

BOJANALA

Environmental Calendar 2013

January 2013

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| 2 Feb : World Wetlands Day | 17 Jun : Desertification Day |
| 23 Mar : World Meteorological Day | 24 Jun : Day of the Sea Fearer |
| 26 Mar : Earth Hour | 18 Jul : Nelson Mandela Day |
| 22 Apr : Earth Day | 1 Sept : National Arbour Day |
| 11 - 12 May : World Migratory Bird Day | 16 Sept : International Day for Preservation of Ozone Layer |
| 22 May : International Biodiversity Day | 22 Sept : World Rhino Day |
| 5 Jun : World Environment Day | 28 Sept : International Coastal Clean-up Day |
| 8 Jun : World Oceans Day | 7 Oct : World Habitat Day |

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Outcomes of CBD COP 11

Sustainable development and green jobs

People and Parks conference

The 7th Annual Air Quality Governance Lekgotla



environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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Dear Valued Stakeholder

The Director-General Ms Nosipho Ngcaba, recently approved the renaming of the publication to a title which more accurately reflects the mandate and activities of the Department of Environmental Affairs. The stakeholder publication's current name Bojanala (a Setswana word meaning Tourism), came about while the department was comprised of Environmental Affairs and Tourism. Therefore, this is the final edition of the publication under the Bojanala masthead. We will begin the new year with a new name, a new look and a fully fledged in house editorial and design team.

The editorial team would like to thank all the members of staff who took part in the consultation and nomination process for the new name. We look forward to continuing to produce a publication that reflects our mandate as well as our departmental values of being Pro-Active, Passionate, People-Centric, showing Integrity, and remaining a high Performance department.

The theme of this final edition for 2012, is Bringing Biodiversity interventions to Life. This theme highlights the numerous domestic, regional and international strides, the department has made in ensuring that South Africa retains and responsibly benefits from, its treasure trove of plant and animal life.

At the eleventh Conference of Parties (COP11) to the Convention on Biological Diversity (CBD), South Africa was appointed chair of the Group of Like Minded Megadiverse Countries for a period of two years. This edition features an overview of the COP11 outcomes from CBD COP11, which took place during October in Hyderabad, India. The Department, led by the Ministry and the Biodiversity and Conservation branch, took part in the high level negotiations, as well as direct engagement with delegates and the public at the exhibition.

Closer to home, we unpack the roll-out of several technological, policy and strategic interventions the department has made in this sector of environmental management. These include measures to ensure the bio-safety of genetically modified organisms; as well as the micro-chipping and DNA sampling of threatened or protected species, in the fight against poaching and illegal harvesting.

While it remains an emotive and contentious issue, there is much to be said regarding the benefits of legal hunting in South Africa, in terms of benefits to the economy and its contribution to the management of wildlife populations. Speaking at the inaugural Hunting Indaba, Minister of Environmental Affairs Edna Molewa, indicated that in 2010 approximately R1.1 billion was generated by the local and trophy hunting industries collectively - an amount which only reflects the revenue generated through accommodation and species fees.

In addition to biodiversity issues, this edition includes articles on the recently convened Waste Khoro in East London and the Air Quality Lekgotla in Rustenburg, where the department engaged with sector stakeholders, experts and policy makers. The edition also includes a report back from the SA Agulhas II's successful relief voyage to the Gough Islands.

We hope you enjoy and learn from the edition. As always, remember to share it with a colleague after reading, or recycle it. From all of us on the Editorial team, we wish you, our valued stakeholder, a peaceful festive season and productive New Year.



Editor-In-Chief
Lavinia Engelbrecht

Green Quotation:

Hurricane Sandy is a disturbing sign of things to come. We must heed this warning and act quickly to solve the climate crisis. Dirty energy makes dirty weather.

- Al Gore, Environmental activist & former US Vice President.

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Members of the Public



Naledi Pooe

Biodiversity is the variety of organisms found within South Africa, including different plant and animal genes species and ecosystems. South Africa is a main attraction because it has one of the biggest biodiversity counts in the world, accommodating about 10% of known bird, fish and plant species.

Biodiversity is an advantage to the South African economy in terms of harvested goods, local agriculture, raw materials and tourism. South African Biodiversity is under threat because of the increase of agriculture in support of the growing population, and overgrazing. Alternative agricultural methods as well as sustainable development can, however be researched to lessen these threats. With the conservation laws in place, the enforcement thereof will ensure that South African biodiversity remains a commodity to South Africa in the future



Dennis Frost

Biodiversity is nature's heritage. What we see in animals, plants and indigenous trees is South Africa's diversity. When we talk of a baobab tree, and wild animals we are talking biodiversity. It is unfortunate now that the Chinese and Vietnamese want to hurt our biodiversity with the dehorning of rhinos. Soon we will be without these wild animals like the extinct dinosaurs. We also have the rare species of birds as part of our biodiversity and they should also be preserved.



Emily Mtshoene

Biodiversity is how we react to nature's creatures like plants and trees. Now we have this issue of rhino poaching. The only negative issue I have with biodiversity is the attention is getting from the government, private companies and agencies. Companies now fund rhinos instead of funding students. This year I am matriculating and I do not even know what my next academic step will be because of lack of funds. I am not against this thing of protecting wild animals like rhinos but I think it cost lots of money to fund them. That money should be channelled into something valuable, not only to preserve nature.



Mondli Zondi

Biodiversity is nature's investment. I mean our wild animals, trees, rivers and oceans. If there is a need for us to preserve our animals, we need strict measures where our constitutional law is not lenient towards perpetrators. Can you imagine what this world will be without biodiversity, I mean without our animals and plants? SA biodiversity need to be taken care of. If we continue killings our wild animals like rhinos, what are we going to tell the next generation about the big 5s of our country?



Elijah Shure

Unfortunately it seems as if in South Africa, only the upper and middle classes are aware of Biodiversity and what it entails. This is the only group with the means to enjoy and conserve it. I think the masses need to be educated and made aware of the beauty of our country and it wealth, that is Biodiversity.



Hester Merritt

I think we live in the most beautiful country in the universe. I shall not swap South Africa for anything in the world. We are blessed with nine diverse provinces, each one with its own fauna and flora. All the wonders of nature are housed I South Africa, our mountains, rivers and coastline. The beautiful baobab trees, jacarandas, oh the list is endless.

Vox-Pops

What is your understanding of South African biodiversity and its importance?

By Madimetja Mogotlane

Departmental staff



Tshoudi Ramonyai

Section: Maintenance Officer: Facilities and Buildings

Thank you for this great opportunity

Well, Biodiversity to me means the foundation of life in S.A. It describes the variety of life on earth, ecosystems and all living organisms: plants, animals, their habitats, genes and hence climate also plays a big role. We rely on it for our security and health; it strongly affects our social relations and gives us freedom and choice.



Busisiwe Stemele

Section: Assistant Director: Learning and Development

South Africa is the third most biologically diverse country in the world, with eight biomes which are Forest, Fynbos, Albany Thicket, Nama Karoo, Succulent Karoo, Grassland, Savanna, Marine and Coastal ecosystem and Desert. Each of these supports its own collection of plant and animal species. The Karoo, for example, is home to plants and animals well suited to hot, dry conditions such as the gemsbok, and succulent plants. Fynbos is home to a variety of plants that are suited to a mediterranean climate and the poor soils of the south west Cape.



Petronella Themba

Section: Logistical Services

The word Biodiversity means life among different living things like plants and animals Mammals are animals that live mainly on earth. There are mammals that feed on meat called carnivores and mammals that feed on plants and are called herbivores. Mammals are all breast-feeding animals and bring up their offspring (small ones) themselves. A human being is also included and is a type of an omnivore feeding on both plants and meat.

Plants are all living things that grow in the soil and do not move. They have a tendency of creating oxygen that we need to breathe for living. They form food sources for animals and also provide shade against the sun on hot days. They also help in preventing soil erosion.



Lisa Pretorius

Section: Principal Landscape architect: Environmental Information and Reporting

I understand biodiversity as the variety in life forms on earth. Biodiversity includes all species, their habitats and the genetic differences between individuals which drive adaptability and evolution. "Biodiversity" also means "species diversity" or "species richness".

South Africa is a biologically diverse country. Although SA occupies only 2% of the world's land surface, it is home to nearly 10% of the planet's plant species and 7% of the reptile, bird and mammal species. The country's coasts are home to 15% of the world's coastal species. Source: SAE0 (2006).



Eric van Tonder

Section: Senior Admin Clerk: Logistic Services

I think biodiversity is the diversity of forests, plants, species, areas, etc. on earth. If we do this correctly plants, species and their environments will become more eco-friendly and productive. Plants and species provide food and other "basic needs" to us and each other. Others plants provide medicine. Trees provide air. Others retain the natural balance and order of things.

Basically if we diversify and "balance" the variety of life correctly, the natural chain of life will flow better!



Barbara Mampshika

Section: Senior Registry Clerk: Logistical services

I know for a fact that Biodiversity in South Africa is very much interrelated to Tourism.

People all over the world, visit our beautiful country to come and indulge in our green heritage, our climate and living organisms. I am also told that the big five animals are found here in South Africa.

All in all, South African Biodiversity is rich, beautiful and makes me proud to be called a citizen.

Outcomes of the Biodiversity COP11



Above: A cultural performance at the opening the CBD COP 11 in Hyderabad, India.

The Convention on Biological Diversity (CBD), one of the three Rio Conventions, was opened for signature at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in June 1992. It entered into force on 29 December 1993 and South Africa ratified the Convention in 1995. The objectives of the Convention are to ensure:

- Conservation of biological diversity,
- Sustainable use of its components, and
- Fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

The governing body of the Convention is the Conference of the Parties (COP), established under Article 23 of the CBD. Its key functions are to keep under review the implementation of the Convention and to steer its development. To date, the COP has met eleven times, the 11th meeting having taken place in Hyderabad,

India from the 8 to 19 October 2012.

In the margins of CBD COP 11 was the High Level Ministerial Segment Organised by the government of India in support of the key issues to be negotiated.

The following themes formed part of the agenda for the High Level Ministerial segment: Implementation of the Strategic Plan on Biodiversity 2011-2020 which was facilitated by the Minister of Water and Environmental Affairs of the Republic of South Africa, Honourable Mrs Edna Molewa; Biodiversity for Livelihoods and Poverty Reduction; Coastal and Marine Biodiversity; and Implementation of Nagoya Protocol on Access to Genetic Resources and Benefit Sharing The agenda of CBD COP 11 was packed with issues of particular interest for the successful implementation of the Convention.

Of particular importance in the negotiations were issues of the implementation of the CBD Strategic Plan and the financial mechanism where the developed countries despite their commitment as agreed in Article 20 of the Convention were



Above: Manmohan Singh, Prime Minister of India, addresses the opening plenary of the High-Level Segment in Hyderabad, India.

reluctant to have a decision on making available resources to the developing countries for the successful implementation of the Convention. Minister Molewa played a critical role in having a decision on doubling the international biodiversity related resources by 2015 and maintaining such up to 2020 adopted.

Parties were also urged to allocate national budget for the implementation of the CBD Strategic Plan. The Status of the Nagoya Protocol also dominated the CBD COP 11 discussions and it was reported that there are currently 92 Signatures and 7 Ratifications.

The requirement for the Protocol to come into force is 50 ratifications. The countries that have ratified/acceded are: Seychelles, Rwanda, Mexico, Lao People's Democratic Republic, Jordan, Micronesia and Gabon. South Africa is in the late stages of ratifying the Protocol and is currently waiting for the final leg of approval which will be the meeting of the National Council of Provinces (NCOP) which is scheduled for the 15th of November 2012 after which the ratification instrument will be submitted for the signature of the Minister of the Department of International Relations and Cooperation, Honourable Mrs Maite Nkoane-Mashabane. Marine and coastal biodiversity: Ecologically and Biologically Significant marine Areas (EBSAs): debates were on how to take

forward the summary reports of regional workshops on the description of areas that meet the criteria for ecologically and biologically significant marine areas (EBSAs).

In the decision, the COP noted that the application of EBSA criteria is a scientific and technical exercise; and emphasized that the identification of EBSAs and selection of conservation and management measures is a matter for states and competent intergovernmental organizations in accordance with international law.

It is further requested that the Secretariat includes the summary reports on the description of areas that meet the EBSA criteria in the repository, and submit them to the UNGA and particularly its Working Group on Marine Biodiversity in Areas beyond National Jurisdiction (ABNJ), and other international bodies.

In the matter of Geo-engineering South Africa faced strong opposition in our attempts to limit such practices to laboratory of other spatially controlled experiments. Eventually the accepted text was strict against ocean fertilization but less so in other areas.

Even so there is evidence that certain countries are not adequately abiding by current resolutions regarding ocean fertilization. On climate change and biodiversity and the Reducing Emissions from



Above: A total of 140 emergency incidents were reported in terms of section 30 of NEMA, with 30 of these being assessed as being minor incidents that were not deemed to pose a serious risk to human health or the environment.

According to the report, the Environmental Management Inspectorate (EMI) commonly known as the Green Scorpions has made 1339 arrests as compared to 1988 in the previous financial year.

The report further reveals that about 1080 criminal dockets were registered during the period in question compared to 718 in the 2010/11 period. The report also indicates a slight increase in the number of convictions obtained nationally, from 72 in 2010/11 to 82 convictions in 2011/12, while the number of acquittals fell considerably from 22 to 7 over the same reporting periods.

A total of 759 admission of guilt fines were paid to the value of R 470 080, while in the previous financial year, 1245 fines amounting to a total of R 867 101 were paid. Admission of guilt fines are issued to minor offenders who are given an option to pay a prescribed fine instead of being tried by a court for that offence. The amount of the fine is based on the nature of the offence as well as what a court would presumably have imposed, the report revealed.

The Department of Environmental Affairs also operates a 24 hour Environmental Crimes and Incidents Hotline. The national complaints and incidents hotline registered 564 complaints and incidents in the 2011/12 financial year, compared

to 570 in the previous reporting period. A total of 140 emergency incidents were reported in terms of section 30 of NEMA, with 30 of these being assessed as being minor incidents that were not deemed to pose a serious risk to human health or the environment. According to the report, some of the most prevalent crimes reported include the poaching of rhino in a national park, the unlawful disposal of waste, illegal cutting and collection of wood and driving in a coastal area without a permit.



Above: Some of the most prevalent crimes reported include the unlawful disposal of waste, illegal cutting and collection of wood and driving in a coastal area without a permit.



Green Scorpions sting offenders hard



Above: (left to right) the Environmental Management Inspectorate (EMI) Chief Director, Mr Sonnyboy Bapela, the Minister of Water and Environmental Affairs Ms Edna Molewa, and the Enforcement Chief Director, Ms Frances Craigie.

By Zibuse Ndlovu

About 1339 environmental offenders have found themselves on the receiving end of the Green Scorpions' sting. This was revealed during the official launch of the latest National Environmental Compliance and Enforcement Report 2011/12 on 22 November 2012 in Cape Town.

Speaking at the launch, the Minister of Water and Environmental Affairs Ms Edna Molewa said the previous initiatives in taking companies to task for environmental offences were not working. "The previous report revealed that allowing a grace period for facilities to come into compliance was not achieving the desired results and consequently resources are being now focused on criminal and administrative enforcement," said the Minister.



Above: The Green Scorpions are a network of environmental compliance and enforcement officials from national, provincial and municipal government.



Above: A statue of Mahatma Gandhi welcomes delegates to the conference of the parties.

Deforestation and Forest Degradation (REDD+) issues Parties feel strongly the CBD Secretariat develops advice on REDD+ issues taking into full account the relevant United Nations Framework Convention on Climate Change (UNFCCC) decisions, based on parties' further views and to report to the Subsidiary Body on Scientific Technical and Technological Advice (SBSTTA) prior to COP 13.

Overall, the CBD COP 11 adopted 33 decisions on a range of strategic, substantive, administrative, financial and budgetary issues. Among other issues, the meeting addressed: the status of the Nagoya Protocol on access to genetic resources and benefit-sharing (ABS); implementation of the Strategic Plan 2011-2020 and progress towards the Aichi biodiversity targets; and implementation of the Strategy for Resource Mobilization.

Deliberations also focused on: issues related to financial resources and the financial mechanism; cooperation, outreach and the UN Decade on Biodiversity; operations of the Convention; and administrative and budgetary matters.

Delegates also addressed: ecosystem restoration; Article 8(j) (on traditional knowledge); marine and coastal biodiversity; biodiversity and climate change; biodiversity and development; and several other ecosystem-related and cross-cutting issues. Decisions on biofuels and biodiversity, the Global Strategy for Plant Conservation (GSPC), the Global Taxonomy Initiative (GTI)

and incentive measures were also adopted. Bilaterals and Trilaterals convened by H.E Edna Molewa played a critical role in influencing negotiations and these were amongst others: Bilateral with the Minister of Environment of India (the COP president) the major focus of which was on how to ensure that expected outcomes of the COP are achieved; Trilateral among the Ministers of Environment in India, Brazil and RSA (IBSA): Strategising on how to make the best of CBD COP 11; Bilateral with the Swiss Minister of Environment; Bilateral with the EU Commissioner and Bilateral with the Minister of Environment in Norway.

These meetings were very strategic in influencing the outcomes of negotiations. They strengthened the relationship between other countries and the Republic of South Africa to a point where it was easy to negotiate and influence decisions at a political level no matter which way negotiations were taking.

For example if it was not for an earlier engagement with the EU Commissioner the negotiations on financial mechanism would have deadlocked.

Other delegation members to the High level Ministerial Segment who also participated in other high level meetings and side events were: Honourable Ms Lulama Xingwana, Minister of Women, Children and People with Disabilities; Honourable Ms Rejoice Mabudafhasi: Deputy Minister of Water and Environmental Affairs; and His Excellency Harris Majekwe: High Commissioner of South Africa based in New Dehli.

Other highlights involve the handing over of the Like Minded Megadiverse Countries' (LMMCs) Chairmanship from Philippines to the Republic of South Africa where Honourable Mrs Edna Molewa was appointed as the chairperson of the LMMC.

In addition, the Deputy Minister Honourable Ms Rejoice Mabudafhasi presented a keynote address of session on "Measuring the True Economic Value of Land" which was part of the Land Day of the Rio Convention Pavilion series.

Minister Honourable Ms Rejoice Mabudafhasi emphasised the need for integrated approaches to sustainable development and land management aimed at addressing challenges relating to population growth, land degradation, climate change, food security, water quality, over-exploitation of nature resources while enhancing socio-economic development and opportunities particularly for women and the youth.

Follow up activities for the country after the CBD COP are amongst others the implementation of the COP 11 decisions; setting up systems for the effective leadership to the LMMC group during RSA's tenure in chairmanship and finalisation of the ratification process of the Nagoya Protocol on Access and Benefit Sharing.

COP11: SA chairs 'megadiverse' country group



South Africa has been appointed chairperson of the Group of Like Minded Megadiverse Countries (LMMC) for a period of two years.

Established in Cancun, Mexico in 2002, the group comprises 17 countries that, while representing less than 10% of the earth's surface, support more than 70% of its animal and plant species between them.

The 17 members are Bolivia, Brazil, China, Colombia, Costa Rica, Democratic Republic of Congo, Ecuador, India, Indonesia, Kenya, Madagascar, Malaysia, Mexico, Peru, Philippines, South Africa, and Venezuela.

South Africa ranks third in the world for biological diversity, after Brazil and Indonesia. South Africa's appointment as chairperson of the group, taking over from the Philippines, was made during the 12th Meeting of the Conference of Parties to the Convention on Biological Diversity in India last week.

Accepting the nomination, Water and Environmental Affairs Ministers Edna Molewa said South Africa was well aware of the pressures facing the world in the light of "climate change, habitat loss and degradation, over-exploitation and unsustainable use of biological resources, pollution and invasive alien species," all factors contributing to loss of biodiversity.

Minister Molewa urged the LMMC group to increase cooperation, particularly regarding the ratification and implementation of the Nagoya Protocol, as well as the implementation of national biodiversity strategies and action plans. South Africa will host a workshop in 2013 in order to develop a roadmap for the group until 2020.



A complex set of factors will influence how ecosystems and species respond over time. It is very clear that climate change will affect ecosystems differently, from low to extreme impacts, but that there are significant differences in the extent of projected changes.

The Grassland biome is greatly reduced, and replaced by Savanna biome. The current of Nama-Karoo biome is likely to resemble an arid Savanna, and a Desert under extreme conditions.

The Indian Ocean Coastal Belt increases with the warm moist conditions which favour this biome expanding southwest along the coast and extending inland. However, as soon as water becomes less available, the Indian Ocean Coastal Belt shifts to resemble a Savanna biome.

The Fynbos biome is are likely to be Succulent Karoo or Albany Thicket. The Succulent Karoo largely persists under all conditions. The Albany Thicket persists under low risk conditions, but gets replaced by Nama-Karoo and Savanna conditions under extreme conditions.

Areas with a climate similar to the current Desert biome are likely to expand in the future into areas which are now Nama-Karoo.

It is extremely difficult to predict exact distributions of the Forest biome, but it is likely that many Forest areas, which are generally dependent on consistently available moisture and protection from fire, are likely to be under increasing pressure in the future.

Savanna is likely to expand significantly in the future, and specific Savanna species are likely to benefit, this does not necessarily benefit existing habitats and species assemblages.

These results suggest that there is a potential shift of biome distribution, which may result in shifting ecosystem structure, and services.

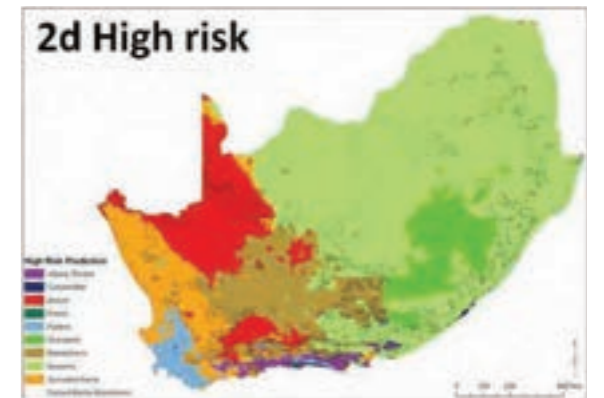
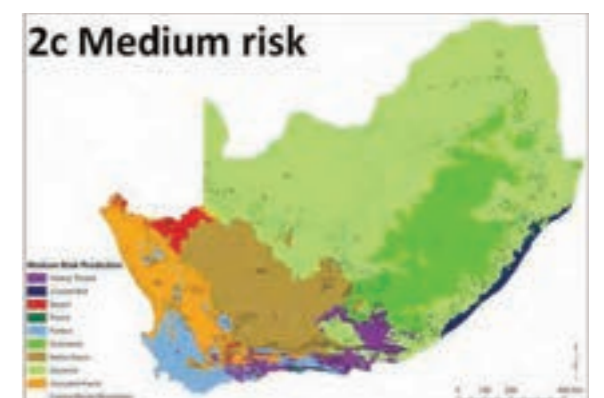
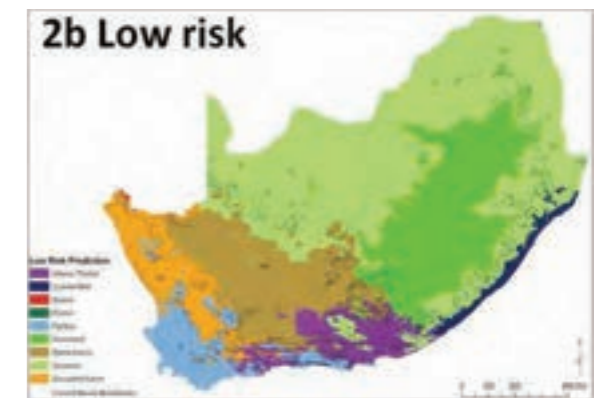
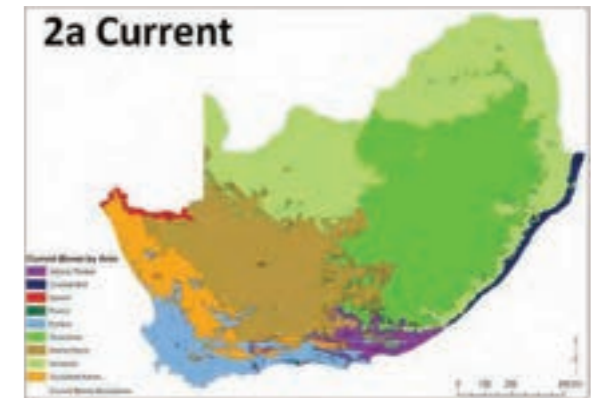
Changes being made to ecosystems are resulting in an increased likelihood of potentially high-impact and abrupt changes in physical and biological systems, such as disease emergence, dead zones in water bodies, and fishery collapses.

This increased likelihood of abrupt change stems from a variety of factors, including loss of biodiversity, increased numbers of invasive alien species, overharvesting, climate change, and nutrient loading. Conversely, the Savanna Biome is projected to expand with its geographic range partly replacing Grassland.

There is a potential related cost of increasing woody cover to a degree which could shift the structure of some regions of this biome towards Forest.

Such shifts have extremely important implications for conservation and ecosystem service delivery, and even ecosystem processes such as wildfire.

Ecosystem-based approach is suggested to be the main focus for biodiversity adaptation to climate change impacts, ensuring additional benefits and the maintenance of diverse agricultural landscapes to support productivity under changing climate conditions.



Predictions of biome climate envelopes under statistically downscaled climate scenarios, looking ahead to approximately 2050. Each map shows that the future climate envelope in an area is likely to resemble most closely the climate of a particular biome, often different from the current biome in that area.

Assessing the impact of climate change on Biodiversity



Caption: Biodiversity is facing the greatest environmental challenge known as climate change. Climate change affects biodiversity complex interaction, thereby disturbing and shaping natural ecosystems

South Africa is home to a significant portion of global biodiversity, and many of its natural ecosystems are relatively intact, despite the changes in land cover that have accompanied societal development.

Biodiversity is a national asset and a powerful contributor to economic development, natural resource management, ecological infrastructure and human wellbeing.

Biodiversity is facing the greatest environmental challenge known as climate change. Climate change affects biodiversity complex interaction, thereby disturbing and shaping natural ecosystems, human socio-economic needs and the environment.

The Biodiversity Risk Management together with the South African National Biodiversity Institute conducted a vulnerability assessment study to assess the potential impacts of climate change on biomes and ecosystems to projected climate change over the medium and long term (i.e. from 2020 to 2050), identifying key species or ecosystems are likely to be most strongly

affected by projected changes and to understanding why they are likely to be vulnerable.

This study was also aimed at highlighting key Ecosystem services, or the benefits that nature provides to people, and how they are impacted by climate change and associated impacts.

We also aimed at growing focus for the conservation of natural resources, its science, policy and implementation.

Ecosystems like forests, grasslands, savannas, fynbos, etc provide different goods and services to society.

These include provisioning, regulating, and cultural services that directly affect people.

They also include supporting services needed to maintain all other services. Some ecosystem services are local (provision of pollinators), others are regional (flood control or water purification), and still others are global (climate regulation).

SA appointed Chairperson of the Group of Like-Minded Megadiverse Countries



Above: Minister Edna Molewa takes over the reigns as Chair of the LMMC, from outgoing chairperson Mr Ernesto Adobo, the Philippine's Deputy Minister of Environment and Natural Resources, during the High Level Segment of Ministers of Environment.

South Africa received an overwhelming vote from the Group of Like Minded Megadiverse Countries (commonly known as the LMMC's), when it was voted in as the new Chairperson of the Group for a period of two years until the next meeting of the Conference of Parties to be held in Korea in 2014. This was revealed at the COP 11 on Biodiversity in India held on 19 October 2012.

The nomination follows the announcement by Philippine's Deputy Minister of Environment and Natural Resources, Mr Ernesto Adobo, the outgoing Chairperson of the LMMC, Philippines during the High Level Segment of Ministers of Environment throughout the world.

The Group of Like-Minded Megadiverse Countries was established in 2002 in Cancun, Mexico as a consultation and cooperation mechanism in order to promote parties' common interests and priorities related to the conservation and sustainable use of biological diversity.

The Declaration, establishing the Group, acknowledged that biological resources and the associated environmental services have an immense strategic, economic and social value, and offer development opportunities to the populations of these countries and the international community.

The megadiverse countries are a group of countries that harbor the majority of the Earth's species and are therefore considered extremely biodiverse. Conservation International identified 17 megadiverse countries in 1998. This group of countries represents less than 10% of the global surface, but supports more than 70% of the biological diversity on earth.

The 17 members of the LMMC are Bolivia, Brazil, China, Colombia, Costa Rica, Democratic Republic of Congo, Ecuador, India, Indonesia, Kenya, Madagascar, Malaysia, Mexico, Peru, Philippines, South Africa and Venezuela.

South Africa ranks third in biological diversity, after Brazil and Indonesia. Accepting the nomination, the Minister of Water and Environmental Affairs, Ms Edna Molewa said that South Africa was privileged to be chosen to lead such an auspicious group of countries mandated to conserve and protect the major chunk of the world's prestigious biological and associated cultural resources which underpins the countries' economies.

"South Africa is not blind to the pressures facing Megadiverse countries and the rest of the world in light climate change, habitat loss and degradation, over-exploitation and unsustainable use of biological resources, pollution, invasive alien species, etc. which concomitantly precipitate biodiversity loss," added Minister Molewa on the last day of the eleventh Conference of Parties (COP 11) being held in India.

The Minister further urged the LMMC Group to heighten co-operation amongst parties in particular in respect of the ratification and implementation of the Nagoya Protocol, resource mobilisation in order to facilitate revision and implementation of National Biodiversity Strategies and Action Plans.

These efforts, she added, will go a long way in assisting to realise Rio+20 vision of the "future we want".

Professional hunters urged to join the fight against rhino poaching



Above: The Minister of Water and Environmental Affairs Ms Edna Molewa addressing the first Hunting Indaba.

By Zibuse Ndlovu

The Minister of Water and Environmental Affairs, Ms Edna Molewa asked professional hunters to continue working together with government in fighting the scourge of rhino poaching. The Minister officially opened the first Hunting Indaba at the Palace at Sun City, North West province on 29 October 2012.

Speaking at the Hunting Indaba, the Minister assured the hunters that the Department of Environmental Affairs together with the South African Law-enforcement Agencies will continue working together in fighting rhino poaching.

"We also recognise all efforts made by the civil society, private sector and individual members of our society. As we gathered here today at this hunting Indaba, we call upon all stakeholders, particularly the private sector to continue working with us towards a common solution to the problem," said the Minister.

The Hunting Indaba was the first such dialogue between the Department of Environmental Affairs and the hunting community of South Africa. It created a platform for dialogue regarding hunting and its role and contribution to conservation, transformation and economic growth.



grass clippings your pile will compact and start to stink.

2. Do not compost meats or pet droppings. Stick with food scraps and yard waste only.

3. Avoid all pesticides and/or herbicide treated material.

4. If you add weeds to your pile make sure your pile is good and hot. It should be steaming hot, not just warm otherwise it may not kill the seeds.

5. Turn your pile as often as you can. Each time you turn it will speed up the process.

6. Keep your compost damp but not wet. As you add material to your pile make sure that each layer is moist as it is added. During the summer your pile will dry out and the composting process will slow down.

7. Got too much material to compost? Make a second or third pile. Stop adding material to a pile that is underway and start a new pile. This will insure you get a chance to use the compost this season.

8. Add compost to your garden a few weeks before you plant. Try to mix it in and let it sit before you plant.

9. Bugs, worms and most bugs are ok. No need to go crazy trying to keep bugs out of your compost.

10. Since the compost process works best at warmer temperatures, it is best to make your first attempt at composting in spring or summer.

By composting these materials, you not only minimise waste, but also contribute to food security if you compost your vegetable garden and do your part in the global effort against climate change.



Above: Compost may be 'hot' (aerobic) or 'cold' (anaerobic).

Let's do our part for Mzansi !



Above: Vegetable peels, and garden waste such as grass clippings can be composted to enrich the quality and bounty of the soil.

There is so much that you can do at home to minimise the amount of waste you generate. Household waste which is not recycled or re-used, eventually ends up in landfills, where space is limited.

Certain types of organic waste from your kitchen, such as vegetable peels, and garden waste such as grass clippings, can be composted to enrich the quality and bounty of your soil.

Nature's great circle of life system means that organic waste materials left on the ground decompose and return their nutrients to the soil.

Millions and millions of microscopic organisms feed on organic remains including our household and garden waste - breaking it down over time to create a rich soil conditioner and fertiliser. Composting works on

the same principles. Almost 75% of household waste is compostable. Thus, composting not only saves landfill space, but recycles material that most of us throw away believing to be useless and also saves money on fertilisers, and of course, we get happy and healthy gardens.

The Basics of Composting

To make good compost, one needs to have the right carbon-nitrogen ration.

If the Carbon content is too high, it will slow down decomposition, and if the Nitrogen content is too high, it could give out an unpleasant smell and also leach into groundwater, polluting it.

Compost may be 'hot' (aerobic) or 'cold' (anaerobic).

Hot compost has to be aerated by turning the pile often to mix in air amongst the composting material.

This is the more sought after type of compost as it decomposes faster and gives a better quality product. A cold compost is advised if you are not in a hurry to obtain your compost product and cannot spare much time for it.

It is also called a 'passive' compost as it received less, if any, turning, and thus the decomposition is anaerobic, that is without making use of oxygen.

Top 10 Composting Tips

1. Gather all grass clippings and green yard waste but be sure to mix with the "brown" materials like leaves and you will need both, but if you only add



Above: Mr. Bantu Holomisa and Ms. Magdel Boshoff observing the activities of the Hunting Indaba.

"Government recognises that game farming and hunting contributes significantly to conservation, tourism development, job creation and sustainable development, especially in rural areas, and is part of the broader biodiversity economy.

An example of this is the contribution of the private sector to the conservation success of the white rhinoceros. The generally positive role that sport hunting has played in the increase in white rhino numbers in South Africa is also recognized by the International Conservation Union (IUCN)," explained the Minister.

The hunting of the White Rhino started in 1968 when there were only approximately 1,800 White Rhinos in Africa.

"This contributed to increasing the value of White Rhinos on auctions and encouraged the expansion of numbers and range," said the Minister.

Statistics compiled in 2010 indicate that there are approximately 18,800 White Rhinos in South Africa and the number of White Rhinos in South Africa has increased over 10-fold since hunting and live-sales started.

In terms of each thematic area, the Indaba discussed the successes, the challenges, areas that require interventions to ensure sustainability and to reduce potential negative impacts,

The Hunting Indaba focused on four key thematic areas, namely:

- ecological and economic impact / contribution of the sector;
- involvement of communities in hunting and transformation;
- hunting in protected areas and buffer zones; and
- legislative challenges.

and opportunities that can be explored to strengthen the contribution of the sector.

Speaking at the event, the Limpopo MEC for Economic Development, Environment and Tourism, Ms. Pinky Kekana said that hunting was not just a conservation matter, but contributes to sustainable development. "We are deliberating on this issue at the back of so many discussions confronting the conservation and the environmental sector at large. There are talks of green economy, talks of sustainable living, talks of transformation, job creation, empowerment and many other issues," said the MEC.

The MEC said the timing for this Indaba was correct as it will assist the government to comprehensively look at issues that confront the hunting industry both positive and negative. "I am confident that we will emerge with win-win solutions to the benefit of all of us and the communities we represent."

People & Parks: People urged to keep planting trees



Above: The Deputy Minister of Water and Environmental Affairs, Ms Rejoice Mabudafhasi during her keynote address where she officially welcomed the delegates of the 5th People and Park Programme National Conference.

By Zibuse Ndlovu

The Deputy Minister of Water and Environmental Affairs, Ms Rejoice Mabudafhasi called on all South Africans to plant indigenous trees in their living and working environments as a practical and symbolic gesture of conserving the environment.

The Deputy Minister made this call while addressing hundreds of delegates from different provinces at the 5th People and Parks Programme National Conference, held in Bloemfontein, Free State on 5 - 7 September 2012.

Speaking at the conference, the Deputy Minister reminded the delegates that everyone was expected to participate in the tree planting

initiatives during National Arbor Week. "The month of September is also celebrated as Tourism Month. It focuses on encouraging South Africans to travel within their own country and to get a better understanding of the affordable and exciting attractions available to them on their own doorstep.

The People and Parks programme is amongst others an integral part of tourism in South Africa," said the Deputy Minister.

The People's and Parks conference was inspired by the World Parks Congress which emphasised the need to consider

communities as key stakeholders in parks management under the theme: "Benefits Beyond Boundaries".

The Deputy Minister said the 7th Meeting of the Conference of Parties (COP7) in 2004 on the Convention on Biological Diversity adopted a Programme of Work on Protected Areas.

"We are very familiar with the concept of service delivery and the challenges we face while trying to make sure that all citizens receive essential services.

What we are sometimes not familiar with

Transfrontier Parks host cycling events



Above : The Tour de Tuli is a four day 280 km mountainbike trail starting in the Northern Tuli Game Reserve of Botswana.

By Roland Vorwerk

Multi-day cycling events that are being held in Southern Africa's Transfrontier Conservation Areas are becoming very popular cross-border products enabling visitors to experience these unique regional ecotourism destinations.

The Tour de Tuli was held in August this year in the Mapungubwe Transfrontier Conservation Area, and attracted about 320 cyclists from across the globe. This annual event is hosted by Children in the Wilderness, an NGO which hosts children who live alongside areas where Wilderness Safaris operates, teaching them the importance of conservation and tourism.

Children in the Wilderness has run this event for a number of years, with a previous version of the event being called the Tour de Kruger, taking place in the Greater Limpopo Transfrontier Park.

The Tour de Tuli is a four day 280 km mountainbike trail starting in the Northern Tuli Game Reserve of Botswana, crossing into the Maramani Community in southern Zimbabwe and ending at the lookout over the Shashe and Limpopo Confluence in the Mapungubwe National Park in South Africa. This popular event is over-subscribed every year, and entries for the 2013 event have just opened.

Following on from the success of the Tour de Tuli, Namibian Wildlife Resorts (NWR) hosted the inaugural Desert Knights event in the /Ai-/Ais Richtersveld Transfrontier Conservation Area in October. NWR were supported by Namibia's Ministry of Environment and Tourism and South Africa's Department of Environmental Affairs

and SANParks, as well as the Peace Parks Foundation. Desert Knights is a unique five day event made up of four mountainbike stages of which three are held in the late afternoon and into the evening as the full moon rises and a full day 34 kms paddle along the Orange River.

Plans are already being made for next year, as Desert Knights 2013 will take place in the run up to the 2013 Adventure Travel World Summit that will take place in Namibia – the first time that this Summit is being held on African soil.

Since the signing of the International Treaty between Botswana and South Africa in 1999 which led to the creation of the Kgalagadi Transfrontier Park, significant strides have been made across the region to establish additional Transfrontier Conservation Areas (TFCAs). Efforts to coordinate conservation efforts across boundaries are being complemented by initiatives to boost tourism numbers to these TFCAs. In addition to building tourism access facilities and upgrading tourism infrastructure, the Boundless Southern Africa initiative was also launched to increase global awareness of tourism activities in 7 TFCAs across Southern Africa, strengthen partnerships for tourism development in TFCAs and develop and market cross-border tourism products.

The cross-border adventure trails are playing an important role in providing visitors to these TFCAs with a truly Boundless tourism experience, while demonstrating the tourism potential of these important conservation areas is to public sector stakeholders.



Above : Minister Fernando Sumbana Jr of Mozambique and Mr Seth Maphalala, representing Swaziland open the trucks to release the game.

In June, 74 Nyala were released post-quarantine pending tests for foot and mouth disease.

A total of 433 animals of different species, including giraffe and zebra, were successfully translocated in 2012, culminating with a ceremony on 10 September 2012.

The translocation was welcomed by the Mozambican Minister of Tourism, Mr Fernando Sumbana Jr who applauded this process and noted the importance of the game introduction as "not only to stabilise the ecosystem processes and biodiversity of the Reserve but also an important pillar to galvanise the development of tourism in the Lubombo TFCA, which unites three countries."

Also present on the day, PPF CEO Mr Werner Myburgh who said, "As with so much TFCA work, the translocation exemplifies a successful partnership between governments and the private sector."



Above : Minister Fernando Sumbana Jr of Mozambique shakes hands with Mr Werner Myburgh, CEO of PPF with Mr Ernest Mokgane, Director: TFCAs of DEA looking on.



Above: The North West Province delegation led by North West Parks and Tourism Board's Social Ecology Unit, People and Parks Programme Representatives from the Provincial Communal Property Association (CPA).

is the notion that it is not only municipalities that provide services, but also our biodiversity and ecosystems protected areas," said the Deputy Minister.

The delegates used the conference to deliberate on the issues concerning the resolution of land claims. They outlined the areas of co-operation between government and communities in an attempt to resolve claims that are within protected areas.

"So far, we have made a budget of R497 559 000 available to seven provinces to implement People and Parks projects. As we speak, 4874 South African citizens are employed in these projects and I am told that some of them are here with us today," explained Deputy Minister.

The Deputy Minister further explained that the appointments made took into consideration, the women, youth and people with disabilities. "We have also managed to sign 4 co-management agreements with communities living adjacent to protected areas since the 2010 conference. These agreements are formalising the relationship of protected areas and their beneficiaries," said the Deputy Minister.

According to the Ms Mabudafhasi the agreements deal with how the benefits are going to be shared and how communities are going to access the protected areas. "Protected areas are accessed for many reasons including natural resource harvesting, ritual performance and many other things," she said.

The first People and Parks Conference was held in Swadini Aventura, Mpumalanga Province in 2004. "One of the resolutions reached at Swadini Conference was to involve communities living in and around protected areas in the management of these areas," said the Deputy Minister.

"I am delighted to announce that 837 local communities have been trained on the importance of these biodiversity, the benefit derived from this areas and how they can organise themselves in a form of forums to reap from these benefits.

We have also through this partnership with Resource Africa, trained a number of SMMEs around protected areas with the view of making sure that any procurement that is done in protected areas is sourced from the locals," added the Deputy Minister.

Air quality remains a national cause for concern



Above: The Deputy Minister of Water and Environmental Affairs, Ms Rejoice Mabudafhasi talks to the media at the Air Quality Governance Lekgotla held in Rustenburg.

By Zibuse Ndlovu

The Department of Environmental Affairs' latest State of the Air report indicates that air quality in South Africa, especially in dense urban-industrial areas remains a national cause for concern.

Speaking at the Air Quality Governance Lekgotla held in Rustenburg on 29 October 2012, the Deputy Minister of Water and Environmental Affairs, Ms Rejoice Mabudafhasi told the delegates that the various air quality aspects and

regulatory tools have been developed and are also being amended to assist government with the implementation of the Air Quality Act to protect people's constitutional right to clean air."

The 2012 Air Quality Lekgotla was celebrated under the theme "Sharpening the Air Quality Technical and Legislative Aspects for Improved Service Delivery".

"This theme keeps us focused on the Air

Quality Act (AQA) which is aligned to South Africa's Constitution and in particular, the right to an environment that is not harmful to health and well-being.

The Act also provides all three spheres of government with a full set of regulatory powers and tools to implement their Constitutional air quality governance functions," said the Deputy Minister.

Game Translocation to Maputo Special Reserve



Above : Minister Fernando Sumbana Jr of Mozambique shakes hands with the Park Manager of Maputo Special Reserve, Ms Custodia Banze.

A Transfrontier Conservation Area (TFCA) is an area straddling across two or more international borders where the natural and cultural resources are collaboratively managed by the Governments and/or authorities involved.

TFCA's foster trans-national collaboration and co-operation for effective management of shared ecosystems.

Apart from the conservation of threatened wildlife and fragile ecosystems, TFCA's encourage partnerships for developing cross-border eco-tourism as a means of fostering regional socio-economic development and establish mechanisms to facilitate exchange of technical, scientific and legal information for the joint management of ecosystems.

In terms of the provisions of South African Constitution the Department of Environmental Affairs (DEA) has the mandate with the approval of the President to enter into international

agreements on the establishment of TFCA's.

The republic has to date established six TFCA's with its neighbouring countries.

In 2010 the Ministry of Tourism in Mozambique requested for game to be donated to restock the Maputo Special Reserve within the Lubombo TFCA.

South Africa through the Department of Environmental Affairs and Ezemvelo KZN Wildlife set out to assist in the facilitation of game translocation from various reserves in South Africa, with the financial assistance from the Peace Parks Foundation.

The 2012 translocation programme got off to a start on 19 May when 23 Kudu from Opathe Game Reserve in South Africa were successfully translocated.

to the benefit of the environment and the people of South Africa was seen in the elephant debate which spanned a period of over ten years.

Academics and other stakeholders were invited over this period to contribute towards a better understanding of how to manage elephants in protected areas. This culminated in the National Norms and Standards for elephant Management in South Africa, which was approved by the Minister of Environmental Affairs in February 2008.

The first democratic elections in South Africa in 1994 had far reaching implications for the conservation establishment of the country. National Parks were no longer the exclusive domain of the minority and to ensure the continued relevance of SANParks a major change within the organisation was required. A transformation task team was thus established.

At the same time a Social Ecology Unit was established to mend relationships with neighbours and to encourage and promote cultural resource management, research and resources, community facilitation and environmental education. The transformation of SANParks required a change in thinking and a systems management approach far beyond just demographical changes.

This has been successfully achieved and today SANParks has undergone major changes whilst still upholding the highest levels of biodiversity conservation on the African continent. The Social Ecology Unit achieved its objectives and has evolved and decentralised down to park level in the form of People and Conservation practices and projects.

Communities are now able to influence the management of their national parks through community forums and park management plans are a requirement by law which must include a thorough stakeholder participation process. All national parks now have management plans which are reviewed every five years.

For a conservation organisation to survive in a developing country requires more than just political will, it also needs to be financially viable. SANParks has therefore entered into a number of private, public partnerships ranging from five star accommodation in parks to the management of retail outlets and restaurants.

These partnerships have accrued R 500 million in revenue since their inception which has gone a long way to supporting conservation initiatives. National Parks are also the largest privately owned and managed tourism organisation in South Africa generating almost R1 billion in revenue. As such SANParks is able to generate 85% of its annual operating expenditure. The State accounts for the other 15%.

The State has however played a major role in supporting poverty relief projects in National Parks. This has enabled SANParks to tackle ecologically critical functions whilst also contributing significantly to employment and skills transfer in some of the

poorest parts of the country.

In the past ten years the state has provided SANParks with R 1.4 billion which has enabled them to employ 34 000 people and create and support 3000 new businesses. The ecological reasons for their employment is to eradicate invasive species, restore wetlands, rangelands and estuaries, control fires and maintain, upgrade and build infrastructure, roads and fences.

SANParks is cognisant of the extremely important role that national parks play in the cultural landscape of the past, present and future generations of South Africans. To ensure that the cultural heritage of national parks is adequately managed, cultural maps were drawn up for all the national parks. From these maps, heritage management plans have been written which form an integral part of the Park Management Plan.

An indication of how serious SANParks is about heritage was demonstrated in the proclamation of Mapungubwe as a national park based on the cultural significance of the area. The Mapungubwe National Park now forms the core of the World Heritage Site which has since been proclaimed by UNESCO. Two other success stories of tangible heritage conservation is to be found in the positive outcomes of negotiations around land for the Khoisan Bushmen community in Kgalagadi Transfrontier Park and the Nama Community in Richtersveld National Park.

As the managing authority of vast tracks of state land in rural areas SANParks is acutely aware of the socio-economic development needs of rural communities. To further assist with existing projects, SANParks recently established a Corporate Social Investment Unit to enhance and increase contributions towards socio-economic projects in communities.

This is seen as being of critical importance to the organisation. Whilst the organisation subscribes to international directives around climate change, and conventions on migratory birds and endangered species it is just as important to meet the needs and aspirations of local people at grass roots level. This poses a major challenge to SANParks as some of the parks are situated in highly populated areas such as around Kruger and Table Mountain. However, the organisation is convinced that it can make a difference and in so doing instil an appreciation for national parks which goes beyond simply providing employment.



Above: Cottages in the Storms River Section of Tsitsikamma



Above: The Environmental Affairs Acting Deputy Director-General: Chemicals and Waste Management, Ms Nolwazi Cobbinnah, the Chief Director of Compliance Monitoring Mr Sonnyboy Bapela, and Ms Cecilia Petlane of the Gauteng Environmental Management Inspectorate.

The Department of Environmental Affairs (DEA) has been hosting the annual Air Quality Governance Lekgotla since 2005.

The Lekgotla is an event that provides a forum for coordination and capacity building in the field of air quality management.

Through engagements on work experiences, successes and challenges, the event gives air quality officials from all spheres of government the opportunity to refine regulatory tools and discuss various means to ensure that the AQA is implemented efficiently and effectively.

"Research findings show that not all South Africans enjoy their Constitutional right to air that is not harmful to their health and well-being.

It is with the aim of examining such challenges in air quality management and finding the best possible ways to address them that the Department hosts events such as the annual Air Quality Governance Lekgotla," explained the Deputy Minister.

Beside the engagements between air quality management officials that took place, this year's Lekgotla was also about showcasing the Department's work in the air quality field.

The Lekgotla also allowed the Department the opportunity to profile its work in managing and improving air quality in the country and to highlight the progress it has made to date with regards to the rollout of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).

The topics discussed for the duration of the event included the compliance and enforcement roles of air quality officials, climate change co-benefits and the implementation progress of the National Climate Change Policy.

"The Air Quality Management Planning Manual was developed to assist all the authorities in their development of their Air Quality Management Plans (AQMPs) to ensure that sufficient resources are allocated to address air quality issues

in their areas.

The officials from all municipalities must ensure that their respective municipalities develop the AQMPs to address, coordinate and facilitate air quality functions within your areas of jurisdiction," added the Deputy Minister.

The Deputy Minister further encouraged the officials from the Department to be proactive and keep on checking support required by municipalities.

"If you need support don't be shy come forward and request support from the National Department of Environmental Affairs. The declaration of the National Priority Areas is a remarkable milestone.

This year the Bojanala-Waterberg Priority Area was declared as the third priority area as an indication of the government's intention to defend the right of all to an environment that is not harmful to health and well-being," said the Deputy Minister.

DEA hosts the Third Waste Management Officers' Khoro



Above: The Deputy Minister of Water and Environmental Affairs, Ms Rejoice Mabudafhasi addressing delegates at the 3rd Waste Management Officers' Khoro at the ICC, in East London.

By Gaopalelwe Moroane

The Department of Environmental Affairs hosted the third Waste Management Officers' Khoro in East London on 8 – 9 October 2012. The Waste Management Officers' Khoro is an annual conference bringing together all government institutions dealing with waste and providing a space for waste management officers to share their experiences and establish best practices in managing waste in their respective municipalities.

The Khoro was convened under the theme "Creating jobs and increasing efficiencies in the delivery of waste services" and thus placed much needed emphasis on creating jobs in waste management whilst striving for the efficient delivery of waste services. Speaking at the Khoro, the Deputy Minister said, "Central to the issue of waste management, is the opportunity to create sustainable jobs in the whole chain of the integrated waste management system from generation, collection, transportation, recycling, recovery through to managing disposal sites. Local government has a constitutional mandate to manage waste and this presents an opportunity to employ innovative ways of fulfilling this mandate and incorporates the principles of the waste management hierarchy". Hundreds of delegates from different provinces and municipalities took turns from the stage presenting and sharing ideas on how to best manage the waste

disposal sites in their respective municipalities. Since the Second Waste Management Officers' Khoro, a lot of progress has been made in terms of waste management. One such milestone is the cabinet approval of the National Waste Management Strategy (NWMS) in November 2011. The Deputy Minister officially launched the NWMS that is inclusive of all three spheres of government, at the Khoro.

The NWMS has been established to achieve the objects of the Waste Act, 2008 and proposes a means of waste management for industry and commerce by providing a policy framework to deal with specific waste streams. "As society progresses, we face the challenges of new and complex waste streams which must be managed in a sustainable manner. It is often a cry of local government that there are no funds to carry out waste delivery functions, often referred to as 'unfunded mandates'. We are working closely with National Treasury to ensure that funds for waste management are allocated and that they are sufficient" said the Deputy Minister. She concluded that in order to ensure the successful implementation of the NWMS, it is imperative that we work closely with other government departments such as the Department of Trade and Industry, Science and Technology, Cooperative Governance and Traditional Affairs and the South African Local Government Association.



Above : Another view of the Mapungubwe Hill at sunset.

SANParks has since created and manages MPA's in West Coast, Table Mountain, Wilderness, Knysna and Addo National Parks. Plans to create MPA's at Agulhas and Namaqua National Parks are progressing well.

The change in emphasis from species conservation to biodiversity conservation prompted the creation of a number of new national parks across South Africa in the 1980's and 1990's. Today over four million hectares of land and sea are managed by SANParks on behalf of the Department of Environmental Affairs for the people of South Africa.

Making people aware of the importance of the environment was identified as a need as far back as 1954 when the first Interpretive Officer was appointed in Kruger National Park. These first interactions with the public, included talks and film presentations, which gradually grew to include static displays and outdoor museums.

The audiences at that time were unfortunately influenced by the political driven laws of the time which made access to national parks by non-white South Africans virtually impossible.

To overcome this and ensure that environmental education messages reached out to all South Africans, SANParks Interpretive Officers commenced outreach programmes to neighbouring communities in the early 1980's. This has since grown substantially with support from National Government, National Lotteries Board and Private enterprise so that today well over 100 000 learners take part in structured environmental education programmes across the country representing all of South Africa's peoples.

The South African National Parks Board realised at an early stage of the Organisations development, the need to structure management systems around scientifically influenced research. To this end, a research division was created and stationed in Kruger National Park. This division (called Conservation Services) is now stationed across the country in Kimberley, Cape Town, Sedgfield, Knysna and Port Elizabeth to meet the scientific needs of park management interventions in biodiversity conservation.

Research from external Universities is encouraged but managed to ensure that it contributes to the research priorities as identified by Conservation Services. A fine example of how this has worked

Spotlight on: SANPARKS



Above : The Mapungubwe Hill.

By Gabrielle Venter

The South African National Parks Board was created in 1926 with the proclamation of the first National Park in South Africa, the Kruger National Park. Fashioned on international trends, primarily American, the National Parks Board set forth to create a National Park which exemplified the natural environment based on perceived ideas of pre-human interference.

There was a strong emphasis on preservation as opposed to the current thinking surrounding conservation. When Col James Stevenson Hamilton was appointed as the first Warden of Kruger, he inherited a landscape which had been heavily altered by years of hunting for trophies, meat and ivory.

There were only three elephants recorded in the park and no rhinos. Today, thanks to the efforts of these early pioneers in conservation there are over 13 000 elephants and many thousands of rhinos.

In the 1930's the board shifted its focus away from Kruger to the establishment of species parks to prevent the extinction of three species of animals in particular, the Mountain Zebra; the Addo elephant and the Bontebok. Three new national parks were thus created in the then Cape province to achieve this preservation objective.

These parks still exist today but their focus, like that of all parks, is more aligned with that of the International Union for the Conservation of Nature and Natural Resources (IUCN) which emphasises the importance of biodiversity conservation.

Thus Bontebok National Park is conserved for its lowland Fynbos and the Addo Elephant National Park has been expanded through land purchases to over 100 000 hectares and includes five different biomes, namely Karoo, Fynbos, Spekboom veld, duneveld and marine. Addo now markets the park as having the "Big seven" which includes the traditional Big five plus the Great White Shark and Southern Right Whale. Mountain Zebra National Park has been increased in size to just under 30 000 hectares and now plays a role in cheetah and black rhino conservation.

SANParks identified two areas of national importance for their spectacular beauty in the 1960's and as such the Golden Gate and Augrabies Falls National Parks were proclaimed. Tsitsikamma National Park became the first marine national park on the African continent in 1964. Research over the past three decades has provided conclusive evidence that Tsitsikamma plays a critical role as a no-take zone to balance the sustainability of areas which are fished outside of this marine protected area (MPA's).

Deputy Minister hands over the first Mahikeng domestic waste pilot project



Above: Deputy Minister Mabudafhasi (right) hands over a model waste truck as a symbolic gesture to Mahikeng Local Municipal Councillor Fikile Lomo (left).

By Peter Mbelengwa

The Deputy Minister of Water and Environmental Affairs, Ms Rejoice Mabudafhasi led the handover of the first domestic waste collection pilot project at the Barolong Community Hall in Mahikeng on 18 September 2012.

The Department of Environmental Affairs (DEA) identified the Mahikeng Local Municipality to participate in the waste collection pilot, which is an Expanded Public Works Programme (EPWP) initiative. The pilot is geared towards job creation, poverty alleviation, small and medium enterprise development, as well as skills development within communities in Mahikeng.

Speaking at the handover ceremony, the Deputy Minister said the handover was a great milestone as it further reiterated the significance and importance of integrated waste management.

"The waste sector offers great potential for job creation by extending waste services into areas that are currently underserved and it improves the waste collection systems in serviced areas." The Deputy Minister added that sustainable waste management practices also formed part of the eight focus areas of the Green Economy Strategy.

In 2007, research was undertaken in six municipalities to determine the feasibility of implementing the waste collection model. As part of this process the model was introduced to the Mahikeng Local Municipality on 30 May 2007. On 18 August 2007 a letter of intent was signed by the Mahikeng Local Municipality to participate in the project. The objectives of the pilot project were to develop a small and medium enterprise-driven and labour intensive implementation model for Domestic Waste Collection for



Above: Members of the public had the opportunity to engage with the Deputy Minister as well as provincial and local authorities during the public participation portion of the programme.

municipalities, so as to:

- Reduce the backlog in domestic waste collection services through technical and financial support.
- Achieve the objective of job creation, skills development and poverty eradication set for the Expanded Public Works Programme.
- Implement a community-based approach to waste management and reduction that is aligned with the National Environmental Management: Waste Act (No 59 of 2008)
- Government policy of waste reduction, reuse and recycling

Before the inception of this ground-breaking project, 15 000 urban households received domestic waste collection services in Mahikeng, while as many as 55 000 rural households did not have access to refuse collection services. Challenges with the waste collection services include the clearing of illegal dumpsites being compromised by insufficient and unreliable waste removal machinery. An additional challenge is in the form of the misuse of skips. "All of these challenges are compounded by the fact that the Mahikeng Local Municipality has only one permitted landfill site that is privately managed. There is also limited recycling in Mahikeng. However, in recent months a recycling forum has been established by the municipality with a view of reducing indiscriminate littering," said the Deputy Minister.

The project has brought dignity to, and improved the quality of life of many citizens in this area. Currently, more than 31 000 households which previously did not receive waste management services are now beneficiaries. The project also illustrated that the waste sector offers great potential for job creation. Five waste collection trucks were procured and five contractors appointed to use trucks for waste collection. A total of seventy (70) workers were further appointed to do actual waste collection from targeted households for the duration of the project. Each contractor was allocated 14 workers. Training was provided to both contractors and workers in order to capacitate them in areas of waste management and business management.

"Based on the lessons learnt through this pilot, DEA aims to establish a model for municipal waste management that addresses backlogs in service delivery in the rest of the country," explained the Deputy Minister.

While lauding projects such as this pilot – which see government giving effect to the Constitutional right of all citizens to an environment that is not harmful to their health and well-being – the Deputy Minister also recognised the recently-celebrated World Ozone Day. "As part of its work in ensuring the environmental rights of citizens, South Africa ratified several multilateral environmental agreements, of which the Montreal Protocol on substances that deplete the ozone layer is one. On 16 September every year, parties to the Protocol celebrate the International Day for the Preservation of the Ozone Layer," said the Deputy Minister.

- Renewable energy, including offgrid and mini grid;
- Sustainable water management;
- Energy Efficiency & Demand Side Management;
- Sustainable human settlements, the built environment and green buildings; and,
- Ecosystem services.

Low Carbon Economy (LCE) – The decoupling of economic growth from its impact on natural resources will be driven by private sector efforts to lower environmental impact and resource consumption.

This can be achieved through clean production methods and other climate change mitigation and adaptation measures.

These include interventions targeting industrial efficiency and the carbon intensity of the economy including energy efficiency, reducing pollution from industrial processes, waste management and reuse of by-products.

The vision of the Low Carbon Economy window is to strive towards a low carbon growth trajectory in line with national climate change policy principles.

Focus areas include:

- Energy efficiency;
- Renewable energy;
- Rural energy including off grid and mini grid;
- Biogas and biofuels;
- Sustainable transport; and,
- Industrial cleaner production and consumption projects.

Environmental and Natural Resource Management (NRM) – The protection of biodiversity and securing the sustainable delivery of ecosystem services is the primary focus of this window.

These include interventions targeting ecosystem based adaptation to climate change that could drive rural development models. Managing and reducing the impact of agriculture and

land use changes through demand management and resource conservation will be supported.

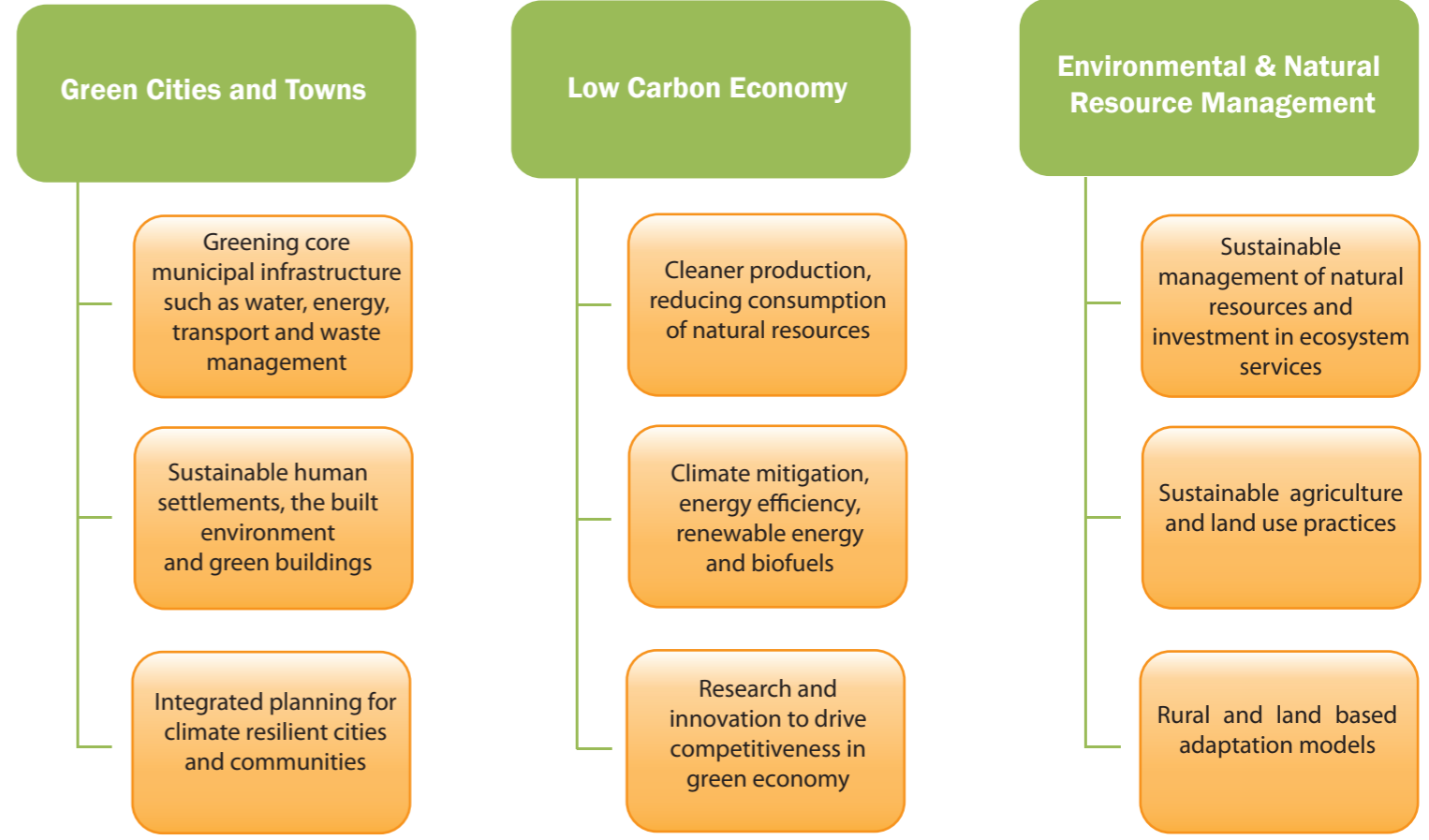
The vision of the NRM window is to strive for protected and conserved resources for sustained ecosystem services to support South Africa's development path.

Focus areas include:

- Payment for Ecosystem Services (PES) projects;
- Biodiversity Benefiting businesses, including sustainable farming;
- Land use management and models; and,
- Rural adaptation projects and plans

The Green fund will provide the following financial instruments:

- Project development grant (recoverable and non-recoverable)
- Capital development grant (recoverable and non-recoverable)
- Concessional Project Development Loan



Green Fund to boost the transition to a greener future



Above : The Green fund provides support through sustainable waste management and recycling.

By Hanlie Schoeman

The Green Fund is a unique, newly established national fund that seeks to support green initiatives to assist South Africa's transition to a low carbon, resource efficient and climate resilient development path, delivering high impact economic, environmental and social benefits.

Through the Department of Environmental Affairs (DEA), the South African government has set aside R800 million to establish the Green Fund. This allocation represents the initial resources available for disbursement by the Green Fund. The DEA has appointed the Development Bank of Southern Africa (DBSA) as the implementing agent of the Green Fund.

A Green Fund Management Committee comprising representatives of the DEA, the DBSA and the National Treasury to provide the direction and make final decisions on applications made to the Green Fund.

The objective of the Green Fund is to lay the basis for the South African economy to

make a transition to a low carbon, resource efficient and climate resilient development path delivering high impact economic, environmental and social benefits.

The Green Fund aims to provide catalytic finance to facilitate investment in green initiatives that will support South Africa's transition towards a green economy by:

- Promoting innovative and high impact green programmes and projects;
- Reinforcing climate policy objectives through green interventions;
- Building an evidence base for the expansion of the green economy; and,
- Attracting additional resources to support South Africa's green economy development.

Importantly, the Fund will only support initiatives, which would not have been implemented without its support.

The Green Fund is additional and

complementary to existing fiscal allocations supporting the transitioning of the South African economy to a low-carbon, resource efficient and climate resilient growth path.

The Green Fund provides support through three funding windows:

- Green Cities and Towns;
- Low Carbon Economy; and
- Environmental and Natural Resource Management

The vision of the Green Cities and Towns window is to strive for well-run, compact and efficient cities and towns that deliver essential services to their residents, utilising available natural resources efficiently and sustainably.

Focus areas include:

- Sustainable transport;
- Sustainable waste management and recycling;

Green Jobs are the key to SA's sustainable development



Above: South Africa has joined an increasing number of countries that have already begun to identify opportunities that the transition to a green economy brings.

By Lavinia Engelbrecht

The Earth cannot indefinitely sustain the current consumption and production patterns of its human population, while maintaining the quality of life required for basic survival, such as clean air, drinkable water, fertile soil.

It is vital and urgent, for the world's nations to reshape the manner in which we approach development, create jobs and nurture the economies of developing and industrialized nations.

This is compounded by multiple, emerging financial and economic challenges which still require resolution. There is also a growing recognition that our natural capital, in the form of ecosystems, biodiversity and other natural resources, is critical to unlocking and boosting economic growth while ensuring the long-term wellbeing of our societies.

South Africa is rich in minerals and is also renowned for our rich array of biological diversity, including world heritage sites of pristine natural diversity and beauty. As a country, we continue to benefit from this rich biodiversity, which serves as an attractor for tourism and interconnected industries. Biological diversity provides raw materials for industry and

essential ecosystem goods and services, from air purification to water filtration, from climate stabilization to flood control. It forms the basis for food security and is the source of medicines on which health care depends.

The value of biodiversity is in quantifiable economic terms and is increasingly being recognised for its essential role in promoting sustainable development and poverty alleviation. Biodiversity is also being recognized for its significance to various cultural activities as well as its beauty.

The rich variety of biological resources and the interactions between them, are therefore, not a luxury, but vital for the development and growth of human societies and the very existence of life on earth.

Faced with the real threat of climate change impacts, sustainable development has become more significant today than ever before. Our strategic objective is to ensure that sustainable development remains central in our planning and execution. Last year Cabinet approved the National Strategy on Sustainable Development (NSSD).

The NSSD sets out the country's sustainable development priorities and actions over the next five years. This Strategy is based on the premise that social and economic sustainability is embedded within and reliant upon a healthy ecosystem and sustainable environmental goods and services.

The NSSD is one of a number of growth and development policies and strategies recently adopted by South Africa to support our sustainable development journey. It is accompanied by strategies such as the New Growth Path and the Green Economy Strategy.

With the Green Economy Strategy, South Africa has joined an increasing number of countries that have already begun to identify opportunities that the transition to a green economy brings.

The Green Economy Strategy has eight focus areas namely: green buildings and the built environment; sustainable transport and infrastructure, clean energy and energy efficiency; resource conservation and management; sustainable waste management practices; agriculture, food production and forestry; water management; sustainable consumption and production; and the cross-cutting focus area that covers research, awareness and skills development – in other building our social capital.

Whilst we have made significant strides towards sustainability, there are still major challenges facing us as a country such as grinding poverty, unemployment and inequality. These challenges are profoundly evident amongst the youth, and can be directly linked to the unsustainable and unjust policies of the past.

South Africa has long realised that the transition to and promotion of a green economy, should be defined by national objectives as well as socio-economic and environmental development imperatives, along with the attainment of internationally agreed sustainable development commitments, including the Millennium Development Goals.

"It is incumbent upon all of 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" said Minister Edna Molewa in her Budget Speech when announcing key areas of intervention the Department will address.

As part of government's drive to address this, South Africa launched the New Growth Path in October 2010 with the green economy being one of the key economic growth drivers.

This green economy offers substantial opportunities for job creation and development in the environmental goods and services sector, particularly in biodiversity, waste and natural resource management services.

The New Growth Path targets 300 000 additional direct jobs by 2020 to green the economy, with 80 000 in manufacturing and the rest in construction, operations and maintenance of new

environmentally friendly infrastructure. The potential for job creation is predicted to rise to well over 400 000 by 2030.

The National Treasury has made available R 800 million Rands for the Green Fund over the next two financial years.

This funding represents a critical resource mechanism to achieve a just transition to a low carbon, resource efficient and job creating green economy. 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.

The Green Fund will further facilitate partnerships to leverage both donor and private sector contributions to fund various projects and programmes linked to the green economy and climate change response strategies. In short, we are putting our money where our mouths are!

Through the Department of Environmental Affairs, government has begun the roll out of the implementation of the Green Fund. The Development Bank of Southern Africa (DBSA) has been appointed as an implementing agency.

A true working green economy is a lot more achievable through a patriotic collaboration of government, business and various social partners: Working together, we can do more. This is exemplified through amongst others, the cross-cutting EPWP, championed government departments in partnership with implementing agents from the private sector, for the benefit of communities and the economy. The Department's Environmental Programmes under the umbrella of the EPWP are rightfully well known for their ability to give resources, skills and dignity of work to previously unemployed people.



Above: The green economy offers substantial opportunities for job creation and development in the environmental goods and services sector, particularly in biodiversity, waste and natural resource management services.

Estimates indicate that 7% of our annual water run-off is being guzzled up by invasive alien plants. What is especially alarming is that this figure will get progressively worse. The negative impacts also do not stop there. Other negative impacts include:

- the degradation of our rich biological diversity that underpins our tourism industry,
- the ecological integrity of our natural systems on which we all depend for our livelihoods,
- fire management and the havoc that alien-invasive fuelled wildfires wreak on us from time to time,
- the productive use of land responsible for keeping the country's food basket stocked, and
- ultimately the conservation of our life-support systems.

The Deputy Minister stated that it is not enough to only be able to identify invasive alien vegetation.

It was also critical to empower ourselves to identify those indigenous plants which they replace.

She issued the following challenge to all South Africans during the campaign:

"What we do in our gardens is perhaps the best barometer to judge this awareness and I challenge each and every citizen to start the fight in their backyards.

This could be done by identifying and removing invasives and promote the planting of indigenous species to protect our natural heritage."

From here these efforts can be extended to our community parks and gardens and initiating volunteer hacking groups, would be the natural next step, and this progression in organisation will eventually lead to a reduced effort in the long run to deal with the problem.

Tribute to Pauline Masoue

"As much as we are gathered here to celebrate the efforts of Programmes such as Working for Water, it is also on a sad note that we mourn the loss of one of our Project Managers in this region, Ms Pauline Masoeu, who exemplified the spirit and energy so necessary to undertake this kind of work.

Pauline started her career at Working for Water as a general worker in 1996, and her untimely death in a vehicle accident has robbed the Programme of a dedicated and tireless worker. One of her colleagues remarked that "whenever she entered her office it was as if a light had been switched on".

We extend our condolences to her family and colleagues. In honour of her and others who have lost their lives in the Working for Water Programme, we dedicate the trees that we will be planting here today. I hope that this will serve as a beacon for the rest of us in the challenges that lies ahead."

-Deputy Minister of Water and Environmental Affairs, Hon Rejoice Mabudafhasi

It is almost exactly nine years to the day that the former Minister of Water Affairs and Forestry, Kader Asmal, launched the Working for Water Programme as a concerted effort by government to deal with the problem of invasive species, said the Deputy Minister. "Ultimately, with the annual outreach and hands-on clearing we undertake during WeedBuster Month, we aim to make the necessary changes in behaviour to help the environment;

and foster community ownership of problems resulting in acceptance and support for alien plant management projects.

"If anything the last nine years have shown us that we cannot relax this effort, and I trust you will carry this message on to your families, friends and colleagues to join together to protect our natural resources. Without this collective effort, we cannot win the battle."

WATER AND FOOD SECURITY: UNDERSTANDING THE LINKAGES

Water is key to food security

Food security exists when all people at all times have both physical and economic access to sufficient, safe and nutritious food that meets their dietary requirements for an active and healthy life.



People who have better access to water tend to have better levels of nourishment. Lack of water can be a major cause of famine and malnutrition, particularly in areas where people depend on local agriculture for food and income.

Erratic rainfall and seasonal differences in water availability can cause temporary food shortages. Floods and droughts can cause some of the most intensive food emergencies.



Drought ranks as the single most common cause of severe food shortages in developing countries. Drought caused more deaths during the last century than any other natural disaster, and Asia and Africa rank first among continents in the number of people directly affected.



Water and Food Security 22 March 2012 www.unwater.org/worldwaterday

The WeedBuster campaign is one of the flagship projects of the Working for Water Programme, which itself is a multi-departmental alien clearing initiative led by the Department of Environmental Affairs. It is the Programme's intention that by the year 2020, substantial control over invading alien plants in South Africa will have taken place, in order to contribute to economic empowerment, social equity and ecological integrity.



QUICK FACTS:

The Working for Water Programme is the largest public-funded initiative aimed at managing invasive alien plants in the world, and an excellent example of integrating environmental conservation and poverty eradication objectives.

The Working for Water programme has created 36,000 jobs during the 2011-2012 financial year through clearing of invasive alien plants, of which:

- 18,000 were women,
- 22 000 were youth, and
- 500 disabled.



Nature, explained the Deputy Minister, has a way of balancing its ecosystems. Often human beings interfere with that balance through our economic and agricultural activities.

Successful weed management, she said, requires proper plant identification, selection of effective management methods and monitoring the effects over time.

"Here in the agricultural community of Onseepkans, you know better than city dwellers, that many weeds, also known as invasive plants were introduced to South Africa via seed or animal feed," said the Deputy Minister.

"However, the natural predators of these weeds were not brought to South Africa at the same time.

Thus, without the insects and bacteria which would naturally feed on these plants in their countries of origin, these weed populations got out of control.

This of course has a negative impact not only on our crops, but also on our indigenous biodiversity, as the invasive plants compete aggressively for scarce water and nutrients."

The Deputy Minister added that South Africa is a water scarce country and in an arid province such as the Northern Cape, this environmental issue is absolutely a matter of life and death.

In recent years, scientists across the world have noted the benefits of making use of insects to control weeds, as opposed to only making use of harmful herbicides which can seep into water supplies or compromise the food chain.

Certain insects are able to be used in agriculture, encouraged in the home and introduced into the environment, as both an alternative to chemical weed control, and to be used in a responsible manner on a commercial scale, together with chemicals. Releases of these insects are cost-efficient and eco-friendly.

Biological control can provide complete control of the problem plant, it reduces the need for using herbicide (a chemical substance used to destroy or inhibit the growth of plants, especially weeds) or mechanical clearing.

The biological control of weeds is the most suitable option because:

- it is relatively cheap and very safe compared with the costs and risks associated with using herbicide;
- it can be successfully integrated with other management practices; and
- it is self-sustaining

The role of weed control in poverty alleviation

The Deputy Minister highlighted the potential damage which can be caused by invasive plants, should they be allowed to proliferate unchecked. This would hit the poorest of South Africans the hardest.

During spring, explained the Deputy Minister, many different plants begin a new spurt of growth. "This applies not only to our beautiful indigenous plants in the Cape Floral region, but also for invasive plants.

These weeds multiply and spread very quickly, pushing out our local biodiversity and putting a strain on both commercial; and subsistence farmers, especially women and the rural poor, who plant crops not for profit, but to literally feed their families from what their small patch of land can produce."

She warned against the tendency to overlook our dependence on our natural resources, which are by far the most valuable inheritance that we can leave for future generations.

"With the widespread prevalence of poverty we should remember that the natural environment is a powerful ally in our attempts to cross this hurdle. As a government we recognise this challenge," said the Deputy Minister. "Today's event represents an opportunity for us to reiterate our commitment to this effort."



Above: South Africa has realised that it needs the support of consumers and has thus introduced incentivised schemes to encourage the installation of energy efficient systems.

Last year the programmes created 26 700 new work opportunities, amounting to 11 676 full time equivalent jobs and 26 891 accredited training person days.

What is sometimes overlooked is the value of the work that is done. For example, the Centre for Scientific and Industrial Research (CSIR) has calculated that the value of the water saved through the clearing of invasive alien plants, which is the focus of our Working for Water Programme, is R400 billion overall.

Forestry South Africa calculated that the damage to the Forestry Industry through major fires in August, 2008, was worth about R3.6 billion but that this could have doubled had it not been for the Working on Fire partnership.

The Department received 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 62 860 work opportunities, 31 277 full-time equivalent jobs, and 600 youth benefiting from the National Youth Service 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.

It is also important to realize and acknowledge that 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.

Unlocking the substantial economic benefits of biodiversity is going to require a sizeable cohort of skilled South Africans, educated formally and with sufficient social conscience and awareness to rise to the challenges and unlock the opportunities presented by the green economy.

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

SANBI will assist in ensuring that participants are mentored and receive the relevant skills and experience required to gain employability and access to permanent jobs in the sector

Government recognises 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.

Getting Rid of e-Waste the right way



Above: Old computers, televisions and other electronics which are beyond repair, are examples of e-Waste.

By Lavinia Engelbrecht

Many of us are guilty of keeping our old or damaged electronics somewhere in a drawer for old times' sake.

Did you know that you can recycle your mobile phone, old computer and other office, school or home electronics? Just like batteries and aerosol cans, some of these electronic products can actually become dangerous if they are not disposed of properly.

South Africa is a rapidly growing economy and our use of consumer electronics has not lagged behind. All of this equipment has a lifespan and once it no longer serves its purpose, it becomes what is known as e-waste.

What is e-waste?

According to the e-Waste Association of South Africa (eWASA), the widely accepted international definition of e-waste is "anything that runs on electricity".

Therefore e-waste (electronic & electrical waste) includes computers, entertainment electronics, mobile phones and household appliances.

Some of the less obvious items that are also considered e-waste are spent fluorescent tubes, printer cartridges, batteries and battery-operated toys that have been discarded.

Why should I be worried about e-waste?

Certain types of e-waste can be dangerous, largely due to the toxicity of some of the substances if processed improperly. The toxicity is due in part to lead, mercury, cadmium and a number of other substances. A typical computer monitor may contain more than 6% lead by weight. These substances, can amongst others, poison water supplies, soil and be very toxic or deadly to humans upon direct contact.

According to eWASA up to 36 separate chemical elements are

WeedBuster Week: Insects as biological control for invasive plants



Above : Deputy Minister Mabudafhasi leading a cleanup during Weedbuster week at Onseepkans.

By Lavinia Engelbrecht

Insects can be used as a formidable weapon in the environmental and agricultural sectors' arsenal, in the fight against the incursion of invasive plants. At various stages in the lifecycle of invasive plants, various insects can be introduced into the field or the environment in a controlled manner, to curb the growth or proliferation of the plants.

The national event for WeedBuster Month 2012, was held on 26 October in the arid town of Onseepkans in the Northern Cape, near the Namibian border. The event was convened under the theme "Goggas Nip Weeds in the Bud."

"This theme was chosen to highlight alternative methods of clearing invasive alien plants, with a particular focus on biological control, in the form of insects, which we refer to in our theme by the name you all know as 'goggas.' During this year's WeekBuster Month, we have come to

Onseepkans to mark the national event, as it is an area in much need of the economic and environmental support and benefits at the heart of the Working for Water Programme," said Deputy Minister of Water and Environmental Affairs Rejoice Mabudafhasi, in her keynote address.

As part of her visit to the area, the Deputy Minister met with the Irrigation Board and emerging farmers. Not one to shy away from being hands on, the Deputy Minister also conducted a clean-up of the area, before visiting the Working for Water project site and interacting with the local community through a Public Participation Programme, also known as an imbizo

The WeedBuster campaign is an initiative led by the Department of Environmental Affairs (DEA) through the Environmental Programmes branch, and is supported by various partners and stakeholders.

The South African campaign is linked to the invasive plant control initiatives by countries such as Australia and New Zealand, as well as to the broader Global Invasive Species Programme.

DEA has invested over R20 million in research and implementation into biological control, and a further R4 million contributed from partnerships with the Agricultural Research Council and academic institutions.

However, much remains to be done towards increasing public awareness on the issue of invasive alien plants, promoting voluntary pro-active responses and community ownership of initiatives aimed at the management and containment of invasive alien plants.

The event at Onseepkans was but one of an array of activities and projects led by the department to this end.

DEA employees pitch in to help the Lillydale Home Care Centre



SPIRIT OF GIVING : (Above) The Department of Environmental Affairs (DEA) employees pitched in to help the Lillydale Home Care Centre to buy agricultural implements.

By Lindiwe Ndelu

In celebration of the Nelson Mandela Day and 10 years existence of Great Limpopo Transfrontier Park (GLTP), employees from the Transfrontier Conservation Area (TFCA) directorate pitched in to help with the buying of agricultural implements and seedlings for the Lillydale Home Care Centre in Mpumalanga, Bushbuckridge Municipality. The TFCA team visited the centre on 2 October 2012.

The Control Biodiversity Officer of Transfrontier Conservation Areas, Mr Thapelo Motebo said the TFCA unit staff personally contributed some money for the buying of the implements. "Assisted by the People and Parks Foundation (PPF), the team was able to help the centre in buying five wheelbarrows, three hose pipes, 5400 beetroot seedlings, 2000 green peppers and 1280 butternut seedlings," said Mr Motebo.

The centre cares for the people who are living with HIV/AIDS by giving them home grown organic vegetables. "The hose pipes will assist the centre in irrigation, wheelbarrows for transportation of

the vegetables. Seedlings will assist the centre and also the affected families to start their own food gardens," said Mr Motebo.



BUSTING THE WEED: The TFCA team and the care centre workers hard at work removing the weed and planting the seedlings.

Passion People-Centric Integrity Performance Proactive



Above: An example of an e-Waste recycling drop off point.

incorporated into e-waste items. This presents difficulties for recycling, as these items are complex and no viable traditional methods of recycling them existed until recent years. These items do not, for the most part, bio-degrade into safe compounds like organic matter.

Many of the plastics used in electronic equipment contain flame retardants, ruling out incineration.

These are generally halogens added to the plastic resin, making the plastics difficult to recycle.

All of this means that your cupboard, household dustbin and ultimately the local landfill site, are no place for e-waste.

How and where can I dispose of e-waste?

Industry role-players, such as manufacturers and retailers of electronic products; international donor organisations and government have initiated a variety of projects, to co-ordinate the safe disposal of the products. eWASA set the trend of partnering with various organisations to create what are known as "Green e-Waste Channels" in Cape Town, Gauteng and KwaZulu-Natal.

The Green e-Waste Channels encompass systems, processes and the infrastructure required for the safe disposal of e-waste, for both homes and businesses.

These partnerships include linking members of the public, businesses, drop-off centres, recyclers and shops with each other, in order to create jobs and ease the pressure on landfill sites.

The Gauteng Green e-Waste Channel has, for instance, started a pilot project in Johannesburg, working with municipal waste collectors Pikitup to establish ten pilot sites for drop-off and collection in the Johannesburg metro, which had grown to 25 sites by 2006. You may contact the provincial or municipal offices in your area to find out where to drop off your e-waste.

If you live outside of Gauteng, the Western Cape and KwaZulu-Natal, you may also enquire at your local supermarket chain, electronics store or cellphone service provider store regarding their e-waste disposal service.

There are also a number of companies countrywide who provide and collect e-waste bins to offices and schools.

SA Agulhas II successfully conducts Gough Island Relief voyage



Above : The SA Agulhas II on its first Gough Island Relief voyage.

By Mthuthuzeli Gulekana

After being handed-over to the Department of Environmental Affairs in early May 2012, the new polar and research ship, the SA Agulhas II undertook a shakedown cruise to the Southern Ocean and Antarctic ice edge. The purpose of the shakedown cruise was to test all ship systems under full operational conditions and under the harsh conditions of Southern Ocean winter. The cruise was also intended to train researchers in use of the modern scientific equipment found on board the vessel.

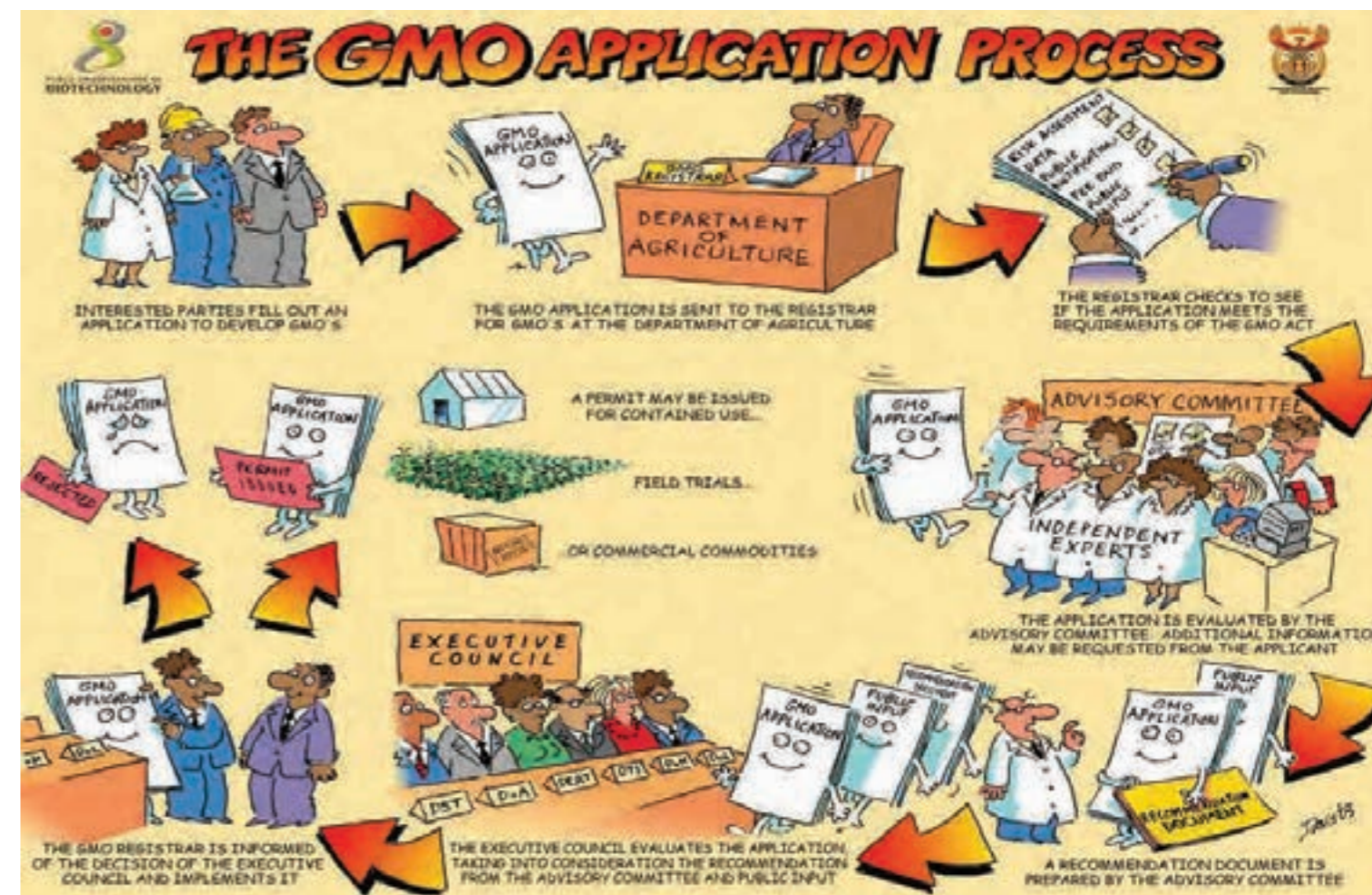
The SA Agulhas II undertook its first full voyage to Gough Island Relief in September 2012. The voyage entails taking an over-wintering scientific and support team to the islands. The vessel also takes all the supplies that the team will need and last them a year at the island (food, fuel, furniture, etc) as well as replenishment of consumables, construction equipment.

During the annual Gough Island Relief Voyage, the SA Agulhas II also take paying British nationals that are resident and/or visitors to Tristan da Cunha, (a British island) as passengers under an agreement between South Africa and United Kingdom (UK). Gough Island is an important weather station base for South Africa.

For the past few years, the South African Weather Services (SAWS) has had a fixed weather station on Tristan da Cunha and Gough Islands that have been continuously providing the essential meteorological data, particularly the air-sea interaction data to the Southern African region. These weather stations are continuously maintained, serviced and/or replaced during relief voyages.

Weather patterns (normal and extreme) that are eventually advected towards South Africa's mainland originate on the island. The collected data is globally important in industries such as sea rescue, aviation, maritime and scientific research. The data is used in scientific models in international research, specifically looking at the detection and monitoring of climate change and variability.

Being only the fourth voyage for the ship, it was necessary to ensure that the logistics capability and capacity of the ship were fully tested. To this end, the DEA appointed experienced officials to lead different aspects of the voyage. For the logistics of the voyage, Ms Chuma Phamoli and Mr Godfrey Magagula, were appointed the DEA Co-ordination Officer (DCO) and Assistant DCO, respectively, whilst Mr Mthuthuzeli Gulekana was appointed as the Chief Scientist to co-ordinate the scientific activities onboard the ship.



minimum requirements to be satisfied in an environmental impact assessment.

The release of GMOs into the environment is listed as an activity in terms of the Regulation in Chapter 5 of the National Environmental Management Biodiversity Act (Act 10 of 2004). The National Environmental Management Biodiversity Act confers to the South African National Biodiversity Institute (SANBI), as one of its functions the responsibility to monitor and report on the environmental impacts of GMOs released into the environment in South Africa.

The act also establishes a mechanism whereby the Minister of Water and Environmental Affairs may request an environmental impact assessment (EIA) of the GMO under the National Environmental Management Act (Act no. 107 of 1998; NEMA)

International context

Cartagena Protocol on Biosafety (Supplementary to the Convention on Biological Diversity). South Africa is a signatory to the Cartagena protocol on biosafety and therefore we are obliged to regulate (GMOs) effectively and use them responsibly.

The protocol regulates the trans-boundary movement of LMOs (living modified organisms), which are GMOs capable of transferring or replicating genetic material, to minimise the potential risks posed by LMOs by ensuring the safe transfer, handling and use of LMOs that may have negative effects on biodiversity or on human health.

Importance of maize in SA

Maize is South Africa's most important agricultural commodity. It is the staple food

of the bulk of the population, more particularly of the poor. Many other everyday commodities such as pharmaceuticals, confectionary, toothpastes, popcorn, soups, etc. include maize in various forms.

Most of our livestock are fed on maize which are then consumed by humans as meat, dairy products, cheeses or eggs. About 60% of maize produced in South Africa is white and the other 40% is yellow maize.

Yellow maize is mostly used for animal feed production while the white maize is primarily for human consumption. The estimated total area of biotech crop in 2011 was 2,3 million ha in SA and of the three GM crops maize occupies 1.873 million ha.

The maize industry is important to the economy both as an employer and earner of foreign currency because of its multiplier effects.

BIOSAFETY: Responsibly enhancing food security



Above: A crop of maize.

Biosafety can be defined as a set of actions and procedures to prevent minimize and/or eliminate potential risks to the environment and human, animal and plant health derived from research, development, production and commercialization of modern biotechnology.

The concept of biosafety also encompasses a range of measures, policies and procedures for minimizing potential risks that biotechnology may pose to the environment and human health. The characteristics of an organism are determined by its DNA (deoxyribonucleic acid) which is the information-containing component of the chromosome.

Genetic modification is the introduction of characteristics from one living thing to another. For example, unique genes are inserted into maize and other crops like cotton and soybean that make them more resistant to drought, herbicides and insects.

Biotechnology has a huge potential to help farmers and to improve food security and it could also make farming more environmentally friendly as less land and insecticides

are needed to grow the same amount of food. However before allowing farmers to grow Genetically Modified (GM) crops, we have to make sure that such crops won't cause any harm to the environment and human health more in comparison to similar conventional crops.

South Africa recognizes potential benefits from using biotechnology and to this end, adopted a National Biotechnology Strategy in 2001 identifying biotechnology as a tool for sustainable development.

As a result, SA has developed a stringent Biosafety regulatory system that ensures that the technology is utilized in a manner that minimize disruptions to the environment whilst simultaneously contributing to the country's sustainable development goals and imperatives.

South Africa has been planting GM crops commercially since 1999 and leads the African continent as the first country to commercialise the production of such crops in agriculture.

There are three (3) crops that have been

approved for commercialisation, namely maize (yellow & white), cotton and soybean. The traits approved via the regulatory system in South Africa for commercial cultivation are: insect resistant and herbicide tolerant cotton, herbicide tolerant soybean, insect resistant white maize, and insect resistant yellow maize.

Regulatory framework for GMOS in SA

The following are legislation that regulates or have provisions for genetically modified organisms:

Genetically Modified Organisms Act (Act 15 of 1997) is the primary legislation for all GMOs implemented by the National Department of Agriculture Forestry and Fisheries. The act aims to ensure that any activity with a GMO in SA is conducted so as to limit potential risks to the environment, human and animal health and also taking socio-economic considerations into account.

National Environmental Management Act (Act 107 of 1998) is South Africa's framework Environmental legislation. Section 24(5) of NEMA lays down the



Above : Crewmates aboard the SA Agulhas II.

All the objectives of the cruise were achieved, within the voyage's initial plans and timelines.

There were also extraordinary and historic achievements, with respect to oceanographic research and ship-based scientific missions, notably:

- The FIRST two sea gliders were deployed in the Southern Oceans, this has never been done under these harsh oceanic conditions. The sea gliders are continuously collecting the data.
- Several Argo floats were deployed
- A multi-disciplinary oceanographic monitoring and observations were conducted through the whole cruise with more than 200 stations occupied.
- Training of young and developing scientific and technical personnel was undertaken
- Deployment of surface weather drifters for the SAWS

A lot of scientific data were collected during the 34 day expedition, the data are being analysed and processed and published later.

During its stopover at the Tristan da Cunha and Gough Islands, all the passengers were given a chance to go ashore and visit the island. At Tristan da Cunha, it was mostly to tour "the most remote island" made up mainly of volcanic rocks. The island has a population of almost 300 people.



Above : Training of young and developing scientific and technical personnel was undertaken

Using DNA & microchipping to clamp down on poaching



Above : A DNA sample being extracted from rhino horn.

In recent years South Africa has been faced with an overgrowing number of wildlife poaching incidents that give rise to high volumes of wildlife and wildlife products that gets exported illegally.

As a means to address this scourge, Directorate Biodiversity Enforcement being responsible for the compliance and enforcement of National Environmental Management: Biodiversity Act (NEMBA) and National Environmental Management: Protected Areas Act (NEMPAA) on a national level has introduced the use of transponders to monitor the cycad trade as well as taking DNA samples to ascertain and monitor the origin of wildlife and wildlife products.

To strengthen the capacity of the officials, officials from the Department of Environmental Affairs and from the provinces

participated in cycad identification and micro-chip training in order to assist in the very challenging task of identifying cycads and tracing them to their origin should the need arise. To further regulate this industry, a super unique transponder has been developed in the United States, which can only be read with a specialised scanner (see picture below). This is an attempt to clamp down on illegal harvesting of cycad specimens from the wild.

South Africa is home to 37 species of cycads, and 29 of those species are endemic to South Africa, meanwhile three of those 37 species are already extinct in the wild (Identification of indigenous cycads of South Africa, Cornia Hugo, 2012).

Eleven species of cycads are critically endangered or are on the verge of extinction in South Africa.



Above : The department has gone high tech to clamp down on illegal harvesting of cycads, amongst others.

Further, officials from the Directorate Biodiversity Enforcement have also undergone DNA sampling training which will give them the expertise to trace the origin of wildlife and wildlife products including the rhino horn, and also be able to relate seized specimens to the crime scene.

The Department of Environmental Affairs is currently in partnership with Dr. Cindy Harper from Onderstepoort Veterinary Genetics Laboratory who has established the Rhodis database.

This database records rhino DNA which is collected from samples taken from live rhinos as well as crime scenes. At a later stage, the data can be used for cross-referencing and investigation purposes.

A good example of this is the seizure of 33 rhino horns by customs officials in Hong Kong, where the use of DNA sampling is likely to pinpoint the origin of those specimens.

Along with relevant state protection agencies, the Directorate: Biodiversity Enforcement is committed to ensuring compliance and enforcement of Biodiversity-related legislation remains a priority.



Above : Scanner reading super-unique transponder

ALL ENVIRONMENTAL CRIMES CAN BE REPORTED TO THE NATIONAL TOLL FREE HOTLINE 0800 205 005