

# BOJANALA



**Vredefort Dome:**  
A step closer to being protected

**A green building**  
for a green department

**Budget vote highlight:**  
Green Economy and Jobs

**Introducing All Rise in Court:**  
Environmental Court Summaries

**Green Economy: Does it include you?**



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## Dear Valued Stakeholder

"Green Economy: Does it include you?" That is the question we pose to you in this Environment Month themed edition of Bojanala. After reading this edition from cover to cover, your answer should certainly be "You bet it does!" This is in line with the international theme for World Environment Month 2012, selected by the United Nations Environment Programme.

In this edition we share information on the R800 million boost earmarked for the Green Fund over the next two financial years, as well as the various environmental programmes championed by the department and national government, with a view to power the green economy and provide livelihoods with dignity, to the most vulnerable members of our society.

In order to showcase these programmes to the public, the department hosted a vibrant national and multimedia Environment Month campaign, which included print media, radio advertisements in various official languages, television interviews, a dedicated webpage, community engagements and targeted material on environmental careers for youngsters.

The highlight of the month's activities was World Environment Day on 5 June, led by the Minister of Water and Environmental Affairs, Hon Edna Molewa, in Mangaung, Free State. This event focused on unpacking the benefits and opportunities of the green economy to the people. The community engagement included a well attended exhibition, where the department's entities, provincial government, the private sector and state owned entities such as Eskom, showcased their green job creation initiatives, products, and services.

Scores of school children toured the various stalls and were educated on the various career options open to them in the environmental sector. The youngsters were also given learning material with environmentally friendly tips, which they were encouraged to share with their communities and families after the event.

This year's Environment Month programme coincided with the hosting of the Rio+20 United Nations Conference on Sustainable Development. The conference took place in Brazil from 20 – 22 June 2012, marking both the 20th anniversary of the 1992 United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro, and sector.



**Editor-in-Chief**  
Lavinia Engelbrecht

the 10th anniversary of the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg. We bring you Minister Edna Molewa's overview of the conference from South Africa's perspective, as well the accolade conferred to Deputy Minister Rejoice Mabudafhasi in Rio, for her dedication to profiling gender issues in the environmental

All this and much more is contained in our latest edition. The editorial team would also like to welcome Katlego Thomas and Phikoleafrika Bosiki, who have recently joined us the graphic design and multimedia interns. Contributions from departmental officials and external stakeholders in the environmental sector are always welcome. Until next time, we hope you enjoy the edition and share it with your colleagues. Do remember to recycle the publication after reading.

## Green Quotation:

**What kind of world do we want for our great-great-grandchildren? You must succeed where we failed.**

**- Desmond Tutu, chair of the Elders**

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# A green building for a green department



**Above:** Minister of Water and Environmental Affairs Edna Molewa (**centre**) surrounded by the department's senior managers at the sod turning ceremony.

**By Lavinia Engelbrecht**

Surrounded by cheers, singing and bright green hard hats, the Minister of Water and Environmental Affairs, Ms Edna Molewa, on Thursday 19 July, turned the sod marking the commencement of the construction of a new green building for the Department of Environmental Affairs (DEA).

"The green building for which we turn the sod today, is the first purpose built, not retro-fitted, green building for government, in the history of South Africa," said Minister Molewa at the construction site in the capital city.

"We have, through this investment, taken that bold step that will ensure that our infrastructure can meet green output specifications outlined in the

Climate Change Response Policy that advocates the use of sustainable building materials which promotes urban greening, energy and water efficiency."

The building which will serve as the head office for DEA is located at the corner of Soutpansberg and Steve Biko Roads (former Beatrix street) in Arcadia, Pretoria.

Minister Molewa was joined by the Director-General, Ms Nosipho Ngcaba, Project Manager Mr Edwin Maseda, and Ms Gugu Dingaan, representing Imvelo/Grinaker LTA, to witness the historical achievement of a R8 billion project.

"Through this Green Building we will propel the department above the construction industry players, setting a



**Above:** An artist's impression of the green building.

good example for other organisations, of course for the benefit of the environment and future generations," Minister Molewa told the guests at the joyous occasion.

Green buildings have the potential to make a significant impact in terms of reducing South Africa's electricity consumption. The global economy is rapidly transforming to a low-carbon economy.

A transition to a more sustainable development path may help to open up new investment opportunities and export markets; supports the creation of knowledge based economy and allows South Africa to set standards and demonstrate thought leadership.

"Our green building should send a clear message to State Owned Companies and the private sector, that government is unequivocal in its commitment to greening the way we do business and empower our people," said Minister Molewa.

"We anticipate that the urban area around us will become a green hub of creativity of green buildings that will forever change the face of the City of Tshwane, this initiative will influence corporate and state owned

companies across the country to follow suit. In two years' time, I look forward to being able to welcome you all here again as we turn the key on our green building. A green building for a green department."

This project is a culmination of many years of hard work and comes after the Director-General of the Department, Ms Nosipho Ngcaba, signed the Public Private Partnership (PPP) Agreement between DEA and the Imvelo / Grinaker LTA.

The signing of the PPP Agreement is pursuant to the



**Above:** Another view of the new green building.



**From left to right:** Mr. Nelson Sheva, Mr. Raymond Moodley, Green building project manager and Chief Director of Facilities Management Mr. Edwin Maseda, Minister of Water and Environmental Affairs Edna Molewa (**centre**) Mr. Simon Everitt (**3rd from far right**) surrounded by Grinaker LTA Teams at the Sod turning ceremony.

granting of Treasury Approval III by the National Treasury and the Minister of Finance's concurrence with the Minister of Environmental Affairs to commit on the future financial obligations of the DEA Green Building Project.

"With the trend towards green buildings picking up it is only fitting that the Department of Environmental Affairs, being the country's authority on the environment has a green building with at least a four star rating for its head office," said Ms Gugu Dingaan, speaking on Imvelo Concessions.

"We have paid careful attention to this requirement in terms of architectural design and landscape.

This building, ladies and gentlemen talks to the overall goal of sustainable development as it showcases various sustainability concepts and is aimed at being an example in the field."

Ms Dingaan indicated the building would include features such as rainwater collectors made of low maintenance and recyclable materials and indigenous plants in the landscaping, to mitigate the need for regular irrigation.

"Anyone who is in the building will have direct access to natural light and ventilation. From the gardens right up to the roof of the building we've built in environmental design principles.

And because a healthy nation is also important, we've promoted the use of stairs to increase activity levels," explained Ms Dingaan.

The Department of Environmental Affairs conducted a feasibility study in 2006 for its accommodation needs and arrived at the conclusion that the current leased office accommodations no longer meet its fundamental needs.

Furthermore, the current premises is also not a proper reflection of what the Department represents, which is to be an exemplary leader in the area of renewable energy, energy consumption, water conservation and taking into account compliance

with the provisions of the Electricity Regulation Act, 2006 (Act no 4 of 2006) and the related energy efficiency regulations. As ambassadors and protectors of the environment, the building will be an example in this new era of Green buildings.

The new building will cover 34, 143 square meters of office space in Gross Lettable Area with an overall size of 3.1309 hectares, and will accommodate 1 305 employees. The parking requirement for the project is 598 parking bays 4 for VIP, 438 for staff and 156 for visitors.

The Project Team spent a considerable amount of time searching for a suitable location which meets various needs. The final choice was an area which provides easy access to Departmental staff and visitors including people with disabilities since it is situated where there are retail, medical and public transport amenities.

The Green Building will become a resource centre with facilities including training, conference, catering for prominent international events, amongst other things.

It will save the Department the expenses of hiring facilities which is currently the case.

The private partner, awarded the tender to design, construct and finalise the project has the responsibility of considering and aligning the department's goals with the new building, reflecting its character and image.

The facilities management will include building maintenance, cleaning of the facility, energy and utilities supply, waste management, conference facilities, furniture management,

parking, pottering and churn management, pest control, internal plants, maintenance, telephone equipment, fire, emergency, landscape maintenance and the help desk facility.

The design and construction will be

carried over a period of 2 (two) years and provision of facility management services together with complementary support services for a period of 25 (twenty five) years in accordance with the service requirements of the Department.



**Above:** Minister of Water and Environmental Affairs Edna Molewa and Director-General Nosipho Ngcaba were all smiles at the event.



**Above:** Director-General Ms Nosipho Ngcaba and Head of Communications Mr. Albi Modise lead guests to the sod-turning area.



**Above:** Head of Communications Mr. Albi Modise, Deputy Director-General of Biodiversity and Conservation Mr. Fundisile Mketeni, Chief Operating Officer Ms. Lize McCourt and Green building project manager and Chief Director of Facilities Management Mr. Edwin Maseda at the staff event held a day after the sod-turning.

The entire contract period will run for a period of 25 years at a cost of R 8 billion.

Following the sod-turning on site with media on Thursday 19 July, all of the Department's staff were given an opportunity to experience the sod-turning for themselves and view artists' impressions of the final product on Friday 20 July.

The staff even at the Voortrekker Monument with its panoramic views of the city was well attended by the future occupants of the green building.

Staff watched a video clip of the Minister's speech from the previous day, and were given an opportunity to ask senior managers pertinent questions about the state of the art building.

Hot topics included access for the

disabled, parking bays and the possibility of a staff gymnasium and a daycare centre for employees' children.

Chief Operating Officer of the Department Ms Lize McCourt, indicated that as a People-Centric department, we had ensured that the building is accessible to staff and members of the public who make use of wheelchairs, the visually impaired and the deaf.

On the other hand, as a green department, DEA had also considered creative means of encouraging shared transport and use of public transport, which has an impact on the amount of parking bays which would be available.

The building itself is located in an area that is close to the Presidency and the Union Building's gardens, as well as

major bus routes and fellow departments.

All of this would encourage a culture of walking to various meetings and surrounds.

The COO indicated that the building would not include a staff gym, however the Department would explore means of encouraging staff to enjoy the outdoor recreational facilities and perhaps sponsoring a public gym, such as those proving popular in the public spaces in Johannesburg.

A daycare centre is also not on the cards, however this is not a policy decision, indicated the COO, adding that staff and senior managers could engage on that further.



**Above:** Green building project manager and Chief Director of Facilities Management Mr. Edwin Maseda unpacks the green building to the DEA staff.

#### **Green elements:**

The Green Building is designed to maximise and demonstrate energy efficiency and to meet green specifications with respect to:

- Lighting (e.g. the maximisation of natural light sources, compact fluorescent lights, individual switching, movement sensors, etc.)
- Reduction of water consumption as compared to the conventional buildings of similar size.
- Efficient Staff Movement (e.g. reduced reliance on lifts, coherent accommodation of interrelated sections, etc.); and
- Indoor/Internal Climate control (e.g. increased passive climate control and reduced reliance on mechanical air conditioning or

centralized air conditioning system with customised control for each office/area).

- Demonstrates urban greening (e.g. indoor planting, roof gardens, etc.)
- Uses and demonstrates environment friendly building materials, finishes, furniture and equipment (i.e. no poisonous paints or adhesives, no energy inefficient appliances, no exotic hardwoods, no toxic laminates, etc.)
- Uses and demonstrates efficient resource use – (e.g. reduction of paper use etc.)
- Demonstrates ergonomic and 'worker-friendly' work spaces.
- Solar generated power for the facility.
- The Building is strategically located to cater for commuting mass transport, promote fuel efficient transport and cycling facilities.

The Green Building will perform to the following green targets:

- Overall energy consumption in the building will be to a maximum of 115kWh/m<sup>2</sup>/annum.
- 10% of the overall energy consumption will be from a renewable energy source.
- Municipal water consumption will be 30% lower than that of a conventionally designed identical building (e.g. use of rain water harvested for gardening and bathrooms).
- The use of selected local South African materials and products.



**Above:** DEA staff were given the opportunity to pose questions on the new green building.



# R800 million boost for green economy jobs



**Above:** The Free State MEC for Economic Development, Tourism and Environmental Affairs, Ms Mamiki Qabathe, the Minister of Water and Environmental Affairs, Ms Edna Molewa, and the Deputy Executive Mayor of Mangaung Metropolitan Municipality, Cllr Mxolisi Siyonzana.

## By Zibuse Ndlovu

The environment sector green economy implementation plan has this year received a boost of R800 million for the Green Fund over the next two financial years, the Minister of Water and Environmental Affairs, Ms Edna Molewa said at the World Environment Day celebrations in Mangaung, Free State on 5 June 2012.

The 2012 World Environment Day celebration was held under the international theme "Green Economy: Does It Include You?"

In her address, the Minister said the Department was looking for partnerships to create 300,000 new jobs in the green economy. "Our Department would

use the funding to attract new and additional investments, to stimulate job creation and to lay the foundations for South Africa's transition to a low carbon, job creating and resource efficient growth path," said the Minister. The country had entered into the Green Economy Accord, which had been called one of the most comprehensive social pacts on green jobs in the world.

The Minister said South Africa was also extending its partnerships to international funding institutions such as the World Bank Clean Technology Fund and the newly established Green Climate Fund. "The implementation of the projects

would offer the country the opportunity to close the scarce skills gap in this sector. The department would soon launch the first phase of countrywide green hubs, with various satellite and regional operations," explained the Minister.

The project would be launched in Mangaung where more job opportunities would be created as part of the department's waste management strategy, which focused also on job creation. "Waste is wealth and we aim to prove that in line with our efforts to reduce, re-use and recycle waste, we could create job opportunities for all our young people," said the Minister.

The Working on Waste programmes focus on waste collection, disposal and recycling initiatives. The Department of Environmental Affairs provides support to the municipalities in the handling of waste: "this includes assistance in the construction of land fill sites and buy-back centres where appropriate.

Amongst other projects by the Department is the Working for Water, which was established in 1995. The project has created 397 146 work opportunities, to combat the impact of invasive alien species on water security, biological diversity, productive use of land, wild fires, erosion and many other negative impacts.

"Working for Water is a programme that has exceptional returns on investment, and I want to emphasise that these jobs are vital for our long-term economic future," said the Minister.

Another programme is the Working for Wetlands which has been in existence since 2004. The programme has rehabilitated over 800 wetlands, creating 15 000 work opportunities for people from the worst vulnerable and marginalised rural communities. "Our country has over 110 000 wetlands covering 4 million and representing 3, 5% of South Africa's surface area.

The Working for Wetlands Programme's focus is on the rehabilitation, protection and sustainable use of our country's wetlands," explained the Minister. Meanwhile, the Working for the Coast programme The Working on Fire also recruits from disadvantaged backgrounds and offers work opportunities to 4 800 fire fighters in 107 bases around South Africa in 2011/12 alone. "Fire-fighters are trained and fight over 2,000 wildfires across the country each

year, all of which pose risks to life, property and the environment," the Minister said.

focuses on initiatives geared towards cleaning and rehabilitation of coastal environmental assets and infrastructure. "This would include the cleaning along the coast as well as rehabilitation and stabilisation of the coastal dunes. This programme has helped a lot of the beaches to either attain or retain the prestigious blue flag status, thereby attracting tourist to our neighbourhoods," said the Minister.

Another programme is the People and Parks, its main focus is on projects that support development of infrastructure in and around the protected areas.

"This infrastructure plays a pivotal role in encouraging both the conservation of our natural resources but also to encourage the eco-tourism. We are currently involved in infrastructure development in five of the Free State reserves and there is visible progress in that regard," elaborated the Minister.

"We also have the Sustainable Land Based Livelihood whose focus is on projects that encourage restoration, rehabilitation and revegetation of degraded areas. We also assist the municipalities in the management of their open spaces and in most cases this culminates in the establishment of recreational parks. In this regard we are currently involved in the development of a major recreational park in the Batho Township within Mangaung Metro with an approximate value of 35 million Rands," said the Minister.



**Above:** Minister Edna Molewa led the World Environment Day celebrations in Mangaung, Bloemfontein on 5 June, the Minister also visited the exhibition area where information on the green economy was provided.

# WASTE IS WEALTH



**Above:** Deputy Minister Rejoice Mabudafhasi in a coastal clean up campaign in 16 September 2011 co-hosted by Umdoni Municipality.

Human activities generate many by products which are seen as useless and are discarded as waste.

Increasing population growth accompanied by urbanisation and industrialisation has resulted in dramatic increases in the volume of waste generated by modern societies.

## Waste creates problems in a number of ways:

- It is aesthetically unattractive and impacts on tourism by creating a blight on South Africa's beautiful landscape;
- It pollutes air, soil, rivers and precious ground water;
- It creates major health hazards to humans, particularly in areas where large amounts of waste are dumped and not cleaned up, for example in informal settlements; and
- It fills up landfill sites which are becoming more difficult and costly to establish and maintain.

It is estimated that the total amount of urban waste (domestic waste) in South Africa is 15 million tons a year.

Industries contribute about 25 million tons a year to the waste stream.

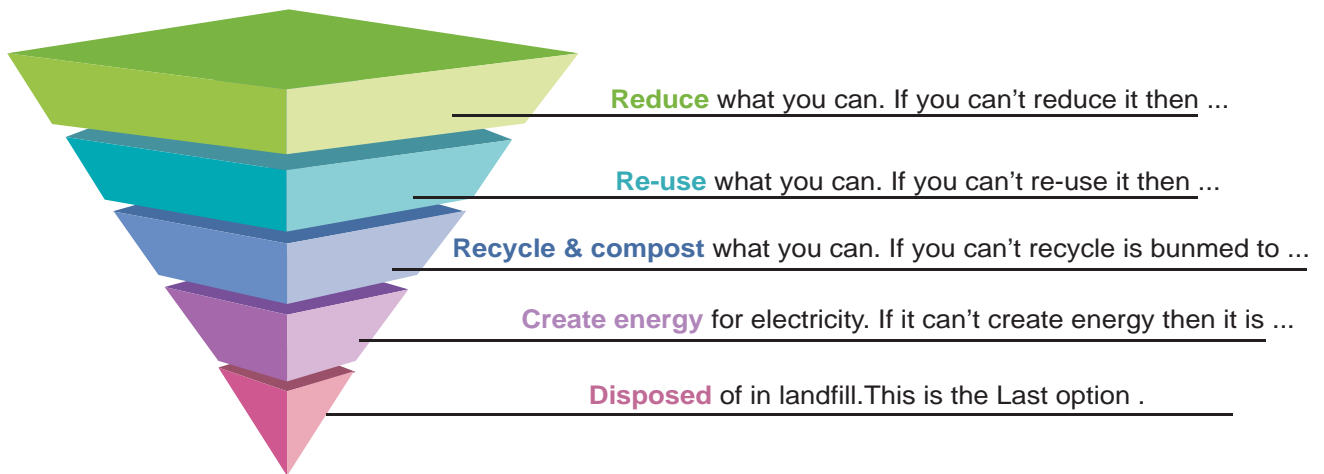
It is imperative that this waste be managed properly if it is to be prevented from having negative environmental and health consequences.

## Managing waste

Waste Management is one of the critical elements of sustainable development, primarily because sound waste management practices contribute to sustainability. Legislation regulating waste management in South Africa has historically been fragmented, and still is to some extent.

The March 2009, enactment of the National Environmental Management: Waste Act (No 59 of 2008) presented a

# Waste Management Hierachy



more holistic approach to the regulations for managing South Africa's waste.

The bulk of the regulations set out in NEM: WA became effective on July 1 2009.

Within the waste sector we have experienced the following problems:

- We have a legacy of contaminated land;
- In the past we focused on landfilling;
- Economic growth and high waste generation rates;
- Rural areas accessing waste collection services;
- Increased urbanisation and demand of access to services; and
- Increased urbanisation and demand of access to services;
- Distorted pricing of waste services; and
- Under utilisation of informal sector for reclamation of waste. This has thus called for a paradigm shift towards a waste management approach that seeks to conserve natural resources and protect the environment by avoiding the production of waste in the first place, reusing, recycling or recovering energy from that which we cannot avoid and using disposal as the last option. Special attention is given to the potential job/business opportunities in this value chain. Government has thus adopted the Waste Management Hierarchy as its basis for waste management in the country. The following are the building blocks for the implementation of the waste hierarchy:

- Norms and Standards;
- Categorisation and Classification;
- Waste Information System;
- Industry Waste Management Plans;
- Listing and Licensing of Waste Management Activities;
- Producer Responsibility
- Economic Instruments; and
- Fiscal Mechanisms.

The emphasis is more on preventing pollution and minimising waste at source since it is much more costly to clean up afterwards.

This approach is based on the following:

- Reduction of waste through reuse of waste products for example using plastic packets and containers in which products are sold to store things or using the blank side of printed paper before sending it to be recycled;
- Recycling to remove mass from the waste stream; and
- Recovery of chemicals, gases and metals from waste.

## Job creation in the Waste sector

With increasing unemployment in South Africa, many people are finding alternative means to generate income.

One of these is to establish a recycling depot or a buy back centre.

The Department of Environmental Affairs receives numerous enquiries and applications to support these ventures.

Although most of these ventures have environmental merit, the planning is frequently inadequate.

There are various ways in which communities can create work through projects that collect waste from where it is generated.

One of the popular models used is the One Person Contract in which case individuals are responsible for collecting waste from households.

They take it to central points where another contractor with a vehicle will collect and transport it to a transfer station or for disposal.

### Transfer station

Waste is temporarily stored here. Individuals can then sort the waste into recyclables and non-recyclables.

Recyclables can either be organic or inorganic waste. Do you know what a buy-back centre is? What about a recycling depot?

- A buy-back centre is a place where people bring waste for collection. They are paid for the waste they bring in; and
- At a recycling depot people are not always paid for the materials they bring in for recycling.

### Questions to ask yourself before embarking on one of the above-mentioned ventures:

- What recyclables are available in your area (plastic, paper or cans)?
- What quantities are being produced?
- At what rate are these being generated?
- How often are they available? Around Christmas only or throughout the year?
- What companies are interested in buying your material?
- How far are these companies from your area?

- Do you have transport to take your waste to the companies?
- Will you benefit from this activity? Briefly match the needs of recycling companies to the recyclables available in your community.

### Waste collection

Local authorities are primarily responsible for waste collection. It is much more costly to clean up litter left on streets and in public spaces than it is to collect waste from formal household waste collection systems. The public, therefore, has to accept co-responsibility for the cleanliness of their towns and cities and ensure that they dispose of litter and waste in allocated bins. It has been recognised that traditional waste collection systems are inappropriate, inefficient and costly when applied to informal settlements. New innovative ways of managing waste in disadvantaged communities are required and so the trend is to move towards community based waste collection by paying people to bring litter or waste to a central collection depot, and involving the community in programmes to keep their neighbourhoods clean.

### Be a waste entrepreneur!

Start collecting, re using and recycling waste and make money from your sales, be they crafts, compost or recycled materials such as paper and tins.

### Recycling

Recycling is an important option for managing and reducing waste. Products which can be recycled are:

- Glass (bottles, broken window panes);
- Paper (magazines, newspaper, office paper);
- Plastic (bags, bottles, containers);
- Metals (beverage cans, scrap metal); and Rubber (tyres).

### Landfills

Approximately 95% of all urban waste is disposed of on land, either in open trenches or in sanitary landfills. There are about 1 200 landfill sites in South Africa, most of them operated by local authorities. Each landfill site should have a permit issued by the Department of Water Affairs and Forestry in consultation with the Department of Environmental Affairs. It is becoming more and more difficult to create new landfill sites as old ones become filled up. Communities are becoming proactive in exercising their right not to have their environment degraded and no one wants to have Not in my back yard!

It is imperative, therefore, that we reduce waste to be disposed in order to increase the landfill lifespan.

# Is an environmental career right for me?



**Thinking Ahead:** A career in environment could be for you.

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

- A social-environmental perspective
- An environmental science perspective

It is important to note that these two complement one another and effective environmental management combines both these perspectives.

## **SOCIAL-ENVIRONMENTAL CAREERS**

Normally one progresses into the social environmental perspective through a Social Science or Arts degree

presented at a university. Subjects may include Anthropology, Archaeology, Development Studies, Geography and Environmental Studies, Law (Environmental Law), Journalism (Environmental Journalism) and Education (Environmental Education). Careers in this field are centred around humans and their relations with the environment, and ways of making these relations beneficial to both people and the environment.

## **Career path qualification:**

- o **Community conservation and rural development**  
BA degree with subjects such as Anthropology, Development Studies, Geography and Environmental Studies
- o **Environmental educators**  
H.dip Ed with subjects such as Geography or Biology Formal Environmental Education course pursued at postgraduate level environment.

o **Environmental lawyers**

BA LLB degree with Environmental Law as a subject

o **Environmental journalists**

No formal qualification other than journalism (degree or diploma)

o **Cultural resource specialists**

BA degree with subjects such as Archaeology, Anthropology, Political and Social Studies or Social History

o **Eco-tourism specialists**

Tourism degree or diploma with environmental interest

### ENVIRONMENTAL SCIENCE CAREERS

Environmental science careers start by completing a science degree at university or a relevant diploma course at technikon. Subjects in the natural sciences such as Zoology, Botany and Ecology generally lead to a career path in biodiversity conservation, but may also lead to a career in environmental management. Subjects in the physical sciences such as Mathematics, Physics and Chemistry might lead to a career path in environmental management aspects such as pollution control

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

o **Specialist scientists in biodiversity e.g. marine biologist, zoologist, ecologist**

o **Postgraduate degrees in Zoology, Botany and Ecology, specialising in particular fields of interest**

o **Waste managers and pollution controllers**

BSc degree with subjects such as Mathematics, Physics, Chemistry, Climatology Technikon diploma or degree in Environmental Science or Engineering

o **Environmental engineers**

Civil Engineering degree or B Tech degree in Civil Engineering

Universities and Technikons will have more information on courses and degrees. You may also contact the Department of Environmental Affairs for more information as well as the requirements and timelines of the annual internship programme's intake. The call for applications is usually sent out in September each year.

# Bosso ke Mang?

## Ke wena... if you choose an environmental career!

Do you want to manage, conserve and protect the environment? Do you want to work with either plants, wildlife, air, water, soil, as well as people? Do you see environmental problems as opportunities for improving the environment as well as people's quality of life?

If you have answered YES to one or more of the above, then an environmental career could be right for you! You could be employed as a technician, technologist, scientist, or at managerial level in one of the many careers in this exciting sector! If you have a drive for entrepreneurship and innovation, you could be an inventor or pioneer in the sector, leading your own company and creating green jobs. Fresh young minds like yours are needed to revolutionise the way we travel, the energy we use, minimize our waste as well as sustainably feed our people and build our houses and towns amongst others.

To pursue a career in the sector, students you would generally need to study certain subjects at Grade 12 level in high school, depending on the specific career you have in mind. Most programmes that are relevant to environmental careers are classified as Science Programmes. Relevant subjects in Grade 12 include Mathematics, Biology, Physical Sciences, English and/or Geography. The required minimum score for each subject is usually adequate achievement. It is however an advantage to have higher scores in your final matric marks, as most universities select students with higher than the minimum scores. Universities and universities of technology will have more information on courses and degrees.

For more information contact:

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**environmental affairs**

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# Vredefort Dome: a step closer to being protected



**Above Left to right:** The North West Dome Land Owners Association Chairperson, Mr DeWaal Nigrini, the Minister of Water of Environmental Affairs, Ms Edna Molewa, and the Chairperson of the Dome Meteorite Park, Mr Gideon Petrus Schoeman.

The Vredefort Dome is one step closer to being a protected site, after the signing of the Vredefort Dome Memorandum of Agreement (MOA) by the Department of Environmental Affairs.

The Minister of Water and Environmental Affairs, Ms Edna Molewa signed the agreement with landowners from the Free State and North West on 26 May 2012 at Parys in Free State Province.

Speaking at event, Minister Molewa said the signing of the MOA signalled the start of a formal partnership between government

and the land owners of the Vredefort Dome World Heritage Site. "Through this signing we aim to ensure that the integrity and Outstanding Universal Value of the site will be maintained in perpetuity," explained the Minister.

The Vredefort Dome was inscribed on the prestigious United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage list in 2005 for being of Outstanding Universal Value to humankind.

"The intention to proclaim the site in terms of national legislation was

gazetted in December 2007. However, the Vredefort Dome has not yet been proclaimed due to concerns raised by landowners," she said.

The Vredefort Dome is the oldest, largest, and most deeply eroded complex meteorite impact structure in the world. It is the world's greatest single, known energy release event. It contains high quality of and accessible outcrop sites which demonstrate a range of geological evidences of a complex meteorite impact structure. It is located in the Free State and North West provinces.



A comprehensive comparative analysis with other complex meteorite impact structures demonstrated that it is the only example on earth providing a full geological profile of an astrobleme (impact structure or "star wound") below the crater floor, thereby enabling research into the genesis and development of an astrobleme immediately post impact.

"This makes the Vredefort dome an excellent research site, it is therefore no wonder that the area has been and continues to be extensively studied by earth scientists from South Africa, Africa and the rest of the world since 1937," the Minister said.

Apart from its natural heritage values, the Vredefort Dome is also rich in ancient art forms. Evidence of early human occupation can be seen in the caves, rock shelters, pottery, rock engravings and rock art. The late Iron Age Stone Walled settlements built by Sotho and Tswana speakers form part of the rich cultural heritage of the Dome. The Minister said Government has subsequently addressed

most of the concerns and established a multi stakeholder Steering Committee for coordination purposes. "Today marked the outcome of four years of engagement and negotiations between the Department of Environmental Affairs (DEA), relevant provincial and local government institutions and the landowners towards the formal proclamation of this breath-taking landscape as South Africa's eighth world heritage site," said the Minister.

South African government was the first State to pledge R20 million towards the conservation of the Vredefort Dome. "I am happy to report that, as from March 2012, the fund accumulated R88 million from various countries, with an additional R25 million in pending pledges," the Minister said.

"This will give the area a formal status like other sites such as Robben Island, iSimangaliso, Mapungubwe, Cape Floral Region, Richtersveld, uKhahlamba

Drakensberg", she said. The site has been recognised on the Unesco Heritage list, being described as having "Outstanding universal value to human kind." Molewa said she was working with land owners towards "final proclamation of this area as a World Heritage Site." The memorandum will also pave the way for the appointment of a management authority which will serve as a precursor for the development of an integrated management plan, as required by UNESCO regulations.

The Environmental Affairs Deputy Director-General, Mr Fundisile Mketeni said the management authority would be mandated to preserve archaeological sites, manage pollution and waste as well as tourism development. "As part of this management system, tourism development will be ensured in order to support local economic development. We want to ensure that this area is not only preserved, but presented to South Africans, Africa and the World for both present and future generations," added the DDG.



# Budget vote highlight: Powering our green economy



**Above :** Minister of Water and Environmental Affairs Edna Molewa, far right, cuts the ribbon during the launch of the Shore Line boat at iSimangaliso Wetland Park in KwaZulu-Natal during International Biodiversity Day celebrations on May 22. The boat is 60% owned by Phillip Mkhwanazi, front left.

It is incumbent upon us to debunk the myth that environment management hinders development, by positioning the sector as a major contributor to job creation and the fight against poverty.

To quote the late great Wangari Maathai: "The environment and the economy are really both two sides of the same coin. You cannot sustain the economy if you do not take care of the environment because we know that the resources that we use whether

it is oil, energy of land, all of these are the basis in which development happens.

"And development is what we say generates a good economy and puts money in our pockets. If we cannot sustain the environment, we cannot sustain ourselves."

The South African government has identified the green economy as one of the keyplan.

The transformation of elements in growth as well as in the

industrial policy action our industries towards the building of a green economy has many facets. It is about creating new labour absorbing industries that also mitigate impacts on the environment. This green economy offer substantial opportunities for job creation and development in the environmental goods and services sector, particularly in biodiversity, waste and natural resource management services. However, the skills required to realise the job potential in the sector are scarce

and students with relevant qualifications are often unable to bridge the gap between education and employment requirements.

The incubation method, which we will utilise in the sector for the very first time, is a unique way to tackle this gap.

Through the South African National Biodiversity Institute (SANBI) we will manage the process of placing a maximum of 800 unemployed school leavers and graduates, mostly from rural areas, in biodiversity jobs for an incubation period of two and a half years.

SANBI will assist in ensuring that participants are mentored and receive relevant skills and experience to gain employability and access to permanent job in biodiversity and ecosystem management.

We are aware that unlocking the substantial economic benefits of biodiversity is going to require a sizeable cohort of skilled South Africans.

For this reason we have mandated SANBI to pioneer a national capacity development programme for the entire biodiversity sector.

SANBI's application to the jobs fund title Catalysing Access to Employment and Job - Creation in Ecosystem management, was approved by the Development Bank of Southern Africa for R300 million.



**Above:** Environmenta Day celebrations in full swing with youngsters at Odi Stadium in Mabopane.

We recognise that a just global transition to a low carbon, resource efficient and sustainable economy has the potential to create jobs across many sectors of the economy, and indeed we can become an engine of development.

Over the past few months we began engagements with various youth formations and communities with the objective to create long lasting strategic relationships that will contribute towards enterprise development and the creation of sustainable jobs throughout the country.

This was with special focus on urban and rural development for the true and real advancement of a working green economy.

As we celebrate Youth Month, we will roll up our sleeves by launching the first phase of the country-wide green hubs with various satellite and regional operations.

Last year we committed to implementing an environment sector Green Economy implementation plan through a local and

international partnership with green investments, supported by domestic funding from the National Treasury's Green Fund, as well as international funding through bilateral cooperation programmes and multilateral facilities such as the World Bank Clean Technology Fund and the newly established Green Climate Africa's growth path the department Fund.

It is envisaged that we will utilise this funding in a catalytic manner so as to attract new and additional investment, stimulate job creation and lay the foundations for South Africa's transition to a low carbon job creating and resource efficient growth path. National Treasury has made available R800 million for the Green Fund over the next two financial years. We have finalised processes with National Treasury and in this financial year will roll out the implementation of the Green Fund and have appointed the Development Bank of Southern Africa as an implementing agency for the green fund managed by a multistakeholder Management Committee



**Above:** The DEA official and a maiden planting a tree during the Reed Dance in Kwa-Zulu Natal at Kwanongoma.

chaired by the department. The primary objective of the Green Fund is to provide catalytic finance for high quality, high impact green economy projects and mainstreaming activities which would not have been implemented without fiscal support.

The Green Fund and the activities it supports will be used to leverage additional funding through a targeted resource mobilisation plan, including from Overseas Development.

Assistance and donor funds relating to green economy and climate change priorities.

These would be pursued in the context of the national development priorities.

A true working green economy is a lot more achievable through a patriotic and growing participation of various social partners. *Mabogo dinku aa thebana!* (*Working together we can do more*).

This is exemplified by our on going roll out of among others the National Waste Management Strategy.

Our various environmental programmes linked to the expanded Public Works programmes linked to the are wellknown for their ability to give there sources and dignity of work to previously unemployed people. What is sometimes overlooked is the value of the work that is done. Last year we created 26 700 new work opportunities amounting

to 1 1676 full-time equivalent jobs and 26 891 accredited training person days. We welcome additional funding of R1.1-billion for the Working for Water and working on fire programmes of the Department over the Medium Term Expenditure Framework (MTEF). This will bring the total budget for the Environmental Programmes to R7.7-billion over the MTEF, and will provide 205 877 work opportunities and 102 603 full-time equivalent jobs over this three year period. In this financial year we aim to create 62860 work opportunities, 31 277 full-time equivalent jobs, and 600 youth benefiting from the National Youth Servc in addition to 40% of the work being done by youth. We also aim to ensure that 55% of beneficiaries from our programmes are women, and 2% are for people with disabilities.

# Minister Molewa unpacks Rio+20 outcomes

## WHAT'S IT ALL ABOUT?

02 July 2012

The Rio+20 Conference on Sustainable Development took place in Rio de Janeiro, Brazil from 20 to 22 June 2012 with the key outcome for South Africa being the recognition of green economy policies as a viable tool for advancing sustainable development and poverty eradication.

The aims of the conference were to secure a renewed political commitment to sustainable development, assessing the progress and implementation gaps in meeting already agreed upon commitments as well as addressing new and emerging challenges. The conference was convened under two over-arching themes: "A green economy within the context of sustainable development" and "Poverty reduction and Institutional framework for sustainable development".

The South African Government viewed the Rio +20 conference to be a critical milestone in the Global Sustainable Development regime, especially on key elements that included an agreement on the need to establish a Sustainable Development Council and General Assembly level and to upgrade the United Nations Environment Programme (UNEP) to become the authoritative voice on environmental governance with the view to promote coherence in the coordination of the environment leg of sustainable development.

The conference also pronounced a process geared towards developing a set of sustainable development goals in line with the post 2015 development agenda. Another pronouncement the department is pleased about is the establishment of a sustainable development finance mechanism and that a clear process towards such a mechanism has been defined.

Furthermore, the global community has agreed on the establishment of a "High Level Political Forum" that will build on the functions of the Commission on Sustainable Development. This decision is aimed at strengthening the integration of the three pillars of sustainable development at a global level and promotes effective implementation of the sustainable development agenda.

Our Government is gratified regarding the adoption of the Global Framework for Sustainable Consumption and Production and the recognition of the

importance of a multilateral instrument that will be geared at managing marine biodiversity beyond national borders. South Africa was the lead voice in calling for the recognition of the strategic role played by marine resources for sustainable development

The South African government is already working towards promoting coherence in the initiatives that are aimed at promoting sustainable consumption and production and the country will be moving into the implementation phase of the green economy initiatives as one of the tools to achieving sustainable development.

Sustainable Development Goals (SDGs) must factor in poverty eradication and the creation of a green economy

INSPIRING WORDS FROM THE YOUNG

"I am passionate about Africa's development, especially when it relates to women's health and empowerment. This includes women's ability to choose when, and how many children to have, as well as their ability to adapt to the changing climate they face each day. I am equally aware that we have a long way to go to meet these challenges, but I believe that when young people know the urgency of the crisis, they will act."

**Esther Agbarakwe (27)** from Nigeria, works with Population Action International in Washington DC as an Atlas Corps International Advocacy Fellow

"I believe in the power of each individual, no matter the political or economic system they live in. Young people around me are becoming activists; they are a real force for good, online and offline, that we must build on."

**Marvin Nala (23)**, environmental advocate from China who founded the Big Appetite volunteer network and intern at UNDP China and Carnegie-Tsinghua Centre for Global Policy



A child drinks water from a tap in a slum area of New Delhi to quench his thirst during a heat wave. Picture: REUTERS/Kamal Kishore

The United Nations has identified seven key issues that need critical attention at Rio+20

# RIO+20

## THE BIG SEVEN ISSUES FOR RIO+20

**JOB**

The economic recession around the world has meant more people are jobless. It's estimated that there are 190 million unemployed people and over 500-million job seekers will flood the job market in the next 10 years. It means that there needs to be a strategy to produce and generate wealth.

The UN says: "Economic action and social policies to create gainful employment are critical for social cohesion and stability. It's also crucial that work is geared to the needs of the natural environment."

The creation of green jobs will be key. The UN calls green jobs those positions in agriculture, industry, services and administration that contribute to preserving or restoring the quality of the environment.

**ENERGY**

Energy is central to how the world functions from job security, climate change and food production. Sustainable energy is the central focus to strengthen economies, protect ecosystems and achieve equity among the planet's people. United Nations Secretary-General Ban Ki-moon is leading a sustainable Energy for All initiative to ensure universal access to modern energy services, improve efficiency and increase use of renewable sources.

**CITIES**

Migration to city centres and how these cities are managed are also a key priority. While cities are seen as hubs for ideas, commerce, culture, science, productivity, social there is a balance to accessing resources and infrastructure. Neglecting to do so will further divide people along socio-economic lines. Modern cities have to tackle pollution, congestion, a lack of funds to provide basic services, a shortage of adequate housing and declining infrastructure.

**FOOD**

New thinking is needed in examining how 21st century people grow, share and consume food. While existing agriculture, forestry and fisheries can provide nutritious food for all and also be a source to generate decent incomes, our resources have not been used wisely or managed properly. Soil quality has dropped, freshwater is scarce, oceans are polluted, forests are being destroyed and the loss of biodiversity is a bleak reality. This has all worsened because we operate in an era of climate change that puts further pressure on available resources. The UN says: "A profound change of the global food and agriculture system is needed if we are to nourish today's 9.25 billion people expected by 2050."

**OCEANS**

The world's oceans, with their complex temperature, chemistry, currents and life are at the heart of what makes the Earth a planet suitable for humankind. We are dependent on healthy oceans for our drinking water, weather, climate, food and even the air we breathe. Oceans remain vital trade routes and channels for transportation, yet these watery realms have been dumping grounds, overfished and neglected in our plans to map out our future.

**WATER**

Clean accessible water for all is an achievable target. But poor economic planning, badly managed infrastructure and wasteful practices has meant that ever year millions of people, most of them children, die from water-borne diseases. There is still inadequate water supply, sanitation and hygiene to millions of the world's people. The UN says of water as a priority: "Water scarcity, poor water quality and inadequate sanitation negatively impact food security, livelihood choices and educational opportunities for poor families across the world." Drought continues to affect the world's poorest countries and leads to a cycle of hunger, malnutrition, disease and death. The UN estimates that by 2050, at least one in four people is likely to live in a country affected by chronic or recurring shortages of fresh water.

**DISASTERS**

Natural disasters caused by earthquakes, floods, droughts, hurricanes, tsunamis and more can have devastating impacts on people, environments and economies. Preparedness can be the difference between survival or death and is also instrumental in ensuring that communities and countries recover quickly after disasters strike. It means that governments need to have comprehensive disaster management plans in place and need to make smart choices quickly to minimise loss and damage, and speed up the recovery and rebuilding phase. It will come down to better technologies for early warning systems, better urban planning for human settlements and better co-operative strategies to rebuild and recover.

- MAJOR GROUPS AT RIO+20**
- Business & Industry
  - Children and Youth
  - Farmers
  - Indigenous Peoples
  - Local Authorities
  - NGOs
  - Scientific & Technological Communities
  - Women
  - Workers and Trade Unions

To this effect, an acknowledgement of sustainability reporting for publicly listed companies and institutions is also seen as a significant milestone taken at Rio +20 and the South African Government will provide the necessary enabling framework for corporate sustainability performance and reporting.

South Africa has extended an invitation to its fellow member states to come together to contribute to the process created under the Finance "Means of Implementation" in the Rio+20 agreements. The process provides for the launch of an inter-governmental process to propose options on an effective Sustainable Development Financing Strategy to be considered by the UN General Assembly by 2014.

This process will "assess financing needs, consider the effectiveness, consistency and synergies of existing instruments and frameworks, and evaluate additional initiatives, with a view to prepare a report proposing options to facilitate the mobilization of resources and their effective use in achieving sustainable development objectives", and calls for "a broad consultation with relevant international and regional financial institutions and other relevant stakeholders" to undertake this work.

While several positive funding initiatives and mechanisms are underway, we welcome the call for greater coherence and coordination to support sustainable development. We wish to particularly highlight the need to identify challenges

that currently inhibit sustained finance for sustainable development by developing particularly least developed countries. Left unaddressed, there is the unfortunate risk that the growing discourse on financing the green economy would be decoupled from creating enabling financial "ecosystems" that mainstream sustainable development finance in support of the delivery of the goals committed to at Rio+20.

Creating an equitable and inclusive sustainable development finance landscape is a critical component of creating the Future We Want. Therefore, the South African government will lead a member states engagement during the fourth quarter 2012 to reflect on the critical elements to activate work towards the development of a Sustainable Development Financing strategy to facilitate mobilization of resources and their effective use in achieving sustainable development objectives

Therefore, the Government is proud to announce that the outcomes of the Rio +20 conference are in line with national developmental interests and that the commitments reached advance the decisions taken at the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002.

**South Africa's** plan of action is to put the country on a growth path that will improve the lives of all its people but will not deplete our natural resources, harm our environment or communities. The plan must make provision to ensure **future generations** have a country that is better off environmentally and socially for them to build their lives. In October 2011 South Africa adopted its **National Strategy for Sustainable Development** and Action Plan.

**THERE ARE NINE FOCUS AREAS IN THE PLAN**

- ☒ Developing green buildings and an eco-friendly built environment
- ☒ **Developing sustainable agriculture, food production and forestry**
- ☒ Conserving resources and improving conservation management
- ☒ **Developing sustainable transport and infrastructure**
- ☒ Advancing clean energy and energy efficiency
- ☒ **Developing sustainable waste management practices**
- ☒ Promoting sustainable consumption and production
- ☒ **Promoting environmental sustainability**
- ☒ Improving water management

**SA's 9-step action plan**

**Rio+20 June 20 & 22 2012**  
 From the origins of our future, to the future we want!



# SA Agulhas II receives an African Welcome



**Above:** The Minister of Water and Environmental Affairs, Ms Edna Molewa, and a Xhosa traditional healer sprinkle the SA Agulhas II with ubulawu (a Xhosa traditional concoction), before its official sail off.

**By Buhle Hlatshwayo**

The brand new South African polar research and supply vessel, SA Agulhas II was officially welcomed in the Cape Town shores on 3 May 2012.

Instead of the traditional western bottle of champagne being broken on the bows, the SA Agulhas II received an African welcome from the Minister of Water and Environmental Affairs Ms Edna Molewa, and sangoma Mama Mangwanya. The welcome ceremony of the research vessel included the sprinkling of ubulawu (a traditional Xhosa concoction) on its 13000 tone sides, done for blessings and sides, done for blessings and good luck.

The new vessel takes over from the 33-year-old SA Agulhas as South Africa's new Antarctic research and supply vessel. "For South Africa, this represents a major investment and signals the Department of Environmental Affairs' commitment and intent in contributing to the understanding of the Earth as a function-

She added that the ship will enable South Africa to better address challenges such as the impact of climate change on biodiversity, and extreme weather conditions. "We will use our endeavours in the Southern ocean in order to contribute to the fortunes of the continent." Captain Freddie Lighthelm, who sailed the vessel home safely from Finland, said the ship was capable of doing long trips in the winter months. "The older ship would struggle to do longer trips, especially in winter, but this ship is bigger, wider and stronger than its predecessor," he explained.

Minister Molewa dedicated the R1.5-billion Agulhas II to the life and achievements of the late South African singer Miriam Makeba, known fondly as Mama Africa. One the ship's lounges is named after Makeba of Agulhas II will operate between South Africa's research bases in Antarctica and on Marion and Gough islands in the Southern Ocean.



# Spotlight: The South African Weather Service



**Above:** The South African Weather Service forecasters in the National Forecasting Centre in Pretoria.

The South African Weather Service (SAWS) is an ISO9001:2008 certified national provider of weather and climate products and services since October 2011 and is the custodian of the South African climate data-bank. By law, only SAWS may issue severe weather warnings and it therefore cooperates closely with government structures to minimise the impact of weather-related natural disasters towards improving the well-being of all South Africans.

The last decade has seen an increase in weather-related natural disasters that have negatively impacted on the lives of local communities. Through death, injury and damage to property, these weather phenomena have hampered sustainable development in both urban and rural communities.

SAWS is committed to reducing the impact of weather disasters by consciously creating weather awareness and investing in the latest and most technologically advanced equipment. The latter aids us in the monitoring and prediction of weather patterns and the collection of related climatic data. Our enhanced national weather observation network has resulted in a synthesis of more accurate weather and climate information, helping us provide early warning information to the Republic of South Africa. A recent study shows an overall public satisfaction rate of 84% with SAWS' products and services.

SAWS is at the forefront of providing weather and climate information in South Africa and continuous future developments will further improve prevention

tive measures - thereby protecting the South African public by keeping weather-related damages to a minimum.

#### **Weather Offices around the country include-**

- Bethlehem Airport
  - Bloemfontein Airport (Forecasting and Observations office)
  - Calvinia
  - Cape Point (Global Atmosphere Watch) / Stellenbosch
  - Cape Town (Forecasting and Observations office)
  - De Aar
  - East London
  - Ermelo
  - George
  - Irene (Technical Service and Observations Office)
  - Kimberley
  - King Shaka International Airport (Forecasting and Observations office)
  - Lanseria Airport
  - Mafikeng
  - Mthatha
  - Nelspruit (Forecasting and Observations office)
  - OR Tambo International Airport (Meteorological Watch Office, Forecasting and Observations office for aviation)
  - Polokwane
  - Port Elizabeth (Forecasting and Observations office)
  - Pretoria (Head Office, National Forecasting Centre)
  - Springbok
  - Thohoyandou
  - Upington
- Remote islands: Marion, Gough and Antactica

#### **Our growing countrywide observational network consists of:**

- 214 Automatic Weather Stations (AWS)
- 25 Climate Stations (1 x 1st order, 3 x 2nd order & 21 x 3rd order stations)
- 1277 Rainfall Stations
- 131 Automatic Rainfall Stations
- 23 Sea Surface Temperature Stations
- 12 Voluntary Observing Ships
- 50 Weather buoys in the South Atlantic and South Indian Ocean
- 14 Meteorological Radar Systems



## South African Weather Service

ISO 9001:2008 certified

- One Global Atmosphere Watch Station at Cape Point
- Two Dobson Ozone Spectrophotometre Stations in Irene and Springbok. (A third to operate at Cape Point)
- One Baseline Surface Radiation Network Station in De Aar
- A national UVB Biometer network
- Four Lightning Detection Sensors (excluding one in Swaziland)
- Six Air Quality Measuring and Monitoring Stations (DEA infrastructure being maintained by SAWS)
- Ten Upper-air Sounding Stations with Irene also conducting ozone soundings

#### **Leading the South African Weather Service**

At the helm of SAWS stands seasoned Chief Executive Officer (CEO), Dr Linda Makuleni, re-appointed for a second five-year term in April 2012. Dr. Makuleni is the first female and longest serving CEO of the South African Weather Service. In 2012 she will serve her sixth year as Permanent Representative of South Africa with the World Meteorological Organisation (WMO), where she serves on WMO's Executive Council as member as well as a number of WMO committees: These include WMO's Strategic and Operational Planning Committee, a position as Deputy Chairperson of the Audit Committee, the WMO Staff Pension Committee and Chairperson of the Executive Council Advisory Panel of Experts on Gender Mainstreaming. She is also a member of the Audit and Evaluation Committee of the International Civil Aviation Organisation (ICAO).

Under Dr Makuleni's drive and influence, the establishment of a Meteorological Association of Southern African (MASA) has become a reality. The constitution of MASA was finalised in 2010, with Dr Makuleni



**Celebrating SAWS' ISO 9001:2008 certification** Front row: Mr Mnikeli Ndabambi, Ms Khungeka Njobe, Dr Linda Makuleni, Ms Modjadji Makoela, Rev. Lulamile Mbetse **Back Row:** Prof. Lindisizwe Magi, Mr Slingsby Mda, Mr Lindani Gcwensa, Ms Adri du Plessis.

serving as first Chairperson until 2011 whereas to date SAWS still hosts its Secretariat.

At the end of 2011, during the Conference of the Parties of the Convention on Climate Change (COP17) in Durban, meteorological services around the world gathered to provide their inputs in terms of agenda items in the Climate Change discourse. SAWS's presence was well recognised and was enhanced by the signing of an agreement between SAWS and WMO, for SAWS to become a WMO Accredited Regional Training Centre.

This prestigious achievement recognises SAWS as a reputable provider of meteorological training to meteorologists from around the world and further strengthens our existing national agreements with various universities for the training of meteorologists and our official registration as TETA SETA for our NQF level 5 Observer's Course (Offered to Meteorological Technicians

The South African Weather Service is geared towards the development and retaining of its staff. From 2007, a reduction in the organisation's staff turnover from more than 20%, to less than 6% in 2011, was achieved. A two year programme to attract and

retain scarce and critical skills in the organisation (with the focus on meteorology, climatology and atmospheric sciences) is having positive results. To date, 124 understudies have been privileged to undergo this programme, whereby critical skills in SAWS are retained by means of a percentage of individuals' salaries. SAWS's strengthened bursary scheme annually awards at least 42 bursaries towards scarce competencies, of which qualified trainees are appointed at SAWS. SAWS has also implemented a career pathing project for scientific and operational staff which promises future success.



SAWS Headquarters (Bolepi House) in Pretoria.

### Celebrating 11 years as a government parastatal

On 15 July 2012, SAWS will celebrate its 11th year as government parastatal under the Ministry of Water and Environmental Affairs. After many years in central government, the South African Weather Service, in a bold step taken towards commercialising parts of the service, was established on 15 July 2001 by means of Act no 8 of 2001. SAWS today receives income from various weather sensitive commercial industries on a cost recovery basis, but still provides public good weather services at no charge to the public as part of its mandate. The Act is currently under Parliamentary review to provide for additional functions and responsibilities, among which the responsibility for air quality monitoring will be included.

#### SAWS's services include:

##### Public Good Services

- Weather, climate forecasting and warning services for the safety of life and property as well as disaster mitigation.
- Gathering of meteorological and climatological data.
- Gathering of atmospheric trace gas data for the detection and monitoring of climate change.
- Carrying out international obligations in accordance with the World Meteorological Organisation (WMO) and acting as the SA government representative in the fulfilment of such obligations.
- Providing meteorological services as an obligation to the Safety of Life at Sea (SOLAS) Convention
- Providing the public with information on daily rain-fall and maximum and minimum temperatures.
- Operating the national meteorological telecommunication network and computer infrastructure. • Acting as a knowledge centre and custodian of the National Meteorological Library and the National Climatological Database.

- Providing meteorological and climatological advice to government.
- Providing meteorological and function-related training to the public.
- Conducting research aimed at reducing the impact of weather-related natural disasters.
- Providing meteorological support for aviation and maritime search and rescue activities.
- Providing meteorological services for the benefit of subsistence farmers, fishermen and disadvantaged or otherwise vulnerable communities.
- Conducting educational and awareness programmes around weather and climate related topics.
- Providing learners, students and educators with educational material pertaining to weather and climate.

##### Commercial Services

Our portfolio of commercial offerings entails a specialised meteorological consultation service to, among others, legal and insurance companies and the manufacturing and selling of meteorological equipment to the state and other users. The latter is supported by a follow-up maintenance and standardisation service.

##### Other commercial services are:

- Client-specific specialised weather forecasts
- Specialised climate information
- Aviation meteorological services
- Services to the maritime industry which are not included in the SOLAS Convention
- Contracted weather and climate related research
- The production and sale of weather and climate related publications

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# IMPROVING LIVES BY GREENING LOW COST HOUSING



**Above:** Deliwe stands in front of her homewhich has undergone a 'green upgrade'. The solar water heaters for two homes are seen on the roof.

The Cato Manor Green Street Retrofit led by the Green Building Council of South Africa, with main funding from the British High Commission and endorsement from the Department of Environment Affairs. South Africa's first Green Street "upgrade in a low income area was completed ahead of the COP17 international climate change talks in late 2011. Thirty low-cost houses in a small cul-de-sac road in the historic township of Cato Manor in Durban received a green upgrade, called a retrofit. This project was led by the Green Building Council of South Africa (GBCSA), in association with the World Green Building Council, and was primarily funded by the British High Commission.

The Cato Manor Green Street is a demonstration site and a living example of how greening interventions in low cost housing can improve quality of life for residents and provide multiple benefits for the country. This project was the first of its kind in KwaZulu-Natal, and one of the first in the country with such a broad set of interventions in one place.

Each household received an energy efficient retrofit in the form of solar water heaters (SWHs) insulated ceilings, efficient lighting, and heat insulation cookers.

Unsafe electrical wiring was replaced in this process. Rainwater harvesting tanks were also added, and food gardens were established for the production of healthy, homegrown food. The polluted stream in the area was cleaned up and indigenous trees and smaller plants and fruit trees were planted.

Homes are now more comfortable, healthier and safer. Residents have hot water on tap for the first time, without having the costs associated with traditional electrical geysers. Less need for fuels like paraffin, coal and wood mean reduced health problems and fire safety risks for these homes.

People are realising significant energy, water and time savings, and enjoy improved convenience and aesthetics. Water and food security have been boosted. Fresh, nutritious food grows at their doorstep and the local area has been upgraded. Training and work opportunities were created and the avoided carbon emissions are being sold to generate some revenue for the community.



**Above:** A family gets involved with establishing their food garden and planting fruit trees.

# Demystifying green jobs



The terms “green economy” and “green jobs” are used increasingly in both the economic and environmental sectors.

The major focus of the discussion on the green economy, both in South Africa and globally, has been on developing and building the necessary clean energy technology and infrastructure for climate change mitigation, such as innovations for reducing carbon emissions.

This is critically important for South Africa, which emits disproportionately large quantities of greenhouse gases and is simultaneously under pressure to increase its capacity to generate energy.

Another component of the green economy is often overlooked: restoring and conserving natural ecosystems can stimulate rural economies, create rural and urban jobs and help maintain critical ecosystem services that are vital to the economy.

In addition, these activities can strengthen the resilience of ecosystems to climate induced change. Enhancing the resilience of ecosystems is necessary to help ensure the economic and social well being of communities, particularly the rural poor who are among the most vulnerable to the impacts of climate change. Ecosystem-based solutions to adaptation and resilience can aim either to maintain the functionality

of ecosystems or to restore functionality where it has been lost. In South Africa, there are a number of innovative nature-based, environmental public works programmes that have created much needed work opportunities linked to restoration and maintenance of natural ecosystems.

## **The South African context: the need for sustainable livelihoods**

Now, as in 1994, poverty and unemployment are among the biggest challenges facing the South Africa government figures falling in the range of 25 - 27% (Statistic SA, 2010) and job losses in mainstream economic sectors continuing due to the effects of global economic trends, there has

build viable livelihoods for economically marginalised communities, especially in rural areas where there has been a pressing need for innovative interventions and collective effort across sectors to develop sustainable employment opportunities.

Of particular concern is the need to skills base is generally low, and stable employment opportunities are few. The government is also concerned about strengthening environmental sustainability.

In May 2010, government held a Green Economy Summit, a high profile event that laid the basis for the development of a green economy strategy and action plan for South Africa.

The outcomes of the Summit are among those that will be championed during the Rio+20 conference in Brazil, during Environment Month. The Conference will take place in Brazil from June 20 to 22 to mark the 20th anniversary of the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, and the 10th anniversary of the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg.

### **How biodiversity supports livelihoods.**

In South Africa, terrestrial, fresh water and marine ecosystems and their associated biodiversity are widely used for commercial, semi commercial and subsistence purposes, through both formal and informal markets.

Biodiversity provides the basis for employment in industries such as fisheries, game and livestock farming. In addition, many rural communities depend on subsistence use of

wild biodiversity and natural resources and the wild flower industry, and the formal conservation sector is also a significant employer.

In addition, many rural communities depend on subsistence use of wild biodiversity and natural resources for their livelihoods, even if this does not create formal employment. Sound natural resource management, particularly the maintenance of healthy wetlands and river systems, underpins many other economic sectors and the employment that these provide.

Public works programmes that enhance natural capital and secure water supplies provide many work opportunities to poor rural and marginalised communities; they also enhance the natural resilience of climate change and protect livelihoods in sectors such as agriculture that depend on the ecosystems.

### **How biodiversity helps create sustainable livelihoods**

Biodiversity helps create sustainable livelihoods through the direct

the ecosystem services that underpin the many ecosystem activities that provide employment opportunities.

### **The contribution of ecosystem services to the economy and sustainable livelihoods**

Many of the benefits derived from biodiversity and ecosystems are public goods that appear to be creation of livelihood opportunities, and through the ecosystem services that underpin the many economic activities that provide "free" – such as clean air, pollination of crops, or flood control.

In recent decades the field of environmental resource economics has grown in South Africa, producing estimates of the contribution of biodiversity to the country's Gross Domestic Product, and monetary values for the many ecosystem goods and services that were previously taken for granted.

Understanding their real value is an important first step towards capturing these values in markets and prices, and considering their value, or its potential loss, in decision making. Resource economics studies that have been carried out in South Africa estimate the total value of ecosystem services at R73 billion (about US\$9.5 billion) per year.



### Formal conservation

People are employed in a wide range of technical and management posts that relate to biodiversity in government departments, provincial nature conservation agencies, municipalities, tertiary education and research institutions and non-governmental organisations. In 2007/8 there were 65,000 public sector jobs in diverse fields related to biodiversity conservation, such as conservation scientists (botanists, zoologists, marine biologists), climate change scientists, protected area managers, field rangers, forestry advisors, agricultural extension officers, biodiversity stewardship officers, conservation planners, GIS technicians, project managers and environmental educators.

### Game farming

The game industry depends heavily on biodiversity for both the animals that form the basis of the sector, and the habitats where they live and feed. Game farming (or wildlife ranching as it is called elsewhere), is an important provider of employment in the provinces of Limpopo, Northern Cape and Mpumalanga, and is a rapidly growing sector in the Eastern Cape. These provinces are characterised by largely rural populations who are mostly poor, with few other viable economic and employment opportunities. The sale of wild game has grown substantially in the last two decades and in 2007 the hunting industry was estimated to employ some 70,000 people.

### Tourism

South Africa's biodiversity, scenic beauty, mild climate and cultural diversity have made it one of the world's fastest-growing tourist destinations, with over 9 million foreigners visiting the country in 2007. The tourism industry has exceeded the growth of virtually all other sectors in the economy in the post-apartheid era, and is an important employer in both the public and private sectors, accounting for approximately 7% of employment in South Africa, and contributing approximately 8.5% to GDP. The government is committed to expanding national parks and provincial nature reserves, broadening tourism opportunities to include historically disadvantaged communities and using wise land-use planning to maintain scenic beauty in production landscapes.

### Fisheries

About 600,000 tons of marine resources worth over R2.5 billion (about US\$325 million), are harvested annually by 27,000 fishermen and women. The value of the entire fishing industry, incorporating commercial, recreational and subsistence fishing, was estimated in 2007 to be R4.5 billion (about US\$584 million) per year.

### Harvesting of natural resources

In many rural economies, where the cash economy is very limited, biodiversity and ecosystems contribute significantly to people's daily consumption needs (through the provision of food, water, fuel wood and building material) and income generation (through activities such as the selling of reed mats, baskets and medicinal plants).

The number of people using non-timber forest resources is in the millions, including rural and urban populations, and the direct use of forest resources amounts to about R8 billion per year (about US\$1 billion). This contribution from the natural environment (referred to as an "ecological wage") is seldom considered, yet holds substantial value.

### Restoration projects

In addition to land restoration achieved through a public works approach there are numerous small-scale, NGO-led restoration and reforestation projects taking place within protected areas and on communal and privately owned land. These are an important source of livelihoods for rural communities. The projects involve people in activities such as collecting seeds, growing and planting trees, and removal of invasive alien plants, in return for which they receive payments that provide a baseline level of income for their communities.

### Environmental public works programmes

Public employment programmes that restore and maintain natural ecosystems are an important source of short-term work opportunities for poor, rural and marginalised communities.

## What are Green Jobs?

"Green jobs" are those that aim to reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable; or jobs that conserve or rehabilitate the environment.

Specifically, but not exclusively, this includes jobs that: reduce energy, materials and water consumption through high-efficiency strategies; reduce the carbon footprint of the economy; minimise or avoid all forms of waste and pollution; protect ecosystems and biodiversity; restore degraded lands and combat erosion (definition based on ILO, 2008 and Lieuw-ke-Song, 2009).

In this article, the term "nature-based jobs" (or work opportunities) is used to refer specifically to work opportunities that relate to the conservation, restoration and maintenance of natural ecosystems. These work opportunities are a subset of "green jobs".



# S.A re-affirms its stance on climate change adaptation



Various simple modes of transport used in Bonn.

## By Surprise Zwane

In its presentation to the United Nation Framework Convention (UNFCCC), the Department of Environmental Affairs re-affirmed its commitment to local action on climate change adaptation post COP17.

The 3rd Global Forum for Urban Resilient and Adaptation was an organized preceding during the UNFCCC June Talks (14-25 May 2012).

The event was held at Gustav-Stresemann-Institut e.V. (GSI) located in Langer Grabenweg, 68 D-53175 Bonn, Germany, from 12 to 15 May 2012.

This annual congress provides a unique opportunity for leaders in the government, private, academic sectors, civil society and media to enter into dialogue about shaping the global dialogue agenda and catalyze solutions.

The Deputy Director for Local Government Planning in the Department of Environmental Affairs, Mr Surprise Zwane said the forum was aimed at elevating the key issues and challenges faced by countries in achieving the commitments made in the 2012 Global Forum.

"The Resilient Cities Forum provided the Department with an opportunity to stress further on its commitment to adaptation and to build more networks, partnership/collaborations in research and policy making on climate change and local government actions," said Mr Zwane.

In his presentation on the Large Cities Support Programme, Mr Zwane informed the Forum about South Africa's resilience and contribution towards



**Plenary session:** (From left to right) Mr. Rafael Tuts, Coordinator, Urban Planning and Design Branch, UN-HABITAT, Surprise Zwane, Deputy Director, Local Government Planning, Dept. of Environmental Affairs, Sean O'Donoghue, Acting Manager, Climate Protection Branch, City of Durban, South Africa.

climate change adaptation. "The session focused on multi-level governance: mechanisms for national-local coordination on urban adaptation," he said.

Mr Zwane said although funding was important, but it is not always the biggest challenge. "The South Africa case proved that fiscal incentives, rewards and indicators can drastically improve environmental management," argued Mr Zwane.

The 2012 thematic areas for the forum were; urban risk assessment and management, socio-economic dimensions of climate change adaptation, institutional dimensions, strategy, policy integration and mainstreaming, urban adaptation planning and practice: Experiences and solutions (including urban design), resilient infrastructure (including urban logistics), and financing the resilient city. "South Africa, in particular the Department of Environmental Affairs

is a key partner and has a pivotal role to play in the annual congress," he said.

South Africa's cities are critical to that country's aspirations for economic growth and poverty reduction. "Currently the proportion of South Africans living in urban areas is 62%, and may grow to nearly 80% by 2050. Moreover at present the top 30 cities host 78% of the country's economic activity," he said.

The South African government is developing an innovative approach, through its Large Cities Support Programme, to encouraging improved environmental performance by local governments. "This approach aims to tie conditional grants to environmental performance by local governments based on a set of performance indicators. A suite of mechanisms is planned to improve the environmental performance

and climate resilience of South African cities," explained Mr Zwane.

"Furthermore this Programme will seek to build working relationships with other public agencies, including the South Africa Local Government Association (SALGA), universities and others," he added. Mr Zwane said the partnerships will take the form of formal framework contracts for programme implementation, and memoranda of understanding for additional activities.

"More exhilarating was the outcomes and inputs, as well as potential networks that were built during the event, one can only hope that they continue and give rise to long term research work and learning networks," said Mr Zwane.

#### Lessons learnt

"A number of lessons were learnt, but the key one was that there are similarities in the way of doing things. The local governments work within national-level legal regulatory and institutional frameworks. Additionally, in a number of countries (particularly countries with federal systems), local authorities also operate within state or province level frameworks," Mr Zwane explained.



Bonn Art Museum and some of the scrap material that is converted to wall art.

# Minister's plea for medicinal plants conservation



**Above:** A Kraalbos farmer in Komaggas shows the Minister of Water and Environmental Affairs, Ms Edna Molewa how Kraalbos is harvested. Observing from the extreme left is Environmental Affairs Chief Operating Officer, Ms Lize McCourt, and the MEC for the Northern Cape Department of Environmental Affairs and Nature Conservation, Ms Sylvia Lucas (on the farmer's immediate right).

## By Zibuse Ndlovu

"There is a need to manage and conserve medicinal plant resources and their associated traditional knowledge for the benefit of current and future generations," said the Minister of Water and Environmental Affairs, Ms Edna Molewa. She was speaking at the Bioprospecting, Access and Benefit Sharing event (BABS) held at Komaggas in Northern Cape on 27 July 2012.

Minister Molewa said one of the main objectives for the Department was to raise awareness about the importance of conserving biodiversity for the human well-being, and to promote the understanding of the economic value of biodiversity.

"We want to enhance public knowledge of the threats to biodiversity and means to conserve it and to engage all of society," explained the Minister.

The Minister visited the province to hand over seven South African bio-prospecting permits to the bio-prospecting organisations from Eastern Cape; KwaZulu-Natal; and Lephalale Municipality, in the Limpopo Province. The permits are set to benefit the regional owners of traditional knowledge.

"I am positive that many more bioprospecting permits will be issued to applicants that fulfill the requirements of the legislation," the Minister said.



**Above:** The Edakeni Muthi Futhi Trust received a Bioprospecting Permit for its project of cultivation, processing and marketing herbal products containing active ingredients from Forty (40) indigenous biological resources.

One of the permits was awarded to Rapitrade 670 (PTY) Ltd for the extraction and purification of chemical compounds from the shrublet, *Galenia Africana*, better known as Kraalbos. "The community of Komaggas would receive both monetary and non-monetary benefits," assured the Minister.

The Khoi Heritage Foundation, which represents the holders of traditional knowledge about the Kraalbos, would also receive one percent of all distributable cash reserves after costs at the end of each financial year.

In both instances the financial benefits would continue until a point deemed appropriate by the directors of Rapitrade 670 (Pty) Ltd.

The Kraalbos plant grows mostly in large quantities in Komaggas, and it can survive for years before it is replanted." This plant is not only an indicator of disturbance, but is also a pioneer plant, being the first



**Above:** The Edakeni Muthi Futhi Trust and the Minister of Water and Environmental Affairs Ms. Edna Molewa posing for a picture with the Bioprospecting Permit.

perennial to regrow after soil disturbances," said the Minister.

A decoction or mixture of Kraalbos is used as a lotion for healing wounds in humans and animal by local communities in the Northern Cape Province. The Khoisan people chew the plant to relieve toothache and it is used in the treatment of venereal diseases, lotion for skin diseases and for the relief of inflammation of the eyes.

The Minister said many widely used cosmetics produced by industries were derived from medicinal plants, and were indigenous and endemic to South Africa.

"We must build a shared appreciation of the importance of medicinal plants resources to human health and well-being and a shared concern about the conservation and sustainable use of these resources," she said.



**Above:** A Kraalbos farmer in Komaggas and the Minister of Water and Environmental Affairs, Ms Edna Molewa looking at the Kraalbos.

The Minister further emphasised that according to one of the Chapters of the National Environmental Management Biodiversity Act, Act 10 of 2004 (NEMBA) no person may without a permit conduct commercial bioprospecting on any indigenous biological resource, or export any indigenous biological resources from South Africa for bioprospecting or any other kind of research.

The BABS Regulations entered into force on 1 April 2008, since then the Department of Environmental Affairs has successfully processed eight permit applications which were found to be in compliance with the legislative requirements of the NEMBA and the BABS Regulations.

Bioprospecting involves searching for, collecting, and deriving genetic material from samples of biodiversity that can be used in commercialised pharmaceutical, agricultural, industrial, or chemical processing end products.

# Communities urged to embrace biodiversity



**Public plea made: (Above)** The Minister of Water and Environmental Affairs, Ms Edna Molewa interviewed by SABC's news reporter during the International Day for Biodiversity celebration at iSimangaliso Wetland Park, in KwaZulu-Natal.

"We need to step up our efforts to protect our biodiversity to allow it to support South Africans – present and future generations included," said the Minister of Water and Environmental Affairs Ms Edna Molewa at the launch of the National Biodiversity Assessment 2011 report. The launch was part of the International Day for Biodiversity celebration held on 22 May 2012 at iSimangaliso Wetland Park in KwaZulu - Natal.

The Minister said biodiversity was the basis for human and socio-economic development.

She warned that failure to protect it was self-defeating, and the biggest losers in the end would be the rural poor. "Our vast wealth of biodiversity - our variety of life from genes, species and ecosystems, offers us a suite of natural solutions in the face of unemployment, rising poverty and climate change," said the Minister.

We need to step up our efforts to protect our biodiversity to allow it to support South Africans – present and future generations included, the Minister of Water and Environmental Affairs

Ms Edna Molewa was speaking at launch of the National the Biodiversity Assessment 2011 report. The launch was part of the International Day for Biodiversity celebration held on 22 May 2012 at iSimangaliso Wetland Park in KwaZulu-Natal.

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species and ecosystems, offers us a suite of natural solutions in the face of unemployment, rising poverty and climate change," said the Minister.

The iSimangaliso Wetland Park is home to five major ecosystems that provide habitat for a significant diversity of African species, including those that are rare, threatened and/or endemic. "The iSimangaliso also has 4 RAMSAR sites, which are wetlands of international importance, with more different types of wetlands than any other place in the world," added the Minister.

Over the past 12 years over R 116 million has been spent by iSimangaliso on park infrastructure,

day visitor facilities and upgrading of tourism facilities. "The benefits of biodiversity, or the natural capital as it is known, are estimated at R73 billion, contributing to 7% of South Africa's GDP per annum. This is our competitive edge in growing our economy and addressing climate change adaptation."

Through the land care programme, 1 550 alien species have been cleared and 3 500 temporary jobs have been created.

"In addition, a bursary programme supports 45 students in tertiary institutions studying tourism and conservation related courses. All students are reportedly progressing well, with no dropouts recorded,"

the Minister said.

Fifty artists and 320 crafters are benefitting from programmes that build their technical capacity and link them to markets. Tour guides and chefs have received training and are working in the tourism sector that has grown up around the iSimangaliso Wetland Park.

The Environmental Affairs Deputy Director General: Oceans and Coast, Dr Monde Mayekiso applauded iSimangaliso for its concerted efforts in creating awareness among young people on issues of biodiversity. "It is important that we continue to encourage young people to pursue career path in biodiversity," said the DDG.



**Above:** The Department of Environmental Affairs Deputy-Director General: Oceans & Coasts Dr Monde Mayekiso during a boat tour on iSimangaliso wetland.

# All Rise In Court

## Court summaries of Environmental cases



In this matter, David Gongqoze, Siphumile Windase, and Nkosi Juza, who are all members of the Hobeni people, were charged jointly with the following four counts:

**Count 1:** fishing in a marine protected area, in contravention of Section 43(2)(a) of the Marine Living Resources Act 18 of 1998.

**Count 2:** entering a national wildlife reserve area without authorisation, in contravention of Section 29(1)(a) of the Environmental Conservation Decree No. 9 of 1992.

**Count 3:** entering a national wildlife reserve area, while being in possession of any weapon, explosive, trap or poison, to wit fishing rods, lines and hooks, in contravention of Section 29(1)(b) of the Environmental Conservation Decree No. 9 of 1992.

**Count 4:** entering a national wildlife reserve area, and willfully killing or disturbing any wild animal other than fish caught in accordance with such regulations as may be prescribed in terms of the Decree, in contravention of Section 29(1)(c) of the Environmental Conservation Decree No. 9 of 1992.

The three accused pleaded not guilty to all the charges and elected to make a detailed plea explanation.

### Background:

This matter is the result of a long history of the Hobeni people, who previously inhabited the area now described as the Dwesa-Cwebe Reserve. These communities have lived within the Reserve from time in memorial. In 1903, Dwesa and Cweba were declared state forests and the land and its resources continued to be used by the resident communities subject to minor controls. In 1971, the Transkei Nature Conservation Act came into force and the Nature Conservation Division was established and restrictions were placed on fishing.

In 1975, the Dwesa-Cwebe Nature Reserve was established, which in 1981 was proclaimed a state protected Nature Reserve with authorities halting all access by local communities. In 1995, a meeting was held with its purpose being the negotiation of an interim solution to problems experienced around access to natural resources at the

Dwesa-Cwebe Nature Reserve by local communities. Already at this point the local communities demanded the unconditional return of their custodianship of this land and its resources. A series of meetings followed between the Eastern Cape Department of Nature Conservation and the communities to discuss future co-management arrangements. In 1998, the Marine Living Resources Act was promulgated, followed which the Marine Reserve was declared a Marine Protected Area (MPA) in terms of the Marine Living Resources Act of 1998 and "no-take" regulations were imposed.

Therefore the community is no longer able to harvest marine resources at all and there is a complete ban on fishing. In 2000, the communities of Dwesa and Cwebe engaged in meetings with the State, culminating in them committing themselves to the retention of the Reserve in perpetuity as a conservation area in the national interest, in partnership with the State subject to the terms of the Dwesa-Cwebe Settlement Agreement and the vision endorsed by the Department of Economic Affairs, Environment and Tourism, Eastern Cape.

### Evidence:

In opening its case the state indicated that since the written plea explanation by the accused contained admissions to all the elements of the various charges they faced and these had been recorded as formal admissions in terms of Section 220 of Act 51 of 1977, the state did not intend leading further evidence, save for reserving its right to call rebuttal evidence if it deemed it necessary.



Cwebe Nature Reserve

The defense called accused 1, David Gongqose who testified that he, as well as the other 2 accused were born and raised in Hobeni, and were all fishermen by trade, and further that he and his fellow fisherman were dependent on the sea and the fish for food for their families and to sell the surplus to maintain and educate their children. He confirmed the hardship experienced by the entire community brought about by the enforcement of the ban on fishing in the Dwesa-Cwebe Reserve, and the frustration of his community at not being consulted, as well as the continuous empty promises and lack of results from numerous meetings between the affected communities and state authorities.

Under cross-examination, Mr. Gongqose conceded that he was aware of the law prohibiting fishing but that such law was made without consulting them. In respect of the interpretation to be placed on the contents of the Dwesa Cwebe Settlement Agreement, he refuted the state's suggestion that this was a surrender of his customary right to fish and he affirmed that the communities expectation was that in signing the Settlement their access to the sea would be restored

Dr. Derick Fray, an Assistant Professor at the University of California, USA, whose field of expertise was in land usage, customs and the impact of proclaimed areas on the residents of coastal areas and the Hobeni area in particular, also testified for the defense. He stated that having attended numerous meetings and being present during the negotiations culminating in the signing of the Dwesa-Cwebe Settlement Agreement, that the subsequent closure of the marine resources brought about by the proclamation of the Reserve as a MPA took place with no consultation with the local communities and outside the co-management process.

Dr. Fay's evidence was that the community leaders and the general membership of the communities expected that the resolution of their land claim would allow for restored access to the marine resources they were previously accustomed too. Under cross-examination, he conceded that he was not qualified in the field of marine biology but was an expert in the human sciences. His research had focused primarily on the humanitarian crises brought about by the closure of the Reserve and had not focused on the marine resources themselves.

The defense also called a second expert witness, Ms. Jacqueline Sunde, a social researcher and PhD student in the Department of Environmental and Geographical Science, University of Cape Town, whose findings were that the new statutory systems of regulation of marine resources and marine conservation had impacted negatively on the capacity of the Dwesa-Cwebe community and other such communities to practice their system of customary law rules in respect of marine resources.

The state applied to re-open its case to lead the rebuttal evidence of Dr. Peter Fielding, a marine biologist and environmental expert involved in the study of small-scale fishing and its impact on the sustainability of marine resources throughout Africa for in excess of 20 years.

Dr. Fielding testified that the result of opening protected areas has historically proved disastrous as the large breeding fish get taken first leading to an unavoidable decline in spawning and hatching of new stock.

Dr. Fielding testified that there are currently 21 marine protected areas along the South African coast of which only a miniscule portion (3) are

complete no-take zones and that the Dwesa-Cwebe protected area was of considerable importance to the protection of South Africa's marine biodiversity. He also stated that the Mbashe Estuary within the Dwesa-Cwebe Marine Reserve is the only known spawning area for the white steenbras.

In the states' closing address, the state argued that it had proved its case beyond reasonable doubt in respect of all four counts and asked for a finding of guilty in respect of all the accused based entirely on their own formal admissions.

The defense argued that in light of the evidence it had presented that the customary rights relied upon existed, the court was entitled to acquit the accused persons on all counts despite the formal admissions made and that the reliance on customary rights to fish and enter the reserve without permits by the accused persons had to be sustained with a ruling that the conduct of the accused persons was not unlawful

Having regard to the evidence presented in the case and the State's election to call no witnesses but rely on the formal admissions by the defense; the court had limited information of the exact circumstances which lead to the apprehension of the 3 accused. In coming to a decision the court was guided by various sections of the Constitution, as well as the Marine Living Resources Act, The Protected Areas Act, National Environmental Management Act and the Biodiversity Act.

In evaluating the conflicting opinions of the experts in this matter, the court emphasised the fact that Dr. Derick Frey and Ms. Jacqueline Sunde were experts in the social sciences and have as their point of departure the impact on humanity and in particular disadvantaged communities while Dr. Fielding is a marine biologist who has as his point of departure the impact of human habitation and exploitation on the environment, more particularly the sea and its resources.

The court was thus tasked with balancing these two competing interests; having regard to the undeniable hardships total closure of harvesting the coastal reserve has to resident communities and the scientifically supported necessity to ensure long term sustainability of marine resources.

The defense called accused 1, David Gongqose who testified that he, as well as the other 2 accused were born and raised in Hobeni, and were all fishermen by trade, and further that he and his fellow fisherman were dependent on the sea and the fish for food for their families and to sell the surplus to maintain and educate their children.

He confirmed the hardship experienced by the entire community brought about by the enforcement of the ban on fishing in the Dwesa-Cwebe Reserve, and the frustration of his community at not being consulted, as well as the continuous empty promises and lack of results from numerous meetings between the affected communities and state authorities. Under cross-examination, Mr. Gongqose conceded that he was aware of the law prohibiting fishing but that such law was made without consulting them.

In respect of the interpretation to be placed on the contents of the Dwesa Cwebe Settlement Agreement, he refuted the state's suggestion that this was a surrender of his customary right to fish and he affirmed that the communities expectation was that in signing the Settlement their access to the sea would be restored.



# Vox-Pops

## How do you think you can be part of the green economy?

By Phikoleafrika Bosiki

### Departmental staff



#### **Katlego Ncube**

**Section:** Directorate Strategic Management

Green Economy is all about renewable energy, waste management, clean transportation, water management, and land management. I could be part of promoting Green Economy by contributing to the above mentioned aspects both at work place as well as at home, e.g by making sure that I switch off all appliances that are not in use, like computer when I knock off, turning off lights at rooms that I'm not using.



#### **Hlayisani Treasure Ntswanwisi**

**Section:** Directorate: Policy coordination

Is about promoting development, delinking economic growth and environmental degradation through improving efficiency and sustainability the use of resource reducing resources degradation, pollution add waste.

The green economy should improve quality of life.



#### **Ronald Mathe**

**Section:** Office Paper Minimisation and Recycling

Being a partaker of green economy is within the context that one should consider the environment in day to day exercise, regardless of the scale or magnitude of work. It is about being energy efficient, maximizing the use of renewable sources of energy, reducing our carbon foot print and promoting recycling. Replacing the old incandescent light bulbs with the efficient light bulbs is one of the examples of green economy. Also by complying with the Office Paper Minimization and Recycling Policy of the department that will actually mean that one is taking part in green economy.



#### **Zodwa Ndhlovu**

**Section:** Office Paper Minimisation and Recycling

When the term "Green Economy" is mentioned, what comes to mind is utilising resources in an efficient manner such that both humans and the environment benefit from that. Being part of the Green Economy is as easy as practicing the very popular energy-saving methods, lift clubs, and promoting recycling initiatives that create jobs to alleviate poverty and save the environment at the same time. We need to realise that certain wastes can be a resource and take full advantage of that. I am glad to say that I am part of the Green economy at a personal and professional capacity. It's part of my daily life.



#### **Rudessa Harris**

**Section:** Legal, authorizations & Compliance Directorate

A green economy is described as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. Personal measures that I will take to ensure a greener economy are the following:

- Conserving energy, for example, by using LED light bulbs at home and also by making use of solar heating
- Reduce the amount of harmful emissions, for example, by making use of electric vehicles in the and recycling
- Starting my own small garden at home which will assist with the conservation and restoration of ecosystems.



#### **Christopher Theka**

**Section:** Intern: Climate Change Monitoring And Evaluation

Green economy is a new model for economic growth and development. My view is that as a developing country, green economic initiatives help in sustaining and advancing economic, environmental and social well being and it is a new driver for job creation and social security.

I partake in such by reducing my energy consumption, using less paper, and recycling of waste as well as engaging with people on greening our way of living.



## Members of the Public



### Lillian Nedzambu

I think that I can be part of and contribute to the green economy by using my skills as a florist and a type of agriculturist, to plant fruits and vegetables in the garden in my home.

That way I will seldom need to go out to look for vegetables, and can share these with my neighbors and children who do not live with me anymore.



### Emmanuel Rambukwana

The main thing that adds to the state of environment is the level of pollution and waste that is produced in households.

I think that to be part of the green economy I can decrease the amount of waste that I personally produce and that my family produces.



### Setshedi Morake

The way that I could contribute to the green economy, is to propose an idea to the government in order to show them a way in which they manage performance, however without using paper.

I would ideally design software that will help government departments in particular to move away from print to more online. Personally- I have reduced the amount of paper that I use, by using the fax to e-mail option.



### Tumelo Malele

I have worked as an administrative clerk, and am currently looking for a job that entails working in administration.

I have noticed that a lot of paper is being used in administrative purposes with filing and things like that.

I think that in my line of work the way that I can contribute to the environment is by finding ways to reduce the amount of paper that we use in administrative position and move towards a more efficient yet eco-friendly way of conducting my duties.



### Aobakoe Mamatela

I can do my bit to be part of a green economy by saving electricity by using blanket instead of heaters.

I will also reuse plastic bags when shopping, and recycling our waste (bottles and cans) instead of just adding to it all to the rubbish.



### Baki Maleke

My contribution to the green economy can be to litter less, and recycle the waste such as paper and boxes that I use.

I also plan to use less electricity in my household, and when possible I will walk instead of using a car in order to emit less harmful gasses to the atmosphere.

# Environmental Calendar 2012

## JANUARY

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|----------------------------------------------------|-------------------------------------------------------------------------|
| 2 February: World Wetlands Day                     | 16 September: International Day for the Preservation of the Ozone Layer |
| 22 March: World Water Day                          | 18 September: World Water Monitoring Day™                               |
| 22-28 March: National Water Week                   | 18 September: International Coastal Clean-up Day                        |
| 23 March: World Meteorological Day                 | 22 September: World Car Free Day                                        |
| 27 March: Earth Hour                               | 24 September: Heritage Day – South Africa                               |
| 22 April: Earth day - "A billion acts of Green"    | 27 September: World Tourism Day                                         |
| 3-9 May: National Bird Week                        | 2 October: World Farm Animals Day                                       |
| 22 May: International Day for Biological Diversity | 4-8 October: Weedbuster Week                                            |
| 31 May: World No Tobacco Day                       | 5 October: World Habitat Day                                            |
| 5 June: World Environment Day                      | 11-15 October: National Marine Week                                     |
| 8 June: World Oceans Day                           | 16 October: World Food Day                                              |
| 17 June: World Day to Combat Desertification       | 8-19 November: United Nations Climate Change Conference                 |
| 1 September: National Arbor Day                    | 5 December: International Volunteer Day                                 |
| 1 - 7 September: National Arbor Week               | 9 December: International Anti-Corruption Day                           |
| 5-11 September: World Water Week                   | 11 December: International Mountain Day                                 |

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