



**ENVIRONMENT**



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South Africa is home to one-sixth of the world's marine species with the Indian Ocean on the east coast and the Atlantic on the west coast. The country has more species of wild animals than Europe and Asia put together and a vast variety of endemic and migratory birds.

The vision of the Department of Environmental Affairs is to create a prosperous and equitable society living in harmony with the environment.

Government leads protection of the environment by example. At regional level, the provincial conservation agencies are major role players, and independent statutory organisations such as South African National Parks (SANParks) and the South African National Biodiversity Institute (Sanbi) are valuable partners in the country's total conservation effort.

South Africa has taken several concrete steps to implement the United Nations' Agenda 21 on Sustainable Development. These include reforming environmental policies, ratifying international agreements and participating in many global and regional sustainable-development initiatives.

### Environmental heritage

South Africa has between 250 000 and a million species of organisms, many of which occur nowhere else in the world.

While South Africa occupies about 2% of the world's land area, it is estimated that the country is home to 10% of the world's plants and 7% of the reptiles, birds and mammals. The southern African coast is home to almost 15% of known coastal marine species, providing a rich source of nutrition and supporting livelihoods of coastal communities.

#### Important dates:

- World Wetlands Day: 2 February
- National Water Week: 19 to 25 March
- Earth Day: 20 March
- World Water Day: 22 March
- World Meteorological Day: 23 March
- World Environment Day: 5 June
- World Oceans Day: 8 June
- World Desertification Day: 17 June
- National Arbour Week: 1 to 7 September
- International Day for the Protection of the Ozone Layer: 16 September
- World Tourism Day: 27 September
- World Habitat Day: 4 October
- National Marine Day: 20 October



South Africa, as a biodiversity-rich country, is committed to the conservation and sustainable management of biological resources, and is signatory to the following biodiversity-related multilateral agreements:

- Convention on Biological Diversity
- Cartagena Protocol on Biosafety
- Ramsar Convention
- Convention on International Trade in Endangered Species
- Convention to Combat Desertification
- Convention on Migratory Species.

In terms of the number of endemic species of mammals, birds, reptiles and amphibians, South Africa is ranked as the fifth-richest country in Africa and the 24th-richest in the world. It is one of only 17 countries that collectively contain two-thirds of the world's biodiversity.

*The National Spatial Biodiversity Assessment* by the former Department of Environmental Affairs and Tourism and Sanbi revealed that 34% of South Africa's ecosystems were threatened, with 5% critically endangered; while 82% of the 120 main rivers were threatened and 44% critically endangered. Of the 13 groups of estuarine biodiversity, three were in critical danger and 12% of marine biozones were under serious threat.

South Africa's National Biodiversity Strategy and Action Plan aims to guide conservation and the management of biodiversity to ensure sustainable and equitable benefits for all communities.

The country's three globally recognised biodiversity hotspots are: the Cape Floral Region, which falls entirely within South African boundaries; the Succulent Karoo, which South Africa shares with Namibia; and Maputaland-Pondoland, which South Africa shares with Mozambique and Swaziland.

The coastline meets the Atlantic, Indian and Southern oceans, which provide exceptional habitats ranging from cool water kelp forests to tropical coral reefs.

The Cape Floral Kingdom has the highest recorded species diversity for any similar-sized temperate or tropical region in the world. It is a world heritage site.

Biodiversity is protected and promoted through institutions and initiatives such as the:

- South African Biodiversity Facility
- South African Biosystematics Initiative

At the end of September 2010, the former Minister of Water and Environmental Affairs, Ms Buyelwa Sonjica, and the MECs responsible for the environmental portfolio in the provinces, signed delivery agreements to realise Outcome 10, which takes its cue from President Jacob Zuma's 2010 State of the Nation Address wherein he committed that government would ensure that the country's environmental assets and natural resources are valued, protected and continually enhanced.



- South African Environmental Observation Network
- Biobank South Africa
- Sanbi.

## **Biomes**

There are eight major terrestrial biomes, or habitat types, in South Africa. These biomes can, in turn, be divided into 70 veld types.

The biomes are the Savanna, Nama-Karoo, Succulent Karoo, Grassland, Fynbos, Forest, Thicket and Desert. The Fynbos Biome is one of only six floral kingdoms worldwide.

## **Conservation areas**

There are a number of management categories of protected areas in South Africa, which conform to the accepted categories of the International Union for the Conservation of Nature.

South Africa has a long-term strategy to expand the conservation areas under formal protection from 6% to the international standard of 10% of the total area of the country. The Department of Environmental Affairs has developed mechanisms for the establishment and expansion of protected areas.

The department has committed significant financial resources towards the expansion of formal protected areas, bringing the number of national parks to 19, and the total formal conservation estate to four million hectares. Since 2004, the department has declared four new marine protected areas (MPAs), increasing the total coastline under protection to 20%.

## **Scientific reserves**

These are sensitive, undisturbed areas managed for research, monitoring and maintenance of genetic sources. Access is limited. Examples are Marion Island and the Prince Edward islands near Antarctica.



At the end of August 2010, the fourth People and Parks Conference took place in KwaZulu-Natal under the theme: *Conservation for the People with the People*.

At the same time, the National Co-Management Framework was launched and various issues of transformation in the biodiversity and conservation sector were addressed.



## Wilderness areas

These areas are extensive in size, uninhabited, and under-developed, and access to them is strictly controlled. Examples are the Cederberg Wilderness Area and Dassen Island in the Western Cape.

## National parks and equivalent reserves

SANParks manages a system of parks which represents the indigenous fauna, flora, landscapes and associated cultural heritage of the country. Of all the national parks, most have overnight tourist facilities, with an unrivalled variety of accommodation in arid, coastal, mountain and bushveld habitats.

National parks offer visitors an unparalleled diversity of adventure tourism opportunities, including game viewing, bush walks, canoeing and exposure to cultural and historical experiences. Conferences can also be organised in many of the parks.

The national parks are: Kruger, Table Mountain, Marakele, Golden Gate, Camdeboo, Mountain Zebra, Addo Elephant, Garden Route National Park (Tsitsikamma, Knysna, & Wilderness), Bontebok, Agulhas, West Coast, Karoo, Namaqua, Augrabies, Kgalagadi, Mapungubwe, Tankwa Karoo, Mokala and /Ai-/Ais Richtersveld Transfrontier Park.

Commercial and tourism-conservation development and the involvement of local communities are regarded as performance indicators. These areas include national parks, provincial parks, nature reserves and indigenous state forests proclaimed in terms of the National Environment Management: Protected Areas Act, 2003.

South Africa is in the process of establishing transfrontier conservation areas (TFCAs) in cooperation with its neighbouring countries.

The conservation status of the areas within these TFCAs varies from national parks, private game reserves and communal natural-resource management areas to hunting

The Agulhas Biodiversity Initiative and the Biodiversity Conservation and Sustainable Development (BCSD) Project, two Cape Action for People and the Environment (CAPE) projects, received top ratings for project implementation from the United Nations Development Programme (UNDP) for 2009. These projects were funded by the Global Environment Facility through the World Bank and the UNDP. The South Africa National Biodiversity Institute's Fynbos Programme provides coordination for both the CAPE partnership and the BCSD Project.



concession areas. Though fences, highways, railway lines or other barriers separate the constituent areas, they are managed jointly for long-term sustainable use of natural resources.

TFCAs aim to facilitate and promote regional peace, cooperation and socio-economic development. The success of TFCAs depends on community involvement. In turn, TFCAs are likely to provide local communities with opportunities to generate revenue.

TFCAs allow tourists easy movement across international boundaries into adjoining conservation areas.

The seven TFCAs are as follows:

- Ai-Ais/Richtersveld TFCA
- Kgalagadi Transfrontier Park
- Kavango-Zambezi
- Greater Mapungubwe (former Limpopo-Shashe) TFCA
- Great Limpopo Transfrontier Park
- Lubombo Transfrontier Conservation and Resource Area
- Maloti-Drakensberg Transfrontier Conservation and Development Area

The National Environmental Management: Protected Areas Amendment Act, 2004 protects South Africa's biosphere reserves, which are generally formed around existing core conservation areas.

In October 2010, an interim National Wildlife Crime Reaction Unit was established with the aim of responding to wildlife crimes and more specifically, the upsurge of rhino poaching and smuggling of rhino horn.

The unit is led by the Department of Environmental Affairs, but includes members from the South African Police Service as well as the National Prosecuting Authority, the South African National Parks and Ezemvelo KwaZulu-Natal Wildlife.





In August 2010, several stakeholders attended the Lead SA Rhino Summit in Johannesburg. The intention of the summit was to improve communication and coordination among the anti-poaching initiatives by South African National Parks, government, police and security agencies, private game reserves and rhino owners as well as other conservation and wildlife organisations. By mid-August 2010, 182 rhinos had been killed by poachers compared to 13 in 2007.

Biosphere reserves include outstanding natural beauty and biological diversity, exist in partnership with a range of interested landowners and can incorporate development, as long as it is sustainable, while still protecting terrestrial or coastal ecosystems.

South Africa added a sixth biosphere reserve to its register when the Vhembe region of Limpopo became one of 22 newly proclaimed reserves by the United Nations Educational, Scientific and Cultural Organisation (Unesco). The new biospheres, located in 17 countries, were added to Unesco's World Network of Biosphere Reserves during the 21st session of the International Coordinating Council of the Man and the Biosphere Programme. By March 2011, the total stood at 564 sites in 109 countries.

The other biosphere reserves in South Africa are:

- Kogelberg Reserve
- Cape West Coast Biosphere Reserve
- Cape Winelands Biosphere Reserve
- Waterberg Biosphere Reserve
- Kruger-to-Canyons Biosphere Reserve.

## National and cultural monuments

These are natural or cultural features, or both, and may include botanical gardens, zoological gardens, natural heritage sites and sites of conservation significance.

## World heritage sites

By August 2010, the World Heritage List included 911 properties forming part of the cultural and natural heritage. These included 704 cultural, 180 natural and 27 mixed properties in 151 state parties. By June 2010, 187 state parties had ratified the World Heritage Convention.

In December 1999, Robben Island, the iSimangaliso Wetlands Park and the Cradle of Humankind were proclaimed world heritage sites by Unesco.

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The uKhahlamba-Drakensberg Park was nominated as a mixed site. In July 2003, the site of the Mapungubwe civilisation became the country's fifth world heritage site. The Cape Floral Region also became a world heritage site at the end of June 2004.

The Vredefort Dome in the Free State was declared South Africa's seventh world heritage site at the 29th session of the Unesco World Heritage Conference held in Durban in July 2005.

Makapan Valley in Limpopo and the Taung Cave in North West were declared extensions of the Cradle of Humankind.

The Richtersveld Cultural and Botanical Landscape was declared a world heritage site in 2007 and covers an area of 160 000 ha of dramatic mountainous desert in the north-western part of South Africa.

### Habitat and wildlife management areas

These areas include conservancies; provincial, regional or private reserves created for the conservation of species, habitats or biotic communities; marshes; lakes; and nesting and feeding areas.

### Sustainable-use areas

These areas emphasise the sustainable use of products in protected areas such as the Kosi Bay Lake System in KwaZulu-Natal.

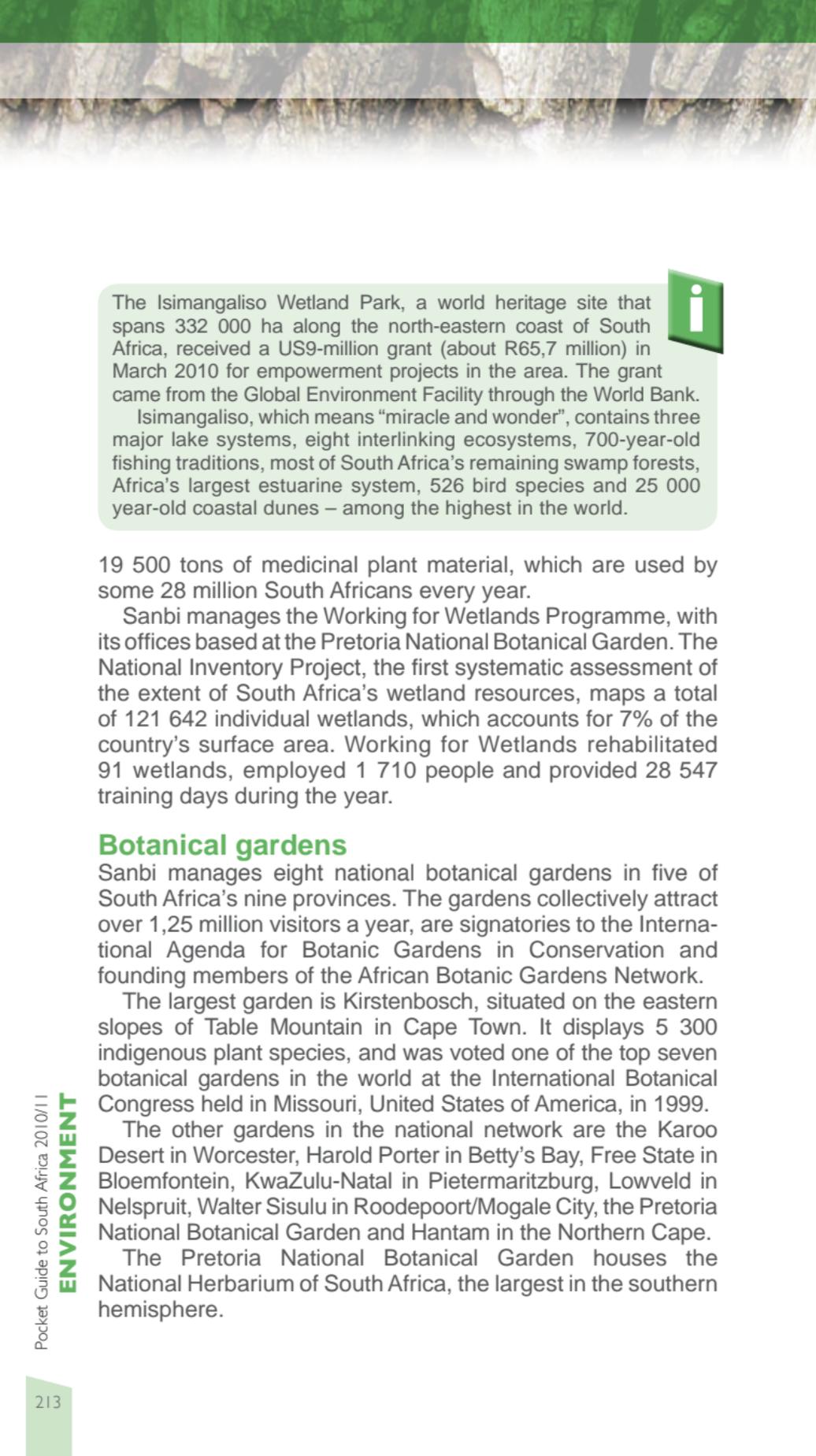
### Wetlands

Wetlands include a wide range of inland and coastal habitats – from mountain bogs, fens and midland marshes to swamp forests and estuaries, linked by green corridors of streambank wetlands.

By February 2010, about 115 000 wetlands covering over four million ha comprising close to 4% of the country's total surface area were mapped in South Africa. These wetlands are part of the natural infrastructure for gathering, managing and delivering water for human use.

The Working for Wetlands Programme focuses on wetland restoration, while maximising employment creation, support for small, medium and micro-enterprises and skills transfer.

Many wetland plants have medicinal value. In South Africa, traditional medicine is the preferred primary healthcare choice for about 70% of the people. Wetlands provide some of the



The Isimangaliso Wetland Park, a world heritage site that spans 332 000 ha along the north-eastern coast of South Africa, received a US9-million grant (about R65,7 million) in March 2010 for empowerment projects in the area. The grant came from the Global Environment Facility through the World Bank.

Isimangaliso, which means “miracle and wonder”, contains three major lake systems, eight interlinking ecosystems, 700-year-old fishing traditions, most of South Africa’s remaining swamp forests, Africa’s largest estuarine system, 526 bird species and 25 000 year-old coastal dunes – among the highest in the world.

19 500 tons of medicinal plant material, which are used by some 28 million South Africans every year.

Sanbi manages the Working for Wetlands Programme, with its offices based at the Pretoria National Botanical Garden. The National Inventory Project, the first systematic assessment of the extent of South Africa’s wetland resources, maps a total of 121 642 individual wetlands, which accounts for 7% of the country’s surface area. Working for Wetlands rehabilitated 91 wetlands, employed 1 710 people and provided 28 547 training days during the year.

## Botanical gardens

Sanbi manages eight national botanical gardens in five of South Africa’s nine provinces. The gardens collectively attract over 1,25 million visitors a year, are signatories to the International Agenda for Botanic Gardens in Conservation and founding members of the African Botanic Gardens Network.

The largest garden is Kirstenbosch, situated on the eastern slopes of Table Mountain in Cape Town. It displays 5 300 indigenous plant species, and was voted one of the top seven botanical gardens in the world at the International Botanical Congress held in Missouri, United States of America, in 1999.

The other gardens in the national network are the Karoo Desert in Worcester, Harold Porter in Betty’s Bay, Free State in Bloemfontein, KwaZulu-Natal in Pietermaritzburg, Lowveld in Nelspruit, Walter Sisulu in Roodepoort/Mogale City, the Pretoria National Botanical Garden and Hantam in the Northern Cape.

The Pretoria National Botanical Garden houses the National Herbarium of South Africa, the largest in the southern hemisphere.

In October 2010, a delegation comprising senior government officials within the environmental sector from national and provincial departments and conservation authorities, led by the Department of Environmental Affairs, attended the 10th meeting of the 10th Conference of Parties to the Convention on Biological Diversity in Nagoya, Japan. South Africa supported recommendations that articulate the role of biodiversity in climate-change mitigation and adaptation.



## Zoos

There are a number of zoological gardens in South Africa. The 85-ha National Zoological Gardens (NZG) of South Africa in Pretoria is one of the world's 10 best. It attracts more than 600 000 visitors annually. The national zoo is responsible for the biodiversity conservation centres in Lichtenburg and Mokopane, and the satellite zoo and animal park at the Emerald Animal World complex in Vanderbijlpark.

The NZG is a national research facility, which presents an opportunity for the zoo to reposition itself as one of the world leaders in breeding and researching endangered species.

The NZG in Pretoria as well as the two biodiversity conservation centres and the Emerald Animal World Complex collectively houses 3 117 specimens of 209 mammal species, 1 358 specimens of 202 bird species, 3 871 specimens of 190 fish species, 388 specimens of four invertebrate species, 309 specimens of 93 reptile species and 44 specimens of seven amphibian species.

## Marine protected areas

The MPAs are modelled on the success of the iSimangaliso Wetlands Park – with strict zoning of both marine and coastal protected areas. The four MPAs are: Aliwal Shoal on the south coast of KwaZulu-Natal, the coastal and marine environment next to Pondoland in the Eastern Cape, Bird Island at Algoa Bay and the Cape Peninsula in the Western Cape.

Some of the protection measures implemented in the MPAs are restrictions for people who want to fish, as well as restrictions for stowing fishing gear when fishing from a vessel.

Durban will host the 17th Conference of the Parties of the United Nations Framework Convention on Climate Change in December 2011.

