

ACCELERATING CHANGE: FOSTERING INNOVATION AND INTEGRATION FOR SUSTAINABLE WATER RESOURCES MANAGEMENT IN EASTERN AND SOUTHERN AFRICA

Hotel Verde Zanzibar – Azam, the United Republic of Tanzania

25 – 27 October 2023

PROGRAMME MANAGER: [Here](#)

Tuesday 24 October 2023					
14:00 - 20:00	Registration of Participants VENUE: Robby				
Wednesday 25 October 2023					
06:30 – 08:00	Registration of Participants/Welcome with tea VENUE: Robby				
	OFFICIAL OPENING DIRECTOR OF CEREMONIES: ENG. MGWISA MPEMBE VENUE: Main Hall LINK: Here				
08:20	All Participants and Guests take seats, Singing of the Tanzania National Anthem				
08:30	Introductions by the 23 rd Symposium Local Organising Committee Chairperson: Dr Augustina Alexander				
08:40	Welcome Speech: Vice Chancellor University of Dar es Salaam: Prof. William-Andey Lazaro Anagnisye				
08:50	Remarks by the Chairperson of WaterNet Trust: Prof. Nnnesi Kgabi				
09:00	Remarks from The Royal Netherlands Embassy in Embassy in South Africa: Ms Marlies Den Boer				
09:10	Remarks by the SADC Representative, Director Infrastructure and Services: Ms Mapolao Mokoena				
09:20	Keynote Address: Dr Ade Freeman, Regional Programme Leader, FAO Regional Office for Africa - Science and Innovation for accelerating transformation of agrifood systems in Africa				
09:40	Official Opening of the Symposium by the Guest of Honour: HE President of Zanzibar Dr. Hussein Ali Mwinyi				
10:00	Handover of WaterNet Shields by HE President of Zanzibar Dr. Hussein Ali Mwinyi to Institutions which have introduced Postgraduate Programmes in IWRM/ICM – University of Mbeya and the National University of Lesotho				
	GROUP PHOTO				
10:15	HEALTH BREAK				
10:45 – 12:45	SESSIONS START				
	Changing hydro-climatic regimes and planning tools for climate resilient pathways VENUE: Cardamom LINK: Here Chair: Prof. Zacharia Katambara Rapporteurs: Ms Fortunata Kayira & Mwamba Safi Cynthia		Water, Land, Energy and Agriculture VENUE: Jinja Hall LINK: Here Chair: Dr Anna Matros-Goreses Rapporteurs: Ms. Chisanga Lyoba & Mr Misheck Chundu		OPEN SPECIAL SESSION VENUE: Annato LINK: Here Chair: Mr Elisha Madamombe Rapporteurs: Dr Loreen Katiyo
				OPEN SPECIAL SESSION VENUE: Maripa LINK: Here Chair: Dr Mamohloding Tihagale Rapporteur:	
10:45	Kechnit, D., Tshimanga, R., Ammari, A & Trigg, M	Application of remote sensing and in-situ measurements for discharge monitoring in large river	van Lieshout, A., Vekerd, Z & Rincon, D. C	Research and Capacity Development for Water and Food Security using EO and Cloud Computing	Enhancing Transboundary Cooperation Between Mozambique and Zimbabwe in the Buzi, Pungwe and Save(BUPUSA) Shared Watercourses Convener: Global Water Partnership Programme Introduction to the Session: L. Katiyo Keynote presentation: L. Madamombe Reactions to the keynote presentation: <ul style="list-style-type: none"> Panel Members: IUCN; Member State Representatives for Moz and Zim; LIMCOM; SADC-GMI; UNESCO; World Bank; Development Partner representatives Question and answer session to the panel: All Closing remarks for the session: IUCN (Mr Saruchera/Ms Zuma)
11:00	Mwamba C. S., Kileshye Onema, JM & Tshimanga Muamba R	Remote sensing and ground applications for reduced vulnerability to flooding in N'Djili River watershed, Kinshasa- DR Congo	Conway, D	Characterising and addressing water-energy-food interdependencies in the Rufiji River Basin, Tanzania	
11:15	Paris, A., Gal, L., Oliveira, R. J., Calmant, S., Gosset, M., Papa, F., Kitambo, B., Wongchuig, S., Boussaroque, M., Fleischmann, A., Moreira, D. M., Tshimanga, R., Crétaux, JF., Andriambelosom, J & Bogning, S	Operational hydrology from space: prospects for African ungauged rivers	Nhamo, L., Mpandeli, S., Liphadzi, S., Molwantwa, J & Mabhaudhi, T	An integrated geospatial and multi-criteria decision approach and the factors required in irrigation suitability mapping	
11:30	Dube, T., Shoko, C & Seaton, D	Advancements in Earth Observation for Water Resources Monitoring and Management in Africa: A Comprehensive Review	Nowbuth, M. D., Torabally, N. I & Jogee, D	Using Remote Sensing and Geographic Information System (GIS) in Support of Sustainable Agricultural Development	
11:45	Winsemius, H., Annor, F., Banda, K., Hagenars, R., Peña-Haro, S., Grimmeisen,	Co-development of Innovative and affordable surface water observations, the TEMBO Africa project	Yaou, L. O., Tshimanga, R. M & Kihumba, A. M	Assessment of irrigation potential in the N'djili River watershed	
					Strategic Engagement: Working with the Youth as the Future Leaders of the Water Sector Convenors: Water Research Commission and WaterNet Programme Welcome and introductions Tihagale, M: Opening remarks Co-convener addresses Nobert, J: Opening Address: Capacitating the youth for current and future water resources management in Eastern and Southern Africa Molwantwa, J: Keynote address: Youth participation to leadership in the African water sector Otieno, B. O: Remark: Youth leadership in the Water and Sanitation sector Panel discussion: What are needs, priorities and challenges of the South and East African youth within the water sector (Facilitator: Feziwe Mamba) Southern Africa Speakers <ul style="list-style-type: none"> Ms Tavonga Takawira (Zim) Mr Mussa Kamanula (Malawi) Zanele Lulane (eSwatini)

		F., Mather, S., Realini, E., Gatti, A & Van De Giesen, N				<ul style="list-style-type: none"> Ms Murendeni Patriciah Ravele, Mr Sikelela Mqhayi) East Africa Speakers. <ul style="list-style-type: none"> Ms Anne Njeri Mugatha (Kenya) Mr Alphonse John Haruna (Tanzania) Facilitated discussion: how do we work together with the unit (priority areas, action points and responsibilities (panel and participants (Facilitator: Prof Mabhaudhi, T)) Tihagale, M: Way forward and closure
	12:00	Kayira F, Chunga B, Elijah Wanda and Asumani Ungwe	Hydrogeochemical modelling of groundwater quality in Salima and Lilongwe districts in Malawi	Paulus, P. T., Muzhinji, N., Borgemeister, C., Chimwamurombe, P, Ateba, C	Application of water quality indices to characterise the physico-chemical properties of irrigation water in Namibia	
	12:15	Hersi, N. A.M., Mulungu D. M.M & Nobert, J	Getting ready for the impact of climate and land use change on groundwater recharge in Internal Drainage Basin, Tanzania.	Jogee, D., Cheekoory, U & Nowbuth, M. D.,	Effects of land use and seasonal changes in the water quality of two rivers in Mauritius	
	12:30	Gomo, M & Ngobe, T	Hydrogeophysical investigation of the groundwater-pans interaction in the Khakhea – Bray dolomite transboundary aquifer (TBA)	Owusu, A., Kagone, S., Velpuri, N., Leh, M., Gumma, M., Ghansah, B., Thilina-Prabhath, P., Akpoti, K., Gebreyesus, K., Tinonetsana, P & Mohammed, I	A Continental-Scale Framework for Partitioning Rainfed and Irrigated Croplands	
12:45 – 13:45	LUNCH BREAK					
	Changing hydro-climatic regimes and planning tools for climate resilient pathways		Water, Land, Energy and Agriculture		SPECIAL SESSION	CLOSED SPECIAL SESSION
13:45 – 15:45	VENUE: Cardamom LINK: Here		VENUE: Jinja Hall LINK: Here		VENUE: Annato LINK: Here	VENUE: Maripa LINK: Here
	Chair: Prof. Zacharia Katambara Rapporteurs: Mr Sikelela Mqhayi & Mwamba Safi Cynthia Rapporteurs:		Chair: Dr Anna Matros-Goreses Rapporteurs: Ms. Teboho Masupha & Mr Misheck Chundu		Chairs: Prof. Innocent Nhapi Rapporteur: Dennis, Placide and Precious	Chair: Ms. Ruth Beukman Rapporteurs: Mr. Carinus de Kock
	13:45	Hashweh, L., Adar, E & Reichert, B	Assessing the shallow groundwater-streamwater interaction and flow trajectories in a wetland –“An example for the Ewaso Narok Floodplain, Kenya”	Mabaya, G	Impact of past irrigation rehabilitation efforts on the overall irrigation performance of smallholder irrigation schemes in Zimbabwe	Water Resources Development and Management for Sustainable Agriculture Convener: Food and Agricultural Organization Programme Nzeyimana, V: Welcoming Remarks Nzeyimana, V: Irrigation Development and Agricultural Water Management Strategy in Sub
	14:00	Leburu, E & Palamuleni, L	Hydro-chemistry assessment of groundwater quality of the Grootfontein aquifer, North-West province, South Africa	Olagbaju, P. O & Wojuola, B. O	Radiotoxic Assessment of Irrigation Water in Rustenburg, South Africa	
	14:15	Kerapetse, C. T., Bushira, K. M., Ngongondo, C & Moosdorf	Characterization of the Hydro-Climate Indices for Adaptive Pathways in Notwane Sub-Catchment, Botswana	Lyoba, C. Tembo, G., Chundu, M., Banda, K & Nyambe, I	Land Use-Land Cover Change and Perception of Drivers in the Bangweulu Wetland and surrounding areas, Zambia	
	14:30	Nhamo, L., ylvester Mpandeli, S & Mabhaudhi, T	Prospects to sustainably manage water-related ecosystems under climate change and increasing demand	Masupha, T., Moeletsi, M & Tsubo, M	Utilizing Innovative Technologies to Enhance Drought Prediction and Management for South Africa's Agriculture	
	14:45	Chikozho, C	Understanding the Landscape of Long-term Strategy Development for Climate Change Adaptation Planning in Africa	Mapedza, E., Gbegbelegbe, S., Huyer, S., Mudege, N., Homann-Kee Tui, S., Nortje, K., Jacobs-Mata, I., Mutenje, M., Kasoma-Pele, W. K., Fakudze, B & Gondwe, T	Gendered Perception of climate change and implications for Climate Smart Agriculture	
	15:00	Shinhu, R., Amasi, A & Wynants, M	Assessing the impacts of current land use and climate changes and future climate changes on river discharge towards Lake Victoria	Kessy, J., Alexander, A. & Mtamba, J	Assessment of land use/cover change and its impacts on the surface water quality of the Mara River Catchment, Tanzania	

	15:15	Van Griensven, A & Mukama, E. B	Understanding the Interplay of Climate Variability and Human Activities in the Water Scarcity of the Great Ruaha Basin	Moses, B	Analysis of silting trends of Lwanyo Dam	<p>Saharan Africa, Main considerations (FAO RAF)</p> <p>Agbesor, P: Water Development for Livestock, Case of FAO Nigeria</p> <p>Besigye, D: Rainwater Harvesting for Agriculture Production, Case of FAO Uganda</p> <p>Kanyabujinja, P. N: Small Scale Irrigation technologies in Rwanda, Innovative Approach to reduce Poverty and Hunger</p> <p>Closing Remarks</p>	<p>SADC Water Research Agenda – Sharing Results of Review and Update</p> <p>Convenor: AUDA-NEPAD SANWATCE (Southern African Network of Water Centers of Excellence)</p> <p>de Kock, C: Welcoming</p> <p>SADC Water: Opening address, setting the scene</p> <p>Introduction</p> <p>Beukman, R: Background Presentation: SADC Water Research Agenda</p> <p>Reflection and Guidance: Facilitator: Beukman. R</p> <p>Discussion: Reflecting on the implementation of the Agenda:</p> <p>Discussion: Key themes and critical issues</p> <p>Beukman. R: Closure and way-forward</p>
	15:30	Mgala, E & Gwambene, B	Reassessing Water Resource Challenges in a Changing Climate in the Kagera Transboundary River Basin, Tanzania				
	15:45	HEALTH BREAK					

16:00 – 18:00	Changing hydro-climatic regimes and planning tools for climate resilient pathways		Water, Land, Energy and Agriculture		OPEN SPECIAL SESSION	OPEN SPECIAL SESSION
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	16:00	Mugatha, A., Valimba, P & Nobert, J	Flood inundation mapping for the Tana River Basin, Kenya		Water Governance and Economics as enablers for Innovation and Integration in Sustainable Water Resource Management Convenors: Programme Opening and welcome Swatuk, L: Evolution of policy programs and outcomes – a global overview Farolfi, S & Jourdain, D: Training on water economics and governance in Southern Africa Dini, J: Water Research Commission research in water governance in South Africa – challenges and opportunities Makurira, H: Water Governance in Zimbabwe Mudhara, M: Water governance and economics in agricultural water management in Southern Africa Ncube, B: SARChI Research Chair in Governance and Economics of Water and Sanitation Sector Institutions Discussion: Bringing it all together	Remote Sensing for Water Accounting and Water Productivity Assessments in Africa – Spotlighting the WaPOR Database Convenors: Programme Part I: Introduction: Moderators: Dr. Marloes Mul & Dr. Seleshi Yalew <ul style="list-style-type: none"> - Introduction to WaPOR: Livia Peiser - <i>WaPOR technical officer, Land and Water Division, FAO, Rome</i> - WaPOR quality assessment: Dr Marloes Mul, <i>Assoc. Professor of Water Resources Management, IHE Delft Institute for Water Education, Delft</i> - Demonstration of a WaPOR based application: Dr Seleshi Yalew, <i>Lecturer/researcher on Land and Water Management, IHE Delft Institute for Water Education, Delft</i> Part II: Invited talks: Moderators: Dr. Marloes Mul & Dr. Seleshi Yalew <ul style="list-style-type: none"> - FAO local representatives: WaPOR applications and capacity development in Africa - IWMI representative: WaPOR applications in selected cases in Africa Part II: Interactive Panel: Moderators: Dr. Marloes Mul & Dr. Seleshi Yalew <ul style="list-style-type: none"> - Panel discussion on the future prospects of remote sensing data in water management - Q&A segment - Closing Remarks
	16:15	Nyudike, F., Nobert, J & Munishi, S	Multi-Criteria Analysis of Water Allocation Scenarios in Kagera Basin, Tanzania			
	16:30	Winsemius, H., Klein Holkenborg, E., Gortzak, E., Van den Homberg, M., Comes, T & Nyoni, F	Towards world-wide estimation and prediction of reservoir water volumes			
	16:45	Juizo, D., Nhantumbo, C., driano Macia, A., Duvail, S & Hamerlynck, O	Approach for estimating the environmental flow for Incomati River Basin Estuarine			
	17:00	Kamamba, M., Banda, K., Sichingabula, Nyambe, I	Forest-Water Nexus: An Evapotranspiration assessment of the Kafue River Sub-Basin using remote sensing			
	17:15					
17:30						
17:45						
18:00 - 19:30	POSTERSESSION VENUE: Chair: Rapporteurs:					
	Water, Ecosystems and the Environment for Poster Presentation	Changing hydro-climatic regimes and planning tools for climate resilient pathways	Innovative approaches, practices and technologies for affordable water supply, and sanitation services	Water governance for sustainable, equitable and affordable water services	Water, Land, Energy and Agriculture for poster presentation	

	Number of posters for presentation: XXX See page XXX for details regarding each poster Posters being presented by young scientists have a green sticker of their pictures on the top right corner	Number of posters for presentation: XX See page XX for details regarding each poster Posters being presented by young scientists have a green sticker of their pictures on the top right corner	Number of posters for presentation: XXX See page XXX or details regarding each poster Posters being presented by young scientists have a green sticker of their pictures on the top right corner	Number of posters for presentation: XXX See page XXX for details regarding each poster Posters being presented by young scientists have a green sticker of their pictures on the top right corner	Number of posters for presentation: XXX Posters being presented by young scientists have a green sticker of their pictures on the top right corner
	Cocktail: Venue: Programme:				

Thursday 26 October 2023								
08:00-10:00	SCIENTIFIC PLENARY SESSION							
	VENUE: Main Hall LINK: Here							
	High level Panel: Implementation and operationalisation of integrated water resources management for accelerating change in the water sector							
	Chair: Prof Jean-Marie Kileshye Onema Rapporteurs:							
	08:00		Opening Remarks:					
	08:20		Introductions of Panelists: • TBC					
	08:30	Moderator	Questions to each panelists by Moderator					
	09:30	All	Questions to panesllists from the floor					
	09:45	Prof. T. Mabhaudhi	Summary of main points Way Forward and					
09:55	Prof. N. Ngila	Closing Remarks						
10:00 – 10:30	Health Break							
08:00-10:00	Water, Ecosystems and the Environment		Innovative approaches, practices and technologies for affordable water supply, and sanitation services		Water governance for sustainable, equitable and affordable water services		OPEN SPECIAL SESSION	
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	10:30	Mamba, F. B., Mbuli, B. S & Ramontja, J	Improving the Efficiency of Dye and Heavy Metal Removal from Wastewater using Carrageenan Graphitic Carbonitride Bimetallic Decorated Biopolymeric Nanocomposites	Chidavaenzi, M., Chitsa, G & Makoni, F	Sand Abstraction; an alternative water supply for multiple uses in rural areas of Zimbabwe	Tyhoyholo, T & Ncube, B	Structural configurations for South African urban water governance: the case of Cape Town	
	10:45	Mqhayi, S., Clark, S & Lindsay	Investigation of radon, its geochemical interactions and application in understanding groundwater-surface water interactions, Heuningnes Catchment, South Africa	Murebwayire, M, L., Muhirwa, E & Makoni, F	Using mWater application to monitor the water services infrastructures: A case of Rwanda Universal Water Coverage	Shoko, E & Ncube, B	Cooperation in common property resource management: a group engagement approach	

	11:00	Onwudiwe, D., Seheri, N & Kgabi, N	The removal of As and Pb from groundwater using functionalized graphitic carbon nitride as adsorbent	Ngambi, M & Samuyachi, J	Sanitation and Hygiene as a key driver for water supply provision - Case Study of World Vision's Water, Sanitation and Hygiene Program, Zambia	Williams, S., Ncube, B & Carolissen, M	An interface between indigenous knowledge and legislative frameworks and scientific research for sustainable water management	Knowledge transfer of Integrated Catchment Management (ICM) experiences and promotion of ICM planning processes: Convenors: RENOKA, GIZ, WaterNET Programme <table border="1"> <thead> <tr> <th>Topic</th> <th>Presentations</th> <th>Responsible</th> </tr> </thead> <tbody> <tr> <td>Welcome Remarks</td> <td></td> <td>WaterNet</td> </tr> <tr> <td>Objectives of Session & Interface TWM – ICM Lesotho</td> <td></td> <td>GIZ - MS</td> </tr> <tr> <td>ReNOKA</td> <td>In a nutshell</td> <td>ICU - National</td> </tr> <tr> <td rowspan="3">ICMDP</td> <td>ICMDP: Overall Process:</td> <td>ICU – National</td> </tr> <tr> <td>Climate Risk and Vulnerability Assessment (CRVA)</td> <td>CPU Members</td> </tr> <tr> <td>Causal and Impact Chains</td> <td></td> </tr> <tr> <td rowspan="3">SCAP</td> <td>Overall Process</td> <td>ICU – CM</td> </tr> <tr> <td>Compendium of Measures</td> <td>GIZ - MM</td> </tr> <tr> <td>Financing Mechanism</td> <td>LoCAL</td> </tr> <tr> <td>Transboundary Stakeholder Movement</td> <td>Awareness Raising Campaigns informed by Behaviour Change Analysis</td> <td>GIZ - MS</td> </tr> <tr> <td>Monitoring & Knowledge</td> <td>ReNOKA Land Cover Atlas</td> <td>DRG</td> </tr> <tr> <td></td> <td>NUL contributions to ReNOKA Support to Tertiary Education</td> <td>NUL WI WaterNet</td> </tr> <tr> <td>Q&A/ Facilitated Discussion: Takeaways for the audience</td> <td></td> <td></td> </tr> <tr> <td>Closing remarks</td> <td></td> <td>WaterNet</td> </tr> </tbody> </table>	Topic	Presentations	Responsible	Welcome Remarks		WaterNet	Objectives of Session & Interface TWM – ICM Lesotho		GIZ - MS	ReNOKA	In a nutshell	ICU - National	ICMDP	ICMDP: Overall Process:	ICU – National	Climate Risk and Vulnerability Assessment (CRVA)	CPU Members	Causal and Impact Chains		SCAP	Overall Process	ICU – CM	Compendium of Measures	GIZ - MM	Financing Mechanism	LoCAL	Transboundary Stakeholder Movement	Awareness Raising Campaigns informed by Behaviour Change Analysis	GIZ - MS	Monitoring & Knowledge	ReNOKA Land Cover Atlas	DRG		NUL contributions to ReNOKA Support to Tertiary Education	NUL WI WaterNet	Q&A/ Facilitated Discussion: Takeaways for the audience			Closing remarks		WaterNet
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	11:15	Ravele, M & Onwudiwe, D. C	Photocatalytic removal of ibuprofen from water using CuO nanoparticles incorporated into graphitic carbon nitride	Zvimba, J., Musvoto, E & Mgwanya, N	"Pathways, challenges and role of innovation as accelerator for transitioning water services to a circular economy"	Moolman, J & Cronje Alberts, R	Identifying key risks to the effectiveness of the Orange-Senqu River Commission Agreement: An overview of preliminary results																																										
	11:30	Lucas, G., Komakech, H., Shemsanga, C & Selemani, J. R	Hydrochemical characteristics of crater lakes and their influence on the downstream water supply sources; Emakat Lake, Northern Tanzania as a case study	Oyesigye, P., Ayesiga, D & Makoni, F	Utilizing a Household Engagement and Accountability Approach (HEAA) to Scale Rural WASH Services in Uganda	Conway, D	Applying behavioural and psychological research concepts to enhance water security																																										
	11:45	Siziba, N & Teta, C	Biomarkers for monitoring Pollutants of Emerging Concern in aquatic environments of urbanising landscapes: A review	Siafwanzya, C., Tembo J. M & Banda, K	Challenges and opportunities of water supply and sanitation in unplanned settlements of Monze Urban Southern Zambia	Mokadem, M	The water use challenge faced by the Vaalharts local population (South Africa)																																										
	12:00	Mabeo, R., Molale-Tom, L & Bezuidenhout, C	Quantification of ESKAPE pathogens and antibiotic resistance genes (ARGs) in wastewater treatment plants (WWTPs) and their receiving waters in NW-P & GP	Deen, A., Gaima, P & Makoni, F	Providing WASH, Connectivity and Electrification through Solar Power to Off-Grid Health Care Facilities in Sierra Leone	Wagoneka, S. T., Gumindoga, W & Rwasoka, D	Groundwater monitoring and advisory system for Upper Manyame Subcatchment: A case study of Upper Manyame Zimbabwe																																										
	12:15	Ravele, M & Onwudiwe, D. C	Photocatalytic removal of ibuprofen from water using CuO nanoparticles incorporated into graphitic carbon nitride	Tabana, L., Kupa, A & Tichapondwa, S	Adsorption of Hexavalent Chromium from Wastewater using Magnetic Biochar Derived from Peanut Hulls	van Koppen, B., Mapedza, E., Zane, G., Buisson, M. C., Murombo, T., Sithole, P., Dini J & Sawunyama, T	Valuing water in equitable water resource allocation																																										
	12:30	Chaparadza, A and Zvinowanda, C	Composite Materials based Passive Samplers for Monitoring Antiretroviral Drugs and their Metabolites in Surface Waters	Tshililo, F., Mutanga, S & Gumbo, T	Assessing the feasibility of decentralised water reclamation schemes in Diepsloot township, Johannesburg, South Africa. A systems dynamics approach	Kandagor, R & Thu Thu Aung, W	Innovative Approaches To Water Crisis Management: GIS and MCDA In Kenya And Myanmar																																										
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	13:45	Clemencio, N., Sumbana, J., Vaz, Rodrigues, M., N. C., Dosse, M., Joaquim, D., Pedro., Santos, R., Monteiro & Juizo	Antibiotic resistance in Maputo. Pre-assessment of full picture: humans, animals and water	Takawira, T., Hoko, Z & Gumindoga, W	Application of hydraulic modelling and GIS for real losses management in non revenue water	Mokadem, N	The water use challenge faced by the Vaalharts local population (South Africa)																																										
	14:00	Okoro, H, Orosun, M., Umar, S., Ngila, J., Zvinowanda, C., Emenike, E & Iwuozor, K	Human and ecological risk assessments of potentially toxic elements in sediments around a pharmaceutical industry in Ilorin, Nigeria	Oluoch, B., Otieno, B., Ojwach & Odindo, Atitic	Reduction of pathogens in domestic wastewater using advanced oxidation processes for crop production	Masona, E., Krasposy Kujinga, K & Gumindoga, W <i>Virtual</i>	Exploring strategies for combating catchment degradation in the Save Basin. A case of Save catchment, Zimbabwe.																																										
	14:15	Nhantumbo, C., Alexandre, P., Mangujo, N., Mucavele, E & Juizo, D	Synoptic survey on the impact of human activities in Pungwe and Buzi river basins in Mozambique	Nyambiya, I., Chapungu, L., Sawunyama, L., Musvoto, E. V., Zvimba, J. N & Nhamo, L	Circular economy drivers, opportunities and barriers, for wastewater services within low- and medium-income countries	Macheca, A. D & Laurinda Mazive. A. T	Strategic financial planning as an important pillar for an efficient and sustainable provision of water supply services in Africa: The case study of Mozambique																																										
	14:30	Yalew, S. G & Mul, M. L	Exploring and Mitigating Invasive Aquatic Weed Challenges on Water Bodies in Africa: An Agent-Based Modelling Approach	Oyaro, D., Kuria, W & Ochieng, O	Behaviors among primary school children. A Case of the WASH UP! Program in Kajiado and Machakos Kenya	Gaegane, G	Integration of built and ecological infrastructure for sustainable dam catchment management in South Africa																																										
	14:45	Chibwe, C., Nyambe, N., Banda, K., Sichingabula, H & Nyambe, I	Biodiversity and condition factor of Luapula Basin Fishes for Ecological Assessment of Interbasin Water Transfer	Haruna, A., Richard imwaga, K & Ndibalema, E	Performance evaluation on the physical and combustion properties of faecal sludge briquettes using different binding materials	Mremi, A., Kimwaga, R & Mulungu, D	Evaluation of Participatory Geographic Information Systems (PGIS) for Faecal Sludge Management in Unplanned Settlements in Kinondoni District.																																										
	Catalysing the WEF Nexus for relevance and operationalisation IWMI, UKZN & GWPSA Programme Mabhaudhi, T & Jewitt, G: Welcome and purpose Mabhaudhi, T: Catalysing the WEF Nexus for relevance and operationalisation. Jewitt, G: WEFTools: Building human and technical capacity to operationalise the WEF nexus approach. Catalysing the WEF Nexus for real-world application Ndeketeaya, A: Building the case for supporting WEF nexus investments. Senzanje, A: Broadening the dimensions of the WEF nexus to include environment and health. Chibarabada, T: Developing a people and gender-inclusive WEF nexus framework. Case study – Lessons from Goma Panel Discussion																																																

	15:00	Kazekula, J	Quality Characteristics of Surface Water in The Luapula and Kafue Basins	Bira, M. M., T. Tangou, T. T & Tshimanga, R. M	Estimating the quantities and qualities of faecal sludge in Funa Catchment, Dr.Congo, for improved management solutions	Kamanula, M & Kafatia, K Jr	Social-economic importance and dynamics of swamp vegetation around lake chilwa, Zomba District, Malawi	WEF Nexus Community of Practice (IHE/UKZN/Nexus Gains) Closing Remarks
	15:15	Muma, S., Kasabila, K., Mwandira, W., Banda, K & Nyambe, I	A Geochemical Characterisation of Uchi Mine Tailings for Future Restorations of the Tailing dumps	Samuyachi, J & Ngambi, M	Sustainability of Open Defecation Free (ODF) - Case Study of Madzimawe Chiefdom in Chipata District, Zambia	Chambwe, M & Tseane-Gumbi, L	The Role of Water Resources in the Advancement of Tourism Development in Rural Communities	
	15:30	Steven, R., Fiwa, L., Chipula, G & Kumambala, P	Estimation of Soil Erosion Using RUSLE Model and GIS: The Case of Mwimba Catchment in Kasungu, Malawi	Zimpita, N., Sei, I., Roi, I & Makoni, F	Assessing Factors Contributing to Open Defecation Slippage in Malawi; The Case of Traditional Authority Onga in Chiradzulu District	Tseane-Gumbi & L Chambwe, M	Urban water resources management and the sustainability of aquatic tourism	
	15:45	HEALTH BREAK						

16:00 – 18:00	Water, Ecosystems and the Environment		Innovative approaches, practices and technologies for affordable water supply, and sanitation services		Water governance for sustainable, equitable and affordable water services		OPEN SPECIAL SESSION	
	VENUE: Cardamom LINK: Here		VENUE: Jinja Hall LINK: Here		VENUE: Annato LINK: Here		VENUE: Maripa LINK: Here	
	Chair: Prof Timothy Dube Rapporteurs: Mr. Edny Mucavele & Mr. Petrus Tuhafeni Paulus		Chair: Dr John Ngoni Zvimba Rapporteurs: Mr. Barnabas Oluoch & Lehlogonolo Tabana		Chair: Prof Innocent Nhapi Rapporteurs:		Chair: Rapporteur:	
	16:00	Gaoh, Z. S. B. G Mwamba, R. T., Katshiatshia, H. M., Odume, N & Ali, B. T	Relationship between land use and water quality in a tropical urban catchment of the Congo basin	Mafuta, W & Makoni, F	Triggering handwashing behaviour among children by soap embedded with toys in Somaliland	Schoeman, Y., Oberholster, P & Erasmus, M	Towards Sustainable Water Management: A Novel Classification System for Ecological Engineering Solutions as new-order Anthromes in Human-Modified Landscapes	The Past, The Present and Future Water Resources Management NTWAM Water and Environment Initiative Programme Welcome Part 1: Overview of NTWAM Water & Environment Initiative Executive Director: Briefing & Documentary PART II: The Past, Present and Future Water Resources Management Approaches Executive Director: Keynote presentation NTWAM team: Panel discussion All Participants: Question and Answer Administrative Director: Vote of thanks Closing & Networking
16:15	Kibii, J & Du Plessis, K	Applicability of CHIRPS-based Pitman Model for Simulation of Projected Climate Change Flows	Mjee, J., Mcharo, J., Kitomari, R., Mwanga & Vungu, S	Nudging influence in improving hand washing behaviour among school aged children: Soapplay project in Karatu District	Mhando, C & Willbroad, H	Technologies by Itself Cannot Facilitate Water Management Efficiency; The Case of Arusha Five Villages Water Project		
16:30	Mhlanga, S	Laboratory-scale production and testing of a bio-nanomaterial-derived flocculant technology for wastewater treatment	Macheca, A. D & Tichapondwa, S	Innovative Wastewater Treatment Technologies for Sustainable Water Management	Gwanu, L., Banda, K & Nyambe, I	Stakeholder Engagement in Integrated Water Resources Management: Assessing Knowledge, Attitudes, Experiences, and Methods for Active Participation in the Upper Zambezi sub-Basin		
16:45	Gumbo, D & Kapangaziwiri, E	Opportunities for environmental flow determination using functional flows approach for rivers in South Africa: A review	Otieno, B., Khune, M., Tshilenge, J., Osifo, P & Ochieng, B	Anaerobic Co-Digestion of Municipal Wastewater Sludge with Food Waste using a Solar-Heated Pilot Bioreactor	Katonda, D	Drumbeats and Floods: Local Interpretations of Napolo and Cyclone Freddy in Malawi		
17:00	Muisa, N., Vuthari V., Ruziwa, W., Musaidi-Manyuchi, M., INhapi, I & Tichapondwa, S	Reuse of waterworks' alum sludge as adsorbent of methylene blue dye from textile industry wastewater	Moyo, N., Chimhundi, J & Brink, H	Performance Assessment of Water Treatment Plants: Case Study of Criterion Water Treatment Plants, Bulawayo, Zimbabwe	Gwambene, B & Mgala, E	Reassessing Water Resource Challenges in a Changing Climate in the Kagera Transboundary River Basin, Tanzania		
17:15	Rodrigues, M., I Nhantumbo, C., Sumbana, J., Kouta, R., Mussagy, A & Juizo, D	Evaluation of the Water Quality of the Infulene River Basin	Komakech, H. C	Potential of Remote Monitoring for Sustainable Operation and Maintenance of Rural Water Supply Infrastructures in Tanzania				
17:30			Mandimutsira, C & Chibaya, L	Design of eco-friendly zeolite based filter impregnated with silver ions for innovative water purification				
17:45			Achieng, S., Nzai, L & Osano, C	Digital Tracking Integration of Household Water Quality Test Findings in WASH Programming				

Friday 27 October 2023

08:00-10:00	Water, Ecosystems and the Environment		OPEN SPECIAL SESSION		OPEN SPECIAL SESSION		OPEN SPECIAL SESSION	
	VENUE: Cardamom LINK: Here		VENUE: Jinja Hall LINK: Here		VENUE: Annato LINK: Here		VENUE: Maripa LINK: Here	
	Chair: Prof Timothy Dube Rapporteurs: Mr. Joseph Mathuthu		Chair: Rapporteur:		Chair: Idalina Roi & Maybin N'gambi Rapporteurs: Pamela Wamalwa and Sylvester Vungu		Chair: Dr Mamohlodging Tihagale Rapporteur: Ms Muvhulawa Mulaudzi & Ms Murendeni Patriciah Ravele	
	08:00						Strategic Engagement: Strengthening Research Development and Innovation (RDI) Transboundary River Basin Organisation Cooperation	

	08:15			<p>Development of Groundwater Policy, Legal and Institutional Enabling Environment Roadmaps Towards Sustainable groundwater Management and Socio-Economic Development in Southern Africa</p> <p>Convenor: SADC Groundwater Management Institute</p>	<p>Innovative Approaches, Practice and technologies for Affordable and sustainable WASH services: Bridging Theory, practice and Impact</p> <p>Convenor: World Vision</p>	<p>Convenor: Water Research Commission, WaterNet, ORASECOM, IUCN</p>
	08:45			<p>Programme</p> <p>Session 1: Setting the Scene</p>	<p>Programme</p> <p>Idalina Welcome and introductions Dr. Fungai Makoni: Overview of World Vision’s goals for achieving SDG 6</p>	<p>Programme</p> <p>Welcome and introductions</p> <p>Tlhagale, M: Opening remarks</p>
	09:00			<p>Munyayi, R: Introduction of Session, Programme Overview, and Expected Outcomes</p> <p>Sauramba, J: Welcoming Remarks</p> <p>Pietersen, K: The Significance of Adequate Groundwater Policy, Legal and Regulatory Frameworks, in Achieving Long-Term Water Security in Southern Africa</p> <p>TBA: Innovative Financing of Groundwater Initiatives for Sustainable Socio-Economic Development</p> <p>Session 2: Panel Discussion</p> <p>Facilitated by Ms. Rennie Munyayi and Dr Pinimidzai Sithole</p> <p>TBA: SADC Groundwater Roadmap: Regional Priorities to Create an Enabling Environment for Sustainable Groundwater Management (A Call for Action)</p> <p>TBA: Visioning the integration of GW into new RBOs</p> <p>Siteo, S: RBO Perspective on the Immediate and Indirect Socio-Economic Consequences of Groundwater Depletion and Contamination, Focusing on the Possible Adverse Effects on Agriculture, Livelihoods, and Ecosystem Services</p>	<p>Using data for water system planning and climate smart decision-making</p> <p>Marie Leonce Murebwayire Using mWater application to monitor the water services infrastructures: A case of Rwanda Universal Water Coverage</p> <p>Mulatu Kassa Real-time Remote Hydromet monitoring to improve water resource evidence-based planning: A Case of Somalia</p> <p>Capacity Development as a pre-requisite for improved WASH services</p> <p>Dr Fungai Makoni World Vision’s capacity building programmes and partnership universities (DRI and Drexel, etc)</p> <p>Innovations on the cutting edge of WASH</p> <p>Partick Gaima Providing WASH, Connectivity and Electrification through Solar Power to Off-Grid Health Care Facilities in Sierra Leone</p> <p>Alternative financing to accelerate progress towards SDG 6</p> <p>Paul Oyesigye Utilizing a Household Engagement and Accountability Approach (HEAA) to Scale Rural WASH Services in Uganda and connecting this work to household microfinance</p> <p>Strong Governance as the main driver of sustainability</p> <p>Noel Zimpita Assessing Factors Contributing to Open Defecation Slippage in Malawi; The Case of Traditional Authority Onga in Chiradzulu District.</p> <p>Dela Banda Sustainability of waterborne Sanitation Facilities in School in Rural Zambia</p> <p>Jessy M Samuyachi Sustainability of Open Defecation Free</p> <p>Maybin N’gambi Discussion and Q&A</p>	<p>Co-conveners addresses</p> <p>Molwantwa, J: Opening Address: WRC CEO and DWS</p> <p>Nnnesi, K: Keynote address: WaterNet “The importance of RBO cooperation in Africa”.</p> <p>TBA: Resourcing the RBO/ Transboundary cooperation</p> <p>Panel discussion: Areas of cooperation (Facilitator: Mwamyalla, T)</p> <ul style="list-style-type: none"> • KOBWA • LIMCOM (tbc) • Dlamini,, Z (Woman in Water Diplomacy) • IUCN • Thamae, L (ORASECOM) • Munamati, M (UNESCO ROSA) <p>Facilitated discussion - finalisation of interests, possible areas of cooperation and prioritisation” (Dr Mamohlosing Tlhagale)</p> <p>Tlhagale, M: Way forward and closure</p>
	09:15			<p>TBA: Aligning Sustainable Development Goals 5 on Gender Equality and Goal 6 on Clean Water and Sanitation - Gender Transformative Approaches to Ensure Sustainable, Equitable, and Inclusive Water Groundwater Management Practices, Improved Livelihoods, and Economic Empowerment</p>		
	09:30					
	09:45			<p>Musiyarira, H: The Role of Capacity-Building Programmes, Research, and Innovation Advancements in Improving Groundwater Monitoring, Data Gathering, and Sustainable Use</p> <p>Session 3: Plenary Discussion</p> <p>All</p> <p>Sauramba, J: Mobilising the SADC Member States and the Broader Stakeholders to Strive Towards a Shared Vision of Securing Groundwater for the Well-Being and Prosperity of Current and Future Generations</p>		

10:00	HEALTH BREAK ADJUDICATORS' MEETING: CHIEF SYMPOSIUM RAPPORTEUR AND SESSION RAPPORTEURS' MEETING:
	CLOSING PLENARY MASTER OF CEREMONY: ENG NANCY MDUMA VENUE: Main Hall LINK: Here
11:20	Remarks and Introduction of the International Scientific Committee and Team of Reviewers by the Chairperson of the International Scientific Committee: XXX
11:30	Overview of the 24 th WaterNet/WARFSA/GWP-SA Symposium presentation by the Chief Symposium Rapporteur: Dr Muchaneta Munamati
11:50	Remarks by the Guest Editor of the Special Edition of the Journal of Physics and Chemistry of the Earth: Prof. Cosmo Socrates Ngongondo
12:10	Vote of Thanks: WaterNet Executive Manager, Prof. Jean-Marie Kileshye Onema
12:20	Announcements: LOC
12:30	LUNCH
14:00 -17:00	Excursion:
18:30-22:00	CLOSING GALA DINNER: Venue: Madinat Hotel Programme <ul style="list-style-type: none"> • 19h00: Arrival of guests and entertainment • 19h15: Welcoming: Collen Lemawane • 19h20: Dinner • 20h00: Award ceremony • 20h40: Announcement Venue and Presentation for Symposium 25 • 21h00: Entertainment and socialising

POSTER SESSION	
VENUE: Chair: Rapporteurs:	
Water, Ecosystems and the Environment for Poster Presentation	
Kurbatova, A., Mikhaylichenko, K., Gushchina, A & Adarchenko, I	Health risk assessment of drinking water in Moscow Region: to drink or not to drink
Kavishe, R., Mulungu, D & Alexander, A	Assessing impacts of livestock grazing on soil properties and soil infiltration capacity of Usangu sub-catchment
Dube, T., Dube T & Dalu, T	Assessment of illegal mining activities in an Austral semi-arid river system: a multivariate analysis approach
Kurbatova, A., Mikhaylichenko, K., Gushchina, Y & Adarchenko, I	Health risk assessment of drinking water in Moscow Region: to drink or not to drink
Nyambe, N., Chibwe, C., Banda, K., Sichingabula, H & Nyambe, I	Benthic Macroinvertebrate Assemblage and Feeding Functional Groups as Surrogates of Water Quality and Ecosystem Health
Tembo, G., Banda, K & Nyambe, I	Terrestrial and Aquatic provisioning ecosystem services in Bangweulu Wetland, Zambia. Holistic Approach: Ecological, Social and Economic approach.
Oberholster, P. F & Botha, A.M	Limnology study of Kalkfontein Dam, South Africa after an upstream diamond mine tailing dam collapsed
Chundu, M. L., Lyoba, C., Greyfold, T., Banda, K., Sichingabula, H & Nyambe, I	Modeling Land Use/Land Cover Changes Using Quad Hybrid Machine Learning Model in Bangweulu Wetland and Surrounding Areas, Zambia.
Tuwa, T and Deus, D	Determination of Groundwater Potential Zones using RS and GIS based multi-criteria analysis in Wami/Ruvu Basin, Tanzania
Changing hydro-climatic regimes and planning tools for climate resilient pathways	
Winsemius, H., Annor, F., Hagens, R., Mather, S., & Van De Giesen, N	OpenRiverCam: the free and open-source software ecosystem for measuring surface water velocity and flow with camera videos
Water governance for sustainable, equitable and affordable water services	
Mbewe, S., Banda, K., Nyambe, I., Sichingabula, H &imba, H	Vulnerability of Zambezi Headwaters to Potential Contaminants: A Case Study of Ikelenge District, North- Western, Zambia.
Innovative approaches, practices and technologies for affordable water supply, and sanitation services	
Vungu, S	Barriers Contributing To Hand Washing Compliance And Wellbeing Among Pupils At Hayedesh Primary School Karatu Tanzania
Vungu, S	The Impact Of The Subsidized Community Led Total Sanitation In Improving Household Sanitation In Buhigwe District
Oberholster, P. J., Botha & Schoeman, Y	Is Africa ready for natural base solutions to treat domestic wastewater as an alternative solution? A case study
Mulaudzi, M	Application of molecular methods for detecting pathogens in wastewater treatment plants and groundwater for improved water security, Cape Town
Malunda, K. B & du Plessis, A	A systematic assessment of water supply potential and its influence on water-access in the Katrivier Valley
Mantchombe, T. A., Richard, E. N and Idzori, F	Potential Use of Alum Sludge as a Substrate in a constructed wetland for grey water treatment
Tarimo, D., Kimwaga, K & Alexander, A (Virtual)	Assessment of Adoption and Diffusion of Biogas Technology in Dar es salaam City, Tanzania
Richard, G., Kimwaga, R & Mulungu, D	Health Risk Assessment on Consumption of Amaranthus mangostanus Grown in Soil Enriched with Fecal Sludge and Municipal Solid Waste Co-compost in Shinyanga, Tanzania

Water, Land, Agriculture and Livelihoods

NB: Highlighted in grey are young water scientists