Driving the protection of our natural assets

With its well-known panda icon, the World Wide Fund for Nature (WWF) is an international non-governmental organisation that works on issues relating to the conservation, research and restoration of the environment. Christine Colvin, Senior Manager of the Freshwater Programmes WWF South Africa (WWF-SA) is leading many of the organisation's water-related initiatives in South Africa. Debbie Besseling spoke to her.

Water is an absolute necessity, with our basic human needs and economy depending on it. A new way of planning is required to protect our precious natural assets and to ensure that future generations inherit a healthy landscape that can provide them with water security. As a water-scarce country, our development has been constrained by our ability to overcome the difficulties of ensuring that water supplies are always readily available.

Much attention has been given to the provision of supplying more South African households with safe, reliable drinking water by bringing taps to homes and settlements that were previously marginalised. But, on this mission to dam and deliver water, we have lost sight of where our water comes from, and the critical role that nature plays in ensuring water for all.

Engineered infrastructure is critical in the water supply chain, however it cannot deliver if we do not take care of our ecological infrastructure, that is the catchments, rivers and aquifers that feed our dams and water schemes.

Research has established that 8% of South Africa's land area provides 50% of the surface water. Colvin discusses the background and highlights of this work: "We worked with Dr Jeanne Nel and Geographic Information System specialists at the CSIR to assess the distribution of runoff in South Africa. We know that rainfall is unevenly distributed in South Africa and highly seasonal. This work helped to define which catchments contribute the most runoff on a national scale and showed where the landscapes are that we need to focus on protecting and restoring, if we are to maintain healthy water supplies into our managed and engineered systems that supply us all.

"Only 16% of this area is formally protected, so the in the next few years it is going to be critical to increase the protection of these areas and to ensure that the farmers, foresters and miners who are working there understand that these areas are critical for our national water security. This helps to make spatially explicit the aims of the National Development Plan – to ensure we have sufficient water to enable economic growth and food security," explains Colvin.

CAREER HISTORY

Colvin holds a BSc Honours in Geology, from the University of Southampton, in the United Kingdom, which she acquired in 1989 and an MSc Hydrogeology, University College London, UK, completed in 1994. She gives an insight into how she got involved in this sector and some of the milestones of her career. "Travelling in Africa in the early 1990s introduced me to the importance of groundwater in village water supply. This had immediate appeal and as a geologist I had found my niche – hydrogeology. I worked in Namibia on a drought relief programme and learned about drilling and geophysics as the sharp end of emergency water provision in arid environments. After returning to London to complete my Masters I worked in heavily polluted sites in the United Kingdom and Eastern Europe, remediating contaminated land. When I returned to South Africa in 1995 I worked with Dr Gideon Tredoux's groundwater group at the CSIR. I loved the research environment, the ability to dig deeper into problems and work across disciplines with ecology colleagues, such as my mentor Dr David Le Maitre, on the importance of groundwater in eco-hydrology."

After many years in research, Colvin wanted to see her work having greater impact and influence decisions that impact water security. "I moved to lead the freshwater programmes at the WWF. Here we are focused on protecting our water source areas, working with business in water stewardship and pioneering new work with the South African National Biodiversity Institute on securing ecological infrastructure for water. We have well established programmes like the Mondi Wetlands Programme and the Water Balance Programme that continue to grow and pilot new ways to include communities in catchment care."

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In her current role, leading and coordinating WWF-SA's programmes on freshwater, Colvin is responsible for the liaison with the international WWF network, agents of change in the South African water sector, business and key funders. She is also involved in developing a strategy of relevant work with impact for South African water security, as well as ensuring successful delivery, financial sustainability and professional excellence of employees and consultants working on freshwater projects.

Colvin is involved in a number of programmes and projects at the WWF-SA, some of these include: South Africa's Water Source Areas, which involves the identification and protection for national water security; the Umgeni Ecological Infrastructure Partnership, a project on the role of private finance in water risk; the Water Balance Programme, involving Nedbank, SonaeNovabord and Woolworths; the De Beers Shared Water Risk and Catchment Security in the Limpopo. Two specific projects are discussed in more detail below.

THE JOURNEY OF WATER INITIATIVE

Colvin has been extensively involved in the Journey of Water, which is all about sharing the complexity of water's journey to people's homes, reconnecting urban users with the natural landscapes that make up their catchments. "'Water doesn't come from a tap' and we wanted to emphasise the role of nature and healthy landscapes in providing people and the economy with water. Supported by Sanlam, we walked over 80 km from the Berg River Dam to Cape Town with a group of passionate celebrities and media who could tell the story with us. We've since shown an advertisement on the Journey and a mini-documentary made by Derek van Dam at eNCA and we've had thousands of hits on the website www.journeyofwater.co.za which shows people where their water comes from," Colvin explains.

WATER STEWARDSHIP PROGRAMME

The UK retailer, Marks and Spencer, assessed their global supply chain and found that fruit coming from the Western Cape was one of their highest risk areas. Peaches and nectarines (stone fruit) require irrigation and this is a semi-arid and water stressed area.

Top left: *Christine with Eric Bezuidenhout of the Faure Wastewater Treatment Works, Cape Town, explaining the Journey of Water.*

Middle left: *Christine with intern Imelda Haines on the Journey of Water.*

Bottom left: *Next to the Eerste River in Stellenbosch with a news filming crew in the background and Department of Water Affairs river monitors in the foreground.*

Colvin elaborates: "We were working here with our own retailer, Woolworths, who are also concerned about better farming methods and protecting water resources. With these two corporates, the commercial and emerging farmers in the fruit sector and the Breede-Overberg Catchment Management Agency (BOCMA), we are now developing a plan for stewardship which will help reduce water risk. Farmers here are already working incredibly efficiently. The Water Research Commission research showed that farmers are only using 33 ℓ per fruit which is way below the global average of 140 ℓ. Now they need to look beyond the farm fence to see what they can do together to restore and protect their catchments and to enable each other to operate with minimum impact."

THE WWF WATER RISK TOOL

The WWF also developed a global tool called the Water Risk Filter. The latest version was launched in March and can be accessed for free on www.waterriskfilter.panda.org.

Colvin explains that the tool helps companies and farmers to scope their water risk by leading them through a detailed questionnaire. It includes global (coarse) data on water scarcity and information on 120 crop types. "It's really useful to get farmers, the biggest consumers of water, to start understanding their water risk and to initiate better practices, including improved efficiency, less impact and water stewardship. Multinational corporates are also using it as a scoping tool to understand where they need to focus water management efforts. We can't leave water management to government and catchment management agencies. Water impacts on everyone and it really is everyone's business. This is a practical way to include it in everyone's business plan and risk mitigation strategies." ❑