



Day 1: Tuesday 26 September 2023

8:30 AM	Registration	
9:00 AM	Opening ceremony (ROOM: Jones + Broadway)	
9:30 AM	Plenary Session 1: Circular Economy and climate change – the issues Chair: Dana Cordell, University of Technology Sydney (UTS), Australia	
30 min each. Q&A in panel discussion	Circular Economy: A National agenda for Australia and Pacific Lisa Mclean , Circular Australia	
	Inputs of anthropogenic nutrients and other contaminants into coastal waters Martina Doblin , UTS, Australia	
	Ten years of urine diversion development in the United States: findings and lessons learned Abraham Noe-Hays , Rich Earth Institute, USA	
11:00 AM	Panel discussion 1: Theme: Challenges in the circular economy and climate change (Moderated by Dana Cordell) Panellists: Lisa Mclean, Abraham Noe-Hays, Martina Doblin, Melita Jazbec (UTS)	
12:00 PM	Morning Tea break	
	ROOM: Jones	ROOM: Broadway
12:30 AM	Session 1: Circular economy Chairs: Jason Prior (UTS) & Li Gao (South-East Water)	Session 2: Circular economy Chairs: Sherub Phuntsho (UTS) & Sanjay Kumarasingham (GANDEN)
Keynote: 20 mins (incl. 5 min Q&A) All other speakers: 15 mins (incl. 3 min Q&A)	Evaluating the sustainability risks and opportunities of circular economy initiatives: a urine-based fertiliser circular ecosystem case study Aldo Ometto , Griffith University (keynote), Australia	Biochar for circular economy: Nutrients recovery for fertilizer production Dong-Jin Kim , Hallym University, Korea (keynote)
	Advancing the Circular Economy of Plastics in Australia through 3D Printing: A Conceptual Framework Aziz Ahmed , University of Wollongong, Australia	Exploring biochar applications for nutrient recovery in sustainable aquaculture systems Cathryn O'Sullivan , CSIRO, Australia
	Hospital waste management: Autoclave-coupled gasification Peter Harris , University of Southern Queensland	Governing circular nutrient value chains: lessons learnt from precinct governance Jordan Roods , University of Technology Sydney, Australia
	Nickel boride for efficient energy-saving Hydrogen production via Urine electrolysis Zhijie Chen , University of Technology Sydney, Australia	Recovery of ammonium from anaerobic digester wastewater, from lab to pilot scale Sydur Rahman , Southern Cross University, Australia
	Organic based fertilisers: Agronomic potential and greenhouse gas emissions Robert Impraim , Incitec Pivot Fertilisers, Australia	
1:50 PM	Lunch break	
2:50 PM	Session 3: Climate change/Water, Energy & environment Chairs: Leonard Tijing (UTS) & Tanisha Shields (Ruminati)	Session 4: Resource recovery from wastes Chairs: Hokyong Shon (UTS) & Bernadette McCabe (University of Southern Queensland)
Keynote: 20 mins (incl. 5 min Q&A) All other speakers: 15 mins (incl. 3 min Q&A)	How wastewater facilities could tackle food waste, generate energy & slash emissions Melita Jazbec , ISF, UTS (keynote)	Reflections on resource recovery within the wastewater industry Sanjay Kumarasingham , GANDEN Engineers & Project Managers (keynote)
	Effectively Tracking Agricultural Emissions to Refine the Understanding of Agriculture's Impact on Climate Change Tanisha Shields , Ruminati, Australia	Kerbside collection and treatment of household food and garden waste in a Queensland regional local government – is it feasible and socially acceptable? Christine Blanchard , Lockyer Valley Regional Council & USQ (invited)
	Modelling Energy Demand, Supply, and Carbon Footprint Projections for Greenfield Planning Within the Framework of Net-Zero Systems: A Case Study of the Western Sydney Aerotropolis in New South Wales, Australia. Gobinath Rajarathnam , University of Sydney, Australia	Nutrient Recovery from Hydroponics Waste Nutrient Solution Dharma Hagare , Western Sydney University, Australia



Updated conference programme can be downloaded from the QR code or link:

	A techno-economic evaluation of urine separation for wastewater treatment plant configurations Jia Meng, Haoran Duan , University of Queensland, Australia	Fertilizer recovery from human urine by novel two-stage processes Zhiqiang Zuo , University of Queensland, Australia
	Creating a Comprehensive Hydroponic Fertilizer by Blending Micro and Macro Nutrients from Bio-Digested Aquatic Floating Weed and Nitrified Human Urine Swaminathan Palanisami , Western Sydney University, Australia	Microbial community in an activated carbon incorporated membrane bioreactor with the biofilm carriers for the nitrification of source-separated urine Weonjung Sohn , UTS, Australia
	Views of stakeholders on complains rating assessment of industrial effluent discharges: a Malaysian context. Zulaikha Mokhtar , University of Queensland, Australia	Membrane capacitive deionization for selective lithium recovery from brines Hanwei Yu , UTS, Australia
4:25 PM	Tea break	
5:00 – 6:30 PM	Poster Session (ROOM: Broadway for 3 min presentation & Harris for poster display) Chair: Sherub Phuntsho	Workshop (ROOM: Jones)
Poster presenters are allocated 3 mins each to present their poster from the podium. They can then be at their poster board for Q&A	<ol style="list-style-type: none"> 1. Gam T. Nguyen, Griffith Uni, Supply, Demand and the Economic Effectiveness of Urine-diverting Technologies and Products: A Systematic Literature Review 2. Niti Bhattarai, UTS, Exploring Sustainable Alternatives: Urine as a substitute for urea in Bio-cementation techniques for improved soil properties. 3. Ibrahim El Saliby and Juan Lucas, Royal Botanic Garden Sydney, Nutrients recovery from human urine and their reuse as fertiliser to grow spearmint (<i>Mentha Spicata</i>) – Ibrahim will present. 4. Cathryn O’Sullivan, CSIRO Agriculture and Food, Harvesting nutrients and clean water from wastewater with biomimetic membranes. 5. Jiayi Jiang, UTS. Potential nutrient recovery from source-separated urine through hybrid membrane bioreactor and membrane capacitive deionisation. 6. Chen Wang, UTS. Graphene oxide-based layer-by-layer nanofiltration using inkjet printing for desalination. 7. Andrea Merenda, UTS. Catalytic membrane reactors for energy-efficient wastewater treatment. 8. Hao Liu, UTS. Enhanced Strategies for Phosphate Recovery from Urine by Magnesium Galvanic Process. 9. A. S. M. Mohiuddin, UTS. Climate change driven extreme events impacting the water quality of Sydney’s largest water source 	Workshop: Roadmapping Workshop for Nutrients Circular Ecosystem (Open to all interested delegates)
7:00 – 9:00 PM	Circular Award Ceremony and Gala Dinner (ROOM: Wattle + Thomas)	

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Day 2: Wednesday 27 September 2023

8:30 AM		Registration	
		ROOM: Jones	ROOM: Broadway
9:00 AM	Session 5: Resource recovery from wastes Chairs: Mikel Duke (VU) & Cara Beal (Griffith)	Session 6: Environmental Pollution/Technologies Chairs: Stefano Freguia (UoM) & Behzad Fatahi (UTS)	
Keynote: 20 mins (incl. 5 min Q&A) All other speakers: 15 mins (incl. 3 min Q&A)	Cost-effective Water Production Qiang Fu (keynote)	Carbonisation – a sustainable technology for circular economies Durell Hammond, Pyrocal (keynote)	
	Unveiling the resource within: Extracting rare earth elements from mine tailings Biplob Kumar Pramanik, RMIT, Australia	Performance Prediction of Plate-and-frame Forward Osmosis Membrane using Machine Learning Models Sungyun Lee, Kyungpook National University (invited speaker)	
	Selective separation and recovery of rare-earth elements using electrochemical methods Youngwoo Choo, UTS, Australia	Improving urban wastewater management by using on-site iron carbonate chemical manufactured with biogas upgrading Xiaotong Cen, University of Queensland, Australia	
	Selective recovery of Rare Earth Elements by direct contact membrane distillation and adsorption from acid mine drainage Charith Fonseka, UTS, Australia	Production of affordable sodium borohydride as a hydrogen carrier Rui Han, UTS, Australia	
10:20 AM		Morning Tea break	
10:50 AM	Session 7: Bioresource/resource recovery Chairs: Qilin Wang (UTS) & Haoran Duan (UQ)	Session 8: Environmental health & risks Chairs: Jason Reynolds (WSU) & Youngwoo Choo (UTS)	
Keynote: 20 mins (incl. 5 min Q&A) All other speakers: 15 mins (incl. 3 min Q&A)	Technologies for achieving energy positive wastewater treatment Qilin Wang, UTS (keynote)	A nature-positive economy: - opportunities and challenges Liana Downey, Australian Conservation Foundation	
	Biom mineralization in a high-rate anaerobic distillery wastewater treatment Lei Zhang, QUT, Australia/Univ of Alberta, Canada	Techno Economic Assessment of Urine Diversion and Conversion to Fertiliser Products at Sydney Central Park WWTP Umakant Badeti, UTS/Xylem, Australia	
	Novel Anaerobic Fermentation Paradigm of Producing Medium-chain Fatty Acids from Food Wastes with Self-Produced Ethanol as Electron Donor Lan Wu, UTS, Australia	Optimised start-up and mass transfer for efficient nutrient recovery in a bio-electro concentration system Veera Koskue, University of Melbourne, Australia	
	Biofouling Control of Reverse Osmosis Membrane Using Biocidal Ammonia from Concentrated Hydrolyse Urine Chee Xiang Chen, University of Melbourne, Australia	Different sizes of microplastics induced distinct microbial responses of anaerobic granular sludge Chen Wang, UTS, Australia	
11:55 PM		Lunch break	
1:00 PM	Plenary session 2: Circular economy and climate change in action Room (Jones + Broadway) Chair: Bernadette McCabe, USQ, Australia		
30 min each. Q&A in panel discussion	Biochar in the circular economy Johanna Johnson, Logan City Council, QLD, Australia		
	Circular economy in Sydney Water Django Seccombe, Sydney Water		
	Net Zero Strategies of The City of Sydney Neil Palagedara, City of Sydney		
2:30 PM	Panel discussion 2: Technology and Circular Economy Panellists: Johanna Johnson, Django Seccombe, Neil Palagedara, Durell Hammond (Pyrocal) and Mikel Duke (Victorial University) Panel moderators: Bernadette McCabe (USQ) and Stefano Freguia (University of Melbourne)		
3:30 PM		Afternoon tea break	
4:00 - 4:30 PM	Closing ceremony & awards (Room: Jones + Broadway)		

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