

## NAMIBIA WORLD WETLANDS DAY REPORT

### POLYTECHNIC STUDENTS EXPLORING WATER COOPERATION IN THE FISH-ORANGE RIVER BASIN.

From 21- 28 March, the Nature Conservation, Natural resource management students of the Polytechnic of Namibia embarked on a journey to explore the Fish-Orange River Basin, to look at water cooperation and water resource management in the Basin and to participate in the national celebration of World Wetlands and World Water Day in Oranjemund.



The main aim of this trip was to practically investigate the uses of water in the upper Fish River catchment (around Hardap), middle Fish River catchment (around Gondwana/Naute) and lower Orange River catchment (from Aussenkehr to the Orange River Mouth Ramsar site). In the upper catchment we focused on the Hardap Dam, which is currently the largest Dam in Namibia. The dam supplies water to the surrounding farmers -, most importantly supporting a huge irrigation scheme, the town of Mariental and the Tourist Resort at Hardap and Game Park surrounding the dam. A combination of flood and sprinkler irrigation is used to water the cultivated crops (maize in summer and wheat in winter). This type of irrigation system can give rise to problems, as the evaporation rate in the area is extremely high and the open water channels can be clogged by reeds, sucking up already limited water. Interestingly, water lost from the dam due to evaporation is more than that which is used in the irrigation scheme. The Hardap Dam also supports a fish (tilapia) farm and a “super farm” dairy , which although a large water user, having 3000 cattle, is aware of the need to recycle water and has its own recycling plant. From the upper catchment we moved down into the middle catchment. As one travels further south water gets scarcer and the landscape gets more arid. The area includes the town of Keetmanshoop, and the nearby site for the proposed Neckertal Dam, which will be the largest Dam in Namibia. The dam wall will be 66m high, the dam will hold 3 times the water volume of



Hardap Dam and is planned to irrigate an area of 5 000 ha. Naute Dam situated in the Lowen River, used for irrigation of dates, a grape plantation and sunflowers, was also visited. Two days were spent in the Gondwana Canyon Park where the Succulent Karoo and Nama Karoo biomes are bisected by the spectacular, breathtaking, Fish River Canyon, an unspoilt landscape. We all agreed it is absolute masterpiece. We were hosted by the Researchers at Holoog within the Gondwana Canyon Park, observed Earth- hour by star-gazing and enjoyed learning about the fauna, flora, geology and the essential role of water in such an arid area. We enjoyed a guided walk along the ridges and !Gab River, close to the research center.



Moving down to the confluence of the Fish and Orange rivers and along the lower Orange River catchment, we traveled from Aussenkehr a large irrigation scheme, where many people from as far away as Caprivi and Kavango come to help pick the grapes, through the Ai-Ais/Richtersveld Transfrontier Park along the internationally shared Orange River. Here we meet Juan Tedder, who had travelled all the way from Pietermaritzburg in South Africa, to give us Mini-SASS training. Mini-SASS (Stream Assessment Scoring System), is a technique used to determine the condition/health of a river by looking at the different types of aquatic invertebrates in the river. Each group of invertebrates has a specific sensitivity score, depending on its tolerance of water conditions. Creatures with high scores can only survive in very good quality, fast flowing, clear, well oxygenated water, while those with low scores are adapted to surviving in poor quality, often polluted waters. The training was simple yet effective and efficient as we were able to use what we had learnt to train the junior school learners from five schools in the basin (Aus, Bethanie, Rosh Pinah, Luderitz and Oranjemund) the following day. These five groups of learners and their school teachers joined the Polytechnic students and together we went on an adventure to experience the Orange River Mouth Ramsar site that we share with South Africa. We explored the plants and birds of the Orange River ecosystem from the Harry Oppenheimer Bridge to where it actually flowed into the sea, learnt about NamDebs' rehabilitation projects and taught the learners how to do mini-SASS. Afterwards the learner, helped by the students from the Polytechnic, prepared short plays and presentations on what they have learned, and so together we all participated in the national World Wetlands Water Day

event held at Oranjemund. The day was a great success. The night ended with a spectacular dinner sponsored by the Scorpion Zinc mine who showed us their artificial wetland the next day.

All of this would not be possible without the gracious sponsorship from ORASECOM, through Christoph Mor, NNF, through Avis, MAWF, MET, NamDeb, Skorpion Zin and the POLYTECHNIC OF NAMIBIA, the hospitality Sue and Trygve Cooper of Gondwana Canyon Park and those who gave up their time to show us around. Thank you to Wessel van Wyk of the Hardap Farmers Association, Melanie Oberholzer of Olthaver and List super farm, Riaan Oberholzer warden of Hardap Park, Bertie Bezuidenhout of Rural Water Supply, Gammy Sikongo and Liana Mbako of Gondwana Canyon Park, Max Witbooi, Vinte Mendes and Wayne Handley of MET and Mr Juan Tedder and Mark Graham of GroundTruth as well as our driver Norton Kruger for our safe journey, Kevin Roberts our backup vehicle from Water Affairs , the World Wetlands Water Day committee and our lecturer, Shirley Bethune for making it possible. It has been an unforgettable experience.