

# SANBI

Biodiversity for Life

South African National Biodiversity Institute



## The Eco-DRR project: People, nature and resilience

Scaling up Ecosystem-based Disaster Risk Reduction to manage disasters intensified by climate change in vulnerable regions of South Africa

South Africa faces intensifying climate hazards, with droughts, floods and wildfires increasingly threatening lives and livelihoods. These risks are often worsened by land degradation, which removes the essential protections provided by healthy ecosystems. The Eco-DRR project works to restore ecological infrastructure at a large scale to enhance the ability of ecosystems to act as natural buffers against these disasters. Supported by a US\$ 40.1 million grant from the Green Climate Fund, the project aims to improve the resilience of over 5.4 million people across four district municipalities. By implementing ecosystem-based approaches, South Africa is building a safer, more resilient future for the communities most vulnerable to climate change.



**forestry, fisheries  
& the environment**

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



SOUTH AFRICAN LOCAL  
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## Reality of climate change in South Africa

Climate change in South Africa is no longer a distant threat. It is a current reality. Temperatures are rising at twice the global average and weather patterns are becoming more erratic. Over the past 50 years, droughts, extreme rainfall events and wildfires have become more frequent. These hazards are already impacting millions of people living in rural and peri-urban areas as dams dry up, livestock perish, crops fail, and homes are lost to wildfires or floodwater.

Crucially, these disasters are worsened by land degradation. The spread of invasive plants and widespread soil erosion have stripped away nature's ability to act as a buffer. For many, especially women and youth, these environmental shifts result in a daily struggle for water and food, higher costs of living, and a loss of the natural resources they depend on to survive. Many efforts to help have been too small or disconnected to provide the level of protection that communities vulnerable to climate change urgently need.



Drought



Flood



Wildfire

### What is Eco-DRR?

**Ecosystem-based Disaster Risk Reduction (Eco-DRR) is the sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim to achieve sustainable and resilient development.**

This approach relies on ecological infrastructure, which refers to naturally functioning ecosystems that provide valuable services to people and the economy. Ecological infrastructure can act as a shield that reduces the impacts of droughts, floods and wildfires on people and their livelihoods. Such ecosystem-based approaches are often more cost-effective than engineered solutions, and they also provide extra benefits, like cleaner water, healthier soil, or better grazing for livestock.

Restored wetlands, grasslands and catchments store more water and keep it flowing for longer during dry spells, helping communities maintain food, water and livelihoods during drought.

Healthy wetlands, floodplains and riparian vegetation slow floodwaters, reducing damage to houses, roads and essential services and keeping families safer during extreme storms.

Clearing invasive plants reduces fuel, to slow the spread and intensity of wildfires, helping protect homes, grazing lands and the lives of people and livestock.

## Reducing vulnerability and building resilience

By putting these ecosystem-based approaches into action at scale, the Eco-DRR project aims to improve resilience to climate change for over **5.4 million South Africans**. Through the large-scale restoration of over **68 000 hectares**, the project ensures that ecological infrastructure can once again protect communities. Clearing invasive plants, restoring wetlands and stabilising degraded soils revives the natural functions that reduce people's exposure to droughts, floods and wildfires and strengthens their ability to recover when shocks occur. A core priority is re-

ducing the specific vulnerabilities of women and youth, who often bear the heaviest burden of climate impacts and rely most on natural resources. By targeting **65% youth involvement**, the project builds the skills and sustainable livelihoods needed to ensure that the benefits of a resilient environment continue well beyond the life of the project. This investment in ecological infrastructure helps ensure that communities are better protected, better prepared and better able to sustain their wellbeing in an increasingly unpredictable climate.

## The Eco-DRR project

The Eco-DRR project, officially titled “Scaling up ecosystem-based approaches to managing climate-intensified disaster risks in vulnerable regions of South Africa” is made possible through a US\$ 40.1 million grant from the Green Climate Fund. The South African National Biodiversity Institute (SANBI) acts as both the Accredited Entity and the Executing Entity over the eight-year implementation period. This work is a shared commitment between national and local government, led by the Department of Forestry, Fisheries and the Environment (DFFE) and the South African Local Government Association (SALGA), in close collaboration with the National Disaster Management Centre (NDMC), and supported by provincial governments and the four target district municipalities.

**IF** we use ecosystems to reduce risks from droughts, floods and wildfires,  
**THEN** we build the resilience of communities and nature to climate change,  
**BECAUSE** well-managed ecosystems help to slow, absorb or buffer the impact of these hazards.

### Component 1: Landscape management and livelihoods

This component focuses on restoring over 68 000 hectares of ecological infrastructure by clearing invasive alien plants, restoring wetlands and improving rangeland management. These actions provide protection against floods, droughts and wildfires, while safeguarding municipal assets, such as dams, roads and bridges from damage. These efforts are locally led and gender-inclusive, targeting 65% youth involvement to build long-term skills and resilient livelihoods. Beyond temporary jobs, the project supports the creation of small businesses and encourages ‘eco-champs’ models aimed at processing cleared biomass or implementing rangeland management.



### Component 2: Disaster preparedness and mainstreaming

This component helps local governments shift from reactive response to proactive preparedness. It enhances municipal capacity to manage climate risks by strengthening Early Warning Systems with innovative technologies to send out life-saving information about droughts, floods and wildfires. The project also updates the ‘Green Book’ digital planning tool with the latest climate data to help municipalities plan safer, more resilient settlements and built infrastructure. To ensure long-term impact, Eco-DRR is integrated into municipal spatial plans and budgets, while professional mentorship empowers officials with the technical skills to manage climate risks.



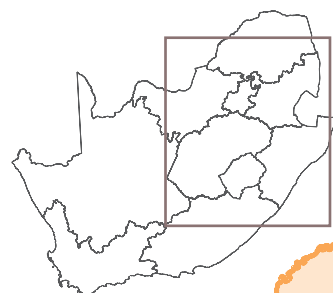
### Component 3: Enabling environment and sustainable finance

This component secures long-term sustainability for the project by building a business case for investments into EcoDRR. It develops innovative financial mechanisms and investment packages to attract permanent private and public sector investment. Using Natural Capital Accounting, the project demonstrates the economic value of ecological infrastructure. Finally, by fostering social learning and accessible information, it ensures that the lessons learnt in the target districts are used to scale up and replicate successful approaches across the entire country.



## The project landscapes

The Eco-DRR project operates in five local municipalities located in four district municipalities across the North West, Limpopo, Mpumalanga and Eastern Cape provinces of South Africa. These were selected for their high climate vulnerability and the potential for nature to provide protection from droughts, floods and wildfires.



### Sekhukhune District

Makhuduthamaga Local Municipality

Improving management of over 12 000 ha of degraded land safeguards ecosystem services for 1.3 million residents and protects assets from extreme heat, heavy rain and floods.

### Ehlanzeni District

Bushbuckridge Local Municipality

Bringing more than 40 000 ha under better management builds resilience for 2.2 million people and protects livelihoods from heat extremes and erratic rainfall.

### Ngaka Modiri Molema District

Ramotshere Moiloa Local Municipality

The population of 0.9 million people is protected from drought and floods by restoring 1 500 ha of wetlands and rangelands to buffer built infrastructure, like roads and dams.

### Alfred Nzo District

Umzimvubu Local Municipality  
Ntabankulu Local Municipality

Restoration of over 12 000 ha of grasslands and wetlands combats extreme rain and rising heat, protecting more than 930 000 people from devastating floods and wildfires.

For more information



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