

# Taking back the 'lost' wetland



*Verlorenvlei lies 25 km north of Lambertsbaai, close to the fishing village of Elandsbaai.*

***Community and governmental agencies are cooperating to overcome the challenges facing one of the South Africa's most important wetlands – Verlorenvlei. Article by Petro Kotzé.***

**A**long the West Coast, about 25 km north of Lambertsbaai lies arguably one of the most important wetlands in the country. Close to the fishing

village of Elandsbaai, the 1 500 ha Verlorenvlei strikes an impressive sight. While it faces a number of challenges, the wetland is an interesting example of how governmental organisations, landowners and residents can work together towards sustainable existence around this special ecosystem.

Forming the centre point of the Sandveld, Verlorenvlei is one of the country's few coastal freshwater

lakes and comprises a coastal lake and reedswamp connected to the sea by a small estuary. Its catchment area is bound by the Swartberg and Olifantsrivierberge in the east and by the Piketberg in the south, but even though it is fed by three rivers, it is mainly groundwater driven, making it a very slow-moving system. The region displays high floral species diversity typical of an ecotone area (the region of transition between two

biological communities, karroid and fynbos). Furthermore, the wetland is regarded as one of the ten most important wetlands for wading birds in the south-western cape, being a particularly important wading area for the white pelican (*Pelecanus onocrotalus*) as well as a number of threatened bird species. The wetland's international importance was confirmed when it was proclaimed a Ramsar site in 1991.

**“After three years of stakeholder engagement, the Sandveld potato producers unanimously voted in favour of working in partnership with the Greater Cederberg Biodiversity Corridor towards building a best practice strategy.”**

A number of people depend on, and make use of the wetland for urban, agricultural or industrial uses. It is used as natural veld grazing for sheep and cattle and water is pumped to irrigate the surrounding fields that have been established on the privately-owned farms. Many of the local farmers are dependent on water-intensive potato farming, as well as the dryland crop rooibos harvested for tea. Recently, the wetland's catchment area was also earmarked as a potential tungsten mining site (see sidebar).

Life on and around the vlei, however, has resulted in severe biodiversity and underground water losses. A desktop study conducted in 2006 by CapeNature looked at sequential aerial photographs of the Sandveld between 1989 and 2004 and calculated that the rate of change (natural vegetation being lost to agriculture) was averaging a staggering 2,7 ha per day. Further challenges include the impact of alien vegetation in the upper catchment on water flow while the estuary mouth is frequently closed due



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*A desktop study conducted in 2006 by CapeNature concluded that the rate of change in the Sandveld between 1989 and 2004 was around 2.7 ha per day.*

to sediment build-up and restricted water movement.

The loss of the area's rich biodiversity and habitat, pressure on the freshwater resource and climate change (being part of an area identified as most at risk to suffer from induced warming and rainfall change) add further burdens. But, despite the pressure on the ecosystem, the people depending on the wetland still have to make a living in the semi-desert surroundings of the Sandveld. It was thus decided that urgent intervention was needed to mitigate the destructive consequences of sustaining life on the vlei.

The issue at Verlorenvlei, says Cape Nature's Jenifer Gouza (Programme Manager: Corridors, Biospheres and World Heritage Sites), is essentially one of sustainability. "It is about balancing the socio-economic needs with the environmental needs," she adds.

## FIXING VERLORENVLEI

**U**rgent efforts to relieve the pressure on groundwater resources and mitigate biodiversity losses were tackled by the Greater Cederberg Biodiversity Corridor (GCBC) (a landscape scale corridor initiative). With CapeNature driving



Cape Nature

*In order to tackle the problem of alien vegetation, the GCBC, with Working for Wetlands embarked on rehabilitation intervention in 2006.*

## MINING – A REALITY IN THE VERLORENVLEI CATCHMENT?

Local landowners and residents are continuing their fight against possible open-cast tungsten and molybdenum mining in the Moutonshoek Valley (the catchment area of Verlorenvlei). In the most recent development landowners received letters from Bongani and Withers Environmental as notification that Bongani Minerals was awarded a Prospecting Right for tungsten in the Verlorenvlei catchment on 1 July 2011.

According to the Verlorenvlei Coalition, which was formed to oppose the mining application, Bongani Mineral's first application to prospect was refused in 2005. When a second application to prospect was brought forward, the licence was granted, but was challenged by a judicial review brought on procedural grounds. This right lapsed before the review could go ahead but just before this happened, Bongani Minerals lodged a mining right application in 2009, based on the technicality that they still owned the prospecting right for Riviera Tungsten.

The coalition maintains that the disputed mineral deposit, Riviera Tungsten, is a belt of low grade and widely dispersed tungsten ore in the Moutonshoek valley. They add that mining the ore would pose a serious threat to precious water resources, as it would require blasting through the Krom Antonies River of the surface, as well as two vital aquifers.

The mining right debacle reached the media again earlier this year, when the *Mail & Guardian* published an article questioning the integrity of the department's mineral prospecting rights process. In the article, the acting regional manager who presided over the prospecting rights application at the time was said to be in a close relationship with one of the directors of Bongani Minerals.

Landowners' legal counsel and the Verlorenvlei Coalition will now lodge an appeal against the prospecting approval with the Minister of Mineral Resources, Susan Shabangu.

**FARMING IN THE SANDVELD**

“We understand that the water issue is a very sensitive one,” says Jacobus Smit, whose family has been farming in the Sandveld for decades. “People have been farming here for 300 years and the water quality has not substantially degraded, but,” he agrees, “the water quantity is a different story.” Smit says that the first farm in the area was officially leased around the 1700s and that water abstraction up until 1978 has been relatively modest, because it had to be pumped with a diesel pump.

However, during the past 20 years, following the arrival of Eskom electricity and centre pivots in the 1980s, the area saw a massive increase in potato farming, and as a result, water usage. By 2008 it was estimated that this industry’s total turnover was R400 million per year, employing about 3 250 people, also making it one of the most important food and employment providers in the Western Cape. Almost all irrigation is dependent on groundwater.

Smit explains that the centre pivot circles are rotated every four years to prevent the outbreak of diseases, but that

they have not yet successfully planted any other food crops in the interim periods. Few crops can survive in the almost sterile soil. Consequently, not only is wind erosion problematic (even though some farmers do plant grain in the circles) but to feed a growing market, new land to plant potatoes is forever needed. Furthermore, to compensate for the soil’s low water holding capacity and the potatoes’ water needs, Smit explains that, to irrigate effectively, you have to water twice every 24 hours.

In some areas, like the upper-catchment area of Verlorenvlei in the Moutonshoek Valley, where Smit farms, water usage has dropped since 1998, when farmers started planting other crops like citrus and lucerne.

Smit is adamant that most of the farmers in the area are well aware of the importance of the vlei that they are very much dependent on, as well as the significance of its sustainable use. “We have to be,” he adds, “people here have to farm responsibly and efficiently, because nature ensures that those who mess up won’t survive.”



Rooibos is one of the main crops grown in the Sandveld.



SA Rooibos Council

implementation, the initiative's aim is to introduce people to sustainable ways of using their land and the natural resources of this unique and diverse region.

Gouza explains that through the GCBC, CapeNature has been able to engage with both the potato and rooibos tea industries to encourage best practice farming in the area. "The aim of this engagement with the industries was to support sustainable farming through the development of best practice guidelines to support participant farmers,"

**"The best practice projects have evolved beyond our expectations and we are encouraged by the fact that the industries have taken up these initiatives to support long-term sustainability goals."**

she elaborates. The idea was that, in time, farmers would voluntarily pursue ecologically-friendly farming practices.

After three years of stakeholder engagement, the Sandveld potato producers unanimously voted in favour of working in partnership with the GCBC towards building a best practice strategy. A Rooibos Biodiversity Initiative (RBI) pilot study was also set up with 20 producers spread over the areas of Niewoudsville, Vanrhynsdorp, Gifberg, Nardouwsberg, Biedouw Valley, Clanwilliam, Graafwater, Citrusdal, Piketberg, Redelinghuis and Elandsbaai.

As a result, the Best Practice Guidelines were developed and now form the basis of an auditing and certification system which provides credibility for the efforts made by

producers to support the RBI. The first of these annual audits were completed in December 2008. The RBI has since evolved into Right Rooibos (the current logo under which best practice is implemented), a change indicative of the move from a largely environmental focus to a more sustainability-driven focus taking environmental, social and economic elements into account.

In 2007, Best Practice Guidelines for potato production in the Sandveld were also produced. Collectively, the two best practice projects have yielded more than 50 participating farmers. The potato industry has also identified usage of certain resources, such as water, to focus on. "This is critical for the industry given climate change projections that the area will be drier and warmer," she says.

In order to tackle the problem of alien vegetation, the GCBC, with Working for Wetlands embarked on rehabilitation intervention in 2006. This programme has been "critical" in dealing with the alien invasive problem, says Gouza. It involves the clearing of invasive alien vegetation, the removal of impediments to water flow, reducing sedimentation as well as an awareness campaign. In order to secure priority biodiversity, stewardship agreements with some of the Sandveld landowners have also been undertaken.

Furthermore, in 2009 the Bergriver Municipality, which manages the upper-catchment area of the vleis (Moutonshoek Valley), became the first B-grade municipality in South Africa to become a member of the Local Action for Biodiversity (LAB) programme. This is a global urban biodiversity initiative launched by ICLEI (Local Governments for Sustainability) in partnership with the IUCN (International Union for the Conservation of Nature). ICLEI is an international association of more than 1 200 local governments from around the world that have made a commitment to sustainable development.



Petro Kotzé

According to Gouza, another key accomplishment that has recently taken place is the establishment of the Verlorenvlei Estuary Forum, an essential governance mechanism to ensure that relevant stakeholders are represented and that the estuary is managed properly. The Forum, representative of all relevant government authorities and interest groups in the Verlorenvlei region is the body ultimately responsible for the implementation of the Estuary Management Plan (EMP). The EMP is a 'living' document, continuously refined through implementation but embedded in overarching national, regional and local plans.

Gouza says that CapeNature has undertaken the rehabilitation work of the wetland in the short and medium term. Yet, the long-term sustainability of the wetland and its catchment area rests in the hands of those that benefit most from it: the landowners and residents that live in close proximity to it. From CapeNature's side, their long-term commitment is tied to stewardship agreements with some of the farmers in the Sandveld and surrounding the

wetland. "The best practice projects have evolved beyond our expectations and we are encouraged by the fact that the industries have taken up these initiatives to support long-term sustainability goals," she says. With continued stakeholder participation, the next set of sequential aerial photographs of the Sandveld will hopefully show evidence that the rate of change is swinging in favour of some of the Sandveld's, and the Verlorenvlei wetland's natural vegetation yet again. □

## SOURCES

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Petro Kotzé

**Above left:** The scenic Moutonshoek Valley, in the Verlorenvlei's catchment area, has been earmarked as a possible tungsten and molybdenum mining site.

**Left:** Water is pumped to irrigate the surrounding fields that have been established on the privately owned farms.