Technical

Chair: Ioannis Alexiou Scientists International, UK

- 13:30 Introduction
- 13:35 Demonstrating Organic Contaminant Removal In An Ozone-based Water Reuse Process At Full Scale Karl Linden, University of Colorado Boulde
- 13:55 Water Reuse By An OMBR-RO System: Trace Organic Contaminant Removal And Salinity Build-up Mitigation Long Nghiem, University of
- 14:15 Hybrid Ceramic Membrane Bioreactor Combined With Nanofiltration (CMBR-NF) For Wastewater Reclamation Feiyun Sun, Harbin Institute of Technology Shenzhen Graduate School (CN)
- 14:35 Separating Grey- And Blackwater; A Necessary Approach For Urban Water Reuse? -- The Example Of SEMIZENTRAL Jo
- 14:55 Closing summary

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

Room GHQ2 Technica

Chair: Günter Hauber-Davidson Water Group, AU

Room M1 Technica

Chair: Per Halkjær Nielsen Aalborg University, DK

BIOLOGICAL TREATMENT III:

- 15:30 Introduction
- 15:35 Effect Of SBR Feeding Strategy And Feed Composition On AGS Stability In The Treatment Of A Simulated Textile Wastewater Rita Frai

BIOTREATMENT OF TEXTILE/CHEMICAL WW

- 15:55 Treatment Of A Chemical Industry Wastewater Aiming At Reuse By Integrating Biofilm And Membrane Separation Processes Joao E
- 16:15 Biological Technologies For High-strength Wastewater Treatment Rania
- 16:35 Two-Phase Partitioning Bioreactors Applied To Colour Removal From Real Textile Wastewater A
- 16:55 Closing summary

WATER REUSE

15:30 Introduction 15:35 Integrated Forward Osmosis - Low Pressure Reverse Osmosis System: A

- Novel Approach Towards Direct Potable Reuse Rodrigo Valla
- 15:55 Treatment of high strength polyester wastewater containing dioxane in combination with grey water via integrated system Mohal y (EJUST) (EG)
- 16:15 Direct Membrane Filtration Of Municipal Wastewater With Ultrafiltration And Reverse Osmosis Membranes Haruka Takeuchi, Kyoto University (JP)
- 16:35 An Investigation Of Membrane Dissolved-ozone Flotation (MDOF) Process For Tertiary Wastewater Treatment Xin Jin, Xi'an University of Arc.
- 16:55 Closing summary

Break 17:00 - 17:15

Oxford Debate 17:15 - 18:00

Re-use of Wastewater as a Drinking Water Source: Technically Feasible But Socially Unacceptable?

Great Hall Q2

Join the conversation on Twitter: #iwa2016brisbane 52 IWA World Water Congress & Exhibition Brisbane 201

Keynote Plenary 09:00 - 09:45

ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation

Great Hall 02

Room M3

Workshop

Coffee Break Session 1

09:45 - 10:30 10:30 - 12:00

Room M2

DISINFECTION

Chair: Chao Chen Tsinghua University, CN

- 10:30 Introduction
- 10:35 Potential Pathogenic Bacterial Communities & Their Resistance Towards Disinfectant In Chloraminated Distribution System Bal Krishna Kc, Wes
- 10:55 Novel Method For Estimation Of RNA Virus Inactivation Utilizing Platinumcontaining Compounds Jason Torrey, University of Tokyo (
- 11:15 Application Of UV-CLEDs For Water Disinfection: E. Coli, MS2 Phage, B. Subtilis Spore Joe
- 11:35 Reactivity Of Antibiotic Resistant Bacteria (ARB) With Chemical Oxidants And Their Persistence In Natural Environment Julie Glady-Croue, Cu.
- 11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

ADVANCED OXIDATION PROCESSES

Chair: Shang-Lien Lo National Taiwan University, TW

- 13:30 Introduction
- 13:35 Decentralized Greywater Treatment System Based On Combined Adsorption And Electrochemical Oxidation Elisabet Andres Garcia, AWMC - Un
- 13:55 AOP Using UV-LEDs With Novel Immobilized Doped TiO2 Photocatalysts
- 14:15 Persulfate Oxidation Of Phenol Activated By Polymer Coated Nano-sized Zero-valent Iron Inseong Hwang, Pusan N
- 14:35 Evaluating Impact Of Large-scale Ozonation On Receiving Water's
- 14:55 Closing summary

Room M2 Technical

Technical

CONFLICTS AND COLLABORATIONS, A DIALOGUE ON WATER, FISHERIES **AND BIODIVERSITY**

WATER REUSE FOR SUSTAINABLE

AGRICULTURE, REGULATION AND

Chair: Melissa Meeker WateReuse Associa

Is water regulation or technology the bottleneck to water reuse

Recent fears for health security have led to strict regulations and high water

of costly treatment processes in order to treat effluents to high standards, only to be returned to a lower quality environment. The challenges created by

quality requirements for water reuse in agriculture. This has imposed the use

these regulations, and by the costs associated with the required technologies have sometimes resulted in the direct use of wastewater on agricultural land,

ieopardizing human and environment health. With a focus on the key steps

needed to facilitate water reuse in agriculture, workshop speakers include

Melissa Meeker (WateReuse Association, USA); Jörg Drewes (TUMunchen, DE), Peter Donaghy (Queensland Urban Utility, AU), Stanley Liphadzu (Water Research Commission, ZA). The workshop will also include an interactive panel

TECHNOLOGY

for agriculture?

Room M3 Workshop

Chairs: Joan Rose Michigan State University, US

Simon Funge-Smith FAO

discussion with the audience.

How do we improve the water sector's relationship with aquatic biodiversity?

The transformation and losses of aquatic biodiversity, particularly fisheries, in historic water developments have often been harmful. There are also innovative and sensitive water developments have often been harmful. Inere are also innovative and sensitive approaches, both in engineering and management, which capture benefits and sustain ecosystem services. As the relationship between water management and other users matures, the economic drivers for water development are increasingly balanced by the realization that ecosystem services and biodiversity can be supported at reasonable cost. Examples can be seen around the world but, in developing countries where inland waters are important for food security and important for biodiversity, dialogue may rapidly reach an impasse. Is this inevitable? Are there no solutions? The workshop explores the challenges and solutions. Presentations from Angela H. Arthington (Australian Rivers Institute, AU), Ian Cowx (University of Hull, UK), John Riddiford (John Riddiford & Associates, AU), Matt Verbyla (École Polytechnique Fédérale de Lausanne, FR), *Diane d'Arras* (Water Europe for Suez, FR)

Can asset management be applied globally with success?

Participants from all regions of the globe, including developed and emerging economies, will participate in a dialogue that reflects on their own context in

relation to other regions, and to gain a more comprehensive awareness of

asset management. The workshop will engage asset management leaders,

primarily from IWA's Strategic Asset Management Specialist Group, in a review and discussion with workshop participants, on the status, issues,

management. This will highlight, compare and contrast similarities and differences globally. All levels of asset management maturity will be engaged.

strengths and opportunities, and future directions surrounding asset

Presentations by Helena Alegre (LNEC, PT); Takayuki Sawai (JWWA Jeff Leighton (Portland Water, US); Greg Ryan (WSAA, AU); Peter C

(Federal University of Mato Grosso do Sul, BR)

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

PHOTO-CATALYTIC ADVANCED OXIDATION

Room M2 Technical

ASSET MANAGEMENT LEADING PRACTICES AND ISSUES

Chair: Scott Haskins CH2M. AU

Room M3 Workshop

Chair: Karl Linden University of Colorado Boulder, US

- 15:30 Introduction
- 15:35 Economically-feasible Removal Of 1,4-dioxane By VUV Irradiation With Limited Disinfection By-product Formation
- 15:55 Integrated Experimental And Theoretical Approach For Predicting Transformation Products In Advanced Oxidation Processes D
- 16:15 Monitoring Of OH Radical Scavenging Factor To Determine The Optimal Operating Conditions For The UV/H2O2 Process Joon-Wun Kang, Yons
- 16:35 Intimate Coupling Of Visible-light-responsive Photocatalysis And Biodegradation For Degrading Phenol Shuangshi Dong, Jilin Univ
- 16:55 Closing summary

Break 17:00 - 17:15

Oxford Debate 17:15 - 18:00

Re-use of Wastewater as a Drinking Water Source: Technically Feasible But Socially Unacceptable?

Great Hall 02

vai (JWWA, JP);

Programme

Keynote Plenary

09:00 - 09:45

ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation

Great Hall Q2

Session 1

Coffee Break

09:45 - 10:30 10:30 - 12:00

UTILITIES AND ECONOMICS

Chair: Francisco Cubillo Canal de Isabel II Gestion S.A., ES

- 10:30 Introduction
- 10:35 Efficiency Benchmarking Of Australian And New Zealand Water Utilities
- 10:55 EBC's Regional Benchmarking Hubs: Removing Barriers In Establishing Improvement Programmes For Water Services Peter Dane, EBC Fou
- 11:15 Benchmarking Water Processes Done Right Manu De Backer, University
- 11:35 Water And Energy Efficiency In Water Supply Systems A Cross Relation Analysis From A Collaborative Project Held
- 11:55 Closing summary

WATER AND WASTE MANAGEMENT IN **ENERGY AND PETROCHEMICALS**

Track 4: Enabling Progress

Room M9 Technica

Chair: Mitch Laginestra GHD, AU

10:30 Introduction

Room M4

Technical

Room M4

Technical

- 10:35 Water Contamination By Hydraulic Fracturing Chemicals: Implications For Water Treatment & Reuse V
- 10:55 Biochemical In Situ Analysis Of The Oil Contaminated Subsurface Water At Different Depths Lu Sidan, College of Water Scient

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 5: Water Quality, Safety & Human Health

- 11:15 Evaluation Of COD Cr Removal By Pilot-scale O3 And H2O2 O3 Oxidation Processes From RO Brine Of Petrochemical Wastewater Jia
- 11:35 The Economic Pre-treatment Of Coal Mine Drainage Water With Caustic And Ozone Brace Boyden, CNF & Ass
- 11:55 Closing summary

13:30 Introduction

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

CLIMATE CHANGE: ADAPTATION AND RESILIENCE

- 13:30 Introduction
- Of Water Distribution System /
- 13:55 Quantifying Water Availability -- Preparing For The Future Bruce Rhodes
- 14:35 A Risk-based And Adaptive Approach For The Management And Regulation Of Wet Weather Overflows Catherine Port, Sydney Water (AU)
- 14:55 Closing summary

RETICULATIONS AND DISTRIBUTION **SYSTEMS** Chair: Roland Liemberger Miya, PH

Room M9 Technica

Chair: Bruno Nguyen UNESCO

- 13:35 Development Of Quantitative Evaluation Model For Disaster Resilience
- 14:15 Comparison Of Alternative Groundwater Desalinating Technologies For Remote Communities Based On Resilience Modelling Keng Har
- Coffee Break

Session 3

resistant Waterworks System Kaz 13:55 Analysis Of Energy Consumption Of Water Distribution And Supply System

Based On Digital Residential Map Data Yas 14:15 Key Findings Of A 2-year Pilot Distribution System Investigation Rolando

13:35 Renewal Of Water Pipelines In Tokyo: Towards Achieving An Earthquake-

- 14:35 Dealing With The Complex Interrelation Of Intermittent Supply And Water Losses Bambos Chara bous, J2C Water (CY)
- 14:55 Closing summary

15:30 - 17:00

15:00 - 15:30

Room M4 Technical

UTILITIES AND BENCHMARKING

Room M9 Technica

WATER, HUMAN RIGHTS AND THE

AFFORDABILITY CONUMDRUM

Is universal and equitable access to safe and affordable drinking water for all by 2030 realistic?

Applying human rights to water and sanitation has proved challenging. Effective service provision relies upon collective actions by interdepend stakeholders; climate change, migration and economic growth will not make this task easier. We will review the practicalities of progressive implementation of these human rights incorporating the affordability criteria. Presentations by *Amanda Loeffen* (WaterLex, Switzerland); *Bruno Tisserat* (EurEau, BE); Pascale Guiffant (SUEZ, FR); and panel discussion with Richard Khaldi (OFWAT, UK); Alberto Biancardi (Aeegsi, IT); Gerard Paye. (AquaFed, FR); Hon. Mlungisi Johnson (Member of Parliament, SA); Maria na (Department of Health, PH).

Chair: Petrus Dane EBC Foundation, NL

- 15:30 Introduction
- 15:35 A Critical Comparison Of Methods For Benchmarking Energy Performance In WWTPs Mic
- 15:55 Demand Forecasting Using Support Vector Machine And Pump Scheduling Optimization Using Genetic Algorithm Jeewon Seo, U
- 16:15 Utility Survival In An Environment Of Mandated Conservation Trevor Hill,
- 16:35 Decision-making Support Tool For Water Management In Cities Based In Eco-efficiency De
- 16:55 Closing summary

Break 17:00 - 17:15 Oxford Debate 17:15 - 18:00

Re-use of Wastewater as a Drinking Water Source: Technically Feasible But Socially Unacceptable?

Great Hall Q2

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Keynote Plenary 09:00 - 09:45

ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation

Great Hall 02

Room P1

Technical

Coffee Break Session 1

09:45 - 10:30 10:30 - 12:00

URBAN WATER INFRASTRUCTURE REHABILITATION

Room MO Technical

Chair: Chris Hertle GHD. AU

- 10:30 Introduction
- 10:35 Leak-before-break In Cast Iron Mains: A Failure Analysis Of A Catastrophic Pipe Burst On Harris Street, Sydney R
- 10:55 Development Of A Simulation System For Water Failure Rate In The Event Of Large Earthquakes - A Tool For Optimizing Water 7
- 11:15 Introducing A Methodology For Water Pipe Condition Assessment Using Dimensional Analysis Method Savalan Pour Akbarkhiavi, Swi
- 11:35 Toilet Revolution: From Waste To Resource Mooyoung Han, Seoul National
- 11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

WATER AND WASTE MANAGEMENT IN FOOD INDUSTRIES

Chair: Santino Diberardino LNEG, PT

- 13:30 Introduction
- 13:35 Manganese Greensand Solution Stability And Comparison Of Activation Methods For Acid Mine Drainage Treatment
- 13:55 Metagenomic Analysis Of Granular Sludge From A Full-scale UASB Reactor Treating Brewery Wastewater Abi
- 14:15 Failure Of Classical Enumeration Methods To Detect Some Escherichia Coli
- 14:35 Novel Bio-electrochemical Process For Water Recycling And Sulfur/metals Recovery From Mining Wastewater Guillermo Pozo, Advance Management Centre, The University of Queensland (AU)
- 14:55 Closing summary

Break

Coffee Break

Room MO Technical

MICROPOLLUTANT TREATMENT **TECHNOLOGIES I**

Room P1 Technical

Chair: Josef Klinger TZW, DE

MICROPOLLUTANTS

10:30 Introduction

11:55 Closing summary

Chair: Frederic Leusch Griffith University, AU

10:35 Source Tracking Of Nitrification And Urease Inhibitors In The Aquatic

10:55 Budge Of Phosphorus And Heavy Metals In Shahe Reservoir, A Heavily

11:15 Micropollutant Reduction Strategy At The Scale Of An Urban Area: The

11:35 Water Cycle In Euro-Mediterranean Hotels And Resorts: From Water

« Micropollutant Project » Of Bordeaux Metropolis Zdravka Dogua

Management Practices To Neglected Water Quality Issues Gianluigh

Loaded Shallow Reservoir In Beijing City Pei Lei, Chinese Academy of

- 13:30 Introduction
- 13:35 Removal Of Diclofenac By Chlorella Vulgaris Sarah Zydorczyk, University
- 13:55 Enhancing Sulfamethoxazole Biodegradation In Wastewater Treatment By Bioaugmentation With Achromobacter Denitrificans Yen Nguyen, New ersity of Lisbon, (PT)
- 14:15 Biodegradation Of Atenolol By An Enriched Nitrifying Sludge Yifeng Xu,
- 14:35 Feasibility Study Of Using A SPAC/PAC-UF Hybrid System For Emerging Organic Pollutants Removal In A Source Water Jiangyong Hu, Nati versity of Singapore (SG)
- 14:55 Closing summary

Session 3 15:30 - 17:00

15:00 - 15:30

Room MO

UNLOCKING FINANCIAL RESOURCES

Workshor

TO DECARBONIZE THE WATER SECTOR

What are the challenges for financing utilities to combat climate change and improve energy performance?

Climate change poses an increasing burden to how water utilities maintain the security of their supply and the operational performance of infrastructure. There are opportunities to access finance for low-carbon, climate-resilient infrastructure, but the flow of resources is slow, caused by a lack of awareness of financial instruments and a dearth of bankable projects to invest in. The issue exists in developed and developing countries, needing closer dialogue and collaboration amongst the finance, utility and government sectors Presenting examples of successful project investments in Australia and United States, representatives from the financial sector, water utilities and developmen partners will debate the bottlenecks and opportunities related to matching financial resources with demand for low carbon, climate resilient infrastructure.

17:00 - 17:15

Oxford Debate 17:15 - 18:00

Re-use of Wastewater as a Drinking Water Source: Technically Feasible But Socially Unacceptable?

MICROPOLLUTANT TREATMENT **TECHNOLOGIES II**

Room P1 Technical

Chair: Josef Klinger TZW, DE

- 15:35 Biological + PAC Compact System For Micropollutants Removal From Pharmaceutical Wastewater Álexandre Gali Serra, Cetaqua, Wate
- 15:55 Phthalic Acid Ester Removal In Conventional Activated Sludge, SBR And UASB Based Sewage Treatment Plants In India Khalid Gani, Indian In
- 16:15 Change In Mutagenicity Of ICM Iopamidol During Chlorination: Estimating TPs Inducing Toxicity By MS/MS And QSAR Analyse Takashi Kondo, Hokkaido University (JP)
- maceutically Active Compounds Removal In Sequential Batch Reactor (SBR) And SBR Followed By Nanofiltration Chun-Hai Wei, King Abdullah University of Science and Technology (SA)
- 16:55 Closing summary

Great Hall 02

Logan Water Alliance -- The Value Of Public And Private Sector

11:35 Financial Issues Facing Tokyo Sewerage And Initiatives Towards The Stabilized Business Management Shimpei Endo, Tokyo M.

11:55 Closing summary

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary 09:00 - 09:45

Programme

ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation

Great Hall 02

REGULATION-FINANCE

Chair: Jennifer McKay UNISA, AU

10:30 Introduction

Coffee Break

Session 1

10:35 Forfaiting, An Output-Based Component For Sustainable Water Finance Karl

09:45 - 10:30 10:30 - 12:00

- 10:55 Collaboration In A Local Government Water Business Tony
- 11:15 "The Regulation On The European Countries And The CPLP. Comparisons And The Opinions Of Municipalities" Octavio Almeida, Open University -

INTEGRATED WATER RESOURCES MANAGEMENT-GOVERNANCE ASPECTS Room P3 Technica

Chair: Katerina Schilling IAWD, AT

10:30 Introduction

Room P2

Technical

Room P2

Technical

- 10:35 Catchment Management: A Local And Global Challenge Cameron Wearing.
- 10:55 Reporting On The Condition And Benefits Of Waterways To Drive Management Actions James Udy, F
- 11:15 Finding The Right Balance: Science/policy/stakeholder Partnership To Provide Water For The Community And The Environment Andrew Mcdougall,
- 11:35 Boundaries Of Benefit Sharing: Mapping Conflict And Cooperation In The Lake Malawi/Niassa/Nyasa Sub-basin Joanna Fatch, University of the Western Cape (ZA)
- 11:55 Closing summary

Lunch Session 2 12:00 - 13:30

13:30 - 15:00

WATER - FINANCE

- Chair: Ed Smeets Edmadi BV, NL
- 13:30 Introduction
- 13:35 Water Markets Re-charting The Course Of Water Resources Alister Walsh,
- 13:55 The Urban Water Security Index: Conceptualisation And Pilot Of A New Index
- 14:15 Demonstrating And Monetizing The Multiple Benefits From Using Sustainable Drainage Ric
- 14:35 For A Sustainable Water Management -Investment Planning And Financial Planning On Waterworks Taka
- 14:55 Closing summary

INTEGRATED WATER RESOURCES MANAGEMENT-CASE STUDIES

Room P3 Technical

Chair: Shafick Adams Water Research Commission, ZA

- 13:30 Introduction
- 13:35 Norman Creek 2012-2031 Master Plan: From Planning To The Challenges Of Implementation Greg Tucker, Brisbane City Cou
- 13:55 Joint Catchment Protection Knud Søndergaard, Odense Municipality (DK)
- 14:15 Decision Support Tools For Integrated Water Resources Planning, Management And Operation Verno Jonker, Aurecon (ZA)
- 14:35 A Catchment Perspective On Planning For Excess Recycled Water Release On The Gold Coast Anna Hollingsworth, City of Gold Coast (AU)
- 14:55 Closing summary

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

REVERSE OSMOSIS IN DIRECT POTABLE REUSE

Chair: Olivier Lefevbre National University of Singapore, SG

What is the future for reverse osmosis in direct potable reuse? Increasing water scarcity is driving the debate on water reuse. We are witnessing a slow paradigm shift from indirect to direct potable water reuse (DPR), where highly purified recycled water is introduced directly into a drinking water system. A key treatment in potable reuse schemes is reverse osmosis (RO) to minimize the risk from chemical and microbial contaminants. This is an expensive treatment process, and generates a brine requiring proper disposal, limit the use of RO or DPR in certain locations. This panel discussion will look at 'out of the box' ideas and discuss ways to ensure virtually fail-safe treatment for microbial and chemical hazards via multiple, redundant barriers not involving RO. The format is a moderated panel discussion by experts in potable reuse, who have been involved in evaluating and practicing RO-free potable water reuse schemes. Presentatons from *Shane Snyder* (University of Arizona, US), *Josef Lahnsteiner* (WABAG, AT), *Stuart Khan* (The University of New South Wales, AU), Shane ell (Trussell Tech, US) and Jörg Drewes (Technical University of Munich, DE)

Room P2 **REGULATION-GOVERNANCE /** Workshop SUSTAINABILITY

Room P3 Technical

Chair: Hamanth Kasan Rand Water, ZM

- 15:30 Introduction
- 15:35 Sustainable Management Of Water Sources For Remote Community Water Supply In The Northern Territory, Australia Len Griffiths, Power and Water
- 15:55 Balancing Financial And Social Objectives In Water Provisioning: Pro-poor Services In Two Kenyan Water Utilities Klaas Schwartz, UNESCO
- 16:15 Tightening Sewage Discharge Standards In Municipal Wastewater Treatment Plants: Does It Increase Sustainability? Xu Wang, C
- 16:35 Understanding Water Resources In Australia's Murray Darling Basin Better Using The Bureau Of Meteorology's National Water Account Shobhit Chan
- 16:55 Closing summary

17:00 - 17:15 Break Oxford Debate 17:15 - 18:00

Re-use of Wastewater as a Drinking Water Source: Technically Feasible But Socially Unacceptable?

Great Hall Q2

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Tuesday

Keynote Plenary 09:00 - 09:45 ADB's Asian Water Development Outlook 2016, Water Management in the Context of Rapid Urbanisation Great Hall 02 **Coffee Break** 09:45 - 10:30 10:30 - 12:00 Session 1 Room P4 Room P5 **RESOURCE RECOVERY I EMERGING TECHNOLOGIES AND** Technical Session INNOVATION Chair: Willy Verstraete Ghent University, BE Chair: Ignaz Worm Isle Utilities, UK 10:30 Introduction Start-up tech companies specially selected to present cutting edge solutions for the topics 'Water reuse to desalination' & 'Smart networks, making them 10:35 Enhanced Elemental Sulfur Recovery By Efficient Regulation Of Denitrifying Sulfide Oxidization Bacterial Community Aijie Wang, Harbin Institute work'. Utilities Start up's: LG Sonic: Algae control devices, by Lisa Bi Metaflush: A valveless toilet flushing system, by *Tony Lake*; Geointeractive: Rapid 3D Photomapping, by *Robert Lee* 10:55 Feasibility Of The Power-to-protein Concept In The Circular Economy Of The

12:00 - 13:30 Lunch

City Of Amsterdam Frank Oes

13:30 - 15:00 Session 2

RESOURCE RECOVERY II

Chair: Willy Verstraete Ghent University, BE

13:30 Introduction

11:55 Closing summary

11:35 *E*

13:35 Identification And Treatment By Adsorption On Biomaterials Of Platinum Based Antineoplastic Waste Streams Karel Folens, University

Urine Collection And Nitrogen Recovery In Paris: A Common Practice In The 11:15 1800s, A Future Practice In The 2000s? Fabien Esculier, University of Paris

Electrodialysis For Resource Recovery From Wastewater: Technical Analysis Emma Thompson Brewster, Advanced Water Management Centre, UQ

- 13:55 Decentralised Nutrient Recovery From Urine Without Added Power Or Chemicals Stef
- 14:15 Enabling Extractive Nutrient Recovery A Sustainable Nutrient Management Approach For A Circular Economy Julian Sandino, CH2M (US)
- 14:35 The Transition Towards Urban Recovery Wastewater Systems In Northern Europe -- Experiences From Pilot Demonstrations Man runa AöR (DE)
- 14:55 Closing summary

RAINWATER HARVESTING

Chair: Mooyoung Han Seoul National University, KR

How can the RAIN CITY help achieve the Sustainable **Development Goals?**

Floods, droughts, water shortages, all are related to rainwater. Appropriate Rainwater Harvesting and Management (RWHM) can mitigate many water management challenges. This is at the heart of the Rain City, where all citizens understand the benefits of rainwater, and laws and regulations support collecting rainwater instead of allowing it to drain away. Based on social consensus, and bringing together technology and economics, the Rain City will help achieve the SDGS. Mooyoung Han (Seoul National University, KR), known as Dr. Rain, gives a master lecture based on 15 years research, practice and case studies on multi-purpose RWHM, and how it can assist politicians, researchers and practitioners find solutions for SDG 6 and SDG

Coffee Break 15:00 - 15:30

Session 3 15:30 - 17:00

RAINWATER HARVESTING

Room P4 Technical

Room P4

Technical

Chair: Mooyoung Han Seoul National University, KR

- 15:30 Introduction
- 15:35 Stormwater Harvesting And Reuse Systems In Brisbane Adrian Crocetti,
- 15:55 Implications And Opportunities For Rainwater Harvesting, Optimizing The Urban Water Cycle Sandra Ungerson, AloPluvia (CA)
- 16:15 Using Water From Fog And Moisture: A Solution To Deal With Migration From Rural To Urban Areas Zahra Elmi, Sistan and Baluchesi
- 16:35 A Case Study For An Integrated Systems Approach To Low-Cost Water Resource Utilization In Rural, Tanzania Onita Basu, Carleton University (CA)
- 16:55 Closing summary

Break 17:00 - 17:15

Oxford Debate 17:15 - 18:00

Re-use of Wastewater as a Drinking Water Source: Technically Feasible But Socially Unacceptable?

Great Hall 02

Room P5

Lecture

Programme

Coffee Break

Session 1

Keynote Plenary

09:45 - 10:30 10:30 - 12:00

09:00 - 09:45

TO PUBLISH YOU MUST REVIEW: A HOW TO DISCUSSION

Career Development Hub Learning

Organiser: IWA and IWA Publishing Chair: Michelle Herbert IWA Publishing

How can we empower our future reviewers to ensure that everyone has an opportunity to publish their work?

The objective of this session is to give novice reviewers guidance and help on how to review manuscripts. In this session, Michelle Herbert (IWA Publishing, UK) and Jo Burgess (WRC, SA) will assist you in understanding what is expected when taking on the role of reviewer. Participants will receive a manuscript to review ahead of the session, and will be able to compare their review with reviewer feedback from IWA Publishing. Participants will also receive notes prepared by *Gustaf Olsson* (Distinguished Fellow, SE) on how he approaches manuscript reviewing

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

THE ART OF SCIENTIFIC **PUBLISHING FOR SCHOLARS** Career Development Hub

Learning

Organiser: IWA and UTM

Publishing is evolving rapidly. Whilst quality publication is highly synonymous with the pulse of academic accomplishments, it also sets the scholarly measures in academia as well as being indicative for an institution's progress in research. This shift may provoke a new form of academia by not only demonstrating unique and original achievements in particular research areas but also to determine new publishing models to redefine the credence of academic publications. This learning session provides an instantaneous outlook of publishing as ways to communicating research findings and transferring knowledge based on scientific scholarly writing. The session targets Young water professionals, academia, academic institution representatives.

Coffee Break

15:00 - 15:30

Track 1: Cities, Utilities & Industries Leading Change Track 2: Water & Wastewater Processes & Treatments

Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Break 17:00 - 17:15 **Keynote Plenary** 17:15 - 18:00

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Business Forums

Tuesday





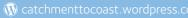


Griffith hosts the **Australian Rivers Institute** where Australia's largest group of freshwater

The **International Secretariat for Future Water**, supported by Future Earth, brings together the world's









Wednesday Spotlight

Plenary Session / 09:00 - 09:45 / Great Hall Q2

Solutions to shape our water future: a voice for our waterways



Introduced by: Peter Goodwin

(International Association of Hydrological Research, UK)

Moderator: Ganesh Pangare, IWA

Plenary Session / 17:15 - 18:00 / Great Hall Q2

Participative societies creating new challenges for the water sector



Ben Schouten

Introduced by: Enrique Cabrera (Technical University Valencia, ES) **Moderator: Jamie Workman**

(Editor "The Source", US)

Forums, Learning Sessions & Career

Basin Leaders Forum / 10.30 - 17.00 **Resilient Basins for Water Security Sky Room**

Themed around Resilient Basins for Water Security the Forum will provide an opportunity for water resource managers from sectors across river basins to share knowledge and experiences and explore viable pathways for sustainable economic, social and environmental development of catchment areas.

Master Lecture / 15:30 - 17:00 **Granular Systems (Aerobic and Anaerobic)** Room P5

Lecturers: Prof. Mark van Loosdrecht Delft University of Technology - The Netherlands & IWA Management Committee member on SG Biofilms, SG Microbial ecology and Water Engineering, SG Nutrient removal and recovery

Prof. Damien Batstone University of Queensland - Australia & IWA Anaerobic Digestion Specialist Group Chair, Generalized Physicochemical Framework Task Group Chair

Water Career Opportunities and Development / 15:30 - 17:00 Room S1

Want to be inspired for embarking on your water career, get advice on career progression and planning, and learn from senior professionals how they got where they are attend this session.

IWA World Water Exhibition / 09:00 - 18:00

Exhibition Hall 1

Join the world's leading companies working in sustainable water management. The IWA World Water Exhibition is a one-stop-shop where you can connect and do business with the leading industry and technology providers.



IWA Project Innovation Awards Ceremony and Dinner / 19:00 - 22:00

Recognising the excellence, leadership and innovation which IWA members and network participants bring to the water sector. IWA Award winners are leaders in their fields, frequently contributing years of research and practice to improving water management across the globe. The Project Innovation Awards is a prestigious global competition that celebrates excellence in water engineering projects around the world. Join the finalists and winners at the award ceremony in the beautiful surroundings of the Rydges Southbank and celebrate with them the strides taken to innovate in the water sector.



Wednesday

Keynote Plenary

09:00 - 09:45

Solutions to Shape Our Water Future: a Voice for Our Waterways Eva Aba

Great Hall 02

Room S1

Forum

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

BASIN LEADERS FORUM

nal Water Ass Chair: Dr. Ger Bergkamp Inte

What are the potential pathways towards strengthening and maintaining resilience within basins? The first session of the Forum will focus on innovative approaches that are being

applied within basins and how these are building resilience. This session will align with the keynote from the congress plenary which will precede the Basin Leaders Forum. The discussions will kick off with an introduction to the Basin Leaders Forum by Prof. Paul Greenfield (Emeritus professor, University of Queensland). Afterwards a panel discussion with Prof. James E. Ball (Vice-President, International Association for Hydro-Environment Engineering and Research), Dr. Paul Bowen (Director of Sustainability, Coca-Cola Company) and Dr. Christian H. Severin (Senior Environmental Specialist, Global Environment Facility) will reflect on how basins can move beyond 'engineer resilience' towards a more dynamic system. Next, a roundtable session facilitated by D diford, Chair, IWA Watershed and River Basin Management Specialist Group will focus on experiences including tools, approaches and case studies highlighting how

UTILITIES OF THE FUTURE FORUM

Utility Leadership; the Missing Link for Water **Technology Innovation**

Attendance by invitation only.

The last decade has seen great innovation in the water technology sector, but despite strong drivers minimal technology adoption has taken place. Utilities face the challenge of often being bound into politics, procurement rules that drive low cost selection and fears that a new, unproven technology will fail. There are a few select utilities that has overcome these obstacles to embrace new technologies that ensure sufficient water supply and quality delivered in a sustainable manner. This session will address the critical changes needed to bring innovation forward. Speakers include Bev Stinson (AECom, US), Jonathan Clement, (PWN, ND), Sudhir Murthy (DC Water, US), Roelof Kruize (Waternet, ND) Sue Murphy (Water Corp, AU), Frank Rogalla (Aquila, ES), Rob Renner (WRF, US)

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

BASIN LEADERS FORUM

Sky Room

Sky Room

Forum

Forum

Chair: Dr. Ganesh Pangare International Water Associ How can long term engagement and investment within a basin be sustained?

The second session of the Forum will reflect on transformational actions that have supported development in basins along with obstacles and how they were addressed Dr. Sanjay Pahuja (Senior Water Resources Specialist, World Bank) will give the keynote on 'Too Many Good Intentions? A Common Roadblock to Sustaining Engagements and Investments in River Basins'. This will be followed by a panel discussion with *H.E. Yue Zhongming* (Commissioner, Yellow River Conservancy Commission), *James Purtill* (Director-General, Department of Natural Resources and Mines, Queensland Government) and *Prof. Jane Doolan* (Professorial Fellow in Natural Resource Governance, University of Canberra). Next, participants will be invited to join the roundtable discussions facilitated by *Dr. John Dore*, Senior Water Resources Specialist, Department of Foreign Affairs and Trade (DFAT) focusing around specific basin timelines and sharing experiences including challenges of water manager across a basin, how they were overcome and how this has affected different stakeholders (especially cities and industries).

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

JOINT REGULATORS, BASINS, UTILITIES AND CITIES FORUM

Sky Room

The complexities of how water impacts and influences sustainable development requires an integrated approach across different basin and city related systems; critical to this is the working relationship between key stakeholders including national and local governments, service providers, water resource managers

and regulators. A team from the Sydney-based Institute for Sustainable Futures opens the forum with a session reflecting on the Australian experience of drought, focusing on partnerships for water efficiency and policy. An interview-style panel will examine the critical lessons learned on the way in which key stakeholders in the Australian sector responded to the Millennium drought. This is followed by a panel discussion with representatives of the Leaders Forums: Cities, Utilities, Regulators and Basins. The outcome will inform how partnerships between these different stakeholders can be facilitated at a local, national and international level.

WATER CAREER OPPORTUNITIES AND DEVELOPMENT

Room S1 Forum

Chair: Randolf Webb Xylem, US

The session will provide participants with a deep insight into the professional life in various segments of the water sector through dynamic interaction with the senior leaders on the panel. Starting with round table discussions the participants will determine the questions that will be asked to the Senior leaders in the panel - Jo Burgess, Water Research Commission, South fer de France, WHO, Switzerland; Diane D'Arras, IWA, Philip Giantriss, Water Supply and Sewerage Association, Albania; Kevin Young, Sydney Water, Australia; Aleksandra Lazic, Xylem, Sweden, Jane Mumbi, Nairobi City Water and Sewerage company

Break

17:00 - 17:15

Plenary Debate

17:15 - 18:00

Participative Societies Creating New Challenges for the Water Sector

Great Hall 02

Programme

Wednesday

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary

09:00 - 09:45

Simplifying the Complexities of Water Resources Management

Great Hall 02

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

BIOFILM PROCESSES

Chair: Kuruvilla Matthew Murdoch University AU

10:30 Introduction

10:35 Biological Nutrient Removal In A Continuous Biofilm Process Torgeir Saltnes,

10:55 A New Concept For Mainstream Deammonification In MBRRs -- From Lab Studies To Full Scale Evaluation Maria Piculell, Veolia Water Tec

11:15 State-of-the-art Non-destructive Biofilm Characterization Techniques In Membrane Systems Johannes Vrouv relder. King Abdullah University of ce and Technology (SA)

11:35 Operation Of Membrane Aerated Biofilm Reactor For The Complete Secondary Treatment Of Municipal Wastewater Eoin Syron, Oxymem Ltd (IE)

11:55 Closing summary

METAGENOMICS OF WATER SYSTEMS

Room M1 Technica

Chair: Aijie Wang Chinese Academy of Sciences, CN

Room GHQ2

Room GHQ2

Technical

Technica

10:35 Transcriptomics And Quantitative Proteomics Reveal Metabolic Networks Of Hydrogen-producing Bacterium Defeng Xing, Harbin Institute of Tech

10:55 The Use Of RT-PCR Techniques Of E.coli And Enterococci For Fast Detection Of Fecal Pollution In Drinking Water Gerhard Wubbels, WLN (NL)

11:15 Wastewater Nitrogen Budgets Can Be Resolved By Complementary Functional Gene And Physicochemical Methods Alea Rose, Charles Darwin

11:35 Metagenomic Profiling Of Antibiotic Resistance Genes And Mobile Genetic Elements In A Full-scale WWTP Jianhua Guo, AWMC, The University of

11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

GHG EMISSIONS FROM WWTP

Chair: Eveline Volcke Ghent University, BE

13:30 Introduction

13:35 Modelling Of Methane Production In A Sewer System Keshab Sharma

13:55 Quantification Of Greenhouse Gases Emissions From Reusing Sewage Sludge Ying-Chu Chen,

14:15 Characterization Of Nitric Oxide And Nitrous Oxide Emissions From A Fullscale Activated Sludge A2/O Process Ximao Lin, Tongji University 14:35 Sludge Drying Lagoon - A Potential Significant Methane Source In

Wastewater Treatment Plants Zhiguo Yuan, The University of Que

14:55 Closing summary

APPLYING MOLECULAR TOOLS IN THE REAL WORLD

Room M1 Workshop

Chair: Per Nielsen Aalborg University, DK

Can microbiological methods transform the water industry?

Microbiological methods are making the leap from the laboratory into the real world of wastewater and water treatment. As DNA sequencing costs decline, the water industry faces demand for greater efficiency and reliability. Sequencing is just one of the technologies that can be of service to the water industry, less well-known technologies such as proteomics or flow cytometry may have a role. There has never been a better time to bring together researchers and practitioners working in this field. Speakers and IWA BioCluster award winners *Mads Albertsen* (Aalborg University, SE), *Holge Daims* (University of Vienna, AT) and *Tom Curtis* (University of Newcastle, UK) discuss future possibilities and the technical and cultural barriers faced by researchers and practitioners.

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

ANAEROBIC PROCESSES

Chair: Glen Diagger University of Michigan, US

Room GHQ2

NANOTECHNOLOGY/ NANOMATERIAL **APPLICATIONS**

Room M1 Technica

15:30 Introduction

15:35 Electrical Stimulation Enhanced Denitrification Of Nitrite-dependent Anaerobic Methane-oxidizing Bacteria Xia Huang, State Key Joint Laboratory of Environment Simulation and Pollution Control (CN)

15:55 Methanogenesis Process Stimulated By Short-term Exposure To Graphene During Anaerobic Digestion Tian Tian, Dalian Unit

16:15 Environmental Compliance And Biohydrogen Production By Anaerobic Codigestion Of Glycerin And Whey In An AnSBBR Gio

16:35 Decomposition Of Sewage Sludge And Control Of Phosphorus Release By Sulphate Reduction Ryoko Y

16:55 Closing summary

Technical

Chair: Tao Li /WA

15:30 Introduction

15:35 Encapsulation Of Bacterial Degraders And Nanoscale Zero-valent Iron In Alginate For Remediation Eakalak Khan, North Dakota State University (US) 15:55 Enhanced Anaerobic Digestion Using Nano-zero Valent Iron (NZVI) To

Achieve High Efficient Energy Recovery Yayi Wang, Tongji University (CN)

16:15 Identifying, Counting And Reducing Residual Superfine Powdered Activated Carbon Particles At < 1 G/L In Treated Water Yoshihiko Matsui, Hokkaido

16:35 Removal of trihalomethanes from drinking water by modified nano-zeolite Mohammad Reza Mirbaloochzehi, Sistan and Baloochestan Water and Wastewater co. (IR)

16:55 Closing summary

Break

17:00 - 17:15

Plenary Debate 17:15 - 18:00

Participative Societies Creating New Challenges for the Water Sector

Great Hall Q2

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Wednesday

Keynote Plenary

09:00 - 09:45

Solutions to Shape Our Water Future: a Voice for Our Waterways Eva Aba

Great Hall 02

Room M3

Workshop

Room M3

Workshop

Room M3

Workshop

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

Room M2

Technical

Room M2

Technical

Room M2

Technical

WHO SANITATION SAFETY PLANNING.

FROM CONCEPT TO IMPLEMENTATION

Chair: Günter Langergraber BOKU University, AT

How do Sanitation Safety Plans help deliver a sustainable water

rryl Jackson (WHO consultant, AU) introduces the SSP concept; Joan

Rose (Michigan State University, USA) presents the Global Water Pathogens Project (GWPP) and the links to SSP; Susan Petterson and David Cunliffe

Growing populations and increasing urbanisation make investing in

sanitation, to reduce pollution of rivers and other water bodies, a priority.

(Health Australia, AU) present the Australian risk management approach;

Gertjan Medema (TU Delft, NL) presents case studies from developing contexts drawing on scientific evidence within the GWPP; and Thor

the workshop will be published in Sustainable Sanitation Practice.

WATER'S STRATEGIC ROLE IN THE

Chair: Neil McIntyre The University of Queensland, AU

RESOURCES INDUSTRY

(Alberta Energy Regulator, CA).

Corporation, AU).

THE PURPOSE OF BENCHMARKING:

OPERATIONAL IMPROVEMENT OR

REGULATORY INTERVENTION?

from each other?

Axel Stenstrom (Durban University of Technology, SA) presents practical

considerations for SSP in a resource limited context. A panel discussion on practical experiences implementing SSP completes the program. Results of

What can the water sector learn and resource industries learn

Water is an essential medium to the resources industry and its management

mining industries effective water management is important not only due to increasingly stringent regulatory requirements but also as it allows more hydrocarbons or minerals to be extracted. Indeed, these sectors are amongst

the fastest growing markets for water treatment technologies. This workshop

management practices, beyond operational results and efficiency, including

improved community acceptance. Presentations by *Phil Tuckett* (SUEZ, AU); *Ross Carruthers* (Queensland Government, AU); *David Post* (CSIRO, AU)

ck McKelvey (Shell, AU); and a panel discussion with Kevin Parks

will showcase experiences, innovative solutions and progressive water

Chair: Enrique Cabrera Universitat Politecnica de Valencia. ES

Efficiency improvement is focus of the entrepreneurial world. Driven by

Is benchmarking a carrot for utilities or a stick for regulators?

competition, it impacts growth and ultimately the survival of companies. With

natural monopolies dominating the water sector, demands for efficiency are

increasing as consumers proactively demand their payments reflect efficient

of the most relevant tools for improving water services. Is it an effective tool

for operational improvement or is additional regulatory intervention hindering efficiency? An Oxford Debate-style with *Peter Dane* (European Benchmarking Co-operation, NL) and *Rob Fearon* (Queensland Water Directorate, AU). Perspectives from *Bruno Tisserand* (EurEau, BE); *Magalhães Miguel* (CRA, MZ); *Kelvin Chitumbo* (NWASCO, ZM); *Brian Carrick* (Queensland Treasury

costs. Comparative Performance Assessment has been presented as one

has become a strategic part of resource extraction. For oil, gas and

ADSORPTION

Chair: Reynald Bonnard Suez, FR

10:30 Introduction

10:35 Efficient Adsorption Of PFOS And F53B From Chrome Plating Wastewater And Their Subsequent Degradation In The Regeneration Process Shubo

10:55 Enhancing Adsorptive Removal Of Radioactive Iodide By Low-dose Chlorine And Superfine Powdered Activated Carbon Yoshih

11:15 Encapsulation Of Fe3O4 Nanoparticles In Porous Materials For Removal Of Arsenic From Water Karel Folens, Ghent U

11:35 Suitable Characteristic Numbers To Test Granular Activated Carbons For The Removal Of Pharmaceuticals Frank Benstoem, RWTH Aachen Uni

11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

ION EXCHANGE

Chair: Tao Li /WA 13:30 Introduction

13:35 Towards The Application Of Chalcogenides In The Environmental Remediation: Granulation Of KMS-1 Based Composite For Cs+ Removal

13:55 Low Waste Solutions For The MIEX® Ion Exchange Treatment Process

14:15 Metal-organic frameworks: potential application in wastewater treatment Chong-Chen Wang, Beijing University of Civil Engineering and Architecture (CN)

14:35 Removal Of Anionic Pollutants By Nano Iron-based Magnetic Hydrogel For Water Purification With Adsorbent Regeneration Baile Wu, The Hong Kong ity of Science and Technology (CN)

14:55 Closing summary

Session 3

Coffee Break

15:00 - 15:30 15:30 - 17:00

MEMBRANE PROCESSES

Chair: Xia Huang Tsinghua University, CN

15:30 Introduction

15:35 The Synthesis, Characterization And Industrialization Of Novel Reverse Osmosis Membrane Using Aquaporin Inside Technology *Lunliang Zhar*

15:55 Using ACH To Control Irreversible Membrane Fouling By Neutralizing Zeta Potential Of Meso-particles At Pre-coagulation Hir

16:15 Evaluating Membrane Performance In Recycled Water Treatment Plants For Assets Replacement Strategy Petra Reeve, South Australian Water

16:35 Treating Domestic Wastewater In A Forward Osmosis Membrane Reactor: Performance, Problems And Perspectives Nur Hafizah Ab Hai

16:55 Closing summary

Break 17:00 - 17:15

Plenary Debate 17:15 - 18:00

Participative Societies Creating New Challenges for the Water Sector

Great Hall 02

Programme Wednesday

Track 1: Cities, Utilities & Industries Leading Change Track 2: Water & Wastewater Processes & Treatments

Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary

09:00 - 09:45

Simplifying the Complexities of Water Resources Management

Great Hall Q2

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

ASSET MANAGEMENT I

Chair: Helena Alegre Lnec, PT

10:30 Introduction

10:35 Business Case Development For Critical Civil Assets David Marlow, WISER

10:55 Shanghai Water Supply Security Risk And Vulnerability Assessment

11:15 Dynamic Asset Management: Asset Management Evolution With Smart

11:35 Achieving Capital Efficiency From Pipe Condition Research Project David

11:55 Closing summary

WATER AND INDUSTRIAL INNOVATION -**POLLUTION CONTROL**

Room M9 Technica

Chair: Ioannis Alexiou Scientists International, UK

10:30 Introduction

Room M4

Technical

Room M4

Technical

10:35 Fouling Phenomena And Filtration Surface Property Changes Of TFC And CNT Blended CA Forward Osmosis For Oil Recovery

10:55 A Novel Pilot-scale Stacked Microbial Fuel Cell For Power Generation Enhancement And Its Performance Analysis Xia Huang, Tsinghua Un

Increased Carboxylate Production In High-rate Activated A-sludge By 11:15 Forward Osmosis Thickening Cristina Cagnetta, Ghent Unit

Novel Kits For Determination Of Sulphate And Iron Reductive Bacterias In 11:35 Water Ha

11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

ASSET MANAGEMENT II

Chair: Helena Alegre Lnec, PT 13:30 Introduction

13:35 The Optimal Renewal Planning Of Multi-regional Water Supply Pipelines Using Dynamic Programming Kill

13:55 Decentralized Treatment Impacts On Dissolved Oxygen And Sulfide Concentrations In Sanitary Sewers Adam

14:15 Sustainability Index For Progress In Municipal Water And Wastewater Services Annika Malm, City of

14:35 Australian-made Technology Renews Sydney's Oldest Sewers John Monro

14:55 Closing summary

WATER MANAGEMENT AND URBAN **PLANNING I**

Room M9 Technica

Chair: Jean-Luc Bertrand-Krajewski DEEP, FR

13:30 Introduction

13:35 Influencing Water Use: Using Behavioural Science To Manage Household

13:55 The Experience Of Implementing IWA's Water Balance In Iran Hamidreza (NWWFC) (IR)

14:15 Water For Life - Securing Water For South East Queensland Karen

14:35 Evaluating Runoff Treatment Efficacy Of Three Lightweight Media For Suspended Raingardens Lokesh Padhye, The University of Auckland (NZ)

14:55 Closing summary

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

Room M4 Technical

WATER MANAGEMENT AND URBAN **PLANNING II**

Room M9 Technica

Chair: Kari Elisabeth Fagernaes Oslo Water and Wastewater Works, NO

COMMUNICATION

CUSTOMER MANAGEMENT AND

15:30 Introduction

15:35 The Influence Of Elicitation Method On Customer Preferences For Water And Wastewater Services Rebecca Sayles, Cranfield Unit

15:55 Transforming The Water Utility Customer Experience Using Human Centred Design Mich

16:15 Think H2O! - An Educational Partnership To Raise Students' Awareness Of The Water Challenges Kenneth Persso

16:35 Networks Vs. Hierarchy - Barriers And Stakeholder Networks In The Urban Water-energy Planning Process Lisa Scholten, Delft University of

16:55 Closing summary

Break

Chair: x x 15:30 Introduction

15:35 Norman Creek 2012-2031 Master Plan: From Planning To The Challenges

15:55 Integrated Hydrological Modelling System For Managing Water Resources In

Australia Under Changing Climate Amgad Elmahdi, Bureau of Me

16:15 Water Scarcity And Affordability In Urban Water Pricing: A Case Study Of Chile Gui

16:35 From Masterplanning Towards Political Agreement Trine Stausgaard Munk,

16:55 Closing summary

Plenary Debate 17:15 - 18:00

Participative Societies Creating New Challenges for the Water Sector

17:00 - 17:15

Great Hall Q2

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Wednesday

Keynote Plenary

09:00 - 09:45

Solutions to Shape Our Water Future: a Voice for Our Waterways Eva Aba

Great Hall 02

Room P1

Technical

Room P1

Workshop

Room P1

Technica

Coffee Break Session 1

10:30 Introduction

09:45 - 10:30 10:30 - 12:00

URBAN DRAINAGE AND SEWERAGE

Chair: Jean-Luc Bertrand-Krajewski DEEP, FR

10:35 Towards Optimized And Reconstructable Sampling Inspection Of Pipe Integrity For Improved Efficiency Of NDT Lei Shi, Un

10:55 Model Based Predictive Control Of Ferrous Dosing To Reduce Odour And Corrosion In Sewers: Modelling And Field Validation Guangming Jiang,

11:15 Determining Factors Controlling Sewer Corrosion Using Long-term Well Controlled Laboratory Based Studies *Philip Bond, University of Queens*

11:35 The Role Of Greater Copenhagen Utility In Implimenting The City's Cloudburst Management Plan Julie Ziersen, HOFOR, Greater Copenhagen Costs (1997) (19

11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00 Room MO

Room MO

Technical

Technical

Room MO

Technical

10:30 Introduction

11:55 Closing summary

Account Perspective W

WATER AND INDUSTRIAL INNOVATION -RECOVERY AND REUSE

Chair: Santino Diberardino LNEG, PT

13:30 Introduction

13:35 Using Open Innovation To Address The Challenge Of Water Treatment Residue At Rand Water Mogan Page

13:55 South Africa's Water Research, Development, And Innovation (RDI) Roadmap: 2015-2025 Jo Burgess, Water Research Com

14:15 Thin-Film Composite Forward Osmosis Membranes Of Thin-Film Layers On Novel Hydrophilic Substrates For Desalination Xinyu Zhang, State Inhonton of Urhan Water Resource and Environment, Harbin Inst

14:35 Sustainability In Industry: Making It Real Cheryl Davis, CKD Consulting (US)

14:55 Closing summary

THE WORKFORCE OF TOMORROW, A GLOBAL RESPONSIBILITY

CUSTOMER EXPERIENCE

Experience - The Adelaide Services Alliance An

Managed Water Services In Three Indian States Ur

Chair: Lucia Cade Seaford, AU

15:30 Introduction

16:55 Closing summary

REGULATION-FUTURE PLANNING

10:35 Increased Water Use Efficiency: ¿Does It Lead To Increased Water

10:55 Water Availability, Allocation And Use In Australia -- A National Water

11:35 Integrated Wastewater System Modelling: A New Approach For The

Productivity? Guillermo Donoso, Pontificia Universidad Católica de

11:15 Understanding Water Resources In Murray - Darling Basin Better Using The

Development Of Long Term Integrated Plans For Wet Weather Gerda Hald,

Bureau Of Meteorology's National Water Account Alankarage Wijed

Chair: Hamanth Kasan Rand Water, ZM

Chair: Trine Stausgaard Munk Ramboll, DK

Can workforce diversity deliver the vision for cities of the future?

Cities are the future for humanity and by 2050 some 3 billion additional people will be living in urban areas. To be fit for this urbanised future, the water sector needs to recruit and train the skilled workers capable of delivering the future vision for cities. Diversity in professional skills, background, age, gender, culture will enhance the water sector's ability to provide robust and innovative solutions for the water wise, liveable cities of tomorrow. *Diane D'arras* (SUEZ, FR) and *Sue Murphy* (Water Corporation of Western Australia, AU) will discuss and invite debate on the challenges and solutions to providing the workforce of tomorrow and overcoming the diversity drought. Participants will be key to identifying actions needed for

15:35 Alliancing To Drive Operational Efficiency And Provide A Great Customer

15:55 The Role Of State Water Departments In Supporting Successful Community

16:15 Engaging Communities In Management Of Stormwater Pollution: Building Awareness Through Effective Communication Angela Dean, The Universit

16:35 What Influences Public Responses To Potable Water Reuse And How

Can We Promote Greater Acceptance? Kelly Fielding, The Un

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

WATER AND INDUSTRIAL INNOVATION -EFFICIENCY IMPROVEMENT

Chair: Rod Navlor Veolia, AU

15:30 Introduction

15:35 A More Adaptable Tech For Renewable Energy Powered RO With Hydraulic Driven Pump And Energy Recovery Integrated Device Ror

15:55 The research on properties of aerobic granular sludge and analysis of microbial community in GSBR Xiao Wang, Harbin

16:15 Targeted Loss Reduction For Water Supply Systems To Achieve Savings In Water Resources Eddy R

16:35 Multi-objective Optimization Of A Self-recirculation A/O-MBR: A Numerical Study Of DO Distribution And Membrane Scouring Min Yang, R

16:55 Closing summary

17:00 - 17:15 Break

Plenary Debate 17:15 - 18:00

Participative Societies Creating New Challenges for the Water Sector

Great Hall 02

Programme

Wednesday

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary

09:00 - 09:45

Simplifying the Complexities of Water Resources Management

Great Hall Q2

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

SMART PLANTS, SMART NETWORK: WATER OPERATIONS GO DIGITAL

Chair: David Lamy Suez, AU

Will going digital transform the water operations?

The workshop is introduced by Renald Gallis (Suez, AU) on the transformation of water operations through key enabling connectivity for water metering; Andreas Weingartner (S::can, AT) discusses innovative sensors for on-line water quality monitoring and early warning systems; a presentation from Zdravka Doquang (Suez, FR) will explore smart water distribution networks and how data analytics has become a key driver for new products and solutions. This is followed by *Michael Storey* (Sydney Water, AU) will then discuss how Sydney Water is creating a digitally connected utility, and the opportunities this creates to improve operations, and services to their customers. *David Lamy* (Suez, AU) will moderate the session and lead a final panel discussion focused on sharing feedback and identifying a vision for the future

THE FUTURE OF DIRECT POTABLE WATER REUSE

Room P3 Workshop

Room P2

Workshop

Room P2

Workshop

Room P2

Workshop

Chair: Jörg E. Drewes Technical University of Munich, DE Is Direct Potable Reuse the future for recycled water?

Growing water scarcity, drought and other environmental challenges are fueling an intense debate on reusing wastewater for drinking water. Indirect potable reuse (IPR) has been the main approach adopted so far, but that is being challenged by direct potable reuse (DPR), where recycled water is fed directly into the raw water supply. From Namibia to the USA, Australia to South Africa, DPR is either already happening or being considered. This workshop will present the state-of-the-art of the prospects of DPR from the point of view of reliability and safety. *Jörg Drewes* (TU Munich, DE) presents on the feasibility of DPR in California, USA; *Shane Trussell* (Trussell Technologies, US) on lessons learned from a demonstration-scale facility in San Diego; Frederic Leusch (Griffith University, AU) on the potential adverse human health risks; David Cunliffe (South Australia Department of Health, AU) on developing global DPR guidelines.

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

COMMUNICATIONS IN A CRISIS SITUATION

Chair: Kari Elisabeth Fagernaes

Oslo Water and Sewage Works, Norwa

How can our communications toolkit help in a crisis?

Communications, marketing, consumer behaviour and partnerships are vital to the future of the water sector. Parts of the industry have embraced new engagement methods and communication tools, but there are lessons to be learned and best practice to be determined. We will explore the resources and tools available, effective uses of new technologies and the power of social media. Groups will discuss different tools and allow participants to share experiences. Attendees will then be put into a fictional crisis, review the crisis from every communication angle, from speechwriters, online communities, media and even the research engineer. Workshop speakers include *Greg Kail* (American Water Works Association, US); *Dennis* za (Sustainable Water and Sanitation for Africa, KE); Sandra Hall (The University of Queensland, AU); and Helen Stratton (Griffith University, AU).

WATER SAFETY PLANS, A LIFELINE FOR **CLIMATE CHANGE AND EXTREME EVENTS** Room P3 Workshop

Room P3

Technical

Chairs: Marion Savill Affordable Water, NZ Zdravka Doquang, Suez, France

What can 12 years of WSP implementation tell us about coping with Extreme Events?

Looking at achievements from both a microbial and a practical treatment plant implementation perspective, how can WSPs help with Extreme Events and what kind of issues will WSP's need to address in the future? Je France (WHO) presents on the achievements of WSP's in large and small water supplies; using case studies from France and Spain; Jean-François Loret (Suez, FR) discusses benefits to operational performance and how they have been achieved; *Paul Byleveld* (New South Wales Department of Heath, AU) looks at emerging future trends and how WSP's assist with Climate Change; *Kenneth Persson* (Sydvattern AB, SE) explores the long-term impact of climate change on raw water resources quality and on drinking water plant operation. A panel discussion ends the session.

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

DIGITAL INTERACTIONS FOR THE CUSTOMER CENTRIC UTILITY

Chairs: Eve Rodrigues Water Services Associa Peter Prevos Coliban Water, Australia

How can digital engagement benefit Water Cities of the Future?

Finding new ways to engage with customers, and developing strategies for effective ICT and social media use, is critical for water service providers. This workshop opens with three talks on utilizing digital tools to engage customers and deliver a better experience. Dr Silver ha (National Water and Sewerage Corporation, UG) discusses social media and other digital tools to provide an immediate customer response to service delivery problems: ska (Yarra Valley Water, AU) addresses the changing service and communication needs of customers; Tim Davis (WaterAid, AU) discusses using customers to provide water quality data through mobile phones. Attendees will then join working groups on how to identify the right digital tools for the right job to provide better service.

SOIL AQUIFER TREATMENT IN WASTEWATER **RECLAMATION**

Chair: x >

15:30 Introduction

15:35 Sustainable Wastewater Reuse Solutions For Managed Aquifer Recharge For Non-potable Application Aleksandra Lazic, Xylem I.

15:55 Study Of Impacts Of Recycled Water Irrigation On Soils Matthew Hudson,

16:15 Reclaimed Water And Subsurface Water Solutions Provide Solution For Water Scarce Maneadero Valley In Mexico Petra Ross, Arcadis

16:35 Empirical Formulas To Predict Virus Attachment In Aquifers As A Function Of Redox Conditions Jack Schiven, Utrecht University (NL)

16:55 Closing summary

Break

17:00 - 17:15

Plenary Debate

17:15 - 18:00

Participative Societies Creating New Challenges for the Water Sector

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Wednesday

Keynote Plenary 09:00 - 09:45

Solutions to Shape Our Water Future: a Voice for Our Waterways Eva Aba

Great Hall 02

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

GROUNDWATER MANAGEMENT I

Chair: Shafick Adams Water Research Comm

10:30 Introduction

10:35 Managing Australia's Largest Groundwater Resource Mark Foreman,

10:55 Safe Drinking Water Abstraction And Nature Management At Winksele-Belgium: The Story Of A Happy Marriage Under Pressure Tom Diez, De

11:15 Requirements And Efficiency Of Agricultural Nitrogen Reduction Measures In The Federal State Of Mecklenburg-Vorpommern Ralf Kunkel, Research

11:35 Near-well Subsurface Water Treatment For A Sustainable And Reliable Drinking Water Supply Alexander Vandenbohede, De Watergroep (BE)

11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

GROUNDWATER MANAGEMENT II: ASR APPLICATIONS

Chair: Shafick Adams Water Research Commission, ZA

- 13:30 Introduction
- 13:35 Meeting Melbourne's Growing Demand For Water Using Aquifer Storage And
- 13:55 The Economic And Operational Potential Of Subsurface Water Solutions For Freshwater Management Gerard Van Den Berg, KWR Watercycle Research
- 14:15 The Legacy Of Sugar And Salt A Success Story In Managing Bundaberg's Coastal Aquifers
- 14:35 Economics Of Aquifer Storage And Recovery In Comparison To Its Alternatives In Korea Jae-Ho Choi, Dong-A University (KR)
- 14:55 Closing summary

EMERGING TECHNOLOGIES AND INNOVATION

Room P5 Session

Chair: Ignaz Worm Isle Utilities, UK

Start-up tech companies specially selected to present cutting edge solutions for the topics 'Water reuse to desalination' & 'Smart networks, making them work'. Start up's: Liquid Integrity Sensors: Provides a solution to detect leaks in large liquid storage facilities, by Kelly Keates; RedEye: Is the first purpose built cloud and mobile engineering drawing management solution, by Gavin Tye; UVS Trenchless Technology: Develops, supplies and services reliable equipment used for condition assessment of pipeline networks and water resources, by Darren Burrowes

13:30 - 15:00

Room P4 **POWERING THE WASTEWATER RENAISSANCE:** THE PATH TO CUTTING EMISSIONS AND **SAVING BILLIONS IN WASTEWATER SECTOR**

Room P5 Workshop

How can smart technology cut GHG emissions and energy costs in the wastewater sector?

Chronic underinvestment in wastewater infrastructure has led to inefficient and fragile infrastructure that wastes energy, generates significant greenhouse gas emissions, and routinely fails. Xylem's latest research – Powering the Wastewater Renaissance - shows that smart technology investments can cut its electricity-related greenhouse gas emissions by 50% and save nearly \$40 billion in the wastewater sector. A multi-stakeholder roundtable discussion - with representatives from utilities. regulators, financiers, and technology providers - explores the opportunities, the challenges, and the potential solutions and next steps. Presentations and case studies set the scene, group discussions explore potentially solutions, and a panel discussion closes the session. A summary report will be provided to all participants. Presenters include *Aleksandra Lazic* (Xylem, SE), *Steven Kenway* (University of Queensland, AU), *Roelof Kruize* (Waternet, NL).

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

WATER IN THE DRIEST CONTINENT - NEW **SOURCES WHEN CLIMATE IS CHANGING**

Room P4 Workshor

Room P4

Technical

GRANULAR SYSTEMS

Room P5 Lecture

Is Australia a model for delivering climate independent water infrastructure?

During the Millennium Drought, between 1997 and 2009, South-Eastern Australia suffered its greatest rainfall deficit since the start of the 20th Century. The rush to secure water supply led to substantial fast-track investment in seawater desalination and wastewater reuse facilities in parallel with measures to reduce consumption. *Dr. Matt Hardy* (Bureau of Meteorology, AU), *Sue Murphy* (Water Corporation of Western Australia, AU), *Christopher Gasso* (GWI, UK) and Peter Beattle (Former Premiere of Queensland, AU), discuss the impact of climate change and approaches to develop alternate water sources, particularly desalination and water reuse. Ian Law (IBL Solutions, AU) and Dr Alistair Grinham (University of Queensland, AU) discuss in more detail the delivery of Australian facilities and marine environmental impact.

(ANAEROBIC AND AEROBIC)

Chair: Mark van Loosdrecht TU Delft. NL

How are granular sludge systems changing the face of wastewater management?

Granules are large, self-supporting biofilms that form under engineered conditions in aerobic and anaerobic systems. Due to the large amounts of biomass that can be accumulated as granules, they can substantially reduce footprints of wastewater treatment units. High-rate anaerobic granular sludge systems have been extensively used in industrial wastewater treatment systems since the late 60s, but following development in the 90s, domestic aerobic granular sludge systems, such as the Nereda process, have enabled low footprint domestic wastewater treatment systems. This master lecture presents common concepts, design principles, and research and development directions for aerobic and anaerobic granular systems that will assist utility and design engineers, researchers, planning and operators in their work.

Break

17:00 - 17:15

Plenary Debate

70 IWA World Water Congress & Exhibition Brisbane 201

17:15 - 18:00

Participative Societies Creating New Challenges for the Water Sector

Great Hall 02

Wednesday

Keynote Plenary

Coffee Break

09:45 - 10:30

09:00 - 09:45

Session 1

10:30 - 12:00

BUILDING LEADERSHIP IN THE WATER SECTOR

Career Development Hub Learning

Career Development Hub

Learning

Track 1: Cities, Utilities & Industries Leading Change Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 5: Water Quality, Safety & Human Health

www.worldwatercongress.org 71

Track 4: Enabling Progress

Organiser: International WaterCentre

Chair: Dr. Andre Taylor International WaterCe

How to drive positive change through building leadership capacity in the water sector?

Advancing integrated and innovative solutions in the water sector often involves managing complex or wicked problems. Driving positive change in the sector requires skilled leadership; leadership to influence change, build partnerships, anticipate and plan for change, and also to lead high-performing, cross-boundary and multidisciplinary teams. In this session, the International WaterCentre, with its reputation as a global leader in the design and delivery of leadership development products in the water sector, will provide practical guidance on how to build leadership capacity at an individual, team, organisational and/or regional level.

note: This is a repetition from the session on Monday

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

HOW TO BRING YOUR IDEA TO THE MARKET WITH USING THE **LEAN STARTUP AND RAPID PROTOTYPING**

Organiser: IWA

Chair: Simon Griffith Who Gives A Crap, AU

You have developed a technology, a method, an idea, and you want to bring this idea to market. That means launching in the least amount of time, spending the least amount of money, yet doing everything you can to ensure success. However, 90% of new ideas and innovations will fail. This session will teach you the basics informed by Eric Ries' The Lean Startup to help ensure that your idea is in the 10% that succeed. The session will include real life examples from Who Gives A Crap's experience with The Lean Startup method, as well as a short workshop in rapid prototyping.

Coffee Break

15:00 - 15:30

Session 3

15:30 - 17:00

SUSTAINABLE DELTA GAME -ADAPTATION PATHWAYS

Career Development Hub

Organiser: Deltares

Chair: Simone De Kleermaeker Deltares, NL

Given the uncertainties about the future, what constitutes a sustainable water management plan?

Water management is increasingly challenged by pressures from stresses such as population growth, potential sea level rise and climate change. Exploring adaptation pathways for the future provides indispensable decision making support in achieving sustainable water management in a changing environment. Sustainable Delta is a serious game that informs and enables communities, stakeholders, elected officials and the general public to better understand water systems and their related restoration and protection measures. It teaches players the importance of negotiation in decision making as well as how to make smarter investment decisions given an uncertain future. Two teams of participants will develop and implement a Sustainable Water Management Plan for the coming 100 years in a fictional setting. number of participants is limited to 20 (first-come, first-served).

Break

17:00 - 17:15

Plenary Debate

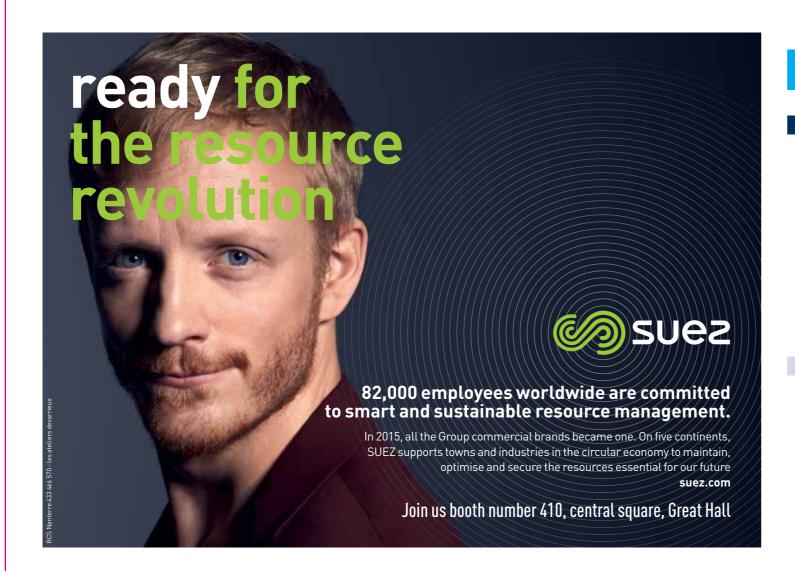
17:15 - 18:00

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Business Forums

Wednesday







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Thursday Spotlight

Plenary Session / 09:00 - 09:45 / Great Hall Q2

Can the water microbiome save the biohealth of the Planet?



Chair in Water

Introduced by: Tom Mollenkopf (Senior Vice President, IWA) (tbc)

Moderator: Darryl Day

(International Centre of Excellence in Water Resources Management, AU) (tbc)

Panel Members:

- Frederic Leusch (Griffith University, AU)
- Mads Albertsen (Aalborg University, DK)

Closing Ceremony, Master Lecture and Forum

Science and Technology Leaders Forum / 10:30 - 15:00

Seeking a shared vision for international water research collaboration and impact, this Forum will bring together some of the top researchers and technology innovation leaders to discuss and identify shared research agendas and effective application pathways to accelerate innovation and create greater impact across the water sector.

Master Lecture / 10:30 - 12:00 **Abatement Options for Mixtures of Emerging Contaminants**

Room P5

Lecturer: Stefan Kools

KWR Watercycle Research Institute- Netherlands

Closing Ceremony / 15.30 - 17.00 **Great Hall Q2**



IWA World Water Exhibition / 09:00 - 18:00

Exhibition Hall 1

Join the world's leading companies working in sustainable water management. The IWA World Water Exhibition is a one-stop-shop where you can connect and do business with the leading industry and technology providers.

Gala evening: relax, network and enjoy / 19:00

Plaza Ballroom of the Brisbane Convention & Exhibition Centre

The gala evening provides an informal and relaxed opportunity to network and connect with other water experts in a truly unique setting. It is the highlight of the social calendar, and a truly fantastic evening is in store for all delegates. In true IWA style the conference dinner promises to be a night of spectacular entertainment accompanied by fine food, wine and good company. Dress: Smart casual



Thursday

Keynote Plenary

09:00 - 09:45

Can the Water Microbiome Save the Biohealth of the Planet?

Great Hall 02

Room S1

Technical

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

SCIENCE AND TECHNOLOGY LEADERS FORUM

The Forum brings together research and technology leaders to discuss and identify shared research agendas, and effective pathways to accelerate innovation and solutions for sustainable water management. Opened by Helmut Kroiss (IWA President), Glen Daigger (IWA Past President) introduces the Forum and Mark van Loosdrecht (TU Delft, NL) presents the current status on water science and technology. Presentations follow on research needs from service providers by Carlos Campos (SUEZ, FR), cities by *Rob Skinner* (Monash University, AU), regulators by *Trevor Bishop* (Environment Agency, UK) and basins by *John Riddiford* (John Riddiford & Associates, AU). The session takes into account the research needs identified from other Leader Forums. Attendees will be fully engaged in identifying research priorities, and developing the agenda through a panel

PATHOGEN OCCURENCE SOURCES AT THE WATERSHED SCALE I

Chair: Christobel Ferguson DPI Water, AU

- 10:30 Introduction
- 10:35 Towards The Development Of An Automated ATP Measuring Platform To Monitor Microbial Quality Of Drinking Water Hans-Jørgen Albred
- 10:55 Prevalence Of Free-Living Amoeba And Associated Amoeba Resistant Bacteria In Two Farming Communities In South Africa Clarissa Kruger, burg (ZA)
- 11:15 Water Quality Risk Management Strategies For Remote Operations Kathy
- 11:35 Applying QMRAcatch In A River-floodplain Area For Estimating Sustainable Virus Reductions To Produce Safe Drinking Water Andreas Fall
- 11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

Session two focuses on global science and technology collaborations. In

order to reach effective collaboration and application, critical analysis of what works / doesn't work for water research collaboration, and how we

will need to adapt and change in the future will be shared through a panel

discussion, including: *Dean Amhaus* (The Water Council, US); *Shaun Cox* (Water Research Australia Limited, AU); *Stephanie Rinck-Pfeiffer* (GWRC, CA); *Cora Uijterlinde* (STOWA, NL), *Xiaochang Wang* (Xi'an University of

Architecture and Technology, CN). Small group discussions will look at how

to move further with research priorities within the IWA's work; what potential new initiatives might be established in the future; and the roadmaps ahead.

The Forum is closed by Diane D'arras (IWA President Elect).

SCIENCE AND TECHNOLOGY LEADERS FORUM

Sky Room Forum

Sky Room

Forum

PATHOGEN OCCURENCE SOURCES AT THE WATERSHED SCALE II Chair: Christobel Ferguson DPI Water, AU

Room S1 Technical

- 13:30 Introduction
- 13:35 Towards The Development Of An Automated ATP Measuring Platform To Monitor Microbial Quality Of Drinking Water Hans-Jørgen Albrechtsen,
- 13:55 Prevalence Of Free-Living Amoeba And Associated Amoeba Resistant Bacteria In Two Farming Communities In South Africa Clarissa Kruger, University of Johannesburg (ZA)
- 14:15 Water Quality Risk Management Strategies For Remote Operations Kathy
- Applying QMRAcatch In A River-floodplain Area For Estimating Sustainable 14:35 Virus Reductions To Produce Safe Drinking Water Andreas Famleitner, TU
- 14:55 Closing summary

Coffee Break

15:00 - 15:30

Closing Ceremony

15:30 - 17:00

Fellows Panel / YWP Panel Great Hall 02

Programme Thursday

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary 09:00 - 09:45

Can the Water Microbiome Save the Biohealth of the Planet?

Great Hall Q2

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

MODELLING WASTEWATER PROCESSES

Room GHQ2 Technical

WATER-ENERGY-CARBON CONNECTIONS

Room M1 Technica

Chair: Harro Bode DF

10:30 Introduction

- 10:35 Full-scale Modeling Explaining Large Spatial Variations Of Nitrous Oxide Fluxes In A Step-feed Plug-flow Wastewater Treatment Reactor Bing-Jie Ni,
- 10:55 A Model-based Analysis Of Operating Conditions To Minimise Methane Stripping From An Anaerobic Digester Effluent Miguel Mauricio-
- 11:15 Potential Of 2-pathway Models For Describing The Combined Effect Of DO And Nitrite On The N2O Production By AOB Horan Duan, LISBP-
- 11:35 A New Approach To Simultaneous Ammonium And Dissolved Methane Removal From Anaerobic Digestion Liquor Xueming Chen, The University of
- 11:55 Closing summary

IN THE URBAN WATER ENVIRONMENT

Chair: Steven Kenway University of Queensland, AU

- 10:30 Introduction
- 10:35 Coupling Plant-wide Process Models With Overall Energy Use- And Production-accounting Imre Takacs, Dy
- 10:55 Energy Cost Savings For Households And Utilities Via Water Demand Management - New Options For Efficient Cities Amar
- 11:15 Stable Partial Nitrification Under Mainstream Conditions Through NOB Inhibition Angeles Val del Rio, University of Santiago de C
- 11:35 Energy And Nutrient Factory At Amersfoort WWTP In The Netherlands Bert
- 11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

MODELLING DRINKING WATER SYSTEM

Room GHQ2 Technical

INTERMITTENT WATER SUPPLY: THE CHALLENGE OF TRANSITIONING TO 24/7 Room M1 Workshop

Chair: Maria João Benoliel EPAL, PT

- 13:30 Introduction
- 13:35 The Importance Of Flow Behaviour In Spiral Wound Membrane Systems
- 13:55 Autonomous Intake Selection Optimisation Model For A Dual Source Drinking Water Treatment Plant Edoardo E
- 14:15 Operational Implementation Of Soft Sensor Model In The Process Control Of A Surface Water Treatment Mark Schaap, Water Company Groni
- 14:35 A Study On Prediction Method For Ozone Dosage And Residual Ozone Concentration In Advanced Ozone Water Treatment Jinseok Hyung, University of Seoul (KR)
- 14:55 Closing summary

Chair: Bambos Charalambous Hydrocontrol Ltd, CY

Can container-stored water be the solution to consumers' intermittent supply?

Transitioning from Intermittent Water Supply (IWS) to 24 hours per day 7 days per week is one of the most difficult conundrums for water utilities. This workshop addresses the many challenges involved, and will explore the bottlenecks entailed in this transition. *Bambos Charalambous*, will set the scene presenting the deeply rooted "beliefs" about IWS and the need for a paradigm shift; *Roland Liemberger* (MIYA, AT) will outline a way forward in transitioning from IWS to 24/7. *Ronnie McKenzie* (WRP, SA) discusses South Africa's currrent problems caused by prolonged drought, and the ongoing efforts to avoid IWS conditions; *Chrysi Laspidou* (University of Thessaly, GR) will highlight policies and how the water-energy-land useclimate Nexus is influencing Intermittent Water Supply.

Coffee Break

15:00 - 15:30

Closing Ceremony

15:30 - 17:00

Fellows Panel / YWP Panel Great Hall Q2

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Thursday

Keynote Plenary

09:00 - 09:45

Can the Water Microbiome Save the Biohealth of the Planet?

Joan Rose

Great Hall Q2

Room M3

Workshop

Room M3

Workshop

Coffee Break

09:45 - 10:30

Session 1 10:30 - 12:00

SEAWATER DESALINATION

Chair: Victor Verbeek Toray Membrane, AU

10:30 Introduction

10:35 Vacuum Membrane Distillation (VMD) With Crystallizer For Mineral Recovery From Hypersaline Reverse Osmosis Concentrate Saravanamut Vigneswaran, University Tehcnology Sydney (AU)

10:55 Faradaic Reactions In Batch-mode Capacitive Deionization *Di He, University of New South Wales (AU)*

11:15 Fouling Prevention And Cleaning Strategies In Submerged Vacuum Membrane Distillation And Crystallization Helen Julian, University of New South Wales (AU)

11:35 Treatment Of RO Brine From CSG-produced Water Using Graphene/PVDF Flat-sheet Membrane Distillation Hokyong Shon, University of Technology Sydney (ALI)

11:55 Closing summary

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

NOVEL DESALINATION TECHNOLOGIES

Room M2
Technical

Chair: Victor Verbeek Toray Membrane, AU

13:30 Introduction

13:35 Solar-powered Reverse Osmosis:a Near-future Milestone To Achieve Sustainable Water Production In The UAE Hassan Arafat, Masdar Institu of Science and Technology (AE)

13:55 Development Of A SWRO-PRO Hybrid Desalination System: Pilot Plant Investigations Youn Gwyn Park GS F&C (KR)

14:15 Assessing Bacterial Growth In Seawater Reverse Osmosis Systems: A New Method For Measuring Bacterial ATP Almotasembelleh Abushabal UNESCO-IHE Institute for Water Education (NL)

14:35 An Experimental Investigation Of A Low Temperature Thermal Pump For Reverse Osmosis Desalination *Jack Nihill, RMIT (AU)*

14:55 Closing summary

Coffee Break 15:00 - 15:30

Closing Ceremony

15:30 - 17:00

Fellows Panel / YWP Panel Great Hall 02

Room M2

Technical

IS THE FUTURE DECENTRALISED?

to sanitation is possible?

practice and innovation?

Kruize (WaterNet, NL).

Chair: Kuruvilla Mathew Murdoch University, AU

UTILITIES SHARING KNOWLEDGE ON

SUSTAINABLE URBAN WATER MANAGEMENT

Chair: Anders Bækgaard WaterCentre South - Odense, DK

How can utilities initiate a paradigm shift to implement best

In a world where utilities are faced with demands for improved efficiency

against a backdrop of challenges to water supply and sanitation caused by

growing populations, rapid urbanisation and increasing water scarcity in all

global regions, there is a need to cooperate to overcome the challenges. We

all levels in their organisations. In this workshop we will discuss new solutions

and trends in water management and share experiences. Examples are utilities

working together to increase energy efficiency, to handle the seismic shift from wastewater treatment to resource recovery, or new solutions for climate change

adaptation that improves urban livability while managing storm water. Speakers include Amit Pramanik (WE&RF, USA), Guihe Tao (PUB, SG), and Roelof

will demonstrate how leading utilities have implemented close co-operation on

Is decentralisation the only way that universal access

The Sustainable Development Goals have set us a target of universal

but decentralised systems can play a major role in achieving this goal.

access to sanitation by 2030. This is a critically important part of the overall

populations. Building the infrastructure for this will be an enormous challenge,

sustainability agenda, and impacts on the health and wellbeing for entire

The workshop will share the experiences from different parts of the world, including India, China and Australia, and discuss the role of decentralised

systems in the future. Different case studies will be introduced by *Marcus Starkl* (BOKU University, AT); *Guoren Xu* (Harbin Institute of Technology, CN); and *Cynthia Mitchell* (University of Technology Sydney, AU).

Programme

Thursday

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments
Track 3: Re-charting the Course of Water Resources

Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

Keynote Plenary

Plenary 09:00 - 09:45

Can the Water Microbiome Save the Biohealth of the Planet?

Great Hall Q2

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

BRINGING LIVEABLE CITIES TO LIFE I

Chair: Jill Fagan Water Services Association of Australia, AU

How can we capture the value from calling liveable cities to action?

Water wise cities that are more liveable, sustainable and resilient have become a major global sustainability issue. The purpose of this workshop is to share novel ideas about how the water sector and water professionals can contribute to more liveable cities. In addition, attention will also be given to what other people and professions should be involved? And how do we engage with them? The session will be highly interactive, with a range of speakers from inside and outside the industry that will inform, inspire, and challenge the audience. Presentations by Jamie Wart (CRC Water Sensitive Cities, AU); John Batten (Arcadis, US); Stuart Waters (Twyfords Consulting, AU)

MEETING THE MULTIPLE REQUIREMENTS FOR DISINFECTION

Room M9 Workshop

Chair: John Bridgeman University of Birmingham, UK

What are the future demands for desinfection in developing and developed countries?

Disinfection is required in treating multiple kinds of water and in addressing multiple water quality issues all over the world. The panelists and audience will discuss the future demands for disinfection in developing and developed countries. This includes facility, reagent, practice, regulation and research, under the condition of multiple demands for disinfection during drinking water supply, wastewater and reclaimed water treatment. The workshop invites four speakers to share their opinions and knowledge on disinfection: Joe Jacangelo (MWH/John Hopkins University, US), Shane Trussell (Trussell Technologies, US), Joan Rose (Michigan State University, US), Chao Chen (Tsinghua University, CN).

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

BRINGING LIVEABLE CITIES TO LIFE II

Chair: Jill Fagan Water Services Association of Australia,

How can we capture the value from calling liveable cities to action?

Water wise cities that are more liveable, sustainable and resilient have become a major global sustainability issue. The purpose of this workshop is to share novel ideas about how the water sector and water professionals can contribute to more liveable cities. In addition, attention will also be given to what other people and professions should be involved? And how do we engage with them? The session will be highly interactive, with a range of speakers from inside and outside the industry that will inform, inspire, and challenge the audience. Presentations by Jamie Wart (CRC Water Sensitive Cities, AU); John Batten (Arcadis, US); Stuart Waters (Twyfords Consulting, AU)

LOW IMPACT STRATEGIES TO MANAGE DIFFUSE POLLUTION AND IMPROVE WATER QUALITY Room M9 Workshop

Chair: Lee-hyung Kim Kongju National University, KR

What are the next innovations to improve Water Quality Management and prevent eutrophication?

Raising awareness of current significant diffuse pollution issues amongst the international community, and encouraging discussion on the latest research, is vital to improving water quality management. The workshop will explore cutting-dge technology for monitoring and modeling diffuse pollution; diffuse pollution impacts on urban land use, agricultural and coastal areas; advance water quality management approaches dealing with diffuse pollution; and innovative solutions and policy development, resulting in the reduction of diffuse pollution and eutrophication. The workshop will have contributions from Brian D'Arcy (Abertay University, UK); Michael K. Stenstrom (University of California, US); Ana Deletic (Monash University, AU); and Lee-Hyung Kim (Kongju National University, KR).

Coffee Break

15:00 - 15:30

Closing Ceremony

15:30 - 17:00

Fellows Panel / YWP Panel Great Hall Q2

Room M4

Workshop

Room M4

Workshop

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Thursday

Keynote Plenary

09:00 - 09:45

Can the Water Microbiome Save the Biohealth of the Planet?

Great Hall 02

Coffee Break

09:45 - 10:30

Session 1

10:30 - 12:00

NATURAL DISASTERS AND EMERGENCY PREPAREDNESS

Room MO Workshop

ASSESSMENT, IMPACTS AND CONTROLS OF MICROBIAL PATHOGENS IN WASTEWATER TREATMENT SYSTEMS AND REUSE

Room P1 Technical

Chair: Matsui Yoshihiko Hokkaido University, JP

Can the water sector prepare and respond to large scale

Over the last decade we have witnessed numerous natural disasters around the world, including huge earthquakes that have caused catastrophic damage during, and immediately following, the quake itself, as well as secondary damage in the following weeks and months. Water and sanitation are vital components of any large-scale humanitarian and reconstruction responses. This workshop will highlight lessons learned from recent experience and showcase prparedness planning for a large-scale disaster from various points of view. Presentations by Sangam Shrestha (Asian Institute of Technology, TH); Yang-Long WU (Chinese Taiwan Water Works Association, TW); Ozek n (Bureau of Waterworks Tokyo Metropolitan Government, JP), followed by a group discussion and audience participation

Chair: Tobias Barnard University fo Johannesburg, ZA

- 10:30 Introduction
- 10:35 How Safe Is Safe? -Advanced Risk Management For Indirect Potable Reuse Using Soil Aquifer Treatment Sadahiko Itoh, Kyoto Uni
- 10:55 Understanding Pathogen Concentrations In Sewage To Inform Reuse Treatment Goals Rebecca Ives, Michigan State University (US)
- 11:15 Cryptosporidium Removal And Inactivation Across The Wastewater Treatment Train: Recycled Water Fit For Purpose Brendon King, SA WATER (AU)
- 11:35 New Tools For Quantification And Detection Of Rotavirus In Untreated Sewage Nicholas Kiulia, Michigan State University (US)

11:55 Closing summary

Lunch Session 2 12:00 - 13:30

13:30 - 15:00 **APPROPRIATE TECHNOLOGIES FOR**

DISASTERS AND HUMANITARIAN CRISES

Room MO Workshop

ASSESSMENT, IMPACTS AND CONTROLS OF

Room P1 Technical

Chair: Pierre Le Clech UNSW. AU

Which water technologies are suitable in humanitarian crises?

Many water and wastewater treatment processes have now reached technological maturity, but implementation in disaster zones or developing countries remains challenging. It is therefore critical to asses the limitations of implementation, and develop systems more suitable and resilient in highly challenging environments. During the workshop audience members will have the opportunity to interact with the panellists, consider future activities and discuss the multi-disciplinary challenges of providing water and sanitation in disaster zones. *Bruno Nguyen*, (UNESCO-IHP), provides an overview from IWA's Water Security and Safety Management Specialist Group. vin Blakey (Engineers without Borders, AU) reports on his Cambodian experience. Rhett Butler (Skyjuice Foundation, AU), and Franz Fre (Kassel University, DE) share experiences from the development of gravity-fed microporous membrane modules. *Roger Ben Aim* (FTS, FR) on opportunities for renewable energy systems for desalination of brackish waters.

Coffee Break

15:00 - 15:30

Closina Ceremony 15:30 - 17:00

Fellows Panel / YWP Panel

MICROBIAL PATHOGENS IN WASTEWATER TREATMENT SYSTEMS AND REUSE **SCHEMES II**

Chair: Tobias Barnard University fo Johannesburg, ZA

- 13:30 Introduction
- 13:35 Wastewater Ponds Effective Treatment Technology For The Future, Today
- 13:55 Virus-Particle Associations In Full-scale UASB Reactors And Waste Stabilization Ponds Matthew Verbyla, Civil and Enviro University of South Florida (US)
- 14:15 Infectious Risk Assessment Of Reclaimed Water By UF Membrane Treatment Process Focusing Attention On Norovirus Nobuhito Yasui, Nationa elopment Agency Public Works Research Institute (JP)
- 14:35 Validation And Monitoring Of Reverse Osmosis Membrane For Virus Removal: The Current Challenge In Water Reuse Marie-Laure Pype, The Un
- 14:55 Closing summary

Great Hall 02

Programme

Thursday

Keynote Plenary

Can the Water Microbiome Save the Biohealth of the Planet?

Great Hall 02

Coffee Break

09:45 - 10:30

09:00 - 09:45

Session 1

10:30 - 12:00

MIND THE GAP: BUILDING A PREPARED,

Room P2 Workshop

DIVERSE WORKFORCE

SUSTAINABLE WATER SOLUTIONS

Room P3 Workshop

Chair: Cheryl David CKD Consulting, US

How can water/wastewater utilities build diverse workforces that are prepared to meet their responsibilities to customers and the environment?

Skilled, prepared employees do not happen by accident. This workshop will explore the diverse components that ensure workforce sustainability, followed by five different experiences across three continents. The session is going to include presentations on candidate development (*Nora Hanke*, EWSETA-ZA); staff development, with a focus on diversity (*Anne Farquhar*, Yarra Val har, Yarra Valley Water-Australia; and *Bhakti Devi*, Sydney Water-AU); and technical training (*Philip Giantris*, *Shukalb-AL* and *Joel Solikume* from PHWC - NG). Workshop participants will divide into three workgroups (candidate development, staff development, and technical training) to discuss their programs in this areas, challenges and lessons learned, and how IWA can help them move forward

Chair: Gerard van den Berg KWR, NL How do we accelerate the development, uptake and implementation of self-sufficient water systems?

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

Track 5: Water Quality, Safety & Human Health

Track 4: Enabling Progress

Climate change and urban population growth negatively affect freshwater availability. Self-sufficient water systems increase the resilience of industries, agriculture and drinking water supply, but initiating a breakthrough of such systems is difficult. This workshop starts with five pitches by Pau Jeffrey (Cranfield University, UK) on the human, natural and technological dimensions of water management; Christos Makropoulos (NTUA, GR) on knowledge sharing; Klaasjan Raat (KWR, NL) on uptake of ASR by the greenhouse industry; Seunghak Lee (KIST, KR) on drivers to initiate large scale ASR demonstrations, and Petra Ross (Arcadis, NL) on valorisation of water innovations. The following discussion focuses on strategies for largescale market uptake of subsurface water solutions to promote self-sufficient

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

PRICING POLICIES AND HUMAN RIGHTS

Room P2 Workshop

IN A WATER SCARCE WORLD

Chair: Ed Smeets Edmadi BV, NL

How do we improve and enlarge statistical information for pricing policies?

Using information from the international survey performed by the IWA Specialist Group on Statistics and Economics, as well as case studies, we will analyse cost optimisation, tariff affordability and possible measures to adopt in the future. Ed Smeets (Edmadi BV, NL) will introduce the workshop context; Teodor Popa (Romanian Water Association, RO) gives a bird's eye view of the water tariffs used in different countries and other key findings of the survey; Anita Bento Ferreira (EPAL, PT) gives a case study of water pricing and the social tariffs in a country facing water scarcity; Guillermo
Donoso (Pontificia Universidad Católica de Chile, CL) will explain the water tariff system, and how the human right to water is ensured even in severe

PROTECTION OF WETLAND, ECO-SYSTEMS **SERVICES FROM WATER QUALITY RISKS**

Room P3 Workshop

Chair: Stuart Bunn Griffith University, AU

water systems.

How do ecosystem services and risk management tools help deliver the SDGs?

Healthy water-related ecosystems and adequate water quality are essential for livelihoods and human health, mostly in areas of low socio-economic development. Wetlands and water quality are interlinked: wetlands can be at risk from poor water quality but can also be vital to improve it. We explore interlinkages and risk management tools to ensure both ecosystem services and human health in achieving the Sustainable Development Goals, particularly on ambient water quality, wastewater treatment and protecting and restoring water-related ecosystems with presentations by *Paul Gle* (UNEP-DHI Partnership, AU) and *Bushra Nishat* (IWA), and a panel discussion where they will be joined by Stuart Bunn (Griffith University, AU); Simon FungeSmith (FAO); Brian D'Arcy (Abertay University, UK); Mike Ronan and Fernanda Adame (Queensland Government, AU)

Coffee Break

15:00 - 15:30

Closina Ceremony 15:30 - 17:00

Fellows Panel / YWP Panel Great Hall 02

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Thursday

Keynote Plenary

09:00 - 09:45

Can the Water Microbiome Save the Biohealth of the Planet?

Great Hall 02

Coffee Break Session 1

09:45 - 10:30 10:30 - 12:00

NOT WAITING FOR A CRISIS: DRAWING LESSONS FROM EFFECTIVE BEHAVIOUR CHANGE COMMUNICATION IN PRACTICE Room P4 Workshop

Room P5 Lecture

Room P5

Lecture

Great Hall 02

Chair: TBC

Do we need to wait for a crisis to start behavior change campaigns?

Increasingly, we recognise the need to go beyond tradition forms of communication to address demand management and water security. Yet, approaches to behaviour change are fragmented and lack integration in the design and management of service delivery. High profile water crises, such as California and San Pablo, have delivered major behaviour change components in their responses. In 2011, Brisbane was similarly gripped by a water crisis, and behaviour change measures targeted decreases in household usage. Targets were met and maintained even after the drought had abated. But why wait for a crisis? This workshop gives an expert overview of behaviour change, followed by an interactive round table discussion distilling key lessons for effective behavior change strategies

ABATEMENT OPTIONS FOR MIXTURES OF EMERGING CONTAMINANTS

Chair: Dr Piet Filet QUT Business School, AU

Chair: Stefan Kools KWR. NL

Should we be worried about emerging contaminants?

Emerging contaminants, the threats they pose and how to deal with them are not fully understood. The lecture will highlight state-of-the-art knowledge on the subject and present some examples of prioritisation efforts on chemicals in the environment. Solutions-focused, we will focus on possible technological and non-technological abatement options throughout the chemical life cycle to improve water quality. The removal efficiencies are presented from gathered information, for example made available by the Watershare tool AbetES. The data and various abatement options will be discussed with the audience, based on the existing assessments regarding their efficiencies to improve water quality and their potential for implementation. This Master lecture will be of particular interest to water quality managers.

What is a Charrette and how can it make planning more effective?

disciplines and communities to identify key actions. A planning charrette enables this collaborative approach. This workshop highlights 4 charrette approaches: *James Davidson* and *Sam Bowstead* (South East Queensland

WaterFutures, AU) look at combined flood and drought options for Brisbane; WaterFutures, AU) look at combined flood and drought options for prisoan Dr Briony Rogers (Monash University, AU) discusses a shared vision for a water sensitive Melbourne; Dr Assela Pathirana (UNSECO-IHE, NL) investigates climate adaptation for water supply of Ho-Chi-Minh City; and Prof Jeroen Rijke (UNESCO-IHE, NL) looks at the implementation of

measures for a Water Sensitive Rotterdam. Small groups will question how

each derived their results; a panel will describe how the charrettes advanced their solutions, highlighting the range in effectiveness of the approach.

Solutions to complex water issues require diverse views from across

Lunch

12:00 - 13:30

Session 2

13:30 - 15:00

REDUCING NON-REVENUE WATER AND ENERGY COSTS FOR UTILITIES

Room P4 **ADDRESSING COMPLEXITY IN WATER** Workshop THROUGH DESIGN THINKING

Chair: Kenneth Thompsom CH2M, US

How do we Reduce Non-Revenue Water and Energy Costs for

It has been estimated that the average amount of non-revenue water for utilities worldwide is around 30%, which impacts the cost of service and overall water resources management. Non-revenue water can be associated with pipeline resources management. Non-revenue water can be associated with pipeline breaks, old leaking infrastructure, water theft, poor metering techniques, and operations such as distribution system flushing, fire demand. Eighty percent of the non-labor cost of water is associated with energy for treatment and pumping, creating a very strong link between water and energy. This highlights the importance of reducing water loss for utilities located in dry and wet climates because of the impact on their overall cost of service. The purpose for the workshop will be to highlight the latest approaches to reducing non-revenue water. Presemtations from Amir Telog (Takadu, IL), and Attila Stahlot (Queensland Urban Utility, AU), Keith Hilson (i2o, UK), Raju Dharani and Aed MacPhaidin (Queensland Urban Utilities, AU), Russell Considine (Itron, AU)

Coffee Break

15:00 - 15:30

Closing Ceremony

15:30 - 17:00

Fellows Panel / YWP Panel

Lunch

12:00 - 13:30

Session 2

Thursday

Keynote Plenary

Coffee Break

13:30 - 15:00

HOW TO ENGAGE STAKEHOLDERS IN THE WATER SECTOR

Career Development Hub

Learning

Organisers: IWA, Seqwater, Engagement Plus Chairs: Robert Goedecke Seqwater, AU Michelle Feenan Engagement Plus, AU

Programme

09:00 - 09:45

09:45 - 10:30

To shape the future of the water sector, we must look to develop solutions which are adaptable to the changing environment. This requires collaboration, leadership, and extensive stakeholder engagement throughout decision making processes. Stakeholder engagement is not an easy skill to develop. Further, it is recognised that this skill is becoming increasingly important in all aspects of the water sector. Experts in Stakeholder Engagement will provide you with insights into their profession, while Seqwater's Water Security Program will be used as a practical exercise for delegates to learn how to map stakeholder influence and interest as well as develop the engagement goal that will help drive the stakeholder engagement process.

Coffee Break

15:00 - 15:30 15:30 - 17:00

Closing Ceremony

Track 1: Cities, Utilities & Industries Leading Change

Track 2: Water & Wastewater Processes & Treatments Track 3: Re-charting the Course of Water Resources

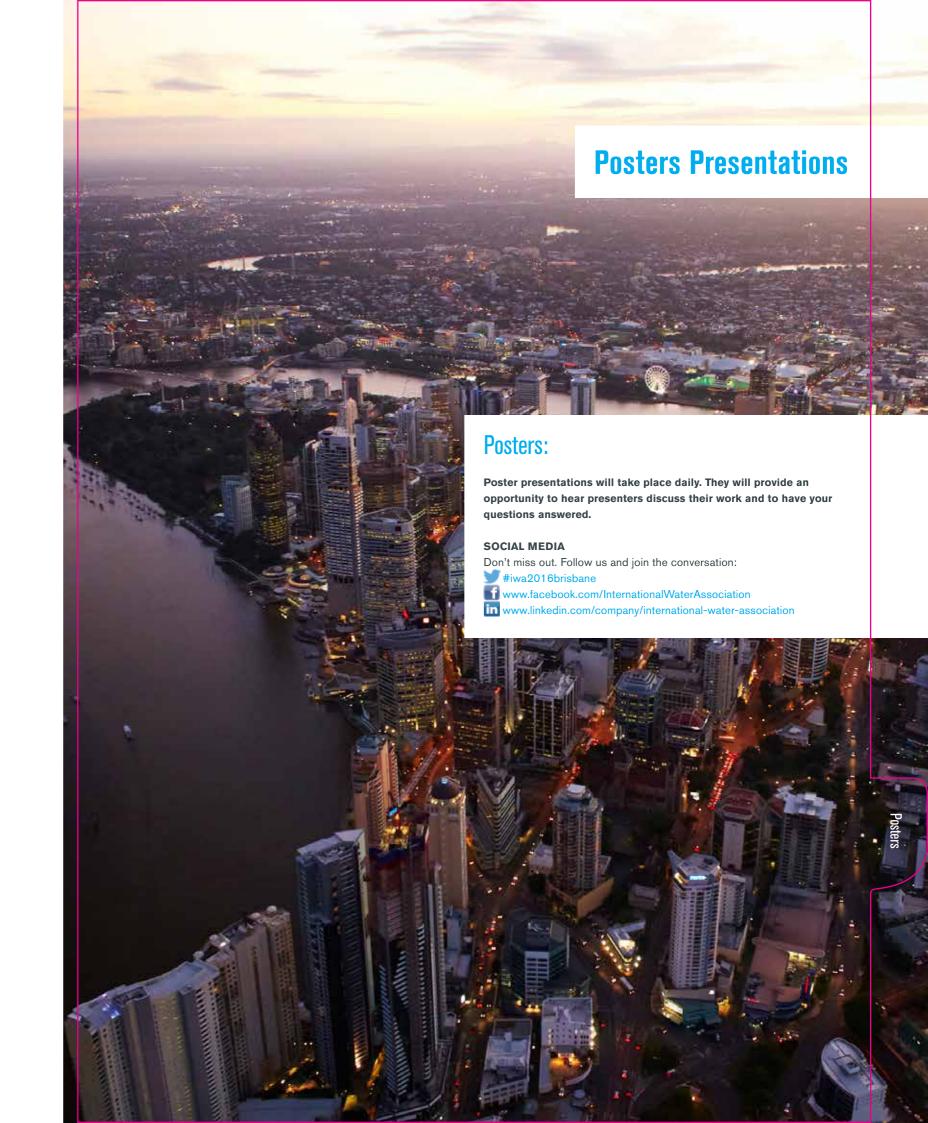
Track 4: Enabling Progress

Track 5: Water Quality, Safety & Human Health

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Business Forums

Thursday



Track 1: Cities, Utilities & Industries Leading Change
Track 2: Water & Wastewater Processes & Treatments
Track 3: Re-charting the Course of Water Resources

Track 5: Water Quality, Safety & Human Health

Track 4: Enabling Progress

Stage 1		Sta	ge 2	
Monday		Mor	nday	
09:45 - 10:30	Poster 1 - 14	09:45	i - 10:30	Poster 220 - 234
12:00 - 13:30	Poster 15 - 43	12:00) - 13:30	Poster 235 - 264
15:00 - 15:30	Poster 44 - 52	15:00	0 - 15:30	Poster 265 - 274
17:00 - 17:15	Poster 53 - 57	17:00) - 17:15	Poster 275 - 279
Tuesday		Tues	sday	
09:45 - 10:30	Poster 58 - 71	09:45	i - 10:30	Poster 280 - 292
12:00 - 13:30	Poster 72 - 100	12:00	0 - 13:30	Poster 293 - 327
15:00 - 15:30	Poster 100 - 109	15:00	0 - 15:30	Poster 328 - 337
17:00 - 17:15	Poster 110 - 113	17:00) - 17:15	Poster 338 - 341
Wednesday		Wed	dnesday	
09:45 - 10:30	Poster 114 - 129	09:45	i - 10:30	Poster 342 - 356
12:00 - 13:30	Poster 130 - 159	12:00	0 - 13:30	Poster 357 - 386
15:00 - 15:30	Poster 160 - 169	15:00	0 - 15:30	Poster 387 - 396
17:00 - 17:15	Poster 170 - 174	17:00) - 17:15	Poster 397 - 410
Thursday		Thu	rsday	
09:45 - 10:30	Poster 175 - 189	09:45	i - 10:30	Poster 411 - 422
12:00 - 13:30	Poster 190 - 219	12:00) - 13:30	Poster 423 - 439

Poster Presentations

Each author introduces the poster in a three minute long pitch. Poster sessions are grouped by thematic track, with two simultaneous sessions taking place in two stages in the Hall 1 Concourse and the Great Hall Concourse (Foyer Level).

Poster Awards

Explore the Hall 1 Concourse and the Great Hall Concourse (Foyer Level), download the digital version of each poster through the mobile App and digital proceedings. Follow the instruction in the voting card available in your satchel. The votes between Monday and Wednesday will define which are the best posters. The winners will be awarded during the plenary session on Thursday afternoon.

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through innovation, education and engagement

The University of Queensland understands the water challenges facing our planet. Scientific discovery, technological innovation, strategic research partnerships, and practical policy application are creating a more sustainable future for us all.

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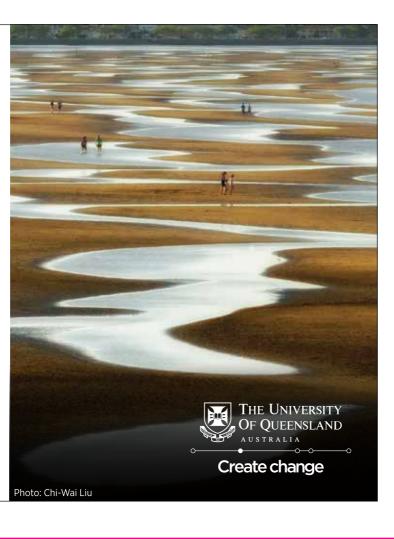
- Water for productive economies
- Water for cities
- Water for the environment
- Water-resilient communities

Learn more at gci.uq.edu.au/sustainable-water-researchers









Poster Presentations

1	3259332	AU	Singapore's Deep Tunnel Sewerage Scheme Phase 2 - Planning And Preliminary Design James Currie Black & Veatch
2	3261405	IR	A New Model For Short-Term Water Demand Forecasting (Case Study: Water Distribution System Of Tehran City) Ali Dolatshahi-Zand NWW
3	3261414	HK	Sustainable Energy Management In Hong Kong's Water Supply System Tai On Lee Water Supplies Department, HKSAR
4	3262176	BR	Removal Of Pharmaceuticals From Waters By Means Of Chlorine Oxidation Marcelo Libanio Federal University of Minas Gerais
5	3262525	JP	From Safe, Better-tasting Tap Water Project To Tokyo Waterworks Innovation Project, for Further Evolution And Promotion Yasuhiro Kojima Tokyo Waterworks Bureau
6	3265890	CN	Promoted Discoloration Of Methyl Orange In Fe(III)/H2O2 Fenton System: Effects Of Gallic Acid On Iron Cycling Huiyu Dong Chinese Academy of Sciences
7	3266093	CN	Sorption And Biodegradation Of Sulfamethoxazole By Sulfate-reducing Bacteria Activated Sludge In Anaerobic Wastewater Treatment Hui Lu Sun Yat-Sen University
8	3266161	KR	Assessment Of PAH Risk By Potential Contamination Of A Drinking Water Source By The Rim Fire Yongju Choi Seoul National University
9	3266420	AU	Macro Asset Criticality - How To Assess Thousands Of Assets In A Few Weeks? Zoubir Ait Mansour SUEZ
10	3266434	AU	Operationalising Sustainable Development Goals For Water Management Tony Wong Cooperative Research Centre for Water Sensitive Cities
-11	3266455	JP	Study Of The Pipeline Renewal Priorities Based On The Deterioration And Structure Of The Water Distribution Network Kunizane Takaharu Tokyo Metropolitan University
12	3266457	CN	Effects Of Nitrogen And Organic Carbon Sources On Regulation Of Lipid Accumulation Of Chlorella Pyrenoidosa Wenyan Liang Beijing Forestry University
13	3266574	CN	Physical Properties Of Anaerobic Sludge Granules As Hydrogels In A Synchronous Started-up Anaerobic Baffled Reactor Yili Wang Beijing Forestry University
14	3267121	NG	Simulation Model In Markovian Decision Theory In Allocation Optimization In Multi-purpose And Multi- Objective NRBD Luke Eme Chukwuemeka Odumegwu Ojukwu University
15	3267148	NG	Simulation Modeling In Markovian Decision Theory In Conjunctively Managed Competitive Multi Purpose A/IRBEDS, Nigeria Luke Eme Chukwuemeka Odumegwu Ojukwu University
16	3268482	DK	Establishing Best Bractise Methods For Climate Adaptation Project Design And Implementation In Urban Areas Michael Tengnagel Ramboll
17	3268984	AU	How To Leverage Existing Systems To Transform A Traditional Network Into An Intelligent Water Network Ranga Fernando Yarra Valley Water
18	3268991	JP	Occurrence Of Musty Odor In Clean Upper River Due To Benthic Cyanobacteriua: - Occurrence And Behavior In River Shinichi Kimura Bureau of Waterworks, Tokyo Metropolitan Government
19	3268995	AU	Towards Practical Implementation Of In-situ Electrochemical Generation Of Iron And Caustic For Sulfide Control In Sewers IIje Pikaar Advanced Water Management Centre, The University of Queensland
20	3269021	AU	Adaptation Pathways For Maintaining Ecological Objectives Of Urban Wetlands In A Drying Climate Amar Nanda The University of Western Australia
21	3269027	KR	Comparison Of TOC Based Refractory Ratio Of Swine Manure With Traditional Index Seong-Wook Oa Woosong University
22	3269033	NL	The Green Village: Water Infrastructure In An Innovation Pilot, Water Out, Shit In Peter van Thienen KWR Watercycle Research Institute / Wageningen University
23	3269133	JP	Sewarage To Support The Attraction Of Tokyo -Its Contributions And Vision Yui Saito Tokyo Metropolitan Government
24	3269187	JP	Characteristics Of Biofilm Of Anaerobic Fluidized Bed Reactor Using Activated Carbon Carrier Junta Takahashi Swing Corporation
25	3269223	PL	Aeration Performance Of Vortex Flow Regulators: Pilot Scale Experiments Patryk Wójtowicz Wrocław University of Technology
26	3269265	KR	Estimation Of Markov Deterioration Hazard Model For Water Pipeline Systems Using Bayesian Inference Hwisu Shin University of Seoul
27	3269277	JP	A Study Of The Anti-Corrosion Effects Of Intermittent Electric Current By Electrolytic Corrosion Prevention Equipment Yuichiro Tsuyuki Yokohama Waterworks Bureau
28	3269466	CN	Determination Of Trace Trimethylamine in Ambient Air By Headspace-Gas Chromatography Dezhi Sun Beijing Forestry University
29	3269538	CN	Degradation Of Sulfamethoxazole In Aqueous Solution By G-C3N4 Under Visible Irradiation Jiayu Tian Harbin Institute of Technology
30	3269569	FI	Customer- And Citizen-Oriented Water Services As Part Of Utility Core Activities Tapio Katko Tampere University of Technology
31	3269588	CN	The Successful NRW Reduction Experience In Dongjiang Water Utility Lu Yuchen SZWG Shenzhen Water Group co. ltd
32	3269589	IR	The Effect Of Square Pore Alteration On Mesh Efficiency Of Standard Fog Collector Zahra Elmi Sistan and Baluchestan Water and Waste Water Company
33	3269727	AU	Managing Abnormal Peaks In Wastewater Loads In Treatment Plant Influent Using Biologocal Process Capability Assessmet Raju Mangalam Sydney Water Corporation
34	3269728	AU	Technological And Community Water Efficiency Strategies For Addressing Water-energy Demand In Remote Australian Towns Cara Beal Griffith University
35	3269732	AU	Investigation Of Cohort Properties For Australian Cast Iron Water Mains Rui Jiang Monash University
36	3269740	KR	The Waterless Portable Private Toilet (WPPT): An Innovative Sanitation Solution In Disaster Zones Mooyoung Han Seoul National University
37	3269776	AU	Trading For A Better Future Of Moreton Bay: QUU's Nutrient Emission Abatement Roadmaps Elaine Pang Arup
38	3269781	JP	Towards The Sustainable Waterworks Facilities For The National Capital Of Japan Makoto Kakinuma Bureau of Waterworks, Tokyo Metropolitan Government
40	3269805	AU	Australian Water Consumer Outlook: Summary And Insights Daniel Lambert Arup
41	3269835	AU	Demand Management: The Dollars And Sense Daniel Lambert Arup
42	3269841	AU	Risk Based Management Of A Critical Steel Main Roberto Mascarenhas Queensland Urban Utilities
43	3269846	AU	Adsorption Of Pb2+ Ions From Aqueous Solutions By Biochar Derived From Date Seed Biomass Zainab Mahdi Griffith University
44	3269852	AU	Aerobic Biodegradation And Sunlight-induced Photodegradation Of Micropollutants In Wastewater Effluents Yufei Wang RMIT University
45	3269868	AU	Burgeoning Brisbane: Post-flood Planning And The Tensions With Multi-residential Development. Samuel Bowstead The University of Queensland
46	3269887	JP	Reduction Of Gas Consumption In Sludge Incinerators Shuhei Awakawa Tokyo Metropolitan Sewerage Service Corporation
47	3269897	AU	Novel application of fluorescence measurement for optimized algal monitoring Sara Imran Khan UNSW

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48	3269921	NL	Optimal Design Of A Real-life Drinking Water Transport Network Blueprint Using Gondwana Peter van Thienen KWR Watercycle Research Institute
49	3269976	ES	A New Methodology To Measure Resilience In Water Supply Systems Francisco Cubillo Canal de Isabel II Gestión
50	3269980	IR	Indicators Of Quality Control In Bacteriological Laboratory Drinking Water Mahboubeh Kalateh Rural Water and Wastewater Company of Khorasan Razavi
51	3270004	AU	Lessons Learnt From Laboratory Pipe Burst Tests Jayantha Kodikara Monash University
52	3270080	CN	Applying SUSTAIN To Evaluate The Runoff Control Effect Of LID Practices In A Residential Region Tao Chen Beijing University of Civil Engineering and Architecture
53	3270089	JP	Development Of An Internal Drop-Pipe Device For Combined Sewer Systems Yukihiro Ishikawa Tokyo Metropolitan Sewerage Service Corporation
54	3270101	JP	Development Of "Siphon-Culvert Survey And Cleaning Apparatus" For Planned Maintenance Tatsuya Amano Tokyo Metropolitan Sewerage Service Corporation
55	3270102	IT	Microalgal Based Treatment Of Digested Agro Wastes - Lab And Pilot-scale Experiments Francesca Marazzi Università degli Studi di Milano Bicocca
56	3270118	JP	Development And Verification Of New Pressure-Relief Device Strengthened The Function Of Anticorrosive/Deodorizing Naokata Uemura Tokyo Metropolitan Sewerage Service Corporation
57	3270398	CN	Spatial Distribution, Risk Assessment And Potential Sources Of 25 VOCs In Water In Aksu Region, China Jin Luo Tsinghua University
58	3270399	JP	Research On The Application Of Flush Gate To Sewage Pipelines Kazuya Yamada Japan Institute of Wastewater Engineering and Technology
59	3270403	AU	Floating Finsbury: A Costed Case Study For Amphibious Construction In Brisbane Samuel Bowstead James Davidson Architect
60	3270433	CN	The Adsorption Behavior And Mechanism Of Pb(II) Removal By Extracellular Polymeric Substances From Klebsiella Sp. J1 Ang Li Harbin Institute of Technology
61	3270573	AU	Control The Hydrogen Sulphide Emission In Sewer By Combination Of Slight PH Adjustment And Lower Iron Salt With The Minimum Dosage Arumugam Sathasivan Western Sydney University
62	3270598	SG	Field Monitoring Of The Performance Of A Modular Bioretention Tree System In A Tropical Climate Jiangyong Hu National University of Singapore
63	3270632	AU	How Effective Is Water Price Signalling In Remote Australian Indigenous Communities? A Novel Charging Trial Nadine Riethmuller Power and Water Corporation
64	3270659	ES	A Reliable Model Of Residual Useful Life For Distribution Assets Patricia Gomez Canal de Isabel II Gestión
65	3270766	KR	Development Of Treatment System Of First Flush Effect For Urban Area Using Underground Settling And Filtration System Dongil Seo Chungnam National University
66	3270782	BE	The Use Of Alternative Physical Water Treatment Devices For The Prevention Of Scale Build-up In An Industrial Freshwater Boudewijn Meesschaert KULeuven
67	3270801	JP	Year-round Operation Result Of A Full-scale On-site Hydrogen Refuelling Station From Sewage Sludge Digestion Gas Ryo Matsumoto National Institute for Land and Infrastructure Management
68	3270812	KR	Development Of Integrated Management System For Efficient Operation Of First Flush Treatment System For Urban River Dongil Seo Chungnam National University
69	3270905	CN	Effects Of Combined UV And Cchlorine Treatment On The Chloroform Formation From Triclosan Weiwei Ben Chinese Academy of Sciences
70	3270962	AU	Developing Shared Visions And Strategies: Participatory Processes To Guide Water Sensitive City Transitions Briony Rogers Cooperative Research Centre for Water Sensitive Cities, Monash University
71	3270987	DE	Optimization Of The Pipe Section Reactor Based On The Computational Fluid Dynamics Analysis Pei Hua Institue of Urban Water Management, TUD
72	3270993	UK	Collaborative Innovation In The Water Sector: Approaches And Advantages Vanessa Speight University of Sheffield
73	3271012	CN	A Model For Predicting Transformation Of Pollutant In Sewer System Pengkang Jin Xi'an University of Architecture and Technology
74	3271844	FR	Long Term Non Revenue Water And Network Management Didier Carron Naldeo
75	3273026	FR	Technical Intelligence: A New IT Concept For Driving Efficiency Of A Water Service Didier Carron Naldeo
76	3273069	NL	Adaptation Mainstreaming To Save Money For Achieving Flood Resilience In Cities Jeroen Rijke UNESCO-IHE
77	3273354	KE	Treatment Of Dairy Industrtial Effluents Macharia L.N. Lucy Macharia Nairobi Water and Sewerage Company
78	3273597	UK	Numerical Model Development For Variably Saturated Constructed Wetland System For Urban Stormwater Treatment Akintunde Babatunde Cardiff University
79	3273617	PT	"The Emergence Of The Water Supply System Efficiency. The Situation In Portugal And The Opinion Of The Portuguese Municipalities" Octavio Almeida Open University - Lisbon - Portugal
80	3273636	AU	Visuals That Engage People With Water Sensitive Cities Tracy Schultz University of Queensland/CRC for Water Sensitive Cities
81	3273652	UK	Influence Of Key Design And Operational Variables On Pollutant Removal In Experimental Stormwater Constructed Wetlands Akintunde Babatunde Cardiff University
82	3273686	JP	Duplexing And Networking Of Pipelines To Prepare For Risk Kazuhisa Fujikawa Bureau of Waterworks, Tokyo Metropolitan Government
83	3273761	CN	Spatial Distribution, Risk Assessment And Potential Sources Of 25 VOCs In Water In Aksu Region, China Jin Luo Tsinghua University
84	3273842	MN	Water Quality & Supply In The Southern Gobi In Mongolia Chandmani Dambabazar Altai Ubur Gobi Water Basin Administration
85	3273969	MX	Circular Economy And Restoration Of Water Cycle: Two Tools Towards Water Sustainability Jose Gleason University of Guadalajara
86	3274140	KR	Degradation Of Medically-important Pharmaceuticals Found In Wastewater By Microorganisms Using Triple Quad LC-MS/MS Ryan De Sotto Korea University
87	3274221	US	Using Big, Regional-scale Water-quality Databases To Improve Catchment-scale Model Predictions Mi-Hyun Park University of Massachusetts, Amherst
88	3275440	NL	Valuation Of Adaptation Pathways For Urban Flood Risk Management Mohanasundar Radhakrishnan UNESCO-IHE Institute for Water Education, Delft, The Netherlands; CRC for Water Sensitive Cities, Australia
89	3275622	DK	Life Cycle Assessment Of Cloudburst Management Plans In Adaptation To Climate Change In Copenhagen, Denmark Martin Rygaard Technical University of Denmark
90	3279352	FR	Advanced Pressure Management Didier Sinapah SUEZ
91	3279586	CN	Chemical And Microbial In Situ Analysis Of The Oil Contaminated Underground Water At Different Depths Sidan Lu Beijing Normal University
92	3285300	CN	The Monitor And CFD Simulation Of Flow Field In A Variable-velocity Oxidation Ditch By Trepanning Pengkang Jin Xi'an University of Architecture and Technology
93	3285715	AT	Preparing Urban Water Utilities For Droughts Roland Liemberger Miya

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Poster Presentations

95	3286674	NL	Unified Framework For Managing Adaptation Deficits In Secondary Cities Assela Pathirana UNESCO-IHE Institute for Water Education. CRC for Water Sensitive Cities
96	3286679	CN	Dissolving Scale Experiment Of Microorganism With High-Yield Of Carbonic Anhydrase Jiang Yu Ye Chongqing University
97	3287105	CY	Towards Sustainable NRW Reduction: An Innovative Approach Bambos Charalambous J2C Water
98	3293704	IR	Treatment Of Detergent Industries Wastewater Keshavarzi Hossein Abadi Mahshid Village Water & Wastewater Company
99	3294148	CN	Application Of Ultra-Low-Pressure Nanofiltration In Advanced Treatment Of Wastewater Formed In Membrane Manufacture Pan Dai Beijing OriginWater Membrane Technology Co., Ltd.
01	3302393	AU	A Data-Driven Platform For Water Pipe Failure Prediction Zelin Li Data61
02	3302531	AU	Data-Driven Long-Term Failure Prediction For Reticulation Water Main Bang Zhang NICTA
03	3304870	AU	Is The Science And Data Underpinning The Rational Method Robust For Use In Water Sensitive Urban Catchments? Tony McAlister Urban Water Cycle Solutions
04	3306397	AU	Water Data And Information To Better Prepare For Water Security And Future Challenges Amgad Elmahdi Bureau of Meteorology
05	3306895	AU	All Models Are Wrong, Some Are Useful. The Case For Operational Modelling Of Water Supply Systems Ann Pugh Innovyze
06	3306920	AU	ServAqua: Towards A Customer Focused Service Quality Model For Water Utilities Peter Prevos Coliban Water
07	3306941	AU	Electromagnetic Treatment Of Hydroponic Media Enhances Lettuce Growth And Prevents Crop Loss At High EC Robert Moore RMIT University
08	3307652	AU	The Optimisation Study Into The Operation Of Wivenhoe Dam: A Review Gregory McMahon G M McMahon Consultants
09	3307659	AU	The 2053 South East Queensland Flood: Only Young Water Professionals Need Attend Gregory McMahon G M McMahon Consultants
10	3308560	AU	Business Rules For Operating The Desal Plant Nathan Taylor CEDA
11	3308595	AU	Evaluating Long-Term Surface Water Impacts Of Open Pit Mining In Australia Krey Price MWH Global
12	3309691	AU	Streamlined Concept Design Of A Dairy Wastewater Brine Management Process Utilising AqMB <startsup>TM<endsup> Designer Simulation Software Krey Price GHD Pty Ltd</endsup></startsup>
13	3408073	CN	Application Of Ultrasound And Quartz Sand For The Removal Of Disinfection Byproducts From Drinking Water Mingxin Huo Northeast Normal Universty
14	3231692	JP	Effects Of PH And Coexisting Chemicals On Photolysis Of Perfluorooctane Sulfonate Using An Excited Xenon Dimer Lamp Naoyuki Kishimoto Ryukoku University
15	3242623	DK	Dynamic Reservoir Control: Applied Smart Grid For Drinking Water Troels Kaergaard Bjerre VCS Denmark
16	3246434	IR	Removal Of Turbidity From Drinking Water Using An Innovative Membrane Filter Hojatollah Elahi Khorasan Razavi Rural Water and Wastewater Company
17	3246721	IR	A Colorimetric Aptasensor For Rapid Detection Of Escherichia Coli O157:H7 Hassan Masoudi Khorasan Razavi Rural Water and Wastewater Company
18	3254502	EG	Effluent Wastewater Treatment For Reuse Using Soil Aquifer Treatment Mahmoud Elsheikh Menoufia University
19	3254930	US	Computer Models Aids Selection Of Optimal Coagulants Alex Yavich Optimization Solutions Environmental, LLC
20	3254976	US	Adapting Conventional Water Treatment For Increasing Concentrations of NOM In Surface Water Supplies Alex Yavich Optimization Solutions Environmental, LLC
21	3256422	IR	Review Of Drinking Water Disinfection Systems Of Islamic Republic Of Iran Zahra Alizadeh National Water and Wastewater Engineering Company
22	3258902	IR	Sodium Chloride Standard Preparation For On-site Hypochlorite Generation In Iran Zahra Alizadeh National Water and Wastewater Engineering Company
23	3260318	DE	Synergistic Effects Using Ozone, UV And Advanced Oxidation In Multi Barrier Treatment Processes Louis Wiart Xylem Inc.
24	3261498	TW	Photoelectrochemical Oxidation Of Ibuprofen Via Cu2O-doped TiO2 Nanotube Arrays Yen-Ping Peng Tunghai University
25	3262340	CA	
	3262379		Drinking Water Production By Using Combined Ozonation And Ultrafiltration Membrane Processes Laleh Yerushalmi Dagua Technologies Inc.
26		IR	Solar Disinfection Of Water For Rural And Small Communities In Iran Ardavan Niknam Water and Wastewater Company
27	3262575	SG	Design And Operation Of Low Energy Membrane Bioreactors <i>Guihe Tao</i> PUB Singapore Pd-Fe/graphene Catalyst Synthesized By UV-assisted Photocatalysis And Its Application In Multifunctional Gas-diffusion Cathode For 4-chorophenol Degradation
28	3263539	CN	Bian Zhaoyong College of Environmental Science and Engineering, Beijing Forestry University
29	3263661	CN	The Linkage Between Elevation And Activated-sludge Microbial Community Along A 3,600-meter Elevation Gradient Lingiong Wang Hohai University
30	3264542	JP	Applicability Of Sewage Heat For Improvement Of Nitrification Performance Of A Trickling Filter Kanda Ryo Ryukoku University
31	3264619	TW	The Effect Of Permanganate Preoxidation Combined With Coagulation On UF Membrane Fouling Control Hsuan-Hsien Yeh National Cheng Kung University
32	3265864	CN	Key Factors Affecting The Removal Of Iopamidol By Zero-valent Iron Of Different Sizes Wan-Qian Guo Harbin Institute of Technology
33	3265895	JP	Why High Adsorption Capacity Of Micro-pollutants On Super-fine Activated Carbons: Adsorbate And Adsorbent Properties Matsui Yoshihiko Hokkaido University
34	3266481	JP	Removal Of Bromophenols By Slow Sand Filtration And UV Irradiation Keiko Katayama-Hirayama Univ. of Yamanashi
35	3266546	JP	The Basic Energy Plan For Sewerage Works Of Tokyo "Smart Plan 2014" Kinji Yamada Tokyo Metropolitan Government
36	3266571	CN	Highly Efficient Phosphate Removal Based On La(OH)3 Nanorods In Nanofibers Jiaojie He Harbin Institute of Technology
37	3266589	JP	Caisson Work At The Senjusekiya Pumping Station Simultaneous Installation Of Two Caissons Ryota Okazaki Tokyo Metropolitan Government
38	3266728	BR	Proposal And Application Of A Performance Indicators System For Water Treatment Plants Focusing On Service Provider Marcelo Libanio Federal University of Mini-Gerais
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40	3266752	CN	Manipulating The Efficacy Of Oxone-MnOx/SBA-15 Aquatic System For Degradation Of Emerging Contaminants Jia-Cheng Yang Chinese Academy of Sciences
41	3266776	CN	Ultradispersed TiO2 Nanocrystals/graphene Nanocomposites With High Photocatalytic Activity For Dye Degradation Jiayu Tian Harbin Institute of Technology
42	3266794	CM	Plurality Effect Of Light, PH And Artemisia Annua Extract On A Fecal Bacterium In Aquatic Microcosm Moïse Nola University of Yaoundé

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145	3267128	CN	Pd-Cu/TiO2 Nanofiber Catalyst For Selective Reduction Of Water Phase Nitrates Wei Wang Harbin Institute of Technology
146	3268954	AU	Risk Based Approach To Safe Land Application Of Melbourne's Biosolids, Quantitative Risk Assessment Of Potential Hazards Philip Wilkie Melbourne Water
147	3268996	JP	A Basic Study On Risk And Performance Evaluation Of Wastewater Reclamation Systems Toshiki Fukushima Metawater Co.,Ltd.
148	3268998	AU	Fertiliser Drawn Forward Osmosis Process: Pilot-scale Desalination Of Mine Impaired Water For Fertigation Hokyong Shon University of Technology Sydney
149	3269008	JP	Aeration Control By Real Time Nitrification Control Using Activated Sludge Model Mitsuharu Nishiyacchi Tokyo Metropolitan Government
150	3269014	JP	Pretreatment Effect In The Removal Of Organic Substances For SWRO Kazuaki Shimamura Swing Corporation
151	3269019	CN	Arsenic Removal By The Pre-oxidation And Nanofiltration Membrane Hybrid Process Guangshan Zhang Harbin Institute of Technology
152	3269037	US	Evaluation Of The Efficiency Of Moringa Oleifera Products As Natural Adsorbents Of Heavy Metals In Contaminated Wastewater Franklin Obeng Sika Polytechnic of Namibia
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159	3269239	CN	Inhibit Bromate Formation In Ozonation Of Bromide-containing Water By LaFeO3/mesoporous Silica Material As Catalyst Fei Qi Beijing Forestry University
160	3269240	TR	Effect Of Guluronic Acid Content On Turbidity Removal Potential Of Bacterial Alginate F. Dilek Sanin Akdeniz University
161	3269260	CN	Study On Adsorption Of Ciprofloxacin& Enrofloxacin Onto Activated Carbon Hao Fu Tsinghua University
162	3269275	CN	A Review Of Sensitivity Analysis Methods In Water Environment Modeling Yuanzheng Zhai Beijing Normal University
163	3269313	JP	Full Scale Application Of New Type Anaerobic Fluidized Bed Process For Treatment Of "Hard To Form Granule" Wastewater Takaaki Tokutomi Kurita Water Industries LTD.
164	3269320	ZA	A Fuzzy Logic Benchmark For A Membrane Bioreactor Treating Furfural Wastewater: Simulating PH Control. Kriveshin Pillay Institute For Water and Wastewater Technology
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170	3269615	PL	Application Of Carbon Nanotubes Adsorption And Ultrafiltration For The Removal Of Metolachlor From Aqueous Solution Malgorzata Szlachta Wrocław University of Technology
171	3269633	SE	Intelligent Wastewater Pumps - The Next Pump Industry Breakthrough Stefan Abelin Xylem Water Solutions AB
172	3269638	MX	Role Of Suspended Solids In Wastewater On The Inhibitory Effect Of ZnO NPs In The Macronutrient Removal By CAS Germán Cuevas-Rodriguez University of Guanajuato
173	3269645	DE	Elimination Of Micropollutants And Antibiotic Resistant Pathogens During Ozonation Ira Brückner WVER
174	3269656	PL	Is The Application Of Biosolids A Beneficial Or Disruptive Waste Management For Soil? A Case Study Of Risk And Benefits Anna Grobelak Czestochowa University of Technology
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182	3269856	MX	Biosorption Of Cr (VI) Using Nitrifying-Denitrifying Consortia, Chitosan Cross-linking Beads And Hybrid System Karina Coronado Apodaca Instituto Tecnológico de Sonora
183	3269901	TW	Removal And Adsorption Characteristics Of Dimethyl Phthalate From Aqueous Solutions Using Electrocoagulation Wei-Lung Chou Hungkuang University
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189	3270069	JP	Factors Influencing Nitrogen Removal In A Single Chamber MFC Using An Air Cathode With Pre-enriched Nitrifying Biofilm Tomohide Watanabe Gunma University
90	3270083	SG	Novel Application Of Intertidal Wetland Sediment As Inoculation Source For Saline Wastewater Treatment How Yong Ng National University of Singapore
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92	3270097	KR	Characterization And Rejection Rate On MF/UF Membranes For Evaluating Pretreatment Of SWRO* Changkyoo Choi Gwangju Institute of Science and Technology
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			Universidade de Lisboa Comparison Of Four Cationic Membrane In A Microbial Fuel Cell System For Power Production And Nitrate Perpoyal Efficiency Selim Sanin Hacettene University
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241	3273640	BR	Evaluating The Hierarchy Of Cyanotoxin Removal By Means Of Adsorption In Granular Activated Carbon Marcelo Libanio UFMG
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254	3276389	CN	Enhancement Of Phenol Biodegradation Via Electrical Stimulation And Responses Of Microbial Communities Xia Huang State Key Joint Laboratory of Environment Simulation and Pollution Control
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295	3262587	JP	Pilot-scale Anaerobic Co-digestion Of Sewage Sludge And Shredded Grass Toshiya Komatsu Nagaoka University of Technology
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302	3269183	JP	Recovery Of Precious And Minor Metals From Sludge In A Constructed Wetland Treating Metal-processing Wastewater Satoshi Soda Osaka University
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The Exhibition Pavilions

Emerging Technologies & Innovation pavilion

Powered by Isle Utilities (Isle) and sponsored by Xylem and John Holland, the Emerging Technologies & Innovation Pavilion and Programme, located at stand number 812, features the latest innovations and breakthroughs in technology for the water industry. The start-up tech companies are specially selected to present cutting edge solutions for the topics 'Water reuse to desalination' and 'Smart networks, making them work'. Visitors are invited to visit the pavilion to attend the daily award ceremonies, social events, and interact with end-users, industry professionals, investors and scientist. This is the place where you will learn about the direction of tomorrow's water world.

TOPIC 1 / WATER REUSE TO DESALINATION:

- Memfree Clear Water Science
- Emefcy MABR
- Hydro-dis
- LG Sonic
- Metaflush
- Krieter





TOPIC 2 /

RedEve

SMART NETWORKS:

Geointeractive

MAKING THEM WORK:

Liquid Integrity Systems Pty Ltd

UVS Trenchless Technology

(John Holland)

Knowledge and Research pavilion

The Knowledge and Research pavilion (K&R Pavilion) represents the high-level institutions in Australia, showcasing their knowledge in the domain of water management.

Participants in the pavilion are:

- Griffith University
- University of Queensland
- CRC for water sensitive cities
- Australian Water Recycle Centre of excellence
- Water Research Australia
- Monash University
- University of Technology Sydney
- RMIT University
- Watersecure
- International Water Centre (IWC) facilitates the central area in the pavilion (discussion area)



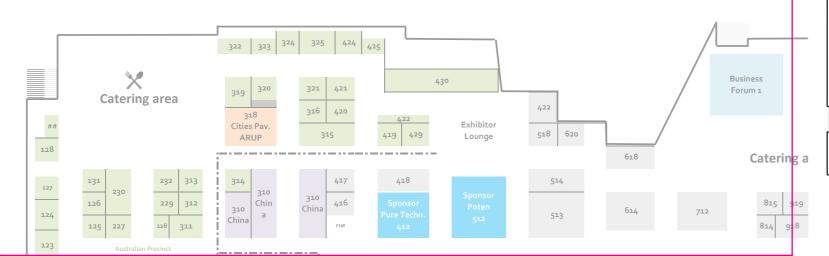


Cities pavilion

The Cities Pavilion, powered by Arup and sponsored by Veolia is an area for cities to highlight their innovations and leadership towards urban resilience and to network with other cities to become inspired by similar contexts and solutions.

On Oct 11th, the day will start with an introduction to the IWA Principles for Water Wise Cities followed by their official launch at the Cities Pavilion. The pavilion includes a central networking area, where the "Principles for Water Wise Cities" will be illustrated.

(Logo ARUP)



Country pavilions

AUSTRALIAN PRECINCT

The Australia Precinct highlights the Australian Water industry and its major players. It is the opportunity to meet and become acquainted with water projects featured by Australia's leading companies, institutes, utilities and government innovations and products on a global stage featuring Australia's leading



Africa Pavilion

organised via African Water Associatio, stand number 908

Belgium Pavilion

organised via VLAKWA, stand number 708

China Pavilior

organised via Acevision, stand number 310

Denmark Pavilion

organised via Danish Water Technology Group, stand number 505

Japan Pavilion

organised via JWWA, stand number 501

Korean Pavilion

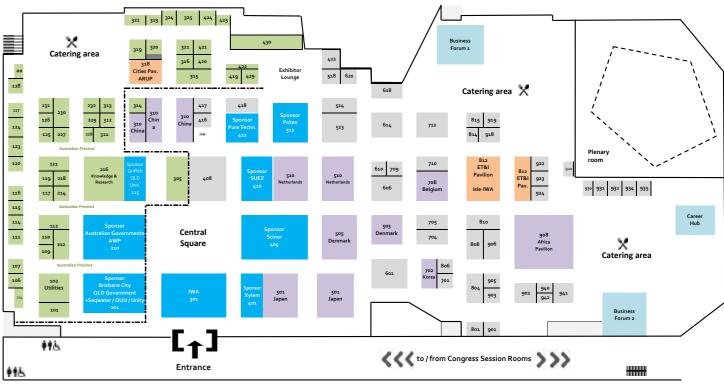
organised via Korea Water Partnership, stand number 702

Netherlands Pavilion.

organised via Netherlands Water Partnership, stand number 510

Floor Plan

to the exhibition



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Amsterdam International Water Week Netherlands	510
AquaFlanders Belgium	708
Aqualab Scientific Pty Ltd Australia	510
Aquatec Maxcon Australia	214
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BIC Electric Denmark	505
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exhibitor	stand
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•	
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Organisation name

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lota Services Australia	112
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VACUUM SEWERAGE SYSTEMS

exhibitor	stand	exhib
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Itron France	704	LINAK
Japan Institute of Wastewater Engineering and Technology <i>Japan</i>	501	Liquid Austra
Japan Pavilion Japan	501	Longk China
Japan Sewage Works Association - JSWA <i>Japan</i>	501	Lonza
Japan Water Works Association Japan	501	Lumin
John Holland Water Australia	812	Maric
Kamstrup Denmark	505	McBe
Kangen Water Nigeria	908 G	MEMO
Kingspan Environmental Australia	107	Metaf
Korea Institute of Civil Engineering & Building Technology <i>Korea</i>	808	META
Korea Pavilion Korea	702	Micro
Korea Water Partnership Korea	702	Minist MHLV
KPMG Global Asset Management Competence Center Belgium	708	Minist and To
Krieter Malaysia	812	Monas
Kubota Corporation Japan	501	Monke

ınd	exhibitor	stand
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04	LINAK Australia Australia	505
01	Liquid Integrity Systems Pty Ltd Australia	812
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01	Lonza Water Treatment Australia	127
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201C	Unity Water Australia	305	Clean TeQ Australia	401 / 812	Australia Xylem USA
201C	SunWater Australia	305	ComplySure Australia	401 / 812	Beijing Scinor China
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Booth number

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			Stallu			
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	505	LINAK Australia Australia	620	EverythingAboutWater India	812	Liquid Integrity Systems Pty Ltd Australia
	505	Rambøll Denmark	701	Aquaveo <i>USA</i>	812	Metaflush Australia
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		Berson UV-techniek Netherlands			901	European Desalination Society - EDS
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	510	Deltares Netherlands	708	Competence Center Belgium	903	Axter SAS France
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51	0 / 812	LG Sonic Netherlands	712	Steel Mains Australia	908B	EPAL Luanda <i>Angola</i>
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	601	Agru Australia	812	Geointeractive Australia	931	Taylor + Francis Australia
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812 John Holland Water Australia

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614 SFI Valvemax Australia

Contact: Glenn Baxter Building A 1 Rivet Road North Ryde, NSW 2113, Australia Phone: 13 61 36 Web address: http://www.3m.com.au/water General Email: gabaxter@mmm.com

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Acevision (Beijing) Exhibition Co., Ltd is a professional organizer of international exhibition service. We has been committed to plan, organize and hold international prestigious exhibitions and conferences in recent years, and adhere to the concept that is "Serving Exhibitors as our duty, Building the first brand of the professional exhibition in China". We provide professional service for China's enterprises' overseas market, especially providing comprehensive, professional, and one-stop exhibition service in the field of environment protection and water

AFRICA WATER ASSOCIATION -

Contact: Aimé Digbeu Avenue 8 prolongée à la montée du Pont Houphouët-Abidjan, 05 BP 1901, Ivory Coast Phone: +225 21 24 04 96 Web address: http://www.afwa-hg.org General Email: contact@afwa-hq.org

With a network of more than one hundred Member Utilities over the whole of the African continent, the African Water Association (AfWA) appears as a partner we can't do without for the improvement of the performances of water and sanitation utilities. Through its programs based on the sharing of good practices and training, AfWA participates in the capacity building and contributes to make Utilities more competitive. Its know-how makes it possible to accompany its members towards achieving the Sustainable Development Goals (SDGs), and other short-term objectives set up for Africa. Its next Congress will be held in Bamako - MALI, in February 2018, with participants from the whole world.

AGRU AUSTRALIA PTY LTD

12 Rollings Crescent Kwinana Beach, WA 6169, Australia Phone: 1300136698 Web address: http://www.agru.com.au General Email: info@agru.com.au



agru

AIR LIQUIDE AUSTRALIA LIMITED

AIR LIQUIDE Contact: Kristen Smith Level 9, 380 St Kilda Road. Melbourne, VIC 3004 Australia Phone: +61 3 9697 9888 Web address: www.airliquide.com.au General Email:

The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 68,000 employees and serves more than 3 million customers and patients*. Air Liquide assists private and public businesses, municipalities and water utility companies with a range of dedicated, industrial gas solutions for the treatment of water.

At Air Liquide Australia we care about the customer's business and their need for efficiency and safety. We provide solutions that make customers' processes safer and more sustainable. Every customer is unique and with our global expertise and local experts, we are able to give mers the individual solutions they need * Following the acquisition of Airgas on 23 May 2016

AITHER

AITHER Contact: Will Fargher Level 2, 45 Exhibition Street Melbourne, VIC 3000, Australia Phone: +61 402 336 614 Email: will.fargher@aither.com.au Website: www.aither.com.au

Aither is Australia's leading water sector advisory firm. We work with businesses, governments and cor to enable decision-making that reflects the value of finite

Aither offers independent analysis, insight and advice on water policy, infrastructure and investment. With a strong team of economists, strategists and water managemer specialists, we aim to be part of the solution to one of the most pressing global issues of our time: the need for improved water management to ensure sustainable mic and environmental outcomes globally. Aither's team of water economists and policy experts are highly experienced, and have developed and deployed custom-designed water market modelling tools to inform analyses for multiple market stakeholders.

Contact: Bruce Pollard 22 Dalmore Drive Scoresby, VIC 3179, Australia Phone: +613 8756 8000 Web address: http://www.alsglobal.com General Email: melbournewrg@alsglobal.com

ALS is a world leader in the provision of analytical laboratory testing, sampling, asset reliability and integrity services to the global water industry via two business nits: ALS Water and ALS Industrial

ALS Water provides sampling and laboratory solutions to all sectors of the water industry from catchment/surface, treatment, waste, desalination, biosolids and drinking water including: Chemical, Microbiological, Pathogenic Biological and Radiological Analysis.

ALS Industrial offers end to end asset management solutions to constructors, manufacturers and assets owners to assist in achieving compliance/specification and maximising asset life and performance through Reliability, Integrity, Mechanical and Materials Engineering, Condition Monitoring and Inspection.

AMSTERDAM INTERNATIONAL WATER WEEK

Contact: Annemieke van Zuylei Bezuidenhoutseweg 2 Den Haag, ZH 2594 AV, Netherlands Phone: +3170 3043700 Web address: http://www.internationalwaterweek.com/ General Email: info@iwwamsterdam.com

International Water Week 30 Ocother - 3 November

The Amsterdam International Water Week (AIWW) is the platform for new alliances and fresh ideas: connecting industry, science, business, policy and technology. The event crosses borders between water and sanitation, deltatechnology, food, agriculture, finance and governance. Thus bringing together a unique mix of professionals conducive to the transition to a circular economy and resilient cities.

The AIWW offers an inspiring combination of events the AIWW conference, the Aquatech, excursions, the Sarphati Sanitation Awards, an extensive young water professionals programme and inspiring social events.

AQUAFLANDERS

Contact: Marc Buysse Desguinlei 250 Antwerp, 2018, Belgiur Phone: +32 32 92 91 90 Web address: http://www.aquaflanders.be General Email: info@aguaflanders.be

AquaFlanders gathers all Flemish drinking water companies and the water sanitation sector. The organization encourages cooperation between members and gives advices to their members in legislative and operational matters (quantity, quality, climate change, sustainability, improvement of asset management, ...). AquaFlanders delivers also services of common interest to their members, such as benchmarking, the organization of the inspection of sanitary installation and sewerage system in the premises, the distribution of potable water in emergency situations, tariff structure, ... AquaFlanders informs stakeholders concerning the positions of their members in the water business

AQUATEC MAXCON

PTY LTD



Contact: Greg Johnson 119 Toongarra Road Leichhardt, QLD 4305, Australia Phone: 0738137100 Web address: http://www.aquatecmaxcon.com.au General Email: enquiry@aquatecmaxcon.com.au

Aquatec Maxcon is Australia's leading provider of water and wastewater technology and equipment. It was established in Ipswich, Queensland, in 1970 where it's Head Office and factory are located. It also has offices in Sydney, Melbourne, Ádelaide, Townsville, Chinchilla, Thailand (Rayong Province) as well as Indonesia (Jakarta). It is now the only broad based water company in Australia and provides a complete range of in-house services.

AQUATECH GLOBAL

Contact: Thijs Jagtenberg

Amsterdam, NH 1070 MS, Netherlands Phone: +31618845293 Web address: http://www.aquatechtrade.com General Email: t.jagtenberg@rai.nl

ABOUT THE AQUATECH BRAND

- Platform for professionals in the world of water
- Inspiring events in Amsterdam, China and Mexico Overview of products and services of the world's leading
- Latest news on process, drinking & waste water AguatechTV with talkshows and interviews

Exhibitor Profiles

AQUAVEO

AQUAVEO"

3210 N Canyon Rd Ste 300 Provo, UT 84604, United States Phone: 01 801 691 5528 Web address: http://www.aquaveo.com General Email: info@aguayeo.com

Aquaveo is a water resources engineering consulting firm that's been developing state of the art enviro

modeling software since 1991. Aquaveo products include the Groundwater Modeling System (GMS), the Surface-water Modeling System (SMS), the Watershed Modeling System (WMS), and the Arc Hydro Groundwater Toolkit for ESRI's ArcGIS. Aquaveo products are used by thousands of consulting firms, universities, and government agencies in more than

Aguaveo provides support and consulting services in the fields of water resources engineering, hydraulics, and hydrologic engineering.

ARCADIS

Contact: Lauren Cavender Gustav Mahlerplein 97-103 Arcadis Symphony Amsterdam NH 1082 Netherlands Phone: +31 (0) 20 2011 011 Web address: http://www.arcadis.com General Email: water@arcadis.com

Arcadis is the leading global Design & Consultancy firm for natural and built assets. Applying our deep market sector insights and collective design, consultancy, engineering, project and management services we work in partnership with our clients to deliver exceptional and sustainable outcomes throughout the lifecycle of their natural and built assets. We are 27,000 people active in over 70 countries that generate €3.4 billion in revenues We support UN-Habitat with knowledge and expertise to improve the quality of life in rapidly growing cities around the world. Arcadis. Improving quality of life.

ARKON FLOW SYSTEMS,

Contact: Sarka David Ticha Novackova 11 Brno. 61400, Czech Republic Phone: +420543214822 Web address: http://www.arkon.co.uk General Email: office@arkon.co.uk

Arkon is a manufacturer of electromagnetic flowmeters offering a wide range of products for flow control and measurement, including ultrasonic level and open channel flowmeters and flow indicators. The products are incorporated with smart customizable communication modules such as GPRS, SMS, TCP/IP, BLUETOOTH, USB, RS232, RS485 Our products are used in over 20 countries with applications such as Water Treatment & Distribution, Waste Water Management, Irrigation, Mining & Chemical Industry as well as projects where efficiency and accuracy coupled with smart technology matters

ARMATEC SALVIRONMENTAL LTD CARMATEC

Contact: Shane Pope Suite A. 11 Enterprise St Birkenhead Auckland, NZ 0628, New Zealand Phone: +64211399279 Web address: http://www.armatec.co.nz General Email: enquiries@armatec.co.nz

Designers manufacturers and suppliers of world-class industrial fibreglass (FRP/GRP) products and odour pollution & corrosion control solutions. We provide cost effective and innovative solutions to the most difficult of challenges. We provide full service complimentary pre-assessment, supply & installation, warranties, follow up inspections and repairs and professional assistance Our unique combination of strong, trusted solutions & leading edge technologies, international networks & in-house design, pilot plant testing, our team of skilled,

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ARUP

Contact: Daniel Lambert Level 10, 201 Kent Street Sydney, NSW 2600, Australia Phone: +61 2 9320 9320 Web address: http://www.arup.com/wate General Email: water@arup.com

Arup is the creative force at the heart of many of the world's most prominent projects in the built environment and across industry. We offer a broad range of professional services that combine to make a real difference to our clients and the communities in which we work. We are truly global. From 90 offices in 35 countries our 13,000 planners, designers, engineers and consultants deliver innovative projects across the world with creativity and passion. The people at Arup are driven to find a better way and to deliver better solutions for our clients. We shape a better world.



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ASIAN WATER MAGAZINE

Contact: Ridhuan Zahir Section 16, Phileo Damansan Petaling Java, 47350, Malaysia Phone: 603 7960 1148 Web address: http://www.shpmedia.com http://www.

General Email: ridhuan@shpmedia.com / ridhuanzahir@

Asian Water is an unbeatable source of the very information that Asia's water professionals are keen to read about. It covers the spectrum of information from regional news to country focuses, technology updates, product information, case studies, market trends and coverage of exhibitions and conferences. Regular features on special products such as pumps, valves, pipes, water treatment equipment, software and others make sure that advertisers and readers get maximum benefit.

Understanding both the publishing and the water industries. Asian Water delivers news, data, and analysis to enable you to make well-informed decisions. Thousands of key decision makers rely on these articles to keep them on the leading edge of critical industry developments.

AUSTRALIAN TRADE AND INVESTMENT COMMISSION (AUSTRADE)

Contact: Leigh Wilmot Level 3 60 Collins St Melbourne, VIC 3000, Australia Phone: +61 3 9648 3111 Web address: http://www.austrade.gov.au General Email: info@austrade.gov.au

(Austrade) contributes to Australia's economic prosperity by helping Australian businesses, education institutions tourism operators, governments and citizens:

The Australian Trade and Investment Commission

- develop international markets and promote international
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- strengthen Australia's tourism industry seek consular and passport services.

Austrade delivers market information and insight, promote Australian capabilities, develop policy, making connections through an extensive global network of contacts, leveraging the badge of government offshore and providing quality advice and services. Austrade's role is to advance Australia's international trade and education, investment, and tourism interests by providing information, advice and services." For eligible Australian enterprises please contact Austrade for our services and global water opportunities

Email water@austrade.gov.au or phone 13 28 78.

AUSTRALIAN UAV PTY LTD

118 Bav Rd Sandringham, VIC 3191, Australia Phone: 1300 738 521 Web address: www.auav.com.au General Email: contact@auav.com.au

Australian LIAV was established in 2013 to provide high quality unmanned survey, inspection and mapping services throughout the Asia Pacific region. With eight office locations and headquartered in Victoria the company now services clients throughout Australia and overseas. Now, with considerable demonstrated experience in the water sector, the company is striving to revolutionise data capture and asset management by reducing costs and increasing safety. In a growing industry Australian UAV is leading the field in innovation delivery and customer support.

AUSTRALIAN WATER ASSOCIATION

Contact: Shona Gawel Level 6, 655 Pacific Highway St Leonards, NSW 2065, Australia Phone: +61 2 9436 0055 Web address: https://www.awa.asn.au/ General Email: info@awa.asn.au

The Australian Water Association is Australia's peak national water organisation, delivering information, expertise and collaboration for sustainable water management. Membership is made up of professionals and practitioners working in utilities, science and research, energy and resources, manufacturing and agriculture; and includes both the water sector (government owned water utilities, water departments and policy experts) and the private sector (privately owned water utilities, contractors, consultants, and suppliers). We have an active branch network across all Australian States and Territories and maintain extensive international links, including with the International Water Association.

AUSTRALIAN WATER PARTNERSHIP

Contact: Prof. Gary Jones UC Innovation Centre (Bldg 22) University Drive Sth Canberra, ACT 2601, Australia Phone: +612 6201 5167

Web address: www.waterpartnership.org.au General Email: contact@waterpartnership.org.au

Australia - water partners for development is a cooperative represented by the Department of Foreign Affairs and Trade, the Department of Agriculture and Water Resources, the Bureau of Meteorology, the Murray-Darling Basin Authority, the Commonwealth Science and Industrial Research Organisation, and the Australian Water Partnership (representing 83 organisations from the Australian public and private water sector). Our core development goal is to support sustainable and equitable management of water resources in the Asia-Pacific, and to provide a gateway to Australian expertise and technology to improve water security, livelihoods and economic well-being throughout the region. Our exhibition will highlight the work and achievements of government departments involved in water policymaking, planning and operations. It will showcase underpinning information, tools and services developed by key knowledge providers, which provide a reliable picture of Australia's water resources and evidence to inform policies and strategies for effective water resource For more information, visit www.waterpartnership.org.au/

event/wwce

AUSTRALIAN WATER QUALITY CENTRE

Contact: Lorraine Bulbeck 250 Victoria Square Adelaide, SA 5000, Australia Web address: http://www.awgc.com.au General Email: awqc@sawater.com.au

The AWQC provides high quality analytical services. leading edge research and professional advice for a range of water quality issues.

AUSTRALIAN WATER RECYCLING CENTRE OF EXCELLENCE

Contact: Don Begbie Level 15, 340 Adelaide Street Brisbane, Qld 4000, Australia Phone: +61 409 125 296

Web address: http://www.australianwaterrecycling.com.

General Email: don.begbie@australianwaterrecycling.

The Australian Water Recycling Centre of Excellence is a national research organisation aiming to enhance the efficiency, expansion and acceptance of water recycling in Australia through industry, government and research

The Centre has invested in a portfolio of industryrelevant research projects across the full water recycling spectrum, developed practical solutions to secure Australia's future water supply, and built awareness and understanding in the community about this precious resource. The Centre worked with key stakeholders to maximise benefits of urban water research nationally. The Centre was funded through the Commonwealth Government's National Urban Water and Desalination

AVK HOLDING

Contact: Michael Ramlau-Hansen dergarde 33 Galten, 8464, Denmark Phone: +45 8754 2100 Web address: http://www.avkvalves.com General Email: sales@avk.dk

The AVK Group is among the world leaders within production of valves, hydrants and accessories for water and gas distribution network, waste water treatment and fire protection. The AVK Group profits from years of manufacturing experience combined with an in-dept knowledge of market needs around the world. The AVK oup is privately owned and employs approximately 3.300 people in more than 77 international companies that all think globally, but act with individualized designs and system solutions for the local markets. The global network and the local commitment permits close cooperation with our customers ensuring a high level of

BEIJING SCINOR WATER TECHNOLOGY CO., LTD.

Contact: Fan Li F8, Xueyuan Internation Tower, 1 Zhichun Road Haidian Disctrict Beijing, 100083, China

Phone: +86 1851 0291 058 Web address: http://www.scinorwater.com/ General Email: fan.li@scinorwater.com

SCINOR is an integrated corporation based in china. Covering the full spectrum of water treatment including membrane R&D and sales, EPC projects and system optimization/operations. Our market experience includes industrial water treatment and reuse, municipal water supply, advanced sewage treatment and reuse, brackish water and seawater desalination, and zero liquid

BERSON UV Contact: Paul Buijs

De Huufkes 23 Nuenen, 5674 TL, Netherlands Phone: +31 40 290 7777 Web address: http://www.bersonuv.com General Email: sales@bersonuv.com

Berson UV (Aquionics in the US) is a globally operating designer and manufacturer of UV systems for disinfection and oxidation for drinking water, waste water and re-use. Our systems hold international validations (DVGW, USEPA, NWRI, JWRC). We have a global network of sales and service partners that serve our customers

BIC ELECTRIC

Contact: Lucja Kalstein Springbankevej 14 Give, 7323, Denmark Phone: +4521772510 Web address: http://www.bic-electric.com General Email: mail@bic-electric.con

BIC Electric is an international technical services provider within mechanical and electrical installation and commissioning of industrial automation systems. Our staff is flexible and we can mobilize teams for our client's needs anywhere in the world at a competitive rate. Regardless of location, we comply with all local labor market regulations, safety requirements, and registrations as well as minimum salary rates.
BIC Electric are certified according to the quality,

nvironmental and occupational health and safety standards:

- ISO 9001
- ISO 14001 OHSAS 18001
- We employ
- Electrician - Mechanics
- Smiths
- Welders
- Electrical engineers

Exhibitor Profiles

BIOACTION PTY LTD

Contact: Geoff Crook 12 Mildon Road Tuggerah, NSW 2259, Australia Phone: +612 4353 4822 Web address: http://www.bioaction.com.au General Email: enquiries@bioaction.com.au

Bioaction designs and manufactures air and liquid phase odour control systems for the water and waste industries as well as manufacturing and food productio industries. Technologies that are used include Biological and Biotrickling filters, activated carbon filters, catalytic iron oxidising filters, chemical dosing systems and others. Bioaction consult to the utility, municipal and industrial markets regarding many types of air filtration requirements including EPA compliance issues and requirements for development applications. Bioaction manufacture in GRP, HDPE and Stainless Steel to suit the specific requirements of the task and do so to international

BIOPROCESS CONTROL SWEDEN AB

Contact: Jing Liu Scheelevägen 22 Lund, Skåne 223 63, Sweden Phone: +4646163951

Web address: http://www.bioprocesscontrol.com General Email: info@bioprocesscontrol.com

Bioprocess Control is a technology and market leader in the area of advanced instrumentation and control technologies for research and commercial applications in the biogas industry. The company was founded in 2006, and brings to market more than 15 years of industry leading research in the area of instrumentation, control and automation of anaerobic digestion processes. Today Bioprocess Control has product exports to more than 50

Bioprocess Control's product portfolio offers both the academic and industrial actors not only from the biogas industry but also from the Anammox field exciting products for gas flow measurement for bacterial activity

BRISBANE CITY

ent and Sustainability Branch Brisbane City Council Level 7, 266 George St Brisbane, 4000, Australia Phone: +617 3403 888 Web address: https://www.brisbane.qld.gov.au/ General Email: news-contact@brisbane.gld.gov.au

Brisbane is home to more than one million people and is renowned for its riverside location, distinctive subtropica climate and friendly relaxed lifestyle – all of which attract businesses, workers and tourists from across the world. Brisbane City Council aims to:

- enhance the quality of life for the people of Brisbane
- build vibrant communities
- improve the quality and value of services to support the
- sustainable economic growth • improve the city's infrastructure to protect and enhance the natural and built environment.
- Today, Brisbane City Council is the largest local government in Australia, both in population and budget.

BUREAU OF SEWERAGE TOKYO METROPOLITAN GOVERNMENT

Contact: Yasuhiro Yoshioka 2-8-1 Nishishinjuku, Shinjuku Tokyo, 163-8001, Japan Phone: +81-3-5320-6641 Web address: http://www.gesui.metro.tokyo.jp/english/ General Email: S4000008@section.metro.tokyo.jp

Responsible for basic functions of the sewer system, i.e. sewage treatment, flood control through removal of rainwater, quality maintenance of public waters. In addition, based on the Management Plan 2016, the

- following initiatives are promoted:

 Implementation of reconstruction of facilities, flood control, earthquake measures and other policies that help the residents of Tokyo feel safe and secure
- Combined sewer system improvement, advanced treatment, global warming measures, and other measures that contribute to the realization of a city with a good water environment and low environmental impact
- Stable provision of best services at minimum cost

BUREAU OF WATERWORKS TOKYO METROPOLITAN GOVERNMENT

Contact: Eriko Tsujioka 8-1, Nishi-Shinjuku 2-chome Tokyo, 163-8001, Japan Phone: +81-3-5320-6336 Web address: http://www.waterprofessionals.metro.tokyo.

in/index html General Email: international_affairs@waterworks.metro

Tokyo Waterworks supplies water to about 13 million Tokyo citizens and its scale and quality of operations are one of the greatest in the world Our advantages are as below

1 World's lowest leakage rate (About 3%) 2 Pursuit of safety and security -Drinking water directly from tap

3 daily stable supply -Around the clock control 4 Long -term perspective management -Financial basis for stable management

We ensure a stable supply of clean water and support residents of Tokyo and all urban functions. Besides we cooperate with overseas utilities through these

BÜRKERT FLUID CONTROL SYSTEMS

Christian-Bürkert-Str 13-17 Ingelfingen, Baden-Württe berg 74653, Germany Phone: +49 7940 10 0 Web address: http://www.burkert.com General Email: info@burkert.com

Bürkert is one of the world's leading manufacturers of process measuring and control systems for fluids in a wide range of industries and applications. With a portfolio of more than 30,000 products, Bürkert is the only supplier to offer all fluid control system components. In five Systemhaus locations as well as four research centres, Bürkert continuously develops customised solutions and innovative products.

One of these is the Online Analysis System type 8905. The innovative analysis device is intended for use in waterworks and is specifically designed for the continuous monitoring and storage of the most important water parameters.

CALIX Contact: Audrey Barucchi 9 Bridge Street Pymble, NSW 2073, Australia Phone: 0406683018

Web address: http://www.calix.com.au General Email: info@calix.com.au Creating new materials, solving global challenges.

Calix is a multi-award-winning Australia technology company that is developing new processes and materials to solve global challenges.
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ROTECTA-Mag™¬ is a concentrated, controlled viscosity, stabilised suspension of magnesium hydroxide liquid (MHL), providing an enduring high pH surface coating for concrete sewer infrastructure and of man holes, wet wells, parts of STPs and large diameter sewer pipes.

CANADIAN NATIONAL COMMITTEE

Contact: Robert Haller 1010 Polytek Street Unit 11 Ottawa, K0E1T0, Canada Phone: 6137470524 Web address: http://www.cwwa.ca

Toronto in 2022 The Canadian National Committee would like to be your host for the World Water Congress & Exhibition We propose Toronto, Ontario Canada as the site for the Congress in 2022 and we think we have a lot to offer! Toronto is also a world leader in water research and innovation and Toronto is a vibrant, world-class city with direct flights from almost anywhere. We have the conference facilities and hotels to host the IWA in one of the safest cities in the world.

We thank you for the consideration to host the water world in Toronto in 2022.

CARDNO

Contact: Sharyn Bow Level 11, Green Square North Tower, 515 St Paul's

Fortitude Valley, QLD 4006, Australia Phone: +61733699822

Web address: http://www.cardno.com.au General Email: cardnoasiapacific@cardno.com

Cardno is a professional infrastructure and environmental services firm, recognised for its comprehensive skills in all aspects of water engineering and water cycle management. Cardno's staff are passionate, trustworthy partners who work with clients and stakeholders to deliver social and environmentally responsible solutions using world class scientific, engineering, economics and

management practices.
From our beginnings here in Brisbane in 1945, Cardno nas grown to work across Australia and in over 90 locations across the globe assisting utilities, governments contractors and private operators to effectively plan, design and manage water resources and water infrastructure for the benefit of local comm

CHALLENGER VALVES & SCIENTEQ

3 Glenn St Shepparton, VIC 3630, Australia Phone: 03 5822 1533

General Email: sales@challengervalves.com.au

Challenger Valves is a leading manufacturer, supplier and distributor of valving and actuation, providing products and solutions to water, power, mining, irrigation and general industries. We stock a wide range of products in various materials including ductile iron, stainless steel, brass and uPVC to handle a wide range of industrial applications. Challenger Valves are now the authorised representatives for Cla-Val automatic Control Valves and for HKC Automation products including a world-leading range of pressure reducing, pressure sustaining and relief altitude and tank filling valves, and pneumatic and electric actuation products.

CITYSMART Contact: Troy McGrath

5/79 Adelaide St Brisbane, 4000, Australia Phone: +61 7 3007 7000 Web address: http://www.citysmart.com.au

General Email: troy.mcgrath@citysmart.com.au CitySmart is a social enterprise collaborating with community, industry and government to drive sustainability outcomes for cities and regions. We help all levels of government and industry with their sustainability policies and strategies, and we specialise in digital customer engagement on low interest topics like energy, water and

Our successful approach demonstrates that sustainability can provide significant economic opportunities while reducing our impact on the environment. CitySmart's four core functions are: the design and delivery of behaviour change programs, the delivery of commercial (business focused) projects, corporate partnerships, and community

CLEAN TEQ LIMITED

Contact: Peter Voigt 12/21 Howleys Road Notting Hill, VIC 3168, Australia Phone: +61 3 9797 6703 Web address: www.cleanteq.com General email: pvoigt@cleanteg.com

waste to influence behaviour change.

Clean TeQ's unique Continuous Ionic Filtration and Exchange (CIF®) technology provides the basis for sustainable solutions for water and wastewater treatment and resource recovery. Designed to maximise water recovery, minimise by-product volume and extract value. the technology has many applications as a standalone process or in combination with membrane technology in applications where membranes struggle to operate cost effectively. CIF® technology treats "difficult waters" i.e. containing suspended solids, scaling and fouling components such as calcium, magnesium and carbonate, COD, organics, sulphate, metals, ammonia, nitrate, phosphate and oxyanions.

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COLETANCHE AXTER

Contact: Rob Mcllwraith Level 13 50 Cavill Avenue Gold Coast, QLD 4217, Australia Phone: 497 476 724 General Email: info@axter.com.au

AXTER is a leading European manufacturer of bituminous geomembrane. AXTER designs, manufactures and sells the geomembrane COLETANCHE issued from the combination of non-woven geotextile reinforcement and a bituminous waterproof binder providing resistance to tearing and mechanical impact as well as very good dimensional stability. As an industrial partner to engineers and consultants in Europe and all over the world, AXTER offers a high quality, effective service, AXTER has exported its products for more than thirty years and 40% of its commercial activity comes from sales to over 50

COMPLYSURE INTERNATIONAL PTY LTD

30 Kees Road Lara, Victoria 3212, Australia Phone: 1300 784 478 +61 3 5282 3773 Web address: www.complysure.com.au General email: sjenkins@complysure.com.au or info@

ComplySure is a cloud based 'app' that simplifies water industry compliance task management. The platform has been developed by Australian based potable and recycled water scientists who are also lead environmental auditors. Accordingly ComplySure intuitively functions to facilitate 'proof of compliance' for both internal and third

ComplySure is particularly suited to safety, health and

environment professionals, risk managers, quality and facilities personnel, whose responsibility is to regularly monitor and report on compliance. Information is securely accessed over the web by authorised people only. The simple to use design will save you time, expense and effort against the current paper based

CONFEDERATION OF DANISH INDUSTRY

Contact: Jens Holst-Nie H.C. Andersens Boulevard 18 Phone: +45 20 60 69 86 Web address: http://www.di.dk General Email: di@di.dk

Confederation of Danish Industry (DI) is a private nisation funded, owned and managed entirely by 10,000 companies within manufacturing, trade and

DI's aim is to ensure the best possible conditions for its members to conduct business, inside Denmark as well as globally. DI's main tasks include policy advocacy at including collective bargaining and a strong set of international services.
A significant share of DI's member companies are

cialized within the field of water technology. It would be our pleasure to connect you to some of them.

COOPERATIVE RESEARCH CENTRE FOR WATER SENSITIVE CITIES

Contact: Fiona Chandler Level 1. 8 Scenic Boulevard, Monash University Clayton, VIC 3800, Australia Phone: +61 (03) 9902 4985 Web address: http://www.watersensitivecities.org.au

General Email: admin@crcwsc.org.au

The Cooperative Research Centre for Water Sensitive Cities is an Australian-based centre that brings together many disciplines, and world-renowned experts, to revolutionise urban water management in Australia and

It was established to change the way cities are designed, built and managed by valuing the contribution water makes to economic

lopment, quality of life, and ecosystems of which cities are a part.

We work with more than 80 partners across Australia and the world, including seven national and international iversities and research organisations to generate knowledge, and on-ground solutions required to transform cities into liveable, resilient, sustainable, and productive places.

DAGUA TECHNOLOGIES INC.

Contact: Robert Kalinowicz 730 - 1010 Ste Catherine St. W. Montreal, Quebec H3B5L1, Canada Phone: 514-969-5531 Web address: http://www.dagua.com General Email: rkalinowicz@dagua.com

Dagua is a Canadian potable water technology company. Dagua's treatment technology is an innovative, patented tment process utilizing a combination of ozonation and ultrafiltration membrane processes for effective. chemical-free water purification and disinfection. Drinking water is produced from groundwater or polluted surface vaters according to stringent quality standards, with a reject water stream that can be reintroduced to the nent without additional treatment. The technology is scalable with designs for portable systems to treat as little as 100m3/d up to full municipal systems of 500,000 m3/d.



Exhibitor Profiles

DANISH WATER FORUM Contact: Lisbeth Flindt Jør

Agern Allé 5 Hørsholm, 2970, Denmark Phone: +45 9133 3620 Web address: http://www.danishwaterforum.dk General Email: dwf@danishwaterforum.dk

Danish Water Forum is a network of Danish water organisations aimed at highlighting expertise and knowledge, and facilitating concerted actions. The competences and high standards of its members make Danish Water Forum an excellent entry point to the Danish water sector within virtually all aspects of water industry, technology, science and management. Danish Water Forum represents contractors and manufacturers, water companies and consultants, research institutions, governmental authorities, and NGOs. This unique blend provides integrated knowledge about all aspects of the entire water sector, including issues relating to environment, agriculture, and health.

DANISH WATER TECHNOLOGY GROUP

Lysbrohøjen 24 Silkeborg, DK-8600, Denmark Phone: +45 5089 4488 Web address: http://www.dk-water.com General Email: ilse.korsvang@dk-export.dk

DWTG gathers Danish suppliers from all facets of the industry, be it ground water, drinking water, process water, wastewater, urban water issues etc. DWTG is part of Danish Export Association, rep more than 560+ Danish companies. DWTG is owned by its 65+ members, who supply components, equipment systems and services to public and private actors in the

water sector.

Water technology is one of Denmark's key competencies Already in the 1970'ies, Denmark had the world's first environmental Ministry, which imposed strict environmental legislation. This has given Danish suppliers an edge when it comes to innovation, sustainability and holistic, energy solutions.

DE WATERGROEP

Contact: Boudewijn Van De Steene Vooruitgangstraat 189 Brussels, 1030, Belgium Phone: +32 22 38 94 11 Web address: http://www.dewatergroep.be General Email: info@dewatergroep.be

De Watergroep is the largest water company in Flanders (Belgium). We are an autonomous Flemish water company offering products and services for the complete water chain. We deliver drinking water to 3 million customers in 175 towns via a network of 32.500 kilometres of pipelines. Our total water production amounted to 126 million m³ of water in 2015. In addition, we apply a sustainable recycling approach for an economically and ecologically sound management of all links in the water chain: rainwater, ground and surface water, drinking water, process water and wastewater, We make water with a custom-made service. Today, for tomorrow's generation.

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Contact: Simone van Schiinde Boussinesqweg 1
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DEPARTMENT OF ENVIRONMENT, LAND, WATER AND PLANNING

Contact: Suzanne Knight 8 Nicholson Street

East Melbourne, VIC 3002, Australia Phone: +61 3 9637 9453

Web address: http://www.delwp.vic.gov.au General Email: http://www.delwp.vic.gov.au/about-us/

The Victorian Government's Department of Environment, Land, Water and Planning creates liveable, inclusive and sustainable communities that support jobs and growth in Victoria, Australia. We recognise the link between the built and natural environment in the quality of our lives, and work to accommodate population growth while maintaining world class liveability and protecting our heritage for future generations.

DETECTION SERVICES

Contact: Steve Simmor 15 / 276 New Line Rd Dural, NSW 2158. Australia Phone: +61 431 893 273

Web address: http://www.detectionservices.com.au General Email: steve@detectionservices.com.au

Detection Services specialises in water industry related services employing over 75 staff across 9 offices.
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EARTH SYSTEMS ontact: Nigel Murphy

14 Church Street Hawthorn 3122, Australia Phone: +61 3 9810 7500 Web address: www.earthsystems.com.au General email: enviro@earthsystems.com.au

Earth Systems is a multidisciplinary environmental and social science and engineering firm which develops and implements innovative and effective environment, water and sustainability solutions throughout the world. Established in 1993, we have successfully completed over 500 major projects in Australia, Asia, Africa, South America, North America and the Pacific. Earth Systems provides high quality services and solutions in the areas of environmental and social impact assessment, water management and treatment, ecology, energy efficiency, carbon accounting, community consultation and development. Our research and development capabilities help to ensure that we are leaders in finding new and

EBC FOUNDATION (EUROPEAN BENCHMARKING COOPERATION) Contact: Peter Dane

Koninginnegracht 19 The Hague, ZH 2514 AB, Netherlands Phone: +31702057830 Web address: http://www.waterbenchmark.org General Email: info@waterbenchmark.org

EBC Foundation (European Benchmarking Cooperation) offers a benchmarking- and improvement programme for water- and wastewater utilities. The Foundation is governed by stakeholders from the water sector (DANVA, DWP, EurEau, Norsk Vann, Vewin). Since 2007, EBC organises annual benchmarking exercises for utilities in Western Europe and beyond. In close collaboration with national water utility associations EBC also facilitates national- and regional benchmarking programmes like in the Danube region. EBC welcomes visitors at its meeting point in the Dutch country pavilion at the IWA World Water Exhibition.

EDS - EUROPEAN DESALINATION

Via Alvaro del Portillo 21 Rome, 00128, Italy Phone: +39 348 88 48 406 Web address: http://www.edsoc.com General Email: balabanmiriam@gmail.com

EDS is a Europe-wide organization for individual and corporate members including universities, companie research institutes, government agencies and all concerned with and interested in desalination and nembrane technologies for water

It is a society uniting all interested in promoting desalination, water reuse and water technology. All processes are covered and the wide range of roles and activities involved in the desalination field are included: research, applications, consulting, contracting, operation and maintenance, manufacturing, marketing, economics, legislation. Members are welcome from other regions outside Europe.

EIJKELKAMP SOIL & WATER

Niiverheidsstraat 30 Giesbeek, Gelderland 6987 EM, Netherlands Phone: +31 313880200 Web address: http://www.eijkelkamp.com General Email: info@eijkelkamp.com

Eijkelkamp Soil & Water makes a difference worldwide by developing, producing and delivering solutions for soil and water projects.

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ELIQUO WATER & ENERGY BV

Contact: Marjolein de Jong Anthonie Fokkerstraat 21 Barneveld, Gelderland 3772 MP, Netherlands Phone: +31 342 744100 General Email: info@eliquo-we.com

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Emefcy was founded in 2007. The systems developed by Emefcy produce electricity directly from the treatment of different types of wastewater. This conversion is made possible by use of microbial fuel cell (MFC) technology. Emefcy's Electrogenic Bioreactor (EBR) revolutionizes the economics of wastewater treatment by generating power instead of consuming power, utilizing electroge bacteria to produce electricity from wastewater while treating the wastewater. Conventional wastewater treatment uses 2% of the global power (80,000 MW and 57,000,000 ton per year of CO2), amounting to \$40B/year. Rather than using energy to treat wastewater, Emefcy harvests renewable energy directly from the wastewater and feeds it to the grid.

EMPRESA PÚBLICA DE ÁGUAS, EPAL-E.P.

Rua Frieddrich Engels, number 3 Luanda, 1387, Angola Phone: +244 22 233 5001 Web address: http://www.epal.gv.ao General Email: Carlota.paihama@epal.gv.ao

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EverythingAboutWater is a leading monthly print & e-magazine (www.eawater.com/eMagazine) on global water sector. It reaches 29,081 active, influential, and engaged readers, who have the discretionary budgets to acquire the products and services that cater to their

EverythingAboutWater consistently provides new ways to connect the water industry with end-user industries. EA Water Pvt Ltd is India's only knowledge and marketing solutions provider in the area of water and wastewater management. For over a decade, our verticals: Publishing, Training and Events have been instrumental in taking initiatives directed towards awareness on most critical water related issues.

eWATER SOLUTIONS

Contact: Robert Carr UC Innovation Centre (Bldg 22), University Drive South Bruce, ACT 2617, Australia Phone: +61 2 6201 5168 General Email: contact@ewater.org.au

eWater Solutions is the developer and custodian of Source - Australia's national hydrological modelling platform for rivers, catchments and urban bulk water systems – and MUSIC – the national standard for modelling water sensitive urban design systems. Backed by our team of software developers and application specialists, eWater Solutions provides capacity building. ustomisation and technical support to Australian and International water management organisations.

EWU ENERGIE-WASSER-UMWELT GMBH

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EXBYTE/CSIRO

Contact: Fang Chen Level 5, 13 Garden Street Eveleigh, NSW 2015, Australia Phone: +61294905601 Web address: http://www.exhyte.io. General Email: Fang.Chen@data61.csiro.au

Exbyte is a research and development team in the Machine Learning Research Group at Data61@CSIRO (formerly NICTA) - one of the largest digital research teams in the world. The Exbyte team is focused on providing data driven solutions for smart prediction, risk evaluation and performance optimization, designed to preserve and extend the service life of long-term infrastructure assets. ExByte's unique combination of actor analysis, anomaly detection, failure prediction and decision support algorithms are run across the data to identify opportunities for improvement and to recommend commercially viable adjustment to maintenance plans.

FEDERATION OF JAPAN WATER INDUSTRIES, INC.

Contact: Yuto Niwa 4-8-9 Kudan-Minami Chiyoda-ku, Tokyo 102-0074, Japan Phone: +81332642307 Web address: http://www.suidanren.or.jp/ General Email: kokusai@jwwa.or.jp

Since its foundation in 1966, the Federation of Japan Water Industries, Inc., has been contributed continudevelopment of waterworks enterprise as the sole representative organ of waterworks, industrial water supply and sewerage industries at national level.

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Contact: Stéphanie De Man Graaf Karel de Goedelaan 34 Kortrijk, West-Flanders 8500, Belgiun Phone: (+32) 56-24 12 61 General Email: info@vlakwa.be

Providing Flanders with sufficient water of good quality at a reasonable price is a major challenge. The key to success is an cooperation between enterprises researchers and government. The Flanders Knowledge Center Water (Vlakwa) is the driving force. At those areas in the market where water problems consitutes a threat to the economy, Vlakwa initiates, coordinates and facilitates:
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Vlakwa is an independent division within VITO, a leading European independent research and technology organisation in the areas of cleantech and sustainable development and elaborating solutions.

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VITO is a leading European independent research and technology organisation in the areas of cleantech and sustainable development, elaborating solutions for the

rge societal challenges of today. VITO provides innovative and high-quality solutions, whereby large and small companies can gain a competitive advantage, and advises industry and governments on determining their policy for the future. VITO has 772 highly-qualified employees who work on international projects all around the world. VITO's headquarters are located in Mol, Belgium, and the company has a subsidiary in China. The total turnover of VITO amounted to about 147 million euros in 2015. VITO's research agenda tackles the major societal challenges we are facing today. VITO focuses on five different research programmes: sustainable chemistry, energy, health, materials management and land use.

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left: The new SAC sensor cube features a fully integrated spectrometer.

centre: In the FIA sensor cube a reagent is added to the water sample. The course of the colour change provides information on the iron content of the water.



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Zorzal 1C Baio C Web address: www.futurenergyweb.com General Email: info@futurenergyweb.com FuturENVIRO is highly focused on the reader and advertiser with an innovative, vibrant design providing up to date information, a unique bilingual Spanish/English format and a highly effective international distribution. Dealing with all environmental topics from waste and water management, pollution control, contaminated soils to smart cities and CSR issues. FuturENVIRO publishes 10 issues per year, 5 dedicated exclusively to water and

5 to waste plus a fortnightly newsletter offering all the up With offices in Spain and Mexico, FuturENVIRO is able to

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West Melbourne, VIC 3003, Australia Phone: +61 3 9274 4200 Web address: http://www.futurewater.com.au General Email: media@executivemedia.com.au

Future Water: The Australian Water Management Yearbook is an essential guide for professionals working in the water industry, as well as those in related industries. Australia - one of the world's driest and hottest continents – faces major and unique challenges when it comes to managing water, our most precious resource. Future Water addresses and explores these challenges in each edition.

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Global Water Intelligence publishes newsletters and reports providing analysis and strategic data on the international water market. Its flagship publication, the monthly industry journal Global Water Intelligence (GWI), has established itself as the market-leading publication for developers, suppliers, financiers, governments, u and municipalities seeking information and analysis on water projects with an element of private sector

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Contact: Joel Podgorsl Überlandstrasse 133 Dübendorf, Zurich 8600, Switzerland Phone: +41587655760 Web address: http://www.gapmaps.org General Email: admin@gapmaps.org

The Groundwater Assessment Platform (GAP) is a freeto-use online platform (www.gapmaps.org) dedicated to the problem of naturally occurring, geogenic groundwater contamination, in particular that of arsenic and fluoride. Long term consumption of water containing high levels of these contaminants can lead to skin lesions, dental and skeletal problems or cancer, GAP contains two main sections: GAP Maps where users can display existing statistical models and relevant input variables as well as develop their own models, and GAP Wiki, which allows users to read and share information on all aspects of

GUTERMANN

Contact: Julian Wilkinsor 38 Ricketty Street Mascot, NSW 2020, Australia Phone: +61424166602

Web address: http://en.gutermann-water.com neral Email: au@gutermann-water.com

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HOLLAND WATER CHALLENGE

Contact: Gregor van Essen Olympia 1A, Arena Business Park ersum, NH 1213 NS, Netherlands Phone: +31(0)208946405 Web address: http://www.hollandwaterchallenge.com General Email: info@hollandwaterchallenge.nl

The Holland Water Challenge is a competition that invites the next generation water leaders to take an active role in developing innovative and sustainable solutions to real-life delta and water problems. In a unique way, the Holland Water Challenge connects young talent with experts from private sector, academia and governmen and inspires them to discover their personal passion for water. In Australia, the Holland Water Challenge is one of the driving forces behind the knowledge exchange partnership on climate extremes between Australia and the Netherlands since 2012.

HOMA PUMP TECHNOLOGY AUSTRALIA

Contact: Frank Mascadri Unit 1, 10 Tapnor Crescent Brendale, QLD 4500, Australia Phone: +61 7 3205 2246 Web address: http://www.homa.com.au General Email: sales@homa.com.au

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510 HYDROLOGIC

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From excessive rainfall and floods to extreme drought Australia is a land of contrasting environments. Easy access to real-time information is essential in reducing impacts and risks before and during flood and rain events. HydroNET is a web-based decision support system empowering Australian water professionals. Smart web-applications transfer weather and water data into valuable tools which enable water professionals to make informed decisions for the analysis and sustainable management of Australian water resources. HydroNET has been developed by the Dutch company HydroLogic WaterTechnology is the official distributor of HydroNET

HYDRONUMERICS PTY LTD

Contact: Chris O'Nei 1/272 Lygon St Carlton, VIC 3053, Australia Phone: +61 (3) 9347 8080 Email: info@h Address: 1/272 Lygon St, Carlton, Victoria, 3053, Web address: www.hydronumerics.com.au

HydroNumerics deliver innovative engineering services that support proactive management of water resources to local and international clients. We have expertise in:

- Proactive Water Management analysing water resources to better understand environmental and operational performance and delivering strategies, hardware and software that support proactive Hydrodynamic and Water Quality Modelling – using the
- Centre for Water Research suite of numerical models to simulate the hydrodynamics and water quality of lakes, reservoirs, estuaries, and coastal seas.

 • Decision Support Systems - integrating sensor
- networks, data analysis and numerical models to deliver real-time decision support. Assessing Environmental and Operational Change -combining our scientific, numerical modelling and decision
- support skills to quantify the effects of environmental and operational change on the health of water resources. Software - developing, maintaining, distributing and supporting numerical models and customised decision

HYDROROCK PTY LTD

Contact: Anita W PO Box 956 Tewantin, QLD 4565, Australia Phone: +61 487 430 845 Web address: http://www.hydrorock.com.au General Email: info@hydrorock.com.au

Hydrorock Australia, part of Hydrorock International, is focused on sustainable water management and dedicated to the development, production and sales of innovative solutions in the field of rain- and surface water. Hydrorock products cover a wide range of solutions for separating rainwater, water drainage, buffering, infiltration and irrigation by using stone wool as basis material. Solutions and features

- preventing flooding
- separation and infiltration of rainwater prevention of dehydration of soil
- contributing to the quantity of groundwater sustainable (100% natural materials)
- esistant against erosion (plant/tree roots) light and strong
- easy, simple and effective

IDA - INTERNATIONAL DESALINATION ASSOCIATION

94 Central Street, Suite 200 Topsfield, MA 01983, United States Phone: +1 978 887 0410 Web address: http://idadesal.org General email: exhibits@idadesal.org

IDA is committed to development and promotion of the appropriate use of desalination and desalination technology globally in water supply, water reuse, water pollution control, water purification, water treatment and other water sciences and technology. IDA carries out this mission by encouraging research, promoting and

exchanging communication, disseminating information, and supporting education in the field of desalination and water sciences. A non-profit association, IDA is associated with the United Nations as part of a growing international network of non-governmental organization (NGOs).

INSTITUTE FOR SUSTAINABILITY AND INNOVATION, VICTORIA UNIVERSITY

Hoppers Lane Werribee, VIC 3030, Australia one: +61 3 9919 8248 Web address: https://www.vu.edu.au/institute-forsustainability-and-innovation-isi General email: isi@vu.edu.au

Victoria University operates an applied water research program through its Institute for Sustainability and Innovation that aims to undertake research aligned to industry needs and to support water businesses. This program incorporates water treatment, water resource management, social and behavioural aspects of water use, ecology, applied infomatics and economics. An industry advisory board offers direction to the program as well as a means for research translation, and more than 70% of their projects involve an industry partner. Key research themes include membrane technologies, climate change impacts on yields, integrated water management, wetland rehabilitation, and community acceptance of potable recycled water.

INSTITUTE FOR SUSTAINABLE FUTURES,

235 Jones Street
Ultimo, NSW 2007, Australia Phone: + 61 2 9514 4950 Web address: http://www.uts.edu.au/research-and-General Email: isf@uts.edu.au

Contact: Stuart White

The Institute for Sustainable Futures is a university research institute that creates change towards sustainable futures by conducting independent project based research for Australian and international clients. We draw on a range of methods and tools from different disciplines, creating practical solutions to real world problems. Our research spans ten broad research areas. We have been involved in several large groundbreaking water research projects for utilities, regulators and other stakeholders across Australia and Internationally that have addressed complex societal problems and the challenges of creating change towards a sustainable future.

INTERNATIONAL WATER ASSOCIATION

New Babylon, Anna van Buerenplein 48. 11th Floor The Hague, 2595 DA, The Netherlands Web address: http://www.iwa-network.org General Email: water@iwahq.org

Hosting a series of presentation, events, book launches and social activities, the IWA stand is the place to meet, greet and network. Join us in the exhibition hall and connect with the water professionals network.

INVISIBLE STRUCTURES PTY LTD

Contact: Jack Droome 185 Great Ocean Road Anglesea, VIC 3230, Australia Phone: +613 5263 1997 Web address: http://www.invisiblestructures.com.au General Email: info@invisiblestructures.com.au

Manufacturer and turnkey installer of large scale (multi ML) Rainstore3 Advantage underground water storage systems for stormwater harvest and reuse for Government, major developers and industrial clients since

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Invisible Structures achieves benchmark construction by utilizing industry professionals with exemplary workmanship to benefit the project, community and

IOTA SERVICES PTY LTD

Contact: Lucy Milkerai 101 Wells Street Frankston, VIC 3199, Australia Phone: 03 9552 3769 Web address: http://www.iota.net.au General Email: lucy.milkeraitis@iota.net.au

Intelligent engineering solutions for water and sewerage Owned by South East Water, an industry leader in smart

IRRIGATION AUSTRALIA LTD

Contact: Bryan Ward Unit 12, 56 Church Ave Mascot, NSW, Australia Phone: 1300 949 891 Web address: http://www.irrigation.org.au General Email: info@irrigation.org.au

Irrigation Australia Limited (IAL) is the Australian irrigation ndustry's peak professional association. IAL is the only national body that has membership across the entire value chain of urban and agricultural irrigation – irrigators and irrigation managers, consultants, designers and nstallers through to educational institutions, government, manufacturers and retailers.

IAL is a registered RTO and focuses on training and professional development through various courses in areas such as retail skills, auditing and maintenance pump operation and hydraulics, and via their certification

For more information go to IAL's website, www.irrigation. org.au or phone 1300 949 891.

ISLE UTILITIES

Contact: Annelies Schenk Phone: +31 6 48 78 22 95 General Email: annelies.schenk@isleutilities.com

Isle Utilities (Isle) is extremely passionate about emerging technologies and we built our business around supporting the acceleration of emerging technologies for water and sanitation in the market place. We have been practicing this through the running of Technology Approval Group (TAG) meetings and organizing Innovation pavilions & forums at Global Events

ITRON INC. Contact: Lucile Montant 9 Rue Ampere Mâcon, Mâcon 71000, France Phone: +33 (0) 3 85 29 39 00 Web address: http://www.itron.com General Email: webinquiry@itron.com

Itron is a world-leading technology and services company dedicated to the resourceful use of energy and water. We provide comprehensive solutions that measure, manage and analyse the usage of energy and water.

Our water efficiency solutions include complete non revenue water reduction programs (pressure management, meters replacement programs, AMI and AMR solutions, cloud-based data management & analytics). With our global experience, technology and expertise, Itron has been able to help customers around the world better manage their energy and water resources. Together, we can create a more resourceful world.

JAPAN WATER WORKS ASSOCIATION Contact: Yuto Niwa

4-8-9 Kudan-Minam Chiyoda-ku, Tokyo 102-0074, Japan Phone: +81-3-3264-2307 Web address: http://www.jwwa.or.jp General Email: jnc@jwwa.co.jp

Japan Water Works Association(JWWA), a Public Interest ncorporated Association, was established on May 12th, 1932 with the aim of introducing water supply facilities and developing water supply technologies in Japan. JWWA's main activities include research and study of water supply management, technologies and water quality. JWWA also provides various service such as inspection and certification of water related products and suport water utilities

Those activities are quite essential for people's daily life as well as social and economic activities in Japan

We are pursuing harmony between water, nature and people.



RESERACH FIELDS

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- Smart water micro-grid technology
- Multi-purpose water treatment package
- Development of advanced water treatment process

WATER AND WASTEWATER INTRASTRUCTURE MANAGEMENTTREATMENT

- Odor control technology in sewer systems
- Asset management for water and wastewater infrastructure
- BIM/GIS based interactive operation technology

PLANTS AND RENEWABLE EMERGY

- Development of modular technology for LNG plants
- MD/PRO based hybrid desalination technology - Development of self-sufficient renewable energy

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AOUATIC ECOSYSTEM

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- Ecological restoration technology
- River and estuarine circulation model
- Emerging contaminants control

OTHERS

- Organic waste resources management
- Indoor air quality control
- Noise reduction technology











CONTACT US: Environmental and Plant Engineering Research Institute

Korea Institute of Civil Engineering and Building Technology, (Daehwa-Dong) 283, Goyangdae-Ro, Ilsanseo-Gu, Goyang-Si, Gyeonggi-Do, 10223, Republic of Korea

www.kict.re.kr

JOHN HOLLAND

380 St Kilda Road Melbourne, 3004, Australia Phone: +61 3 8698 9400 Web address: http://johnholland.com.au General Email: external.affairs@jhg.com.au

John Holland is at the forefront of Australia's infrastructure, building and rail markets. Operating across Australia, New Zealand and South East Asia, they have been transforming city skylines, connecting regional centres and providing vital infrastructure for more than

John Holland participates in every link in the project lifecycle from originating, financing, designing, engineering, manufacturing and constructing to support the most complex of developments, and the ongoing ownership, operation and maintenance of these facilities. Their expertise extends across all facets of water and wastewater, from treatment to pipelines, pumping and irrigation systems, dams and water storage.

KAMSTRUP

Contact: Mikael Hanser Industivei 28 Stilling, 8660, Denmark Phone: +45 89 93 10 00 Web address: http://www.kamstrup.com General Email: info@kamstrup.dk

Kamstrup is a world-leading supplier of energy and water metering solutions. Our solutions support primarily utilities, but also applied in properties with individual metering. For 70 years, we have delivered reliable, costeffective ways to measure and manage energy and water consumption worldwide.

Today, Kamstrup is the largest manufacturer of ultrasonic meters in the world. Innovation has always been our driving force. We have evidence that keeping research & development, production and administration situated under one roof at our headquarters in Denmark enhances the quality and reduces delivery time.

KINGSPAN ENVIRONMENTAL PTY LTD

Contact: Nick Szkute 93 Magnesium Drive Crestmead, QLD 4132, Australia Phone: 1300736562 Web address: http://www.kingspan.com General Email: commercial@tankworks.com.au

Kingspan Water have been manufacturing steel water storage tanks since 1934. Our Rural and Commercial tanks have capacities up to

542,000 litres. This range is specifically designed for the Rural, Industrial, Fire, Energy, Mining, Agriculture, Diary & Commercial

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Kingspan Water only uses Australian made steel For more information about the range, contact our Commercial Manager on 0447 180 914 or email: commercial@tankworks.com.au or visit: www.tankworks

KOREA INSTITUTE OF CIVIL ENGINEERING AND BUILDING TECHNOLOGY

Contact: Seogku Kim 238, Goyangdae-Ro, Ilsanseo-Gu, Goyang, Gyeonggi 10223, South Korea Phone: +82-31-910-0300 Web address: http://www.kict.re.kr General Email: sgkim@kict.re.kr

Korea Institute of Civil Engineering and Building Technology (KICT) is a top-notch think-tank that works on construction policies and techniques for comfortable and safe land environments as well as develops technology to improve public safety and quality of life.

KICT pushes the boundaries of value creation as it creates a research ecosystem for convergence and

Each KICT institute has been established and based on specialized expertise to promote 'Future Flagship R&D' as well as establish 'Big Engineering R&D' to lead the

struction industry in Korea. KICT is a trusted partner with convergence and cooperation through constant R&D and innovation.

KOREA WATER PARTNERSHIP

244 Daerim-ro, Yeongdeungpo-gu, 5th floor Seoul, South Korea Phone: +82 2 2039 6782 Web address: http://www.kwp.or.kr General Email: kwp@kwp.or.kr

Korea Water Partnership (KWP) is a registered not-forprofit corporation founded in April 2015 aimed to provide a network platform for water professionals in private and public sectors in order to promote water industry. Korea Water market is highly regulated industrial sector compared to general manufacturing and service industry. In rapidly changing regulatory environment, water industry needs a new platform to network local as well as global stakeholder. KWP is a bridge between private and public

KWP is creating a new network with international organizations to strengthen international cooperation and to improve the status of the Korean water industry.

KPMG GLOBAL ASSET MANAGEMENT COMPETENCE CENTER

Contact: Daniël Pairor Bourgetlaan 40 Brussels, 1130, Belgium Phone: +32 38 21 19 41 Web address: http://www.kpmg.com General Email: dpairon1@kpmg.com

The KPMG Global (physical) Asset Management Competence Center is offering end-to-end solutions for organisations which are dealing with asset management questions in a broad sense. Our methodologies are innovative and serve worldwide as models. We are staffed with experienced specialists of business advisors, engineers, tax experts and auditors providing pragmatic advice and hands-on assistance managing physical

We create added value for our clients enabling: - integration of financial and technical/operational insights;

- long-term strategic business direction;
- risk-based performance and prioritization of maintenance and investments
- integration of asset management systems and whole life cycle processes;
 - improved management of the physical assets.

KRIETER WATER & ENVIRONMENT SDN

Contact: Mr. Adam Hashim Hartamas 2, A15-02 No.2 Jalan - Duta Hartamas 50480 Kuala Lumpur, Malaysia Phone: +603 62111582 Web address: http://www.krieter.com.my General Email: info@krieter.com.my

KUBOTA CORPORATION

Contact: Osamu Kume 1-3, Kyobashi 2-Chome, Chuo-ku Tokyo, 104-8307, Japan Phone: +81-3-3245-3228 Web address: http://www.kubota-global.net/ General Email: kbt g.iwa@kubota.com

Kubota Corporation(TSE:6326) is one of Japan's leading manufacturers of a comprehensive range of machinery and other industrial and consumer products. Since 1890, Kubota Corporation has offered various products including farm equipment, engines, construction machinery, electronic equipped machinery, pipe-related products, environment-related products, and social frastructure-related products to contribute to improve human lives and society. With broad product lineup and its unique comprehensive strength, Kubota Corporation presents in more than 110 countries and strives to solve the worldwide problems related to food, water and the environment, which are indispensable for human beings Please visit http://www.kubota-global.net/index.html for the latest news and more information.

LG SONIC

Contact: Anne Gierveld Radonstraat 10 Zoetermeer, ZH 2718 TA, Netherlands Phone: +31707709030 Web address: http://www.lgsonic.com General Email: info@lgsonic.com

Since 1999, LG Sonic has been a leading international manufacturer of ultrasonic algae control and biofou prevention systems. Our latest innovation, the MPC-Buov is a floating, solar powered, platform that combines continuous online water quality monitoring, web-based software, and ultrasonic technology to effectively contro harmful algal blooms in large water surfaces. The MPC-Buoy eliminates up to 90% of the exiting algae and prevents the growth of new algae. Furthermore, the MPC-Buoy allows to reduce TSS, BOD and chemical consumption. At this moment, the system is installed in akes and water reservoirs in, among other countries, the USA, Malavsia, and Poland.

LINAK AUSTRALIA PTY LTD

Contact: Peter Ebenwaldne 82-84 Abbott Rd Hallam VIC 3803 Australia Phone: +613 8796 9777 Web address: http://www.linak.com.au General Email: sales@linak.com.au

LINAK Australia, a division of global automation solutions producer LINAK. LINAK develop and manufacture over 7,000 different products for actuator systems including actuators, lifting columns, control boxes, controls and associated accessories. Recognised globally for their dedication to high quality, innovative and technically advanced automation solutions, over 80% of LINAK products are classified as custom solutions. Built for the arshest conditions including extreme temperatures, dust and vibration, LINAK actuators are a proven alternative to nydraulic power movement and operate with stoke lengths of up to 1m and forces of up to 1 tonne.

LIQUID INTEGRITY SYSTEMS PTY LTD

Contact: Kelly Keates 39 Raglan Ave, Edwardsto South Australia, Australia 5039 Phone: +61 8 83710020 Web address: http://liquidintegritysystems.com.au General Email:kjkeates@zonge.com.au

Liquid Integrity Systems (LIS) provides a solution to detect leaks in large liquid storage facilities such as lagoons, or dams, reducing risk and improving community assurance by preventing contamination to the environment. Modern fluid storage facilities are often lined with a synthetic geo-membrane to prevent contamination of the environment; these geo-membrane liners often develop leaks that can result in unwanted contamination LIS monitoring systems measure the current flow across the liner at safe voltages and the potential field within the fluid to determine whether leaks exist in the liner, providing information to allow leak location to be determined. The echnology is applicable to any new or existing, lined, liquid or solid waste facility. LIS monitoring can be a cost effective means of ensuring new or older lined facilities meet modern environmental requirements. They may be permanently installed and require no additional utilities, automatically assessing liner integrity. Warnings and results are sent to the client in a format that can be easily interpreted, and can be integrated into client control

LONGKOU CHENGFENG ZHIYUAN TECHNOLOGY CO., LTD.

Contact: Yonghui Zhao Dongjiang Hi-Tech Industrial Park Longkou, Shandong 265718, China Phone: +86 0535-8661789 Web address: http://www.lk-chengfeng.com General Email: chengfeng valve@163.com

Longkou Chengfeng Zhiyuan Technology Co.,Ltd. is a company which devotes itself to research and sales in multiport valves and complete equipments for water treatment system.

Exhibitor Profiles

LONZA WATER TREATMENT

sanitation and surface water.

Contact: Chris Smith Level 1, 12-24 Easey Street, Collingwood Phone: +61 3 9417 2428 Web address: http://www.lonzawatertreatment.com.au

Lonza Water Treatment products are sold worldwide for the sanitation and treatment of drinking water, microbial control in industrial applications in cooling and power generation, commercial pool and spa water, food

General Email: ordersaustralia.water@lonza.com

Our calcium hypochlorite dosing systems prepare and deliver a consistently accurate liquid chlorine solution for effective disinfection Our well-known brands

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desire to support the communities we serve

Contact: Graeme Anderson 15 Old Norton Summit Rd Magill, 5072, Australia Phone: +61884312281 Web address: http://www.maric.com General Email: graeme@maric.com.au

Maric are the inventors, manufacturers and global suppliers of the Maric constant flow valves. These pre-set tamperproof valves are ideal for fixing a flow rate where pressures are either fluctuating or unknown Their use by water authorities enables them to better understand water demand patterns better, which in turn enables them to supply more customers from existing infrastructure, thus maximizing revenue. They also have many applications in; pump protection, water treatment and mining.

MCBERNS INNOVATIVE SOLUTIONS

ontact: Noel South 11 Tectonic Crescent Kunda Park, QLD 4556, Australia Phone: +61 7 5445 1646 General Email: mail@mcberns.com

designer and manufacturer of 4-side Void Protection Safety Access Covers, Odour Filtration Units and the AutoWellWasher™. Trading since 1991, we provide Product Design, Consultancy and Fabrication: Odour Management and Monitoring Services; Installation and Asset Maintenance Services as well as Project Management for wastewater sector providers in Water Utilities, Construction, Mining and Industrial. Using sound industry knowledge and understanding we incorporate advanced design methodology and techniques to create the best solutions for odour management and improved worker safety. Our innovative design approach, reliability and custome service ensures industry best practice products and

MEMCOR® AN EVOQUA BRAND

Contact: Bruce Biltoft 15 Blackman Crescent South Windsor, NSW 2756, Australia Phone: +61387206597 Web address: http://www.evoqua.com General Email: info.au@evoqua.com

MEMCOR® products represent 30 years of innovation in membrane technologies for municipal and industrial applications.

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METAFLUSH PTY LTD

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. standards.

MEMFREE

Australia

Contact: Dr Vivian Robinson

Canterbury, NSW, 2193

Phone: +61 2 9718 1444

Address: 186 Canterbury Road (PO Box 100)

Web address: http://www.memfree.com.au General Email: viv@memfree.com.au

MemFree are automated, industrial scale electrolysis

based water treatment systems that clean polluted water to better than nano filter level, without using membranes or chemicals, pH adjust excluded. Their three controls

can be set for 99% removal of a wider pollutant array at

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possible. Suited for potable water and STP, industrial,

higher loadings, lower operating costs and less waste

Virtually all toilet cisterns contain valves that either directly control the flushing process, or are necessary to prime and/or control a siphonic system which empties the cistern and flushes the toilet. Valves can malfunction or eak and therefore need constant monitoring for correct operation if water wastage is to be avoided. To improve the performance of the toilet flushing process have been centered on refining existing flush valve design and reducing the total volume of water used when flushing, instead of examining alternative, simpler and more robust options for achieving controlled flushing. MetaFLUSH® is a radical new design of a valveless toilet flushing system that is simple, robust, is logical to operate, has dual flush capability, is easy to maintain, and

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METAWATER CO., LTD.

Contact: Takashi Yuasa JR Kanda Manseibashi Bldg, 1-25, Kanda-sudacho, Chiyoda-ku Tokyo, 101-0041, Japan

Phone: +81-3-6853-7317

Web address: http://www.metawater.co.jp/eng/ General Email: yuasa-takashi@metatwater.co.jp

METAWATER Co., Ltd. is a total water solution and service provider. We have been engaged in the installation and service works of mechanical and electrical equipment in drinking water, wastewater, and environment protection business market in and outside Japan. Our aim is to provide any clients with the best solution in order to create an achievable water & resource circulation The wide range of service of METAWATER such as EPC works, O&M services, privatization business, and integrated management services, is contributing to realize more sustainable social infrastructures. We will further accelerate privatization business in Japan and international business

MICRODYN-NADIR (XIAMEN) CO., LTD.

Contact: Lingling Cai No.66 Jinting North Road, Xinglin Jimei Xiamen, Fujian 361022. China Phone: +86-592-6775500 Web address: http://www.microdyn-nadir.cn General Email: infochina@microdyn-nadir.cn

With production locations in Germany, China and Singapore as well as offices in the USA and South-America, MICRODYN-NADIR is a leading, independent producer of micro-, ultra- and nanofiltration membranes

For almost 50 years, MICRODYN-NADIR has been applying its products in various industrial and municipal applications, e.g. in the field of water and wastewater treatment as well as in many process-integrated applications. The product's outstandingly sharp cut-offs and reproducibility allow for a high application variety, among others in the chemical and food industry.

MINISTRY OF HEALTH, LABOUR AND WELFARE (MHLW), JAPAN

Contact: Ryutaro Kaneko 1-2-2 Kasumigaseki, Chivoda-ku Tokyo, 100-8916, Japan Phone: +81-3-3595-2368 Web address: http://www.mhlw.go.jp/stf/seisakunitsuite/ bunya/kenkou_iryou/kenkou/suido/index.html General Email: suidougijutsu@mhlw.go.jp

MHLW has jurisdiction over water supply in Japan. The main roles are as follows -Governance of Waterworks Act Approval of water utilities license Supervision of water quality -Supervisory guidance and entry inspection -Financial assistance

-Dealing with international affairs -Promotion of research and development

MINISTRY OF LAND. INFRASTRUCTURE. TRANSPORT AND TOURISM / JAPAN SEWAGE WORKS ASSOCIATION CONTACT: YUKA OKABE

Uchikanda Suisui Bldg. 2-10-12 Uchikanda Chiyoda-ku, Tokyo 102-0074, Japan Phone: +81-3-6206-8746 Web address: http://www.jswa.jp/en/jswa-en/ General Email: kokusai@ngsk.or.jp

Our booth is operated by MLIT and ISWA At our booth, you can learn management of wastewater

-WHO WE ARE-

Ministry of Land, Infrastructure, Transport and Tourism is a national government in charge of wastewater system. Japan Sewage Works Association, JSWA is not for profit organization supported by 1,500 public utilities and 1,000 private companies for the interest of public

MONASH SUSTAINABILITY INSTITUTE

Contact: Rob Skinn Monash University, VIC 3800, Australia Phone: +61 3 9905 0124 Web address: www.monash.edu/sustainability/ General Email: enquiries@msi.monash.edu

Monash is taking transformative steps to shift the world onto a sustainable and resilient path. Our focus isn't just the environment - it's people and economics too. Monash works with industry, government and community to find solutions to real-world problems. Examples include: devising strategies to reduce carbon emissions and designing communication programs to encourage energy efficient behaviour; devising new filtration systems to collect urban stormwater for re-use, and finding innovative answers for communities without adequate sanitation; running training to drive environmental change in the workplace, and finding ways for developing countries to leapfrog dirty technologies and go straight

MOTT MACDONALD NEW ZEALAND

Contact: Steve Couper Level 1, 23 Union Street Auckland, Central Auckland 1010, New Zealand Phone: +64 (0)9 375 2400 Web address: http://www.mottmac.com General Email: steve.couper@mottmac.co.nz

Mott MacDonald is a global engineering, management and development consultancy adding value for public and private clients on agenda-setting, next-generation projects worldwide. We use ingenuity to save our customers money and time, reduce risks, increase efficiency, maximise sustainable outcomes and advance

A World of Water Education & Engagement Products water360.com.au/engage

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Exhibitor Profiles

We do this through innovative thinking and by drawing on the immense talent and energy of our people designers, engineers, project and programme managers, management consultants, environmentalists, planners. economists, business strategists, infrastructure finance advisors, public private partnership experts, cost consultants, low carbon specialists, technology experts, safety advisors, health and education specialists. development policy advisors and more.

MOVUS

Contact: Brad Parsons Building 1015, 80/120 Meiers Road Indooroopilly, QLD 4068, Australia Phone: +614 1619 7849

Web address: http://www.movus.com.au General Email: brad.parsons@movus.com.au

MOVUS is developing "FitMachine" - an innovative sensor solution for monitoring equipment health of industrial rotating machinery, in the same way that a "FitBit" helps individuals to monitor their personal fitness. FitMachine combines multiple capabilities into a simple, self-install sensor at a highly affordable price point. FitMachine uses machine learning and artificial intelligence algorithms to predict machine failures and reduce maintenance budgets by up to 50%.

MTD INTERNATIONAL BV

Contact: Hans Verh Clara Zetkinweg 4 Tilburg, Noord-Brabant 5032 ML, Netherlands Phone: +31 88 77 55 000 Web address: http://www.mtd.net General Email: info@mtd.net

MTD is the worldwide market leader in turn-key solutions for temporary drinking water and waste water infrastructures, water treatment and plumbing services for all your on- and offshore projects.

MTD offers the complete water supply chain, from a drinking water production unit including service and maintenance till a waste water purification unit for reusing water.
MTD supplies their rental friendly products and services

at more than 1000 projects per year

NAIROBI CITY WATER & SEWERAGE COMPANY

Contact: James Karania P.O. Box 30656 Kampala Road off Enterprise Road, Industrial Area Nairobi, 00100, Kenya Phone: +254703080000

Web address: http://www.nairobiwater.co.ke General Email: info@nairobiwater.co.ke

Nairobi City Water and Sewerage Company has a jurisdiction divided into seven administrative regions with a mandate to provide water and sewerage services in a financially sustainable manner. The City has a populati of 3.8million projected to grow to 4.5 million by 2019. NCWSC has been leveraging on technology to improve performance by adopting e-billing, digitizing customer location, improved meter reading through use of Mobile Field Assistance application resulting in increased revenue. A key achievement is the reduction of non-revenue water losses from 45% to 36% in the last three years resulting to increased access to water

NANFANG ZHONGJIN ENVIRONMENT CO.,

Contact: Jason Wu Renhe Town, Yuhang District Hangzhou, Zhejiang 311107, China Phone: +86 13588305880 Web address: http://www.cnppump.com General Email: jason@nanfang-pump.com

CNP is a professional manufacturer which develops, manufactures, sells stainless steel multistage centrifuga pumps. The company is always devoted to innovation and management after founded more than 20 years. The company embarked on the road of a virtuous cycle

and operating in scale. The company has professiona pump design and developing technicians. And formed a manufacture management, quality management and marketing management system. The pumps is applied to industrial and mining enterprises, municipal water supply, farm irrigation, petrochemical engineering, domestic water and fire water supply of high buildings, industrial water treatment, water purification, pharmaceutical industry, boiler, air-conditioning system, etc.

NATIONAL WATER AND SEWERAGE

Contact: Rose Kaggwa Plot 39, Jinja Road, P.O. Box 7053 Kampala, Uganda Phone: +256 313 315 111 Web address: http://www.nwsc.co.ug General Email: rose.kaggwa@nwsc.co.ug

National Water and Sewerage Corporation, Uganda is a public utility that is 100% owned by government of Uganda providing water and sewerage services in urban centers across the country on a commercial and financially viable basis. As at July 2016, the Corporation operated within 165 urban centers with the number of towns envisaged to grow as the corporation continues to pursue increased geographical expansion.
Vision "To be the Leading Customer Centered Water Utility in the World"

Corporate Mission "To sustainably and equitably provide cost effective quality water and sewerage services to the delight of all stakeholders while conserving the

NETHERLANDS-AUSTRALIA COALITION ON CLIMATE EXTREMES

intact: Gregor van Essen Olympia 1A, Arena Business Park Hilversum, NH 1213 NS, Netherlands Phone: +31(0)208946405 Web address: http://www.nwp.nl General Email: info@nwp.nl

Partners: Deltares, HydroLogic, Holland Water Challenge, Van Oord, Royal HaskoningDHV, UNESCO-IHE, Fugro, NWP. The devastating Queensland floods of 2011 sparked an alliance to take-on climate extremes between two countries that have enjoyed strong relationships for hundreds of years: Australia and the Netherlands Both countries have a long history dealing with natural disaster; Australia being more occupied with disaster preparedness and recovery and the Netherlands with disaster prevention. As they have come to understand: neither approach is and will be sufficient. New solutions and approaches are needed resulting in a thriving knowledge exchange partnership that has been underway for several years.

NETHERLANDS WATER PARTNERSHIP

Contact: Sandra Bors Den Haag, ZH 2594 AV, Netherlands Phone: +31 70 3043700 Web address: http://www.nwp.nl / www. dutchwatersector.com General Email: info@nwp.nl

NWP is your gateway to the Dutch Water Sector. Companies, NGOs, Knowledge Institutes and Government have joined forces in this public-private partnership. From water purification to spatial planning, from governance to land reclamation, from small scale solutions to mega structures, the partnership has the expertise. Our members (200) work together to offer sustainable, multifunctional water solutions for people, planet and profit worldwide.

NWP acts as a centre of information on water expertise policy developments and market opportunities. NWF also initiates, coordinates and executes projects for its members and organizes trade missions, exhibitions and conferences. Let's work together!

ONTOTO PTY LTD

Contact: Joshua Ludwick 193 Lackey Road Moss Vale, NSW 2577, Australia Phone: +61491113273 Web address: http://www.ontoto.com.au General Email: info@ontoto.com.au

Ontoto is a small team of can do people who design, manufacture and support our products right here in Australia. Our company is in response to the call for operational simplicity and affordable ground water monitoring technology. We are specialists in remote telemetry data logging and international leaders in low-power technology. Our products are field tested and

backed with a 5-year warranty. The importance of ground water is underestimated by the majority. A lack of monitoring is leaving us uninformed and ignorant to the changes happening under our feet. Remote telemetry reporting shows you depletion versus recharge; from your office.

PALL CORPORATION

6 Chivers Road Somersby, NSW 2250, Australia Phone: +61 2 4340 8900 Web address: http://www.pall.com/water

Pall Corporation is a filtration, separation and purification leader, providing service and solutions to meet critical fluid and water treatment objectives. Our products and services are specifically designed and optimised to meet the customers' objectives and to be environmentally compliant to external regulatory controls. Pall Corporation has several thousand water treatment plants around the world that use membrane filtration technology. In Australia alone Pall has more than a 100 membrane system

Pall's Containerised Aria Fast solutions also help municipal and industrial customers address critical water quality, scarcity, and demand issues.

PARKSON CORPORATION

Contact: Mike Jakob 1401 W. Cypress Creek Road Ft. Lauderdale, FL 33309, United States Phone: +1 954-974-6610 Web address: http://www.parkson.com General Email: technology@parkson.com

Parkson is a supplier of equipment and solutions for potable water, process water, and industrial and municipal wastewater applications. Parkson designs, engineers and assembles products that provide customers with advanced screening, biological, filtration, biosolids and disinfection solutions. We also have a highly trained field service team capable of completely rebuilding aging equipment or retrofitting equipment to include the latest technological advancements. Founded in 1960 and headquartered in Fort Lauderdale, Florida, Parkson is an industry leader in the USA with a global installation base. Additional branches are located in Dubai, Montreal, Chicago, and Kansas City.

POTEN ENVIRONMENT GROUP

Contact: Yingxin Zhang No. 60 Xizhimen North Street Beijing, 100082, China Phone: +86 10 8229 3399 +86 186 1170 0474 Web address: http://www.poten.cn/ General Email: overseas@poten.cn/

Poten Environment Group is a pioneer and leading

provider in water and environmental protection services in China and all around the world. Poten designs, builds and operates state of the art innovative water and wastewater treatment infrastructures. soil remediation and restoration,

as well as developing cutting edge water and environment monitoring and testing systems. Poten commits to create innovative solutions for a better environment." Linked-in: http://www.linkedin.com/company/poten environment-group-co.-ltd.?trk=top_nav_home

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In a world of vast information there is void of vital knowledge for the water industry executives.





Publication for Management & Business within the Greater water industry www.intwater.com Tel:972-36959352

Exhibitor Profiles

116 PROCHEM / AVFI

Contact: Peter Winter 63 Radley Steet, Virginia Phone: +61 732652711 General Email: pwinter@prochem.com.au

Prochem/AVFI offer a full range of Stainless Steel Piping Products and AVFI range of Water Valve

PUBLIC UTILITIES REGULATORY COMMISSION (PURC)

Contact: Deborah Bonney
No. 53 African Liberation Circle, Ridge Roundabout Accra, CT 3095 Cantonments, Ghana Phone: +233 3022 44181-3 Web address: http://www.purc.com.gh General Email: info@purc.com.gh

The Public Utilities Regulatory Commission(PURC) was set up as a multi-sectoral regulator by Governmer of Ghana in October,1997 under the Public Utilities Regulatory Act,1997 (Act 538) as part of the utility sector reform process to regulate the provision of utility services in the electricity and water sectors By virtue of the Energy Commission Act, 1997 (Act 541) PURC also has regulatory responsibility over charges for supply transportation and distribution of natural gas services Under Section 4 of Act 538, PURC is an independent body and is not subject to the control of any authority in the performance of its functions

PURE TECHNOLOGIES

Contact: Hugh Chapman 7/2-12 Pyrmont Bridge Rd Pyrmont, NSW 2009, Australia Phone: +612 9518 5422 General Email: hugh.chapman@puretechltd.com

Pure Technologies is a world leader in the development and application of innovative technologies for inspection monitoring and management of large diameter water and wastewater pressure pipelines. Pure's expertise and technologies are being used around the world to help utility operators mitigate pipeline deterioration and maximize capital budgets for rehabilitation and

QUEENSLAND GOVERNMENT

Contact: Executiv PO Box 15216 Phone: 13QGOV

Advancing Queensland - State-wide Innovation with

Water is fundamental to the wellbeing of Queenslanders.

the State's economic development and the protection of its rich natural values. Queensland government is programs including; world leading basin managen approaches that balance competing uses, a system of tradeable water entitlements, long-term planning for water security to deal with floods and droughts, diverse water services infrastructure and community water conservation and engagement programs. A key focus is managing the rivers flowing to the Great Barrier Reef to protect this natural asset. These outcomes are underpinned by collaborative contemporary science and science-topractice partnerships

QUEENSLAND URBAN UTILITIES

Contact: Mel Anderson Level 2, 15 Green Square Close Fortitude Valley, Brisbane QLD 4006, Australia Phone: +61 407 797 130 Web address: http://www.urbanutilities.com.au General Email: Melissa.anderson@urbanutilities.com.au

Queensland Urban Utilities is one of the largest water distributor-retailers in Australia, supplying drinking water recycled water and sewerage services to a population of more than 1.4 million in South East Queensland. At Queensland Urban Utilities, we have a customer centric philosophy and a strong innovative culture. Our innovations, which include converting waste to energy are delivering millions of dollars of operational savings,

safer work practices and better customer service. In 2015 we were named in BRW's Top 10 Most Innovative Companies List - the first time a water and sewerage provider has received the prestigious ranking.

RAMBOLL

Contact: Christian Nyerup Nielse Hannemanns Allé 53 Copenhagen, 2300, Denmark Phone: +45 5161 1000 Web address: http://www.ramboll.dk General Email: info@ramboll.com

Ramboll is a leading engineering, design and consultancy company founded in Denmark in 1945. With almost 300 offices in 35 countries we emphasise local insights combined with a global knowledge-base.
Within water we build on a strong Nordic tradition of

managing water resources which we combine with a solid experience from the US on assisting private and industrial companies. We can handle all project phases and our main service areas include Water Resources, Water & Wastewater Treatment, Water Infrastructure and Climate Adaptation & Flood-Risk Management.

REDEVE

Contact: Gavin Tye 126 Margaret St, Brisbane City QLD 4000, Australia Phone: +61 1300 236 673 Web address: http://www.redeve.co General Email: corporate@redeye.co

Utilities worldwide struggle with engineering drawing management, exposing them to significant safety and financial risk. RedEyeDMS is the first purpose built cloud and mobile engineering drawing management solution. making it easy for people who work with engineering data to upload, find, and link relevant documents, photos and drawings together so they can work with the right information on any device with a single click. Changes in the field can be captured in real time and users can typically find any drawing in under a minute. RedEyeDMS nes an asset owner's Single Source of Truth (SSOT) for engineering data, eliminating the inefficiency associated with people working off the wrong drawings and enabling effective, auditable collaboration between internal staff and external contractors. The simple to use mobile and web interfaces requires no training. As a SaaS solution there is no software to install or maintain. RedEyeDMS is suitable for utilities ranging from 1,000s to 1,000,000s of drawings. RedEye in configurable to the specific requirements of each utility, as determined during a scoping study. RedEye works with an organisation's existing change management processes during the

ROYCE WATER TECHNOLOGIES PTY LTD

Contact: Rod Wellings Unit 4, 30 Raubers Road Banyo, QLD 4014, Australi Phone: +61 428571234 General Email: contact@roycewater.com.au

Royce Water Technologies is Australia's most trusted treatment and analysis. We supply dissolved oxygen sensors, Ametek Jofra temperature calibrators, precalibrators, online process analysers and sensors for water, effluent and wastewater monitoring. We distribute the leading brands in Australia for wate

and wastewater management - WTW (A Xylem brand), Crystal Engineering, Ametek Calibration, Chemscan® analysers, Royce Technologies, B&C Electronics, LTH Electronics and other leading brands.

RUBICON WATER

Contact: Tony Oakes 1 Cato Street Hawthorn East, VIC 3123, Australia Phone: +61 3 9832 3000 Web address: www.rubiconwater.com General email: enquiry@rubiconwater.com

large-scale gravity-fed irrigation systems and offers a completed integrated system from the dam to the crop. Our software, smart automated water control gates, flow meters and radio technology integrate to automate open channel and gravity pipeline distribution systems. Since 1995 we have produced over 20,000 control gates and flow meters sold in more than 10 countries

Farmers get the water their crops need at the right time enabling more efficient and productive use of water. And because water is moved using gravity, solar-power and software our solutions are env

S::CAN MESSTECHNIK GMBH

Contact: Robert Wur Brigittagasse 22-24 Vienna, 1200, Austria Phone: +43 1 219 73 93 0 Web address: http://www.s-can.at General Email: office@s-can.at

s::can is the only firm in the world that has given its heart and soul to online water quality measurement. Since our foundation in 1999, nothing else has come out of our development department; nothing else has come out of our production sites.

Today, our product range covers absolutely state-of-theart measuring instruments for each individual parameter for typical applications in the areas of drinking water, waste water, environmental monitoring, and industrial applications. Whether it is a simple pH sensor or a complex spectral probe, s::can measuring instruments are intelligent and mutually compatible in s::can systems and with third-party systems.

SALT WATER

L7, 275 Alfred St North Sydney, NSW 2060, Australia Phone: +61420991315 Web address: http://www.saltwatersolutions.com.au General Email: info@saltwatersolutions.com.au

Salt Water is the process design and simulation software developer behind the AqMB platform. AqMB Designer™ is an online, collaborative application for process design and deliverable output. In use by global consultancies and OEM's, it has been used to complete an actual design in 70 minutes where the traditional method for the same plant took 5 days. Integrated into Designer™ is SupplierLink™, a portal that connects suppliers with designers when they are ready to specify. Prophet™ is a forecasting and optimisation software securely interfacing one-way with SCADA to enable treatment plants to trend changing conditions and predict performance in advance.

SALTFREE DESALINATION

PO BOX 8041 Biralee Park Wodonga, VIC 3690, Australia Phone: +61 410 579 651 Email: sales@saltfree.com.au Website: www.saltfree.com.au

Saltfree Desalination manufacture custom built reverse osmosis filtration units for domestic and commercial applications. Units for brackish water can process up to 10,000 ppm or saline water up to 35,000 ppm. producing 12,00- to 500,000 litres per day depending on water quality. Our products are suitable for domestic uses (including gardens, showers, and evaporative air conditioners) and commercial markets (including car washes, vineyards, hydroponic farms and cattle stations).

SCALENE ENERGY WATER

Contact: Jay Prabakaran 2931 Moggill Rd, Pinjarra Hills risbane, QLD 4069, Australia Phone: +61 414 410 374 General Email: info@scalene.org

Scalene-Energy-Water-Corporation-Limited (SEWCL) was established in 2010 as the commercial wing of Scalene-Energy-Research-Institute (SERI). SERI was established in 2002 with the aim of bringing energy self sufficiency and sustainable growth.

Many years of research has finally culminated in commercialising Aquatron™ and FPSTAR, Aquaria®. Serigas® Sparse and BioScada Technologies SEWCL capabilities include feasibility study . sizing . design - supply of equipment - installation/erection testing * training * operation and maintenance.
SEWCL has provided turn-key solutions in different parts of the world.

footprint, while harnessing the immense potential of abundantly available bio resources in an eco-friendly and economical method.

SENEGALAISE DES EAUX (SDE)

Contact: Ndiaya Diop Route du Front de Terre Dakar, Afrique BP 224, Senega Phone: +221338393703 Web address: http://www.sde.sn General Email: eau@sde.sn

Created in 1995, Sénégalaise Des Eaux is a private water company in charge of production and distribution for the main urban areas in Sénégal. SDE has an affermage contract with the State of Senegal. Mission

- SDE is in charge of:
- Production and distribution of drinking water in urban
- Invoicing of the water consumption and the collection
- Repairs and maintenance of the water installations in Sénégal
- Customer management and communication

SEQWATER Contact: Liz Kearins

117 Brisbane Street Ipswich, QLD 4305, Australia Phone: +61 418 294 662 Web address: http://www.seqwater.com.au General Email: liz.kearins@seqwater.com.au

Seqwater provides safe, secure and reliable bulk drinking water to Brisbane and South East Queensland. We also provide flood mitigation services, and supply irrigation vater to 1,200 farmers, as well as manage rec facilities at 20 lakes.

We operate in a climate of extremes, with a diverse asset base including dams and weirs, conventional water treatment plants, a desalination plant and the largest recycled water scheme of its kind in the Southern

We're looking for great people to join us in providing this most essential service in one of the most beautiful parts of Australia. Visit seqwater.com.au.

SFI AUSTRALIA

Contact: Jeremy Lewis 500 Dowling Street Wendouree 3355 Australia Phone: 1800734000 Web address: http://www.sfivalvemax.com.au General Email: jeremy@sfiaust.com.au

SFI Australia is a supplier of specialised valve maintenance equipment, hydraulic tools, automatic flushing systems to the Utilities Industry.

Specialist supplier of valve maintenance equipment in Australia. This is high-quality and reliable equipment designed to carry out maintenance tasks to ensure water systems are operating at their highest performance levels.

Supply of the Stanley hydraulic tools range which include power packs, breakers, post pullers ground post driver, pole tamper, spike puller & driver, earth auger, chainsaws, portable water pump, concrete saws, grinders, impact wrenches hammer drills etc.

SINGER VALVE INC.

Contact: Mark Gimso 12850 87 Avenue Surrey, BC V3W 3H9, Canada Phone: +1 604-594-5404 Web address: http://www.singervalve.com General Email: singer@singervalve.com

Singer Valve manufactures innovative control valve solutions for the water industry. Whether you are looking to control high pressure drops, or need built in safety back-ups for applications where failure is not an option, we have them all. We also specialize in electronic control applications – customized to your specific needs. Some of our innovative products include:

- Single rolling diaphragm technology offering superior low flow stability
- Patented hydraulically controlled flow modulation valve
- Custom engineered anti-cavitation cages · Pressure reducing valve with integral, secondary back-
- Specialty pilots and options that solve the most difficult.

SOCIETE MALIENNE DE GESTION DE L'EAU POTABLE-SA - SOMAGEP

Rue 41, Djicoroni Troukabougou Bamako, République du Mali Phone: +223 20 23 75 91 / 20 22 40 30 Web address: http://www.somagep.m General Email: somagep@somagep.ml

SOMAGEP SA is a state-owned company with a board, created August 5, 2010. The capital of the company is detained, up to 100% by the state of Mali. SOMAGEP SA has the mission, as a Public utility, to operate the water service across the country as a whole.

- collecting and processing rough water - processing and distributing potable water
- ensuring the control of water quality
- billing and managing customer relationship
- expanding water connections for individuals rehabiliting and renewing distribution networks
- maintaining all the production and distribution system

SODECI

Contact: EBAH Basile Avenue Christiani, Treichville 1 ABIDJAN, Southen +225, Cote d'Ivoire Phone: 21 23 30 03 Web address: http://www.sodeci.ci General Fmail: sodeci@sodeci.ci

Company profile /products and services: First private drinking water company of public service in AFRICA, certified ISO 9001.

SODECI deal with two contracts: 1. Management of supplying drinking water throughout

the country

2. Management of providing sanitation services SODECI is in charge of:

888 towns supplied, 12 million people served; 664 wells; 83 drinking water treatment plants; 13 000 Km of network: 209 million m3 produced.

Vision: Take the lead in Africa for the management of drinking water and sanitation services.

Mission: Producing and supplying drinking water;

Servicing and supporting plants and facilities;
Operate and maintain wastewater treatment plants and

Hydraulic study, works design and achievement

NATIONAL WATER AND SEWERAGE CORPORATION (NWSC) – UGANDA

Continuous Improvement for sustainable and equitable service delivery

Government that is mandated to provide water and providers and ultimately improve service delivery sewerage services in the major urban centers in Uganda. within the region and other parts of the world.

Our service foot print in terms of number of towns with The ESU has partnered with several utilities NWSC services has increased from 12 in 1998 to 27 in in Ethiopia, India, Kenya, Tanzania, Zambia, 2010 and 171 in 2016

Our vision is "To be the leading customer centered water utility in the world" and,

Our Mission: To sustainably and equitably provide cost effective, quality water and sewerage services to the delight of all stakeholders, while conserving the environment

Through our External Services Unit (ESU), we promote south-south as well as North-South Corporation and

NWSC is an autonomous public utility, 100% owned by partnership to create synergies within utility

Mozambique, Nigeria, Rwanda, South Sudan, Pakistan, Sierra-Leone, Netherlands, Ghana, Bagladesh, Trinidad and Tobago and Uganda amongst others. This is made possible by the existence of a well balanced and motivated professional workforce.

We boost of a state of the art International Resource centre located in Kampala through which it provides capacity development for our staff and partners and also a venue for international events.





Plot 39, Jinja Road P.O. Box 7053 Kampala, Uganda Tel: (+) 256 313 315000 /111 Website: www.nwsc.co.ug. Email: info@nwsc.co.ug, www.facebook.com/waterug & @nwscug

Exhibitor Profiles

SOUTH AUSTRALIAN WATER INDUSTRY

Contact: David Evans SA Water House, 250 Victoria Square Phone: +61 8 7424 2466 Web address: http://www.waterindustry.com.au General Email: getconnected@waterindustry.com.au

Water and how it is managed continues to be a critical factor underpinning South Australia's econ environment and lifestyle. With a range of water resources, each with their own challenges, South Australia has developed a range of capabilities to manage them for economic, social and environmental purposes. South Australia's water capabilities evolved over many decades in response to key priorities and emerging issues. These competencies are spread across government, industry, research and educational institutions, ensuring a multifaceted approach to water, including internationally competitive goods and services, strategic policy, legislative frameworks and robust scientific analysis.

SPRINGER NATURE

Contact: Fritz Sch Van Godewiickstraat 30 Dordrecht, ZH 3311 GX, Netherlands Phone: +31786576281 Web address: http://www.springer.com General Email: fritz.schmuhl@springer.com

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STATE OF GREEN Contact: Finn Morte Vesterbrogade 1E

Copenhagen, 1620, Denmark Phone: +45 72 100 179 Web address: http://www.stateofgreen.com General Email: info@stateofgreen.com

State of Green is a not-for-profit, public-private partnership tasked with branding Denmark and the green solutions of Danish business and industry. Showca efficient and sustainable water solutions. Denmark will host the IWA World Water Congress and Exhibition in 2020. We are therefore interested in meeting commercial and political decision makers who are looking for water solutions of the future. We are equally interested in talking to media representatives (journalists, commentators bloggers) in order to present the Danish case. Our platform www.stateofgreen.com is a one-point-entry for decision-makers looking for solutions within energy, environment, climate and water

STEEL MAINS PTY LTD

Contact: Rodney Glocer PO Box 191, 125-175 Patullos Lane Melbourne, VIC 3062, Australia Phone: +61 392173170

General Email: customerservice@steelmains.com

Steel Mains is Australia's leading manufacturer and supplier of complete steel pipeline systems for the transportation of water and wastewater, offering a total solutions approach on its customers. The company provides leading pipe jointing technology with its renowned Ball & Socket welded joint, Sintajoint Rubber Ring Joint (RRJ) and Sintalock welded Rubber Ring Joint Systems. Steel Mains is experienced with water pipeline supply into the Middle East, Singapore and Oceania having supplied some major projects e.g. Pal Tech Abu Dhabi with 150km x 813mm OD Steel Pipe.

SUEZ

Contact: Emma Jefferson

Level 3, 3 Rider Boulevard Rhodes, NSW 2138, Australia Phone: +61 2 8775 5681 Web address: http://www.suez.com.au General Email: emma.jefferson@suez.con

Water, waste-based secondary materials and energy are essential for the vitality of human activities. We provide expert water optimization services in water networks engineering, equipment, operation and maintenance. We pioneer advanced solutions through waste water recycling and seawater desalination. We ensure waste collection and disposal and promote waste recovery to generate renewable waste based energy and secondary materials. We offer innovative solutions in consulting for the sustainable urban development.

SUMITOMO ELECTRIC INDUSTRIES, LTD.

Contact: Koii Mats Chuo-ku, Osaka Phone: +81 6 6220 4337 Web address: http://global-sei.com General Email: poreflon-sales@info.sei.co.jp

Under the Sumitomo Spirit and the Sumitomo Electric Group Corporate Principles, which have guided us at the Sumitomo Electric Group for 400 years. In 2003. Sumitomo Electric commercialized polytetrafluoroethyl resin (PTFF) water treatment membrane modules for crofiltration (MF), and started sales of Poreflon Module and we are currently proposing not only Poreflon™ Module but also water treatment system for water supply, sewage and industrial wastewater

SWING CORPORATION

Contact: Toru Tomioka 7-18 Konan 1-chome, Minato-ku Tokyo, 108-8470. Japan Phone: +81-3-6830-9075 Web address: http://www.swing-w.com/en General Email: tomioka.toru@swing-w.com

Established in Japan as Ebara Corporation in 1920 and providing services in over 50 countries, Swing Corporation is a leading water solutions provider headquartered in Tokyo. We design, build, operate and maintain water and waste water treatment plants for municipal and industrial customers using the best of Japan's water and environmental technologies. Swing Corporation applies decades of experience in the operation of over 300 water treatment facilities while simultaneously building an international multidisciplinary water business to meet local and global needs, delivering water solutions in Indonesia, China, Vietnam, Malaysia and other countries.

TAISEI KIKO CO., LTD.

Contact: Tadahiro Yama Umeda Kita-ku 1-1-3-2700 Osaka, 5300001, Japan Phone: +81-6-6344-7784 Web address: www.taiseikiko.cor General Email: overseas@taiseikiko.com

Since its foundation in 1941, TAISEI KIKO has been a pioneer in the field of water, sewage, and gas pipeline intenance, by constantly striving to meet the needs of the industry.

TAIZHOU G-GOOD ADHESIVES CO., LTD.

Contact: Henry Chi SHINIU, YANJIANG TOWN LINHAI, ZHEJIANG 317022, China Phone: +86-576-8416 2725 Web address: http://en.g-good.com.cn General Email: henry@g-good.com.cn

G-Good Adhesives, established in 2005, is a productpriented enterprise with advanced R&D power. In 2009 a 12000 m2 factory site was built including steel can manufacturing facilities. Now a 37725 m² new site is under construction, and will be ready in 2017. Currently G-Good supplies NSF listing plastic pipe cements, industrial adhesives and structural adhesives to Europe, America, Middle East & Asia countries, and offers seamless technical & customer service. We welcome the global distribution & OEM business cooperation

TAYLOR AND FRANCIS

Suite 2, Level 2, 11 Queens Road Melhourne VIC 3004 Australia Phone: +61 (03) 8842 2416 Web address: http://www.tandfonline.com General Email: support@tandfonline.com

Taylor & Francis partners with researchers, scholarly societies, universities and libraries worldwide to bring knowledge to life. Our content spans all areas of Humanities Social Sciences Behavioral Sciences Science, Technology and Medicine, and we are one of the world's leading publishers of scholarly journals, and

Our network of offices has grown to include representatives in Oxford, New York, Philadelphia, Boston, Melbourne, Singapore, Beijing, Stockholm, and Johannesburg. This has enabled T&F staff to provide local expertise and support to our editors, societies and authors, as well as tailored, efficient customer service to our library colleagues in institutions around the world.

THE AUSSIE BLADDA TANK

Contact: Andrew Prigr 2 Andrew Street Mooroolbark, VIC 3138, Australia Phone: +61 431 722 989 Email: andrew@aussiebladda.com.au Website: www.aussiebladda.com.au

Manufactured from UV stabilised reinforced polypropylene, the Aussie Bladda Tank is a flexible tank for potable water. The tank is unique as it is compact to transport, can be tailored to fit into difficult spaces and requires no framework. Tanks can be rolled up when not in use and moved to a new location. Originally designed to collect rain water and store it in confined areas such as under a house or decking without comprising valuable space in the backyard, the Bladda has been adapted over time and is sought out by the building industry, architects and the general public looking for flexible water storage solutions

THE CHOOSE TAP COALITION

Contact: Tarnya McKenzi Lucknow Street

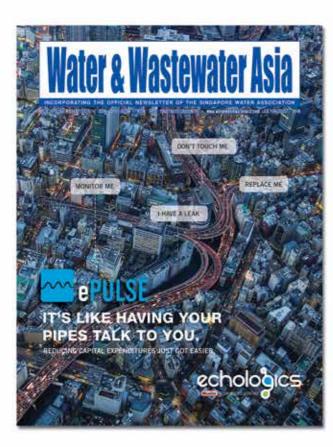
Mitcham, 3132, Australia Phone: +61 3 9872 1526 Web address: http://choosetap.com.au General Email: choosetap@vvw.com.au

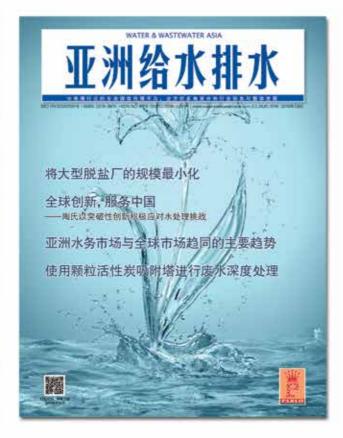
Choose Tap is the first fully integrated, community-based program of its type in the world and is designed to cause a shift in the way people, especially youth, relate to tap water. It is a multi-utility engagement program, addressing situational factors by making drinking tap water more accessible and convenient, developing awareness and involvement through multi-channel communications and activations and challenging attitudinal and values based issues around drinking tap water. Visit the Choose Tap Delegate Lounge to find out more about this program and the Choose Tap coalition partners spreading the good word on tap water across the country and beyond. Learn how you can become a Choose Tap Partner and don't forget to use the Choose Tap refill station to guench your World Water thirst.

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Quench Your Thirst for Knowledge with Water & Wastewater Asia!

Water is essential for life, but the world will face mounting difficulties in securing sufficient clean water as a multitude of challenges present themselves in various ways. To combat this, technologies evolve and tremendous business opportunities are expected to be generated. Hence, it has become extremely important to stay abreast of key industry happenings within the rapidly growing market. WWA works to reflect the industry and quench your thirst for knowledge and information, thus serving as your gateway to the dynamic market.





Water & Wastewater group of magazines is also available in Chinese. Water & Wastewater China (WWC) caters to the Chinese market. It is the ideal platform for commercial water-related specifiers and innovative water & wastewater management service and product vendors to reach out to a targeted audience in China.

If you have been looking to penetrate the Chinese market, WWC is perfect for you.

Water & Wastewater Asia

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Exhibitor Profiles

THE JAPAN INSTITUTE OF WASTEWATER ENGINEERING AND TECHNOLOGY

3-1. Suido-cho. Shiniuku-ku Tokyo, 162-0811, Japan Phone: +81-3-5228-6511 Web address: http://www.jiwet.or.jp/en General Email: jiwet@jiwet.or.jp

The Japan Institute of Wastewater Engineering and Technology (JIWET) is a public interest incorporated foundation established in September, 1992. Since its establishment, while accumulating knowledge and experience from the academic world, private sector and public sector, JIWET has carried out investigation, research, development and evaluation activities to solve numerous issues concerning sewerage services and striven to disseminate the results of those activities in

Many of our achievements thus made have been utilized vide and increased the public interest.

THE UNIVERSITY OF QUEENSLAND

Sustainable Water Program - Global Change Institute Building 20, Staff House Rd St. Lucia, QLD 4072, Australia Phone: +617 3443 3100 Web address: https://www.gci.uq.edu.au/ General Fmail: e abal@ug edu au

The University of Queensland (UQ) is one of Australia's leading research and teaching institutions. We strive for excellence through the creation, preservation, transfer and application of knowledge. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world The University of Queensland ranks in the top 50 as measured by the QS World University Rankings and the Performance Ranking of Scientific Papers for World Universities. The University also ranks 52 in the US News Best Global Universities Rankings, 60 in the Times Higher Education World University Rankings and 77 in the Academic Ranking of World Universities

THE WATER AND CARBON GROUP

Contact: Jim Hunter Level 4 127 Creek Street Brisbane, QLD 4000, Australia Phone: +61 732119997 Web address: http://waterandcarbon.com.au General Email: enquiry@waterandcarbon.com.au

The Water and Carbon Group is a unique contractor that specialises in the design building and operation of low energy wastewater treatment and ecological infrastructure

We operate throughout Australia and service a range of clients across different industry sectors including government, utilities, councils, developers, and industry. Our team comprises process engineers and ecological engineering specialists, which gives us the ability to approach solutions from an integrated engineering and ecological perspective. We draw on a diverse range of process tools allowing us to deliver projects that are not only innovative, but achieve the lowest whole-of-life cost, with minimal energy demand.

TOKYO METROPOLITAN GOVERNMENT REPRESENTED BY TOKYO CONVENTION &

Contact: Elena Bychenkova-Maliouguina Nisshin Bldg. 6F, 346-6 Yamabukicho, Shinjuku-ku Phone: +81-3-5579-2684

Web address: http://www.businesseventst General Email: businessevents@tcvb.or.jp

It is a great pleasure to invite you all to Tokyo for the IWA World Water Congress & Exhibition in 2018. Tokyo represents a vital crossroad where over 400 years of history and tradition meet innovation. The City offers a rich diversity of attractions, from art performances to shopping to the world-renowned Japanese cuisine Tokyo is also known for its safety, cleanliness and

The natural friendliness and the willingness to help tourists of the Japanese people will surely make your stay in Tokyo comfortable.

TOKYO METROPOLITAN SEWERAGE SERVICE CORPORATION

2-6-2 Otemachi, Chivoda-ku Tokyo, 100-0004, Japan Phone: +81-3-3241-0869 Web address: http://www.tgs-sw.co.jp/ General Email: seiko-hayashida@tgs-sw.co.jp

Tokyo Metropolitan Sewerage Service Corporation(TGS:Tokyo Gesuidou Service) was established in 1984 by applying the funds and technologies of the Tokyo Metropolitan Govern and private companies into practical use Since TGS was established,we have been a group of professiona sewerage engineers in fields such as civil engineering electricity, machinery, and water quality, and are recognized as a reliable contractor for maintenance of sewerage facilities. Now TGS has become an indispensable partner of Bureau of Sewerage, Tokyo Metropolitan govern

We are also actively working in concert with the Tokvo

TSS TOKYO WATER CO., LTD.

6-14-1. Nishi-Shiniuku. Shiniuku-ku Tokyo, 160-0023, Japan Phone: +81-3-5320-9423 Web address: http://www.tssk.jp/eng/ General Email: yonekawa-naoyuki@tssk.jp

TSS Tokyo Water Co., Ltd. (TSS) is partner of the Bureau of Waterworks Tokyo Metropolitan Government. TSS has carried out projects utilizing mainly Non-Revenue Water reduction technology around the world, with the focus on South East Asia. (Malaysia, Myanmar, etc.) Our original TS Leak Checker, portable and compact with a sensor integrated, is designed to enable leak detection in 2 seconds at the minimum and has greatly boosted the efficiency of leak detection .We have excellent reputation

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Contact: Kirsten Habicht Tueager 1 Aarhus, 8200, Denmark Phone: +45 894 495 00 Web address: http://www.unisense.com General Email: sales@unisense.com

Measure O2, H2S, N2O, pH, H2 and more on a micrometer scale.

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Unisense co-exhibit with our daughter company Unisens Environment who is bringing N2O and H2S sensors to the wastewater and industrial market

UNISENSE ENVIRONMENT A/S

Aarhus N, 8200, Denmark Phone: +45 8944 9500 Web address: http://www.ur General Email: sales@unisense.com

Unisense Environment was established in 2013 as a spinoff from Unisense A/S - the world leading manufacture of microsensors for environmental research. Unisense Environment brings sensors traditionally used for research into industrial applications. Unisense Environment supplies a new advanced N2O sensor which could reduce the climate impact of wastewater treatment

The N2O Wastewater System is the world's first sensor system for measuring N2O directly in the treatment processes and estimating the atmospheric emission Furthermore, Unisense Environment is developing a novel sensor for liquid phase measurement of hydroger

UNITYWATER Contact: Alice Champion Level 2, 6-10 Maud Street Maroochydore, QLD 4558, Australia

Web address: http://www.unitywater.com General Email: alice.champion@unitywater.cor

Unitywater provides high quality, safe and reliable sewage collection and treatment services and clean drinking water to Moreton Bay, Sunshine Coast and Noosa communities in South-East Queensland.

We manage more than 300,000 customer accounts and operate \$3.2 billion of essential service infrastructure more than 765,000 people - that's 16.3% of Queensland's population

We work 24 hours a day, seven days a week to provide a constant service for our customers who are at the heart of

All of our activities meet strict environmental guidelines and we are passionate about preserving our environn for generations to come.

UNSW GLOBAL WATER INSTITUTE

Contact: Nick Schofield UNSW, Vallentine Annexe (H22) Kensington, NSW 2052, Australia Phone: +61 2 9385 5097 Web address: http://www.globalwaterinstitute.unsw. General Email: gwi@unsw.edu.au

The Global Water Institute embodies multidisciplinary water research, education, innovation and probler solving. With over 400 specialists, we offer the following key capabilities:

Water/wastewater management: treatment, recycling, membranes, trace organics, physicochemical processes odorous/gaseous emissions, cyanobacteria, risk

Water resource management: groundwater hydroclimatology, flood management, climate change/

Coastal and estuarine management: civil/ecoengineering, hydraulics, sediments.

Aquatic ecosystems/biodiversity: river/wetland management, biomonitoring, conservation practice,

Public health and social science: health services.

Policy and sustainability: water governance, planning titutional capacity, sustainability assessment. Industry specialisations: aquaculture, fisheries, agriculture, mining, coal seam gas, water utilities Education: world leading PhD and international student

UVS TRENCHLESS

Street name numbe City, zip code. Country Web address General Email

UVS Trenchless Technology, (a BlueZone Group company), develops, supplies and services reliable equipment used for condition assessment of pipeline networks and water resources. UVS is home to the innovative SewerSerpent™ that uses Extra-low Voltage (<50Vac) electricity to quickly and accurately locate leaks in sewer pipelines. SewerSerpent™ can be used to locate leaks that are the source of exfiltration and inflow/infiltration problems in sewer networks and can locate leaks that CCTV cameras cannot detect by visual inspection alone. UVS application engineering develops innovative solutions for customer needs including specialised systems for long-range pipeline inspection

VCS DENMARK

Contact: Henrik Werd Odense, 5000, Denmar Phone: +45 631 323 33 Web address: http://www.vcsdenmark.com General Email: info@vandcenter.dk

VCS Denmark is the third largest water and wastewater utility in Denmark. We operate 6 waterworks, 14 wastewater treatment plants and 3400 km of water and wastewater pipeline network. VCS Denmark is known as a frontrunner in the Danish

water and wastewater sector We have supplied the city of Odense with clean drinking

water since 1853, and as a company, we embody more than 150 years of experience in water supply and wastewater management.

Today we are a modern water and wastewater utility with 185 employees, all highly skilled professionals within

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Vermeer Australia is part of the worldwide dealer network of Vermeer Corporation, a manufacturer based in Pella, Iowa, comprising over 3,000 people in 60 nations. We deliver real impact on our customer's productivity and profit through the provision of high-quality construction, environmental and surface mining equipment and the support of a nationwide network of factory trained and certified dealerships.

Our Australian dealer network spans the entire east coast, with our localised sales, parts and service teams offering an unmatched level of customer support.

VFWIN

Contact: Dieneke Krijbolder Bezuidenhoutseweg 12 Den Haag, ZH 2594 AV, Netherlands Phone: +31703490850 Web address: http://www.vewin.nl General Email: info@vewin.nl

Vewin is the association of drinking water companies in The Netherlands. Vewin represents the common interests of its member utilities in national and international politics and institutions. Ten drinking water companies provide water of outstanding quality for almost 17 million inhabitants and 8 million connections. Their unique selling point is the absence of chlorination, due to a long-standing focus on water quality from source to tap. Dutch drinking water is for 60% produced out of ground water and for 40% out of surface water. Besides on water quality, the sector focusses on providing sustainable and efficient services to the customer

VICTORIAN GOVERNMENT - DEPARTMENT OF ECONOMIC DEVELOPMENT, JOBS, AND RESOURCES

Contact: Elise Coughli 121 Exhibition Street

Melbourne, VIC 3000, Australia Phone: 13 22 15

Web address: www.business.vic.gov.au General email: trade@ecodev.vic.gov.au

The Department of Economic Development, Jobs, Transport and Resources (DEDJTR) is the Victorian Government's lead agency for creating the conditions to sustainably develop the Victorian economy and grow employment. Our role is to increase jobs, investment, exports and opportunities; stimulate innovation, competitiveness, and confidence; and support sustainahility

Trade Victoria, which sits within DEDJTR, has primary responsibility for supporting Victorian exporters, strengthening linkages with international businesses providing high level international market intelligence, improving access to overseas markets and increasing the capabilities of Victorian businesses to compete

VICTORIAN GOVERNMENT -DEPARTMENT OF ENVIRONMENT. LAND, WATER AND PLANNING

8 Nicholson Street East Melbourne, VIC 3002. Australia Phone: +61 3 9637 9453 Web address: http://www.delwp.vic.gov.au General Email: http://www.delwp.vic.gov.au/about-us/

The Department of Environment Land Water and Planning (DELWP) creates liveable, inclusive and sustainable communities that support jobs and growth in Victoria. We recognise the link between the built and natural environment in the quality of our lives, and work to accommodate population growth while maintaining world class liveability and protecting our heritage for future generations. The Water and Catchments Group of DELWP manages Victoria's water resources in partnership with a network of government agencies and water authorities. We manage groundwater, catchments and waterways, infrastructure, water saving and re-use projects, flood management, governance and water legislation. Our expertise ranges from river hydrology and ironmental science to water engineering, planning and specialist industry technologies.

VINIDEX

Contact: Ian Patersor 224 Musgrave Road Coopers Plains, QLD 4108, Australia Phone: +61407622552 Web address: http://www.vinidex.com.au General Email: ipaterson@vinidex.com.au

Vinidex is Australia's leading supplier of PVC, PP and PP piping systems for the transportation of water and

Since humble beginnings in 1960, Vinidex has built an enviable reputation based on quality, service, innovation and performance, and employs over 600 staff across Australia. In 2014 Vinidex became part of the Aliaxis Group, a global leader in the manufacture of plastics pipes and fittings. Aliaxis operates in over 40 countries, has more than 100 manufacturing and commercial entities and employs 15.700 people.

With state-of-the-art facilities around Australia. Vinidex will continue to lead the industry in the delivery of pipeline

VONTRON MEMBRANE TECHNOLOGY CO., LTD.

Contact: Ailsa Zhou T1-1108 Xihuan Plaza, No. 1 Xizhimenwai Street Beijing, 100044, China Phone: +86-10-58301837 Web address: http://www.vontron.com General Email: zhoual@vontron.com

Vontron Membrane Technology Co., Ltd. is specialized in R&D, manufacture and technical service of RO and NF membrane elements. Owning the core technology and capability for fabrication of membrane sheet, Vontron is the biggest professional manufacturer of compound RO membranes in China, and is the provider of system design and applied service with powerful technical support. Vontron will be, as always, carrying out the corporate spirit of "Surmounting ourselves and pursuing endlessly bringing forth the new products from the old ones, and devoting ourselves to the establishment of elite products for the enviro-tech era

WATER360

Contact: Don Alcock P.O. Box 10907, Queen Street Brisbane, QLD 4000, Australia Phone: +61 7 3028 7652 Web address: d.alcock@watersecure.com.au General Email: http://www.water360.com.au

Water360 is a new international water education and engagement toolkit managed by Australian Water Secure Innovations Ltd (WaterSecure Innovations), a not-forprofit company formed with support by the Australian water industry. Water360 products are based on extensive R&D to help drive innovation and efficiency for the water industry, in Australia and internationally. Water360 products help water utilities and organisations with their community education and customer engagement programs. A range of videos, animations, guides and interactive maps can be used and adapted for websites, displays, e-learning, workshops, forums, and

Water360 has been developed with support by the Australian government, and the water industry in Australia and the United States. Products are widely applicable to the international water community. Used individually or together, they help enhance industry focus on integrating the full water cycle into urban water supply managemen Commencing in 2016, WaterSecure Innovations is also focused on WaterVal - streamlined water treatment technology validation

http://www.watersecure.com.au/engage

WATER ALLIANCE

Contact: Juliette Douglas PO box 7560, Agora 4 Leeuwarden, Friesland 8934 CJ, Netherlands Phone: +31 58 2849044 Web address: http://www.wateralliance.nl General Email: j.douglas@wateralliance.nl

The water Alliance is a unique partnership of public and private companies, government agencies and knowledge institutes involved in the watertechnology industry in The Netherlands. The Water Alliance is partner in business at the WaterCampus in the Netherlands. The WaterCampus is the meeting point of the European Water technology sector. The WaterCampus offers a unique research infrastructure and is a meeting point for scientists and companies from all over Europe

WATER ENVIRONMENT FEDERATION (WEF)

Contact: Laila Sukkariyyah 601 Wythe Street Alexandria, Virginia 22314, United States Phone: +1-703-684-2400 Web address: http://www.wef.org General Email: inquiry@wef.org

The Water Environment Federation (WEF) is a notfor-profit technical and educational organization of 33,000 individual members and 75 affiliated Membe Associations (MAs) representing water quality professionals around the world. Since 1928, WEF and its members have protected public health and the environment. As a global water sector leader, our mission is to connect water professionals; enrich the expertise of water professionals; increase the awareness of the impact and value of water; and provide a platform for

Exhibitor Profiles

WATER RESEARCH AUSTRALIA

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Water Research Australia Limited (WaterRA) is a highly-effective not-for-profit company, established and supported by members to initiate and manage collaborative research. Our research scope encompas a wide range of water management issues in urban. regional and remote water. Research is vital for the water industry to underpin decision-making processes with vidence-based science.

WaterRA delivers significant benefits to the water industry, the research community and regulatory bodies

· Facilitating networking between industry, researchers

- and regulators

 Advocating for safe water on the national agenda
- Funding and managing researchEncouraging knowledge sharing
- Developing future industry professionals

WATER SERVICES ASSOCIATION OF AUSTRALIA (WSAA)

Contact: Adam Lowel Level 8, Suite 802, 401 Docklands Drive Docklands, VIC 3008, Australia Phone: +61 3 8605 7666 Web address: http://www.wsaa.asn.au General Email: info@wsaa.asn.au

The Water Services Association of Australia (WSAA) is the peak industry body representing the urban water industry and represents over 65 public and privately owned water or water related organisations. Our members provide water and sewerage services to over 20 million customers in Australia and New Zealand and many of Australia's largest industrial and commercial enterprises. Based around our vision of 'customer driven enriching life', WSAA facilitates collaboration, knowledge sharing, networking and cooperation within the urban water industry. We are proud of the collegiate attitude of our members which has led to industry-wide approaches

WATERBIZ

Contact: Amir Cohen PO Roy 21349 el Aviv, 61212, Israe Phone: +97236959352 Web address: http://www.intwater.com General Email: amircoen@inter.net.il

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WaterGroup is Australia's leader when it comes to saving water – and money! Consulting. Water Loss Management. Turn-Key Delivery. Performance Contracting. Smart Metering. From critical pipeline monitoring and total network

management to smart metering and active leak detection we have access to the best equipment available. Our industry knowledge and practical experience allows us to help you select and implement the correct solution for your needs. WaterGroup is proud to be the distributor of ality German made SebaKMT products (a member of the Megger Group).

WATERSHARE

Contact: Theo van den Hoven PO Box 1072 Nieuwegein, UT 3430 BB, Netherlands Phone: +31650685167 Web address: http://www.watershare.eu General Email: info@watershare.eu

Watershare is an international network that brings together knowledge and expertise in the form of Communities of Practice, within which knowledge institutions from all over the world carry out projects jointly and exchange tools in the field of the public water sector. The user-friendly expert tools, which the members develop themselves, find applications in a variety of areas, such as water management, water treatment and transport, water quality and health, and sustainability. Through the wide application of models and methods within Watershare, the collaborating knowledge institutions are able to better serve their end-users. KWR is the founding father of Watershare.

WETT RESEARCH CENTRE. RMIT UNIVERSITY

124 La Trobe Street Melbourne VIC 3000 Australia Phone: +613 9925 0810 Web address: https://www.rmit.edu.au/research/ research-institutes-centres-and-groups/researchcentres/wett-research-centre General Email: wett.researchcentre@rmit.edu.au

Researchers in the Water: Effective Technologies and Tools (WETT) Centre at RMIT University work with government, industry and the community to provide a secure, sustainable supply of safe, clean water with minimal impact on the environment. WETT researchers provide a unique multidisciplinary approach to solving problems and assisting practitioners to develop and implement sustainable water management practices. Our research covers three key areas: Water and wastewater treatment, Water resources and management, Biosolids management and bioenergy generation, and includes improving process efficiency, development of new monitoring methods, resource reclamation, and utilisation of renewable energy. Tailored training programs can also

XYLEM INC.

Contact: nan Street name, number

City, zip code. Country Web address: http://www.xylem.com/ General Email:

Xylem. Derived from classical Greek, our name refers to the supporting tissues that help transport water and nutrients from a plant's roots to its leaves. To the people of Xvlem, our name stands for our promise to live our values while solving our custom most challenging water problems, and to set industry standards for fluid technology applications and water

solutions. Xylem comprises five growth centers - Transport, Treatment, Dewatering, Analytics and Applied Water Systems. These businesses are interconnected, anticipating and reflecting evolving needs and sharing their applications expertise to cover every stage of the water cycle.

YOKOHAMA WATERWORKS BUREAU

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The City of Yokohama, second largest city in Japan has been nominated by the World Bank as one of the first six global best practice Eco2 Cities which balance ecological sustainable development and economic urban

Japan's modern waterworks and sewerage syste originated in Yokohama in 1887 and now the City of Yokohama offers safe and stable service to 3.7 million citizens.

"Yokohama Water Business Association", organization of public-private partnership, contributes to water supply and sewerage utilities overseas, making use of advanced technology of private sector and knowhow of public sector in planning, construction, operation & maintenance, and management.

Notes





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Water is fundamental to the wellbeing of Queenslanders, the State's economic development and the protection of its rich natural values. The Queensland Government is at the forefront of innovative and pioneering policy and programs including: world leading basin management approaches that balance competing uses, a system of tradeable water entitlements, long-term planning for water security to deal with floods and droughts, diverse water services infrastructure and community water conservation and engagement programs. A key focus is managing the rivers flowing to the Great Barrier Reef to protect this natural asset. These outcomes are underpinned by collaborative contemporary science and science-to-practice partnerships.

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Australia – water partners for development – brings together Australian public and private sector organisations to share its experience in the sustainable and equitable management of water resources internationally. Our exhibition and speaking program highlights Australia's achievements in water policymaking, weather and water information and forecasting, water resource assessment, and river basin planning and operations. It showcases the science, tools and services that deliver a reliable picture of Australia's water resources to inform the development of policies and strategies for effective water resource management.

Visit our gateway to Australian expertise and technology and discuss ways to improve water security and manage water to sustain livelihoods and economic well-being in your country.

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