



## CWRR Masters student wins prestigious award

CWRR's MSc student Nantale Nsibirwa was awarded the prestigious KwaZulu-Natal Premier's Award at the 6th annual [Symposium of Contemporary Conservation Practice](#) held in Howick on 6-10 November 2017. The award was based on her exceptional oral presentation at the Symposium combined with a presentation made to a panel of judges. The award supports Nsibirwa financially to attend an

international conference in the coming year. Nsibirwa's research, supervised by Prof. Graham Jewitt, involves identifying the source areas and transport pathways of diffuse pollution in the uMngeni Catchment. She has just completed her technical analyses and is in the process of writing up her MSc thesis. Nsibirwa has a strong interest in development issues related to water. "I am hoping in future to be involved in work or research directly relating to Sustainable Development Goal (SDG) six, which aims to provide people with access to safe water and sanitation", says Nsibirwa. CWRR are very proud of Nsibirwa and wishes her all the best in pursuing her career. Read more at [UKZN Ndaba Online](#).



## The last two Research on Tap for 2017

CWRR's new seminar series Research on Tap was ended for the year with two successful and well attended seminars. On the 18 October the topic of the seminar was the Water-Energy-Food-Land Nexus. Chaired by Dr. Tafadzwa Mabhaudhi, a panel discussion was held with panelists Prof. Roland Schulze, Dr. Sabine Stuart-Hill, Dr. Denver Naidoo, Dr. Aidan Senzanje and Mr. Angus Nicoll - from Umgeni Water. Together with the audience, they all engaged in a very stimulating discussion resulting in many ideas for taking the next step towards addressing the challenges ahead via a nexus approach.

The seminar themed Climate Change and Water Resources started off with a screening of the movie Before the Flood by Leonardo DiCaprio to stimulate discussion on the global and local effects on climate change, multinational agreements and mitigation strategies. The following day the seminar carried on with presentations from Centre members whose work are directly or indirectly linked to climate change, followed by a discussion about the movie.



Thursday 30 November 2017

## The CWRR Newsletter

You are reading the sixth and last issue of the CWRR's Newsletter for the year 2017.



The Newsletter editor Dr. Rebecka Malinga thanks everyone for their much appreciated contributions to fill each issue with exciting news and important updates on what goes on at the Centre and beyond! The Newsletter will now take a break and a new series will start in February 2018.

## German researchers visit the uMngeni catchment and CWRR

Prof. Claudia Pahl-Wostl and a PhD student of hers, Evelyn Lukat, visited the CWRR 13-24 November 2017. Their visit was their first of a couple more to come in the next 3 years (incl. co-design workshops). Their project ["Increasing Good Governance for Achieving the Objectives of Integrated Water Resources Management" \(STEER\)](#) explores innovative forms of coordination and cooperation in order to solve water use conflicts. The idea is to apply a diagnostic approach, which will support the examination of typical problem situations and the development of suitable solution strategies. The team will analyse five in-depth case studies, one of them is the uMngeni catchment; the others are located in Spain, Mongolia and two in Germany. During this first trip, Claudia and Evelyn, with the support of CWRR's Dr. Sabine Stuart-Hill, explored the situation of water management in the uMngeni catchment by observing meetings of expert groups such as the UEIP Sub-Committee meetings, Catchment Management Fora as well as getting to know and interviewing key stakeholders like uMngeni Water, Water Service Authorities and NGOs, e.g. DUCT, and WWF.

## A fishy field survey

The Aquatic Ecology Research group embarked on a 10 day benthos and fish community survey of the Mvoti, Thukela and Amatikhulu estuaries. Their first stop was the Mvoti estuary. The sandy beach and lush green vegetation may be picturesque, however the water told a much different story. It revealed that further upstream where Mvoti is joined by Ntshaweni River there is effluent being deposited from the Sappi Stanger paper mill, accumulating in the estuary. As they stepped into the waters of Mvoti's estuary a cloud of black soot rose around them. This was worsened with each drop of the benthos collecting grab and each pull of a seine net. Their next stop was the Thukela, which offered a much different scenario in terms of visible effluent discharge however the environmental impact has been noticed by the local community. MSc students Lungelo Madiya and Mpatheni Mthembu spent four days setting fyke nets, seine nets and gill nets to survey the fish in Thukela. Meanwhile MSc students Nombuso Gongo and Mbali Sosibo grabbed submerged sediment to isolate benthic invertebrates for further analysis. They ended their trip with a four day survey of the Amatikhulu estuary, which is situated alongside a nature reserve on one bank and a residential community on the other. They utilized the same sampling techniques as they had on the Thukela, however with much different results. For instance in Amatikhulu there was a higher diversity of schools of several different juvenile reef fish.



## Latest publications – journal articles



◆ Prof. Roland Schulze, Dr. Sabine Stuart-Hill and others assessed water resources and water services frameworks through the lens of OECD Principles on Water Governance in their [new article](#) published in *Water International*.

◆ Dr. Edward Ridell and others have a new paper on sediment trap efficiency of intermittently dry reservoirs in Kruger National Park. [The paper](#) was published by *Earth Surface Processes and Landforms*.

◆ Dr. Nick Rivers-Moore and colleagues propose an adaptive freshwater conservation planning strategy by incorporating stream connectivity and thermal vulnerability. [Read their paper](#) in *Journal of Hydrology*.

◆ *Geoderma* recently published [a study](#) by Dr. Vincent Chaplot and Dr. Macdex Mutema on the "Effect of conversion from sugarcane preharvest burning to residues green-trashing on SOC stocks and soil fertility status: Results from different soil conditions in Brazil".

## PhD student at summer school in Scotland

CWRR's PhD student Byron Gray was provided the opportunity to attend the 8th Annual Catchment Science Summer School hosted at the University of Aberdeen in Scotland in August 2017. The summer school consisted of 31 students at different stages of their PhDs, with various universities and research institutions represented. The aims of the course were to understand the evolution of empirical and theoretical development in runoff process research, hydrochemical and isotopic measurement and analysis, and model integration, linking field experiments with modelling approaches. The course consisted of an intense week providing a mixture of lectures, discussions and practical's, starting on the Sunday evening and ending on the Friday afternoon. On the Wednesday, they had the opportunity to visit the Girnock Burn catchment, located on the Balmoral Estate outside Aberdeen. "Visiting this catchment was a great experience for me, as it was very different to the catchments I am used to in the Drakensberg and South Africa in general", says Gray.



## Postdoc adventures in Malawi



CWRR postdoc researcher Dr. Rebecka Malinga travelled to Malawi in November to attend the annual meeting of the Future Climate for Africa program [UMFULA](#) (Uncertainty Reduction in Models for Understanding Development Application). The meeting brought together climate scientists, impact modellers and social scientists to discuss their current work and ways forward to achieve the over-all goals of the program: Improved and tailored climate services for decision-makers in Malawi and Tanzania. The meeting ended with an open panel discussion, co-organised with Malawi's Civil Society Network on Climate Change, on how climate information can build a resilient Malawi. Malinga then continued for a week of intensive fieldwork in the Chikwawa district in southern Malawi. An unfortunate car breakdown required adaptive solutions, and her team was left with the only option to proceed with the fieldwork using bike taxis. Despite this, and a challenging heatwave of up to 45 C°, Malinga's interviews with small-scale sugarcane producers on decision-making, gender and climate information needs turned out very successful.

