

The UJ Faculty of Engineering and the Built Environment, in collaboration with SOJO Business & Tourism and Klipriviersberg Sustainability Association (KlipSA) invite you to a public lecture presented by

Prof Anthony Turton
Gurumanzi (Water Wisdom)

The Perfect Storm in the Water Sector – What is Driving It and Why it is a Game-Changer

ABOUT KEEDZ: Klipriviersberg Economic and Ecosystem Development Zone (KEEDZ) is a proactive intervention to establish appropriate economic and social development in the Klipriviersberg region to protect, promote and enhance the value of the natural assets. Key initiatives include the Klipriviersberg Agritropolis to address food security and unemployment in the region and the Klip River Wetland Management Plan to improve the quality and quantity of water in the Klip River and to identify economic and social goods and services.

BROAD DESCRIPTION OF TOPIC: We are currently in the grips of a major El Nino drought event. We are releasing around 4 billion litres of untreated, or at best partially treated sewage into our national rivers and dams daily. The aquatic ecosystems are already distressed by the drought, but are now insulted further by these sewage flows. In effect we have created a massive biological reactor into which we are pumping partially metabolized drugs, including antibiotics, antidepressants, antiretrovirals, recreational narcotics and oestrogen. In this primordial soup we have rapid bacterial and viral replication taking place, with an increased likelihood of mutations in the presence of these low concentrations of drugs. While this is happening, we have a typhoid outbreak, not yet an epidemic, but hovering on the horizon as a present risk. Concurrently the capacity of the state to respond seems to be diminishing, with the trend in both Green and Blue Drop compliance deteriorating. In effect we are now overloading our major potable water plant, none of which were ever designed to safely convert sewage effluent into drinking water. In short, we have a perfect storm as major drivers converge, potentially creating a game-changing event over which no individual stakeholder has any direct control. What happens if we see a mutation of a common pathogen like Cholera or Typhoid, because of the exposure of these bacteria to low doses of partially metabolized medication? What is the actual status of science with respect to the linkage between microcystin toxins and degenerative disease of the central nervous system? What is the extent of exposure by ordinary people to low concentrations of Microcystin? What possible solutions should be considered? How do we inform the public without creating panic? How will this Perfect Storm play out and will the Business as Usual approach survive? Will disruptive technologies take us to a new Business Unusual? While this plays itself out, what can the ordinary citizen do to protect their family from exposure?

DATE 1 March 2016 at 18:00

VENUE A Les G01 (Lecture Room), Auckland Park Kingsway Campus, University of Johannesburg (corner Kingsway and University Road, Auckland Park, Johannesburg)

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ABOUT THE PRESENTER:

Prof Anthony Turton holds two professorships: at the University of Free State Centre for Environmental Management; and as part of the UNESCO Chair of Groundwater at the University of Western Cape. He has published widely and is a well-known professional speaker, trainer, facilitator and advisor. He has been deeply involved in the AMD issue from a solution perspective. He is also part of a team developing disruptive technology that will be entering the market shortly.

He has extensive experience in strategic planning and thought leadership in situations of inherent uncertainty. He has served in various leadership positions both nationally and internationally, including those involving fiduciary responsibilities. He is a founding member of the Universities Partnership for Transboundary Waters (UPTW) and the former President. He served as Deputy President of the International Water Resource Association (IWRA) and as a Deputy Governor of the World Water Council (WWC). He is working with a team establishing the Ecological Engineering Institute of Africa (EEIA).

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