

Hydrologists' Lifework Culminates In Launch Of Water Resource Study Website

Johannesburg 19 March 2015. A Website has been launched which provides country wide information for water resources experts on South Africa, Swaziland and Lesotho. The website was demonstrated to an audience of water professionals by Royal HaskoningDHV's Dr Bill Pitman and Allan Bailey.

As the National Water Resources Strategy (2013) states: *"For water to play an optimal role in poverty eradication, the reduction of inequality, inclusive growth and development, and building a just and equitable society; water resources planning must be integrated into national, provincial and local planning, and must be addressed in all growth and development strategies."* The countrywide WR2012 study is therefore essential.

The ground-breaking water resources study - WR2012 - is funded by the Water Research Commission (WRC) with support from the Department of Sanitation (DWS) to provide a new and enhanced water resource analysis for South Africa, Lesotho and Swaziland.

Both Dr Bill Pitman and Allan Bailey of Royal HaskoningDHV together with other key water resources experts were tasked with developing the WR2012 Study website. The firm has rendered over 90 years of continuous service to the South African water industry. Amongst the audience at the much anticipated launch were public sector advisors responsible for writing policy and protocol for environmental health from the Department of Water and Sanitation and private sector consultants in the natural sciences (hydrologists, wetland specialists, soil scientists and ecologists), engineers and urban and regional planners.

Ms Deborah Mochotlhi, Deputy Director General Planning and Information Management with the Department of Water and Sanitation, said of the study *"The WR2012 study is expected to contribute to the quest of the Department of Water and Sanitation of improving the accuracy of information and overall information management such that decision making, especially towards the*

realization of the ideals of the National Development Plan and policy making, is based on information in which there is high confidence. To this end the Department of Water and Sanitation has also embarked on a monitoring network review project and on developing the National Integrated Water Information System (NIWIS) to integrate all information management systems.”

Dhesigen Naidoo, CEO of the Water Research Commission, added *“Not only data is needed, not only information is needed. It is about turning information into knowledge. The WR 2012 study is starting with data going all the way to knowledge”.*

Dr Ronnie McKenzie, Consultant at WRP Engineers mentioned in line with his keynote: *“South Africa has a complicated system of water transfers and an economy that is very sensitive to water restrictions. In a severe drought, it is possible that water restrictions may have to be implemented after only two years and such a drought can last for many years. This can affect coal power stations, irrigation schemes, mines. The WR2012-study provides an improved hydrological assessment, which feeds into water resources yield assessment models and water resources planning models. It is therefore of critical importance to our country.”*

Dr Bill Pitman said *“The Study is a culmination of several water resources appraisals that have been undertaken over the last 60 years. The website provides access to all the data, maps, water resources models, spreadsheets and other tools to enable water professionals to investigate, analyse and plan our water resources.”*

Eiman Karar, executive manager water resources management at the Water Research Commission and chair of the day, mentioned *“WR2012 is aimed at supporting planning and the updating of reconciliation figures for the National Water Resources Strategy 1 and 2 as well as feeding into National Water Resources Strategy 3.”*

The rainfall-runoff WRSM2000 model – also known as the Pitman model, named after its innovator and developer Dr Bill Pitman, is a key part of this project and has undergone further enhancements during this study. Outputs from the Pitman model are used as the primary inputs to DWS’s water resources planning models.

Water resources appraisals have become the life work of Dr Bill

Pitman and Allan Bailey, who have collaborated in the building and enhancing of Pitman's original work, dating back to the 1960's. Allan Bailey said *"This is the sixth comprehensive water resources appraisal of South Africa and the third that Royal HaskoningDHV has had a central role in. It builds on the WR2005 project which was completed in 2010. Final deliverables are planned for 2016 and it is envisaged that these products will greatly facilitate analysis of integrated water resources across the country for a wide range of users."*

WR2012 DELIVERABLES

In his presentation, Allan Bailey clarified the main deliverables of the study as follows:

Already complete

Website www.waterresourceswr2012.co.za with data and information up to September 2010, including rainfall, observed streamflow, land use/water use, monitoring information, natural and present day streamflow, reservoir records, water quality and other pertinent data .

Still to come

- WR2012 Executive Summary and Users Guide.
- Map book of 77 GIS Maps with background, rainfall and runoff maps for each Water Management Area (WMA) and other relevant maps for the whole country.
- Enhanced WRSM200/Pitman model with daily time step and improved graphics
- Quaternary data spreadsheets
- Salinity modelling of the entire Vaal River

Training to universities, consultancies and other organisations.