



ENVIRONMENT

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South Africa is a land of variety and extremes; its climatic conditions, for example, vary considerably, notably from the coastal to the inland regions. Topographically it is also characterised by extremes, ranging from a narrow coastal plain to a steep escarpment and a large plateau.

Although it has a land surface area of just over 1,2 million km² – representing just 2% of the Earth's total land surface – South Africa contains almost 10% of the world's known bird, fish and plant species, and more than 6% of the world's mammal and reptile species.

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 conservation efforts.

Government is committed to protect the country's rich biodiversity heritage for the benefit of all, and to create a prosperous and equitable society that live in harmony with its natural 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

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 Harbour 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

- Convention on Migratory Species
- Nagoya Protocol.

Policies

Climate Change Policy Framework

In July 2012, the Minister of Public Enterprises, Mr Malusi Gigaba, launched the Department of Public Enterprises' Climate Change Policy Framework for all state-owned companies (SOCs) under his portfolio. The framework is to optimise the impact of the SOCs on the reduction of carbon emissions and development of the green economy without compromising the SOCs' financial viability. An announcement on the move towards a biofuels strategy and the signing of the UN Global Compact by SOCs also followed.

The framework is intended to guide longer term actions required to put South Africa on a low-carbon development path and to ensure that the SOCs lead as agents of change in the process of building a green economy.

The Green Economy Accord

In 2012, the National Development Plan was launched as a new economic framework for South Africa. It aims to create an additional 11 million jobs by 2030. The Green Economy Accord is the fourth accord of the New Growth Path Policy and sets out 12 commitments to give effect to the green economy.

Role players

South African National Biodiversity Institute

Sanbi manages South Africa's nine national botanical gardens, classified as conservation gardens, located in five of the country's nine provinces. Together, they conserve more than 7 500 ha of natural vegetation. The National Herbarium, situated within the Pretoria National Botanical Garden, houses the largest collection of scientific plant specimens in southern Africa, with over one million specimens.

In July 2012, the International Wildlife Management Congress in July 2012 was held at Durban's International Convention Centre. It was hosted by American Maryland-based Wildlife Society in partnership with SANational Parks, the Wildlife and Environmental Society of South Africa, and Ezemvelo KwaZulu-Natal Wildlife. The theme was *Cooperative Wildlife Management Across Borders: Learning in the Face of Change*.

South African National Parks

The work of SANParks focuses on building strategic partnerships at international, national and local levels, in support of the conservation of the natural and cultural heritage of South Africa. In 2012, SANParks was responsible for the management of 22 national parks.

iSimangaliso Wetland Park Authority

iSimangaliso stretches over 332 000 ha and comprises 9% of South Africa's coastline. It includes five ecosystems (marine, coastal dunes, lake systems, wetlands, and woodlands). The species lists for the park are the longest in the region. Of the species listed in the park, 56 are endemic to KwaZulu-Natal, 108 to South Africa and 467 are listed as threatened and endangered in South Africa. The park also has four Ramsar sites.

Conservation areas

Protected areas

South Africa has 528 protected areas, of which 20 are marine, totalling 7,5 million ha or 6,2% of the land area.

Scientific reserves

Scientific reserves are sensitive and undisturbed areas managed for research, monitoring and the maintenance of genetic sources.

Access is limited to researchers and staff. Examples of such areas are Marion Island and the Prince Edward Islands near Antarctica.



Wilderness areas

These areas are extensive, uninhabited and underdeveloped, and access is strictly controlled with no vehicles allowed. The highest management priority is the maintenance of the intrinsic wilderness character. Wilderness areas include the Cederberg Wilderness Area and Dassen Island in the Western Cape, and the Baviaanskloof Wilderness Area in the Eastern Cape.

Biomes

There are eight major terrestrial biomes, or habitat types, in South Africa. These biomes are 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.

National parks and equivalent reserves

SANParks manages 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.

South Africa has the following national parks:

- Addo Elephant National Park
- Agulhas National Park
- Augrabies Falls National Park
- Bontebok National Park
- Camdeboo National Park
- Garden Route (Tsitsikamma, Knysna and Wilderness) National Park
- Golden Gate Highlands National Park
- Karoo National Park
- Kruger National Park
- Mapungubwe National Park
- Marakele National Park

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Only about 6% of South Africa's land is covered by protected areas. The Mountain Zebra-Camdeboo Project aims to improve the conservation status of the land to create a corridor between the two national parks. It will provide private landowners with the option to protect their land from environmental threats while maintaining land use.

The project's area covers about 530 000 ha and includes sections of four biomes – grassland, Nama Karoo, thicket and savanna – as well as six major vegetation types and a globally important birding area.

It is envisaged that the corridor will consist of a mosaic of SANParks-managed and privately owned and managed properties, which are expected to stimulate economic development and tourism while protecting the area from inappropriate development.


- Mokala National Park
- Mountain Zebra National Park
- Namaqua National Park
- Table Mountain National Park (which incorporates the Cape of Good Hope, Table Mountain and Silvermine nature reserves)
- Tankwa Karoo National Park
- West Coast National Park.

A transfrontier conservation area (TFCA) is a cross-border region. The conservation status of the areas within a TFCA ranges from national parks, private game reserves and communal natural-resource management areas to hunting-concession areas. TFCAs allow tourists easy movement across international boundaries into adjoining conservation areas.

The seven TFCAs are as follows:

- Ai-Ais/Richtersveld
- Kgalagadi Transfrontier Park
- Kavango-Zambezi
- Greater Mapungubwe
- 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.

South Africa's biosphere reserves include:

- Vhembe, situated in the north-east of Limpopo, which includes the northern part of the Kruger National Park; the Makuleke Wetland, which is protected under the Ramsar Convention; the Soutpansberg and Blouberg biodiversity hot spots; and the Makgabeng Plateau.
- The 100 000-ha Kogelberg Reserve on the country's southern coast is in the middle of the Cape Floral Region and home to 1 880 different plant species, 77 of which are found only in this region.

The Cape West Coast Biosphere Reserve starts in Cape Town in the southern suburb of Diep River and stretches up the west coast as far as the Berg River, encompassing parts of the Cape Floral Region. The reserve includes the Ramsar-protected Langebaan Lagoon as well as Dassen Island, which is home to several protected bird species.

The Cape Winelands Biosphere Reserve includes a part of the Cape Floral Region, as well as the wine-growing region.

The 400 000 ha Biosphere Reserve, in the Waterberg in Limpopo is an important catchment area for the Limpopo Basin, with four large rivers originating within its borders – the Lephalele, Mokolo, Matlabas and Magalakwena rivers.

The Kruger-to-Canyons Biosphere Reserve stretches from the Kruger National Park to the Blyde River Canyon. It is an important conservation area as it covers three biomes.

In November 2012, the Gouritz Cluster Biosphere Reserve was recognised by the UN Educational, Scientific and Cultural Organisation (Unesco) in terms of the Man and Biosphere Programme.

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.

World heritage sites

South Africa has seven world heritage sites proclaimed by Unesco, namely:

- Robben Island
- iSimangaliso Wetlands Park
- the hominid sites at Swartkrans, Sterkfontein and Kromdraai (known as the Cradle of Humankind)
- Ukhahlamba-Drakensberg Park (mixed natural and cultural)
- Mapungubwe Heritage Site
- Cape Floral Kingdom
- Richtersveld Cultural and Botanical Landscape.

Wetlands

By 2012, about 115 000 wetlands, covering over four million ha and comprising close to 4% of the country's surface area, had been mapped in South Africa. The Department of Environmental Affairs is responsible for the South African Wetlands Conservation Programme, which ensures that South Africa's obligations in terms of the Ramsar Convention are met.

South Africa's Ramsar sites include:

- Barberspan
- Blesbokspruit Nylsvley Nature Reserve
- De Hoop Vlei
- De Mond (Heuningnes Estuary)
- Kosi Bay
- Langebaan
- Makuleke Wetlands
- Ndumo Game Reserve
- Ntsikeni Nature Reserve
- Nylsvley Nature Reserve
- Orange River Mouth Wetland
- Prince Edward Islands in Antarctica
- Seekoeivlei
- St Lucia
- the turtle beaches and coral reefs of Tongaland
- Ukhahlamba-Drakensberg Park
- Verlorenvlei Nature Reserve
- Wilderness Lakes.



Marine protected areas (MPAs)

MPAs conserve natural environments and assist in the management of fisheries by protecting and rebuilding economically important stocks. South Africa's MPAs include:

- Aliwal Shoal, KwaZulu-Natal
- Betty's Bay, Western Cape
- Bird Island, Eastern Cape
- De Hoop, Western Cape
- Dwesa-Cwebe, Eastern Cape
- False Bay, Western Cape
- Goukamma, Western Cape
- Hluleka, Eastern Cape
- iSimangaliso, KwaZulu-Natal
- Langebaan Lagoon, Sixteen Mile Beach, Malgas Island, Marcus Island, Jutten Island, Western Cape
- Pondoland, Eastern Cape.
- Robberg, Western Cape
- Sardinia Bay, Eastern Cape
- Stilbaai, Western Cape
- Table Mountain, Western Cape
- Trafalgar, KwaZulu-Natal
- Tsitsikamma, Western Cape.

Zoological gardens

Established in 1899 and given national status in 1916, the National Zoological Gardens of South Africa in Pretoria is the largest zoo in the country and the only one with national status. The 85-hectare zoo 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.

The Johannesburg Zoo covers 81 hectares. It houses more than 320 species of animals, totaling about 2 000 animals including crocodiles, Siberian tigers, hippos and rhinos.

Bloemfontein Zoo was established in 1920. Covering 15 hectares, it housed 65 animal species including tigers, panthers, lions, buffalo and antelope.

Breeding centres

There are a number of game-breeding centres in South Africa. The National Zoological Gardens of South Africa is responsible for the management of the Lichtenburg Biodiversity Conservation Centre, which covers an area of some 6 000 ha, and the Mokopane Biodiversity Conservation Centre, covering 1 333 ha.

The Lichtenburg Biodiversity Conservation Centre houses, among other animals, Père David's deer, which is extinct in the wild, pygmy hippopotamus, white rhino, the endangered addax, and scimitar-horned and Arabian oryx. The Mokopane Biodiversity Conservation Centre is home to an abundance of exotic and indigenous fauna such as lemur, the rare tsessebe, roan antelope and black rhino.

The De Wildt Cheetah and Wildlife Centre, situated near Pretoria, is best known for its highly successful captive-breeding programme that contributed to the cheetah being removed from the endangered list in the *South African Red Data Book – Terrestrial Mammals* in 1986. The De Wildt Vulture Unit is a rehabilitation and holding facility for injured, poisoned and disabled vultures.


The Hoedspruit Endangered Species Centre in Mpumalanga was initially established as a breeding programme for the then endangered cheetah.

Aquariums and oceanariums

There are aquariums in Pretoria, Port Elizabeth, Cape Town, Durban and East London. The Aquarium and Reptile Park of the National Zoological Gardens in Pretoria is the largest inland aquarium in Africa.

The Port Elizabeth Oceanarium's exhibits include an underwater observation area, a dolphin research centre, various smaller tanks containing 40 different species of bony fish and two larger tanks that display sharks and stingrays. East London aquarium will be 82 years old in 2013, making it South Africa's oldest aquarium.

At the Two Oceans Aquarium situated at the Victoria and Alfred Waterfront, Cape Town, more than 3 000 specimens



represent some 300 species of fish, invertebrates, mammals, birds and plants supported by the waters along the Cape coast. The aquarium at uShaka Marine World in Durban incorporates both fresh and sea water species.

Snake and reptile parks

The Port Elizabeth Snake Park at Bayworld has a wide variety of South African and foreign reptiles. The Aquarium and Reptile Park at the National Zoological Gardens in Pretoria houses 80 reptile species from all over the world.

The Hartbeespoort Dam Snake and Animal Park near Pretoria features one of the finest reptile collections in southern Africa. The Pure Venom Reptile Farm is one of the largest of South Africa's reptile parks. It is situated inland from Shelly Beach, on KwaZulu-Natal's South Coast.

The Croc River Enviro Park in Nelspruit, Mpumalanga is the largest facility of its type in Africa. Khamai Reptile Centre's primary aim are conservation, breeding of endangered reptiles and education. Located outside Hoedspruit in Mpumalanga, it offers a close-up look at many local as well as exotic snakes, crocodiles and lizards.

Protecting environmental resources

The department is increasing its capacity to address potential wildlife crimes. Internationally, it will continue to play an active role in supporting and contributing towards global forums, including Interpol's Wildlife Crime meetings, the Cites Rhinoceros Task Force, the regional Rhino and Elephant Security Group and other rhino management groups and initiatives.

Protecting the coastline

To counter illegal activities along the coastline, as well as the country's 1 155 000-km² Exclusive Economic Zone (EEZ), the former Department of Environmental Affairs and Tourism boosted its compliance unit with the appointment of more than 80 fishery control officers and 100 honorary fishery control officers, after the implementation of the Honorary Fishery

Rhino poaching statistics released in January 2013 by the Department of Environmental Affairs reveal that 668 rhinos were poached in South Africa in 2012.

In March 2013, rhino poaching statistics indicated that the Kruger National Park remained the hardest hit, with 15 rhino poached since 20 February 2013. Twelve rhino had been poached in KwaZulu-Natal and North West provinces each, while eight had been poached in Limpopo and seven in Mpumalanga.

Of the 50 people arrested, 47 were alleged poachers and three had been charged with the illegal trade in rhino horn following their arrest in possession of three rhino horns, during a raid in Johannesburg in February 2013.

Control Officers Policy.

The department patrols up to the 200 nautical-mile limit from the shore and the most remote reaches of the EEZ as well as around the Prince Edward Islands. The vessels also conduct multilateral patrols in the Southern African Development Community (SADC) coastal states.

Vessel monitoring

Five coastal nations in the SADC have taken the innovative step of linking their vessel-monitoring systems. South Africa, Namibia, Angola, Mozambique and Tanzania have signed a memorandum of understanding that will allow them to share information about the movement of licensed boats along the southern African coast.

Recycling

The National Recycling Forum is a non-profit organisation created to promote the recovery and recycling of recyclable materials in South Africa.

Collect-a-can, one of the oldest recycling initiatives in South Africa, has been instrumental in creating a culture of recycling.

In August 2012, the Integrated Industry Waste Tyre Management Plan of the Recycling and Economic Development Initiative of South Africa was gazetted for immediate implementation.