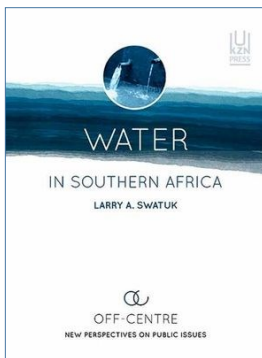
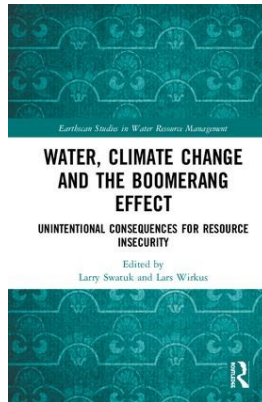




Making a difference - One drop at a time.

Visit from author of water governance and management books

During one week in August, the CWRR hosted Prof. Larry Swatuk from the University of Waterloo in Ontario, Canada. The purpose of Swatuk's visit was to engage students and researchers in discussions and activities around his two recently launched books on water governance and management. On 1 August, Swatuk held guest lectures for the Hydrology Honours students at CWRR involving them in discussions about his UKZN press book *Water in Southern Africa*. On 2 August, The uMngeni School of Water Governance Research arranged a discussion forum at the Institute of Natural Resources with Swatuk, in order to discuss and reflect on the challenges uMngeni Catchment governance and management is facing, in relation to Swatuk's Routledge book *Water, Climate Change and the Boomerang Effect: Unintentional Consequences for Resource Insecurity*, co-edited with Lars Wilkus. Further, on 3 August Swatuk presented the ideas of his book, and future plans for research and engagement with decision makers, at a CWRR Research on Tap Seminar.



System Dynamics Workshop

The CWRR's project on *Demonstration of How Healthy Ecological Infrastructure Can Be Utilized To Secure Water for the Benefit of Society and the Green Economy Through a Programmatic Research Approach Based on Selected Landscapes* (funded by the WRC) could win a longest project name award, but is also achieving much more than that. One aspect of the project is to develop and implement a methodology to assess water resource connectivity and inter-dependency (between surface and groundwater, water quality and quantity, water and society, etc) from a landscape perspective. Using four case study sub-catchments across the uMngeni (Mthinzima, Baynespruit, Mzimyathi, and Palmiet) as a lens, the study aims to gain a better understanding of the broader uMngeni catchment. Part of the methodology includes developing a water-society based system dynamics model of the catchment. This was the focus of a project workshop held in July. Through further exploration, this project component aims to better understand and represent the relationships between water, society and space in the uMngeni Catchment. *By Susan Risko*



Wednesday 8 August 2018

The CWRR Newsletter

You are now reading the seventh issue of CWRR's Newsletter 2018. Your input to the Newsletter is 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

♦ Wednesday 22 August: CWRR Research on Tap Seminar 3 2018, titled *Increasing Good Governance for Achieving the Objectives of Integrated Water Resources Management*.

Presenter: Evelyn Lukat, Osnabrueck University, Germany

Time: 11.30-12.30

Venue: Seminar room 10, Rabie Saunders

More details about the seminar will be further announced.

CWRR member in editorial team

CWRR Associate Dr. Nick Rivers-More, has been appointed as co-editor of the *African Journal of Aquatic Science*, and forms part of the Editors-in-Chief duo together with Professor Cate Brown. They were appointed during the Southern African Society of Aquatic Scientists Congress at the end of June 2018. Read more [here](#).

MSc proposal presentations by a strong MSc team

On the afternoons of 31 July and 6 August the Centre staff, students and others had the pleasure to take part of eleven interesting and ambitious proposal presentations by our MSc students starting in 2018. Coordinated by Dr. Sabine Stuart-Hill and hosted by Prof. Graham Jewitt, the two afternoons were a great success. The students have shown impressive progress in their literature reviews and research proposals and many have already taken on their fieldwork and data collection.

The students all form part of a strong and promising team of future Hydrology Masters! The Centre wishes all MSc students a successful research progress!

◆ Kyle Reddy (Richard Kunz): Estimation of Water Use and Yield of Inoculated and Fertilized Soybean under Rainfed Conditions at a Smallholder Farm Scale

◆ Sameera Khan (Tinisha Kershani Chetty): Integration Of A Soil Moisture Stress Factor With The Sebs Model To Improve The Estimation Of Actual Evapotranspiration During Water Stress Conditions

◆ Dylan Teasdale (Dr. Sabine Stuart-Hill): Comparing drought management from 1982/83 and 2015/16 in the uMngeni-Mooi system

◆ Keanu Singh (Prof. Jeff Smithers): A review of data availability, quality and screening on the estimation of design floods in South Africa

◆ Nkosinathi Dlamini (Prof. Jeff Smithers): Development and Assessment of an Ensemble Joint Probability Event Based Approach for Design Flood Estimation in South Africa

◆ Jeremy Naidoo (Prof. Jeff Smithers): An Assessment And Improvement Of Empirical Methods For The Estimation Of Design Floods In South Africa

◆ Lizeth Nkambule (Dr. Sabine Stuart-Hill): Modelling the Impact of Climate Change on Smallholder Sugarcane and Tea Crop Yields in the Shire River Basin, Malawi

◆ Ntombiyenkosi Nxumalo (Dr. Sabine Stuart-Hill): Exploring the Manifestation of Water, Energy and Food Nexus at a Local Scale Through the Lens of Sustainable Livelihoods in the Umngeni Catchment

◆ Ruvekh Singh (Dr. Alistair Clulow): Evaluation of Conventional and Earth Observation Techniques to Measure the Water Use of Avocado Trees: A Case Study in the Everdon Estate Avocado Plantation

◆ Jordan Bull (Prof. Colin Everson): Assessing the Effects of differing site Preparation Treatments on Erosion Processes and Sediment Yield at Varying Scales of a Commercial Eucalyptus Plantation

◆ Robyn Horan (Dr. Michele Toucher): The Improvement of the Soils Database behind the ACRU Model and the Potential Use of the Root Zone Storage Concept in Hydrological Modelling

Latest publications

Journal articles:

◆ The influence of turbidity and water temperature on black fly species in the middle and lower Orange River, South Africa. *Canadian Journal of Zoology* 2018. Nick Rivers-More and Rob Palmer.

◆ Cosmic ray neutrons provide an innovative technique for estimating intermediate scale soil moisture. *South African Journal of Science* 2018. Thigesh Vather, Colin Everson, Michael Mengistu, and Trenton Franz.

Working paper:

◆ Climate information needs in Southern Africa: a review. *Grantham Research Institute on Climate Change and the Environment* 2018. Daleen Lötter, Claire Davis, Emma Archer, Katharine Vincent, Joanna Pardoe, Mark Tadross, Willem Landman, Sabine Stuart-Hill and Graham Jewitt.

Research visit at UKZN for diagnosing water governance in the uMngeni



As her second field visit, Evelyn Lukat, a researcher from Osnabrueck University in Germany, is currently visiting the CWRR. She collects data for the [STEER project](#), led by Prof. Claudia Pahl-Wostl, that aims to in-

crease good governance for achieving the objectives of IWRM. CWRR's Dr. Sabine Stuart-Hill collaborates in the project. The researchers of the two universities aspire to build on existing ties and to strengthen their collaboration in the future.

The project sets out to "diagnose" several international water governance cases and to engage their stakeholders in experience exchange on best practices of cross-sectoral coordination and collaboration. Therefore, Lukat currently conducts interviews with a variety of stakeholders engaged in water governance and management such as DWS, members of UEIP, Umngeni Water, agriculture, forestry, community based projects or the municipalities.

The next Research on Tap Seminar on 22 August 2018 will feature a presentation of the STEER project and sets out to engage the audience in a discussion on the framing of the uMngeni case study.