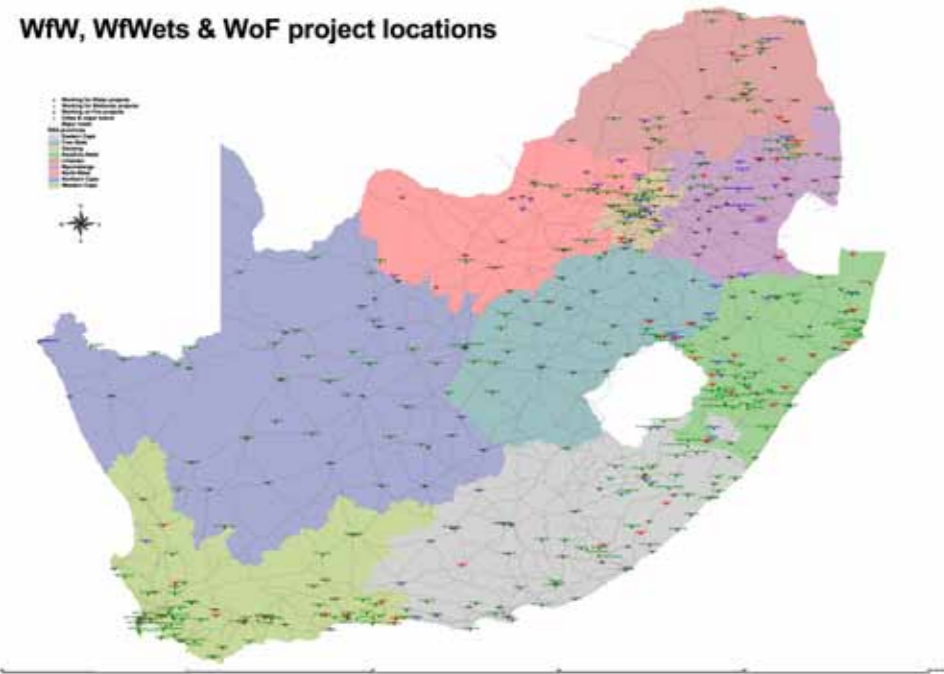


WWF, WWets & WoF project locations



## Biodiversity Briefing Series



This series was developed for the Cape Action for People and the Environment (C.A.P.E.) partnership programme, with support from the South African National Biodiversity Institute (SANBI), the Wilderness Foundation and the Critical Ecosystem Partnership Fund.



### Other biodiversity-related jobs

Many South Africans depend on biodiversity for their livelihoods. Our fishing and game-farming industries are based on the use of biodiversity, as are businesses and communities that harvest products from nature or provide tourists with a wilderness experience. Government and non-governmental organisations also employ many people in protecting the environment and conserving biodiversity.

**Fishing** About 600 000 tons of marine resources are harvested annually by 27 000 South African fishermen and women, with a value of over R2.5 billion. The value of the entire fishing industry, incorporating commercial, recreational and subsistence fishing, was estimated in 2007 to be R4.5 billion a year. Many linefish have been overfished to the point where the industry's survival is threatened, and government has set aside Marine Protected Areas where fishing is not allowed, to enable stocks to be replenished. Government is also committed to protecting wetlands and estuaries as nurseries for fish stocks.

**Conservation** In South Africa, people are employed in a range of scientific and environmental posts that relate to biodiversity – in government departments, provincial nature conservation agencies, municipalities, tertiary institutions, research bodies and non-governmental organisations. In 2007/08 there were about 65 000 public sector jobs in diverse fields – including botanists, zoologists, oceanographers, climate change scientists, game rangers, forestry advisors, biochemists, soil scientists, agricultural extension officers, environmental educators, marine rangers, horticulturalists and geographical information systems technicians.

**Harvesting** Many rural communities depend on harvesting renewable resources for their livelihoods – timber for fuel and shelter, plants for medicine and animals for food. In addition, many people work in small and medium businesses harvesting wild products for sale – like fynbos flowers, ferns, rooibos and honeybush tea, reeds for thatching and basketwork, and plants sold for their aromatic oils or remedies, such as buchu, hoodia and devil's claw. The growing market for wild harvested products has led to an increase in the area of land under conservation management. Government also promotes co-management initiatives that ensure sustainable harvesting or offer alternative livelihoods. Ongoing research is enabling the development of new products from our biodiversity – in the food, horticulture, cosmetics and pharmaceuticals sectors.

**Tourism** South Africa's biodiversity, scenic beauty, sunny climate, cultural diversity and value for money have made it one of the world's fastest-growing holiday destinations, with over 9 million foreigners visiting in 2007. Directly and indirectly, tourism constitutes approximately 7% of employment in South Africa, and is one of our fastest growing sectors - with its contribution to the country's gross domestic product (GDP) increasing from 4.6% in 1993 to 8.3% in 2006. Government is committed to expanding our national parks and provincial nature reserves, broadening tourism opportunities to historically disadvantaged communities, and using land-use planning to maintain scenic beauty in agricultural landscapes.

**Game-farming** The game industry also depends on biodiversity – both the animals and the habitat where they live and graze. Wildlife ranching or game farming is an important provider of jobs in Limpopo and the Northern Cape, and is growing in the Eastern Cape. The sale of wild game has grown substantially in the last 20 years, and professional hunting was estimated in 2007 to support 70 000 jobs and generate R1 billion a year from trophy hunting fees, taxidermy, accommodation and venison. Provincial conservation agencies are working with landowners to manage their veld sustainably.



Heiveld Cooperative members harvesting rooibos in the Sandveld



## Biodiversity as a Resource for Creating Jobs

South Africa has a wealth of natural resources that are key to our development as a nation. Our natural resources include our minerals, our soil, our water and our biodiversity – for example, fish stocks, medicinal plants and game. Natural resources are a form of capital, like infrastructure, land, labour or finance – we can see them as “natural capital”.

As a nation, we need to invest in maintaining, restoring and building our natural capital, so that it can help support socio-economic development for all our people. Investing in looking after our biodiversity is a way of ensuring that it works for us, to fulfil our goals of:

### Creating work and sustainable livelihoods

Achieving rural development, food security and land reform

Delivering water for the nation's needs

Providing protection against climate change

## What is Biodiversity?

**Biodiversity is the full variety of life on Earth – from the tiniest plant to the largest animal.**

**Its complexity is measured in terms of variations in: the number of different species, the genetic wealth within each species and the interrelationships between species in ecosystems.**

**South Africa is one of the most biodiverse countries in the world: with a land area of 1,2 million km<sup>2</sup> - representing just 1.24% of the Earth's surface - South Africa contains almost 10% of the world's known bird, fish and plant species, and over 6% of mammal and reptile species**



Mark Wing

## Creating **green jobs**

**Q. Are green jobs related to energy?**

**A.** Spurred on by the global recession and the need to cut greenhouse gas emissions, there has been a growing interest in "green jobs" that relate to reducing electricity use or providing alternative sources of energy, like solar heating or wind power. These industries can help us mitigate climate change and have the potential to increase entrepreneurship and permanent jobs.

**Q. What about other environmental green jobs?**

**A.** Other green jobs are those relating to looking after the environment – restoring degraded land or wetlands, combating soil erosion, removing alien plants, collecting and sorting recycled waste, building fire breaks or conserving woodland areas - involving long-term jobs and short-term work opportunities.

**Q. How do public works help the environment?**

**A.** In South Africa, many temporary work opportunities are created through the Environmental Sector of the Expanded Public Works Programme (EPWP). In the 2007-8 financial year R1.3 billion was spent on these environmental programmes, creating employment blocks averaging at 100 days for 119 000 previously unemployed people.

*Working for Woodlands employees in the Eastern Cape*



Angus Tanner

## Creating Work & Sustainable Livelihoods

**Q. What environmental programmes exist?**

**A.** The environmental programmes run through government departments including *Working for Water*, *Working for Wetlands*, *Working on Fire*, *LandCare* and *CoastCare*. Other existing programmes are *People and Parks*, operated by SANParks, and *Greening of the Nation*, operated by the South African National Biodiversity Institute (SANBI). New programmes include *Working for Energy*, *Working for Land* and *Working for Woodlands*.

**Q. Are the benefits significant?**

**A.** The EPWP programme aims to create 4.5 million job opportunities from 2009-2014, with R 6 billion earmarked for environmental programmes. The opportunities are mostly short term, but do provide some income and work experience, and EPWP programmes have to provide two days of training for every 22 days worked. In rural areas short-term opportunities can fit well with seasonal demands for labour. Contractors are encouraged to start their own small businesses, but this has not yet occurred on a large scale.

**Q. How do the programmes work?**

**A.** In most of the programmes, contractors undertake to do the work, managing teams of an average of ten workers. Working on Fire, government's premier veld and forest fire-fighting initiative, employs workers on a daily-wage basis. It offers training in veld and forest firefighting and, because of its physical nature, attracts large numbers of youth.

**Q. What is the new wage incentive?**

**A.** During Phase 2 of the EPWP, government is offering a wage incentive to provinces, municipalities and non-state actors like non-governmental organisations (NGOs) who qualify and wish to undertake environmental projects like clearing aliens, rehabilitating wetlands, replanting veld or cleaning up the coastline. The incentive is a grant to pay the basic wage costs of these projects (R50 per worker per day), with non-wage costs covered by other EPWP grants.

**Q. What about the Community Works Programme?**

**A.** Environmental pilot projects will also be carried out through the Community Works Programme (CWP), based on the lessons learnt from a pilot project on donga rehabilitation in Sekhukhune District. CWP projects deliver services where communities have identified needs, with project workers guaranteed a minimum of 100 days of work per year – usually two days a week.

**Q. Can jobs be created with carbon funding?**

**A.** Research has shown that the spekboom plant (*Portulacaria afra*) has enormous capacity to store carbon and offset harmful greenhouse gas emissions. Working for Woodlands in the Eastern Cape is creating jobs and improving grazing for livestock by replanting spekboom. There is considerable potential to tap into international carbon funds for further job creation based on replanting or rehabilitating thicket areas – see case study.

## Jobs in Eastern Cape spekboomveld

The Expanded Public Works Programme, through the Eastern Cape Department of Economic Affairs and Tourism and the Gamtoos Irrigation Board, has established two rehabilitation sites on degraded communal land at Glenmore near Peddie. Spekboom used to grow thickly in the area, providing shade and grazing for livestock, and homes for smaller animals, while enabling rain to seep into the ground instead of running off. The plant is also specially adapted to extract the maximum amount of carbon dioxide from the air and to store it in the leaves and soil.

Through the project, spekboom is being replanted over a large area to prevent further degradation and soil erosion. The project manager, Samora Gusha, from the Gamtoos Irrigation Board, said plans were in the pipeline to create 26 more jobs in the area: "The work teams here at Glenmore consist of 12 members each, including drivers, plus a contractor who is in charge".

"They cut branches of spekboom from healthy established plants in the area and simply plant them in the ground in degraded areas," said Gusha. "If they have sufficient water, the roots will take in the soil in a few weeks. It is a simple process really because spekboom grows so well and easily. We hope in the future – if the market develops – to sell our carbon credits to foreign buyers and in that way inject more money into the communities."

"There are lots of benefits to the communities when projects like this are started and grown," explained Gusha. The teams have been supplied with tools, uniforms and boots and planting is going full steam ahead. Mzimkhulu Nkone, a contractor in charge of one of the teams, said that many people will benefit from the project: "We didn't have jobs and we were suffering. Now we can put food on the table. A lot has changed since we started to work – we are happy to work and earn money."

*Eastern Cape workers taking spekboom cuttings to plant.*



Mike Powell