





Department of Forestry, Fisheries and the Environment

2023

January

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February

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August

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September

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October

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November

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December

S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

ENVIRONMENTAL DAYS

02 Februar 03 March 21 March 23 March 22 April 14 May 22 May

World Wildlife Day International Day of Forests World Meteorogical Day Earth Day World Migratory Bird Day International Day for Biological Dive 08 June 17 June 31 July September 16 September 19 September World Oceans Day Desertfiction and Drought Day World Ranger Day National Arbor Month Ozone Day

International Coastal Clean-up Day South African National Parks Week World Fisheries Day

PUBLIC HOLIDAYS

an Sun New Year's Da
an Mon New Year Holix
Mar Tue Human Rights
Apr Fri Good Friday
Apr Mon Family Day
Apr Thu Freedom Day
Mon Workers' Day
Mon Workers' Day

16 Jun 9 Aug 24 Sep 25 Sep 16 Dec ri Youth Day Ved National Women's Day un Heritage Day Ion Heritage Day Holiday at Day of Reconciliation Ion Christmas Day



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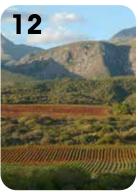
About the back cover image:

The Sudwala Caves

The Sudwala Caves in Mpumalanga, are set in Precambrian dolomite rock. They are the oldest known caves in the world, and began to form around 240 million years ago. Their formation was caused when natural acid in the groundwater seeped through the faults and joints of the Precambrian dolomite rock. Whilst there are not many signs of life inside the cave, the discovery of primitive stone tools indicate that early humans may have inhabited the cave from as far back as the early Stone Age era (2.5 million years ago), spanning until the late Stone Age era up to a few thousand years B.C.









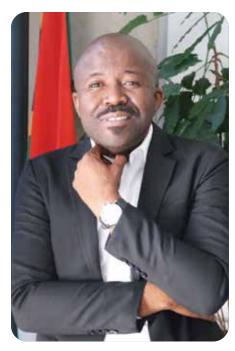








Editorial: It's time for wetland restoration



Let me start by saying Happy New Year to you and your loved ones and warmly welcome you to the final instalment of your favourite environment magazine, the Environment Quarterly, for the financial year 2022/2023.

As we look ahead into the new year, the team and I are extremely proud to have journeved with you in packaging and producing five of the best online and hard print editions of this magazine that not only spoke to current issues in the environment but also delved deeper working together with subject specialists to bring about sustainable solutions for people and nature.

This year's theme for World Wetlands Day, "It's time for Wetland Restoration" is the perfect wake up call for South Africans communities to start the work of rehabilitating wetlands for the fish and rice that grow in them, for the amount of carbon they store that help us to breathe in clean air and for the freshwater they are able to keep.

The dim reality is that wetlands are being lost three times faster than forests and are the Earth's most threatened ecosystem. More than 80% of all wetlands have disappeared since the 1700s. The trend is accelerating. Since 1970, at least 35% of the world's wetlands have been lost.

Our DFFE Working for Wetlands team as seen on the image below work hard to rehabilitate wetlands that have been destroyed by pollution, industrialisation or other damaging sources. South Africa has designated Ramsar sites, the latest being the Berg Estuary in the Western Cape. To read more, visit www. ramsar.org.

Solar power or solar powered devices and renewable energy are becoming more and more a topic of interest in many homes and businesses in South Africa and the rest of the world. As this need for renewable energy increases, our Minister Barbara Creecy started her year with a busy schedule travelling

to visit the Princess Elisabeth Antarctic Research Station as a guest of the Government of Belgium. While there, Minister had the opportunity to learn more about the first zero emissions research station in Antarctica which has become a showcase for best practice in the use of renewable energies to reduce environmental impacts. Read more on Page 4 or visit our Twitter page @environmentza.

Each one of us should play a part in changing our behaviour toward the environment because it is only through our responsible actions that we can be proud and assist government, industries and our communities in keeping our country clean, safe and free from harmful substances.

We really hope you have a good read and come back next time for more environment news.

Remember you can write to us if you want to contribute articles in the publication or let us know of good news stories happening in your environment.

Till we meet again in the New Year!

Head of Communications & Advocacy

Albi Modige

Meet our team

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It's time

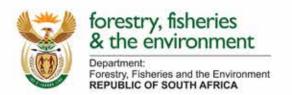
for wetland restoration

More than 35% of natural wetlands have been lost in the last 50 years.

Your choices, your voice and your actions can trigger a restoration trend.

Join #GenerationRestoration #ForWetlands

WorldWetlandsDay.org f ≥ ₫









Minister visits zero emissions base in Antarctica

By Salome Tsoka Images Supplied

s the world continues to grapple with the effects of climate change, nations are turning to innovative solutions to reduce their environmental impact. One such solution can be found at the Princess Elisabeth Antarctic Research Station, the first zero emissions research station in Antarctica. The station, operated by the International Polar Foundation under mandate from the Belgian Polar Secretariat, has become a showcase for best practices in the use of renewable energies.

On 09 January 2023, Minister of Forestry, Fisheries and the Environment, Ms Barbara Creecy, embarked on a four-day visit to the station as a guest of the Government of Belgium. The visit, hosted by both the Belgian government and the International Polar Foundation gave Minister Creecy an opportunity to learn more about the station's pioneering work in reducing its environmental impact on the continent.

This Ministerial visit allowed Minister Creecy to get a better insight on the threats of pollution and research into the human impact on ocean and marine ecosystems threatened by global climate change and earth systems observations. The scientific data collected during these voyages is critical to the understanding of the impacts of climate change and weather information associated with extreme events as well as other things.

During the visit, Minister Creecy also travelled to the Belgian base of the South African Antarctic Programme's Research Station, known as SANAE IV, located in Queen

Maud Land where she interacted with the station crew and inspected the facilities used by the South African scientists.

South Africa has a rich history of research and presence in Antarctica with the first Antarctic base, a SANAE I, a Meteorological research station built on a wooden structure in 1961/62. Since then, South Africa has not only maintained an uninterrupted presence on the continent, but has played an active role in the management and conservation of the vast continent and contributed to the pool of scientific knowledge.

The Agulhas II, a South African ship, departed Cape Town in December with the team for 2023, also delivering equipment, supplies and fuel.



Above: The Minister inspects the solar installations on the roof of Princess Elizabeth in Antarctica.







Above: Minister Creecy conducts a tour of the Princess Elizabeth Zero Emissions Base, including the battery storage unit, Waste Water treatment unit and the research laboratory.



About the contributor: Salome Tsoka

Ms Salome Tsoka holds a BA Degree in Journalism from the University of Johannesburg and has been writing for as long as she can remember. She is a Senior Communication Officer in the Chief Directorate: Communications at the Department.



Above: Minister Creecy with Captain Mdluli and the first officer of the Agulhas II.



Above: Minister bids farewell to the Princess Elizabeth base.



Above: Minister Creecy visits the Agulhas II ice shelf.



Above: The maintenance team in the pump room at the SANAE IV.



Above: Minister visits the maintenance team in the pump room at the SANAE IV.



Above: The Agulhas II, a South African ship, departed Cape Town in December with the team for 2023 as well as equipment, supplies and fuel.



Above: Minister Creecy with the \$61, \$62 and public works team at SANAE IV.



Above: The Minister with the S61, S62 and public works team at SANAE IV.

Wetlands in South Africa

etlands in South Africa make up only 2.4% of the country's area, but 48% of wetland ecosystem types are critically endangered. South Africa has lost approximately 50% of the original wetland area. Approximately 300 000 wetlands remain, making up only 2.4% of South Africa's area. Of the 791 wetland ecosystem types in South Africa, 48% are critically endangered, 12% are endangered, 5% are vulnerable, and 35% are least threatened, making wetlands the most threatened ecosystems of all in South Africa. The theme for Wetland Day this year is "Wetlands Restoration", this highlights the urgent need to prioritize wetland restoration. South Africa has made considerable efforts in the restoration of wetlands around the country including partnering with other organisations as well as creating the Working for Wetlands Programme.

Working for Wetlands inception

The restoration of wetlands began in 2000 in an effort to protect, promote their wise-use and rehabilitate them. Since 2004, the Department of Forestry, Fisheries and the Environment (DFFE) has invested over R1.3 billion in the rehabilitation of wetlands across the country to improve the integrity and functioning of ecosystems. These rehabilitation measures hope to address the causes and effects of wetland degradation.



Above: Vhembe Wetlands Restoration team.

Restoring and protecting wetlands has significant benefits like:

- Increased biodiversity.
- Replenished and filtered water supply.
- Enhanced protection against floods and storms.
- More local and sustainable livelihoods, less poverty.
- Increased tourism, higher quality leisure time.
- Increased carbon storage and avoided emissions.
- Inner satisfaction of achieving a transformation.

100s of beneficiaries

The Working for Wetlands programme used wetland rehabilitation as a vehicle for both poverty alleviation and the wise use of wetlands. Since its inception approximately R1,3 billion has been spent on the rehabilitation of 1873 wetlands around the country. The programmed has also created over 40000 jobs through the Extended Public Works Programme.



Urbanisation threats

The 2018 SANBI National Biodiversity Assessment indicated that approximately 99% of estuarine area and 88% of wetland area is threatened with less than 2% falling in the Well Protected category. South Africa's estuarine and inland wetland ecosystems face many pressures and are highly threatened. However, the restoration and protection of these estuaries and inland wetlands will secure essential benefits and deliver large return on investment. Urbanisation threats include:

- Aggressive agriculture
- Mining, pollution and excess nutrients
- Wetland soil erosion
- Flood attenuation on the country's national roads
- Wetland pollution threatens water quality.
- Invasive alien plants.
- Wetland pollution from drainage pollutants.



Healthy wetlands act like sponges in the landscape and are able to slow the flow of water from floods, which are likely to become more frequent as the climate changes.

Healthy schools, healthy kids

By Dimpho Matlanato

ack to school also means back to lunch packing. The challenge is that it is not only important to pack lunches that children will eat, but it is also important to pack lunches that are nutritionally balanced and waste free. A healthy lunchbox should at least contain one item from each of the five food groups i.e., fruit, vegetable, dairy, grain, and protein. Always avoid permanent packaging, make your lunch waste free by using reusable items such as:

- Flasks and reusable bottles for drinks
- Lunch containers/lunch boxes
- Cloth napkins
- Reusable forks, spoons, and knives

how to start a school recycling Program Inglyse the Conduct *wateness* education

Should you have non-reusable items in your lunch box, remember to recycle:

- Plastic containers
- Juice boxes/cartons
- Cardboard
- Cooldrink cans

The current legislation puts more emphasis on waste avoidance, minimisation, reuse, and recycling. Implementing a recycling programme at your school instils the right values and behaviour in children and presents the school with new learning opportunities. Additionally schedule a trash pickup day an annual,

monthly, or weekly event. Taking kids outside to see how much trash ends up on the grounds helps them become aware of where they're putting their

Steps on how to start a recycling programme at school.

As we are talking about packing healthy lunches for going back to school, it is equally important to be hygienic. Proper hand washing is by far the most effective method of avoiding illness and preventing the spread of germs. This needs to be done at following times:

- before eating
- after using the bathroom
- after touching dirty surfaces
- after blowing one's nose, coughing, or sneezing
- after being outside (playing, gardening, etc.



About the contributor: Dimpho Matlanato

Dimpho Matlanato is an intern in the Chief Directorate: Communications. She holds a BA Degree in Journalism from the University of Johannesburg.

Masilonyana Municipality receives compactor truck worth R3 million

By Veronica Mahlaba



Above: The Mayor of Masilonyana Local Municipality, Cllr. Dimakatso Modise ecstatic after receiving the waste compactor truck, handed over by Deputy Minister Makhotso Sotyu and the Executive Mayor of Lejweleputsa District Municipality, Cllr. Veronica Ntakumbana.

he Masilonyana Local Municipality in the Free State received a waste compacter truck worth R3 million from the Department of Forestry, Fisheries and the Environment (DFFE). The truck was handed over by Deputy Minister Makhotso Sotyu on 11 November 2022.

Due to insufficient budgets, many local municipalities including Masilonyana Local Municipality face serious challenges with waste collection services and as a result, some of the residents and businesses dump waste in open spaces resulting in illegal dumps. Deputy Minister Sotyu called on the community to play their part in keeping their immediate environment clean through ceasing to illegally dump waste and litter.

"What I usually observe is we come and clean places full of illegally dumped waste and the next time we come back we find the same place filthy again. This is unacceptable. It is unacceptable for people's health and that of the environment. We need to change the face of Brandfort. As per the request by the municipality we have come to assist and provide waste management interventions. Today we are handing over a waste compactor truck to the municipality to assist in combating the waste collection issue," explained Deputy Minister Sotyu.

The addition of the compactor truck to the Masilonyana Waste Fleet will significantly improve capacity and scale-up waste collection services for the municipality.

The truck is part of the National Yellow Waste and Landfill Management Fleet which the DFFE through the Municipal Infrastructure Grant (MIG) has purchased as an intervention to assist selected local municipalities across the country to address illegal dumping and improve waste collection services in un-serviced areas.

The Mayor of Masilonyana Local Municipality, Cllr. Dimakatso Modise expressed how happy she was with the handover of the truck and stated that it shows that the three spheres of government can work together to bring about service delivery to the citizens.

"The DFFE is showing us that District Development Model is not a talk shop but can really be implemented and effective. Our waste collection problems have been partially solved. I will make sure that there is a municipal programme that will be created for waste collection in the different parts of the municipality. The residents will be informed of the day and time when the truck is coming to collect waste in their areas, so they are able to take their waste outside for collection. Whilst that is happening, we will also create awareness about the importance of keeping our environment clean to encourage residents to keep waste in their yards until collection day," Cllr. Modised said.



Above: The addition of the waste compactor truck to the Masilonyana Waste Fleet will significantly improve capacity and scale-up waste collection services for the municipality.



About the contributor: Veronica Mahlaba

Ms Veronica Mahlaba is a Senior Communication Officer in the Chief Directorate: Communications at the Department of Forestry, Fisheries and the Environment.

Back to School: Deputy Minister donates school supplies By Veronica Mahlaba

Soaramelo Con School Vision

Above: Some of the learners that received school shoes and bags from Boaramelo Combined School. Deputy Minister Sotyu was accompanied by the Executive Mayor of Xhariep District Municipality, ClIr Irene Mahlomakhulu (far left) and Mayor of Kopanong Local Municipality, ClIr Xolani Tseletsele (black coat).

o kick start the new year, the Deputy Minister of Forestry, Fisheries and the Environment, Ms Makhotso Sotyu visited Boaramelo Combined School in Jagersfontein, Free State to donate school supplies and equipment for the Deputy Minister's Back to School Programme on 18 January 2023.

The Department donated 70 eco-desks, 800 school shoes, 800 bags, 800 water bottles, 700 solar lights, 4 waste bins, buckets of paint, garden tools and sanitary towels to the school. In 2022, the community of Jagersfontein was hard hit by the damage caused by the burst of the diamond mine dam wall which left many people destitute. The Deputy Minister's visit serves to assess the state of school readiness for the 2023 academic year.

Deputy Minister Sotyu stated that she was pleased to see the resilience of the people from Jagersfontein. "I must commend you on rebuilding your lives after such a tragedy. This is one of the reasons I chose to visit this town for this year's Back-to-School Programme. Education is the cornerstone of securing a successful future," said Deputy Minister.

Boaramelo Combined School Principal Maikeco Mokhothu said he is over the moon for receiving the supplies as they will come in handy for the school. "When we opened there were two classes that were empty without furniture. We couldn't believe that the

Department delivered the eco-desks so quickly. Now quality education can be offered to our leaners," Mr Mokhothu explained.

Grade 12 learner, Ms Oratilwe Phenethi said as learners they appreciate everything they received and that all that was donated will help many learners in the school. "The school shoes and bags will ensure that all learners look the same and no one will look better than the other as we come from different backgrounds. The only thing that we need to focus on as learners is to work hard and pass," she said.



Above: The eco-desks donated by the Department are made out of biomass from cleared invasive alien plants.

F&D WASTE

Generated throughout the Supply Chain

Agricultural Production



Tonnes Per Year

264% of Food Waste Generated

Post-Harvest Handling & Storage



24 Tonnes Per Year

23.5% of Food Waste

of Food Waste Generated

Processing & Packaging



2.7

Tonnes Per Year

26
47
of Food Waste Generated



Consumption Stage



Tonnes Per Year

of Food Waste Generated

Total of Food Waste



10.2
Tonnes Per Year

100% of Food Waste Generated









A SNAPSHOT OF FOOD WASTE IN SOUTH AFRICA

EDIBLE PORTION OF FOOD WASTE



10 Million tonnes per year.

CLIMATE CHANGE



Food Wastage contributes

7.6 % of total greenhouse gas emissions.

CONSUMER FOOD WASTE



waste is generated per household per week.

WATER



Approximately
of water (1/3 of the Gariep River) is put
into growing food which
ultimately ends up as waste

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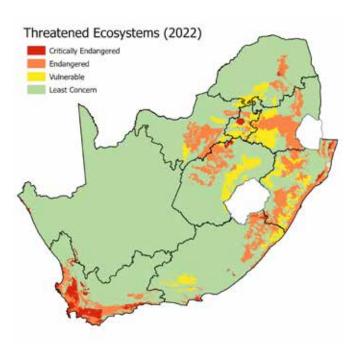
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Red List of Terrestrial Ecosystems prepares us for Kunming-Montreal Biodiversity targets By Eleanor Momberg

Images by Andrew Purnell

ate in 2022, the Revised National List of Ecosystems that are Threatened and in need of Protection (known as South Africa's Red List of Terrestrial Ecosystems 2022) was published for implementation by the Minister of Forestry, Fisheries and the Environment.



Above: A simplified map showing the location of threatened terrestrial ecosystems in South Africa.

The publication of the List of threatened terrestrial ecosystems came on the eve of the 15th Conference of Parties to the Convention on Biological Diversity (CBD COP15) which has, in recent years, had to deal with the emergence of ecosystem-level indicators as important pillars of the post-2020 Global Biodiversity Framework.

A successful outcome of CBD COP15 was the adoption of the Kunming-Montreal Global Biodiversity Framework (GBF) which includes concrete measures to limit the loss of natural habitat, improve ecosystem integrity and restore degraded areas by 2030. Meeting the agreed global targets for protected areas (Target 3) and for biodiversity inclusive spatial planning (Target 1) requires good information on ecosystem threat status.

South Africa's Red List of Terrestrial Ecosystems, first published in 2011, was substantially revised over the past few years by researchers at the South African National Biodiversity Institute (SANBI), supported by numerous experts. The revision included extensive research and stakeholder engagement ensure that the new list represents the most up-to-date information about the status of ecosystems.



Above: Albany Alluvial Vegetation cleared for vegetables near Patensie, Eastern Cape, © Geoff Spiby. This ecosystem type is Endangered due to habitat loss, while the low hills have Sundays Valley Thicket (Least Concern) and the mountain are covered in Kouga Grassy Sandstone Fynbos (Least concern).

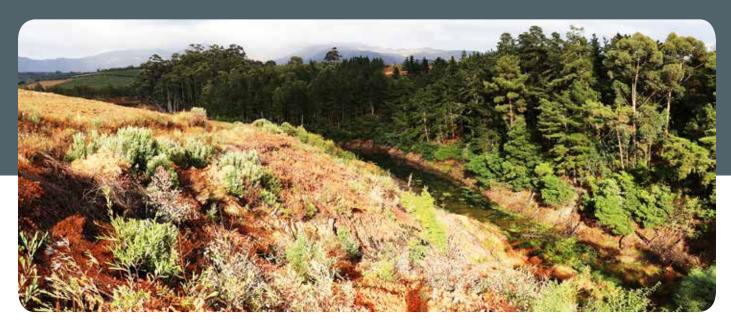
The List categorises 120 of South Africa's 456 terrestrial ecosystem types as threatened. In terms of area, this means that approximately 10% of the remaining natural habitat in the country is under threat. Of the 120 terrestrial threatened ecosystems 55 are Critically Endangered, 51 Endangered and 14 are considered Vulnerable.

Threatened ecosystem types can be found in all provinces, but are concentrated in the Fynbos biome of the Western Cape and Eastern Cape, KwaZulu-Natal's



About the contributor: Eleanor Momberg

Eleanor Momberg is a specialist writer in the Media Liaison unit of Communications. She has extensive experience as a journalist and communicator.



Above: he Fynbos biome has 59 threatened ecosystem types (CR: 33, EN: 24 & VU: 2) – many threatened by invasive species such as pines and eucalypts. This image shows how alien clearing on the riverbank on the left of the picture contrasts with mature alien trees on the far bank demarcated for later clearing.

Indian Ocean Coastal Belt, the Albany Thicket Biome of the Eastern Cape (see image), the Highveld Grasslands, and the Savanna Biome.

By law, anyone wanting to undertake specific activities in those areas that contain a threatened ecosystem will need environmental authorisation to do so. The Department of Forestry, Fisheries and Environment's National Web-based Environmental Screening Tool, which allows prospective developers to undertake a basic screening, includes information from the Red List of Terrestrial Ecosystems. Threatened ecosystems are considered Very High sensitivity in the screening tool, and therefore are a triggering feature for a full Environmental Impact Assessment to be required at the proposed development site. This serves to ensure the consideration of threatened ecosystem types in development activities. South Africa became one of the first countries globally to use ecosystem-level features directly in statutory conservation measures.

The first list of terrestrial ecosystems that are threatened and in need of protection, published in 2011, was ground-breaking and, in addition to triggering Environmental Impact Assessments, quickly came to play an important role in the development of multisectoral land-use plans, including bioregional plans, municipal Spatial Development Frameworks (SDF) and Integrated Development Plans (IDP). Other innovative mechanisms such as biodiversity stewardship programs focus on offering protection to some of these ecosystems. These tools cross-cut a wide range of sectors such as agriculture, mining, and urban development where activities have an impact on biodiversity.

Despite the different areas of focus, the collective objective of all such interventions is to effectively reduce or even halt the rates at which terrestrial ecosystems are losing their constituent biodiversity and geographic distribution – among the key focus areas of the Kunming-Montreal Global Biodiversity Framework.

In addition to the conservation and protection interventions, the List also informs national strategy documents such as the National Biodiversity Strategy and Action Plan and helps South Africa meets its obligations as a signatory to international treaties such as the CBD and the United Nations Convention to Combat Desertification (UNCCD).

Updating the List has come at an opportune time. Besides incorporating new information related to land cover change and the national vegetation map, the new list comes at a time when global change and other human-induced pressures on ecosystems are accelerating. It highlights the need for an improved understanding of pressures from invasive species, overgrazing, and disrupted fire cycles.

What is different about the new List is that the findings were reached using the International Union for Conservation of Nature (IUCN) Red List of Ecosystems (RLE) standards for assessing the threat status of ecosystem types – which did not exist when the list was first published in 2011. This means that the 2022 list of threatened ecosystems is not directly comparable with the 2011 list, and should rather be considered as its replacement.

The revised List is a substantial step forward, but further improvements are planned. One of these is ensuring that information on ecological integrity or ecosystem condition is improved so that these are not underestimated in future.

Because of improved information systems and the use of the IUCN's Red List of Ecosystem standards, this List can be updated more frequently in future. This will greatly assist with biodiversity inclusive spatial planning and the management of terrestrial ecosystems and the services they offer.

Details on the assessment methodology, input data used, and full results can be viewed at the following web portal: http://ecosystemstatus.sanbi.org.za

SA plays crucial role in CoP 15



Above: Director-General, Ms Nomfundo Tshabalala.



Above: Deputy Director-General, Ms Flora Mokgohloa and SANParks Chairperson, Ms Pam Yako.

wo years after being delayed by the COVID-19 global pandemic, countries convened in Montreal, Canada for the United Nations Convention on Biological Diversity's 15th Conference of Parties.

South Africa attended led by the Department of Forestry, Fisheries and the Environment's delegation; headed up the Director-General, Ms Nomfundo Tshabalala – seeking a balanced outcome that considers the three objectives of the CBD. These include conservation, sustainable use and access & benefit sharing from the use of genetic resources supported by science.

Furthermore, South Africa wanted an ambitious Global Biodiversity Framework that would be matched by financial means of implementation within the goals and targets to reduce biodiversity loss to halt and reverse such trends by 2050 for people to live in harmony with nature.

South Africa played a significant role in the negotiations; co-chairing several working groups including Resource Mobilisation and Access to Benefit Sharing from Digital Sequence Information (DSI).

One of the key decisions adopted at COP15 was to the Strategy on Resource Mobilisation to complement

the Global Biodiversity Framework 2030. The proposal to increase finance to developing countries to drive sustainable investment in reversing the loss of biodiversity as well as prevention of future loss for the Planet through implementation of the Framework was accepted. Following initial resistance from developed countries to the creation of Global Biodiversity Fund, a compromise was reached calling for the Global Environment Fund to further reform its operations to ensure adequacy, predictability, and timely flow of funds.

SA was pleased on the resolutions and decisions on Access and Benefit Sharing from the use of (DSI) from genetic resources, where the outcome recognised DSI as part of the Convention; as well as the establishment of a global mechanism for the sharing of benefits. South Africa stands ready to participate and offered to share our experiences in the process to develop the mechanism.

However, the final Kunming-Montreal Declaration, whilst ambitious in its expression of goals and targets, fell short in respect of ambition on means to close the financina gap of US\$700-billion and capacity building, technology and technology transfer that is need to prevent and protect biodiversity loss across the world.



Above: Director: Biodiversity Monitoring & Special Projects, Mr Simon Malete and Mr Yuval Tchetchik from Biodiversity Economy and Resource Mobilisation



Above: SANBI CEO, Mr Shonisani Munzhedzi and Ms Ines Verleye from

Green Scorpions achieve great success despite pandemic constraints

By Salome Tsoka and Dimpho Matlanato



Above: Over 300 Green Scorpions from around the country came together for the 9th Environmental Compliance and Enforcement Lekgotla in

The year 2020, saw the world plagued by the Covid-19 pandemic which forced many countries around the world including South Africa to impose strict restrictions in an effort to curb the spread. Unfortunately, these restrictions also affected the Environmental Management Inspectorate (EMI) also known as the Green Scorpions from going to the field and do their work.

Despite these challenges, the Green Scorpions still found a way to uphold Section 24 of the Constitution. Speaking at the 9th Environmental Compliance and Enforcement Lekgotla held in Gauteng from 14 to 17 November 2022 under the theme: "Facing Uncharted Waters: New Challenges and Solutions for the Green Scorpions." Speaking on behalf of Deputy Minister Makgotso Sotyu, Deputy Director-General: Regulatory Compliance and Sector Monitoring, Ms Vanessa Bendeman said that working together, they found new and innovative solutions to overcome these challenges.

"Despite these obstacles, I am heartened to note that the Green Scorpions have, through your resilience and the desire to protect the environment, maintained, and in some instances, even increased your level of compliance and enforcement activities in the past financial year. This is evidenced by the statistics outlined in National Environmental Compliance and Enforcement Report (NECER), which will be officially released later this morning," Ms Bendeman said.

According to the report, criminal investigation of environmental crimes increased by 7.6% in the year under review, with 952 criminal dockets registered. A total of 1 091 admission of guilt fines to the value of R408 730.00 were paid. This is an increase of 6.6% from the previous year. Additionally, 838 people were arrested and there was an increase of 262.5% in the number of convictions for environmental crimes, showing a hike from 16 to 58 in the past financial year. Six plea agreements were entered into and 129 warning letters were issued. The total Rand amount of Section 24G

administrative fines related to the commencement of an unlawful activity decreased to R11 274 319 from R18 154 666 in the previous year.

"These increases in environmental compliance and enforcement activities are to be commended, especially in light of the significant budget decreases experienced by the Green Scorpions as the country's economy experiences a step down and other priorities compete for resources, limiting your ability to fill key posts and fund daily operations. In fact, the annual report notes a decrease of more than 5% in the number of national and provincial Environmental Management Inspectors (EMIs) from 3 158 in the 2020/21 financial year to 2995 in the last financial year," Ms Bendeman said.

The four-day long Lekgotla also presented an opportunity for the Green Scorpions from the Department and the Gauteng Department of Agriculture, Rural Development, and Environment (GDARDE), to assist the Muldersdrift community with gardening tools. The two departments donated a jojo tank, work suits, hosepipes, shovel squares, domestic forks, plastic rakes, steel rakes, and 10L watering cans, 50kg LAN 28% (fertiliser), 10g beans seeds, 10g onion seeds, 10g carrot seeds, and 10g beetroot seeds to the Tshepo Ya Bana Food Garden which provides care, support, and fresh vegetables to disadvantaged youth, women, orphans and people living with disabilities.



Above: Green Scorpions, attending a shark and ray identification training at the Lekgotla.

Is an environmental career right for me?



Above: DFFE Bursary recipient, Mr Thimothy Nthite currently works in the Chemicals and Waste Management Branch as an intern.

he environment provides many exciting, interesting and satisfying career choices stretching across a tremendous range of fields and disciplines. Working in the environmental field is rewarding because you can contribute to the maintenance and conservation of essential life systems necessary for our human survival.

The South African government has put environmental legislation in place, calling for much innovation in this sector. This means there is a nationwide need for environmentally trained professionals to reverse environmental deterioration, and to seize the opportunities to create more sustainable and environmentally responsible ways of satisfying our needs and wants. To pursue a career in the sector, you would generally need to study certain subjects at grade 12 level in high school, depending on the specific career you have in mind. Most programmes that are relevant to environmental careers are classified as Science Programmes. Relevant subjects in Grade 12 include Mathematics, Biology, Physical Sciences, English and/or Geography.

The required minimum score for each subject is usually adequate achievement. It is however an advantage to have higher scores in your final matric marks, as most universities select students with higher than the minimum scores. Although there is a lot of overlap, universities of technology generally focus on applied studies, whereas universities focus on fundamental studies. Universities of technology generally do not require university exemption at matriculation. There are two main routes which you can take: a social-environmental perspective or a environmental science perspective. It is important to note that these two complement one another and effective environmental management combines both these perspectives.



Above: Mr Steven Mabungane is a shark dissector with our department to educate learners about available careers in oceans and how they can play their part.

Social-Environmental Careers



Normally one progresses into the social-environmental perspective through a Social Science or Arts degree presented at a university. Subjects may include Anthropology, Archaeology, Development Studies, Geography and Environmental Studies, Law (Environmental Law), Journalism (Environmental Journalism) and Education (Environmental Education). Careers in this field are centred around humans and their relations with the environment, and ways of making these relations beneficial to both people and the environment.

On 08 February 2022, the Mayor of Matihabena Local Municipality, Cllr Thanduxolo Khalipha was showing Deputy Minister Sotyu the progress they have made at Odendaalsrus Landfill Site as part of the waste management intervention by the Department

Thereafter, the Deputy Minister held a stakeholder engagement to give progress to the community about the four intervention projects which are part of Department's contribution to the District Development Model discussed 2020. Veronica Mahlaba.

and civil engineers pursue environmental management through ensuring that environmental concerns are brought to bear on infrastructural development.

Career Path Qualification

- Community conservation and rural development BA degree with subjects such as Anthropology, Development Studies, Geography and Environmental
- Environmental educators H.dip Ed with subjects such as Geography or Biology - Formal Environmental Education courses pursued at postgraduate level
- Environmental lawyers BA LLB degree with Environmental Law as a subject.
- Environmental journalists No formal qualification other than journalism (degree or diploma).
- Cultural resource specialists BA degree with subjects such as Archaeology, Anthropology, Political and Social Studies or Social History.
- Eco-tourism specialists Tourism degree or diploma with environmental interest.

ENVIRONMENTAL SCIENCE CAREERS

Environmental science careers start by completing a science degree at university or a relevant diploma course at a university of technology. Subjects in the natural sciences such as Zoology, Botany and Ecology generally lead to a career path in biodiversity conservation but may also lead to a career in environmental management.

Subjects in the physical sciences such as Mathematics, Physics and Chemistry might lead to a career path in

Career Path Qualification:

Environmental impact assessment environmental management - BSc degree in natural sciences with postgraduate courses in environmental management.

environmental management aspects such as pollution

control or waste management. Landscape architects

- Landscape architect Landscape architect degree at the University of Pretoria or the University of Cape Town
- Nature conservation University of Technology diploma in Nature Conservation or BSc degree with subjects such as Zoology, Botany, Ecology.
- Specialist scientists in biodiversity e.g. marine biologist, zoologist, ecologist - Postgraduate degrees in Zoology, Botany and Ecology, specialising in particular fields of interest.
- Waste managers and pollution controllers BSc degree with subjects such as Mathematics, Physics, Chemistry, Climatology University of Technology diploma or degree in Environmental Science or Engineering.
- Environmental engineers Civil Engineering degree or B Tech degree in Civil Engineering.

Contact the Department of Forestry, Fisheries and the Environment (DFFE) for more information as well as requirements and timelines of the annual internship programme's intake.













DFFE competition inspires learners

By Salome Tsoka



Above: Magwaxaza Primary School managed to exceptionally expand their vegetable garden which helps the learners and the surrounding community.

he Department of Forestry, Fisheries and the Environment's efforts to raise awareness on proper waste management practises has left an indelible mark on the hundreds of learners at the Maawaxaza Primary School in Maclear in the Eastern Cape.

The school took part in a school waste management awareness campaign which culminated with a school competition for six schools in the towns of Maclear, Ugie and Mount Fletcher. Held in August 2021 by the Department in partnership with the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism and the Elundini Local Municipality, the competition taught the schools about the 4Rs, waste management and mismanagement and different ways in which waste can be handled. This year, the Department visited the school to find out how the competition had changed their lives.

Magwaxaza Primary School Principal, Mr Mzwamadoda Mti said since the awareness campaign and school competition, the school has since created its own recycling centre whereby the learners and community are encouraged to collect and bring boxes and papers to the school. Despite its small size and it being housed in a storage room in one of the classrooms, the principal hopes to make it bigger and to develop a constant relationship with the nearest recycling centre so that can collect. The school also managed to use some of the prize money to expand the school's vegetable garden.

"We started a school vegetable garden which has been a tremendous help to the school learners and the community at large. Poverty is very rife in this area because the unemployment rate is so high. We figured this garden would help feed them and by selling some of the produce we can also help buy the learners school shoes and school uniform," Mr Mti said.

Ten-year-old, Ms Athandile Mangeni said that last year the school competition taught the learners how to look after the environment. Today, they continue to use this knowledge to teach their parents and community to not only look after themselves but their environment as well.

"The school competition has taught us a lot especially with how to keep our classrooms and school clean. It has also taught us how to keep ourselves clean. By learning how to keep our environment clean we have also learnt how to grow a clean vegetable garden which feeds us at school and in our homes," she said.

Waste management is a problem in many parts of the country. According to the 2018 State of Waste Report, South Africa handled 55.6 million tonnes of general waste with only 34.5% of this waste being recycled. However, only 59% of households had their waste collected by their municipalities whereas, 34% of households disposed of their waste at a communal dumps or illegal dumps. This is why waste management initiatives run by the Department are so pivotal.

A suitable Biotrade standard provides a transparent mechanism

By Madimetja Mogotlane



Above: The Deputy Director-General: Biodiversity and Conservation, Ms Flora Mokgohloa welcomes guests at SA-EU policy dialogue.

Dialogue epartment of Forestry Fisheries and the Environment

Above: Mr Christian Grun, from the German Embassy in South Africa said proper regulations are very much needed.

the Department of Forestry, Fisheries and the Environment together with Federal Ministry for Economic Cooperation and Development hosted SA-EU Policy Dialogue at Sheraton Hotel. The two day dialogue took place on 15 November 2022 under the theme: Engagement on the Draft Framework for a SA Biotrade Standard in compliance with Nagoya Protocol on Access and Benefit Sharing (ABS).

The Draft Framework for a RSA Biotrade Standard was presented to gather input and explore implementation possibilities to strengthen compliance to the Nagoya Protocol on ABS and begin national preparation to meet requirements of the EU Corporate Sustainability Supply Chain Due Diligence Directive.

Welcoming the guests at the dialogue, the Deputy Director-General: Biodiversity and Conservation, Ms Flora Mokgohloa said, "As the custodian of the biotrade economy of South Africa, guided by the draft National Biodiversity Economy Strategy, it is the responsibility of the Department to ensure that Biotrade is sustainable. A suitable biotrade standard provides a transparent mechanism for promoting biodiversity conservation, fair trade, and product differentiation across the value chain. South Africa has species that are found only in South Africa and nowhere else across the world therefore we become a very important role player within the biotrade."

Mokgohloa further said we need to recognize that there are already practitioners on the ground that have their own mechanisms that may not necessarily be defined as standards per se, because we have got protocol in place that we can even adapt those practices in developing a standard. Standards should be used to access the market. One of the important issues at CITES is around recognizing the role of indigenous people and local communities.

Ms Nomsa Sibeko, a Traditional Healer from Nature Speaks and Responds lamented the way other healers do not adhere to the way plants should be harvested. "Every traditional healer is trained to harvest plants and species in a responsible way according to ancient culture. The problem that we have now is that the people who are not trained properly overharvest our plants and species," she said.

Mr Christian Grun, from the German Embassy in South Africa said the leadership that the Department has shown is truly an outstanding example of what makes it special to local communities and indigenous communities who hold not only the knowledge but also the rights to the products and practices in the framework of the product. "It is very fitting that proper regulations are very much needed in this framework as well and the exchange on those regulations is at the heart of this dialogue that is supported by EU."



Above: Ms Nomsa Sibeko, a Traditional Healer from Nature Speaks and Responds said healers should be trained to harvest plants.



About the contributor: Madimetja Mogotlane

Madimetja Mogotlane is a Senior Communications Officer, Internal Communications and Events in the Chief Directorate: Comminication Services, Mr Mogotlane is a former intern in Media Liaison at the department and has journalistic experience.

Expo entices pupils into marine science

By Zibuse Ndlovu



Above: DFFE's Marine Research Technician, Ms Kanyisile Vena demonstrating to the learners the testing of oxygen in seawater using a Titration method.



Above: Mr Steven Mabungana, an educational shark dissector showing the learners a practical example of the impact of plastic pollution on marine life.

cores of learners from schools in Dr Ruth Segomotsi Mompati District Municipality and surrounding areas showed up for an expo on careers in marine science.

The high-spirited career expo held on 17-18 November 2022 in the North West Province, was one of the Department of Forestry, Fisheries, and the Environment's (DFFE) initiatives to expose the youth and learners to opportunities in Marine Science, Environmental Management, Mining, Robotics, 4th Industrial Revolution concepts and career pathing.

Speaking on the sidelines of the Expo, the Assistant Director for Learning and Development at the DFFE, Mr Mbongeni Mncube said he believes the career expo was much needed because more often learners do not know what they want to study post-Grade 12. "It is very difficult for learners who are at a Primary Level and Secondary Level to make a career choice, but we are making it easy for these young people to access such useful information, especially the leaners that are in the rural areas," said Mr Mncube.

The Expo targeted one thousand learners in grades 9 to 11 from Dr Ruth Segomotsi Mompati District Municipality over two days. The stakeholders that came to exhibit comprised of national, provincial, and local government, public entities, institutions of higher learning and the private sector. Each stakeholder highlighted what they offer, what opportunities they have and how young people can access them.

Grade 9 learner, Ms Mosebetse Omphile, from Reabetswe Secondary School (15), said the expo was highly informative. "We were equipped with information regarding different courses. This will go a long way in helping us choose the right career. I have also learned from this career expo that every organism plays an important role in the ecosystem to which it belongs, whenever one species is removed, other species in the food chain are affected...and this encouraged me to want to choose a career that is related to the environment, and I that will help me learn more about how the ecosystem interacts," said Omphile.

The Dr Ruth Segomotsi Mompati District Municipality comprises five local municipalities: Naledi, Greater Kagisano-Molopo, Mamusa and Lekwa-Teemane. The population is situated in more than 470 villages and towns dispersed in a 250km radius (approximately 50km north to south and 200km east to west. It is one of the four districts in the province with poor rural areas.

Municipality's District Development Chairperson, Mr Alfred Gaetsosiwe said the Expo will empower learners with valuable knowledge to make educated decisions regarding their future. "While we are focusing on the economic development, we need to also focus on human development and education, and since we are in a rural district we thought it was necessary that we invite different sectors so that learners in our schools get an opportunity to interact with them on career pathing," said Mr Gaetsosiwe.



About the contributor: Zibuse Ndlovu

Zibuse Ndlovu is the Assistant Director in the Communications and Advocacy Chief Directorate at the Department of Forestry, Fisheries and the Environment..



Above: Grade 9 learner, Ms Mosebetse Omphile, from Reabetswe Secondary School.



Above: The Career Expo empowered learners with valuable knowledge to make educated decisions regarding their future through discussions and presentations. Participating stakeholders included the South African National Biodiversity Institute (SANBI).



Above: DFFE's Ms Xolelwa Skefile interacting with learners and answering questions concerning career opportunities that are offered by the Department.

DID YOU KNOW?

Explorer headshot by Lovan Lambert



2022 National Geographic **Wayfinder Award recipient**

Zoleka Filander

Zoleka Filander is a South African deep-sea researcher who aspires to change human perceptions and help people reconnect with the ocean environment. She is employed by the national ministry of Fisheries, Forestry and Environment and also currently pursuing a Doctor of Philosophy at Nelson Mandela University. Her primary scientific training focuses on the classification and identification (taxonomy) of invertebrates that inhabit the seabed. With most of the world's seabed yet to be explored, this work largely involves documenting the species in various regions to establish a baseline, as well as reporting on new species.

Wetland Restoration

Wetlands are vital for humanity...

Freshwater is rare. Wetlands provide most of it.

- Only 2.5% of water on earth is freshwater, mostly stored in glaciers and aquifers.
- Less than 1% is usable, 0.3% is found in wetlands such as rivers and lakes.



Wetlands store more carbon than forests.

- Peatlands cover 3% of our planet yet store around 30% of all land-based carbon.
- Coastal wetlands like mangroves sequester and store carbonup to 55 times faster than tropical rain forests.



Wetlands help us cope with storms and flooding.

- 60% of humanity lives and works in coastal areas.
- Saltmarshes, mangroves, seagrass beds and coral reefs shield coastal communities in extreme weather.
- Inland, a single acre of wetland can absorb up to 1.5 million gallons of flood water.



Wetlands are a source of livelihoods and food.

- More than a billion people live from fishing, aquaculture and tourism
- Wetland paddies provide rice for 3.5 billion people.

Restoring lost and degra



forestry, fisheries & the environment

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



on: Why is it time?

But we're at a tipping point. Wetlands are disappearing.

Wetlands are being lost three times faster than forests.

- They're the Earth's most threatened ecosystem.
- More than 80% of all wetlands have disappeared since the 1700s.
- The trend is accelerating. Since 1970, at least 35% of the world's wetlands have been lost.

Human activities are driving wetland degradation.

 Wetlands are being drained and filled in for agriculture and urban construction.



 Water pollution and overfishing harming wetland ecosystems, along with invasive species.

Wetland species are facing extinction.

 One in three freshwater species and 25% of all wetland species face actual extinction from wetland decline.



 81% of inland wetland species and 36% of coastal and marine species have declinedin the last 50 years.









WORLD WILDLIFE DAY:

The United Nations General Assembly proclaimed 03 March, the day of the adoption of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as World Wildlife Day to celebrate and raise awareness of the world's wild fauna and flora.

South Africa is one of the world's biologically mega-diverse countries with biodiversity (plant and animal species) providing an important foundation for tourism. Mega-diverse countries are a group of countries that contain the majority of the Earth's species.

ENDANGERED:

Some of the indigenous species facing a high risk of extinction in the wild in the near future are: African Wild Dog, Cape Vulture, Magaliesberg Aalwyn/Aloe.

WHAT ARE CRITICALLY ENDANGERED SPECIES:

Indigenous species facing an extremely high risk of extinction in the wild in the immediate future.

Example: Riverine Rabbit, Wood's Cycad, Dark-Legged Burrowing Scorpion.

















WHAT YOU NEED TO KNOW ABOUT THE PROTECTION OF NATURAL FORESTS AND PROTECTED TREES ON PRIVATE COASTAL PROPERTIES

WHAT IS NATURAL FOREST?

Many properties along this coast are covered by natural forest. Natural forest consists of closed canopy stands of indigenous trees, usually with shrub and herb layers below, and the height may vary from about 2 metres (scrub forest) or even lower in early pioneer or re-growth stages, to more than ten metres. Certain tree species only occur in forest (indicator tree species) and botanists can therefore distinguish forest from other woody vegetation. Such trees include white milkwood (Sideroxylon inerme).





Destruction of protected trees or natural forest without a license is a **criminal offense.**



Whitemilkwood (Sideroxylon inerme) occur on the whole Indian Ocean coast of SA



Red milkwood (Mimusops caffra) mostly on the KwaZulu-Natal and Eastern Cape coasts

License application forms for activities affecting protected trees or natural forests can be obtained from the website www.environment.gov.za and must be submitted to the nearest forestry regional office of the Department of Agriculture, Forestry and Fisheries.

NATURAL FOREST IS PROTECTED



Section 3 of the National Forests Act of 1998 determines that natural forests may not be destroyed. Section 7 of this Act also determines that trees in natural forest may not be cut, destroyed, pruned or damaged without a license. In terms of policy

such destruction is only allowed in exceptional circumstances such as strategic projects like bulk services and infrastructure (e.g. major roads, power lines, dams and pipelines) but not for residential development. The only other exceptions to this rule are:

- vested rights such as zoning certificates issued and properties registered at the Surveyor General before the year 2000, when the National Forests Act was enacted;
- primary property rights, such as the right to erect a dwelling for own use on a vacant property (number of units per specified area in semi- urban areas may have been determined in local zoning schemes).

These exceptions do not apply automatically due to complex land use and legal issues, and do not do away with the need to apply for a license, in which case the responsible forestry official may have to investigate these land issues first.

CERTAIN TREE SPECIES ARE PROTECTED

A list of 47 tree species have been declared as protected under the National Forests Act of 1998. No such trees may be cut without a license under Section 15 of this Act. Trees such as white or red milkwood are forest species that sometimes occur outside forest and are also listed as protected tree species.

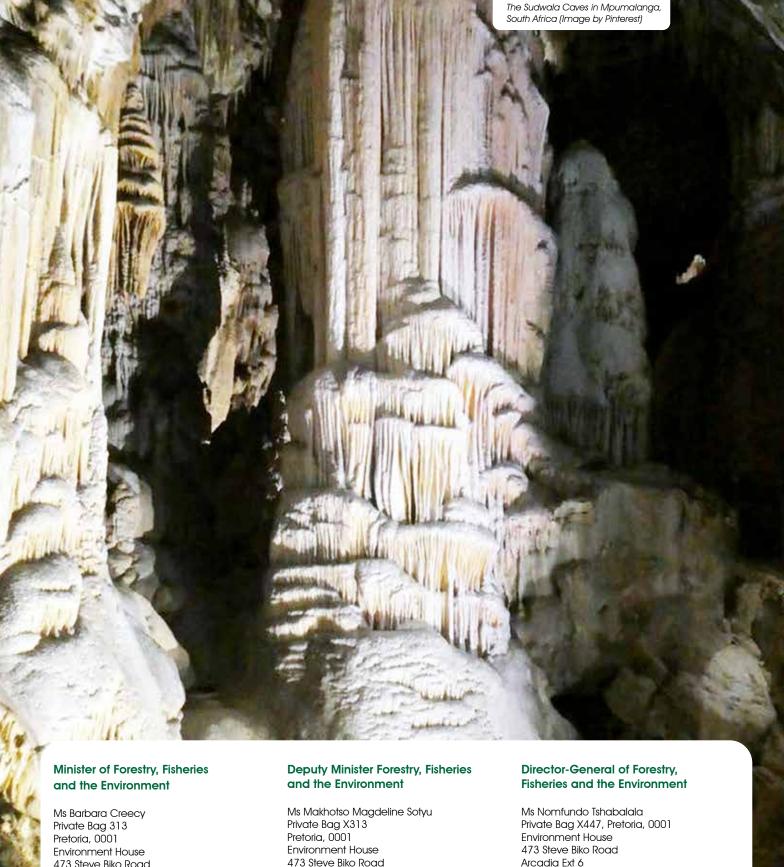
Cutting or pruning also requires a license except if less than 25% of the crown is pruned, but not for the topping of such trees, and also not for new development or re-development (exemptions published in Government Gazette on 27 August 2007). No topping or excessive pruning for seaviews are allowed.



White milkwood (Sideroxylon inerme). This tree and the red milkwood (Mimusops caffra) are dominant keystone species on the coast and are protected because of their aesthetic and ecological role.







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