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NEWSLETTER

Hello and welcome to *our year end newsletter 2025*

This issue captures Future Water's wrap-up for 2025. It includes details from closing off flagship project RRIP as well as the 6-year PaWS project; impactful knowledge-sharing sessions; conference contributions and kicking off new projects.

Project highlights, partnerships & visibility

A new 4-year journey begins: WATERSENS Project 🚀

We are excited to be part of this new EU-funded project "WATERsens - Development of innovative decentralized technologies and new co-created governance models for WATER SENSitive communities", tackling droughts, floods and emerging pollutants with innovative solutions! 💧

RRIP: Reorienting research, innovation & practice - Partnerships & Futures Symposium 2025 ♻️

We hosted the RRIP Partnerships & Futures Symposium in September. We were successful in growing our partnerships and networks during the first 3 years of RRIP and together we look forward to achieving the following ongoing objectives of the RRIP program and Future Water:

- Establish a **centralized virtual network and Community of Practice** for water quality laboratories in South Africa.
- Promote a **citizenry informed** by water quality science, aiming for net-zero water usage and degrowth.
- **Research to support new practices** and engage inclusive, **justice-oriented governance systems**, with researchers collaborating closely with civil society.

- Develop a **suite of novel processes** to treat and recover valuable components from different 'waste' waters - focussed on **commercialization and the circular economy.**
- Experiment with **decentralized treatment of contaminated water using nature-based solutions (NbS).**
- Develop **engineering tools for integrated technical assessment of water and sanitation systems.**
- Understand the **existing policy/legislative landscape** to support an enabling regulatory environment for the implementation of novel 'waste' water systems.
- Growth of existent and further establishment of **living labs; wastewater research** focused on **circularity; water sensitive practices** used widely across the continent.

If you are interested in joining our network and building on our objectives, please get in touch. *Click here to read our RRIP newsletter to see how the symposium unfolded* 🗞️

Future Water MSc students, **Shantel Mayinoti and Sibahle Mcanyana,** participated in the ***Wetskills Challenge*** in Gauteng, South Africa; a program that builds capacity around teamwork and real-world problem solving in the water sector. The program helped them to build their technical, communication and pitching skills - which they presented at the AWSISA Africa & Global South Water & Sanitation Dialogue in November. Here they had the opportunity to meet with industry experts/mentors to gain a deeper understanding of South Africa's water resource management challenges.

Future Water's Young Professionals presenting at the 8th YWP WISA

Our team of young water professionals presented at the 8th YWP WISA conference held in Gqeberha, Eastern Cape - ***From silos to synergy: Sustainable and collaborative water management solutions***

Presentation highlights include:

- **Kekeletso Ramodibe**, *"Indigenous relationality and environmental plurality"*
- **Lauren Grootboom**, *"Indigenous knowledge systems, women and water systems in South Africa: Decolonising climate-resilient water management"*
- **Simnikiwe Majwete**, *"Learning from crisis? Examining the governance gap in Western Cape smart water policy innovation"*
- **Joshua Matesun,** *"Innovating wastewater modeling: Data-driven extension of PWM_SA for micropollutant tracking in South Africa WWTPs"*
- **Shalongo Angula**, *"System-wide modelling and data-driven strategies for wastewater reclamation and reuse"*

A huge ***CONGRATULATIONS*** to Simnikiwe for her prize in achieving the highest scoring presentation in sub theme: ***Policy integration for Water Governance.***

DIGITWATER *'Building Resilient Water Futures'* at the International Scientific Symposium, in Cuba.

Aligned with a new Erasmus-funded project, DIGITWATER, **Dr. John Okedi** participated in two interdisciplinary workshops at the International Science Conference: **Water Resilience through Citizen Science**, focusing on inclusive governance and water justice; and **Water Resilience through Digitisation,**, exploring IoT, AI and data tools for water applications. The conference was co-hosted by the Central University 'Marta Abreu' of Las Villas in Cuba; the Department of Water and Climate at Vrije Universiteit Brussel, and UNESCO.

South African lighthouse of hope from nature-based wastewater treatment - Water Resources Podcast 🎙️

Prof. Kevin Winter discusses nature-based approaches to treating informal settlement discharge for use in agriculture and other sectors🔗

Training and learning workshop - Resilient design for dry times: The case for decentralised water reuse

This workshop hosted by the **Water Research Commission (WRC)** and the Future Water research institute (UCT), brought together municipal engineers, planners, regulators and researchers to explore the practical **implementation of decentralised water reuse** for water-scarce regions. **Paula Kehoe**, **Director of Water Resources at the San Francisco Public Utilities Commission (SFPUC)** shared San Francisco's experience in on-site non-potable reuse and how lessons from the US regulatory, institutional, and technological frameworks can be adapted to the South African context.

After six years of research and engagement activity, our 'Pathways to water resilient South African cities (PaWS)' has come to an end

We hosted a workshop on Thursday, 4 December where we shared final findings, introduced the launch of the toolkit being developed on ***"Repurposing stormwater ponds as multifunctional spaces",*** and discussed the way forward with institutionalizing and governing multifunctional ponds in Cape Town and other parts of South Africa. Part of the workshop was a site visit to the retrofitted pond in Fulham Rd, Mitchells Plain, to showcase what's been done there; and to demonstrate proposed maintenance and local engagement activities.

Click here to read the final newsletter: The governance and institutionalisation of multifunctional BGI as nature-based solutions (NbS) in South African cities 🔗




IsPoSA project team visit: Integrating informal settlements into sanitation policy: addressing a barrier to South Africa achieving SDG6.2

The recently-launched IsPoSA project investigates the extent to which informal settlements are considered in local and national policies with regard to the provision of drainage and greywater management, and whether and how such policies, and their local implementation, were developed using evidence to ensure they take local contexts into account. Investigations are based in the Western Cape and the IsPoSA team came together in early December to meet and engage with local stakeholders to analyse whether evidence of specific needs and conditions of informal settlements has been effectively integrated into policy (engagements will continue in 2026).

Wins and Awards

Science Engagement Grant Awarded: *Transitional landscapes - Stormwater ponds as biodiversity hubs*

Future Water have been awarded a science engagement grant that'll kick off in 2026 🚀 and build on the Pathways to water resilient South African cities (PaWS) project through:

- Community-based workshops
- Seed harvesting/ broadcasting/ stepping stones
- Citizen science biodiversity mapping
- Creative placemaking activities with community members

Future Water's postdoctoral researcher, **Dr. Nhlanhla Hlongwa**, has been awarded funding from the **WRC** to continue his research on ***"Evaluating biofiltration for contaminant reduction using a One Health approach: a comparative assessment of polluted and biofiltered water systems for public health and water quality"*.**

Student exchange & continued conference activities

*"I conducted my first field-based water sampling in Atlantis - **where I also saw my first zebras!** Beyond developing field experience, I also deepened my knowledge in the lab by analyzing the water samples under Rachelle's guidance. I truly enjoyed my time in CPT with the Future Water team, and I would like to thank everyone for their warm welcome and for generously sharing their knowledge and experience with me. Thank you all"* - Intern Lou Febvay, Bordeaux INP 🇫🇷

Emily Nicklin and **Kalpana Maraj** attended the **Sustainable Development of Energy, Water and Environment Systems** Conference in Dubrovnik, Croatia.

- **Emily Nicklin**, *"Exploring how nature-based solutions, particularly constructed wetlands, can help reduce concentrations of emerging contaminants (mainly ARVs) in surface waters impacted by informal settlements"*
- **Kalpana Maraj**, *"Using biochar produced from invasive woody biomass to remove pharmaceuticals from polluted surface waters"*

Rita Manganye participated at the **Science Forum South Africa** held in Lynnwood, Pretoria. *"Representing the MAReM project at the Science Forum was incredibly rewarding, with over 60 engaged visitors stopping by our EU Stand to learn about managed aquifer recharge and groundwater microbiomes. The experience reinforced the value of interdisciplinary research and provided meaningful connections with water professionals, academics, and potential community partners"*

Njabulo Thela & Kalpana Maraj participated at the IWA water and Development Congress & Exhibition: Water, sanitation and innovation, hosted in Bangkok, Thailand - ***Pathways to progress and a resilient future:***

- **Njabulo Thela**, *"Turning human urine into fertilizer using reverse osmosis: A pilot study"*
- **Kalpana Maraj**, *"Biochar Derived From Alien Invasives For The Removal Of The Antiretroviral Lamivudine From Surface Waters Polluted By Runoff From Informal Settlements"*

New publications

Author(s)	Title
Sardeshpande, M., Naicker, R., Hlahla, S., Mutanga, O., Slotow, R. and Mabhaudhi, T.	Determining the influence of livelihoods, land access, and location on household food and nutrition security in KwaZulu-Natal, South Africa. Agric Econ 13, 87
van der Merwe, S., Armitage, N.P., Carden, K., Mguni, P. and Sheridan, C.M.	Designing and engineering nature-based solutions - An evaluation of sustainable drainage systems for improving stormwater quality in Johannesburg, South Africa. Nature-Based Solutions (8) 2025
van der Merwe, C.D. and Armitage, N.P.	Modelling the impact of SuDS on stormwater quality management in the Bongani River catchment, Knysna, South Africa. Water SA 51 (4)
Ghosh, B. and Mguni, P.	Sustainability transitions in the Global South. Book chapter in "Introductions to Sustainability Transitions Research"
Ghosh, B., Velasco, D., Chakraborty, K., Mguni, P. and Yuana, S.L.	Transformative Innovation Policy: An Analytical Review of Key Methods and Challenges. Annual Review of Environment and Resources (50)

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