



Letters to the Editor

Empty for a reason

I refer to the article on Beervlei Dam in the January/February 2011 issue of *The Water Wheel* as well as the letter from CL Marechal (Pr Eng) on the same topic in the March/April 2011 edition.

Mention was made in the original article that the main purpose of the project was that of flood attenuation for the lower Gamtoos Valley. In order to achieve this objective the reservoir of the Beervlei Dam needs to be empty at the start of the flood in order to store as much of the flood water as possible. The Karoo sediments in the area contain a lot of salts and it has been found that lengthy storage of water results in high water salinity. The mode of operation is that any floodwater is used as quickly as possible

by the downstream irrigators and the reservoir is thus kept empty for flood absorption purposes. A similar flood attenuation dam has been built upstream of the town of Ladysmith (KwaZulu-Natal) and this dam has a large uncontrolled outlet in its base to ensure emptying after a flood. You will see from this explanation that the Beervlei Dam has not been decommissioned as mentioned by Mr Marachel, but is alive and well in its empty state!

I have received many queries from members of the public as to why the Beervlei Dam is always empty. I have accordingly requested the Department of Water Affairs some eight years ago to erect a sign board with such an explanation at the viewpoint of the Beervlei Dam. Unfortunately

this has not been done. I consider it most important that we as Water Resource Managers and Engineers interact with the public via various means and I would still like to see such a sign board when I drive past the dam en route to the coast.

*Paul Roberts (Pr Eng),
Secretary: SANCOLD*

Environmental legislation correction

Thanks for a lovely magazine. However, I must point out what appears to be an error on p21 of the interesting article by Petro Kotzé ('Princessvlei – Tug of war over Cape Flats wetland continues' in *The Water Wheel* March/April 2011). In the blue coloured box on the right hand side of the page, it is mentioned that EIA is still governed by regula-

tions promulgated in terms of the Environment Conservation Act of 1989. (By the way, it was incorrectly given in the article as Environmental, instead of Environment).

In fact, EIA regulations were promulgated and implemented in terms of NEMA in 2006, with revised regulations in 2010.

Luke Sandham, Associate Professor, School of Environmental Sciences & Development, North West University

Correction

In the article 'Women share secrets of career success in water' (*The Water Wheel* March/April 2011) the names of the authors, Lindiwe Ndlela and Nazreen Kola, were accidentally omitted. *The Water Wheel* regrets the error.

Dams not the be all and end all of water

The World Wildlife Fund (WWF) has called on South Africans to be more sensible in their use and management of land and water resources.

"The more we reduce the ecosystems' ability to deliver clean fresh water, the

less water secure we will be and the greater the cost we will have to pay for our water," said Mark Botha, Head of WWF's conservation programmes.

In his message delivered during National Water Week in March, Botha

said that many South Africans, especially those living in urban areas did not have a full understanding of where the water that flowed from their taps really came from, and the key role clean catchments played in providing it. "Cape Town has run out of water many times in the last century. Each time an expensive 'supply side' solution

was found to buy us more time, but always at a cost. Now, with augmentation options rapidly diminishing, we are finding that the biggest cost of dams is the complacency that they leave us as ratepayers."

"At some point, we need to realise that we cannot only continue building more dams and other water infrastructure, but that it is imperative to invest in the natural resources that we already have. We need to concentrate more of our efforts on catchment security," noted Botha. According to him, catchment security is about the sound ecological management of our water generating infrastructure – not the dams, works and pipes that bring the liquid to our houses – but the catchment, wetlands and rivers that bring it to our dams and farms.

WWF recognises the need for man-made water infrastructure; however, it

believes that without healthy freshwater ecosystems this infrastructure may be rendered useless. To illustrate, it appears that the much-touted desalination plants built in haste at great expense in the southern Cape in 2009/10 are hamstrung by ecological water constraints. Two of the four have already been shut down due to insufficient water availability.

At the same time, the mountain catchments in the Garden Route are being over-run by invasive plants, and clearing efforts are not even holding them at current infestations. If the costs of the desalination plants (estimated to be around R35-million) had been routed into securing ecological integrity of the catchments, the people of Plettenberg Bay may have not experienced water shortages last summer, WWF said in a statement.

Source: WWF



New road signs help toads hop to it



Ten new road signs have been erected in Cape Town to alert road users to the presence of Western Leopard Toads (*Amietophrynus pantherinus*) in certain areas of the city.

The signs were installed at crucial points within the distribution range of this endangered species.

The Western Leopard Toad is only known to occur in a very small area of the Western Cape, which includes the low-lying sections of the Cape Peninsula, the Cape Flats and the Agulhas Plains.

In Cape Town, almost all of the historic distribution range of the toad has been transformed due to urbanisation.

They now occur within residential areas where they have to survive an increasing number of threats such as herbicides, attacks by domestic pets, artificial barriers such as solid boundary walls and, of course, being killed by cars when crossing roads. The toads breed in remaining wetland areas within these residential areas and have to migrate to and from their breeding ponds every year between July and August. Road mortalities during these periods of active movement have added significantly to the threatened status of this charismatic amphibian.

In an effort to create awareness and encourage responsible use of road networks, the City of Cape Town has erected road signs warning users to slow down and be vigilant, especially when driving at night.

Source: City of Cape Town

International award for Durban metro

The eThekweni Water and Sanitation Unit emerged victorious following the announcement of the inaugural Water for Life Best Practices Awards during World Water Day earlier this year.



The municipality won the award in the category Best Participatory, Communication, Awareness Raising and Education Practices. The annual prize, organised by the United Nations, aims to highlight those organisations or individuals displaying outstanding merit and achieving particularly effective results in the field of water management or in raising awareness of water issues.

eThekweni won for its innovative approach to communication and awareness raising in poor areas and its contribution to addressing key challenges related to water and sanitation in a continuously growing urban area. According to the adjudicators, the success of the approach used to raise awareness can be seen in the results of the independent surveys that measure customer satisfaction; the reduction in non-revenue water levels; the increase in payment of accounts through the debt relief programme; and by the number of schools

Water diary

IMPOUNDMENTS

JUNE 13-17

The 2nd IWA Symposium on Lake and Reservoir Management will take place in Granada, Spain with the theme 'Sustainable Approaches to Enhance Water Quality'. Enquiries: Prof Francisco Rueda; Email: fjrueda@ugr.es

AGRO INDUSTRIES

JUNE 22-24

The 8th International Symposium on Water Management Problems in Agro-Industries will be held in Cesme, Turkey. The aim of the symposium is to provide a forum for discussion of the present problems and recent experiences and advancement in the management of waste in the agro-processing sector, such as textile, pulp and paper, leather, food, sugar, edible oil, beverage etc. Enquiries: Mrs Tugce Katipoglu Yazan; Istanbul Technical University; Tel: +90 212 285-6586; Email: agro2011@itu.edu.tr; Visit: www.agro2011.itu.edu.tr/site/

WATER QUALITY

JUNE 28-30

The Third Municipal Water Quality Conference will take place at the Cape Town International Conference Centre. The conference is organised jointly by WISA and the Department of Water Affairs with the theme 'Reshaping the South African Municipal Water Quality Landscape'. Among others, the latest Blue and Green Drop reports will be launched. Enquiries: Dot Zandberg, Email: conference@wisa.org.za or Maryna Niemand, Email: niemandm@dwaf.gov.za

YOUNG WATER PROFESSIONALS

JULY 3-5

The Second Regional Conference of

the WISA/IWA Young Water Professionals will take place at the CSIR International Conference Centre, in Pretoria. Enquiries: Cilla Taylor (Secretariat); Tel: (012) 667-3681; Email: confplan@iafrica.com

WATER HISTORY

JULY 5-7

The International Water History Association will be holding its 7th biennial conference in the Kruger National Park. Enquiries: Petra Lawson; Email: Petra.Lawson@nwu.ac.za

WATER LAW

JULY 3-7

The IUCN Academy of Environmental Law 2011 Colloquium will be held at the Mpekweni Beach Resort, in the Eastern Cape. The aim of this colloquium is to share understanding and expertise in the field of water and the law. Themes include governance and water management; land use planning; pollution and waste; ecosystems and the natural environment; coastal and marine issues; water rights and water scarcity, among others. Enquiries: Glaudin Kruger (Secretariat); Tel: +27 (0)83 316 2905; Email: kruger@kruger-associates.com or Visit: www.iucnael-watercolloquium-2011.com

IRRIGATION

AUGUST 2-5

The South African Irrigation Institute 2011 National Congress will be held at the Protea Hotel Kruger Gate, Mpumalanga with the theme 'Sustainable Irrigation for People, the Planet and Prosperity'. Enquiries: SABI, Tel: (021) 850 8220; Email: Riana@sabi.co.za

and teachers reached through the sustainable schools programme.

Among others, the city has managed to reduce incidence of diarrhoea by up to 31% in some of its poorest areas by

providing toilets and education on better hygiene for children. In addition, cholera outbreaks have been prevented while the number of blockages in toilets and sewerage pipes has been reduced.

MASTERS DEGREE IN ENVIRONMENTAL MANAGEMENT

PART-TIME OVER TWO YEARS

“SUSTAINABILITY DEPENDS ON FUNCTIONING ENVIRONMENTAL SERVICES” (Prof MT Seaman)

Centre for Environmental Management
University of the Free State
Tel: 051 401 2863, Fax: 051 401 2629
Email: cem@ufs.ac.za
Website: www.ufs.ac.za/cem

For more visit our website at www.ufs.ac.za/cem

UNIVERSITY OF THE
FREE STATE
UNIVERSITEIT VAN DIE
VRYSTAAT
YUNIVESITHI YA
FREISTATA



UFS·UV

NATURAL AND
AGRICULTURAL SCIENCES
NATUUR- EN
LANDBOUWETENSAPPE

STRATEGIC ACADEMIC CLUSTER: WATER MANAGEMENT
IN WATER-SCARCE AREAS

Tel: +27 051 401 2863
Fax: +27 051 401 2629
E-mail: cem@ufs.ac.za
www.ufs.ac.za/cem

Mapping human vulnerability to climate change

Canadian researchers are mapping human vulnerability to climate change using the same analytical tools as those used to study how various species of plants and animals migrate to climate change.

PhD student Jason Samson of McGill University's Department of Natural Resource Sciences, together with his colleagues combined climate change data with censuses covering close to 97% of the world's population in order to forecast potential changes in local populations for 2050. The team found that if populations continue to increase at the expected rates, those who are likely to be the most vulnerable to climate change are the people living in low-altitude, hot regions of the world, including South America, the Arabian Peninsula and much of Africa.

In these areas, a relatively small increase in temperature will have serious consequences on a region's ability to sustain a growing population. "It makes sense that the low latitude tropical regions should be more vulnerable because the people there are already experiencing extremely hot conditions which make agriculture challenging. An increase in temperature over the next few decades will only make their lives more difficult in a variety of ways," noted Samson.

This contrasts with Samson's predictions about the impact of climate change on human populations in high-latitude more temperate zones of the world, where the temperature change is expected to be greater. Because the spread of human populations along with their activities are already more constrained by the cooler conditions in these regions, the researchers expect that climate change will have less of an impact on people living in these areas.

The study also points to clear inequities in the causes and consequences of climate change: the countries that have contributed the least to climate change, based on their average per-capita carbon dioxide emissions, are nevertheless predicted to be the most vulnerable to its impacts. It is hoped that this data could be useful for decision makers around the world in the ongoing international negotiations around climate change.

US environmental scientist named 2011 Stockholm Water Prize Laureate



Stephen Carpenter, Professor of Zoology and Limnology at the University of Wisconsin-Madison, in the US, will receive the 2011 Stockholm Water Prize.

Prof Carpenter's groundbreaking research has shown how lake ecosystems are affected by the surrounding landscape and by human activities. His findings have formed the basis for concrete solutions on how to manage lakes.

Prof Carpenter is recognised as one of the world's most influential environmental scientists in the field of ecology. By combining theoretical models and large-scale lake experiments he has reframed our understanding of freshwater environments and how lake ecosystems are impacted by humans and the surrounding landscape.

The Stockholm Water Prize Nominating Committee emphasises the importance of Prof Carpenter's contributions in helping us understand how we affect lakes through nutrient loading, fishing, and introduction of exotic species. "Prof Carpenter has shown outstanding leadership in setting the ecological research agenda, integrating it into a socio-ecological context, and in providing guidance for the management of aquatic resources," noted the Committee.

HM King Carl XVI Gustaf of Sweden will present the prize during the World Water Week in Stockholm later this year.

New commission confronts threats to food security from climate change

Recent droughts and floods have contributed to increases in food prices. These are pushing millions more people into poverty and hunger, and are contributing to political instability and civil unrest.

Climate change is predicted to increase these threats to food security and stability.

Responding to this, the world's largest agriculture research consortium, CGIAR, has announced the creation of a new Commission on Sustainable Agriculture and Climate Change.

Chaired by Prof Sir John Beddington of the UK, the Commission will in the next few months seek to build international consensus on a clear set of policy actions to help global agriculture adapt to climate change, achieve food security and reduce poverty and greenhouse gas emissions. The Commission brings together senior



natural and social scientists working in agriculture, climate, food and nutrition, economics and natural resources from Australia, Brazil, Bangladesh, China, Ethiopia, Kenya, India, Mexico, South Africa, the UK, the US and Vietnam.

Findings of existing research will be synthesised to clearly articulate scientific findings on the potential impact of climate change on food security globally and regionally. The Commission will then produce a set of specific policy actions for dealing with these challenges.

Water footprint measuring advances

A major step towards standardisation of water footprint measurement has been achieved with the issuing of a global assessment manual by the Water Footprint Network.

The assessment, issued by the 139-member network and scientists of the University of Twente in the Netherlands, complements the recently completed Global Water Footprint Standard in giving consistency to measures of water use and impact. "The Global Water Footprint Standard comes at a time when companies in all sectors are awakening to the risk that water scarcity poses to their bottom lines and reputations," reports Jim Leape, DG of WWF International, a leading member of the Water Footprint Network. "This work helps companies understand their dependency and impact on water resources, and offers guidance on response strategies that conserve

water for industry, communities and nature."

By measuring the amount of freshwater used in goods and services consumed or in production, the water footprint concept is helping companies to reduce water use where it is most wasteful. Individuals can use the water footprint to understand how much water they are using through the food they eat, the clothes they wear and the consumer goods they buy. Changing to less water-intensive products and choosing to buy foods from water-rich areas or catchments that are sustainably managed will move them toward a sustainable water footprint.

To download the manual or order a hard copy, visit: www.waterfootprint.org/?page=files/WaterFootprintAssessmentManual

Source: WWF