

THE NEW CWRR NEWSLETTER

Welcome to the fifth issue of the CWRR Newsletter 2025! As always, the CWRR Newsletter carries news and updates from our members, including staff, associates and students. For contributions, suggestions and queries, please email Dr Shaeden Gokool, GokoolS@ukzn.ac.za



AWARD-WINNING JOURNEY: SBONELO MTETWA

Mr. Sbonelo Mtetwa shares how his journey in Hydrology at UKZN has been an incredible experience. He received the Centre for Water Resources Research Award, for top Hydrology Honours student last year, sponsored by the Umgeni Research Chair.

"I was honoured as the top Hydrology Honours student and graduated cum laude, a moment of great pride for me," Sbonelo proudly affirms, and explains how he values the Centre's reputation for its world-class research, its supportive lecturers, and strong focus on solving real-world water challenges in Africa. "Being part of the CWRR is truly special. The collaborative environment and mentorship have helped me grow both academically and personally."

This year, Sbonelo is excited to be continuing his studies as a Hydrology Master's student, building on the solid foundation he received during his Honours. "My goal is to contribute to innovative research that promotes water security and sustainable development," Sbonelo shares, adding: "I am grateful to be part of a department that inspires excellence and prepares its students to make a meaningful impact in the field of water resources." We wish Sbonelo a continued successful and exciting Hydrology journey ahead.



AWARD-INSPIRED EXCELLENCE: LUYANDA MPANZA

Ms. Luyanda Mpanza, began her studies at UKZN through the BSc (Augmented) program and later chose to major in Hydrology and Soil Science. Having received the Roland Schulze Award for Top 3rd year Hydrology student, sponsored by the Umgeni Research Chair, Luyanda shares her gratitude: *"I am truly honoured and deeply grateful to the Centre for recognizing my hard work and dedication by awarding me the Roland Schulze Award."*

Inspired by her award, Luyanda has continued with her Hydrology Honours studies with the aim of a future career in hydrological modelling. *"This award is a strong motivation to continue striving for academic excellence,"* Luyanda concludes. We look forward to following Luyanda on her way to becoming a leading researcher in her field of choice.



CWRR AT THE 17TH ANNUAL NRF-SAEON GSN INDIBANO

From 31 August to 5 September 2025, three MSc candidates from the CWRR, namely Ms. Ameera Yacoob, Mr. Glen Mkhonta and Ms. Thobeka Mpungose, presented their research at the 17th Annual NRF-SAEON GSN Indibano. The event brought together emerging researchers, scientists and environmental practitioners from across South Africa to exchange knowledge on ecosystem monitoring, water security and climate change. Ameera received first prize for Best Presentation for her work on UAV-based multispectral imagery to quantify crop water stress in smallholder farming systems.



Glen presented his research on evaluating the predictive accuracy of HEC-HMS and coupled HEC-HMS with HEC-RAS models for flood simulation in the lower uMngeni River sub-catchment. Thobeka explored groundwater and surface water interactions within the uMngeni Catchment, offering insights into hydrological connectivity and water resource sustainability. Their research contributes to data-driven water resource management. It emphasises the importance of combining hydrology, modelling and field-based observations to improve decision-making at the catchment scale in the context of increasing climate variability.



Key sessions at the Indibano examined the interconnections between biodiversity, carbon dynamics and water delivery, showing how land use and fire regimes influence water security. Discussions highlighted the value of long-term ecological datasets for informing policy and managing South Africa's Strategic Water Source Areas. CWRR researcher Dr Rebecka Henriksson formed part of a panel discussion titled "Data to Action", along with Ms. Zanele Shezi, Dr Kathleen Smart and Dr Amukelani Maluleke (EFTEON), Prof. Fhumulani Mativha (University of Limpopo), Mr. Toka Mosikidi (University of the Free State), and Ms. Clea Welch, University of Cape Town). Moderated by Ms. Margaretha Burger (Nelson Mandela University), the panel addressed

community engagement and outreach in research, and how ecological data can be converted into relevant and practical strategies for improved water governance and land management.

The conference's fifth day took the delegates on a field trip, first down underground into Eskom's Drakensberg Pumped Storage Scheme, and then to the heart of Spioenkop Nature Reserve for demonstrations of the SAEON/EFTEON research infrastructure.



VOLLEYBALL SUCCESS LANDS HYDROLOGY STUDENT SCHOLARSHIP: BONTLE FINGER

Thanks to her outstanding performance on the volleyball court, Ms. Bontle Finger, an Honours student in Hydrology, has been awarded a prestigious Sports Scholarship from UKZN.

Bontle chose to study at UKZN because of its unique focus on Hydrology. Supervised by Dr Shaeden Gokool, Bontle is currently completing her Honours research project titled *"Flood mapping and damage assessment using remote sensing: the use of satellite data to map flood extent and assess damage in flood prone areas."* Receiving this scholarship has enabled her to further her academic career, with plans to continue into Master's and PhD studies in Hydrology and Water Resources Management.

Alongside her studies, Bontle has built an impressive sporting career, earning the 2025 University Sports South Africa (USSA) Indoor Volleyball Women's Champion title, representing the 2025/26 South African team, and collecting medals at international competitions in 2024 and 2023.

Reflecting on the role of sport in her journey, she notes that success depends not only on physical fitness but also on mental strength:



Photo: Nkosikhona Gcabashe

"Every sport I have participated in, including

volleyball, has proved that the game is 20% physical fitness and 80% mental fitness," Bontle says in the full article by [UKZN NdabaOnline](#), and continues: "No matter how good you look on the court, if you cannot rise above the pressure, then you must go back to the drawing board."

We believe this mindset will also take her far academically, and we are excited to cheer Bontle along on her journey.



PUBLICATIONS

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