

	Room 1	Room 2	Room 3
08:30 - 10:00	Opening Ceremony		
08:30 - 08:45	Performance		
08:45 - 09:00	Welcome Address <i>Ronnie McKenzie</i>		
09:00 - 09:15	Title to be advised <i>Minister DWS</i>		
09:15 - 09:30	Welcome to Cape Town <i>City of Cape Town</i>		
09:30 - 10:00	Keynote Address <i>to be advised</i>		
10:00 - 10:30	Coffee Break		
10:30 - 12:00	Plenary Session <i>Chair: Ronnie McKenzie</i>		
10:30 - 10:50	Special presentation <i>Diamond Sponsor</i>		
10:50 - 11:10	Presentation from the Water Research Commission <i>Desighan Naidoo</i>		
11:10 - 11:30	A Ten Point Plan for Managing Crisis Situations Where The Total Water Supply Is At Risk <i>Tim Waldron</i>		
10:30-10:50	Title to be advised <i>Mbali Matiwane</i>		
12:00-13:30	Lunch		
13:30-15:00	Different ideas - a controversial session! <i>Chair: Jo Parker</i>	Theory - Important to know <i>Chair: Dave Pearson</i>	Focus on South Africa (1) <i>Chair: Thabo Masike</i>
13:30-13:50	A Workable, Lasting Solution to reduce Water Losses through Leaking Water Pipes Hyunseok Cho Belgium	FAVAD, N1 and NDF calculations for practitioners are now better, simpler and more versatile Mark Shepherd South Africa	Assessing the effectiveness of projects that are aimed at reducing water loss in Ekurhuleni Metropolitan Municipality Salome Chiloane South Africa
13:50-14:10	Simulator for NRW and real loss estimation in water distribution systems for developing countries Parag Gurav India	The Effect of the Pipe Material on the Behaviour of Water Leakage through Longitudinal Cracks under Pressure. Didier Ilunga South Africa	Water Loss Management in the mining industry Abraham Laubscher South Africa
14:10-14:30	Comparative Analysis of Non-Revenue Water Assessment Methods in Three Cases in Developing Countries Taha Al-Washali Yemen	Leakage characterization of pipes in water distribution systems Rene Nsanzubuhoro South Africa	Development of the No Drop incentive-based regulation programme to improve non-revenue water and efficiencies in South Africa Moloko Raletjena South Africa
14:30-14:50	Performance Benchmarking for reduction of network water losses: Case of Indian urban water supplies Sai Amulya Nyathikala India	Development of a two-tier prioritisation algorithm for water reticulation pipe replacement Andre-Hugo van Zyl South Africa	A Continual Integrated Quality Improvement Model for standardised Policies and Procedures in local government in South Africa Nokhanyo Madiwa South Africa
14:50-15:00	Q&A	Q&A	Q&A
15:00-15:30	Coffee Break		
15:30-17:00	Pressure Management (1) <i>Chair: Dewi Rogers</i>	The importance of geospatial information <i>Chair: Paul Fanner</i>	
15:30-15:50	First Tool in Reducing NRW is Pressure Management. First Tool in Pressure Management is PRV Optimization & Maintenance Charl Myburgh RSA	Five ways to use geographical information Edwin Nyirenda Zambia	
15:50-16:10	Smart pressure optimisation to address major water network challenges Mark Loveday United Kingdom	Using spatially located municipal billing data to determine apparent losses in South African municipalities Jacobus P Theron Wessels South Africa	
16:10-16:30	Monitoring the trends in water reticulation pressure and its effects on Non-Revenue water Stacy Mbeba Zimbabwe	The benefits of the House to House Survey for NRW reduction in Beira, Mozambique Reinder Van den Brink-Bil Mozambique	
16:30-16:50	Pressure Reduction – A Study Case Francisco Paracampos Brazil	Using logging results to resolve operational problems in a municipal water network to reduce water loss Swart Boeta South Africa	
16:50-17:00	Q&A	Q&A	

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08:30-10:00	A truly global look at Non-Revenue Water <i>Chair: Malcolm Farley</i>	Focus on South Africa (3) <i>Chair: Willem Wegelin</i>	Metering (1) <i>Chair: Bambos Charalambous</i>
08:30-08:50	World's Largest Level 1 Validated Water Audit Data Set compels US utilities and regulators to mandate Best Practices – A state to state Domino Effect Will Jernigan United States	Use of a Non-Revenue Water Pre-Feasibility Assessment Tool to Mobilise Support and Guide Decision-Making Philip de Souza South Africa	Lessons Learnt From Two Decades of Meter Verification In Severn Trent Water Mikal Willmott United Kingdom
08:50-09:10	South East Europe - a success story in regional acceptance of modern water loss management Jurica Kovac Croatia	A Holistic Approach in the Analysis of and Turn-Around Strategies for Municipal Water Supply Systems - The Perspectives of a Financier Konstant Bruinette South Africa	Assessment of apparent water losses due to metering errors using an alternative, validated methodology Mthokozisi Ncube South Africa
09:10-09:30	Implementation and recent development of holistic non-revenue water programs in China Shuming Liu China	Launching a Holistic WCWDM Programme Derek Hazelton South Africa	Effectiveness of data science technology in reducing apparent loss caused by meter under-registration Janani Mohanakrishnan United States
09:30-09:50	Quantifying the Global Non-Revenue Water Problem Roland Liemberger Austria	Capacity building through the Framework Programme for Research, Education and Training in the Water Sector Moses Mukota South Africa	Quality control experiences of new residential water meters Francisco Arregui Spain
09:50-10:00	Q&A	Q&A	Q&A
10:00-10:30	Coffee Break		
10:30-12:00	The Cape Town Water Crisis <i>Chair: Ronnie McKenzie</i>	Case Studies from around the World (1) <i>Chair: Roland Liemberger</i>	Performance indicators and economics <i>Chair: Will Jernigan</i>
10:30-10:50	The IWA's Water Loss Specialist Group brings together officials from the City of Cape Town and specialists from around the world to discuss the present water crisis and experience from elsewhere. A high calibre panel will discuss solutions to prepare for future droughts. More details will be available in due time.	Learning and Innovation from New Zealand Richard Taylor New Zealand	Going Beyond ELL in Strategic Infrastructure Asset Management Ross Fisher United Kingdom
10:50-11:10		Reducing Water Loss from Water Distribution Systems: China's Challenges and Endeavours Qiang Xu China	Why it is time to move on from technical indices Dewi Rogers Italy
11:10-11:30		Benchmarking the Real Water Losses of the District Metered Areas under Dhaka City Sraboni Chowdhury Bangladesh	Investment indicators assessment for water losses reduction in Brazil using data from a controlled DMA Daniel Manzi Brazil
11:30-11:50		Bahrain Case Study Hana Al Maskati Bahrain	Implications of the Costs of Leak Repair for Performance Contracts in Intermittent Water Systems David Taylor United States
11:50-12:00		Q&A	Q&A
12:00-13:30	Lunch		
13:30-15:00	Performance Based NRW Reduction <i>Chair: Gerard Soppe, World Bank</i>	Benchmarking and Water Audits <i>Chair: Ken Brothers</i>	Metering (2) <i>Chair: Francisco Arregui</i>
13:30-13:50	Several speakers from the World Bank will introduce the initiative on performance based NRW reduction contracting and the present stage of the development of standardized procurement documents. More details will be available soon.	Using the AWWA Free Water Audit Software to Compile the Standard Water Audit for Waterbedrijf Groningen, the Netherlands Cor Merks Netherlands	The Value of Metering Mark Shamley South Africa
13:50-14:10		Ratio of Real to Apparent Losses in Brazil Italo Lima Brazil	The use of Automatic Meter Readers (AMRs) to better understand water use on residential properties, Gauteng, South Africa Samanta Stelli South Africa
14:10-14:30		Empirical Analysis of Non-Revenue Water in the Latin America / Caribbean Region Alan Wyatt United States	Establishing Meter under Registration on domestic premises with Roof Tanks David Pearson United Kingdom
14:30-14:50		Benchmarking of water losses, non-revenue water and efficiencies in South Africa over the past decade Allestair Wensley South Africa	Can Smart Meters increase billed consumption: Lessons from meter audits and replacements in South Africa Pieter Crous South Africa
14:50-15:00		Q&A	Q&A
15:00-15:30	Coffee Break		
15:30-17:00	Performance based NRW reduction <i>Chair: Roland Liemberger</i>	Pressure Management (2) <i>Chair: Richard Taylor</i>	Hydraulic Modelling and DMAs <i>Chair: Dewi Rogers</i>
15:30-15:50	Performance Based Contracts for NRW Reduction Project – An overview of The World Bank current initiatives in Africa Ignacio Peña Argentina	The impact of pressure adjustment on consumer water demand Niel Meyer South Africa	Distribution Pressure Management based on Hydraulic Model for Intermittent Supply Shinsuke Takahashi Japan
15:50-16:10	A Comparison of Turnkey and Co-Management Performance-Based Non-Revenue Water Reduction Contracts Paul Fanner United Kingdom	Pressure Management - Not Your Father's Approach Assaf Heimann Israel	Water losses evaluation for real time monitoring of water supply network Osama Al Gahtani Saudi Arabia
16:10-16:30	Performance Contract for Non-Revenue Water Reduction - Case Study Bahrain Joe Dalton Bahrain	The Future of Hydraulic Control in Water-Systems Carl Yates Canada	The Importance of District Metered Areas in Water Loss Reduction – Case Study of Blantyre Water Board of Malawi Verson Kafodya Malawi
16:30-16:50			
16:50-17:00	Q&A	Q&A	Q&A

	Room 1	Room 2	Room 3
08:30-10:00	Latest Technologies (1) <i>Chair: Mbali Matiwane</i>	Top speakers from around the world <i>Chair: Tim Waldron</i>	Very different NRW issues! <i>Chair: Caryn Seago</i>
08:30-08:50	Latest technologies or is there an elephant in the room Stuart Hamilton United Kingdom	Ten Reasons to avoid Intermittent Water Supply Bambos Charalambous Cyprus	Non-Revenue Water in Zimbabwe. Overview of the Challenges and Opportunities for Reduction of Non-Revenue Water. Anesu Takaendesa Zimbabwe
08:50-09:10	The Case Study in Leak Detection by Using Satellite-based Technology: Metropolitan Waterworks Authority (Thailand) Lalita Kongthong Thailand	The on-going challenge of maintaining low levels of Non-Revenue Water in distribution networks Andrew Donnelly Portugal	How can utilities successfully implement a non revenue water reduction to serve low-income urban areas? Rosemary Campbell United Kingdom
09:10-09:30	Applying Satellite Leak detection Technology for Water Loss Analysis Mordecai Feldman Israel	Operational and Structural Alignments to Achieve Sustained Success in a Water Loss Reduction Program Ken Brothers Canada	Development of a leakage control system at the water supply network of the city of Patras Irene Karathanasi Greece
09:30-09:50	Development of Smart Water Network in Hong Kong Tony Laubscher Hong Kong	Front Line Coaching, a personalised approach for repair operatives Jo Parker United Kingdom	Smart Water Networks – A holistic approach to managing assets, NRW, operations and service Andy Smith United Kingdom
09:50-10:00	Q&A	Q&A	Q&A
10:00-10:30	Coffee Break		
10:30-12:00	Latest Technologies (2) <i>Chair: Stuart Hamilton</i>	Focus on South Africa (2) <i>Chair: Niel Meyer</i>	Case Studies from around the World (2) <i>Chair: Jurica Kovacs</i>
10:30-10:50	Machine learning for the deconvolution of factors affecting real losses Andy Blackhall United Kingdom	Losses after the Customer Meter Ronnie Mckenzie South Africa	Implementation of a program to combat water losses in Luanda - Angola Ricardo Guimarães Angola
10:50-11:10	Acoustic Monitoring Minimises Water Loss and Risks of Pipeline Failures Jenny Soh Singapore	Development of a municipal operational guideline to assist with the preparation of a water conservation and water demand management Willem Wegelin South Africa	Active Leakage Control and New Leak Detection Technologies Application in China Junwei Jin China
11:10-11:30	Leaks can be detected from space Gustavo Bach Israel	Water Savings in Schools in South Africa David Dalling South Africa	Active Leakage Control Applying in Liantang Utility Yu Chen China
11:30-11:50	Leak detection from space - Using Satellite Viloshnee Naicker South Africa	Managing Large Consumer Leakage in a Time of Drought Brad Astrup South Africa	Recover and Protect More Revenue, Think Beyond the Leaks Travis Smith South Africa
11:50-12:00	Q&A	Q&A	Q&A
12:00-13:30	Lunch		
13:30-15:00	Latest Technologies (3) <i>Chair: Tim Waldron</i>	Focus on South Africa (3) <i>Chair: Brad Astrup</i>	Transmission Mains <i>Chair: Willem Wegelin</i>
13:30-13:50	Experiences with Virtual DMAs and Smart Leak Detection Raúl Navas Spain	Using near-live telemetry data in managing the allocation of water resources during drought conditions – Western Cape Case Study Alexander Sinske South Africa	Water Loss Assessment on Transmission Mains Joerg Koelbl Austria
13:50-14:10	Application of machine learning models to predict the area of leak from accelerometer measurements Joseph Butterfield United Kingdom	Non-revenue Water and Water Loss Management: A Critical Review Samuel Molekoa South Africa	The application of inline leak detection technology in large diameter pipelines: statistics and cases studies Pedro Pina Portugal
14:10-14:30	FlowSure Leakage Detection System Trial at Portsmouth Water Alan Cunningham United Kingdom	Sasol Partnerships Drive Water Loss Reduction at Metsimaholo Local Municipality Rivash Panday South Africa	Global overview of condition assessment technologies and expert reviews from water utility asset managers Erik Driessen Netherlands
14:30-14:50	Technology out of this world: Preventing infrastructure failure and water loss with geospatial data Dave Johnson South Africa	The Future of Utility Companies Ryan Fourie South Africa	Pipeline leak detection using fibre optic sensors Sebastian Jahnke South Africa
14:50-15:00	Q&A	Q&A	Q&A
15:00-15:30	Coffee Break		
15:30-16:30	Debates, Discussions and Decisions <i>Chair: Ronnie McKenzie</i>		
15:30-16:30	Closing		
16:30-19:00	Preparations for Gala Dinner		