

WATER CONVENTION 2010 PROGRAMME

28 June 2010 (Monday)

Time	Event	
1830 – 2100	Opening Ceremony & Welcome Reception	Level 4, Hall 404

29 June 2010 (Tuesday)

Time	Event	Venue
0900 – 1045	Joint Opening Plenary	Level 4, Hall 404
1045 – 1115	Tea Break at Water Expo	Level 6, Hall 602-3
1115 – 1245	<p>Water Convention Keynote Speeches:</p> <p><i>Moderators: Darryl Day (Australia) & Paul Reiter (The Netherlands)</i></p> <p>NRW Reduction 360°: The Manila Water Experience <i>Perry Rivera (Philippines)</i></p> <p>Cities of the Future: Improving the Machine and Tending the Garden <i>Paul Brown (USA)</i></p> <p>Safe Water and Sanitation for Sustainable, Clean and Healthy Cities <i>Maria Neira (Switzerland)</i></p> <p>Governance & Finance in the Water Sector <i>Arjun Thapan (Philippines)</i></p>	Level 2, Theatre
1245 – 1400	Lunch	Level 3, Concourse
1400 – 1500	The Singapore Water Lecture by the 3 rd Lee Kuan Yew Water Prize Laureate: Yellow River Conservancy Commission	Level 4, Hall 404
1500 - 1545	Tea Break at Water Expo	Level 6, Hall 602-3
1545 - 1730	<p>Water Convention Poster Session <i>Level 2, Foyer</i></p> <p>WHO Seminar on Economics of Drinking Water and Sanitation: The Cost Factor* <i>Level 2, MR 201</i></p>	

* Details of the WHO Seminar are available on the next page.

WHO Seminar on Economics of Drinking Water and Sanitation: The Cost Factor

Background

Access to safe drinking water and basic sanitation underpins the health status of communities and is a major development goal as reflected in MDG7 target C. In a resource-constrained environment, the reality of many countries, prudent allocation of financial resources for water supply and sanitation schemes is central to ensure sustainable and efficient access. The recent report of the Global Annual Assessment on Sanitation and Drinking-water (UN-Water/WHO, 2010) points, among a number of issues, to the lack of proper targeting and the absence of clear decision-making criteria for the extension of access to water and sanitation.

Options to achieve these goals are varied and contextually determined - rural versus urban and high income versus low income, and types of services - government, private sector or in public-private partnership. Yet, what is universal to the final selection from the locally feasible options is the need for a proper economic evaluation. Such an evaluation starts with a sound cost analysis.

The seminar will draw on the valuable experience of the World Bank, World Health Organization and IRC the Water and Sanitation Centre of Netherlands to develop and test tools, methods and procedures for preparing sound cost estimates of drinking-water options. The discussions will focus on challenges, opportunities and plausible solutions to constraints on establishing a sound economic basis for the extension of sustainable access to safe drinking-water and sanitation.

Seminar Objectives:

- To provide updated information on tools, methods and procedures for preparing cost-estimates as part of the planning for water and sanitation projects with a focus on the needs of low-income communities
- To share knowledge and experiences of key actors and members of the audience on the needs in introducing this economic component to water and sanitation planning and the impact of the costing tools.
- To explore the characteristics of and relevant criteria to be contained in an enabling policy framework supporting optimal cost-effectiveness in expanding drinking-water and sanitation
- To define capacity building needs beyond policy formulation to introduce a costing element in the planning and preparation of water and sanitation projects in the Asia-Pacific Region.

Outcomes:

- Updated information on on-going work on costing tools, methods and procedures and their impact

- Conclusions and recommendations on policy frameworks and capacity building needs in costing of water and sanitation

Seminar Programme

Time (hrs)	Programme
1600	Opening Address <i>Dr Maria Neira, Director, Department of Public Health and Environment, WHO, Geneva</i>
1605	Economics in the Water and Sanitation Program in South-east Asia <i>Guy Hutton, Senior Economist, Water and Sanitation Program, World Bank</i>
1620	The Lifecycle Costs of Water, Sanitation and Hygiene (WASH Cost) <i>Catarina Fonseca, Senior Programme Specialist, International Water and Sanitation Centre, Netherlands</i>
1635	The Cost Manual for Improved Drinking-water for Low-income Communities <i>Professor Fabrizio Carlevaro, University of Geneva, Department of Econometrics, Geneva, Switzerland</i>
1650	Panel discussion on Key Issues and a Vision of Next Steps Moderator: <i>Robert Bos, Co-ordinator, Water, Sanitation, Hygiene and Health, WHO</i> <u>Proposed Panel members:</u> <ul style="list-style-type: none"> • Mr Guy Hutton, Senior Economist, World Bank • Ms Catarina Fonseca, Senior Programme Specialist, International Water and Sanitation Centre, Netherlands • Professor Fabrizio Carlevaro, Department of Econometrics, University of Geneva • Mr Ngaim Hai Guan, Senior Deputy Director, Department of Policy and Planning, PUB Singapore • ADB representative (tbc) • Mr Terrence Thompson, Regional Advisor, Water and Sanitation, WHO Regional Office for the Western Pacific, Manila, Philippines
1720	Conclusions and Closure

30 June 2010 (Wednesday)

TIME (HRS)	SOLUTIONS FOR WATER SYSTEM EFFICIENCY & EFFECTIVENESS		PLANNING FOR SUSTAINABLE WATER SOLUTIONS MR 203, LEVEL 2	WATER QUALITY & HEALTH MR 202, LEVEL 2	GOVERNANCE & FINANCE MR 201, LEVEL 2
	SOURCE TO TAP MR 208, LEVEL 2	WASTE TO RESOURCE MR 209, LEVEL 2			
0900 – 1030	<p>Optimisation & Improvement of Water Treatment Systems I <i>Chair: Darryl Day</i></p> <p>0900 hrs: Distribution System Optimization <i>R. Renner (USA)</i></p> <p>0915 hrs: Integrated Approach For Optimizing Water Utility Efficiency <i>K.-P. Chiu, S.M. Choor, T. Howland (Singapore)</i></p> <p>0930 hrs: Implementation Of Real-Time Optimisation Of Pumping Control With Genetic Algorithms <i>S.T. Lam (Hong Kong)</i></p> <p>0945 hrs: Leading The City Of Baltimore, MD (USA) Into The 21st Century: Flexible Treatment Solutions And Integrated Raw Water Management <i>J. L. Manuszak, M. MacPhee, S. Liskovich, L. Feldsher (USA)</i></p>	<p>Wastewater Collection Systems <i>Chairs: Abdul Kadir Mohd Din</i></p> <p>0900 hrs: Eco-Design and Implementation of Used Water Reticulation System in Tianjin Eco-City <i>X. Liu (China)</i></p> <p>0915 hrs: Deep Tunnel Wastewater Conveyance System in Hong Kong <i>R. Seit (Hong Kong)</i></p> <p>0930 hrs: Delhi Interceptor Sewer Project To Bring River Yamuna Back To Its Life <i>V. Singh, R. Negi, S. Vaidya, D. Moudgil (Singapore)</i></p> <p>0945 hrs: Wastewater Collection System Optimization for Cost-Effective and Sustainable Capital Improvement Planning <i>P. Smith, J.I. Wilson, A. Witt, M. Canning (Australia)</i></p>	<p>Water & Global Change <i>Chair: Kala Vairavamoorthy</i></p> <p>0900 hrs: Global Change and Its Impact on Urban Water Management in Asian Cities <i>P. Reiter (The Netherlands)</i></p> <p>0915 hrs: Climate Change and Urban Thirst, the Rotterdam Approach <i>P. Verhoeven (The Netherlands)</i></p> <p>0930 hrs: Global Change and Uncertainties at the Urban Scale - Asian Case Studies <i>S. Herath (Japan)</i></p>	<p>Formulating Water Quality Guidelines & Regulations <i>Chairs: Avner Adin & Terrence Thompson</i></p> <p>0900 hrs: Water Quality Guidelines for Desalinated Water <i>A. Adin (Israel)</i></p> <p>0915 hrs: Piped Drinking Water Sampling Plan for Small Water Systems in Singapore - A Regulator's Perspective <i>P. S. Joshi, R. Vaidyanathan, C. H. Lam, S. S. Appoo (Singapore)</i></p> <p>0930 hrs: Packaged Water Regulation: Improving Local Processes For Sustainable Water Delivery In Developing Nations <i>A.C. Dada and O.D. Dada (UK)</i></p> <p>0945 hrs: Raw Water Quality Weight Factors: Vaal River, South Africa <i>B. Dzwayiro, F.A. Otieno, G.G. Ochieng, J.J. Bezuidenhout (South Africa)</i></p>	<p>Is the Availability of Finance A Real Issue? <i>Chairs: Michael P. Barrow & Anand Chiplunkar</i></p> <p>0900 hrs: Choosing Financing Options <i>M.P. Barrow (Philippines)</i></p> <p>0910 hrs: Bottleneck Financing of Water Assets: A Financier's Experience <i>R. Kannan (Singapore)</i></p> <p>0920 hrs: Availability of Finance from the Perspective of the Equity Finance Community <i>S. Wilson (Singapore)</i></p> <p>0930 hrs: Credit for the Rural Poor: The Experience of Grameen Bank <i>N. Begum (Bangladesh)</i></p> <p>0940 hrs: Financing of Infrastructure Projects - Perspectives from the Analysts <i>C. Gasson (UK)</i></p> <p>0950 hrs: Availability of Finance - Perspectives from Venture Capitalists <i>D. Henderson (Singapore)</i></p>
1030 – 1100	TEA BREAK @ WATER EXPO (Level 6, Hall 602-3)				
1100 – 1230	<p>Optimisation & Improvement of Water Treatment Systems II <i>Chair: Robert Renner</i></p> <p>1100 hrs: Experiences in Improving Water Treatment Systems in China <i>H.K. Foo (Singapore)</i></p> <p>1115 hrs: Unique Water Treatment Process Challenges At New And Existing Small To Medium Water Treatment Plants In Australia <i>M. Chapman (Australia)</i></p> <p>1130 hrs: Dissolved Air Flotation - An Old Proven Technology Expanded to New Treatment Applications at Very High Rates <i>J.D. Dyson, R. Hess, T. Ballard (USA)</i></p> <p>1145 hrs: Tai Po Water Treatment Works - Expansion Of A Major Operating Treatment Works In Hong Kong <i>P. W. Poon, L. Fernandes, C. Hartinger, C. Venkataraman (Hong Kong)</i></p>	<p>Upgrading of Wastewater Treatment Plants <i>Chair: Glen Daigger</i></p> <p>1100 hrs: Selection And Development Of An Innovative Process Train For An Advanced Tertiary Treatment Plant <i>J. Currie, J. Bates, J. Mieog (Singapore)</i></p> <p>1115 hrs: The New York City Water Pollution Control Plant Biosolids Management Plan <i>R. Pun, G.G. Baldwin, K. Mahoney, A. Spangel, P. Lai (USA)</i></p> <p>1130 hrs: Operational Performance and Optimization of RO Wastewater Treatment Plants <i>C. Bartels, R. Franks, K. Andes (USA)</i></p> <p>1145 hrs: Wetland System: A Cheaper and Efficient Treatment Option for the Food Processing Waste in Africa <i>J. Adelegan (South Africa)</i></p>	<p>Cities of the Future <i>Chairs: Steve Moddemeyer & Paul Brown</i></p> <p>1100 hrs: Integrated Urban Systems: New Tools To Support Sustainable Development <i>D. Spector, W. Cesanek, A. Cannan (Singapore)</i></p> <p>1115 hrs: Sustainable In-situ Water Management Strategies For Sino-Singapore Tianjin Eco-City <i>C.Y. Peng (China)</i></p> <p>1130 hrs: Smart Climate Change Adaptation In Rotterdam, Delta City Of The Future <i>P. Dircke and A. Molenaar (The Netherlands)</i></p> <p>1145 hrs: The City Revisited: A New Sustainable Concept And Design For The Urban Cycle Management Of Water, Waste And Energy <i>Z. D. Quang, J. Boudon, P. Gislette, J.-M. Audic (France)</i></p>	<p>Source Water Protection & Management <i>Chairs: Anand Rudra & Francisco Arellano</i></p> <p>1100 hrs: Effect Of Australian Bush Fires On Quality Of Source Waters For Drinking In Australia <i>J. Dymke (Australia)</i></p> <p>1115 hrs: Reduction of Evaporative Losses from Tropical Reservoirs using Environmentally Safe Organic Monolayer <i>P. S. Babu, H. S. Eikaas, A. Price, D. Verlee (Singapore)</i></p> <p>1130 hrs: Development Of A Pilot Biotic Index For Water Quality Assessment In Urban Tropical Reservoirs <i>E. Clews, L. Loke, C. Belle, E-W. Low, P. Todd, H. Eikaas, P. Ng (Singapore)</i></p> <p>1145 hrs: Predicting Cumulative Effects Of Catchment Disturbances On Runoff <i>Z. Yusop (Malaysia)</i></p>	<p>National Level Institutional Reforms <i>Chair: Paul Reiter</i></p> <p>1100 hrs: The Jawaharlal Nehru National Urban Renewal Mission in India <i>O. P. Mathur (India)</i></p> <p>1130 hrs: Restructuring of the Water Sector for Seeking Private Sector Investment <i>A. Lazaro III (Philippines)</i></p> <p>1145 hrs: Water Sector Restructuring and Regulation - The Malaysian Experience <i>Y.H. Teo (Malaysia)</i></p> <p>1200 hrs: Restructuring the Australian Water Sector <i>C. Davis (Australia)</i></p>
1230 – 1400	LUNCH (Level 3, Concourse)				

TIME (HRS)	SOLUTIONS FOR WATER SYSTEM EFFICIENCY & EFFECTIVENESS		PLANNING FOR SUSTAINABLE WATER SOLUTIONS MR 203, LEVEL 2	WATER QUALITY & HEALTH MR 202, LEVEL 2	GOVERNANCE & FINANCE MR 201, LEVEL 2
	SOURCE TO TAP MR 208, LEVEL 2	WASTE TO RESOURCE MR 209, LEVEL 2			
1400 – 1530	<p>Membrane Systems <i>Chairs: Jonathan Clement & Harvey Winters</i></p> <p>1400 hrs: Enhancing Efficiency Of Full-Scale Ultrafiltration Membrane Treatment For Increased Capacity And Lower Operating Costs <i>M.C. White and M.J. Kosterman (USA)</i></p> <p>1415 hrs: Operating Experience Of Highly Efficient Drinking Water Membrane Plant <i>E. Wong, R. Brito, D. Ratte, J. Imrie, M. Blazeovski (Canada)</i></p> <p>1430 hrs: Operating Experience With Ultrafiltration For TOC Reduction Of Surface Water <i>F. Knops and W. Dautzenberg (The Netherlands)</i></p> <p>1445 hrs: Molecular Characterization Of Microbes Associated With Biofouling In SWCC SWRO Plants <i>M. O. Saeed, W. L. Teng, I. A. Tisan, G. L. X. Tan, G. F. Al-Otaibi, G. Venkidachalam, P. P. Gao (Saudi Arabia)</i></p>	<p>Energy Efficiency in Wastewater Treatment <i>Chair: Ng Wun Jern</i></p> <p>1400 hrs: Energy Efficiency Opportunities in the Wastewater Process Stream, an International Research Project with a Regional Dimension <i>M. Brandt (UK)</i></p> <p>1415 hrs: Greater Energy Efficiency Through Anaerobic Wastewater Treatment <i>P.L. McCarty (USA)</i></p> <p>1430 hrs: Perspectives In Energy Use And Greenhouse Gases At Wastewater Treatment Plants <i>C. Wallis-Lage (USA)</i></p> <p>1445 hrs: Anaerobic Co-Digestion Of Lipid-Rich Wastes And Excess Sludge On Wastewater Treatment Plant <i>P. Camacho, R. Gerard, C. Garel, S. Martin, L. Monnot, P. Dauthuille (France)</i></p>	<p>Water and Energy Footprints <i>Chairs: Kala Vairavamoorthy & Rob Skinner</i></p> <p>1400 hrs: Water and Energy Footprints Frameworks <i>V. Novotny (USA)</i></p> <p>1415 hrs: The Australian Experience in Water and Energy Footprints <i>N. Apostolidis (Australia)</i></p> <p>1430 hrs: Climate Change & Water Vulnerability - Coca-Cola Perspectives <i>G. Koch (Singapore)</i></p> <p>1445 hrs: CityWater - How to Minimise Energy Footprint <i>R. Mackay (UK)</i></p>	<p>Water Safety & Management Plans <i>Chair: Terrence Thompson & Lee Hian Kee</i></p> <p>1400 hrs: Challenges and Issues Related to the Implementation of WSPs <i>T. Thompson (Philippines)</i></p> <p>1415 hrs: Drinking Water Quality Risk Management Plans In Victoria, Australia <i>M. Chapman, G. Finlayson, M. Steele, C. French, K. Dudley, H. Clarke (Australia)</i></p> <p>1430 hrs: Integrated Water Quality Management Plan - PUB's Strategy in Ensuring Safe Drinking Water <i>C.H. Woo (Singapore)</i></p> <p>1445 hrs: Water Emergency Programme – Mitigation Measures Facing Cutzamala System Cuts By The Lack Of Rain In Mexico City <i>R. Olivares (Mexico)</i></p>	<p>Inspired Leadership <i>Chair: Arjun Thapan</i></p> <p>1400 hrs: Phnom Penh Water Supply Transformation <i>E.S. Chan (Cambodia)</i></p> <p>1415 hrs: Equip. Empower. Excel. The Manila Water Brand of Leadership <i>R.T. Maranan (Philippines)</i></p> <p>1430 hrs: Restructuring and Privatisation of SWCC <i>M. Hizan (Saudi Arabia)</i></p> <p>1445 hrs: The Restructuring of Hai Phong Water Supply <i>V. Phong (Vietnam)</i></p>
1530 – 1600	TEA BREAK @ WATER EXPO (Level 6, Hall 602-3)				
1600 – 1730	<p>Disinfection & Advanced Oxidation Systems <i>Chairs: Richard Woodling & Regina Sommer</i></p> <p>1600 hrs: Trends in UV and UV-Oxidation for Disinfection and Treatment of Environmental Contaminants <i>C. Williamson (USA)</i></p> <p>1615 hrs: Prediction Of Advanced Oxidation Performance In Full Scale UV/H₂O₂ Reactor Systems <i>C.H.M. Hofman-Caris, D.J.H. Harmsen, B.A. Wols, L. Janssen, E.F. Beerendonk (The Netherlands)</i></p> <p>1630 hrs: Advanced Oxidation Processes (AOPs) – Comparison Of Different Treatment Scenarios Based On Processes Combining Ozone, UV And Hydrogen Peroxide <i>A. Ried, A. Wieland, J. Mielcke, D. Rohring, R. Wong (Hong Kong)</i></p> <p>1645 hrs: UV Radiation Advanced Oxidation Process: Applications, Mechanisms And Design <i>J. Feng, D. Arifin, R. Woodling, C. Sichel, K. Andre, T. Peschman, B. Coulter (Singapore)</i></p>	<p>Innovative Solutions for Wastewater Treatment <i>Chair: Cindy Wallis-Lage</i></p> <p>1600 hrs: Overview of New Innovations in Wastewater <i>G. Lettinga (The Netherlands)</i></p> <p>1615 hrs: A Green Solution - A Hybrid Process Combining Bio-Sorption And Anaerobic Digestion To Reduce Sludge Production And Save Energy In WWTPs <i>R. Wikramanayake, E. Yu, L. Xiao, R. Knauf, S. Pradhan, J.Y. Hu, E. Jordan, M. Doyle, W.J. Liu (USA)</i></p> <p>1630 hrs: Design And Operational Aspects Of UASB Sewage Treatment Plants <i>B. Heffernan and J. Van Der Lubbe (The Netherlands)</i></p> <p>1645 hrs: Development Of Ceramic Membrane Bioreactor (MBR) Using Flat-Sheet Type Ceramic Filter <i>H. Noguchi, T. Niwa, H. Lie, K. Kekre, G. Tao (Japan)</i></p>	<p>Spatial Planning & Urban Design <i>Chairs: Srikantha Herath</i></p> <p>1600 hrs: Spatial Planning and Institutional Reform - Melbourne's Experience <i>B. Furnage (Australia)</i></p> <p>1615 hrs: Stormwater Low Impact Development Alternatives for Low-Income Communities in Central America: The Case of Ocotillo-Anexo, Honduras <i>A. Milou (USA)</i></p> <p>1630 hrs: Jakarta: Flood-Free? Sustainable Flood Mitigation Measures <i>H. Hahm and M. Fisher (Indonesia)</i></p> <p>1645 hrs: Urban Storm Sewer Infrastructure Planning And Climate Change Risk Approaches: The City Of Alexandria VA, Case Study <i>L. van der Tak, C. Perl, P. Pasteris, L. Traynham, R. Warrick (USA)</i></p>	<p>Trends in Water Quality Monitoring <i>Chair: Shane Snyder & Lim Mong Hoo</i></p> <p>1600 hrs: Results of an International Inter-laboratory Comparison for Emerging Contaminants <i>B. Vanderford (USA)</i></p> <p>1615 hrs: Priority Pollutants In Urban Stormwater: From Concentrations And Loads Analysis To Modelling <i>A. Dembélé, J.-L. Bertrand-Krajewski, C. Becouze, B. Barillon, M. Coquery, C. Cren-Olivé (France)</i></p> <p>1630 hrs: New Technology For On-Site Detection Of <i>E. coli</i> And Coliform Bacteria In Water <i>S. Brown, E.J. Marcotte, C.E. Dunkinson, P. Aston, P.J. Gallant, D. Wilton (Canada)</i></p> <p>1645 hrs: Modern Instrumental Analytical Approaches for Express Control of Quality Water in Regions with Conflicts and Disaster <i>S. F. Nickolaj (Ukraine)(TBC)</i></p>	<p>Improving Creditworthiness <i>Chair: Kamran Khan</i></p> <p>1600 hrs: Reforms for Enhancing Creditworthiness of Utilities and Urban Local Bodies <i>W. Streeter (Singapore)</i></p> <p>1615 hrs: Experience of Projects in People's Republic of China <i>B. Reid (Philippines)</i></p> <p>1630 hrs: Pricing of Water Services in Manila East Concession <i>P. Rivera (Philippines)</i></p> <p>1645 hrs: Panel Discussion</p>

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	SOURCE TO TAP MR 208, LEVEL 2	WASTE TO RESOURCE MR 209, LEVEL 2			
0900 – 1030	<p>Network Management I: Water Network Asset <i>Chairs: H. Syaiful & Chong Hou Chun</i></p> <p>0900 hrs: Urban Water Loss Control In The Asian Region <i>B. Oren (Israel)</i></p> <p>0915 hrs: Network Asset Management In PUB For Reliable And Efficient Water Supply <i>W.K. Sin, R. Meiyappan, T. Soh, H.C. Chong (Singapore)</i></p> <p>0930 hrs: Development Of A Successful Untethered Leak Detection Technology For Large Diameter Water Pipelines <i>M. Holley and J. Elliott (USA)</i></p> <p>0945 hrs: Method Of Leak Detection Using Helium Gas As Tracer <i>I. Kridiasto, T. Erk, I.G. Taib (Indonesia)</i></p>	<p>Membrane Bioreactors <i>Chair: Cindy Wallis-Lage</i></p> <p>0900 hrs: Submerged MBRs - From Infancy to Full-Scale Applications <i>K. Yamamoto (Japan)</i></p> <p>0915 hrs: The Heenvliet Hybrid Membrane Bioreactor: Comparison Between Series And Parallel Operation <i>M. Lousada-Ferreira, W. Langhorst, M. de Kreuk, J. van der Graaf (The Netherlands)</i></p> <p>0930 hrs: Urban Water Chain Management Through A Municipal MBR <i>H. Futselaar, H. Schonewille, R. Rosberg, D. de Vente, J. Buitenweg (The Netherlands)</i></p> <p>0945 hrs: Energy Reduction And Optimisation In Membrane Bioreactor Systems <i>G. Tao, K. Kekre, M.H. Oo, D. Lew, H. Seah (Singapore)</i></p>	<p>Flexibility of Urban Water Infrastructure Systems <i>Chairs: David Spector & Darryl Day</i></p> <p>0900 hrs: Flexible Design for Effective Flood Risk Management under Future Uncertainties <i>Z. Kapelan (UK)</i></p> <p>0915 hrs: Pipe Network Interconnectivity Planning And Optimization For Improved Water Supply Reliability <i>P.J. Smith, A. Steere, A.M. Duncker, P. Feronas (Australia)</i></p> <p>0930 hrs: Real Options Theory and Its Application To Urban Water Systems <i>K. Vairavamoorthy (UK)</i></p> <p>0945 hrs: Flexibility of Urban Drainage Systems <i>H. Seiker and J. Eckart (Germany)</i></p>	<p>Water Quality & Potential Health Risks <i>Chairs: Wolfgang Kuehn & Frans Schulting</i></p> <p>0900 hrs: Toxicological Relevance Of Emerging Contaminants For Drinking Water Quality <i>M. Schriks, M.B. Heringa, M.M. van der Kooi, P. de Voogt, A.P. van Wezel (The Netherlands)</i></p> <p>0915 hrs: Health Risk Of Drinking Desalinated Water <i>M.Y. Abdulrahim and M.A. Dawoud (UAE)</i></p> <p>0930 hrs: Managing The Risk Of Emerging Algae Toxins In Drinking Water: Development Of A Comprehensive Analytical Approach <i>M.-L. Janex-Habibi, I. Baudin, A. Bruchet, M. Esperanza, S. Courtois, L. Constans, S. Chrupalla, M. Br��h��, M. Lengronne, L. Brient (France)</i></p> <p>0945 hrs: Water Quality and Household Behaviors Affecting Water Quality in an Intermittent and Continuous Urban Piped Water Supply <i>E. Kumpel and K. Nelson (United States)</i></p>	<p>Creating Bankable Projects <i>Chair: Anand Chiplunkar</i></p> <p>0900 hrs: Structuring of Projects for Successful Public-Private Partnerships <i>A. Chiplunkar (Philippines)</i></p> <p>0930 hrs: Case Study of PPP Projects in Gujrat <i>A. Madhavan (Philippines)</i></p> <p>1000 hrs: Worldbank 's Experience in Creating or Structuring Bankable Project Globally <i>K. Khan (Singapore)</i></p>
1030 – 1100	TEA BREAK @ WATER EXPO (Level 6, Hall 602-3)				
1100 – 1230	<p>Network Management II: Demand Management <i>Chairs: Chong Hou Chun & Malcolm Brandt</i></p> <p>1100 hrs: Over Sized Water Meters and Non Revenue Water <i>J. Fisher (USA)</i></p> <p>1115 hrs: Water Conservation As A Key Strategy For Sustainable Water Management <i>T.W. Kok, M. Tan, H.Y. Ang, C.L. Lim, W.C. Wong, R. Singh, T.K. Tay, H.C. Chong (Singapore)</i></p> <p>1130 hrs: Developing Urban Water Demand Management Strategy: A Case Study Of Madhya Pradesh, India <i>K. Singh (India)</i></p> <p>1145 hrs: Introduction To The Taiwan Water Supply <i>T.-S. Liao and K.-D. Jou (Taiwan)</i></p>	<p>Sludge Treatment & Disposal <i>Chair: Pascal Dauthuille</i></p> <p>1100 hrs: Sludge Management & Its Development in China <i>G. Xu (China)</i></p> <p>1115 hrs: The DLD Process : A New Way To Improve The Biogas Production From Sludge <i>M. Coeytaux (France)</i></p> <p>1130 hrs: Recuperative Thickening At Bondi Sewage Treatment Plant <i>P. von Huben and A. Ryan (Australia)</i></p> <p>1145 hrs: Treatment And Disposal Of Water Treatment Plant Residuals For Ho Chi Minh City, Vietnam <i>T. D. Phu, H.D. Pham, L. C. Dan, R. L. Hurdle (Singapore)</i></p>	<p>Integrated Treatment Technology for Efficient Urban Management <i>Chairs: Harry Seah & Hubert Gijzen</i></p> <p>1100 hrs: Role of Natural Treatment Systems in Managing the Urban Water Cycle <i>G. Amy (Saudi Arabia)</i></p> <p>1115 hrs: Innovation Approach <i>M. Dutang (France)</i></p> <p>1130 hrs: Drinking Water Purification In Growing Urbanization And Water Reuse Scenario <i>R.S. Barhate, S. Kallidaikurichi, S. Ramakrishna (Singapore)</i></p> <p>1145 hrs: A Sustainability Index For Selecting Among Home Water Treatment Alternatives <i>M. A. Hamouda, W. B. Anderson, P. M. Huck (Canada)</i></p> <p>1200 hrs: Sustainability Drives 30-year Strategic Planning Direction for Woodman Point Wastewater Treatment Plant <i>K. D. Jong, D. Higgs, J. S. Powell (Australia)</i></p>	<p>Toxic Metals – Health Effects & Mitigation Measures <i>Chairs: Ong Choon Nam & Tapan Chakrabarti</i></p> <p>1100 hrs: Heavy Metal Pollution in Xiangjiang River Basin and Its Emergency Response <i>Z. Shi (China)</i></p> <p>1115 hrs: A New Media Filtration System For The Removal Of Trace Inorganic Contaminants <i>R. Woodling, K. Sathrugnan, D. Arifin, M. Wismer (Singapore)</i></p> <p>1130 hrs: Phytotoxicity Of Lead (Pb) To Scirpus Grossus As A Preliminary Test For Phytoremediation Process Of Wastewater Contained With Lead (Pb) <i>B.V. Tangahu, S.R.S Abdullah, H. Basri, M. Idris, N. Anuwar, M. Mukhlisin (Indonesia)</i></p> <p>1145 hrs: Arsenic In Ground Water and Removal by SONO Filter: Performance, Large Scale Production and Distribution <i>A.K.M. Munir (Bangladesh)</i></p>	<p>Customer Participation <i>Chair: Amy Leung</i></p> <p>1100 hrs: Experience of Involving Customers in Sustainable Sanitation Solutions <i>B. Pathak (India)</i></p> <p>1115 hrs: Customer Participation In Planning And Delivery Of Urban Water Supply, Wastewater And Solid Waste Services <i>J. Masic (Philippines)</i></p> <p>1130 hrs: Private Sector Provision for Water and Sanitation in Urban Areas in Developing Countries: Role of Community Organisations <i>K. Singh (India)</i></p> <p>1145 hrs: Accountability And Incentives For Improving Performance For Urban Water Supply And Sanitation In India <i>M. Mehta and D. Mehta (India)</i></p> <p>1200 hrs: Timing Of Customer Consultation In Project Planning And Delivery: Lessons From An Australian Case Study</p>

TIME (HRS)	SOLUTIONS FOR WATER SYSTEM EFFICIENCY & EFFECTIVENESS		PLANNING FOR SUSTAINABLE WATER SOLUTIONS MR 203, LEVEL 2	WATER QUALITY & HEALTH MR 202, LEVEL 2	GOVERNANCE & FINANCE MR 201, LEVEL 2
	SOURCE TO TAP MR 208, LEVEL 2	WASTE TO RESOURCE MR 209, LEVEL 2			
					<i>J.M. Williams, M. Dent, G. Croke (Australia)</i>
1230 – 1400	LUNCH (Level 3, Concourse)				
1400 – 1530	<p>Low Energy Desalination Systems <i>Chairs: Harry Seah & William Hanbury</i></p> <p>1400 hrs: The Quest For Low-Energy Desalination: Prototype Results <i>T. Letourneau and L.S. Liang (Singapore)</i></p> <p>1415 hrs: Nanofiltration For Seawater Softening – An Emerging And Economically Viable Process <i>P. Eriksson, U. Bharwada, Q.S. Niu, R. Reddy, P.R. Dontula, Y. Tayalia (India)</i></p> <p>1430 hrs: Long-Term SWRO Testing Of Nanocomposite Membranes <i>C. Kurth, R. Burk, J. Green, J. Leparc, P. Choules (USA)</i></p> <p>1445 hrs: Successful Operation Of 56,000 m³/day Seawater UF Pretreatment System <i>S.A. Basha and A.H. Gulamhusein (Saudi Arabia)</i></p>	<p>Decentralised Wastewater Treatment <i>Chair: Ryan Yuen</i></p> <p>1400 hrs: Implementing Rural Sanitation In South Asia <i>A. Weitz (Indonesia)</i></p> <p>1415 hrs: DEWATS for Community-Based Sanitation Improvements <i>Y. Ismawati (Indonesia)</i></p> <p>1430 hrs: DEWATS In City Sanitation Plans As Required By The National Urban Sanitation Policy <i>R. Pai (India)</i></p> <p>1445 hrs: DEWATS as Part of the Strategy for Sewerage and Sanitation Services in Metro Manila <i>L. Cleofas (Philippines)</i></p>	<p>Planning & Design of Sustainable & Efficient Urban Water Systems <i>Chairs: Gary Amy & Linda Macpherson</i></p> <p>1400 hrs: Planning and Design of Sustainable & Efficient Urban Water System <i>X.C. Wang (China)</i></p> <p>1415 hrs: Designing Sustainable & Efficient Water Systems - Case Study of Qingdao, China <i>M. Wagner (Germany)</i></p> <p>1430 hrs: Form - Function - And Fun! - Integrating Marina Barrage Into The Life Of The City <i>B.M. Harley and K.G. Yap (Singapore)</i></p> <p>1445 hrs: Housing & Development Board's Initiatives In Sustainable Water Management <i>A. Tan (Singapore)</i></p> <p>1500 hrs: Eco-Practices in Planning and Design for an Integrated Drainage and Sewerage System for Tianjin Eco-city <i>X.C. Lee (China)</i></p>	<p>Microbial Contaminants – Mitigation Measures <i>Chair: Joan Rose & Karina Gin</i></p> <p>1400 hrs: Recent Advances in Microorganisms Detection <i>J.B. Rose (USA)</i></p> <p>1415 hrs: Novel Paradigms To Reveal The Public Health Challenges And Threat Posed By Waterborne Pathogens <i>R. Sachidanandham and K. Gin (Singapore)</i></p> <p>1430 hrs: Influence Of Materials, Water Qualities And Disinfection Methods On The Drinking Water Biofilm Community <i>R. Roeder, K. Heeg, P. Tarne, U. Szewzyk (Germany)</i></p> <p>1445 hrs: Use Of Single-Pass Hollow-Fiber Ultrafiltration For Recovery Of Viruses From Large-Volume Drinking Water Samples In India <i>J. Narayanan, S. Kamatchiammal, D.J. Santhosh, V. Saroja, A. Nisha, V.R. Hill (USA)</i></p>	<p>Implementing Viable PPPs <i>Chair: Charles Chaumin</i></p> <p>1400 hrs: Project Finance for PPP and PFI Projects in the Water Industry <i>S.C. Lee (Singapore)</i></p> <p>1430 hrs: PPP Projects in Singapore - Case Studies on Desalination and NEWater <i>C.H. Tan (Singapore)</i></p> <p>1500 hrs: Promoting a Great-leap-forward Development Through Innovation <i>Y. Jian (China)</i></p>
1530 – 1600	TEA BREAK @ WATER EXPO (Level 6, Hall 602-3)				
1600 – 1700	<p>Alternative Water Sources <i>Chairs: Jonathan Clement & Michelle Chapman</i></p> <p>1600 hrs: The Role of Technology for Alternative Water Sources <i>J. Clement (The Netherlands)</i></p> <p>1615 hrs: Treatment Of Variable Water Sources: Adaptations For A Flexible Desalination System <i>M. Chapman and F. Leitz (USA)</i></p> <p>1630 hrs: Steri-Flow Microfiltration As Treatment To Stormwater Canal In Sydney <i>M. Johir, S. Vigneswaran, J. Kandasamy, R. Sleigh (Australia)</i></p> <p>1645 hrs: Local Rain Water Recovery, A Cost Effective, Reliable And Green Water Usage Solution For Large Industrial Site Study And Test Case In A Singapore Industrial Environment <i>P. Wind (Indonesia)</i></p>	<p>Solutions for Water Reuse <i>Chairs: Ng How Yong & Masaru Kurihara</i></p> <p>1600 hrs: Zhangjiagang Integrated Wastewater Treatment and Recycling Project <i>J. Chen (Singapore)</i></p> <p>1615 hrs: Performance Of Membrane Bioreactor (MBR) Combined With Reverse Osmosis (RO) Process For Water Reclamation In Singapore <i>T. Itonaga (Japan)</i></p> <p>1630 hrs: Water Reuse Comes Of Age In Edmonton Canada <i>L.K. Lampe (USA)</i></p> <p>1645 hrs: Electrochemical Separations For Water Reuse <i>R. Xiong, H. Yang, C. Wei, J. Barber, W. Cai (China)</i></p>	<p>Panel Discussion <i>Chairs: Paul Reiter & Kala Vairavamoorthy</i></p> <p>Panelists: <i>Hubert Gijzen (Indonesia)</i> <i>Ek Sonn Chan (Cambodia)</i> <i>Arjun Thapan (Philippines)</i> <i>Wang Xiaochang (China)</i> <i>Srikantha Herath (Japan)</i></p>	<p>Contaminants of Emerging Concern <i>Chair: Mark Sobsey & Hu Jiangyong</i></p> <p>1600 hrs: Field Trial Of A Plastic Housing Biosand Water Filter In Rural Communities Of Cambodia To Assess Impact On Water Quality And Diarrheal Illness <i>M. Sobsey, C. Stauber, E. Printy (USA)</i></p> <p>1615 hrs: Occurrence Of Diclofenac In Hospital Effluent - A Case Study From India <i>V. Diwan, A.J. Tamhankar, R.K. Khandal, S. Sen, M. Aggarwal, C.S. Lundborg (Sweden)</i></p> <p>1630 hrs: Formation Of NDMA By Chloramination Of Nitrogenous Pharmaceuticals <i>J-P. H. Croue, J. Leroux, H. Gallard (Saudi Arabia)</i></p> <p>1645 hrs: Monitoring of N-Nitrosodimethylamine and other Nitrosoamine Compounds in Local Drinking Water <i>Z.B. Zhang, J.Y. Hu, W. Fang, Y.H. Leong, S.A. Andrews (Singapore)</i></p>	<p>Regulation of the Water Sector <i>Chair: Ashok Jaitly</i></p> <p>1600 hrs: Experience in Regulation of the Water Sector in New South Wales <i>J. Cox (Australia)</i></p> <p>1615 hrs: Legal and Regulatory Frameworks in Emerging Markets for Private Sector Investment in Water Infrastructure <i>J. Harris (Singapore)</i></p> <p>1630 hrs: Lessons from the Privatization of Manila's Water Concession: The Case of Maynilad <i>M.M. Flor (Philippines)</i></p> <p>Panel Discussion</p>
1700 - 1730	CLOSING & 'BEST POSTER AWARD' PRESENTATION CEREMONY (MR 203, LEVEL 2)				

TIME (HRS)	SOLUTIONS FOR WATER SYSTEM EFFICIENCY & EFFECTIVENESS		PLANNING FOR SUSTAINABLE WATER SOLUTIONS MR 203, LEVEL 2	WATER QUALITY & HEALTH MR 202, LEVEL 2	GOVERNANCE & FINANCE MR 201, LEVEL 2
	SOURCE TO TAP MR 208, LEVEL 2	WASTE TO RESOURCE MR 209, LEVEL 2			
1900 – 2100	SIWW CLOSING DINNER (RESORTS WORLD SENTOSA)				

List of Poster Presentations

Title	Panel No
A New Phosphorous-Free Antiscalant for Membrane Desalination <i>D. Musale, S. Lopes, B.B. Yao, M. Fazel, R. Yeleswarapu, A. Hallsby, A. Sheikh (United States)</i>	ST1
A Thin-Film Composite Membrane for Forward Osmosis Applications <i>N.Y. Yip, A. Tiraferri, W.A. Phillip, J.D. Schiffman, M. Elimelech (United States)</i>	ST2
Advanced Materials for Innovative and Cost Efficient Water Treatment <i>A.C. Lee, R. Fu, X.H. Zhu, R. Gensler, A. Groth, J. Gifford (Singapore)</i>	ST3
Application of a Broadband Ultrasound System for Barnacle Growth Mitigation at the Marina Barrage, Singapore <i>R.J. Xie, M. Gomez, S.K. Ng, H.S. Eikaas, J.Z. Lim, V. Goh, D. Toh, K.L. Khoo (Singapore)</i>	ST4
Applications of Computational Fluid Dynamics (CFD) on Water Technologies <i>D.Y. Arifin and R.E. Woodling (Singapore)</i>	ST5
Bridging the Water Gap. A Flexible, Interim, SWRO Desalination Solution While Major Strategic Decisions Are Being Planned <i>M. Eldridge and D. Dwek (United Kingdom)</i>	ST6
Carbon Nanofibers for Water Purification <i>S. Vadukumpully, C. Basheer, S. Valiyaveetil (Singapore)</i>	ST7
Characterization Real Time Behaviour of Fouling at a Membrane Surface using Electrical Impedance <i>J. Cen(Australia)</i>	ST8
Comparison of Calcium Carbonate Crystal Growth Kinetics between a Conventional Reactor and a Proprietary Enhanced Reactor <i>K. Banerjee (United States)</i>	ST9
Comparison of Pre-Treatment Methods for RO Desalination at Chowder Bay, Sydney <i>K. Chinu, M. Johir, S. Vigneswaran, J. Kandasamy, S. Sathananthan (Australia)</i>	ST10
Concept for Energy Efficient and Sustainable Operation of Water Supply Networks <i>G. Eng, M. Gauder, F. Blank, H.M. Schreyer (Singapore)</i>	ST11
Development of Low Energy Consumption and Low Fouling Submerged Type PVDF UF Hollow Fiber Membrane Module <i>T. Kitade, Y. Tanaka, S. Minegishi, Y.F. Yang, J.H. Ma, M. Henmi (Japan)</i>	ST12
Efficiency Improvement of Co-located Electric Power and Seawater Desalination Plants Using Aquifer and Storage Technology <i>T.M. Missimer (United States)</i>	ST13

Poster Session: Solutions for Water System Efficiency & Effectiveness – Source to Tap

Title	Panel No
Emerging Treatment Technology for Sustainable Water <i>M.H. Lean, A.R. Volkel, J. Seo, A. Kole, N.E. Chang, B.H. Hsieh, K. Melde (United States)</i>	ST14
Extracting Hydraulic Performance & I/I Information at Human Viewing Speed <i>P. Stevens (United States)</i>	ST15
Fabrication of Electrospun Nanofibers and Their Applications for Nanomaterial Detection in Aqueous Solution <i>N. Mahanta and S. Valiyaveetil (Singapore)</i>	ST16
Harvesting and Usage of Rainwater for Domestic Purpose <i>K. Glucina and M. Jousset (France)</i>	ST17
High Alloyed Stainless Steels for Brine Handling Applications <i>E. Halling and S. Randström (Sweden)</i>	ST18
Influence of Polycarboxyl-ate Molecular Mass on the Formation of CaCO ₃ Particles <i>S. M. Pancera, S. Nied, J. Liu, K. Huber (Taiwan)</i>	ST19
Innovative System to Pre-treat Seawater for RO <i>M.H. Lean, J. Seo, A. Kole, A.R. Völkel, N.E. Chang, B.H. Hsieh, K. Melde (United States)</i>	ST20
Integrated Pressure and Energy Management in Water Network Operation <i>G. Eng, M. Gauder, F. Blank, H.M. Schreyer (Singapore)</i>	ST21
Reducing Energy Consumption for Deionized Water Systems Using Reverse Osmosis and Electrodeionization <i>J.H. Wood, J.D. Gifford, J.W. Arba (United States)</i>	ST22
RO/CEDI Systems for Service Deionization Applications <i>L.S. Liang, J. Lombardo, J. Telepciak, J. Gifford (United States)</i>	ST23
Seawater Desalination (RO) as a Wind Powered Industrial Process - Technical and Economical Specifics <i>J. Käufler, K. Ruediger, R. Pohl, H. Sader (Germany)</i>	ST24
Selection of the Most Efficient Water Distribution Pipeline Material in Shanghai, China <i>Z.H. Chen, Z.K. Xu, X.M. Zheng, D. Walton, C. Wang (China)</i>	ST25
Superhydrophilic Manganese Oxide Nanowire Membrane for High Flux Water Filtration <i>X. W. Zhang, T. Zhang, J.W. Ng, D. Sun (Singapore)</i>	ST26
Sustainable Ultraviolet Disinfection Solutions for Large-Scale Municipal Applications <i>J. Muller, W. Lem, D. Tomowich (Canada)</i>	ST27
SWRO Pre-treatment with Singapore Seawater - Pilot Testing Utilizing Ultra Filtration Membranes and Screen Systems <i>R. Wikramanayake, S. Sreeramachandran, R. Knauf, R. Subburayan, L. Birkner, S. Cao, P. Gallagher (United States)</i>	ST28

Poster Session: Solutions for Water System Efficiency & Effectiveness – Source to Tap

Title	Panel No
The Practice of Permanent Area Operation in Reducing NRW: A Case Study of PA B14 in PALYJA - Jakarta, Indonesia <i>N. Manurung, L. Martin, R. D. Halim, A. Surbakti (Indonesia)</i>	ST29
Water Demand Management and Losses in Mabopane and Ga-Rankuwa, Odi areas in South Africa <i>N.T. Mhlongo, F.O. Otieno, G.O. Ochieng (South Africa)</i>	ST30
Reuse of Rejected Water from Desalination Plant <i>H. Hodhan, M. N. Al-Dahlwai (Saudi Arabia)</i>	ST31

List of Poster Presentations

Title	Panel No
Abu Dhabi Constructs a Deep Tunnel Sewerage System in Underground Space <i>B. Bevan (United Arab Emirates)</i>	WR1
Acclimation Studies on an Osmotic Membrane Bioreactor System <i>W.C.L. Lay, Q. Zhang, J. Zhang, S. Mu, D. Mcdougald, M. Andersen, Y. Liu, A.G. Fane (Singapore)</i>	WR2
An Integrated Anaerobic-MBR Energy Efficient Wastewater Treatment Process for Water Reclamation <i>F.S. Wong, Y.P. Moy, W. Fang, S. Lin (Singapore)</i>	WR3
Benefits of Electrical Variable Speed Drives for Influent Pumping Station in Changi Water Reclamation Plant, Singapore <i>P. Dalal and P. Wikstroem (Malaysia)</i>	WR4
Bio-sorption Capacity of Organic Matter in Sludge <i>R. Wikramanayake, E. Yu, L. Xiao, S. Pradhan, J.Y. Hu, E. Jordan, M. Doyle, W.J. Liu (United States)</i>	WR5
Case Study on Environmental Waste Recovery in Singapore Polytechnic using a Modified Autothermal Thermophilic process <i>A. Kon (Singapore)</i>	WR6
Degradation of Emerging Pollutants by <i>Trametes Versicolor</i> in Sewage Sludge <i>C. Rodriguez, E. Marco-Urrea, G. Caminal, T. Vicent (Spain)</i>	WR7
Determination of the Efficiency of the Photocatalytic Reactor during Enhanced Iron Ions Phenol Degradation <i>B.S. Rosales, A.O. Gomez, J.M. del Rio (Mexico)</i>	WR8
Development of a New ASM1SMP Model for Fouling Prediction and Energy Efficiency in Membrane Bioreactors <i>S.J. Mu, Z.B. Zhang, M. Andersen, J. Chen (Singapore)</i>	WR9
Energy Saving and Effectiveness Solutions in the Building Services Pumping Applications <i>A. Dhawan, C. Panozzo, E. Tan (Italy)</i>	WR10
Evaluation of Nano-SiO ₂ to Soft Subgrade Soil Treated by Sewage Sludge Ash and Lime <i>D.F. Lin, H.L. Luo, M.D. Cai, L. Chen (Taiwan)</i>	WR11
GC/FID Analysis of Biotreated Industrial Wastewater from a Petrochemical Plant <i>G.J. Poi, A. Ball, M.C. Pua (Singapore)</i>	WR12
High Water Recovery System with PVDF Hollow Fiber Membrane Modules to Reduce Discharged Wastewater <i>T. Ogawa (Japan)</i>	WR13

Poster Session: Solutions for Water System Efficiency & Effectiveness – Waste to Resource

Title	Panel No
High-rate Solids Contact Clarification - A Highly Versatile, Solids Separation Process for Drinking Water and Industrial Wastewater (Phosphorus Removal) Applications <i>R. Wikramanayake, R. Knauf, G. Baker, E. Lawrence, S. Scott, G. Shrestha, P. Gallagher, D. St. Germain (United States)</i>	WR14
Implications of Bacterial Population Distribution and Activity on Integrated Fixed-Film Activated Sludge Process Design and Operation <i>J.P. Boltz, J.P. McQuarrie, G.T. Daigger (United States)</i>	WR15
Increased Energy Savings & Total Present Value Savings By Optimized Design Choices of High Efficiency Wastewater Aeration Systems <i>G.R. Conner and R.C Chann (United States)</i>	WR16
Modified Fouling Index (MFI) for Evaluating Fouling Propensity of Secondary Effluents in Ultrafiltration (UF) Process <i>B. Cai, K. Glucina, H.Y. Ng (Singapore)</i>	WR17
Optimizing the Design and Operation of Forward Osmosis Membrane Bioreactors through a Modeling Approach <i>S.J. Mu, M. Andersen, W. Lay, Y. Liu, A.G. Fane (Singapore)</i>	WR18
Optimizing the Design of the Overall Aeration System: Methodology and Case Studies <i>S. Besnault, S. Martin, G. Carrand, P. Dauthuille (France)</i>	WR19
OxyMix™ Aerator: New Oxygen Injection and Dissolution Device for Activated Sludge <i>A.O. Weist, Y.P. Neo, M.A. Fitzgerald, B. Ozbas, T. Reid, L. Johnson (Singapore)</i>	WR20
Performance of Low Pressure Membrane Processes for the Reuse of Urban Wastewater: Effect of Intermediate Physical Chemical Tertiary Treatments <i>J.P.H. Croue, E. Filloux, A.T. Pain (Saudi Arabia)</i>	WR21
Phosphorus and BOD Removal from Synthetic Wastewater by Chemical Precipitation <i>S. Sangsawat, B. Sillapajarnngul, G. Disyawongs (Thailand)</i>	WR22
Pilot Study of Novel Membrane Bioreactor for Water Reuse <i>J.J. Qin, M.H. Oo, K.A. Kekre, T. Day, L.F. Zhang (Singapore)</i>	WR23
Reed-bed Wastewater Treatment System: Sunga Wastewater Treatment Plant, Nepal <i>K. Singh (India)</i>	WR24
Sidestream Management in Wastewater Treatment Plant towards a Global Energy Efficiency <i>T.L. Li, S.M. Ruel, L. Graveleau, A. Kaldate, P. Dauthuille (France)</i>	WR25
The Other Oxidizer – A Review of Wet Air Oxidation as an Alternative to Incineration <i>C. Maugans (United States)</i>	WR26

Poster Session: Solutions for Water System Efficiency & Effectiveness – Waste to Resource

Title	Panel No
Use of Oxygen Uptake Rate (OUR) as a Tool to Compare Change in Aerobically Biodegradable Organics through the Interchange Bioreactor of SBR-Cannibal System <i>R. Wikramanayake, R. Conde, L. Xiao, W.J. Liu, M. Doyle, E. Jordan (United States)</i>	WR27
Role of Contaminant Removal Technologies in Industrial Wastewater Treatment <i>S. Sudheendra (Singapore)</i>	WR28
Solutions to Increase the Energy Efficiency of Wastewater Treatment Plants <i>T. Steckenreiter, S. Siraj (Singapore)</i>	WR29
Utilization of 4-Nitrophenol to Reduce Sludge Growth in Activated Sludge Culture <i>S.Lin, Y. Li, W. Jiang, Q. Tang (Singapore)</i>	WR30

Poster Session: Planning for Sustainable Water Solutions

List of Poster Presentations

Title	Panel No
A Sustainable Wastewater Management Approach in the City of Sibul, Sarawak <i>T.W. Lee (Singapore)</i>	PS1
Beyond the Blackbox: Measuring Household Water Use in Canberra <i>K. Harriden (Australia)</i>	PS2
Case Study: Sustainable, Urban Water Utilities <i>G.L.S. Wong (United States)</i>	PS3
Efficient Water Resources Management for Sustainable City using Geo-information and Dynamic Optimisation Technologies <i>H.A. Saleh (Belgium)</i>	PS4
Gray Water Calculation Tool for Implementation of the Water Framework Directive in Sewage Systems <i>B. Barillon, P. Dauthuille, S.M. Ruel, H. Le Goas, L. Millair (France)</i>	PS5
Greater Mandurah Wastewater Planning - Long Term Options <i>H. Forster and R. Taylor (Australia)</i>	PS6
Impact of Technology on Real-Time Management of Collection Systems in US and UK <i>P. Stevens (United States)</i>	PS7
Innovative Solutions for Sustainable Management of Odour Nuisance in Urbanized Environment <i>V. Lazarova, E. Senante, V. Guimet, F. Fotoohi, P. Dauthuille (France)</i>	PS8
Local Rain Water Recovery, A Cost Effective, Reliable and Green Water Usage Solution for Large Industrial Site Study and Test Case in a Singapore Industrial Environment <i>P. Wind (Indonesia)</i>	PS9
Managing Water Loss and Energy through Efficient Modelling Techniques <i>U. Umakhanthan (Australia)</i>	PS10
Online Condition Monitoring for Membrane Systems <i>G. Eng, M. Gauder, M. Antoine, S. Senthilmurugan (Singapore)</i>	PS11
Overview of Geology and Geotechnical Instrumentation along the STEP Deep Sewer Tunnel Alignment, Abu Dhabi <i>M. Marshall, S. Parashar, E. Farouz, A. Al Tenaiji (United Arab Emirates)</i>	PS12
PALYJA Water for All Programs <i>V. Fournier, P. Folliasson, I. Damayanti (Indonesia)</i>	PS13
Strategic Energy Management Planning in Philadelphia <i>P.P. Kenel, W. Allis, C. Crockett, P. Kohl, P. Kumar (United States)</i>	PS14

Poster Session: Planning for Sustainable Water Solutions

Title	Panel No
Technical and Economical Evaluation of Nanofiltration and Reverse Osmosis Processes for Reducing Total Dissolved Solid from Groundwater of Birjand <i>A. Mohammadpour, A. Torabian, G. Nabi, A. Ghadimkhani (Iran)</i>	PS15
Toward Energy Self-Sufficiency of Wastewater Treatment <i>V. Lazarova, T.L. Li, S. Martin, P. Dauthuille (France)</i>	PS16
Amenity Enhanced Apartment Complex Design using Reclaimed Water and Renewable Energy <i>K.Y. Park, C. Choi, W. Park, H. Park (South Korea)</i>	PS17

List of Poster Presentations

Title	Panel No
A Simple GC-EI-MS Method for the Determination of N-Nitrosamines in Source and Drinking Waters. Application to 20 French and US Sites <i>A L. Bruchet and M. Esperanza (France)</i>	WQ1
Analysis of Drinking and Waste Water using AAS and ICP-OES for Regulatory Compliance <i>P R. Sarojam (India)</i>	WQ2
AquaVerity – A Comprehensive Solution For Ensuring Drinking Water Safety <i>N. Ulitzur (Israel)</i>	WQ3
Arsenic Detoxification: Sustainable Remedial Approach for Arsenic Contaminated Drinking Water <i>K. Nakamura (Japan)</i>	WQ4
Arsenic Removal: An Effective Solution for Developing Countries <i>K. Sathrugnan and R. Woodling (Singapore)</i>	WQ5
Cold Vapor Atomic Fluorescence Spectrometry and ICP-MS for Sensitive Monitoring of Mercury in Water <i>W.N. Yap, W. Zhang, Z.X. Guo, Z.G. Yang (Singapore)</i>	WQ6
Determination of Residual Glyphosate and Aminomethylphosphonic Acid (AMPA) in Dam and River Water <i>K.G. Moodley and D.K. Chetty (South Africa)</i>	WQ7
Determination of Trace Perchlorate and Thiocyanate in Water by Suppressed Ion Chromatography <i>W. Zhang, Master, Z.X. Guo, Z.G. Yang (Singapore)</i>	WQ8
Episodic Short Term Study of Marine Biofouling Near the Jubail Desalination and Power Plants, Saudi Arabia <i>M. Al-Namazi, M.O Saeed, A.A. Al-Thukair (Saudi Arabia)</i>	WQ9
Formation and Removal of Genotoxic Compounds during UV/H ₂ O ₂ -GAC Treatment of Drinking Water <i>M.B. Heringa, D.J. Harmsen, A.A. Reus, C.A. Krul, T.H. Knol, D.H. Metz, E.F. Beerendonk, G.F. Ijpelaar (The Netherlands)</i>	WQ10
Full-Scale UV/H ₂ O ₂ for Treatment of Micropollutants in Drinking Water and Water Reuse Applications <i>R. Peterson, A.D. Festger, A. Royce, N. Brown, D. Tomowich (United States)</i>	WQ11
Health Impacts of Improved Community Water Supply and Sanitation in Vietnam <i>J. Brown, V.T. Hien, M. Jenkins, E. Printy, M. Sobsey (United States)</i>	WQ12
Kanchan Arsenic Filter: Technology for Removal of Arsenic and Microbiological Contamination <i>A. Dzikus, R. Shrestha, K. Singh (India)</i>	WQ13

Poster Session: Water Quality and Health

Title	Panel No
Large Dissolved Air Flotation Filtration (DAFF) Plant Designed and Operating in Both DAFF and DF Mode in Australia <i>M. Chapman, C. Modulon, N. Johnston (Australia)</i>	WQ14
Latest Results on Testing a New Arsenic-Selective-Hybride-Adsorber for Arsenic Removal from Potable Water – Overcoming Disturbance Effects by Silica, Pitcher Tests and Working over Regeneration Procedure <i>S. Neumann, R. Klipper, S. Breuer (Germany)</i>	WQ15
Long Term Evolution of Natural Organic Matter (NOM) at Various Sites in France, UK, Germany and USA. Consequences for drinking water production <i>A.L. Bruchet, M. Philibert, M. Suffet, P. Charles (France)</i>	WQ16
On-line Monitoring Strategy for Water Quality Assessment <i>B. Barillon, A. Zenasni, S.M. Ruel, C. Cren-Olive, J. Chapgier, F. Lavastre, N. Jaffrezic-Renault (France)</i>	WQ17
PCR Assay for Direct Detection of Thermotolerant Campylobacters in Turbid Pond Water <i>H.H. Abulreesh, T. Paget, R. Goulder (Saudi Arabia)</i>	WQ18
Practical Application and Case Study of Fish Bio-sensor On-line Monitoring System in Water Supply <i>Y. Fu, R.J. Xie, N. S Lim (Singapore)</i>	WQ19
Rapid Molecular Detection of <i>Escherichia coli</i> in Drinking Water Using Real-Time PCR <i>J. Narayanan (United States)</i>	WQ20
Real-time Water Quality Management using an Automatic Profiler Winch System in Shing Mun Reservoir of Hong Kong <i>E.C.M. Cheng (Hong Kong)</i>	WQ21
Redox Chemistry of Lead Dioxide (PbO ₂) and Its Implication in Lead Contamination in Drinking Water <i>Y.P. Lin (Singapore)</i>	WQ22
Removal of Ionized Pollutants Using Ion Exchange Membrane Chemoreactor <i>S. Zhou, S.Y. Chen, D.H. Xie, P. Xie (China)</i>	WQ23
SiCURE™ Ballast Water Management System: Helping Secure our Ecologically Fragile Oceans <i>V. Zolotarsky, L. Nupnau, L.J. Lombardo, I.Ivanter (United States)</i>	WQ24
Stated Preference for Improved Rainwater Collection and Piped Water Supply in the Mekong Delta of Vietnam <i>M. Elliott, S. Ozdemir, N.K. Pham, J.M. Brown, H.T. Vo, M.D. Sobsey (United States)</i>	WQ25
The Impact of Environmental Conditions on Occurrence of Toxic and Non-toxic Stains of Cyanotoxin Producers in Tropical Reservoirs <i>C.P. Feng, P.P. Gao, Y.T. Wong, T.C. Chiam-Tai (Singapore)</i>	WQ26

Poster Session: Water Quality and Health

Title	Panel No
Use of Biologically Active GAC Filters for Removing DBP Precursors and Other Micro Contaminants <i>M. MacPhee, Z. Chowdhury, S. Kommineni (United States)</i>	WQ27
Using Machine to Machine Technology for Water Monitoring & Alert systems <i>G.H. Tan and C.K. Choo (Singapore)</i>	WQ28
Water Quality and Household Behaviors Affecting Water Quality in an Intermittent and Continuous Urban Piped Water Supply <i>E. Kumpel and K. Nelson (United States)</i>	WQ29
Water Safety Plan: An Approach to Suppress Microbial Contamination in Drinking Water in Bangladesh <i>S.A.J. Shamsuddin (Bangladesh)</i>	WQ30
Cost Effective Simultaneous Bromate, Disinfectant Byproducts (Oxyhalides) and Anions Analysis using Isocratic Ion Chromatography (IC) <i>A.K. Heng, W. Lawal, A. Nachez, S. Hoffmann, J. Gandhi (Singapore)</i>	WQ31
Current and Emerging Techniques for Environmental Water Analysis – A Survey of Different USEPA Methods <i>A.K. Heng (Singapore)</i>	WQ32
An Assessment of Capacity Gaps and Shortfalls in the Water, Sanitation and Hygiene Sectors <i>S. Cavill, D. Saywell (United Kingdom)</i>	WQ33
Toxicity of Nitroanilines to <i>Pseudokirchneriella subcapitata</i> (green alga) Evaluated With a Closed-system Test Technique <i>C.Y. Chen (China)</i>	WQ34

Poster Session: Water Quality and Health

List of Poster Presentations

Title	Panel No
A Strategic Framework based on Water Management for Developing Sustainable Cities in Syria <i>H.A. Saleh and G. Allaert (Belgium)</i>	GF1
Dealing with Water Complexity and the Cost of Non Decision for Water Infrastructure in Asian Urban Environment <i>P. Wind (Indonesia)</i>	GF2
Fostering Public Private Community Partnerships for Sustainable Water Resources – Challenges and Opportunities <i>P. Aggarwal (India)</i>	GF3
Inspiring Leadership in Policy Making in the Kingdom of Morocco <i>K. Eckermann (Germany)</i>	GF4
Lessons Learned by the Private Sector In Providing Two Billion Liters of Safe Drinking Water in the Developing World <i>G. Allgood (United States)</i>	GF5
Palyja Relief Mission for Padang following West Sumatra Earthquake <i>W. Prabakti, T. Erk, L. Martin, I. Taib (Indonesia)</i>	GF6
Principles of Water Governance: Enabling Private Sector Provide Better Water and Sanitation Services to the Urban Poor <i>K. Singh (India)</i>	GF7
Programme Management during the Construction of a Deep Tunnel <i>D. Trueman (United Arab Emirates)</i>	GF8
Case Study on the Strategic Tunnel Enhancement Programme (STEP) <i>S. H. Orakzai, R. H. Marshall (United Arab Emirates)</i>	GF10