

Press release: NBA launch day 3 October 2019 – for immediate release

Well protected biodiversity but increased threats, reveals National Biodiversity Assessment

National Biodiversity Assessment (released by SANBI today) reveals success at assessing and protecting our biodiversity, but nearly 14% of species and 50% of ecosystem types in South Africa are threatened.

Almost half of all South Africa's 1 021 ecosystem types are threatened with ecological collapse and one in seven of the 23 312 indigenous species that were assessed are considered threatened with extinction. The National Biodiversity Assessment (NBA), released today by the Minister of Environment, Forestry and Fisheries, is a key reporting process for the state of our biodiversity.

However, efforts to protect our biodiversity are showing promising outcomes, as over two-thirds of ecosystem types and 63% of species assessed are represented in protected areas. This is good news for both biodiversity and the economy.

The four-year study led by the South African National Biodiversity Institute (SANBI) found that major pressures on South Africa's biodiversity are habitat loss, changes to freshwater flow (e.g. as a result of over-abstraction), overuse of some species, pollution, climate change and invasive alien species.

South Africa's is ranked in the top three countries globally when it comes to plant and marine species endemism (species found nowhere else on earth). The diversity and uniqueness of South Africa's species and ecosystems makes us one of the world's 17 megadiverse nations – countries that together contain more than two thirds of the world's biodiversity. "South Africa is a global leader in the field of national assessments of biodiversity and is the only megadiverse nation to have assessed its species and ecosystems for the third time," said Dr Andrew Skowno, lead scientist of the NBA at SANBI.

At the launch function today, Minister of Environment, Forestry and Fisheries, Ms Barbara Creecy, commented that with this wealth of biodiversity comes the responsibility of ensuring it is both protected and used sustainably. She said: "Biodiversity is central to South Africa's national objectives of addressing poverty, inequality and unemployment, and supports increased economic growth and improved service delivery for all its citizens. Every decision taken, whether by governments or individuals, affects the future of biodiversity."

South Africa's economy is highly dependent on its biodiversity – for example: biodiversity-related employment is estimated at 418 000 jobs; biodiversity tourism generates a direct spend of R31 billion annually; and our approximately 2 000 medicinal plant species contribute to the African Traditional Medicine sector worth ~R18billion per year.

Nature is declining globally at rates unprecedented in human history – as documented by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) earlier this year when they released their Global Assessment on Biodiversity and Ecosystem Services. Dr Skowno said, "The NBA is nationally-focussed work that complements the international processes well. South Africa has provided numerous contributions to the various IPBES assessments. The global biodiversity assessment and South Africa's NBA contain many of the same themes, and the overall findings are complementary".

Headline findings of the NBA include:

1. Estuaries and wetlands are the most threatened ecosystems in SA, and their restoration and protection will deliver a large return on investment

Of all the natural realms (terrestrial, freshwater, estuarine, marine), estuaries and inland wetlands have the highest proportion of threatened ecosystem types, and face numerous pressures. Approximately 99% of estuarine area and 88% of wetland area is threatened. Less than 2% of their extent is in the Well Protected category.

The restoration and protection of estuaries and inland wetlands will deliver large return on investment, as these small ecosystems deliver disproportionate benefits for people. Wetlands protect human settlements from flood waters and also clean pollutants from freshwater. Estuaries are crucial nurseries for many fish species important for human consumption, and are focal places for tourism and recreation.

2. Protected areas: investment success in the ocean and on land

Two thirds of ecosystem types are represented in the protected area network, leaving 31% of types unprotected. "This means South Africa is doing quite well at protecting its terrestrial and marine ecosystem types through careful protected area expansion strategies that take threatened ecosystem types into account," said Skowno. "Wetland and river ecosystem types have the lowest levels of protection, which shows we need to put more effort into protecting our precious aquatic ecosystems."

Protected areas have expanded in the ocean and on land and are a source of pride for South Africans. Continued expansion will help to ensure biodiversity conservation, ecological sustainability and even more social and economic benefits from biodiversity to society. Protected areas now cover nearly 9% of South Africa's mainland area and 75% of terrestrial ecosystem types have some form of representation.

Dr Kerry Sink, head of the Marine Unit at SANBI, remarks that the 20 new Marine Protected Areas (MPAs) declared in 2019 ensure that 5% of the country's mainland marine territory and 87% of marine ecosystem types have some protection.

"This is a huge improvement, as previously MPAs covered less than 0.5% of the ocean around South Africa. The new MPA network added about 53 000 km² to South Africa's Protected Area estate. This expanded MPA network will help to boost tourism, protect marine ecosystems, rebuild fish stocks, support climate resilience and sustain South Africa's emerging oceans economy," said Sink.

3. All species groups show an increased risk of extinction; freshwater fishes most threatened

South Africa has an incredibly wealth of plant species, with 20 401 plant species found within our borders. These have all been assessed and an incredibly high number, 2 804 species are threatened with extinction. This is due to many indigenous plants having extremely limit ranges that coincide with areas that have been extensively developed or degraded. South Africa has the second highest number of documented plant extinctions of any country in the world, with 36 species confirmed extinct and a further 70 possibly extinct. All mammal, bird, reptile, amphibian, freshwater fish, butterfly and dragonfly species were assessed, together with selected marine and estuarine fishes and invertebrates. Of the 2 911 animals assessed, at total of 12% are categorised as threatened with extinction.

Tracking the change in risk of extinction overtime has revealed concerning trends. "We found increased extinction risk is evident for most groups, and freshwater species and butterflies are declining most rapidly," said Domitilla Raimondo, the head of the Threatened Species Unit at SANBI.

Freshwater fishes are the most threatened of all species groups that have been fully assessed. One in three of South Africa's freshwater fish species are threatened with extinction. Half of South Africa's freshwater fish species are endemic (found nowhere else in the world). Among these endemic species, two-thirds are threatened.

The rapid expansion of invasive alien species, excessive abstraction of water from our rivers, and drought-related declines linked to climate change are the key emerging threats to South Africa's species" said Raimondo. "Effective management and conservation strategies to halt the decline and promote recovery

of threatened species is urgently needed.” Citizens can contribute by joining citizen science programmes to monitor and conserve threatened species.

4. Protected areas: providing protection for many species

Using a new protection level indicator for species, the NBA reveals that 63% of plants are categorised as Well Protected. Mammals, reptiles, birds, amphibians and butterflies were also assessed, and overall 63% of these species were also categorised as Well Protected.

Raimondo said: “South Africa’s protected areas are generally providing good protection for species as a whole, however when considering only threatened species, more than 85% of threatened birds, plants, freshwater fishes, amphibians, mammals and butterflies are under-protected – so there is definitely more work to be done to ensure protection of our threatened species. The results provide important feedback for protected area expansion strategies and for protected area management.”

Supplementary information for this press release

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For more information:

The National Biodiversity Assessment (NBA) is the primary tool for reporting on the state of biodiversity in South Africa. It is used to inform policies, strategies and activities for managing and conserving biodiversity more effectively. The NBA is led by the South African National Biodiversity Institute (SANBI) as part of their mandate to monitor the status of South Africa’s biodiversity. The NBA was undertaken between 2015 and 2019. It involved extensive collaboration from over 470 individuals representing about 90 organisations. The full suite of NBA products, which include a synthesis report, seven technical reports, datasets, maps, supplementary materials, and popular products, is **accessible at** <http://nba.sanbi.org.za/>

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An additional **factsheet of what urgent action** is required is below.

More about IPBES: <https://www.ipbes.net/>

Side Bar to Press release: NBA launch day 3 October 2019 – for immediate release

Pressures on biodiversity prompt urgent action

Government and civil society must ensure it does all it can to protect and manage South Africa's biodiversity to support socio-economic development and human wellbeing. Dr Andrew Skowno, Lead Scientist for the National Biodiversity Assessment (NBA) at SANBI, said: "The NBA presents important information that can be used by government and civil society in numerous decision-making processes.

Actions for managing and conserving biodiversity highlighted in the NBA include:

- **Improving spatial planning.** The NBA provides information that helps to identify biodiversity priority areas in the landscape and seascape. Spatial biodiversity plans help to support decisions about the desired future uses of the land or ocean, often in the form of Spatial Development Frameworks produced by municipalities. They also inform the decisions made in response to development applications such as environmental impact assessments.
- **Strengthening compliance and enforcement.** While there may be good policies and legislation in place, there is limited technical capacity to use existing policy tools, and limited capacity to enforce laws or regulations.
- **Strengthening cross-sectoral and cross-realm planning.** Biodiversity features and ecological processes are connected in complex ways that cross natural realms and human-constructed boundaries. To deal with this interconnectedness, cooperative governance is essential.
- **Strengthening evaluation for adaptive management.** Interventions to manage and conserve biodiversity are often not monitored for effectiveness. This needs to be improved to make adaptive management possible.
- **Maintaining and further strengthening capacity.** A common theme across the NBA is that of human capacity. Building an equitable and suitably skilled workforce to improve the management and conservation of biodiversity is an important part of building a capable state.
- **Improving conservation project implementation.** Improving project financing and management are key elements in implementation success for specific projects.
- **Research priorities.** Improved foundational information (e.g. distributions, descriptions) for species and ecosystems, further work on pressures on biodiversity and ecological condition, and research for further improving the indicators used in the NBA are needed.
- **Monitoring needs.** Investment in existing and future strategic and cooperative biodiversity monitoring programmes is essential to strengthen our ability to detect trends and plan accordingly. While South Africa has some robust biodiversity monitoring programmes, many involving citizen scientists, there has been a decline in resources allocated to monitoring programmes and some key datasets are very old and no longer being updated.
- **Data management and sharing imperatives.** Effective collaboration and data sharing between biodiversity data facilities, and between these facilities and the data users, provides a crucial foundation for ongoing research and monitoring. This ultimately improves the quality and accuracy of biodiversity assessments and planning, and underpins transparent science-based policy advice and decision making.

All South Africans can help reduce the pressures on our biodiversity

We all need to play our part to protect and conserve our natural heritage of South Africa's species and ecosystems, no matter whether we live in an urban or rural setting. Here are some of the things South African can do:

- **Consider what you eat:** eat foods from local sources that are sustainably produced.
- **Think before you buy:** minimise purchasing of items that have only a single use (e.g. plastic straws, food in single-use packaging), and buy locally-made items to reduce your carbon footprint.
- **Reduce your waste:** recycle all packaging, reduce your energy and water consumption and make sure you don't waste them, dispose of any other waste appropriately.
- **Become involved:** support local initiatives that protect, restore and study nature – like coastal clean-ups, biodiversity citizen science projects, alien plant hacking, and more.

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Images for use:

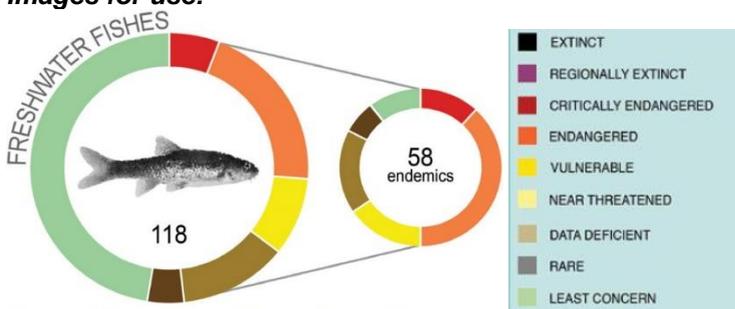
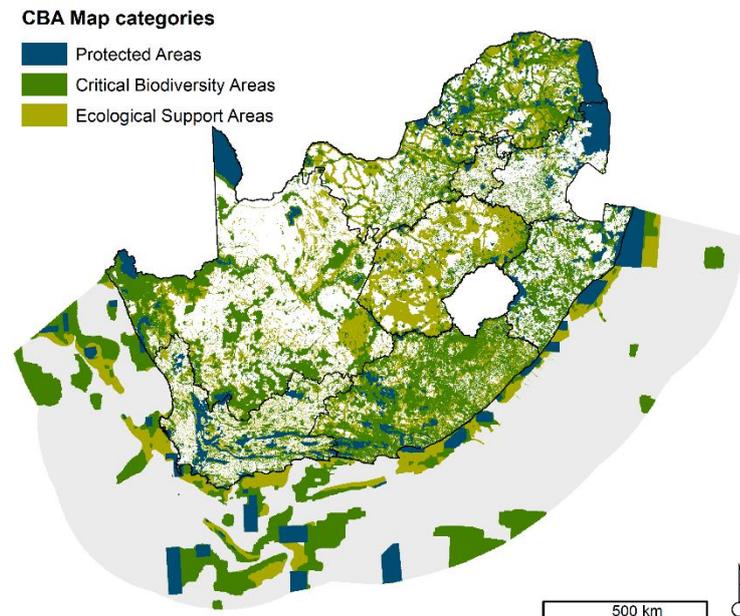


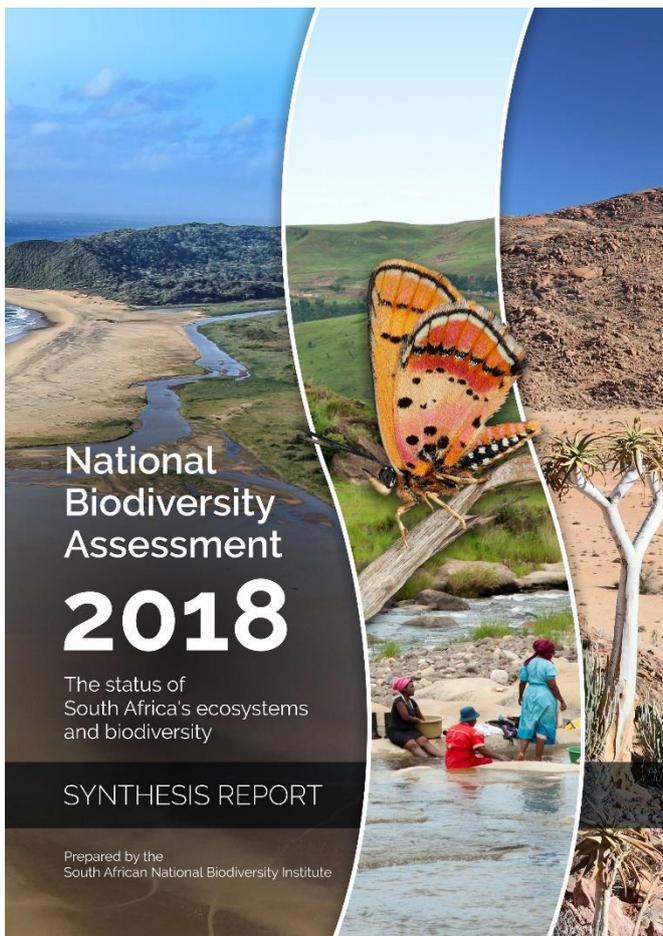
Figure 1. There are 118 freshwater fish species in South Africa and 58 of these species are endemic. The colour on the graphs show the proportion of species in the IUCN Red List of Species categories of threat status. The fact that 66% of our endemic freshwater fishes are threatened (Critically Endangered, Endangered or Vulnerable) reflects the poor ecological condition of South Africa's rivers and wetlands.



Maps of Critical Biodiversity Areas, prepared at provincial or metropolitan scale, now cover the whole of the landmass and the ocean around South Africa. The first national coastal and marine CBA Map (developed in early 2019) now complements the land-based CBA Maps. Together, these maps provide key inputs into strategic planning and decision making processes.



Biodiversity scientists use the data submitted by citizen scientists on platforms like iNaturalist to update information on species distribution and abundance patterns used in Red List assessments. Here, birders record bird sightings on a cell phone app © SANBI



Front cover of the synthesis report of the National Biodiversity Assessment