

Environment Quarterly

Omgewings kwartaalverslag • Ubume bendalo ngekota • Mbango wa kotara



DEA Budget Vote 2017
**Celebrating
Environment Month**



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



2017 environment CALENDAR



January

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2 February
22 March
23 March
26 March
22 April
9 May
22 May
5 June
8 June

World Wetlands Day
World Water Day
World Meteorological Day
Earth Hour
Earth Day
World Migratory Bird Day
International Biodiversity Day
World Environment Day
World Oceans' Day

17 June
18 July
31 July
1 September
10 - 16 September
16 September
22 September
21 November

World Day to Combat Desertification
Nelson Mandela Day
World Ranger Day
National Harbour Day
National Parks Week
World Ozone Day
World Rhino Day
World Fisheries Day

DEA Budget Vote 2017

- 5** Green budget for a cleaner, greener SA
- Features**
- 9** Limpopo youth pilot SA Green Schools Programme
- 10** Circular economy: Creating economic growth while protecting the environment
- 12** Deputy Minister supports waste initiatives in KwaZulu-Natal
- 14** CSIR support for jobs in waste
- 15** Proud and loud about our National Environmental Monitors Programme
- 16** Connecting young people to nature
- 17** Eradicating alien invasive species naturally
- 22** Eco-Logic Awards celebrate environment champions
- 23** Careers in the Oceans Economy
- 26** Is the Great White Shark in danger?
- 30** Celebrating World Turtle Day
- 31** EPIP takes the greening of open spaces a notch higher
- 32** Recreational Park to benefit the community of Ga-Kgoroshi
- 34** SA continues to attract record number of tourists to its shores
- 36** Heritage and human rights
- 37** International award for iSimangaliso's Andrew Zaloumis

Regulars

- 2** Editorial
- 4** DEA Events
- 18** Research: A citizen-based approach to direct suspended sediment sampling in the Tsitsa River catchment
- 20** Pull-out poster: Opportunities for Youth in Environment
- 33** Spotlight on: Andover Nature Reserve
- 39** All Rise in Court
- 40** Vox pops



To use this QR code conveniently you must have a smartphone equipped with a camera and a QR code reader/scanner application feature.





Dear Valued Stakeholder,

South Africa has declared June Environment Month, when the country celebrates not only World Environment Day (WED), but also World Oceans Day (WOD) and the World Day to Combat Desertification and Drought (WDCD).

World Environment Day is the United Nations' most important day for encouraging worldwide awareness and action for the protection of our environment. In South Africa, June is also Youth Month, an important time to celebrate the role of the youth in bringing to the fore the fight for democracy and marks a

time when youth, as the future leaders of our country, can exploit their potential in building a new, transformed society. Throughout Environment Month, the youth are encouraged to get closer to nature, harness the promise it holds, as they commit to building a climate resilient and healthier world for tomorrow.

WED is the biggest, most globally celebrated day for positive environmental action. Environment Month enables everyone to realise their responsibility to care for the Earth, and reminds all of their individual power to become agents of change. The 2017 theme 'Connecting People to Nature, as approved by the UN, implores all people to get outdoors and into nature, appreciate beauty and importance of the natural world, and to take forward the call to protect the Planet. By embracing a healthy 'planet, communities embrace a healthier population.

The theme further invites all members of the public, young and old, to think about how they can be part of nature and how intimately they depend on it. It further challenges us to think about how we can collectively take action on environmental issues, such

as harnessing the link between sustainable development and the environment. WED 2017 also encourages us all to find fun and exciting ways to experience and cherish this vital relationship we have with our natural world.

The Department of Environmental Affairs (DEA) aims to utilise World Environment Day 2017 celebrations to promote the activities and programmes of the different branches within DEA and its agencies - SANBI, iSimangaliso, SANParks and SAWS.

On 25 May Minister Molewa delivered the department's Budget Speech in Parliament. On Page 5, we unpack key highlights of the speech which include the Operation Phakisa strategic approach, the recycling economy and the National Green Fund, amongst other issues.

We hope you enjoy the issue and encourage you to share it with friends and family. You can also download the publication on www.environment.gov.za on the publications section or connect with us on our social media platforms.

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JUNE IS ENVIRONMENT MONTH

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environmental affairs
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UN environment



South Africa recognised for ratifying the Basel Convention Ban Amendment



South Africa received an award with eight other country recipients out of 178 countries who were supposed to submit national reports for the Basel Convention on the Control of Transboundary Movement of Hazardous Waste & their Disposal, for the year 2013 on 4 May 2017 at the Basel, Rotterdam & Stockholm (BRS) Conventions COPs in Geneva, Switzerland. Receiving the award on behalf of South Africa was Ms Mishelle Govender the Chief Director for Hazardous Waste Management and Licensing at the Department of Environmental Affairs.

Left: Attending the African Group technical briefing of Ministers before their High Level Segment was Deputy Minister of Environmental Affairs, Ms Barbara Thompson with the Deputy Permanent Representative of RSA in Geneva Ms Ncumisa Notutela, DDG of the Chemicals & Waste Branch, Mr Mark Gordon, Chief Director of Chemicals Management Obed Baloyi, Chief Director Hazardous Waste Management & Licensing Ms Mishelle Govender, & other DEA colleagues.

Image by: Nontsikelelo Tiko and the Basel Secretariat

Right: The South African meeting. Deputy Director: Policy Analyst, Mr Tebogo Sebego Director and Senior Policy Advisor for Multilateral Environmental Agreements (MEA's), Ms Noluzuko Gwayi and Chief Director: Chief Director: Hazardous Waste Mr Obed Baloyi who are the Basel Convention Ban Amendment Team that worked on ratifying the amendment.

Image by: Nontsikelelo Tiko and Basel Secretariat



Bilateral discussions between South Africa and Argentina

Environmental Affairs Minister, Dr BEE Molewa had a bilateral meeting with the Minister of Science, Technology and Productive Innovation of Argentina, Dr Lino Barañao at the Maslow Hotel in Sandton on 04 April 2017 to discuss issues related to oceans and coasts.

Image by: Zibuse Ndlovu

SANBI wins Silver at Tourism Indaba



The South African National Biodiversity Institute won a Silver Award in the Tour Operator category at the Tourism Indaba, held on 16 – 18 May 2017 in Durban. The theme for the 2017 Tourism Indaba was Biodiversity and Sustainable Tourism. The Tourism Indaba brings together a showcase of Southern African tourism products and services for the international travel trade.

Image by: Veronica Mahlaba

Green budget for a cleaner and greener SA

Images by Veronica Mahlaba



Above: Minister of Environmental Affairs, Dr Edna Molewa and Deputy Minister Barbara Thomson delivering the 2017/2018 Budget Vote Policy Statement in Parliament on 25 May 2017 in Cape Town.

On Thursday, 25 May, Minister of Environmental Affairs, Edna Molewa delivered the department's budget vote speech in Parliament, Cape Town. The budget reflects the department's commitment to long-term transformative development that is economically, socially and environmentally sustainable and affirms commitment to the collective aspirations of Agenda 2063 of the African Union (AU).

1. Phakisa strategic approach – Planning and supporting the Green Economy

By facilitating and supporting the planning and growth of economic activity in new and existing green sectors and greening less sustainable sectors, this will lead to greater investment, create jobs, and enhance our international economic competitiveness.



Oceans Economy

a total of R17.7 billion in investment has been unlocked through the Operation Phakisa: Oceans Economy process in the five initially identified areas – offshore oil and gas, aquaculture, marine manufacturing and transport, oceans governance and tourism.

Biodiversity Economy

In 2016 the Department of Environmental Affairs (DEA) together with the Department of Tourism, co-hosted a Biodiversity Economy Operation Phakisa Delivery Lab to accelerate the economic growth and job creation opportunities in the biotechnology and biodiversity conservation sectors, in particular through the ecotourism and wildlife sectors.

The Biodiversity Economy implementation plans target the creation of 100 000 jobs, and support for 4 000 new Small, Medium and Micro-Enterprises (SMMEs) by 2030.



The Recycling/circular Economy

The recycling/circular economy views waste as a resource with value once it is recovered, reduced, re-used and recycled; and provides the opportunity for beneficiation, enterprise development, and innovation.

Given the potential to significantly scale up green economy initiatives in this sector, DEA are preparing to host a Chemicals and Waste Phakisa that will see the Annual Waste Khoro for 2017 taking the form of a Chemicals and Waste Circular Economy Lab Programme.



Supporting Broader Integrated Green Economy Development

The department is implementing phase one of its Greenhouse Gas Emission Mitigation system to allocate carbon budgets to companies that are significant emitters of greenhouse gases. South Africa's National Climate Change Adaptation Strategy that sets out programmes for responding to expected climate change impacts on the economy, society, and environment is in its final stages.

By 2016 South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) had already attracted over R200 billion in investment. DEA supported this programme with Strategic Environmental Assessments. In the past year, the department finalised authorisations for 124 renewable energy development applications, amounting to a total of some 55 000 megawatts of renewable energy, as well as development applications for some 43 Strategic Infrastructure Projects (SIP's).



2. Environmental justice strategic approach

Enhancing the regulatory system

Developing the "one environment system" in the mining and water sectors has indicated many areas for improving and integrating the environmental regulatory system. This has resulted in a comprehensive review of environmental legislation with the aim of improving procedural efficiency; reducing duplication and fragmentation, as well as standardising, streamlining and aligning legislative requirements.

This comprehensive regulatory review process addresses any emerging areas of concern, gaps or inadequate coverage in the regulatory system, including:

Climate change

DEA is focussing on the domestic measures required to contribute to the global effort to pursue efforts to limit global warming to 2 degrees Celsius, and 1.5 degrees Celsius, as obligated by ratification, in November 2016, of the Paris Agreement to combat climate change.

Chemicals

Regarding chemicals, the department is phasing down Hydro-fluorocarbons (HFCs), in terms of obligations in the 2016 Kigali Amendment to the 1986 Montreal Protocol on Substances that Deplete the Ozone Layer and managing the public health and environmental impacts of mercury pollution, in terms of obligations in the Minamata Convention on Mercury signed in 2015.

The phase-out, import and export of hazardous chemicals and waste is being managed in terms of obligations in the Basel, Rotterdam and Stockholm Conventions.

Waste

DEA is managing the detrimental impacts of plastics and the phase-out of micro-plastics in terms of UN General Assembly and UN Environmental Assembly resolutions, as well as the findings of a Plastic Material Study that will be conducted this year in collaboration with the plastics industry, the South African Bureau of Standards, the National Regulator for Compulsory Specifications, the National Treasury and Department of Health.

The appointment of independent operators to run clean-up and processing operations in the different waste management sectors will be done through an open and competitive tender system.

In conjunction with National Treasury the DEA will conduct a feasibility study into the option of a landfill disposal tax as a disincentive to landfill.

Biodiversity and Conservation

Implementing the decisions taken at the 17th Conference of Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), hosted by South Africa in 2016, will include:

Provisions to strengthen actions to combat illicit wildlife trafficking, improve protection of entire groups of species, empowering youth and closer engagement with rural communities. Provisions to manage the international trade in hunting trophies and the trade in cycads.



The CITES listing of wild ginger and Temminck's pangolin. The transfer of the Cape Mountain Zebra from Appendix I to Appendix II by CITES, which recognises a remarkable conservation success story – where a species has recovered from just less than 100 individual animals in the 1990s to over 5 000 in 2016.



The decision not to list South Africa's elephant population in Appendix I, that would have introduced a ban on the international commercial trade in wild elephant – a victory for scientific, evidence-based decision making. The purpose of this comprehensive legislative review is to have more accessible, user-friendly and efficient decision-making tools.

- A Consolidated Integrated Permitting System (CIPS) to provide a single environmental authorisation and permit application and processing interface.
- An EIA Screening Tool, integrated with the CIPS that will provide for an early focussing of assessments and accelerate the assessment and authorisation process.
- A Special Needs and Skills Development Programme to provide pro bono environmental services for individuals and organisations who cannot afford to pay for the costs of an Environmental Impact Assessment.
- A special initiative in plastic design to improve the recycling of plastic bags.
- A 5-year monitoring programme to intervene in support of local government in the management of the nationwide network of 42 air quality monitoring stations.
- An air quality offset programme to be rolled out by industries in the Vaal Triangle Airshed and Highveld Priority Areas.
- A National Biodiversity Offset Policy, in collaboration with the Departments of Mineral Resources and Water and Sanitation, to ensure that significant residual impacts of development, particularly in the mining sector are remedied.
- A national guideline towards the Establishment of Coastal Management Lines to protect coastal public property, coastal protection zones and infrastructure.



Above: Minister Edna Molewa and Deputy Minister Barbara Thomson interacting with learners from KwaBhekilanga Secondary School in Alexandra, Johannesburg. Ms Ntombenhle Nkosi and Mr Kingsley Macebele had many questions regarding environmental issues.

Success stories

In the last financial year, all competent authorities processed 1266 Environmental Impact Assessments (EIAs) at a 96% efficiency rate. Whilst the poaching of South Africa's rhino remains of concern, there is a slow but steady decline in poaching numbers. This is thanks to the Integrated Strategic Management of Rhinoceros approach approved by Cabinet in 2014, supplemented by a Rhino Conservation Lab in 2016 to enhance collaboration between government, the private sector and NGOs.



3. Economy-wide service delivery strategic approach – Implementation and investment

The National Green Fund continues to support investment projects, research and development and capacity development initiatives across the green economy.

The government has to date allocated R1.2 billion to the fund, creating approximately 6 620 direct jobs. One such project being supported by the fund is the construction of the flagship Hammarsdale Waste Beneficiation centre in KwaZulu-Natal, which will maximise waste diversion from landfill through innovative recycling technologies.

Phase 1 of this project, that is being run by a non-profit called USE-IT, will lead to the creation of 153 permanent jobs, as well as 80 construction jobs. Since its inception, USE-IT has created 2 400 jobs from waste beneficiation and has won a number of national and international awards.

However, the onus to create green jobs cannot be on government alone. In this regard, forging partnerships and incentivising private sector investment, both domestically and internationally, is key.

These partnerships include, but are not limited to:

- The Partnership for Action on Green Economy (PAGE), that seeks to put sustainability at the heart of economic policies and practices.
- The Switch Africa Green partnership that is implementing innovative pilot renewable energy projects.
- In February 2017, SANParks convened its first ever Tourism Investment Summit to explore public-private partnerships.
- The United Nations Environment Assembly (UNEA), the Global Environment Facility (GEF) and the Green Climate Fund (GCF).
- The Development Bank of South Africa and the South African National Biodiversity Institute (SANBI) have been accredited as implementing agencies for both the GEF and GCF and are now able to process finance applications for climate change adaptation and resilience.
- Cooperative engagement in Multilateral Environmental Agreement bodies to advance the environment, climate change, and sustainable development agenda.
- Cooperative engagement within the African Union and Southern African Development Community (SADC); fostering bilateral relations with key African countries, and strengthening South-South Co-operation within key emerging developing markets such as



BRICS

Cooperative engagement in research in Antarctica continues, in collaboration with the Departments of Science and Technology and International Relations and Cooperation. The network of National Parks and protected areas provide the base infrastructure for a growing eco-tourism and wildlife use sector. In the last financial year, South African National Parks (SANParks) received 6.7 million visitors into its 19 parks generating approximately R2.6 billion. To ensure that the National Parks are accessible to all South African citizens, over 91 000 people were granted free access to National Parks during the 2016/17 financial year.

The Protected Area Expansion Initiative builds up the base ecological infrastructure supporting this growing wildlife economy over time while enhancing the biome range to allow for species migration and contributes towards mitigating the impacts of climate change. In 2016 a total of 3 874 hectares were added to National Parks and plans are underway to acquire 3 569 hectares next year.

R213 million was used to support SMMEs in National Parks and neighbouring areas in 2016. In order to develop coastal communities, regulations re-zoning Tsitsikamma Marine Protected Area (MPA) allowing for controlled fishing in 3 'take' zones (comprising 20% of the MPA coastline) has been gazetted.

In support of growing the eco-tourism and wildlife use sector, South Africa has submitted applications to The United Nations Educational, Scientific and Cultural Organization (UNESCO) for them to consider designating the Garden Route as a Biosphere Reserve, as well as listing the Khomani Cultural Landscape and the Barberton Makhonjwa Mountains on the World Heritage List, in June 2017 and October 2018 respectively. These prestigious international designations will boost local eco-tourism development and provide job creation opportunities for rural communities. The Department of Environmental Affairs remains committed to the conservation of our natural environment, the protection of public and environmental justice and health and promoting inclusive growth that creates jobs and grows our economy.



Limpopo youth pilot SA Green Schools Programme

By Gaopalelwe Moroane
Images by Itumeleng Motsepe



Above: Mosasane Baloyi Primary School are winners of the intermediate phase of the inaugural South African Green Schools Programme launched in Limpopo.



Above: The Deputy Minister of Environmental Affairs, Ms Barbara Thomson delivers her keynote address during the inaugural South African Green Schools Programme in Limpopo.

Limpopo youth paved the way for other South African schools during the launch of inaugural South African Green Schools Programme in Polokwane on 27 April 2017. "The Greenest Schools Programme is still in its infancy stage but our vision is to make it a leading environmental management and award initiative working with primary and high schools across the country," said Deputy Minister Barbara Thomson.

Participating schools presented to an audience which was made up of Deputy Minister Barbara Thomson and MEC for Economic Development, Environment and Tourism, Mr Seaparo Sekwati. Schools presented based on the following environmental themes: Waste Management, Energy Efficiency and Conservation; Water Management and Conservation; Landscaping, Tree Planting and Beautification, Public Participation and Community Empowerment, Leadership and Institutional Arrangements.

It has become important to continuously heighten environmental awareness on environmental issues such as pollution, climate

change, and biodiversity loss in order to reconnect people with the environment. Environmental awareness also promotes methods in which communities can decrease the negative impact they have on the environment. "Today's children are today's decision makers and they need to be equipped with knowledge of the workings of the environment. This awareness therefore plays an important educational role," said Deputy Minister Thomson.

As part of the South African Green Schools Programme initiative, learners from at least 105 schools in Limpopo province showcased their projects that focus on environmental conservation.

The twelve schools that made it to the finals shared insightful but simple examples of how they and in turn other schools wishing to participate in the programme can green their schools:

- Learners from PAX College shared with audiences how they have planted grass and shrubs to reduce soil erosion in their school in Polokwane.
- Intermediate phase entrant

Sudzulusani Primary School empowers and involves the public in their green school project by encouraging parents to assist with the vegetable garden.

- Blue Crane award recipient Ramatlho School shared how they use sod covers over the grass and soil to protect soil from being washed away by rainwater.

Winning schools received prizes up to the value of R100 000. Prizes money will not be given to schools as cash but schools will choose projects which further the objectives of the broader mandate of DEA such as purchasing of water tanks, vegetable garden implements and seeds, initiating a recycling programme, installation of renewable energy, schools/community parks.

The DEA will be collaborating with one province at a time. Mpumalanga will be participating in the 2017/18 leg of the programme. The aim is to add one province every year until it becomes a national program.

For more information on how you can be part of the SA Green Schools Programme, kindly contact: Ms Morwesi Ramotse on 012 399 9997.



About the contributor: Gaopalelwe Moroane

Gaopalelwe Moroane is a Senior Communication Officer under the sub-directorate, Editorial Services in the Department of Environmental Affairs. Prior to working for DEA she worked for short periods with the Pretoria News, Grahamstown's local paper Grocott's Mail as well as writing reviews for the National Arts Festival publication, Cue Newspaper.

Circular economy: Creating economic growth while protecting the environment

By Seipati Sentle
Images by Itumeleng Motsepe



Above: Minister of Environmental Affairs, Dr Edna Molewa and the European Union's Environment, Director- General, Mr Daniel Calleja at the Circular Economy Seminar on 4 May 2017 in Durban.

The Minister of Environmental Affairs, Dr Edna Molewa will prioritise youth employment and provide much needed considerable social, economic and environmental opportunities which will include job creation, enterprise development in South Africa and developing countries where unemployment is high by providing access to valuable resources through the development of a system called the circular economy.

Minister Molewa believes that the country's economic plan such as the tyre industry could serve as an important case study of how the Circular Economy can successfully turn waste into wealth. "The South African government has already identified a host of sectors where wealth could be extracted from the so-called dead capital of waste products. One of these is

the recycling of tyre and plastics sector. We as the South African government are working hard to amend the Waste legislation to allow for independent operators to run clean-up and processing operations in the different waste management sectors," said Minister Molewa.

Minister Molewa briefed the European Union's Environment Director General, Mr Daniel Calleja on the opportunities created by the circular economy model through a number of first rate testimonials and technical interventions. She said the tyre circular economic plan can make the entire operation possible by managing the operations of, and revenue in, the sector. "It also helps what is referred to as waste pickers organise themselves into cooperatives, generate jobs for waste transporters, sets up the necessary storage depots as new

small businesses, and provides financial and other support to many of the recycling plants needed to repurpose the spent tyres. South African waste sector employ nearly 30 000 people in 2012 of which 2009 are employed in the public sector mostly in local and metropolitan municipalities – and 9 741 worked in the private sector," she added.

The high level SA-EU Circular Economy Seminar, brought together a number of high profile delegates and successful companies worldwide as well as start-ups, experts and policy makers. The Circular Economy is an economic model that minimises resource input and waste generation. The value of the resources used in products is retained by returning them into the product cycle at the end of their use. By doing so, Circular Economy imitates nature where nothing is wasted. Opportunities



About the contributor: Seipati Sentle

Ms Seipati Sentle is a Communications Specialist for the Department of Environmental Affairs.



Above: The maker of Sk8Shades creates sunglasses and sunglass accessories from old skateboards which is one example of waste being reused instead of being sent to landfill sites.

for job creation exist in moving waste away from landfills towards alternative waste treatment across the entire waste hierarchy. This can be achieved through cleaner production, industrial efficiency, dismantling, refurbishment and reuse, as well as new methods of collection, sorting, reprocessing and manufacturing.

The circular economy, is a trillion-dollar opportunity, with huge potential for innovation, job creation and economic growth. The wealth to be found in waste could generate a host of jobs and viable new enterprises, thus helping to counter any country's unemployment rates, thus contributing to economic growth. During the Dialogue today, and the discussions between South Africa and the EU, we hope to continue with the work being done to align the global Sustainable Development Goals (SDGs) with the National Development Plan (NDP).

Mr Calleja pointed out how the European Union (EU) is rapidly pursuing the transition to a circular economy as a top priority adding that the EU is undertaking in-depth reforms to enable Europe's economy to transition towards ambitious sustainability objectives while strengthening the competitiveness of our companies and maintaining a healthy environment for our citizens. "We need to forge alliances between like-minded partners, such as the European Union and South Africa, not only at Government level but also through innovative business and research partnerships. We underlined the importance

"The Circular Economy is an economic model that minimises resource input and waste generation. The value of the resources used in products is retained by returning them into the product cycle at the end of their use"

of the circular economy model for transitioning to a low-carbon, climate resilient economy," said Mr Calleja.

Both Minister Molewa and Mr Calleja agreed that as a sustainable development model, the idea behind the Circular Economy will keep resources at their highest possible level of value at all times, thus eliminating the very idea of waste, and leaving 'enough for

all forever.' Waste in the context of circular economy is broader than physical rubbish. It also refers to product end-of-life as well as the enormous under-utilisation of products and assets in markets. For example, a discarded product that is not recycled is a waste, but so is ending the working life of a product prematurely or letting it sit idle. A typical car, for example, is used only 5% to 10% of the time and as much as 80% of the items stored in a typical home are used only once a month.

With the right business model, products could remain in the economy much longer than a day, and consumption rates of everything from cars to consumer goods could increase tenfold by utilising innovative sharing models. Most notably, the Circular Economy encourages companies to think about how goods can be designed, produced and marketed with reuse in mind.



Above: Minister Molewa and Director-General look at examples of existing circular economy beneficiaries

Deputy Minister supports waste initiatives in KwaZulu-Natal

By Zibuse Ndlovu and Abraham Shoba



Above: Deputy Minister Thomson, and Msunduzi Mayor, Councillor Themba Njilo handing over bakkie keys to Songimvelo Recyclers in Msunduzi.

Deputy Minister of Environmental Affairs, Ms Barbara Thomson handed over 15 trolleys to the South African Waste Pickers Association in Moiriver and a Kia bakkie to Songimvelo Recyclers in Msunduzi,

KwaZulu-Natal on 20 and 22 April 2017.

Speaking at both events, the Deputy Minister highlighted the importance of supporting waste management initiatives as they contribute to job

creation and improving the quality of life for all.

“Recycling has enormous economic potential. Conservative estimates put the financial value of the formal South African waste sector at R15



About the contributors: Zibuse Ndlovu and Abraham Shoba

Zibuse Ndlovu is the Assistant Director: Editorial Services at the Department of Environmental Affairs, within the Communications Chief Directorate.

Abraham Shoba is a Communication Officer at the Department of Environmental Affairs, within the Communications Chief Directorate.



Above: Deputy Minister handing over 15 trolleys to the South African Waste Pickers Association in Mooiriver. These waste pickers have in the past converted retail store.



Above: Deputy Minister Thomson joined the community to clean up the streets of Bruntville in Mooiriver.

billion. It is time that we wake up to this economic potential of recycling," said Deputy Minister Thomson.

Referring to the job creation opportunities in the sector, the Deputy Minister called on local businesses and entrepreneurs to explore the economic opportunities provided through waste recycling.

"Let us involve our youth and women in such interventions as they are most affected by unemployment and poverty."

Songimvelo Recyclers employ vagrants and unemployed youth to collect recyclable material for recycling within the city. "They have played a role in cleaning the streets of Msunduzi by collecting recyclable material and disposing of it at landfill sites," said Msunduzi Mayor, Councillor Themba Njilo.

Councillor Njilo said the clean-up initiative by Songimvelo Recyclers and tools donated by the Department of Environmental Affairs (DEA) would help transform the city. "This is a dream come true

"Recycling has enormous economic potential. Conservative estimates put the financial value of the formal South African waste sector at R15 billion."



Above: Ms Boitumelo Dlamini and Ms Sindiswa Duma from General Waste: Awareness and Capacity Building, weighing the waste collected during the clean-up in Bruntville.

for the city to take on a clean-up initiative. We've already started the cleaning process beginning at the Ematsheni area and clearing up the streets."

The DEA, in partnership with the Department of Public Service and Administration through its Tirelo Boshá Programme provided the means to purchase a vehicle for Songimvelo Recyclers. The vehicle is fitted with a customised trailer to increase the capacity to transport recyclable materials, and Songimvelo Recyclers founder Mr Hugo Ngcobo said the

donation came in handy as it will assist them with their recycling business.

"Upon receiving a truck, we managed to keep Pietermaritzburg clean by opening up a mobile buy-back centre in the city and we also go around the city and buy recyclables in kilograms from the ordinary people who simply participate in the recycling," Mr Ngcobo said. His co-founder Mr Ivan Khumalo said lack of employment influenced their decision to start the company to ensure they turn waste into money.

The South African Waste Pickers Association, Groundwork, and Petco are among the organisations that have partnered with the DEA to support emerging waste pickers.

Mooiriver Recycling Corporative founder, Mr Sibusiso Dladla said the trolleys handed over to waste pickers will make their work easy. "We are very thrilled by receiving these trolleys, and we hope that others who are doing the same work will be encouraged from what we have achieved and strive to do more," said Mr Dladla.

The waste pickers in Mooiriver have in the past converted retail store trolleys into convenient modes of transport to move the collected waste material to buy-back centres with ease. "As a recycling corporative we want to grow, be able to create decent jobs, maybe in future be able to manufacture and produce products that people can buy," said Mr Dladla.

CSIR support for jobs in waste

By Reyhana Mahomed



Above: The informal waste sector in South Africa has been active for more than two decades and plays an important role in diverting recyclables away from landfills.

The Council for Scientific and Industrial Research (CSIR) has undertaken research for the Green Fund to evaluate waste and recycling cooperatives to understand the opportunities and constraints facing waste cooperative implementation in South Africa. The Fund is managed by the Development Bank of South Africa on behalf of the Department of Environmental Affairs. The waste sector can contribute towards addressing South Africa's unemployment challenges.

The informal waste sector in South Africa has been active for more than two decades and plays an important role in diverting recyclables away from landfills. However, CSIR research shows that the sector is marginalised and operates at the fringe of municipal solid waste management systems. In efforts to create sustainable, thriving cooperatives, the public and private sectors need to collaborate to boost cooperative development in the waste sector.

"We have all seen the trolley pushers on our roads," says CSIR principal researcher, Dr Linda Godfrey referring to the informal waste pickers collecting waste from kerbsides. "There are an estimated 60 000 – 90 000 informal waste pickers earning a livelihood from the collection and sorting of recyclables in South Africa. Working on landfill sites and at kerbsides, these informal waste pickers collect approximately 80 – 90% of all post-consumer paper and packaging recyclables in the country, saving municipalities

R750 million in landfill airspace per annum, at little to no cost."

One of the ways to integrate the informal waste sector into the formal waste economy, is formalisation through the establishment of cooperatives, explains Godfrey.

"But we found that cooperatives, not only waste and recycling co-operatives, have a very high failure rate in South Africa." Waste cooperatives in South Africa face numerous challenges in their day-to-day duties, including lack of infrastructure such as transport, equipment and premises to sort and safely store their collected waste, as well as lack of capacity for training and acquiring knowledge and skills.

She explains: "What we found is that while training is necessary, it is often insufficient. What cooperatives need to become sustainable is incubation and mentoring, but this comes at a significant cost."

Godfrey believes that cooperatives require long-term support and investment from all relevant role-players in the sector, as they have the potential to create a significant number of direct and indirect income opportunities.

The CSIR provided insight on potential solutions to waste management challenges in South Africa. "The waste sector can definitely support low-skilled workers and also provide wonderful opportunities to deal with waste as a secondary resource," says Godfrey. The waste sector can contribute towards addressing South

Africa's unemployment challenges through creating large numbers of low-skill jobs to address current challenges, while at the same time developing new enterprises that will require new types of skills.

The CSIR's support for SMME development in the waste sector is linked to the Department of Science and Technology's Waste, Research, Development and Innovation Roadmap. "The CSIR, through the Waste RDI Roadmap Implementation Unit, manages a portfolio on waste research development and innovation on behalf of the DST. Essentially it focuses on growing the investment and capability in waste research and development in South Africa," said Godfrey.

The Department's "Ten-Year innovation Plan: Towards a knowledge-based economy" recognises the importance of science and technology in improving the country's competitiveness and economic growth. The waste sector is recognised by government as one that provides opportunities for value recovery, job creation and economic development. The Roadmap has been developed to provide strategic direction and to coordinate and manage South Africa's portfolio of investment for the next 10 years in six identified clusters of waste research, development and innovation activities, including strategic planning, modelling and analytics, technology solutions, waste logistics performance, waste and environment, and waste and society.



About the contributor: Reyhana Mahomed

Reyhana Mahomed is a Communications Manager at the Council for Scientific and Industrial Research (CSIR): Natural Resources and the Environment. Before joining the CSIR, Ms Mahomed was a Deputy Director in the Department of Environmental Affairs' Chief Directorate: Communications.

Proud and loud about our National Environmental Monitors Programme

By Pitso Mojapelo



Above: Since inception over 2 000 environmental monitors have participated in the programme focusing on Patrols, Environmental Monitoring and Education.

From 2010, South Africa experienced high volumes of Rhinoceros (*Diceros bicornis* and *Ceratotherium simum*) poaching, which ultimately threatened the existence of this important mammal that forms part of the country's Big Five. In response to this challenge, the Department of Environmental Affairs through its Environmental Programme Branch initiated the National Environmental Monitoring Programme (NEMP) in 2012. The sub-programme NEMP is located within the Chief Directorate: Environmental Protection and Infrastructure Programme (EPIP) under the Wildlife Economy Focus Area. Implementation of the NEMP just like all programmes with the Branch, follows the Expanded Public Works Programme (EPWP) methods.

The first group of twenty four (24) Environmental Monitors were deployed at the privately owned reserve Sabi Sands, which borders the world renowned Kruger National Park. The Programme has since grown from a security driven approach to environmental management in response to many challenges experienced on protected areas throughout the country. Since

inception over 2 000 environmental monitors have participated in the programme focusing on Patrols, Environmental Monitoring and Education.

The Department provides monthly wages or stipends to all environmental monitors and the host institutions covers all operational costs, amongst others training, accommodation, and personal protective equipment. Thirty-two (32) host institutions of which, seven (7) are public entities and twenty-five (25) private reserves/institutions are currently benefiting from the Programme.

Between 2013 and 2016, the programme received several national and international awards in recognition of the work done by environmental monitors in their different fields of operation. These awards included the following: Best EPWP Kamoso National Programme, Best Rhino Conservation, Best Biodiversity Special Programme and United Nations Environment Programme: Champions of the Earth.

The Black Mambas Anti-Poaching Unit, an all-female team of

environmental monitors based at Balule Private Nature Reserve has attracted attention from all over the world with over 2 billion hits since winning the United Nations Environment Programme: Champions of the Earth. Individual Environmental Monitors have also won accolades within conservation and the current Ranger of the Year in South Africa, Mr Anton Mzimba is part of the Programme.

In 2015, South African Broadcasting Corporation (SABC) flighted a 16 episode series named Code Green, which brought in all environmental monitors from Kwazulu-Natal known as Rhino Ambassadors. The series was such a success and as a result SABC has now approved a 26 episode series as a follow up and it will be flighted between July and November 2017

The programme continues to attract many interests from both the public and private sector of South African solely based on its uniqueness within the Expanded Public Works Programme and its impact within the biodiversity and conservation management space. We are proud to implement such an impactful



About the contributor: Pitso Mojapelo

Mr Pitso Mojapelo is the Deputy Director: National Programmes. He has been involved in Natural Resource Management since 1999 when joining government and has worked for Department of Agriculture, Forestry and Fisheries, Rural Development and Limpopo Department of Agriculture.

Connecting young people to nature – Youth Conservation Programme

By Veronica Mahlaba

During the 17th Conference of the Parties to the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES CoP17) in 2016, a legacy programme known as the Youth Conservation Programme (YCP) was officially born. At the 2014 IUCN World Parks Congress in Sydney, South Africa undertook to be one of the countries that strives to inspire a new generation of young conservation professionals.

At the heart of this promise is the government's commitment to connecting young people to nature and empowering the youth in decision making to be current and future leaders for change. The YCP emphasises the importance of every individual playing a role in the protection of South Africa's natural wealth, while simultaneously highlighting the possibilities for socio-economic upliftment through conservation.

The Department of Environmental Affairs (DEA) is committed to the empowerment and socio-economic development of previously disadvantaged South African communities around protected areas through conservation and sustainable use.

Chief Director: Protected Areas Systems Management, Ms Skumsa Mancotywa stated that it is the belief

of the South African government that the youth represents a vast human resource potential, which if properly nurtured tapped, can contribute immensely to government's national development agenda. "Young people have the opportunity to play a central role in tackling sustainable development challenges of the 21st Century. For South Africa and the world to achieve the 2030 Agenda for Sustainable Development, the youth must be at the centre of a sustainable future through advocacy, monitoring and implementation of the Sustainable Development Goals," said Ms Mancotywa.

Mr Thembuliwo Nephawe, one of the participants from Limpopo said they got knowledge they never got from school. "It was not just theory, we went on game drives and got to interact with game rangers, park rangers trust managers, environmental monitors and general employees who taught us about the administration side of the work in the protected areas. We now know why it is important to protect the protected areas as people living next to them."

Legacy projects are those which are the embodiment of DEA's vision to harmonise the existence of people and the environment by facilitating the growth of livelihoods through conservation and sustainable use.

During the 7th People and Parks Conference in 2016, Minister Edna Molewa also endorsed the establishment of the South African Youth Conservation Forum which serves as a vehicle for the development of a robust youth programme, identify funding opportunities and ensure programme monitoring thereof. The Youth Conservation Forum will also serve as the voice of young people in Conservation platforms both nationally and internationally. "Moving forward, the youth are championing the YCP under the umbrella of the mother body, the People and Parks Programme. This is once again, a notable stride the government has achieved in pulling youth to the centre of conservation endeavours," explained Ms Mancotywa.

"The YCP is a programme that will mobilise youth around conservation in a way that stresses the importance of every individual playing a role in the protection of South Africa's natural wealth, while simultaneously highlighting the possibilities for the social economic upliftment through conservation," explained Ms Mancotywa.

This is a comprehensive programme designed to give the participants a solid foundational understanding of conservation, and to support their learning with practical experience and an opportunity to consider a career in nature conservation.



About the contributor: Veronica Mahlaba

Veronica Mahlaba is the Senior Communication Officer: Editorial Services at the national Department of Environmental Affairs, serving under the Communications Chief Directorate. Ms Mahlaba has experience as a Lecturer in the Media Studies Department at a private college. She has worked as writer for a metropolitan municipality and she is a keen photographer.

Eradicating alien invasive species naturally:

A century of biological control in South Africa Caring for the coast

By Debbie Muir



Above: Cochineal infesting the flattened leaflike stem (cladode) of the Australian pest pear.

Biological control, or biological pest control or simply biocontrol, is the method of suppressing or controlling a population of undesirable plants, insects or animals by their natural enemies to economically non-important levels. The reason why alien invasive species (AIS) are so successful in establishing in another country is because their natural enemies remained in their country of origin. Biological control agents are often predatory or parasitic and could include insects, vertebrates, nematodes (round worms), mites, fungi, bacteria and even viruses that eat or infect their prey. This natural phenomenon of predation is used as part of the fight against alien invasive species in addition to the more traditional chemical and mechanical control methods.

The objective of the Working for Water programme implemented by the Department of Environmental Affairs is to control and eradicate alien invasive species. The Biocontrol programme is a specific focus area of the Working for Water programme and facilitates the use of biological control agents to control alien invasive species through the identification, mass rearing, release and monitoring of biological control agents.

South Africa has been importing biological control agents for more than a century. The research conducted in verifying host specificity has been so rigorous that there has been no incidences of the biological

control agent shifting to another species or attacking non-target plants. South Africa is world renown for this work. After studying the predators of an unwanted Alien Invasive Species (AIS) in their natural habitat, a selection is made for testing. When a possible biological control agent is found to be completely host specific, it is approved and imported into South Africa for the use against the said AIS. Once imported the biocontrol agent is reared en masse and strategically released in areas where the AIS density is very high or which is difficult to treat by chemical or mechanical control methods.

More than 270 biocontrol agents were tested over the last 50 years and 106 agents were cleared for release. Over 80 of these biological control agents have established in the country to date and are contributing to the control of 48 alien invasive plant species. It is possible to release more than one biocontrol agent onto a target species as they can fill various niches and increase the effectiveness of the biocontrol. An example of one AIS with more than one biocontrol agent is red sesbania (*Sesbania punicea*). Red sesbania has 3 different biocontrol agents – all weevils – which feed on different parts of the plant – the stem, flower and seeds.

The search for new biological control agents for targeted AIS in South Africa is done by the Agricultural Research Council: Plant Protection Research Institute (ARC-PPRI) and supported by the Universities of Cape Town, KZN, WITS and Rhodes through

funding provided by Environmental Programmes as part of the Working for Water programme. Research programmes to find new biological control agents continue, as does the mass rearing and implementation programmes, however a larger emphasis will be placed on research on the establishment, post release evaluation and impact studies on the effects of biocontrol agents on the targeted alien invasive species.

The positive impacts of biocontrol in South Africa is grossly underestimated and it is the hope that with future work done, this will become more and more apparent.

The first biocontrol agent, cochineal (*Dactylopius ceylonicus*), was released in South Africa in 1913 onto the drooping prickly pear plant (*Opuntia monocantha*) and shortly after in 1920, a different species of cochineal, *Dactylopius opuntiae*, was released to control the very aggressive invasive species, the jointed cactus (*Opuntia ficus-indica*). An area which was severely infested (80% infested) by the jointed cactus on a farm outside Graaff-Reinet was selected to be treated exclusively with biological control agents. Biological control is a long term control method, and the results obtained in a short time was superb - the infestation was effectively reduced and controlled in just 31 years.



About the contributor: Debbie Muir

Debbie Muir is the Specialist programme manager for Natural Resource Management in the Branch: Environmental Programmes. She has experience of over 15 years in biocontrol implementation as she was one of the first Biocontrol officers appointed in 2001 when the implementation of biocontrol was conducted only in the Western Cape and KZN.

Jamjars, smartphones, and Open Data Kit

A citizen technician-based approach to direct suspended sediment sampling in the Tsitsa River catchment

By Laura Bannatyne and Namso Nyamela



Above: Explaining the use of the cellphone.



Above: A citizen technician taking a suspended sediment sample using a pole and jar sampler.



The catchment of the Tsitsa River (Part of the Umzimvubu catchment in the Eastern Cape) is in many places highly gullied and degraded, leading to visibly high suspended sediment loads in the Tsitsa River, particularly during floods following periods of heavy rain.

In common with much of South Africa, there is very little suspended sediment data for the Tsitsa River. We do not know how much soil is being eroded, nor which parts of the catchment supply more sediment than others. Because of this, we do not know where to direct catchment rehabilitation efforts, or what effects this erosion and suspended sediment load may have downstream. This information is important for planning sustainable catchment livelihoods, for managing river health, and for the sustainability of the Department of Water and Sanitation's (DWS) proposed dams on the Tsitsa River at Ntabelanga and Laleni.

Currently available information comes from modelling and GIS

studies. Verification is needed through long-term suspended sediment sampling from the Tsitsa River and its tributaries. Data from this direct sampling project will help the Department of Environmental Affairs to prioritise community-based land rehabilitation initiatives throughout the catchment, and to determine the relative contributions of sub catchments to sediment delivered to the sites of the proposed dams. The project began in early 2015 and is expected to continue for several years.

Sampling approaches that would rely on researcher presence and/or installed instrumentation were precluded by cost, study area size, the unpredictability of flood events, and the risk of equipment theft, vandalism, and damage during high flows. Due to these challenges, and with the added benefit of providing sustainable employment, it was decided as part of the broader Ntabelanga and Laleni Environmental Infrastructure Project (NLEIP) to recruit

and train people living close to the rivers of the Tsitsa catchment as "Citizen technicians". Starting in December 2015, eleven citizen technicians living in the catchment above the site of the proposed Ntabelanga Dam were trained to collect suspended sediment samples and make observations of the river and weather. Five more citizen technicians were later recruited when the initiative was expanded to the Inxu River, upstream of the proposed Laleni Dam.

Individuals were recruited based on their availability and aptitude for the work, and on the proximity of their homes to the river sampling site. Local residents know from experience the response of the river to weather events, and they are well placed to notice rises in river level and to be able to sample the important flood flows, when most of the suspended sediment is mobilised and transported. During the dry season and at low water the citizen technicians collect baseline

About the contributors: Laura Bannatyne and Namso Nyamela

Laura Bannatyne is a Masters candidate in the Geography Department at Rhodes University. She has a working background in the water sector and an Honours degree in Environmental Water Management.

Namso Nyamela is a Master of Science candidate in the Geography department at Rhodes University and has completed a Bachelor of Science Honours in Environmental Water Management.

samples in the early morning and late afternoon. When they observe a rise in water level they collect 20 flood samples at short, catchment-specific intervals through the ensuing flood flow. They are paid for each sample they collect.

The citizen technicians use basic equipment such as Perspex clarity



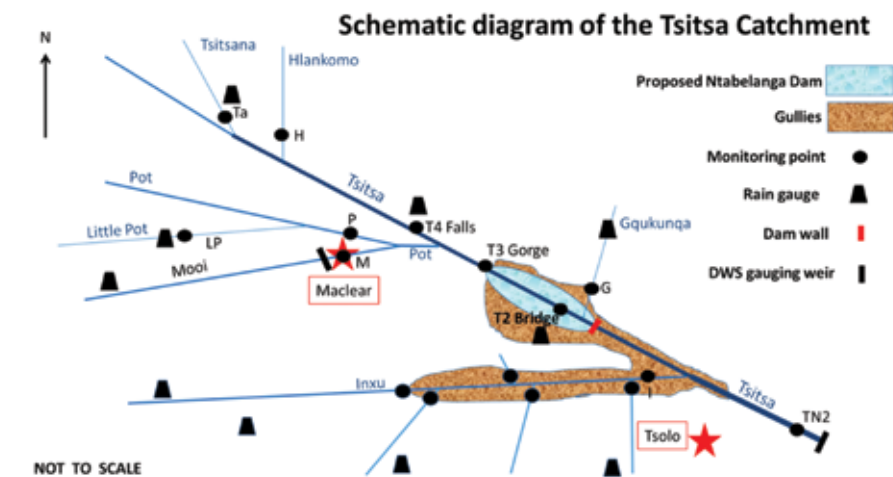
Above: A citizen technician about to set off from her home to the river to take samples.

The sampling sites were positioned upstream of confluences that are dominated by specific land-uses, such as forestry (Mooi), commercial agriculture (Pot), or communal grazing (Hlankomo), or that are in either very good or very poor condition, for example the near-pristine Little Pot catchment as contrasted against the heavily gullied Tsitsa catchment immediately upstream of the proposed Ntabelanga dam site. Discharge is determined at each site and used with suspended sediment concentration data to calculate suspended sediment fluxes and yields for each catchment.

Whilst engaging local residents provides a practical solution to the sampling problem, it presents a significant challenge in terms of ensuring that samples are correctly taken at multiple remote sites in a large catchment that is distant from the research base. Quality assurance of the collected data is crucial, particularly when it is to be used in support of catchment-scale environmental management actions and policy decisions. Data collection protocols were established and embedded using the ODK forms loaded to the smartphones. Support, supervision, and feedback were provided to citizen technicians

tubes, plastic jars and wooden poles, as well as software-enabled smartphones to take photographs of the river and of their samples, and to record information about the river level, visual clarity, and weather conditions.

The software, Open Data Kit (ODK), uses forms loaded onto



Above: A schematic diagram of the Tsitsa River catchment.

both via the phones and during monthly sample pick-up visits. The ODK-enabled smartphones allow communication, data reporting and sampling compliance checking, in addition to supporting administration and management of the human and financial resources in line with the aims of the NLEIP programme.

Data

By December 2016, ~8000 suspended sediment samples and associated information had been received from the citizen scientists.

Quantitative data from each site includes visual clarity data; suspended sediment concentration derived by evaporation; electrical conductivity; and measured turbidity. This is supplemented by continuous depth data from Solinst pressure loggers installed at each site, discharge data from the DWS gauging stations, and 5-minute rainfall data from the six rain gauges installed throughout the catchment.

Qualitative information from each site comprises time- and date-stamped photographs of the river and of each sample, as well as a weather report. These are immediately accessible by the researcher once sent to the database, and give a real-time

smartphones to closely guide the citizen technicians' data-gathering activities. The completed forms are sent using the local cellular network to a database that is immediately accessible to researchers at Rhodes University. Suspended sediment samples are collected for analysis by a field assistant on a monthly basis.

indication of river stage and turbidity. They can be composited to show changes over time at a single station or down the catchment.

This allows the immediate visual interpretation of a flood flow. The progression and timing of discharge and sediment peaks down the catchment, and associated changes in water and turbidity levels can clearly be seen. If the collected water samples were lost, or if their analysis was delayed, this record would still provide valuable discharge and suspended sediment flux information to the catchment manager or researcher.

The Tsitsa River catchment direct suspended sediment sampling programme is now well established, and beginning to provide information about the sources and extent of suspended sediment in the catchment. It is a new and innovative way of providing this much-needed information which has wider application throughout South Africa (and indeed globally), as climate change and its associated uncertainties prompt government and other environmental agencies to research and plan for sustainable catchment health.



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Environmental Affairs Internship Programme

The environmental field provides many exciting, interesting and satisfying career choices, stretching across a range of fields and disciplines. The Department of Environmental Affairs has implemented an internship programme, which aims to create a pipeline of candidates that may compete for appointments in and outside the department.

Unemployed South African undergraduate and postgraduate students who have not been previously employed under any internship programme can apply in fields that are in line with the department's core business. Applicants should not be above 35 years of age. Applications for 2018/19 will open in October this year. For more information contact: Department of Environmental Affairs, Mr Thomas Mathiba Director: Sector Education, Training and Development Tel: 012 310 3653 Email: tmathiba@environment.gov.za or visit www.environment.gov.za/careers/internships. Candidates with disabilities are always encouraged to apply.



Minister encourages learners to do environmental

Environmental studies offer career opportunities

Ipeleng Machiswa has a BSc. Honours in Chemistry, BSc degree in Biology and Chemistry at the University of North West and a Certificate in Environmental Law with the University of Pretoria. In 2016, she did her internship programme at the Department of Environmental Affairs in Pretoria. Now completed, she shares her experience.

"I chose to study biology and chemistry because it includes all the fields in which all sciences are based or connected, such as environmental science, physics etc. My curiosity of everything around us made me choose it.

"I was with the branch Biodiversity and Conservation, which deals with conservation of the species and entails facilitation of biodiversity management plans for all the species, threatened or protected species and facilitates the implementation of several multilateral environmental agreements.

"I enjoyed working in DEA. I have gained valuable insight on my future career development. I went into the internship programme with my eyes open and my expectations realistic. For me it was a profoundly rewarding experience, with its own challenges and it has paved the way for a successful professional career."



Ipeleng Machiswa

DEA Youth Conservation Programme continues momentum

At the 17th Conference of the Parties to the Convention on International Trade in Species of Wild Fauna and Flora (CITES), the Minister of Environmental Affairs, presented the Youth Conservation Programme (YCP) as the legacy of CITES Co African soil.

During the plenary discussion on youth engagement in conservation, Minister Molewa presented the worldwide movement to elevate the voice of youth in the dialogue on biodiversity. This has contributed to this global undertaking through several platforms, including the Sydney Promise. The YCP is the next step in South Africa's commitment to forge a strong relationship between young people and nature on home soil.

The YCP programme aims to mobilise young South Africans, who living in communities adjacent to protected areas, on the need for conservation. Through intensive work and practical experience, the programme stresses the important role young people play in conservation. Simultaneously, great emphasis is placed on the opportunities available for social-economic upliftment through sustainable participation in the biodiversity economy.

The YCP was brought to fruition by the Department of Environmental Affairs' People & Parks Programme, a branch that is charged with facilitating the socio-economic development of previously disadvantaged South African communities neighbouring protected areas, through conservation and sustainable use. One of the primary objectives of the YCP is formal integration of the youth voice into structures of governance.

The People & Parks Programme launched the initial campaign in August 2016 with great pride and excitement for the future of this endeavour that we reported that the Youth Conservation Programme had been fully endorsed by the People & Parks Conference. "The YCP is a key vehicle for empowering young South Africans to become pivotal in our conservation process," said Minister Molewa.

The Youth Conservation Programme continues to be piloted in 2017 in several South African provinces, with the goal of placing young people at the centre of decision-making processes, thereby empowering them to become current and future leaders for change.



environmental affairs

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Environmental Affairs
REPUBLIC OF SOUTH AFRICA

ies for Youth in ONMENT



Minister Edna Molewa and Deputy Minister Barbara Thomson interacting with learners from KwaBhekilanga Secondary School in Alexandra, Johannesburg. Ms Ntombenhle Nkosi and Mr Kingsley Macebele had many questions regarding environmental issues. Photo: Veronica Mahlaba



Minister Molewa encouraged the learners to pursue environment studies as the field of their career during Cell C's Take a Girl Child to Work initiative. Photo: Sivuyile Ngaba

Finding wealth in waste

In our 20 years of environmental protection and conservation, the Department of Environmental Affairs (DEA) has also created and sustained projects that benefit the citizens of South Africa. We are committed to improving socio-economic benefits within the environmental sector by creating 65 494 work opportunities for women, youth and people living with disabilities.

Youth Jobs in Waste (YJW) is a sub programme providing employment opportunities to the youth of South Africa. The programme addresses a skills gap in municipalities that allow for smooth landfill operations. The Minister of Environmental Affairs, Mrs Edna Molewa launched the Youth Jobs in Waste Programme on 17 June 2013. The launch, which took place in Phuthaditjhaba, Free State, formed part of the DEA Environment and Youth Month celebrations.

Speaking at the launch, the Minister said, "The waste sector has been identified as one of the critical sectors with the potential to contribute substantially to the generation of jobs within the green economy. It is in this light that the department is increasingly expanding its programmes in job creation and enterprise development programmes in this sector."

In 2014, the programmes created over 4000 jobs across eight provinces of South Africa. Youth Jobs in Waste beneficiary, Themba Danster says, "Unfortunately family circumstances stopped me from completing my tertiary studies so I was overjoyed when I got the opportunity to be in this programme. He is a collections administrator, based at the Green works! Project. This is the service-learning component

Youth Jobs in Waste beneficiary (Free State);

Themba Danster



responsible for training students to implement environmental improve combining community service with an academic curriculum. He got involved in the programme after seeing a newspaper advert calling for youths who were interested in waste management jobs. "I was one of 17 successful candidates out of 85 applicants in the Free State province."

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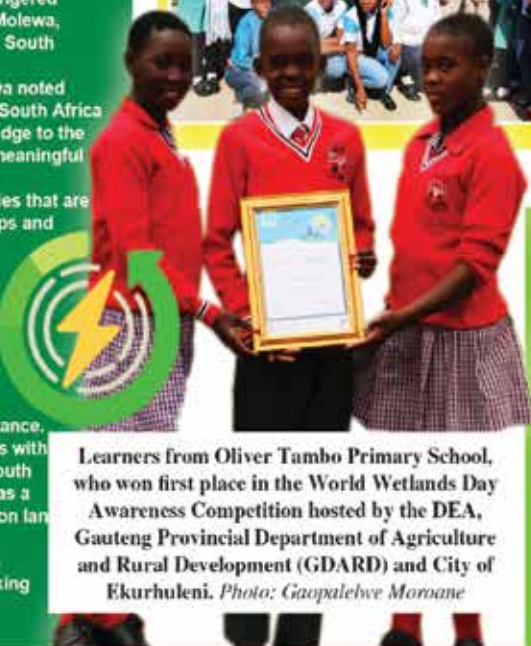
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Young women and pupils from Gauteng schools join Minister Molewa to discuss climate change issues and how they can mitigate or adapt to them. Photo: Gaopalehve Moroane

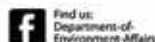


Learners from Oliver Tambo Primary School, who won first place in the World Wetlands Day Awareness Competition hosted by the DEA, Gauteng Provincial Department of Agriculture and Rural Development (GDARD) and City of Ekurhuleni. Photo: Gaopalehve Moroane



The Department of Environmental Affairs launched yet another exciting new cycle of the Working for the Coast programme on 17 June 2016, during World Oceans Day celebrations in Durban. The projects will generate approximately 2 407 work opportunities over two years.

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Eco-Logic Awards celebrate environment champions

By Veronica Mahlaba



Above: All the winners of the 2017 Eco-Logic Awards, held on 14 May at the CSIR International Convention Centre in Pretoria.



Above: The Black Mamba All Women Anti-Poaching Unit received the Eco-Warrior Silver Award. They were represented by Ms Cute Mhlongo and Sharon Malepo.

The 6th Eco-Logic Awards once again celebrated the environment champions. According to the Publishing Editor of *Enviropaedia*, Mr David Parry-Davies, these awards celebrate individuals, communities and organisations who have the intelligence, foresight, wisdom and maturity to behave in a manner that he describes as 'Eco-Logical.'

At the opening of the awards Mr Parry-Davies said, "For those who will be accepting these awards tonight, you are our very own eco-heroes who look at the environmental challenges in our world as opportunities to pioneer solutions and achieve sustainable growth. Your contributions are of paramount importance in developing the green economy

and green jobs in our country and we honour you with this token of our appreciation."

Simply Sustainable won the Climate Change award. Simply Sustainable designs and constructs Sustainable Rammed Earth Houses. The houses are built using locally-harvested materials, resulting in a low ecological and CO2 footprint.

Mr Paul Marais from Simply Sustainable expressed that he is proud of the work he does. "I have been doing this for 40 years. It's great to get recognition of the efforts that one makes. It is important we do more. In our own homes we need to pay more attention to the environment as that's where we can make the most impact," Mr Marais explained.

The Gold Award winners for each category include:

1. **The Biodiversity Award (sponsored by Sun International):** Local Action for Biodiversity: Wetlands South Africa.
2. **The Climate Change Award (sponsored by the Department of Environmental Affairs):** Simply Sustainable.
3. **The Eco-Innovation Award (supported by the City of Tshwane):** Solar Veranda.
4. **The Energy Efficiency Award (sponsored by Eskom):** Hot Spot by AET Africa.
5. **The Recycling and Waste Management Award:** Reliance Compost.
6. **The Transport Award (sponsored by SANRAL):** Bicycles and Beyond.
7. **The Water Conservation Award (sponsored by Coca-Cola Beverages SA):** Water Explorer by WESSA.
8. **The Green Economy Award (sponsored by NCPD-SA):** GreenCape Sector Development Agency by GreenCape.
9. **The Municipalities Award (sponsored by Santam):** Atteridgeville Recycling Park by City of Tshwane.
10. **The Eco-Community Award (sponsored by CHEP):** Umgibe Farming Organics and Training Institute.
11. **The Eco-Youth Award:** Charne Blignaut of CB Scientific
12. **The Eco-Angel Award (sponsored by Pam Golding Properties):** Nonhlanhla Joye of Umgibe Farming Organics and Training Institute.
13. **The Eco-Warrior Award (sponsored by SodaStream):** Lorraine Jenks of Hotelstuff / Greenstuff.



Above: *Enviropaedia* Publishing Editor, Mr David Parry-Davies, Mayor of Tshwane, Councillor Solly Msimanga, Department of Environmental Affairs Chief Operating Officer, Ms Limpho Makotoko and Environmental Affairs Spokesman, Mr Albi Modise at the Eco-Logic Awards on 14 June 2017 at CSIR International Convention Centre.

Careers in the Oceans Economy - Oceanography

By Gaopalelwe Moroane Image by Mduzuzi Seakamela and Waitt Institute



Above: Oceanographer, Mr Mthuthuzeli Gulekani alongside Department of Environmental Affairs' Minister, Dr Edna Molewa.



Above: Oceanographers dive with members of the Waitt team during a conch survey.

Every year on the 08 June we celebrate United Nations' (UN) World Oceans Day. The day is celebrated globally by communities, agencies, organisations, governments, academia, schools as well as institutions of higher education to pave a better future for Planet Earth's citizens to have a sustainable and better future. Several activities and events are organised globally towards a common cause and a common theme that the United Nations initiated. The overall theme for World Oceans Day has been agreed to be "Our Oceans, Our Future", however, this year's specific theme under the general "Our Oceans, Our Future" is focussing on Conservation action, hence the theme for World Oceans Day 2017 being "Encouraging solutions to plastic pollution and preventing marine litter for a healthier ocean and a better future."

In light of this we conversed with an Oceanographer, Mr Mthuthuzeli Gulekani from the Department's Branch: Oceans and Coasts about his career to get an idea of what it involves and how one can pursue a similar career path.

What education requirements, college degrees, licenses are needed for your career?

Firstly, many people do not understand what oceanography means. To make it easy, we define "geography" which loosely translates to "Geo" (Earth) and "graphy" (study of): The study of the Earth, its inhabitants and dynamics. Similarly, Oceanography is made up of "ocean" (oceans or sea) and "graphy" (study of) thus the meaning "Study of the oceans". One needs to learn about general sciences from secondary school years and enhance these studies of general natural sciences in the higher education (university) to establish a foundation for oceanography. It must be noted that the Planet Earth is made up of more than 70% being the oceans. Perhaps this should be called Planet Oceans, or something close to that.

Having said this, it is clear that general and natural sciences will launch you in to a career as an oceanographer. One needs to pass their senior national certificate (matriculation) with at least Mathematics, Natural Sciences and Biological Sciences. These will assist you immensely. Furthermore, to be a practising oceanographer one needs to enrol to a membership body that regulates the profession of scientists in general. This body is called South African Council for Natural Scientific Profession (SACNASP). In private

companies, where tenders and projects are of competitive nature and some bidding companies and/or organisations air or come together to propose a project that will ensure that they are relevant with regards to the containers.

How long have you been working as an oceanographer?

I have worked as an oceanographer since my student years at the university (University of Cape Town) when I was laboratory assistant analysing chemical composition of seawater samples. But formally, I worked as an oceanographer in 2004 working as a junior marine scientist at the Council for Scientific and Industrial Research (CSIR) in Cape Town until 2008. And in 2008 I joined the Department of Environmental Affairs (when it was still Marine and Coastal Management). So I have been an oceanographer for about 13 years.

What inspired you to venture into this career path?

What encouraged me is the fact that it is a unique field that makes one to be on the outdoors especially at sea. The most inspiring thing about this career is going on field trips and cruises on board, research ships and

small boats. Many people pay a lot of money to go on sea cruises, but I get paid to do it as a job. That is nice.

What are the duties that are most often and expected of you and how do you manage keeping abreast of them?

As I said earlier, oceanography is the study of the oceans, therefore, an oceanographer's job is to continuously collect, analyse and interpret data and information in the marine environment in order to monitor and understand how the environment behaves. The objective being to be able to forecast the patterns and behaviour of the oceans (just like the forecast the daily weather) in order to save lives and property. The results of our research are further presented at various platforms to create awareness and as scientific advice towards certain guidelines, acts and policies. To keep up-to-date with the the latest discoveries, unless you are making the latest discoveries, one needs to attend various forums, conferences, seminars and symposia to present your work and share information and ideas of further developing

new methodologies. However, as a government official we conduct applied research, that is, research that is directed at solving societal problems such as, ensuring that the people know about ocean currents and tides as well as the quality of seawater where they are going for holidays. We also do oceanography that seeks to understand the role of oceans on climate change and how the oceans regulate global climate and weather patterns. Most of this research is applied, and in return we report to the people who sponsor our research, that is, the tax payers, through providing them with relevant information we gather, and the knowledge and products we generate from this research.

What is the most rewarding and challenging part of what you do?

The most rewarding part for any oceanographer is knowing that your work is consistently being used to advance life and it is used as an input in socio-economic decisions. Furthermore the information and knowledge we generate helps to create awareness about the various services that the marine environment

provides and to encourage sustainable use of the marine environment. Ultimately we exist to research, gather and distribute relevant information in order to save lives and property.

What advice would you give to someone who is interested in pursuing a career in oceanography?

My advice for someone who wishes to have a career out of the marine sciences, is to start early by studying and gathering a lot of knowledge on various natural sciences (chemistry, biology, physics and mathematics) and have a strong hold on these subjects because as an Oceanographer (or Marine Scientist) you use a combination of all these subjects. You get to work with people from various disciplines and you should be able to interpret and converse with them at the same level. Furthermore, it will be important to develop passion and enthusiasm to discover as early as possible and start studying these marine sciences subjects or modules at university from the first year.



Above: Interns contracted in various sections at SA Shipyards in Durban. From left: Boiler Maker Nomvuyo Mngadi (24), Intern in the Commercial Department Olona Hintsa (26), Intern in the Marketing Department Sisonke Qina and Boiler Maker Ayanda Xulu (29).

South Africa's first black female Master Mariners

By Erica Mathye



Above: Only 28 years old, Ms Pretty Molefe considers all the challenges that come with being a woman at sea as one of the driving forces to her thriving success.



Above: Captain Tshepo Motloutsi (33) comes from Lebowa kgomo in the Limpopo province. On board a ship, she is the overall command of the vessel.

Pretty Molefe, Tshepo Motloutsi and Thembela Taboshe are names that made history in March 2016 when they became South Africa's first black female Master Mariners aka ship captains. The trio has been hailed as pacemakers for women, particularly black women, wanting to follow their dreams in maritime. Currently under the employ of the South African Maritime Safety Authority at the port of Durban, the ship captains are also furthering their careers in maritime law. The three women are proof of the enormous opportunities available in the oceans economy. We chat to them about what it takes to crack it in this male-dominated field.

Captain Pretty Molefe (28)

Born in Pinetown in KwaZulu-Natal, Pretty always believed in the power of education to break down the barriers of how far one could go in life.

Pretty says growing up in Durban made her want to explore all that the province had to offer in terms of work opportunities. Pretty did a diploma in Maritime Studies with

Durban University of Technology. In her second year of study, she joined the Maersk Line cadet programme, which she says gave her a foot in the maritime industry.

"In 2009 I qualified as deck or navigation officer and soon after that I became Chief Navigation Officer," she says.

In March 2016, Pretty qualified as one of three first black female Master Mariner in the country, and says like so many other women in her line of work, she's had to fight the beast of this being a male-dominated industry. "I look up to other women in the industry. When they reach a milestone in their career, I have hope because I know the same can be possible for me," says Pretty.

Recent statistics indicate that women represent only 1-2% of the world's 1.25 million seafarers.

Pretty says being called Captain means other kids growing up in townships and rural areas can pursue careers in the maritime industry. "It is that real. I am happy that government-wide initiatives such as Operation Phakisa have made it possible for kids

from disadvantaged backgrounds to have a future in maritime

Captain Tshepo Motloutsi (33)

When she qualified as a Master Mariner, Tshepo says she was not even aware of the statistics that she was one of two black women in the country with this qualification. "I was elated because I am an over-achiever. I always want to be a level better than where I am right now. This qualification and endorsement is motivation for me to never stop growing and learning." Tshepo is studying towards a Master of Commerce in Maritime Studies with the University of KwaZulu-Natal where she.

Having worked with South African Maritime Safety Authority (SAMSA) since 2013, Tshepo says never to despise small beginnings. "I started my career as a ship surveyor, licencing of small boats, ship registry, the accreditation of institutions to run maritime courses and the accreditation of SAMSA approved medical practitioners. The fulfilment in her career, she says, comes from meeting people from all corners of the world and learning from them.



About the contributor: Erica Mathye

Erica Mathye is the Deputy Director: Editorial Services at DEA. Before joining the Department, she worked as a journalist, literature editor and sub-editor for various publications. Her interests include travelling and spending time on Pinterest looking for home improvement ideas.

Is the Great White Shark in Danger?

By Sarika Singh
Images by Ryan Daly, Sarika Singh
& Marine Dynamics/Dyer Island Conservation Trust



Above: A carcass of a great white was available for dissection after it had been attacked by orcas.

During the first week of May 2017, there were several reports of the Great White Shark carcasses washing ashore. Three carcasses were recovered, two in Gansbaai and one in Struisbaai, offering an opportunity for DEA and local scientists to assess the cause of these animals' deaths. Examination of the carcasses showed that all three had their livers removed and bite indentations on their fins and trunks were consistent with a killer whale predation. Further to this, small pods of Orcas had been spotted in and around Gansbaai and False Bay in the preceding weeks.

While it may be considered wasteful that only the livers of each of these animals were consumed, this is quite a common occurrence in nature, where quality is more important than quantity. Other examples of this are found in seals preying on sea birds where they

often remove and consume only the stomach or abdominal content and not the rest of the carcass. In this case the squalene (oil and fat that assists sharks with their buoyancy) in the shark's liver is highly nutritious in pound for pound comparison with muscle tissue. As such, all animals had their liver quite precisely removed and consumed, with the rest of the carcass discarded by the culprit whale and washed ashore.

Further to the white shark predations, Alison Kock, Marine Scientist for Shark Spotters, reported recovering several cow shark carcasses in a similar condition with their livers removed, in False Bay subsequent to a series of Orca Sightings. Sharks, and White Sharks specifically, have been documented to register Orcas as a threat and elicit avoidance behavior. White Shark Cage Diving operators in False Bay and Gansbaai also reported declines and the absence

of White Shark Sightings proximate to Orca sightings.

The Department of Environmental Affairs, in collaboration with shark scientists and marine mammalogists, is focusing on collating and documenting scientific information on these incidents, as they relate to our tourism, management and conservation priorities. However it should be noted that this is a natural phenomenon and should be taken in the context of an anticipated shift that occurs in an ecological system due to seasonal/temporal incidence differing predator and prey regimes.

The nature of killer whales

Killer whales are widely distributed mammals, extending from the Arctic/Antarctic, into the tropics, in both coastal and oceanic waters, but are typically more abundant in cooler water. Orcas are common



About the contributor: Sarika Singh

Marine Scientist Sarika Singh has been employed by the Department for about 10 years. Her designation within the Oceans and Coasts Research Group is focused on research, provision of scientific and management related recommendations for top predator species, with sharks being her primary focus.



their hunting behavior, which is backed by a large brain, capacity to learn and specialised physiological tools such as echolocation, resulting in very formidable predators.

Their diet is varied, with whales, dolphins and seals being the

the generalist in its approach to feeding.

Orcas also tend to harass and injure other species without necessarily having the motivation to feed. This has been observed with pods of orcas drowning large whales, flipping and ramming dolphins and porpoises, or engaging in play with sea birds sharks and other cetaceans often resulting in their death.

to the region, with them frequenting South Africa's Southern Ocean territories and being documented ephemerally along the mainland coastline. To date, there have been 785 documented incidents of occurrence on the South Africa coast ranging from the Western Cape all the way to Northern KwaZulu-Natal. The sightings of Orca pods appears to be increasing in South Africa, but this may be an artefact of increases in the number of water users and the extent of access along the coastline.

Killer whales are apex predators and while we are quite accustomed to viewing Great White Sharks as occupying the top of the food-chain in our waters, Orcas are much more specialised hunters and consider pretty much anything in the ocean as potential prey. These mammals have highly developed social groupings and interactions which lend organised and strategic dimension to

predominant prey species, however they are opportunistic and will make use of anything that may be locally abundant. Records of species in their diet include dugongs, sea offers, bony fish, sharks and rays, birds, turtles and squid. Records of land animals in their stomach content alludes to a scavenging/opportunistic shift from its normal predatory modus operandi, making it quite



Above: Scientists Malcolm Smale (Bayworld Research Aquarium), Sarika Singh (DEA) and Sisanda Sibanga undertaking a dissection on a Great White Shark.

A response from Environmental Affairs

The Department of Environmental Affairs, in collaboration with shark scientists and marine mammalogists, is focusing on collating and documenting scientific information on these incidents, as they relate to tourism, management and conservation priorities. However, the department would like to urge media and citizens to take cognisance that this is a natural phenomenon and should be taken in the context of an anticipated shift that occurs in an ecological system due to seasonal/temporal incidence differing predator and prey regimes.

Killer whales are widely distributed mammals, extending from the Arctic/Antarctic, into the tropics, in both coastal and oceanic waters, but are typically more abundant in cooler water. Orcas are common to the region, with them frequenting South Africa's Southern Ocean territories and being documented ephemerally along the mainland coastline. To date, there have been 785

documented incidents of occurrence on the South African coast ranging from the Western Cape all the way to Northern KwaZulu-Natal. The sightings of Orca pods appears to be increasing in South Africa, but this may be an artifact of increases in the number of water users and the extent of access along the coastline.

Killer whales are apex predators and while we are accustomed to viewing Great White Sharks as occupying the top of the food-chain in our waters, Orcas are much more specialised hunters and consider almost anything in the ocean as potential prey. These mammals have highly developed social groupings and interactions which lend organised and strategic dimension to their hunting behaviour, which is backed by a large brain, capacity to learn and specialised physiological tools such as echolocation, resulting in very formidable predators.

Proudly welcoming back the SA Agulhas II

By Seipati Sentle

The SA Agulhas II -dubbed the Miriam Makeba – an expedition ship carrying a team of researchers on board has docked on the shores of East Pier Quay, Waterfront, Cape Town, on the 12th May 2017 from its trip from the Marion Island.

The ship embarked on its annual relief voyage which takes place during the months of April/May. It left in April 2016 with a team of 74 researchers who spent 13 months at Marion Island, and they were recently joined by another team which departed in April 2017. On the 12th May, the DEA welcomed both teams and celebrate the successful voyage undertaken by the SA Agulhas II on her annual Marion Island relief voyage.

The Departmental Coordinating Officer, Mr Adriaan Dreyer, and his assistant Mr Errol Julies co-ordinated the voyage expedition ship and to ensure the voyage is well managed and communicate well with all the

stakeholders on board and in the Island on behalf of the Department.

Captain Gavin Syndercombe, the Master of the Ship managed the ship to Marion Island which normally takes 4 days from Cape Town to reach its destination. The Shore-based Chief Scientists Prof Werner Nel and a ship-based Chief Scientists Dr Hans Verheye from the Department of Environmental Affairs were also on board. Accompanying them too is experienced Dr Darren Green, the Ship Doctor who is take care after the medical well-being of the passengers on board and ship Crew.

The Department of Environmental Affairs in its quest to transform the Maritime industry has always provided 4-5 cabins as berths for young Maritime recruits. It has also not failed on this voyage as it has provided 5 berths for two black male deck cadets and also three berths for two black male engineering cadets and one female engineering cadet.

This voyage is particularly important as it highlights changes in the abundance, distribution and diversity of plankton communities in the Atlantic and Indian sectors of the Southern Oceans to the South of Africa, which have generally not been studied in much detail, particularly in winter. As such this work forms part of DEA's commitment and contribution (since 2011) to research work done by the Scientific Committee on Antarctic Research (SCAR), which in 1991 established an international monitoring programme in the Southern Ocean to map spatio-temporal patterns of plankton, including krill. It will also use the sensitivity of plankton species to environmental variability and Climate Change as indicators of the health of the Southern Ocean.

Marion Island is a volcanic island that forms part of the Prince Edward Island which belongs to South Africa. The weather is generally very cold, with only about 29% sunshine per year. The annual rainfall averages



2500mm with snow and ice mostly in winter. The Island is regarded as a natural laboratory as it is home to a vast biodiversity leading to the production of numerous research papers and secondary degrees.

This relief voyage will offer another opportunity to conduct multi-disciplinary research on Marion Island and the surrounding of the Prince Edward, which will assist in understanding the ecosystem structure and functioning of the Islands.

The Marion Island Team consists of 74 scientists who have met as individuals and have departed as a team which spend the past 13 months on Marion Island. Their roles on Marion Island will be to gather data throughout the year for various research projects funded by the Department of Science and Technology.

They are accompanied by a team that will provide support for the communications systems, facilities, medical wellbeing and weather observations. On-board the vessel were researchers from various South African Institutions of higher learning who will also be performing oceanographic and biological research, some of which forms part of international collaborative projects. The newly awarded aviation service

providers Ultimate Heli (Pty) Ltd rendered helicopter support for the movement of cargo and passengers on board.

An integral part of the environment is undoubtedly the Oceans and Coasts. The marine and coastal environment are national assets which provide and sustain a wide range of economic, social and ecological services that are a foundation for the livelihoods of millions of South Africans. They not only underpin national and international transport, mining, coastal tourism and fisheries industries but also are vital components of the climate system as a carbon sink and global temperature controller.

Investigations have found that South Africa's oceans economy has potential to contribute more than R20 billion to the gross domestic product (GDP) by 2019 and at least 1 million jobs by 2033. As the DEA, our role in this regard is particularly focused on marine protection services and ocean governance, which entails the protection of the ocean environment from all illegal activities and promotion of its multiple socio-economic benefits.

Our focus is on the management and conservation of our oceans and coastal environment. The purpose is to bring about harmony and integration of the various role players in the

ocean space, but also safeguard against any possible compromise of the ocean environment through application of different legislation relevant to oceans and coastal management.

DEA collaborated with the Department of Science and Technology (DST), the National Research Foundation (NRF) and Council for Scientific Industrial and Research (CSIR) to embark on the research voyage, which takes an estimated 25 days out in the Southern Ocean. The researchers on-board will gather physical, biological and chemical oceanographic data. The expedition aims to fill a significant research void in the ocean and climate numerical models, which are unable to accurately simulate seasonal processes.

The voyage provides a unique opportunity to map large-scale spatial patterns of phyto and zooplankton using the Continuous Plankton Recorder between the ice edge and Cape Town during winter. The data obtained from this cruise, along with data obtained from other seasons, will contribute towards a more detailed description and understanding of spatial, seasonal, inter-annual and multi-decadal changes in community structure as well as abundance and distribution of plankton in the Southern Ocean.



Celebrating World Turtle Day

By Millicent Makoola and Tshago Letshwiti
Images by Linda Harris and Diane Le Gouvello



Above: Marine turtles lay a large numbers of eggs in holes that they excavate with their hand flippers on dry, sandy beaches.

On 23 May 2017, the Department of Environmental Affairs joined the rest of the world in celebrating World Turtle Day. There are seven species of marine turtles in the world, five of which have been recorded in South Africa. These are the Leatherback, Loggerhead, Green, Hawksbill and the rarely seen Olive Ridley turtles. The Leatherback and the Loggerhead turtles nests in the iSimangaliso Wetland Park. These nesting beaches are of critical importance to turtles because of their genetic distinction from other rookeries of the same species in the Western Indian Ocean. The Wetland Park has been chosen as one of the sites of importance for sea turtle conservation under the Indian Ocean South East Asia Turtle Memorandum of Understanding (MOU) of which South Africa is a member state.

Marine turtles lay a large numbers of eggs in holes that they excavate with their hand flippers on dry, sandy beaches. The clutch is then covered and left to incubate with no parental care. The eggs take between 70–120 days to hatch. As with other reptiles, temperature can determine whether an egg develops into a male or a female. Male hatchlings are associated with lower temperatures

while females are associated with higher temperatures. When the turtles hatch, they dig to the surface and head immediately towards the sea.

They spend the rest of their lives in the open ocean or shallow coastal waters, except when they return to nest. As such they are highly migratory, often moving considerable distances between nesting and feeding areas. Turtles are long-lived and can take many years to reach breeding age (for example, loggerhead females first reproduce between 17 and 33 years of age), and in many cases nest every few years rather than annually.

The eggs in the nests, are in one of the most sensitive life stages of turtles. Turtle eggs are susceptible to crushing, burial, exposure, erosion, tides and/or storm inundation. As such trampling by humans or life stock has the potential to crush eggs or hatchlings ready for emergence while still in their nests. Natural events such as tidal or storm inundation of nests or the erosion or accretion of beaches are natural selective pressures ensuring survival of the fittest turtles.

Sea turtles are affected by numerous anthropogenic impacts. These include degradation of coastal and marine habitats, oil spills, degradation of water quality (including the

accumulation of marine debris and ocean acidification), incidental capture or by-catch in fishery practices (that is, shark nets, purse seine and longliners). Other impacts affecting sea turtles include mortality through diseases or parasite infestation and predation by land based predators such as mongoose, jackal, honey badgers as well as pets (e.g. dogs).

Sea turtles have an ecological role in that they influence community diversity and structure by operating at multiple trophic levels as predators, prey, competitors, nutrient transporters, habitat modifiers and substrates for epibionts (an organism that lives on the surface of another living organism). Turtles can enhance benthic diversity, for example, by feeding on sponges they reduce their coverage of reefs that facilitate growth of corals. They also actively rework the sediment on the sandy beaches while digging their nests and directly making significant nutrient contributions to nutrient-poor beaches through nesting and thus influencing beach food webs. Turtles may also play a role as ideal sentinel species for ecosystem changes because they use a range of habitats throughout their lives and interact with various threats throughout.

About the contributors: Tshago Letshwiti and Millicent Makoola

Ms Tshago Letshwiti is an Assistant Director within the Internal and External Communications Sub-Directorate at the Department of Environmental Affairs, in Cape Town.

Ms Millicent Makoola is a Control Environmental Officer for the Directorate: Oceans Conservation Strategies.

EPIP takes the greening of open spaces a notch higher

By Nomvuyo Mlotshwa



Above: The Eco-Educational Centre has been registered for a Green Star Rating.



Above: The seedling germination Unit.

Kutlwanoong Settlement in Odendaalsrus in the Free State has suffered the closing down of mines in the area which means a lack of job opportunities for people with minimal skills and experience. Deep in these issues, the Environmental Protection and Infrastructure Programmes (EPIP) has constructed a community park worth R5 million.

The project has employed 83 community members, 71 of them youth, more than 50 percent of them women and 3 percent persons living with disabilities. For 12 months, the programme has empowered the community through basic income, skills development and training.

Before the intervention by EPIP, the park was an abandoned open space cluttered with bushes and rubble where the community was illegally dumping dangerous and hazardous waste. A lot of criminal activity was also taking place there. Once cleaned and levelled, Lukhanyiso Greening Park was refurbished using old tyres to construct kids play facilities and tables and chairs. The eco-educational centre may be hired at a cost for trainings, meetings

or functions. Solar panels have been installed for water and lights and work is continuing to build a guard house for security staff.

Seedling germination and new sapling trees are kept in the "Seeding Greenhouse Tunnel" at the park. 800 indigenous trees have been planted in and around the park. Through this greening project, nine SMMEs have been empowered rendering services such as the supply of building material, park facilities, vegetable seeds, and trees and facilitating training to project participants.

Accredited training received by project participants includes Plant Production and Waste Management certificates. The non-accredited training received includes Introduction to Health and Safety in the Workplace including Fire Fighting, First Aid Level 1, Life Skills including Personal Finances and Community Security and Access Control.

The vegetables planted and seedlings are sold for sustainability of the park and to pay the permanent staff income. This project inspired its participants to be the environmental champions in their communities by starting their own backyard

vegetable gardens at home and they also encourage and assist their neighbours in planting theirs as well thus contributing towards food security and poverty alleviation in their communities.

Participants in the greening project applied eco-friendly and organic methods of planting such as the "Qala Tala 3-tyre" vegetable garden technique which entails planting crops inside old tyres to promote sustainable living practices in the small spaces. "The pumpkin hanging" planting method, also used, supports the intensive growing of vegetables. The evergreen tunnel planting of the star jasmine and lazy housewife runner beans allows plants to produce larger yields of vegetables in a small area of land and no soil is needed thus soil borne diseases are reduced or eliminated. These planting methods expand the number of plants you can grow in a single space as some vegetables like pumpkins which grow on vines and take up a lot of space, are trained to grow in compact spaces.



About the contributor: Nomvuyo Mlotshwa

Nomvuyo Mlotshwa is the Assistant Director: Programme Publicity and Liaison. She is responsible for managing and promoting the brand of the Environmental Protection and Infrastructure Programmes. She is passionate about community outreach and stakeholder liaison.

Recreational Park to benefit the community of Ga-Kgoroshi

By Madimetja Mogotlane



Above: Minister Molewa handed over a recreational park to the Ga-Kgoroshi community, Moletji in Limpopo province.



Above: Kgoroshi Goodhope Recreational good hope will provide the locals with plenty of jobs and recreation.

The Environmental Affairs Minister, Mrs Edna Molewa has officially handed over a recreational park to the Ga-Kgoroshi community, Moletji in Limpopo province. Speaking at the event in Ga-Kgoroshi on 20 April 2017, Minister has praised the immense impact the project has had in the livelihood of many people in Ga-Kgoroshi during its construction.

"Today is your turn as the Ga-Kgoroshi community to take delivery of this recreational park and environmental education centre worth R12 million. This facility is one of our many Extended Public Works Programme or EPWP initiatives that continue to benefit our various communities not only in this province, but across the country. The construction of this park created at least 171 decent job opportunities for the people of the Ga-Kgoroshi community. Among these were 99 were women, 95 youth and four people with disabilities. These job opportunities were labour intensive and consistent with the requirements of the government's Expanded Public Works Programme," she said.

EPWP is a nation-wide government-led initiative aimed at drawing a significant number of unemployed South Africans into productive work in a manner that will enable them to gain skills and increase their capacity to earn income. The project commenced in December 2014.

It has included the construction of a perimeter wall, an education centre and storage building, the construction of two ablution facilities for men and women as well as the installation of paving and braai areas. Also part of the project was the construction of the control house at the access gate, the installation of a water and reticulation system that utilises septic tanks with French drains, and the planting of trees and general landscaping to make this area as special as it is today.

The Minister also urged the community to use the recreational park as escapism while also enjoying the beauty of nature in their midst. "Through this project, a poorly managed open space has been transformed into a recreational area for all members of your community to come and relax in. Besides improving the aesthetics of the area, here you will be able to enjoy the natural environment. By planting indigenous trees and beautifying this area, we have contributed to improving the integrity of the natural environment thus adding significantly to biodiversity conservation," she said.

The Limpopo MEC for Economic Development, Environment and Tourism, Mr Seaparo Sekoati said the recreational park forms part of the department's development plan and plans are afoot to establish a nature reserve in the area.

"This park is part of Limpopo Development plan which its aim is to develop our province that we will all be proud of. As the province, we have programs that are responsible to conserve nature and environment. We are also in discussions with the royal house to establish a nature reserve in Moletji which will form part of your heritage. We have already started with the EPWP program where will start with fencing of the reserve. We also have biodiversity program like wells that can improve the livelihood of the community," he said.

Kgosi Kgabo Moloto III of the Moloto royal house assured his constituency that good things are imminent if they can embrace each other as the community.

"We extend our gratitude to the department for this project. We also hope to take care of this park, whilst we will be waiting for phase 2 of the project to follow. I would also like to thank you the community of Ga-Kgorosi for your good cooperation during the construction of this project. Let us make good use of this park and not use it as a battlefield. Let it be a recreational park that will be utilised for entertainment and other recreational activities. Good things will come our way if we embrace each other and work together. I thank you my people," he said.



About the contributor: Madimetja Mogotlane

Madimetja Mogotlane is a Senior Communications Officer, Internal Communications and Events in the Chief Directorate: Communications at the Department of Environmental Affairs. Mr Mogotlane is a former intern in Media Liaison at the Department and has journalistic experience.

Andover Nature Reserve

A People and Parks revitalisation project for Bushbuckridge communities

By Grany Dlamini



Above: The new administration building.



Above: Renovated chalet.



Above: New furniture in the renovated chalets.

The People and Parks Programme implemented by the Environmental Protection and Infrastructure Programme (EPIP) has become sustainable in unlocking economical potential of protected areas for the benefits of adjacent communities. The Department of Environmental Affairs (DEA) through its EPIP has funded an infrastructure development project in Andover Nature Reserve.

The reserve is located in the Bushbuckridge Local Municipality within Mpumalanga Province and is characterised by a high unemployment rate and high literacy level, whereby it is clear that the local economy is not able to absorb the number of adults and youth able and willing to work. Unfortunately, the least employed people in the community are women.

The scourge of poaching in the region was found to be threatening the local and national existence of a number of species with some being on the verge of extinction. The Branch Biodiversity and Conservation (DEA) commissioned a study on the state of affairs within the protected areas in the country.

During this investigation the reserves were inspected and one of the findings highlighted the dilapidated and in some cases even non-existent conservation management infrastructure, including offices, conservation management staff

quarters and guest accommodation. Without the necessary infrastructure the reserves cannot be effectively managed, or generate income, and benefits for the local communities are lost.

The Andover Nature Reserve caters for many local communities in and around the rural villages of Bushbuckridge and it is well-situated to assist in the economic development of these communities. In addition, the Andover Nature Reserve is not very far from other privately owned reserves, Provincial and National Reserves. As such Manyeleti and Kruger National Park is located on its western boundary, south and adjacent to the access road to the Orpen gate.

The infrastructure constructed in the Andover Nature Reserve included a new house for the reserve manager and a new administration building with conference facilities. Some of the existing infrastructure was upgraded and included the following: upgrading of four existing chalets; the senior staff house; extension of existing single quarters; upgrading and conversion of the old administration building into a chalet; extension of four existing picket houses; and remodelling of open spaces by planting of trees and maintenance of roads.

The project has been implemented over a period of two years, from February 2015 and an expected completion date of end June 2017. The 208 participants from the villages of Burlington (White City and Islington),

Sigagule and Andover surroundings included 118 women, 129 youth, and 3 persons with disabilities. Participants were offered accredited training in construction, conservation and hospitality related fields including plumbing, painting, tiling, and masonry, nature site guide, general field assistant, assistant housekeeper and hospitality table attendant.

In addition, participants were capacitated on a personal level on environmental awareness, hazard identification and fire awareness; waste management; and personal finance. Other vocational skills imparted to the participants included mixing of concrete, brick laying and plastering. After the completion of this project, these skills will help the participants to gain entry into better work opportunities.

A total investment of R 35 000 000.00 (thirty five million rand) was made towards this socio-economic environmental project. Small medium and micro enterprises were utilised during the project to provide protective clothing, plumbing, construction materials and equipment, as well as transport for the participants. The infrastructure within the Andover Nature Reserve is completed and the assets have been handed over to the co-owning entities of the Mpumalanga Tourism & Parks Agency (MTPA) together with the Community Property Association (CPA) representing the land claimants in the area.



About the contributor: Grany Dlamini

Grany Dlamini is the Deputy Director: Programme Planning and Quality Assurance (People and Parks focus area) in the Environmental Protection Infrastructure Programme chief directorate. She is responsible for the planning of the People and Parks project focus area.

SA continues to attract record numbers of tourists to its shores

By Zibuse Ndlovu



Above: Minister Molewa delivering a keynote address during the launch of SANParks' inaugural Tourism Investment Summit.

“Despite trying economic times and a wide array of options available to the domestic and international tourism market, we continue to attract record numbers of tourists to our shores.” These were the words of Environmental Affairs Minister, Mrs Edna Molewa, who was speaking at the launch of SANParks' inaugural Tourism Investment Summit held at the Maslow Hotel in Sandton on 27 March 2017.

Addressing scores of delegates, Minister Molewa said South Africa's national parks were important catalysts for economic development. “As government, we will continue to look for partners in the establishment of responsible new products for sustainable development and tourism growth while at the same time, and more importantly, ensuring that our fauna and flora in our national parks are conserved,” said Minister Molewa.

In 2016, over 10 million tourist arrivals were recorded in South Africa, a 13% increase from 2015. The sector accounted for 4.5% of total employment in 2015. “These are over 700 000 jobs in the tourism sector, and we can improve these numbers only

if private and public interest support each other,” said Mrs Molewa.

Echoing the Minister of Environmental Affairs, the Minister of Tourism, Ms Thokozile Xasa highlighted that the Tourism industry contributes 3.9% to the GDP, which is more than most labour intensive sectors. “Our focus is on inclusive economic growth and job creation. By empowering our people, we give them the tools with which to participate in the economy in a meaningful way and take advantage of what South Africa has to offer,” said Minister Xasa.

According to SANParks CEO, Mr Fundisile Mketeni, SANParks received

6 million visitors at the close of the last financial year. “Managing over 15 000 beds, SANParks is indisputably a major player in South Africa's tourism industry. SANParks has earned a total income of R816 million through 45 public-private partnerships ranging from cable cars, luxury lodges and restaurants to adventure activities,” said Mr Mketeni.

The discussions at the summit were centred on the contribution of the tourism sector to the national priorities of government, an economic outlook on the tourism sector, potential growth of the sector, and challenges facing the industry, as well as the transformation of the industry and the need for, and importance of, Public-Private Partnerships.

SANParks Board Chairperson, Ms Joanne Yawitch stressed that, “public-private partnerships ventures have the proven potential to leverage benefits such as job creation and enterprise development, particularly in rural areas where there are few other economic opportunities.”



Above: Department of Environmental Affairs Director-General, Ms Nosipho Ngcaba and Mr Shonisani Munzhedzi, the Deputy Director-General for Biodiversity and Conservation at the Tourism Investment Summit.

DEA creates environmental awareness at Tourism Indaba

By Veronica Mahlaba



Above: Environmental Management Inspectors, Ms Boitumelo Mphelo and Ms Trudell Potgieter creating environmental awareness at the 2017 Tourism Indaba.



Above: Minister of Tourism, Ms Tokozile Xasa; President Jacob Zuma; Premier of KwaZulu-Natal, Mr Willie Mchunu; Deputy Minister of Tourism, Ms Elizebeth Thabethe and Mayor of EThekweni, Councillor Zandile Gumede at the opening of the Tourism Indaba.

The Department of Environmental Affairs (DEA), South African National Parks (SANParks), South African National Biodiversity Institute (SANBI) and Boundless Southern Africa were present to spread environmental awareness and showcase our mega bio-diverse country and its well-managed natural resources at the Tourism Indaba. The Tourism Indaba held was held on 16-18 May 2017.

The theme for the 2017 Tourism Indaba was Biodiversity and Sustainable Tourism. The theme coincides with the observance of 2017 as the International Year of Sustainable Tourism for Development, as proclaimed by the United Nations General Assembly (UNGA).

Environmental Management Inspectors (EMIs) from DEA commonly called Green Scorpions were present at the Tourism Indaba. Assistant Director: EMI Capacity Development and Support, Ms Boitumelo Mphelo stated that the main goal of taking part in the Tourism Indaba was to create environmental awareness to the public and tourists to understand exactly who they are and how they operate globally.

"DEA was giving awareness on what species are regulated in terms of the National Environmental Management: Biodiversity Act (NEMBA) and also show what is in the legal & illegal trade," said Ms Mphelo.

Also at the Indaba was Boundless Southern Africa (BSA), a regional marketing initiative that promotes Transfrontier Conservation Areas (TFCAs) in the Southern African Development Community (SADC) as tourist destinations in a consolidated manner to potential investors and tourists from around the world.

Marketing Manager, Mr Roland Vorwerk stated that what makes Boundless unique is that it is all about marketing tourism experiences within eco-systems rather than within designated countries that have their own political and social boundaries. Boundless Southern Africa supports the marketing initiatives of the Regional Tourism Organization of Southern Africa (RETOSA) to deliver against their mission of developing effective and impactful tourism within the SADC region.

"The BSA stand at the 2017 Tourism Indaba was used to promote the cross-border events to a range of interested stakeholders, these being international and domestic tour operators, travel media and other regional stakeholders," Mr Vorwerk said.

Events Manager at SANBI, Ms Ebirth Adams explained that their role was to showcase SANBI's products, especially the Manor House accommodation, as well as to showcase the Gardens richness in biodiversity for the appreciation and enjoyment of all visitors local and internationally.

The SANBI stand was awarded the Silver Award in the Tour Operator category. "It was humbling and a pleasure for SANBI to be awarded with a silver award. This is an indication that we reached our objective, and this could only be achieved by the good team works and the support of our Directors. The fruit of Indaba is already paying off since the Pretoria Garden was visited by Gift Tours, an operator I met at Indaba, to discuss a possible package for his township tour groups," she said.

SANParks was there for creating awareness of parks, investments marketing and building up a strong bond with existing and new clients.

As the customer consultant at SANParks, Ms Nokuthula Skosana said her main aim was to market and create awareness for the Wild Card, especially to the domestic market. The Wild card gives you access to 80 and more parks with unlimited access.

"The Wild Card is the best way to explore Southern Africa's wild spaces, as you will get 365 days of access to the parks and reserves in the cluster of your choice and category. As a member you don't pay daily conservation fees-instead you pay an annual fee. You can buy the Wild Card membership online www.wildcard.co.za or call 0861469453 or at selected parks and our reserves," explained Ms Skosana.

Heritage and human rights

By Ntsizi November



Above: The DEA employees who attended the heritage and rights training at Ditsong Museum in Pretoria.

Twelve officials of the Department attended, alongside other participants from nine African countries, the ground-breaking African Regional pilot training course on heritage and rights that was undertaken within the context of “Our Common Dignity: Towards a Rights Based Approach” hosted at Ditsong Cultural History Museum in Pretoria.

The Our Common Dignity initiative was started in 2007 by the International Council for Monuments and Sites (ICOMOS) Norway as a national initiative and was later expanded into an international collaboration with the UNESCO World Heritage Advisory Bodies such as the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), ICOMOS and International Union for Conservation of Nature (IUCN) in 2011 – in close contact and dialogue with the UNESCO World Heritage Centre, in Paris, France.

The first pilot training course on the complex topic of Human Rights and Heritage Management for the European Region was in Oslo, Norway in March 2016. The recent African Regional training course that was held at Ditsong Museum in South Africa was a follow up and was facilitated by Professor Stener Ekern of the Norwegian Centre for Human Rights based at the University of Oslo in Norway with the support of Peter Larsen, a lecturer at Lucerne University in Switzerland, Shireen Said, a South African advocate with extensive experience in rights issues acquired while working with the United Nations

Development Programme (UNDP), Leburu Andrias from the Indigenous Peoples of Africa Co-ordinating Committee (IPACC) based in Botswana and Ntsizi November from both the Department and ICOMOS South Africa who also project managed the training course. These series of regional training courses are the result of a collaboration between the “heritage world” and the “human rights world”.

Participants

Participants for this particular course came from across the African continent after being recommended by the African World Heritage Fund.

The purpose of the pilot training course

The recent African Regional pilot training course on heritage and rights, was a follow up to a similar course that was offered in Oslo, Norway. Broadly, the course covered:

1. General introduction to the International Human Rights System, including its institutions and mechanisms;
2. Specific introduction to relevant Cultural Rights and texts, as well as the UN and UNESCO Institutional Framework;
3. Human rights-based approach planning tools for heritage management; and
4. Discussions of various case studies provided by participants.

The training programme lasted for a week that started on 13-17 March 2017.

Interface of heritage and rights

Nowadays than ever before, in the face of increasing threats to conservation areas, global understanding of the inevitable interface of the practices of heritage conservation and the promotion of human rights is a must.

As noted throughout the lessons during the week, human rights are universal legal guarantees protecting individuals and groups against actions and omissions that interfere with fundamental freedoms, entitlements and human dignity. On the other hand, human rights law obliges Governments (principally) and other duty-bearers to do certain things and prevents them from doing others.

Therefore, a human rights-based approach is a conceptual framework for the process of human development that is normatively based on international human rights standards and operationally directed to promoting and protecting human rights.

It was noted from one of the lectures that “heritage itself is a dynamic process which involves competition over whose version of the past, and the associated moral and legal rights which flow from this version of the past, will find official representation in the present”.

The right to an environment that is not harmful to one’s well-being, is included among human rights that should be protected and promoted in accordance with the Constitution of the Republic of South Africa and international law.

International award for iSimangaliso's Andrew Zaloumis



Above: Mr Andrew Zaloumis, the Chief Executive of the iSimangaliso Wetland Park, KwaZulu-Natal.

At a ceremony held in Frankfurt, Germany, KfW Stiftung honoured environmentalist, Mr Andrew Zaloumis, for his outstanding commitment to conservation and visionary management as CEO of the iSimangaliso Wetland Park.

Mr Zaloumis, who was nominated by UNESCO for the award, received the KfW-Bernhard-Grzimek-Preis for his ground-breaking work in people-centred conservation in one of South Africa's poorest regions.

The laudatory speech was given by Dr Fanny Douvère, coordinator of the UNESCO Marine Programme in Paris. "In taking World Heritage conservation to a whole new level, Mr Zaloumis has given hope to and inspired both the youth of iSimangaliso and his World Heritage peers around the world," Douvère comments.

"Marking the 30th anniversary of Bernhard Grzimek's death, we are particularly pleased to honour Mr Zaloumis whose personal commitment to a region, which is one of the richest in terms of biodiversity but at the same time one of the most endangered in Africa, is truly in the spirit of the man who has lent his name to the biodiversity award of KfW Stiftung. Andrew Zaloumis' approach

to restoration of major ecosystems and its wildlife and sustainable management of natural resources is forward-looking and blazes a trail for many similar areas," points out Dr Lutz-Christian Funke from the Board of KfW Stiftung.

Mr Zaloumis first became involved in the iSimangaliso region as a human rights activist during apartheid. During this time he worked with communities in the northern section of the iSimangaliso Wetland Park. He went on to follow in the footsteps of his father, the late Dr Nolly Zaloumis, who was fundamental to the Save St Lucia campaign.

Under the direction of Mr Zaloumis, the iSimangaliso Wetland Park became South Africa's first UNESCO World Heritage site. Zaloumis coined the term "developing to conserve" in the very early days of the redevelopment of the Park. His visionary programmes have turned a failing state asset into an important contributor to Kwa-Zulu Natal's tourism GDP. iSimangaliso is responsible for some 8 000 tourism jobs, has created more than 160 000 short-term jobs, provided bursaries to young people for university education, offered training in tourism, construction, craft, art, agriculture among other, and opened doors for 215 entrepreneurs who have received

seed capital for their businesses and mentoring.

On the ecological front, some 14000ha of exotic plantations have been removed, all but one of the historically naturally occurring animal species have been reintroduced in the iSimangaliso Wetland Park, and the ambitious St Lucia Estuary rehabilitation project is two months from completion.

iSimangaliso is one of the eight most important biodiversity hot-spots on the planet. The area comprises five primary ecosystems, is home to 467 endangered and threatened species and is inhabited by eleven endemic species that cannot be found anywhere else.

"In order to conserve places like iSimangaliso, we need development plans that extend beyond industrial exploitation and economic cost-benefit calculations. If we are to flourish moving forward, our continued growth rests on social justice, political inclusion and environmental responsibility. Approaches to conservation that prioritise education, economic independence and raising awareness of the value of nature are the foundations for the emergence of a new generation of supporters for this unique place – a new breed of conservationists



Above: Mr Andrew Zaloumis is interviewed about the 220 kilometres of untouched natural coast with five major ecosystems belonging to the park, which was declared a UNESCO World Heritage Site in 1999.

motivated by a profound sympathy for human suffering, who will reject the financialisation of conservation and embody a love for Nature's intrinsic worth."

"Failure," Mr Zaloumis states, "is not an option."

In his acceptance speech at the awards ceremony, Mr Zaloumis said, "I would like to thank the KfW for this award. There is no doubt it will strengthen iSimangaliso's hand in mobilising the support and partners it needs. I would like to thank the UNESCO Marine World Heritage Programme for holding the bar high and stimulating a vibrant community of marine site managers and specialists. Our status as a World Heritage Site has helped solidify iSimangaliso's position among the world's icons and promoted its conservation. Finally, I would also like to acknowledge the many people who have stood by my side to make this possible. This has been and is a team effort."

"We are extremely proud of our CEO and his visionary leadership, which has positively impacted on the communities bordering our World Heritage Site, developed entrepreneurs who have themselves grown to win accolades for their excellence in products and service deliveries of different kinds, skilled young and old to take charge of their destinies while providing for their families, enlightened the youth, ignited interest in conservation and environmental matters from early on for school going children," says Mr Buyani Zwane, Chairman of the iSimangaliso Board.

"This award is further acknowledgment of exceptional leadership and selfless dedication to conservation by a true son of the soil. Congratulations.

We learn and plough back to our communities, organisation, province and country. Eventually, the region and continent will experience the magic that is iSimangaliso," Mr Zwane concludes.

The awards ceremony was preceded by a panel discussion led by renowned professionals from science, environment protection and business and explored the topic, "The invisible crisis – our plastic waste in the world's seas".

Local students from six technical secondary schools with a teaching emphasis on mathematics, computer science, natural sciences and technology (MINT) also took part in an afternoon discussion with Mr Zaloumis and scientists from Goethe University Frankfurt. The teenagers – interested in learning more about the connections between Western lifestyle, its impact on the global environment and local nature conservation discussed these issues with Mr Zaloumis, who is responsible in iSimangaliso for more than 200kms of coastline, giving special attention to the problem of plastic waste and its harmful effects on the world's oceans.

About the KfW-Bernhard-Grzimek-Preis:

Bernhard Klemens Maria Grzimek was a renowned German conservationist, zoo director, zoologist and author, who won the first German Oscar for his the documentary film Serengeti

Shall Not Die. After publication in Germany in 1968, Grzimek's Animal Life Encyclopaedia was translated into English and published in 1975 in 13 languages.

KfW is one of the world's leading promotional banks. With its decades of experience, KfW is committed to improving economic, social and ecological living conditions all around the world on behalf of the Federal Republic of Germany and the federal states.

To do this, it supplied funds totalling EUR 81.0 billion in 2016 alone; and of this, 44 % went into measures for protecting the environment and combating climate change.

KfW does not have any branches and does not hold customer deposits. It refinances its lending business in a responsible manner and almost entirely in the international capital markets. In 2016, it borrowed EUR 72.8 billion for this purpose.

Climate and environment protection is one of the four areas of activity of KfW Stiftung. With its projects, the foundation aims to heighten public awareness of biodiversity – one of the major social challenges of our time – and to raise attention to the importance of protecting endangered species. The internationally renowned KfW-Bernhard-Grzimek-Preis is awarded every two years to outstanding organisations or leaders who distinguish themselves in their remarkable endeavour to preserve the world's biodiversity with creative and innovative ideas. KfW Stiftung thus honours the lifetime achievement of the long-time director of the Frankfurt zoo and conservationist Professor Bernhard Grzimek, who has rendered exceptional services to the preservation of the planet's natural resources in Germany and around the world. In 2013, the inaugural prize was awarded to the Frankfurt Zoological Society. The 2015 winners of the second KfW-Bernhard-Grzimek-Preis were Emmanuel de Merode and Pavan Sukhdev.

For more information on the iSimangaliso Wetland Park, follow us on Twitter, Instagram, Facebook and Youtube, or visit our website at www.isimangaliso.com.

For media enquiries and photographs contact Bronwyn Coppola on 0834509111 or bronwyn@abetterworld.co.za

Minister Molewa notes the Constitutional Court decision on the moratorium on the domestic trade in rhino horn

The Minister of Environmental Affairs, Dr Edna Molewa, has noted the decision of the Constitutional Court on the application for leave to appeal the 2015 High Court of South Africa, Gauteng Division order that set aside the moratorium on the domestic trade in rhino horn. On 5 April 2017, the Constitutional Court dismissed the application for leave to appeal.

The moratorium was implemented in terms of section 57(2) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEMBA), and took effect on 13 February 2009.

An original application challenging the moratorium was brought by Johan Kruger in 2012, joined by John Hume in 2015. Wildlife Ranching South Africa and the Private Rhino Owners Association of South Africa supported the application.

On 26 November 2015 the High Court set aside moratorium on the domestic trade in rhino horn with immediate and retrospective effect.

Pursuant to this judgment, the Minister filed an application for leave to appeal to the High Court, which was dismissed. Thereafter, the Minister

petitioned the Supreme Court of Appeal (SCA) for leave to appeal.

The SCA in May 2016 dismissed the Minister's application for leave to appeal with costs. No reasons were given for the order. The Minister subsequently applied to the Constitutional Court for leave to appeal the decision in June 2016. Yesterday's decision was the outcome of this application.

"Whilst we are studying the implications of the order handed down by the Constitutional Court, it should be noted that the court's decision should not be construed to mean that the domestic trade in rhino horn may take place in an unregulated fashion," says Minister Molewa.

Since the moratorium came into effect, the Department of Environmental Affairs has strengthened its laws, regulations and systems to ensure no regulatory loopholes exist with regards to the possession of rhino horn as well as a possible future domestic trade in rhino horn.

In the absence of the moratorium, it must be emphasised that all domestic trade in rhino horn will be subjected to the issuance of the relevant permits in

terms of the National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004) (NEMBA) and applicable provincial legislation.

In terms of NEMBA a permit is required to among others possess, transport and trade in rhino horns and any derivatives or products of horn. The judgment does not mean that persons are allowed to trade (including selling, donating, or in any way acquiring or disposing of rhino horn) without a permit issued by the relevant provincial conservation department.

Application forms applying for authorisation of the regulated activities must be submitted in the province in which the applicant intends to carry out the restricted activity (E.g. selling, trade in, buying, giving, donating or accepting as gift, possession, conveying, movement, transport etc.). It must be furthermore emphasised that this matter does not relate to the international trade in rhino horn for commercial purposes. Commercial international trade in rhino horn is still prohibited in terms of the provisions of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Minister Molewa welcomes opening of Skukuza Regional Court to assist in combating rhino poaching-related offences

The Minister of Environmental Affairs, Dr Edna Molewa, has welcomed the opening of the Skukuza Regional Court in the Kruger National Park.

"The opening of the Regional Court is one of the plethora of measures being taken in terms of the Integrated Strategic Management approach to combat rhino poaching. Having a Regional Court in Skukuza will ensure that the case turnaround times for rhino poaching and related cases are expedited thus making a significant contribution to tackling the illicit trade

in rhino horn and any other related activities," said the Minister.

Rhino poaching has been declared a National Priority Crime, and government continues to work as a team in the implementation of the Integrated Strategic Management of Rhinoceros. This is a multi-sectoral, interdisciplinary approach involving Department of Environmental Affairs (DEA) and the South African National Parks (SANParks), the Department of Home Affairs, the Department of Defence (as a leader of the SANDF) the South African Police Service (SAPS)

and its Directorate of Priority Crime Investigation (DPCI) also known as the Hawks, the State Security Agency (SSA), the South African Revenue Service (SARS), the Department of Justice and Constitutional Development, as well as the provincial conservation authorities.

The court was opened by the Department of Justice and Constitutional Development and has been operational since 7 March 2017. The court was officially inaugurated on 19 April 2017.

Vox Pops

DEA staff members

As a tourist, what do you do to make your travel eco-friendly or sustainable?



1. Ms Kedibone Matshediso

Land Remediation

I would say flying is the least eco-friendly mode of transportation, give or take, in my opinion even though convenient in terms of the time it takes to get from one place to another.

Some eco-friendly measures I normally practice in my travels are flying on non-stopping flights (one way), as this reduces the amount of CO2 emissions. I also often use re-usable and recyclable material (such as re-usable plastic cups and containers) when on-board the plane. It is also apparent that the landing of a flight expands a lot of energy so I usually don't fly when travelling short distances.



2. Mr Lubabalo Maweni

Ozone Depleting Substances (National Ozone Unit)

Where possible I try to look for hotels and other accommodation that have effective waste treatment systems, that recycle and that are energy efficient.

I also make sure to not hire a vehicle when travelling abroad and opt to commute.

I'm also careful in what I purchase when I travel in case it comes from endangered species. I make sure to make proper research about things like animal hides and jewellery made from animal products in that particular country.



3. Ms Maria Paul

Climate Change and Biodiversity

I usually choose airlines that are committed to going green such as Mango airlines. Also, if I'm travelling internationally, I usually take a route with less flights i.e. nonstop flights. I usually take my flight from Durban to Dubai and then from Dubai to Cochin, and that's only 2 planes.



4. Mr Clement Nchabeleng

Biodiversity Planning and Management

Well, I'm not too sure hey, since I fall asleep most times on the flight but guess that by me not using the disposable products that end up in dustbins, not littering, smoking and/or drinking on the plane is my little way of contributing towards the protection of our ecosystem.



5. Ms Aysha Michaels

Governance and Compliance

When travelling, I do not print my boarding pass but save it as a PDF and it can be scanned from my phone.

I also make sure I use the right fuel for my car all the time and specifically choose fuel that is eco-friendly.

Vox Pops continued

Members of the public



**1. Mr Tsitohaina Andriamanohera
Madagascar**

I have everything on my phone or tablet. At hotels I try to not waste water by not requesting washed towels every day. I don't use the air condition much because in Madagascar we don't use it. This decreases the usage of energy.



**3. Ms Damaris Kibe
Kenya**

I travel mostly with my colleagues, so as a group we make sure we don't book many cars but travel together as a group to lessen the pollution of fumes in the environment. We don't throw litter out of the car, we collect it in a plastic bag and hold on to it until we find a bin to dispose it. Wherever we go, we leave the place as we found it. We don't destroy any vegetation.

the value of keeping our environment clean and the positive impact they make. I want them to have a principle of cleaning up after themselves and going an extra mile.

When I am at the airport I make sure the taps at the toilet are not left leaking. If they continue to leak I report it to management.

I make sure I abide by the rules and regulations of the tourism authority. When I am at the hotel I minimise the use of different towels as washing them uses up energy. Have Ubuntu towards the environment as it nurtures us.



**5. Ms Lwana Lopes
Mozambique**

I drink a lot of water, so instead of buying different bottles of water I use the same one. When I go to the beach I never leave any garbage behind. I ensure that I take the litter with me and dispose it in proper bins. I avoid to use chemical products and use organic products to avoid polluting the environment.



**7. Ms Nompilo Mncube
South Africa**

I put litter in the bin to make sure the environment around me is clean. I prefer to use a shower because it saves more water.

Currently in the country we are experiencing drought, so I do my bit to conserve water. If there are man-made walkways, I walk on those instead of destroying plants and natural vegetation.

The truth is, you don't need to spend a lot of money to become a more eco-friendly traveler. In fact, becoming more conscious about how you travel can actually save you money.



**2. Dr Mohab Hussein
Egypt**

I don't use the air condition much, only when I need to save electricity. I use water sparingly to save water. Africa doesn't have a lot of water resources, I conserve water as much as I can. cycling of nutrients. So Save our Wetlands.



**4. Mr Darron Raw
Swaziland**

When I travel with my family we take an additional refuse bag with us. If we are at a camping site or beach we make it a point that we pick up our rubbish and generally clean the site up. I want my children to grow up knowing



**6. Ms Sarudzai Muza
Zimbabwe**



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