

# Liquid assets

The Toyota Enviro Outreach programme branches into water conservation through John Lucas's Explore4Knowledge team. **Mariola Jakutowicz Fouché** enjoyed an educational weekend with them on the Olifants River in the Western Cape.

PHOTOGRAPHY: DYLAN HASKIN

“Let’s be honest, water is boring,” says John Lucas of Explore4Knowledge (E4K), immediately capturing the afternoon attention of teenagers sprawled on their desks before him. It’s the first in a series of educational talks he will deliver in the next few days and a prelude to E4K’s multi-day tribute to the International Day of Action for Rivers, celebrated on 14 March. “It doesn’t affect you

into the world of the Olifants, one of three primary rivers that supply drinking water to the Western Cape. Amazingly, it is still considered pristine, with minimal urban impact made on it. While other studies have been conducted, there is currently no information of the long-term effects of pollutants on the river’s course and the water itself.

Enter John and his research: he aims to create a baseline from

## On the International Day of Action for Rivers, organisations all over the world highlight the importance of water and water resources

emotionally – we don’t really know why we’re trying to save it, because it’s just always there, right?” he asks.

Wrong. At all of 25, John is the founder of E4K, a platform that creates environmental awareness among youth from a range of socio-economic backgrounds by highlighting the importance of nature conservation and climate change, particularly in river systems – the focus of his postgraduate work.

John’s enthusiasm spills over into the classroom as he delves

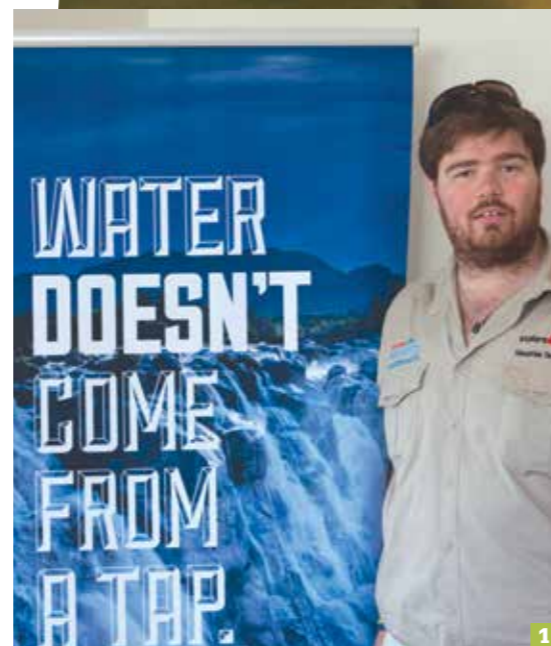
which to gauge the consequences of contamination on the Olifants River. This involves seasonal testing for metals in water and sediment samples at predetermined collection points, along with analyses of the insect diversity in those areas. These are all indicators of the river’s ecological health, and sampling will continue throughout the year while the data is uploaded to a national electronic information base.

E4K’s conservation efforts and work with schools and universities



### FRESH FACTS

- > Only 3% of the planet’s visible water is fresh water.
- > 8% of Africa’s land area provides 50% of its water.
- > In the Western Cape, few rivers are still referred to as “pristine”.
- > The Olifants River is 265km long and runs through two dams and only five towns.
- > Three rivers provide Cape Town, Saldanha, Ceres and Atlantis with water, namely the Olifants, Breede and Berg rivers.
- > South Africa is the cheapest country in the world for water.



**TOP:** As part of its Enviro Outreach programme, Toyota sponsors the vehicles used in E4K’s water research project. Here the water of the Olifants River still appears in a pristine state. / **1.** John Lucas of Explore4Knowledge (E4K) does research on riverine systems in the Western Cape to gauge the impact of contamination. / **2 + 3.** Sediment and insect samples are collected from the Olifants River and later analysed to determine the river’s health.



**ABOVE:** The fleet of Toyota 4x4s on the Dasklip Pass outside Porterville make their way to Beaverlac.

in and around Cape Town have attracted partnerships with various organisations and NGOs whose focus is on youth and community development. Apart from Toyota Enviro Outreach providing vehicular support for the team to get to its sampling sites for extended periods, the Pick n Pay School Club initiative and Klipbokkop Mountain Reserve (which assists with responsible 4x4 driving and logistics) are staunch supporters. It takes a solid vehicle to drive through rocky drifts and detours, especially in the notoriously soggy Cape winters, and the Toyota Hilux double-cab 3-litre D-4Ds, says John, are the “heart and soul” of his team. During the weeks spent in remote locations, he keeps water samples

frozen in the back of his home-from-home trailer until they can be analysed in the city.

**WATER WISDOM**  
Two hours out of Cape Town, our convoy heads over the Dasklip Pass

**“Water is not a resource that lasts forever – we need to take care of it”**

near Porterville to Beaverlac in the Groot Winterhoek mountains, along the course of the Olifants River. It’s an attractive, popular campsite. Grassed, shaded and framed by the range’s characteristic rock formations, it’s the perfect base for two more youth contingents expected at the weekend.

Early the next morning, we take our Toyotas through their paces over the Olifants River. Although I’m no stranger to rough riding, it’s my first date with a Cruiser, and I’m nothing less than blown away by its off-road capabilities.

The International Day of Action for Rivers, originating in Brazil with protests against dams being built in the Amazon, has organisations all over the world participating in conservation initiatives to highlight the importance of water and water resources. E4K has partnered with International Rivers, the World



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Wildlife Fund’s Journey of Water project and the South African Sustainable Seafood Initiative (SASSI) to create a four-day water-conservation awareness event, beginning at Noordhoek Primary. At this small farm school near Citrusdal, John and the team give excited Grade 5, 6 and 7 learners a lesson in cartography and water conservation. They examine all the aspects of their neighbouring Noordhoeks River from source to mouth and use topographical maps to see where it fits into the bigger picture of South Africa’s waterways. Another group goes down to the river itself (important for its endemic and endangered freshwater fish) to clean up accumulated rubbish. Some have never swum in the water,

much less paid attention to it. Within 25 minutes, a bakkie-load of waste is collected and a prize is proffered for the oddest items: an old cellphone, and a laminated school diploma.

**THINK OR SWIM**  
Saturday heralds the arrival of learners from Fairmont High School in Cape Town and Cape Peninsula University of Technology students, who are here to help examine the impact of humans on rivers and freshwater resources. We begin the morning’s activities at the nearby Ratel tributary, where rafting aficionado Marie-Louise Kellett of Gravity Adventures speaks about the construction of dams, such as the planned hydroelectric scheme on the Orange River, and

**1:** John Lucas (left) discusses the E4K programme with the writer at the Beaverlac campsite. **2:** Learners from Noordhoek Primary School took part in E4K’s programme, which tied in with the International Day of Action for Rivers.



**ABOVE:** Chris Kastern prepared a special fish braai with SASSI-approved ingredients.

**SASSI SUSSED**  
Chris Kastern, a seafood-transformation manager for WWF South Africa, works with retailers to incorporate sustainability into their core business through the South African Sustainable Seafood Initiative (SASSI), which drives the sustainable utilisation of fish in our oceans.

“John Lucas is an education ambassador for SASSI and a project partner with WWF’s Journey of Water initiative, highlighting water resources in South Africa,” says Chris. “WWF and SASSI work with ambassadors who can reach children. John, through his work with E4K and education, links the research he is doing in the freshwater space with SASSI’s marine water interest. “There is a direct link between the work being done in fresh water and marine water: the estuarine systems are critical to marine species and are sensitive ecological systems. Many species rely on them as breeding grounds. If we’re contaminating the water at source and not effectively managing the rivers well enough, it has a tremendous knock-on effect on the estuarine system.”

their effects on the sustainability of our waterways. With a spectacular waterfall as backdrop, geography teacher Johann Dempers lectures his Grade 11 charges on fluvial systems and the formation of sediments that resulted in the sandstone mountains around Beaverlac. After a welcome dip in the clear, tannin-stained river, the students gain some hands-on experience in assessing water quality by collecting sediment and insect samples, while Marie-Louise and company footele about on small inflatable craft in Beaverlac's central attraction, the deep rock pool. Dinner is a grand affair, with the culinary enthusiast Chris Kastern of WWF South Africa serving up a sustainably fished tuna-and-snoek braai. It's a splendid end to an intensive day of conservation awareness and paddling fun.

John envisions inviting more schools and hosting similar events. What does he consider E4K's greatest success? "Water doesn't come from a tap – there are people who honestly still believe this is where it comes from," he says. "If, after our talks, one person's attitude changes towards conservation in a positive way and they share that



message with others, then we've achieved what we set out to do."

A favourite metaphor of his is "breaking the golden thread of a river". There's a source, a mouth, and everything in between that makes it function as an holistic system. When sections in the middle are destroyed by tangible human intervention (pollution, urbanisation, mining or bridge building, for example), then the beginning is no longer the beginning, and the end no longer the end. There is no unity, and the system deteriorates. "Pollution is not going to go away. It is your problem," John maintains. "Water is not a resource that lasts forever – we need to take care of it." ❖

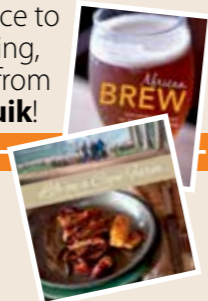
**ABOVE:** The Enviro Outreach team and schools that took part in the International Day of Action for Rivers with E4K. **RIGHT:** The famous rock pool at Beaverlac provides some time out for the participants.



For more information on the Toyota Enviro Outreach programme, visit [www.toyotaoutreach.com](http://www.toyotaoutreach.com). If you are interested in the work of Explore4Knowledge and International Rivers, visit [www.explore4knowledge.com](http://www.explore4knowledge.com), and [www.internationalrivers.org](http://www.internationalrivers.org). Read more about Pick n Pay School Club on [www.schoolclub.co.za](http://www.schoolclub.co.za). To learn about the WWF's SASSI and Journey of Water initiatives, visit [www.wwfsassi.co.za](http://www.wwfsassi.co.za) and [www.journeyofwater.co.za](http://www.journeyofwater.co.za). Logistical support for the Outreach team is provided by the Klipbokkop Mountain Reserve, outside Worcester, one of the foremost off-road academies in the country ([www.klipbokkop.co.za](http://www.klipbokkop.co.za)). To book a stay at Beaverlac, visit [www.beaverlac.co.za](http://www.beaverlac.co.za).

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