



08:15 – 09:00 KEYNOTE ADDRESS The future of research and innovation Wim van Vierssen Netherlands Introduced by ITT		Room 17
09:15 – 10:45 WATER AND HEALTH Room 1 Water safety plans Chair John Howard Australia 09:15 Introduction 09:20 Securing executive buy-in for preventative risk management – lessons from water safety plans Simon Pollard UK 09:40 From international developments to local practice – Germany's dialogue process towards water safety plan implementation Oliver Schmoll , Claudia Castell-Exner Germany 10:00 Community water planner field guide – developing guidelines and best practice documentation to support water management in remote Indigenous communities Michele Akeroyd Australia 10:20 Managing uncertainty in the provision of safe drinking water Steve Hrudey Canada 10:40 Closing summary	09:15 – 10:45 MANAGING UTILITIES AND THEIR ASSETS Room 2 Strategic asset management and long-term planning 1 Chair Helena Alegre Portugal 09:15 Introduction 09:20 Optimising asset management expenditure – a risk-based approach to capital investment strategy Amit Chanan Australia 09:40 Leading asset management practices help utilities optimise their asset life cycle cost Terry Brueck US 10:00 Planning for water scarcity results in best practices Pamela P Kenel US 10:20 Formulating a strategic waterworks development Yasunobu Okamoto Japan 10:40 Closing summary	
10:45 – 11:15 Morning break		Exhibition
11:15 – 12:45 WATER AND HEALTH Room 1 Drinking water quality management Chair Gertjan Medema Netherlands 11:15 Introduction 11:20 Facing the challenges of the drought and climate change – strategies for the early detection and response to potential issues affecting water quality John Howard Australia 11:40 A review and critical reflection on transient induced water quality events in the distribution system Monirul Islam Canada 12:00 Water and health in rural areas of Romania Mihaela Vasilescu Romania 12:20 Dental caries affected by water quality and water treatment Erik Arvin Denmark 12:40 Closing summary	11:15 – 12:45 MANAGING UTILITIES AND THEIR ASSETS Room 2 Strategic asset management and long-term planning 2 Chair Amit Chanan Australia 11:15 Introduction 11:20 Estimation of service life of pipes – alternative measures to prevent blockages and flooding events in the wastewater network in Oslo VAV Rita Ugarelli Norway 11:40 Asset management in action – asset inventory and condition assessment of pressure pipes/force mains in Hillsborough County, Florida, US Will Williams US 12:00 How can we diagnose and improve the longevity of polyethylene pipes? Dominique Geoffray France 12:20 Establishment of leakage accident rate curves for drinking water pipes Hiroshi Matsushita Japan 12:40 Closing summary	
12:45 – 14:15 Lunch		Exhibition
14:15 – 15:45 WATER AND HEALTH Room 1 Guidelines and regulations for water quality management Chair Marion Savill New Zealand 14:15 Introduction 14:20 Establishment of new regulatory framework for quality of piped drinking water – Singapore's experience Ramnath Vaidyanathan Singapore 14:40 Challenges in addressing variability of lead in domestic plumbing Michael Schock US 15:00 Lead in drinking water – the need for major improvements to reduce threats to public health Colin Hayes UK 15:20 Hygienic and toxicological approval of products in contact with drinking water Ger Ardon Netherlands 15:40 Closing summary	14:15 – 15:45 MANAGING UTILITIES AND THEIR ASSETS Room 2 Strategic asset management and long-term planning 3 Chair Herve Suty France 14:15 Introduction 14:20 Adaptation of water supply and sanitation systems to cope with climate change Sveinung Saegrov Norway 14:40 Developing a multi-town CIP for water assets (pipes, pumping stations and reservoirs) using a deterioration modelling and field sampling approach – mission possible Eric Lalonde Canada 15:00 Linking asset management to sustainability – the role of a decision-making culture David Marlow Australia 15:20 Introduction of asset management to Bureau of Waterworks, Tokyo Metropolitan Government Kazuo Kato Japan 15:40 Closing summary	
15:45 – 16:00 Afternoon break		Exhibition
16:00 – 17:30 KEYNOTE ADDRESS Closing session and Paul Harremoës lecture, 'Water and industry' Chad Holliday US Introduced by Paul Reiter IWA		Room 17



08:15 – 09:00 KEYNOTE ADDRESS The future of research and innovation Wim van Vierssen Netherlands Introduced by ITT		Room 17	
09:15 – 10:45 SCIENCE AND APPLICATION OF WATER TREATMENT Membrane filtration for removal of dissolved matter Chair Wolfgang Uhl Germany 09:15 Introduction 09:20 Nanofiltration selection for NOM removal – pilot- and full-scale operation Tinghir Amandine France 09:40 The influence of divalent ions on rejections of carbamazepine in the presence of humic acid removal by nanofiltration Mehdi Janqorban Iran 10:00 Preparation and application of polyamide thin film composite membrane in forward osmosis process Wei Duan Singapore 10:20 A solution to remove high concentration of colour and TOC from surface water – nanofiltration Nicolas Minel Canada 10:40 Closing summary	Room 3	09:15 – 10:45 WATER, CLIMATE AND ENERGY W Riding the tiger – adapting to climate change: transitioning to a climate-resilient future Chair Henk van Schaik Netherlands 09:15 Introduction – climate change, why adapt, challenges it presents 09:35 Climate adaptation challenges in the United States Margaret Pageler US 09:45 Climate adaptation challenges in The Netherlands Wim van Vierssen Netherlands 09:55 Climate adaptation challenges in Australia Tom Mollenkopf Australia 10:05 Climate adaptation challenges in China Yanqing Wu PR China 10:15 Panel discussion	Room 4
10:45 – 11:15 Morning break		Exhibition	
11:15 – 12:45 SCIENCE AND APPLICATION OF WATER TREATMENT Effect of dissolved matter on membrane filtration Chair How Yong Ng PR China 11:15 Introduction 11:20 Effects of oxidation on natural organic matter and the permeate flux of UF/NF ceramic membranes applying ozone and H ₂ O ₂ /UV AOP Joerg Winter Germany 11:40 Organic fouling of ultrafiltration membranes by transparent exopolymer particles (TEP) in a seawater UF-RO plant Loreen Villacorte Netherlands 12:00 Organic fouling in forward osmosis process Venketeswari Parida Singapore 12:20 Analysis of membrane fouling of the microfiltration of cells–proteins mixtures using MPM image analysis In-Soung Chang Korea 12:40 Closing summary	Room 3	11:15 – 12:45 WATER, CLIMATE AND ENERGY W Riding the tiger – adapting to climate change 2: projections and uncertainty in adapting to a climate resilient future Chair Carol Howe Netherlands 11:15 Climate services – the Dutch experience in development and provision of climate data for the water sector Dutch Met Office Netherlands 11:30 Climate change projections and water resource planning – how do we work together? Trevor Bishop UK 11:45 Incorporating down-scaled GCMs and their uncertainty into utility planning Carlos Montero Spain 12:00 Climate change projections and actions for the future – Tokyo case study Gen Ozeki Japan 12:15 Panel discussion	Room 4
12:45 – 14:15 Lunch		Exhibition	
14:15 – 15:45 SCIENCE AND APPLICATION OF WATER TREATMENT Modified membrane filtration processes Chair Don Bursill US 14:15 Introduction 14:20 Hybrid membrane process to achieve biostability in drinking water systems Benoit Barbeau Canada 14:40 Pilot study – treatment of membrane concentrate Nathalie Vigneron-Larosa France 15:00 Separation for three divalent cations (Cu, Ni and Co) by NF membranes from pH 3-5 Shiao-Shing Chen Chinese Taiwan 15:20 Organic fouling development in a long channel RO membrane cell Huajuan Mo Singapore 15:40 Closing summary	Room 3	14:15 – 15:45 WATER, CLIMATE AND ENERGY W Riding the tiger – adapting to climate change 3: making decisions in the face of uncertainty Chair Adam Lovell Australia 14:15 Climate change uncertainties and adaptation approaches Carol Howe Netherlands 14:30 Using decision support systems for water resource planning in a drying climate – a review of the systems and practical application in Australia Alan Gregory Australia 14:45 How to make decisions with uncertainties – Singapore case study Kenneth Chua Singapore 15:00 How to make decisions with uncertainties – Teipei case study Chen Man-Li Chinese Taiwan 15:15 Panel discussion	Room 4
15:45 – 16:00 Afternoon break		Exhibition	
16:00 – 17:30 KEYNOTE ADDRESS Closing session and Paul Harremoës lecture, ‘Water and industry’ Chad Holliday US Introduced by Paul Reiter IWA		Room 17	



08:15 – 09:00 KEYNOTE ADDRESS The future of research and innovation Wim van Vierssen Netherlands Introduced by ITT		Room 17	
09:15 – 10:45 WATER, ECOSYSTEMS AND CATCHMENTS	Room 5	09:15 – 10:45 WATER, ECOSYSTEMS AND CATCHMENTS	Room 6
W River basins of the future – visioning resilient water basin management for 2050. Jointly organised by IUCN and IWA (including Watershed and River Basin Management specialist group) Chair Mark Smith IUCN, Mark Buehler US 09:15 Introduction 09:25 The world in 2050 Nagaraja Rao Harshadeep, Amal Talbi World Bank 09:50 Panel presentation and discussion – a 2050 scenario in three highly impacted basins Colorado River basin Pat Mulroy US Murray-Darling River basin John Langford Australia Yellow River basin Yangbo Sun PR China 10:30 Setting basin targets for 2050 – ideas from the audience and panelists		W Groundwater management in urban water supply and sanitation systems Chair Peter Binney US 09:15 Introduction Peter Binney US 09:30 Introduction to the groundwater–urban infrastructure interface Héctor Garduño Mexico 09:50 Urban hydrogeology in Brazil – crisis or opportunity for sustainable cities? Ricardo Hirata Brazil 10:10 Public water supply and current nitrate groundwater pollution in the region of Natal-RN Marcelo Queiroz Brazil 10:30 Integrated urban water balance as a tool for aquifer recharge management in arid urban areas – the San Luis Potosi Metropolitan Area, Mexico Oscar Escolero Mexico	
10:45 – 11:15 Morning break		Exhibition	
11:15 – 12:45 WATER, ECOSYSTEMS AND CATCHMENTS	Room 5	11:15 – 12:45 WATER, ECOSYSTEMS AND CATCHMENTS	Room 6
W River basins of the future – visioning resilient water basin management for 2050. Jointly organised by IUCN and IWA (including Watershed and River Basin Management Specialist Group) Chair Mark Buehler US 11:15 Setting a solutions agenda Walter Grayman US 11:40 Panel input and discussion: Key responses needed from basin agents Urban development Pat Mulroy US Food and agriculture David Molden IWMI Energy Steve Moddemeyer IWA Environment Karin Krchnak US Water Governance Mark Smith IUCN 12:05 Interactive discussion with audience led by chair – prioritisation of needed actions 12:35 Closing summary of 2050 targets and prioritised actions from the session co-chairs Mark Smith, Mark Buehler		W Groundwater management in urban water supply and sanitation systems Chair Peter Binney US 11:15 Use of groundwater as a safety net in urban water supply Yugandhar Mandavkar India 11:35 Groundwater scenario in urban Lucknow, UP, India Nagendra Kishore Choudhary India 11:55 Case study from South Africa Shafick Adams South Africa 12:15 Is it worth decontaminating groundwater? Lessons from a cost-benefit analysis in a French case study Jaen-Daniel Rinaudo France	
12:45 – 14:15 Lunch		Exhibition	
14:15 – 15:45 MANAGING UTILITIES AND THEIR ASSETS	Room 5	14:15 – 15:45 WATER, ECOSYSTEMS AND CATCHMENTS	Room 6
Governance and regulation Chair Bruno Nguyen France 14:15 Introduction 14:20 Synergistic information engineering for optimised compliance and security management Zaid Chowdhury US 14:40 SWITCH project in Birmingham – delivering demand-led research using a learning alliance framework Jennifer Chlebek UK 15:00 Balancing public versus private water allocation Stephen Draper US 15:20 Best practices in worldwide water regulation Rui Marques Portugal 15:40 Closing summary		W Groundwater management in urban water supply and sanitation systems Chair Peter Binney US 14:15 Panel discussion 15:30 Closing remarks – integrating groundwater into IWRM Ken Howard Canada	
15:45 – 16:00 Afternoon break		Exhibition	
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09:15 – 10:45 SECURING NEW AND TRADITIONAL WATER RESOURCES FOR THE FUTURE Room 7	09:15 – 10:45 MANAGING UTILITIES AND THEIR ASSETS Room 8	
W Role of innovation, good governance and management in water reuse 1 Chairs Blanca Jimenez Mexico and Audrey Levine US Keys to success in water reuse – the role of good governance, institutional incentives and regulations 09:15 Welcome address Valentina Lazarova France 00:00 Keynote presentation – Milestones in water reclamation, recycling and reuse Takashi Asano , University of Davis, California, US 09:30 How to secure water reuse – the US experience Wade Miller US 09:45 Main achievements and challenges for efficient water reuse Akissa Bahri Ghana 10:00 Tools and frameworks for management of water quality Adam Lovell Australia 10:15 Role and constraints of regulations – the need for international policy Blanca Jimenez Mexico 10:30 Roundtable discussion Shane Snyder US, Rongchang Wang China <ul style="list-style-type: none"> • Good governance – how to secure safe and viable water reuse through pricing policy, institutional incentives and appropriate regulations • Fit to use – do we have the right approach, clear water quality requirements and appropriate tools and technologies? 	W Non-revenue water (NRW) management in low- and middle-income countries (LAMIC) Chair Roland Liemberger Philippines 09:15 Introduction Roland Liemberger Philippines 09:25 NRW management – why is it still not mainstream in LAMIC? Tim Waldron Australia 09:45 Recommendations for rapid NRW assessment Roland Liemberger Philippines 10:00 NRW assessment and reduction in Malawi Hielke Wolters Malawi 10:15 Group exercise Rapid NRW assessment	
10:45 – 11:15 Morning break		Exhibition
11:15 – 12:45 SECURING NEW AND TRADITIONAL WATER RESOURCES FOR THE FUTURE Room 7	11:15 – 12:45 MANAGING UTILITIES AND THEIR ASSETS Room 8	
W Role of innovation, good governance and management in water reuse 2 Chairs Akissa Bahri Ghana, Josef Lahnsteiner Austria How to enhance efficiency and trust in water reuse 11:15 Communication and public education – how the understanding of water quality can help to promote water reuse Linda MacPherson US 11:30 Integrated solutions for fast-growing urban areas – responsible use and reuse of water and energy Peter Cornel Germany 11:45 The keys to success for water reuse in West Basin, California Rich Nagel US 12:00 Role of integrated water management for the city of the future Chong Tzeh Chua Singapore 12:15 Main challenges and best practices for the design and management of dual distribution systems Joe Towry US 12:30 Alternate presentation – feedback from operation of water reuse facilities in Namibia and India Josef Lahnsteiner Austria	W Non-revenue water (NRW) management in low- and middle-income countries (LAMIC) Chair Roland Liemberger Philippines 11:15 Presentation and discussion of group results 11:45 NRW management in Malaysia Shaharis Saad Malaysia 12:00 Outsourcing of NRW management – how the private sector can help Mai Flor Philippines 12:15 Panel discussion facilitated by Tim Waldron Australia	
12:45 – 14:15 Lunch		Exhibition
14:15 – 15:45 SECURING NEW AND TRADITIONAL WATER RESOURCES FOR THE FUTURE Room 7	14:15 – 15:45 MANAGING UTILITIES AND THEIR ASSETS Room 8	
W Role of innovation, good governance and management in water reuse 3 Chair Duncan Ellison Canada Design and management of onsite water reuse systems and technologies 14:15 Challenges of onsite treatment – product and technology performance verification and certification Tom Bruursema US 14:30 Challenges and solutions for onsite water reuse in the United Kingdom John Griggs UK 14:45 Lessons learned of onsite reuse and new regulations and standards in Canada and the United States Cate Soroczán Canada 15:00 Regulatory requirements or guidance for post-installation maintenance and performance for onsite systems Chris Coulthurst Australia 15:15 Questions and answers – main challenges, regulations and best practices for the design, regulation, installation and management of onsite systems and the need for guidance and good practices 15:30 Wrap-up – feedback from various countries and organisations	Have you lost your water? Water loss management and control Chair Tim Waldron Australia 14:15 Key messages from the water loss task force conference Tim Waldron Australia 14:40 A portable tool to detect leaks in large-diameter pipes Ignacio Casals Spain 15:00 Embarking on the world's largest non-revenue water management project, Manila, Philippines Roland Liemberger Philippines 15:20 Leak modelling in water distribution systems by pressure and flow data optimisation approach Mohammad Hossein Naser Moaddeli Iran 15:40 Closing summary	
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09:15 – 10:45 WATER, ECOSYSTEMS AND CATCHMENTS Room 9 New approaches to monitoring urban water Chair Frank Sacher Germany 09:15 Introduction 09:20 Water network monitoring and water loss control using a statistical algorithmic solution – a case study in Jerusalem Haggai Scolnicov Israel 09:40 Suspended particles in wastewater – their optical, sedimentation and acoustical characterisation and modelling Anne Pallares France 10:00 Developing a public information and engagement portal of urban waterways featuring real-time monitoring and modelling Thomas Cochrane New Zealand 10:20 Fluoride monitoring in groundwater resources of Iran Ahmad Montazeri Iran 10:40 Closing summary	09:15 – 10:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 10 Stakeholder and public engagement on nanotechnology for water Chair Jan Hofman Netherlands 09:15 Introduction Jan Hofman Netherlands 09:25 The benefits of nanotechnologies for water and wastewater treatment, market expectations and timing for full-scale development Pedro Alvares US 09:45 The risks of nanotechnology during water treatment and on human health and ecosystems Annemarie van Wezel Netherlands 10:05 Manufacturer – benefits and risks during the production phase, when the product is in use and product certification 10:25 Moderated panel discussion	
10:45 – 11:15 Morning break		Exhibition
11:15 – 12:45 WATER AND HEALTH Room 9 Pharmaceuticals and other microconstituents Chair Maria Fürhacker Austria 11:15 Introduction 11:20 Limiting the emissions of micro-pollutants – what efficiency can we expect from wastewater treatment plants? Samuel Martin Ruel France 11:40 Occurrence characterisation of pharmaceuticals in raw wastewater from households, livestock farms, hospitals and pharmaceutical manufacturers in Korea Jeong Eun Oh Korea 12:00 Full-scale MBR treatment of hospital wastewater as forerunner for hotspot wastewater treatment solutions in high density urban areas Silvio Beier Germany 12:20 Removal of micropollutants in WWTP effluent by biological assisted membrane carbon filtration (BioMAC) Marjoleine Weemaes Belgium 12:40 Closing summary	11:15 – 12:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 10 Stakeholder and public engagement on nanotechnology for water Chair Jan Hofman Netherlands 11:15 Consumer organisation – what are the questions from the consumer's point of view? Does the consumer like nanotech to be applied in their water treatment? Is the high tech image contributing to water consumption and trust? Or are the feared risks working against the technology's introduction? 11:35 Utility operator – what are the concerns of operators when nanotech is used in the treatment system? What are the special considerations for operators when using nanotech-based treatment processes? 11:55 Labour union – what protection is required for workers with nanotechnology? How can a labour union help take care of the necessary safety precautions? Dutch labour union (FNV/IVAM) 12:15 Moderated panel discussion	
12:45 – 14:15 Lunch		Exhibition
14:15 – 15:45 WATER AND HEALTH Room 9 Endocrine disruptors Chair Shane Snyder US 14:15 Introduction 14:20 Degradation of endocrine-disrupting chemicals during activated sludge reduction by ozone Yafeng Nie PR China 14:40 Elucidating the role of ammonia oxidising bacteria versus heterotrophic bacteria during the biotransformation of microconstituents Nancy G Love US 15:00 Abiotic transformation of estrogens – impact of environmental variables and by-products identification Ruth Marfil-Vega US 15:20 Removal and fate of estrogens in an anaerobic-anoxic-oxic activated sludge system Yongmei Li PR China 15:40 Closing summary	14:15 – 15:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 10 Stakeholder and public engagement on nanotechnology for water Chair Jan Hofman Netherlands 14:15 Water utility – what hurdles are there to implement nanotechnology in a treatment system? Communication strategy? Requirements in the design process? Operator training? 14:35 Consulting engineer – what are the important aspects for a consulting engineer in designing a new nanotechnology-based treatment system? 14:55 Water quality regulator – how can a water quality regulator help to engage nanotechnology without compromising water quality and safety? 15:15 Moderated panel discussion	
15:45 – 16:00 Afternoon break		Exhibition
16:00 – 17:30 KEYNOTE ADDRESS Closing session and Paul Harremoës lecture, 'Water and industry' Chad Holliday US <i>Introduced by Paul Reiter IWA</i>		Room 17



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09:15 – 10:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 11 Advances in physico-chemical processes and technology Chair Yoshimasa Watanabe Japan 09:15 Introduction 09:20 Electrochemical dechlorination of 2,4-dichlorophenol in aqueous solution on palladium-loaded meshed titanium electrode Zhirong Sun PR China 09:40 Electrochemical treatment of wastewater polluted by nitrate – selective reduction to N ₂ on boron doped diamond cathode Vincent Georgeaud France 10:00 Cationic starch as an alternative flocculant for synthetic polymer Michael Sievers Germany 10:20 Critical aspects of an in-tank flocculation sub-model for rectangular settling tanks using a 3D-CFD model Krishnamurthy Ramalingam US 10:40 Closing summary	09:15 – 10:45 WATER, ECOSYSTEMS AND CATCHMENTS Room 12 Management of the quality of water resources – regulatory and economic aspects Chair John C Little US 09:15 Introduction 09:20 Using AnnAGNPS to evaluate the impact of controlled tile drainage on surface water quality in the South Nation River Basin, Ontario, Canada Que Zhenyang Canada 09:40 Monitoring station for water quality assessment of receiving bodies Bruno Barillon France 10:00 Development and application of a harmonised water quality index Miguel Angel Lopez Zavala Mexico 10:20 A new approach for monitoring and modelling of organic matter in a Brazilian polluted river – the case study of Iguaçu River Cristovao Vicente Scapulatempo Fernandes Brazil 10:40 Closing summary	
10:45 – 11:15 Morning break		Exhibition
11:15 – 12:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 11 Innovative water treatment processes and plants 1 Chair Rhodes Trussel US 11:15 Introduction 11:20 Organic micropollutant elimination – quantitative structure-activity relationships for process and performance selection and performance monitoring Gary Amy Saudi Arabia 11:40 Removal of nitrate and perchlorate from polluted drinking water using the ion exchange membrane bioreactor – effect of module configuration Maria Reis Portugal 12:00 Suspended solid abatement in a conical fluidised bed flocculator Shuangshi Dong PR China 12:20 Dissolved air flotation – an old, proven technology expanded to new treatment applications at very high rates John Dyson US 12:40 Closing summary	11:15 – 12:45 MANAGING UTILITIES AND THEIR ASSETS Room 12 Sustainable water services for the urban poor – indicators and benchmarking for improved utility performance Chair Enrique Cabrera Spain 11:15 Introduction Maarten Blokland Netherlands 11:25 IWA performance indicators and benchmarking in utilities – lessons learned applicable to the urban poor Enrique Cabrera Spain 11:35 The PROBE project – benchmarking for pro-poor water services provision – objectives, partners, methodology, initial results Maarten Blokland Netherlands 11:45 Outcomes of the Access Task Force and way forward for IWA Darren Saywell IWA 11:55 Roundtable discussions Table 1 – What are the perspectives, objectives and indicators that best establish the preparedness and performance of utilities in serving the urban poor? Table 2 – What are the key success factors from best practices in service provision to the urban poor? Table 3 – What are the internal and external incentives that drive utilities to improve performance in the area of pro-poor services provision? Table 4 – What information do they need and which methods do water providers use to identify the urban poor? Table 5 – What should a toolbox for pro-poor water service provision contain and how could it best be structured?	
12:45 – 14:15 Lunch		Exhibition
14:15 – 15:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 11 Innovative water treatment processes and plants 2 Chair Willy Verstraete Belgium 14:15 Introduction 14:20 Leading the City of Baltimore into the 21st Century – flexible treatment solutions and integrated raw water management Jennifer Manuszak, Michael MacPhee US 14:40 Environmental applications of fullerene nanomaterials in water treatment Soryong Chae US 15:00 Softening and conditioning – strategy and case study Martijn Groenendijk Netherlands 15:20 Biocatalytic dechlorination of trichloroethylene with bio-Pd in membrane and fixed bed reactors Tom Hennebel Belgium 15:40 Closing summary	14:15 – 15:45 MANAGING UTILITIES AND THEIR ASSETS Room 12 Sustainable water services for the urban poor – indicators and benchmarking for improved utility performance Chair Enrique Cabrera Spain 14:15 Roundtable discussions continued 15:00 Presentation and discussion of the outcomes of the roundtable discussions 15:30 Session report Maarten Blokland Netherlands 15:40 Word of thanks, closing Enrique Cabrera Spain	
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09:15 – 10:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 13 Modelling and control of water systems Chair Wolf Keller Canada 09:15 Introduction 09:20 Quantification of sewage exfiltration by means of hydrodynamic simulations Christian Karpf Germany 09:40 Improving energy efficiency through optimal control of pumps in water supply and distribution systems Will Williams UK 10:00 Practical application of the head-dependent gradient method for water distribution networks Calvin Siew UK 10:20 Improved automated control of sewer interception in the City of Montréal – 20 years' experience in innovative, real-time control technologies for better CSO control Alain Charron Canada 10:40 Closing summary	09:15 – 10:45 CITIES OF THE FUTURE Room 14 Sustainable urban water systems for the future Chair Carol Howe Netherlands 09:15 Introduction 09:20 Re-engineering cities as forces for good in the environment – paths of transition to distant future alternatives Bruce Beck US 09:40 Role of decentralised systems in the transition of urban water systems Ashok Sharma Australia 10:00 Sustainable water cycle planning – integrating water and the built environment Elliot Gill UK 10:20 Dynamic virtual infrastructure benchmarking – DynaVIBe Robert Sitzenfrei Austria 10:40 Closing summary	
10:45 – 11:15 Morning break		Exhibition
11:15 – 12:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 13 Modelling treatment processes Chair Peter Vanrolleghem Canada 11:15 Introduction 11:20 Uncertainty and risk evaluation of the DCWASA Blue Plains AWWP nitrogen removal system Bruce R Johnson US 11:40 Impact of influent data frequency and model structure on calibration and model output uncertainty Ingmar Nopens Belgium 12:00 Evaluation of a new model for the reduction of excess sludge production by ozonation of return activated sludge – what solids COD fraction is affected? Dominic Frigon Canada 12:20 QualViz – a tool for visual representation of water quality models Geoffrey T Parker UK 12:40 Closing summary	11:15 – 12:45 AWARDS Room 14 2010 IWA Project Innovation Awards global winners showcase 11:15 The Project Innovation Awards (PIA) is a prestigious global competition which recognises and celebrates innovation and excellence in water engineering projects around the world in five different project categories – applied research, planning, design, operations/management and small projects. Featuring presentations by the global PIA winners and honour awardees, the participants will have the opportunity to learn about the unique innovations and engineering features adopted which make these projects global models for effective and sustainable approaches to water management. This session follows the PIA global awards ceremony and dinner which will be held on the evening of Wednesday 22 September.	
12:45 – 14:15 Lunch		Exhibition
14:15 – 15:45 SCIENCE AND APPLICATION OF WATER TREATMENT Room 13 Modelling clarifiers Chair Sudhir Murthy US 14:15 Introduction 14:20 Integration of wastewater treatment plant simulators and clarifier computation fluid dynamic models to achieve greater modelling confidence Joe Rohrbacher US 14:40 Sludge settleability detection using automated SV30 measurement and its application to a field WWTP Changwon Kim Korea 15:00 Shall we upgrade one-dimensional secondary settler models in WWTP simulators? Benedek Plosz Norway 15:20 New findings of three-dimensional flow characteristics in circular secondary clarifiers Markus Ahnert Germany 15:40 Closing summary	14:15 – 15:45 AWARDS Room 14 2010 IWA Project Innovation Awards global winners showcase 14:15 Continued	
15:45 – 16:00 Afternoon break		Exhibition
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09:15 – 10:00 NATIONAL PLATFORM PRESENTED BY DENMARK Room 15 Danish water solutions to a developing world under increasing environmental and climate stress		09:15 – 10:45 CULTIVATING LEADERSHIP SKILLS FOR WOMEN IN THE WATER SECTOR Room 16 Award ceremony for the 2010 IWA Women in Water Award for Leadership and Leadership Development 09.15 Welcome and introduction to the IWA Women in Water (WiW) Programme and the WiW Award for Leadership and Leadership Development Linda MacPherson US 09.25 Speech by past award winner and presentation of award Joan Rose US 09.40 Speech by winner of the IWA Women in Water Award 2010 Cassilda Teixeira Brazil 10.05 Introduction to roundtable discussions, speech by incoming IWA President Glen Daigger US 10.15 Keynote speech – Women in leadership and social aspects of sustainability Judi Hansen Australia
10:00 – 10:45 INDUSTRY FORUM PRESENTED BY CDM Room 15 The water–biosolids–energy nexus – resources for our future 10:00 With increasing awareness of the energy and resource potential in wastewater biosolids – and with municipal water utilities representing 40% or more of urban energy needs – the water industry advancing the technologies and capabilities of biosolids processing for agricultural use and production of renewable energy. An holistic and integrated approach to maximising the resource potential of our water sector facilities will be the driving challenge of our industry through the next decades. David Parry US		
10:45 – 11:15 Morning break		Exhibition
11:15 – 12:00 INDUSTRY FORUM PRESENTED BY NORIT Room 15 The water–energy nexus		11:15 – 12:45 CULTIVATING LEADERSHIP SKILLS FOR WOMEN IN THE WATER SECTOR Room 16 11.15 Roundtable discussions Table 1 – Rapporteur 1 Table 2 – Rapporteur 2 Table 3 – Rapporteur 3 Table 4 – Rapporteur 4 Table 5 – Rapporteur 5 12.10 Presentation and discussion of conclusion and recommendations 12.35 Session report 12.40 Closing
12:00 – 12:45 INDUSTRY FORUM PRESENTED BY CH2MHILL Room 15 Pathways for integrated water management 12:00 Introduction – a call for water market integration Bob Bailey US 12:05 Creating a policy-making context for integrated water management Chad Holliday US 12:15 Water portfolio management – a framework for defining integrated water solutions in a climate change context Kathy Freas US 12:30 Case studies – turning challenges into win-win solutions Glen Daigger US		
12:45 – 14:15 Lunch		Exhibition
14:15 – 15:00 NATIONAL PLATFORM PRESENTED BY JAPAN Room 15 Japanese business strategy to work on the global water issues		14:15 – 15:45 CULTIVATING LEADERSHIP SKILLS FOR WOMEN IN THE WATER SECTOR Room 16 Women leadership panel from the Latin America region Chair Cassiloo Teixeira Brazil 14:15 Panelists Viviana Rocco Uruguay Irene Altafin , Celia Renno Brazil Historically, Latin America has been a patriarchal society where women have not had the same opportunities as men. Currently, they do not participate as significantly in the labour market as men do and when they manage to overcome this barrier, they often experience situations of prejudice and devaluation of their work with salaries that are not compatible with those of men who occupy similar positions. However, overall female participation in the Latin American labour market has increased substantially, especially since the 1990s, and this trend extends to the sanitation sector, where we can already see many women occupying positions of prominence. In this session, some of these women will discuss the challenges they faced and their accomplishments.
15:00 – 15:45 INDUSTRY FORUM PRESENTED BY CANADIAN UTILITIES Room 15		
15:45 – 16:00 Afternoon break		Exhibition
16:00 – 17:30 KEYNOTE ADDRESS Closing session and Paul Harremoës lecture, 'Water and industry' Chad Holliday US <i>Introduced by Paul Reiter</i> IWA		Room 17



08:15 – 09:00 KEYNOTE ADDRESS

The future of research and innovation **Wim van Vierssen** Netherlands Introduced by **ITT**

Room 17

09:15 – 10:45

LAC REGIONAL FORUM

Room 17

Latin America and Caribbean (LAC) regional forum – regional and national reviews

Chair **Carlos Rosito** Brazil

09:15 Introduction and LAC overview **Carlos Rosito** Brazil

09:25 LAC national reports – success and ongoing challenges

Brazil **Carlos Rosito** Brazil

Argentina and Columbia **Daniel Nolasco** Argentina

Chile **Pedro Pablo Errezuris** Chile

Mexico **David Korenfeld Fedemarn** Mexico

Bolivia **Detlef Klein** Bolivia

10:20 Panel discussion

10:45 – 11:15 Morning break

Exhibition

11:15 – 12:45

REGIONAL FORUM

Room 17

Latin America and Caribbean regional forum – Water Operators Partnerships (WOPs)

Chair **Carlos Rosito** Brazil

11:15 Introduction

11:25 Presentation of the regional WOPs platform for LAC – progress and promise **Tomas Lopez** UNHABITAT

11:35 LAC Water Operator Partnerships case studies – best practices, lessons learned, results

Caribbean

Columbia EPM

Brazil CAESB

LAC North South partnerships **Steen Bjerggaard** IWA

12:20 Panel discussion

12:45 – 14:15 Lunch

Exhibition

15:45 – 16:00 Afternoon break

Exhibition

16:00 – 17:30 KEYNOTE ADDRESS

Closing session and Paul Harremoës lecture, 'Water and industry' **Chad Holliday** US Introduced by **Paul Reiter** IWA

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