



Making a difference - One drop at a time.

A word by CWRR's new Director

As the newly appointed Director of CWRR, I would like to welcome you all back after the Christmas break. I trust that you all had a good holiday and that you managed to fully recharge your batteries for an exciting and productive 2019!

I am firmly of the opinion that the success and sustainability of the CCWR depends on our collective efforts, so I am looking forward to building on the success of the CWRR to date, to sustain operations, and facilitate growth and improved impact by a collective team effort.

I would like to congratulate Dr. Alastair Clulow, Dr. Michele Toucher and Dr. Sabine Stuart-Hill on their election to the 2019 CWRR ManCo and thank them for their willingness to volunteer their time to the management of CWRR. The 2019 CWRR ManCo has met and has put some initial plans in place to respond to issues raised by members. These include improving communication, promoting transparency and cohesion, reviewing the CWRR constitution and revising the CWRR membership categories to be more inclusive - particularly for postgraduate students and post-doc researchers, and to enable both members and students to identify and commit to the mission and objectives of the CWRR.

I invite you all to contribute to the above and to provide new ideas for consideration. My door is always open to any suggestions and contributions, so please feel free to communicate these to me.

I am currently on a steep learning curve as I have also been requested by the School of Engineering to act as an interim Umgeni Water Chair, so thanks to all of you who are supporting me as I acclimatize to my additional new roles!

Warm regards

Jeff Smithers



Thursday 7 February 2019

A new year...

...means a new volume of the CWRR Newsletter. You are now reading the first issue of 2019, with news and updates of the achievements and endeavors of CWRR's members, staff, associates and students.



Your contributions are as usual welcome! Please send stories and photos of your field trips, project updates, interesting courses, links to publications, and more, to MalingaR@ukzn.ac.za

The Newsletter is also available online at CWRR.ukzn.ac.za

Important dates



◆ **Friday 22 February:** The first CWRR Research on Tap Seminar for 2019, titled *Flood Studies*, where Prof. Jeff Smithers will present an overview of the National Flood Studies Programme, and Katelyn Johnson, Thomas Rowe, Nkululeko Mabila, Keanu Singh, Nkosinathi Dlamini, Ryshan Ramlall, and Udhav Maharaj will present updates on their respective research projects.

Time: 15.30-16.30

Venue: Botany Lecture Theatre, John Bews Building

New file transfer facility provided by SANReN

The South African National Research Network (SANReN) has implemented FileSender, a web-based application that allows authenticated users to securely and easily send large files to other users. This service is similar to that provided by others such as Dropbox and MS Sharepoint, but significantly faster based on initial tests. Authentication is done via the South African Federated Identities for Research and Education (SAFIRE), which facilitates the use of your UKZN login details to access resources at other education-related institutions. As of Feb 2019, members of SAFIRE included the CSIR and most universities, with notable exceptions being Wits and SAEON.

To test the service, Richard Kunz accessed FileSender at <https://filesender.sanren.ac.za/>, then authenticated himself using his UKZN LAN username and password. A compressed (RAR) file of 242.4 MB was uploaded in 109 seconds. A web-based link to the file was provided, which can then be shared with colleagues. The file downloaded from FileSender in 81 seconds, compared to approximately 30 minutes from Dropbox.

By Richard Kunz

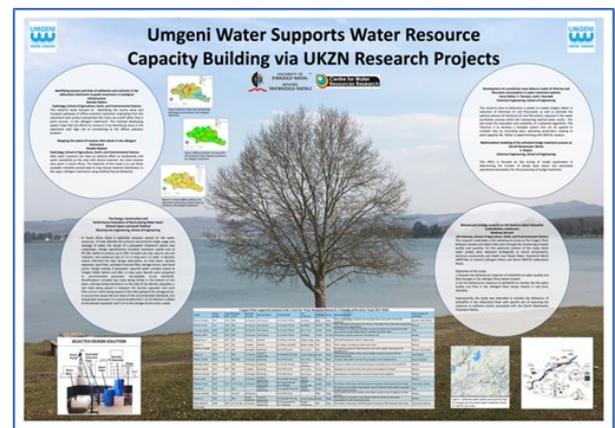
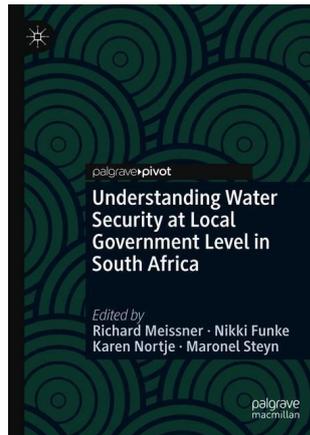
The National Flood Studies Programme Research Workshop

The National Flood Studies Programme (NFSP), an initiative led by Prof. Jeff Smithers of the CWRR, has been supported by the Royal Academy of Engineers in the UK through their Industry Academia Partnership Programme (IAPP) over the past two years. The objectives of the project are to: (i) Provide support for the initiation of the NFSP in South Africa, (ii) Develop research capacity in South Africa in the field of design flood estimation, and (iii) Develop capacity and expertise in design flood estimation in South Africa. The partners in the project are UKZN, University of Bath (UoB) in the UK, University of Pretoria, Central University of Technology and the NFSP (SANCOLD, WRC, DWS, SANRAL).

The deliverables in the project includes annual research workshops incorporating international expertise (Dr. Thomas Kjeldsen from UoB) to present, discuss progress and guide projects, during which the project plan and implementation for NFSP can be updated. The annual workshop for 2019, held 24 - 25 Jan in Pietermaritzburg, was attended by 27 delegates with 12 postgraduate students presenting on their research progress. Students received constructive comments from delegates on their projects and significant progress since the 2018 workshop was evident. At the upcoming CWRR Research on Tap Seminar on 22 Feb, Smithers and his team will present their work on the NSFP. *By Jeff Smithers*

Book on Water Security

CWRR associate Dr. Richard Meissner, CSIR, is the lead editor of the new Palgrave Pivot book [Understanding Water Security at Local Government Level in South Africa](#). Meissner is also lead or co-author of all the five chapters in the book. This book is an important contribution to the advancements in the concept of water security from a South African and local perspective.



Engineering Expo

On 23 Nov 2018, the College of Agriculture, Engineering and Science along with the Dean and Head of School of Engineering, Professor Glen Bright, hosted a Research Exposition entitled 'Showcasing Research Excellence' to celebrate industry partners. Receiving an award for generous support, Umgeni Water was recognized for contributions made. The CWRR would also like to recognize Umgeni Water for support provided over the years to numerous students as well as the Umgeni Water Chair Prof. Jeff Smithers as interim (previously Prof. Graham Jewitt). Significant support has also been received by the Water Research Commission, particularly for the Umgeni Ecological Infrastructure Project, which, since inception, has graduated 6 honours students, 10 MScs, and 2 PhDs with 6 additional PhDs in the pipeline! The CWRR are also extremely grateful for the generous support and financial contributions offered by our industry partners that enable the Centre to build capacity and in turn the future of tomorrow. *By Susan Risko*

Latest publications

- ◆ Quantifying rehabilitation risks for surface-strip coal mines using a soil compaction Bayesian Network in South Africa and Australia. [Integrated Environmental Assessment and Management 2019](#). Vanessa Weyer, Alta de Waal, Alex Lechner, Corinne Unger, Tim O'Connor, Thomas Baumgartl, Roland Schulze, and Wayne Truter.
- ◆ Present status of soil moisture estimation over the African continent. [Journal of Hydrology: Regional Studies 2019](#). Lindumusa Myeni, Mokhele Moeletsi, and Alistair Clulow.
- ◆ Temporal thermal refugia and seasonal variation in upper thermal limits of two species of riverine invertebrates: the amphipod, *Paramelita nigroculus*, and the mayfly, *Lestagella penicillata*. [Aquatic Ecology 2018](#). Helen Dallas and Nicholas Rivers-Moore.
- ◆ Traditional Medicines from Wetlands ([book chapter](#)). Donovan Kotze. In: [The Wetland Book](#). Edited by Max Finlayson et al. Springer 2018.