



# Water Security South Africa

## Ensuring access to Water for all in South Africa



### Water for all - our top priority...

No person, animal or plant on earth can survive without this wonderful gift from nature we call water. But, the water we have on Earth is finite and, in South Africa, our government has prioritized water conservation high on their agenda. South Africa is the 30th most water scarce country in the world. The average annual rainfall of South Africa is 480 mm per annum, half that of the world, but 21% of the country receives less than 200 mm per year.

Many of the country's water sources are degraded and 50% of our wetlands have been lost to the impacts of agriculture and urban sprawl. Of the 262 municipalities in South Africa, 1/3 do not have access to an in-house engineer and it is estimated that South Africa will experience significant water shortages by the year 2020.

### Northern Cape Demonstration

Namaqualand, is part of the Northern Cape Province and falls within the Succulent Karoo, one of only two arid biodiversity hotspots in the world. The average rainfall for the Namakwa District Municipality is 180mm per year, making water an extremely scarce resource for the region. With livestock farming by far the largest industry in the region, taking up 95% of the land suitable for agricultural use, water is critical to local communal and private farmers to keep their goats and sheep alive.

In the remote rural villages in Namaqualand, water services are often unreliable and local people often rely on water from wetlands for their own consumption during the dry summer months. As a result of ploughing up valley bottoms to plant grains, most of the wetlands in the area have been destroyed and are no longer functioning. This loss of water combined with

the aridity of the region and the predicted decreased rainfall as a result of climate change, bodes ill for farmers, their families and their livestock in the future. In Namaqualand, farmers are reliant on underground water sources as well as wetlands but funding and capacity issues within local government has contributed to heavy losses of not only water but income for farmers – primarily due to broken water infrastructure. The cycle of degradation that can come about from something as harmless as a broken water pump can be devastating. In many areas across Namaqualand you might find 5 or 6 farmers sharing one pump in a remote part of the land. The convergence of stock and farmers around one pump causes trampling and overgrazing of the land, the loss of ground cover and soil erosion. Coupled with that is the poor condition of animals who have to travel too far for water, resulting high mortality rate of weaning lambs and a massive reduction in stock for market for the struggling farmers of the region.

CSA, in partnership with the national program, Working for Wetlands, and the implementing agent, Namaqua National Park, is working to restore critical wetlands and to remove alien invasive water-hungry trees from the wetlands, in the area. Local people are trained and employed to carry out vital restoration work thereby creating work in an area where 60% of the people are without work. This program is immensely successful, with farmers reporting water flow in previously dry wetlands within half a day of invasive aliens being removed.

One particular wetland, restored in the remote village of Leliefontein, proved its worth when it provided enough water to the entire town for over a week when the water infrastructure broke and was left in disrepair during the hottest summer month of the year. Natural infrastructure maintenance is essential to build peoples resilience to these types of disasters.

The cost saving alone to the municipality is enormous and significantly less than the cost to repair hard infrastructure like dams and pipes.

CSA continues to focus on wetland health restoration and education so that natural vegetation can return. The skills to repair and maintain these precious resources are transferred from conservationists to farmers so that they can continue to access this water and fodder resource while keeping it healthy.

Helping local people to achieve water security is critical for both their livelihoods and the plants they depend on as grazing for their

livestock. By ensuring water security in Namaqualand, both the people that live there and the many endemic species that depend on wetlands, will be more resilient to the expected impacts of climate change.

## Eastern Cape Demonstration

Conservation South Africa is working with a group of partners to restore the last remaining undammed river in South Africa. The Umzimvubu is located in the Maputaland Pondoland Albany Hotspot and the programme will see a 20 year investment protect more than 1 million hectares of globally significant grasslands and indigenous forest in the region. The area consists of 22 different vegetation types within 5 of South Africa's 8 eco regions and, along with its many wetlands, provides food, fresh drinking water and ecosystem services to more than 770,000 people in one of South Africa's poorest rural areas.

One of the greatest challenges facing this catchment is the high unemployment rate, with at least one out of three people jobless in this region and massive ecological degradation due to unsustainable human activities. This degradation is evident all over the catchment in the form of dongas or gully erosion, wattle infestation and high silt load in rivers. The conservation effort is estimated to cost about R26,652,840 over the next seven years and could create up to 1,548 green jobs annually.

The degradation of this catchment doesn't only affect water supply, but also leads to loss of good grazing land, poor livestock productivity, loss of fertile topsoil and agricultural productivity, destruction of infrastructure such as roads and bridges that are washed away, and siltation of dams. The catchment restoration and management strategies employed here, and the demonstration projects being implemented, are aiming at being major job creation initiatives, with a multiplicity of long-term benefits in line with the presidential priorities of integrated rural development, job creation, appropriate pro-poor infrastructure development and service delivery.

Implementation will expand from the Upper Catchment to the wider catchment over the next two decades.

# healthy ecosystems benefit human wellbeing in South Africa

## human wellbeing

- access to clean drinking water
- more jobs
- more income for healthier stock

## ecosystem services

- increased water retention of soil
- sustained water supply
- improved grazing

## healthy ecosystems

- removal of alien plant species
- restored grasslands

