

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING





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AIR QUALITY MANAGEMENT PLAN CLEARS THE AIR

DID YOU KNOW THAT KIDNEY FAILURE, BIRTH DEFECTS, HEADACHES, SHORTNESS OF BREATH, NAUSEA, AND CANCER ARE A FEW OF THE HEALTH RISKS THAT CAN BE EXPERIENCED BY SOMEONE WHEN CONTINUOUSLY INHALING AIR WITH HIGH CONCENTRATIONS OF CERTAIN AIR POLLUTANTS?



These health risks, in addition to the fact that breathing in "bad air" can induce asthma attacks in known sufferers, are only some of the key issues that the *Department of Environmental Affairs and Development Planning* will address by implementing and managing the Air Quality Management Plan for the Western Cape.

The team from the Directorate: Air Pollution, after conducting an extensive public participation process, formulated and developed the Air Quality Management Plan (AQMP) to comply with the National Environmental Management: Air Quality Act and more specifically to provide a mechanism that will advocate guidance on air quality management in the Province. The AQMP focuses on ensuring the effective and consistent implementation of sustainable air quality

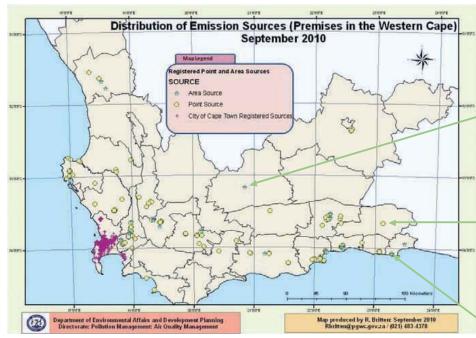
management practices, by all spheres of government, relevant stakeholders and civil society to progressively achieve and efficiently maintain clean and healthy air in the Western Cape.

Major contributors to air pollution are emissions from motor vehicles, particularly diesel vehicles, as well as emission releases into the atmosphere from activities such as residential wood burning. Other contributing factors to poor air quality include smoke and soot from controlled and uncontrolled fires, seasonal agricultural burning, and crop spraying and refuse burning. Specific industrial activities such as brick manufacturing and timber processing increase the particulate concentrations in the air as opposed to fish-meal processing that result in offensive odours. These air pollutants are released from point or area sources. (Continued...)



POINT SOURCE	refers to industrial areas where serious air pollutants can be expected.
AREA SOURCE	refers to areas such as landfills, residential areas or feedlots for animals.







1. AREA SOURCE



2. AREA SOURCE



3. POINT SOURCE

MAP INDICATING POINT AND AREA SOURCE LOCATIONS IN THE PROVINCE.

The Department fullfills a significant role in terms of the National Environmental Management: Air Quality Act (NEM:AQA) as well as an oversight responsibility. Four ambient air quality monitoring stations have been installed at various locations. It is the long term vision of the Department to acquire and install an additional 12 ambient air quality monitoring stations to ensure the effective management and monitoring of air quality in the Province.

The oversight responsibility of the Department includes working hand in hand with municipalities to manage ambient air quality in the province. It is your constitutional right as a citizen to enjoy clean and healthy air that is free from any harmful air pollutants that can threaten the status of your health.



AMBIENT AIR QUALITY MONITORING STATION LOCATED AT AN IDENTIFIED AREA SOURCE.

MAP INDICATING LOCATION OF AMBIENT AIR QUALITY MONITORING STATIONS IN THE PROVINCE. STATIONS HAVE BEEN INSTALLED IN MAITLAND, GEORGE, MALMESBURY AND WORCESTER. (*) INDICATES LOCATIONS OF STATIONS)

WHAT CRITERIA ARE CONSIDERED TO IDENTIFY A SUITABLE LOCATION TO INSTALL THE AMBIENT AIR QUALITY MONITORING STATIONS?

A site selection process is used to identify the most suitable location to install the ambient air quality monitoring stations. The result of such an assessment should reveal the most suitable cost effective location that will allow for representative monitoring of air pollutants. The process entails assessing the suitability of location in terms of:

- a) its proximity to industrial activities; residential developments, transport routes, power supply;
- b) the type of air quality complaints received from residents and/or stakeholders;
- c) security can the equipment be located with limited risk of theft and vandalism?

DEFINITIONS

Source: www.wikipedia.org

Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment, into the atmosphere.

Air pollutant: An air pollutant is known as a substance in the air that can cause harm to humans and the environment. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made.

Sources: Sources of air pollution refer to the various locations, activities or factors which are responsible for the release of pollutants into the atmosphere.

Air Quality: the impact that air pollutants have on the quality of air i.e how safe is the air you breathe?



EMPOWERING LANDFILL OPERATORS

Landfill space in the Western Cape has progressively become a rare "resource" in our Province

Did you know that on 10 March 2009 the President assented to the National Environmental Management: Waste Act, No. 59 of 2008? This essentially means that this act governs the manner in which waste management is regulated in the country and ultimately in your municipality. This act also empowers us to understand that it is our constitutional right to have an environment that is not harmful to our health and live in an environment that is protected for the benefit of present and future generations by administering reasonable legislation and other control measures. It is just as important to appreciate that this act advocates the prevention of pollution and ecological degradation.

The Waste Act defines various types of waste, some of which are extremely harmful to our health and the environment (*hazardous waste*), waste that does not pose an immediate hazard or threat to our health or the environment (*domestic waste*), and includes *domestic waste*, *building and demolition waste*, *business waste* and *inert waste*. Essentially this act provides guidelines of best practice to ensure that waste in your home, community, business and general environment is safely disposed of by taking the necessary practicable steps.

2. GENERAL WASTE. WHEN BURNT, TYRES EMIT AIR POLLUTANTS AND ARE CONSIDERED HAZARDOUS WASTE 3. BUILDING, DEMOLITION & HAZARDOUS WASTE



VARIOUS TYPES OF WASTE ILLEGALLY DUMPED IN AND AROUND A WATER BODY THAT CAN BECOME CONTAMINATED AND POSE A HEALTH RISK.

Disposing of your waste

Your domestic waste is presently transported to a landfill site. Most of the landfill sites in the Province are owned by municipalities. The daily operations on the landfill sites entail various activities to ensure that the types of waste received on the site is controlled and recorded. Landfill operators are responsible, for among other duties, to compact and cover the waste as effecting measures to prevent various waste materials such as paper and plastic from being blown around.



A LANDFILL SITE IN THE PROVINCE INEFFECTIVELY MANAGED.

Why is the Act important?

It is estimated that Cape Town's waste alone is growing at an average of 7% every year, and given our legacy of dumping waste, the province is fast exhausting its landfill airspace. Not only are new landfill sites costly to construct and operate, but also completely unsustainable. The reality is that eventually there will be no more land to dump on.

This act serves as a guiding principle to legislatively address waste concerns and the correlation between population growth and waste statistics. (Continued...)



INEFFECTIVE WASTE MANAGEMENT ON LANDFILL SITES CAN CAUSE YOUR HOME, COMMUNITY AND BUSINESS ENVIRONMENTS TO BECOME STREWN WITH WASTE, ULTIMATELY CREATING AN UNSAFE AND INNEATINE I LYING FRUIRONMENT



ON SITE INSPECTIONS ALSO REVEALED

THAT FIRES WERE STARTED ON LANDFILL SITES. THIS NOT ONLY

POSES AS A HIGH RISK FACTOR FOR RUN AWAY FIRES BUT THE BURNING OF CERTAIN WASTE

EMITS AIR POLLUTANTS INTO THE ATMOSPHERE.

TABLE DEPICTING THE STATISTICS: Waste generated across the province

DISTRICT	Tons per annum: AVERAGE 2010
City of Cape Town	2.55 million (m)
West Coast	0.18 m
Cape Winelands	0.35 m
Overberg	0.15 m
Eden	0.39 m
Central Karoo	0.04 m
TOTAL	3.66 m

Our province hosts an estimated 5.8 million people with an average growth rate of 2.7% per annum. Although statistics reflect a much higher population growth along the coast, a stable increase is evident in the non-urban areas. Waste in the province is estimated to comprise 13-28% paper, 10-33% plastics, 14-39% green or organic waste and 5-13% glass that is being directed to the various landfill sites across the Province.

Provincial Government – the oversight function

In an attempt to address this pressing concern the Western Cape *Department of Environmental Affairs and Development Planning* (DEA&DP) embarked on a waste management audit of the 240 waste facilities in the Western Cape. One of the most predominant findings of the audit indicated that poor waste management stems from the fact that the majority of landfill operators have a severe lack of technical knowledge in managing landfills and proper waste disposal. Interviews with landfill operators also revealed that the Municipal Integrated Waste Management Plans (IWMPs) of the municipalities had not been communicated to the municipal landfill operators as part of capacity building and training.

This is a major concern as the Act provides your local municipality with a mandate to develop, implement, and manage an *Integrated Waste Management Plan (IWMP)*. Some of the primary objectives of this plan are to assist your municipality to:

- Identify the negative impacts which poor waste management practices have on your health and environment, and find the necessary solutions to address these; and
- to manage the delivery of a waste management collection service to your residential premises.

(Continued



A-C: THE TEAM FROM THE DIRECTORATE: WASTE MANAGEMENT CONDUCT ON-SITE INSPECTIONS AS PART OF THE WASTE MANAGEMENT AUDIT.

The Importance of the Act is extended

On 1 July 2009, the responsibility of licensing waste management facilities, as in accordance with the National Environmental Management: Waste Act of 59 of 2008, was assigned to provincial environmental departments. This now essentially means that licenses must be issued to the owners of landfill sites declaring that these facilities are authorised to practice effective waste disposal management. This further means that the disposal methods applied are in consideration of the health of the surrounding community as well as the environment in general.

In order to assist municipalities in attaining the licensing requirements the Department of Environmental Affairs and Development Planning (DEA&DP) developed and conducted training to empower municipal operators with the necessary skills to ensure that the landfill practices are in keeping with safe disposal methods.

THE TRAINING WAS MADE AVAILABLE TO
MUNICIPAL AND OPERATIONAL STAFF ASSOCIATED
WITH WASTE DISPOSAL IN ALL FIVE DISTRICT
REGIONS AND A TOTAL OF 47 MUNICIPAL OFFICIALS
ATTENDED THE COURSES HELD IN MALMESBURY,
KLEINMOND, AND OUDSHOORN. OFFICIALS WERE
EDUCATED ON THE MINIMUM REQUIREMENTS FOR
WASTE DISPOSAL ON LANDFILLS, WHICH ALSO HAD
SPECIFIC FOCUS ON BEST PRACTICES AND
OPERATIONAL REQUIREMENTS.



HEAVY MACHINERY IS OPERATED BY THE LANDFILL OPERATORS AS ONE OF THE PRIMARY WASTE DISPOSAL METHODS ON THE LANDFILL SITES





A-C: TRAINING TAKING PLACE AT THE VARIOUS OFFICES BEFORE TRAINEES CONDUCT A PRACTICAL SITE INSPECTION.



"Delegates at the training truly appreciated the presence of the authorities throughout the training sessions. It was important for them to experience the support of the authorities and to know that they can approach us for assistance at anytime," noted Eddie Hanekom, Deputy Director of Waste Disposal Management at the Department of Environmental Affairs and Development Planning. Municipal landfill operators and staff across the province are now able to implement best practices learned at the training to extend the lifespan of many of landfills currently in use by managing waste effectively.

After reviewing practical case studies, trainees were able to visit the local landfill sites to investigate practical aspects of the course such as addressing challenges of problematic waste, waste salvaging, wind blown litter, and record keeping. Trainees expressed their concern about on site security at the landfill site and how best to manage the "kuiergaste". Department officials were able to clarify that no squatting or waste recovery is allowed on any landfill sites. Officials emphasized that the health and safety of personnel and the illegal informal salvages is of the utmost importance and must be treated as a priority.



A SERIOUS CONCERN RAISED BY TRAINEES IS THE ILLEGAL RECOVERY OF WASTE BY "KUIERGASTE" AT THE LANDFILL SITES WHO ALSO ERECT TEMPORARY STRUCTURES FOR SHELTER.

THE STATE OF OUR ENVIRONMENT UNDER THREAT

OUR HEALTH AND WELL-BEING DEPENDS ON OUR NATURAL ENVIRONMENT. THAT IS WHY PROTECTING THE NATURAL ENVIRONMENT IS NOT JUST ABOUT SAVING ANIMALS AND PLANTS: IT IS ALSO ABOUT PROTECTING PEOPLE'S LIVES AND LIVELIHOODS.









BUILDING AND DEMOLITION WASTE BEING ILLEGALLY DUMPED ON A SITE IN PHILLIPI.

ILLEGAL DUMPING HAS SIGNIFICANTLY ESCALATED IN AREAS SUCH AS PHILLIPI. THIS ENVIRONMENTAL VIOLATION COMPROMISES THE STATE OF THE NATURAL ENVIRONMENT. REMEDIATION IS BOTH COSTLY AND TIME CONSUMING.



A-B: CLEARING OF INDIGENOUS VEGETATION, SAND DUNE MINING OR EXCAVATIONS ARE ENVIRONMENTAL VIOLATIONS THAT IMPACT ON THE WATER TABLE (AS DEPICTED).



DID YOU KNOW THAT THE NATIONAL **ENVIRONMENTAL MANAGEMENT ACT 107** OF 1998 (NEMA) WAS ASSENTED TO ON 19 NOVEMBER 1998? THIS LEGISLATIVE FRAMEWORK SERVES AS A MEANS TO PROTECT OUR NATURAL ENVIRONMENT FROM RUIN AND CLEARLY HIGHLIGHTS THE RESPONSIBILITY OF ALL CITIZENS. **SECTION 28 OF CHAPTER 7 OF THE NEMA** SPELLS OUT OUR INDIVIDUAL RESPONSIBILITY TO TAKE CARE OF OUR **NATURAL ENVIRONMENT AS: DUTY OF CARE AND REMEDIATION OF** ENVIRONMENTAL DAMAGE. THIS MEANS THAT EVERY PERSON WHO CAUSES, HAS CAUSED OR MAY CAUSE SIGNIFICANT POLLUTION OR **DEGRADATION OF THE ENVIRONMENT MUST TAKE REASONABLE MEASURES TO** PREVENT SUCH POLLUTION OR **DEGRADATION FROM OCCURRING,** CONTINUING OR RECURRING, OR, IN SO FAR AS SUCH HARM TO THE **ENVIRONMENT IS AUTHORISED BY LAW** OR CANNOT REASONABLY BE AVOIDED OR STOPPED, TO MINIMISE AND RECTIFY SUCH POLLUTION OR DEGRADATION OF



C-D: ILLEGAL STORAGE OF HAZARDOUS WASTE ON URBAN PROPERTY POSES HEALTH RISKS AND ALSO LEADS TO THE CONTAMINATION OF SOIL AND WATERBODIES.





THE ENVIRONMENT.

THE STATE OF THE NATURAL ENVIRONMENT IS COMPROMISED AS WATERBODIES ARE POLLUTED AND COMMUNITIES RESIDE IN UNHEALTHY NATURAL ENVIRONMENTS.

ARE YOU AN
ENVIRONMENTAL
CRIMINAL?

IN SOUTH AFRICA, WE HAVE A NUMBER OF LAWS THAT PROTECT US AND OUR ENVIRONMENT BY MAKING IT ILLEGAL TO DO THINGS WHICH HARM THE ENVIRONMENT. ENVIRONMENTAL CRIME, WHICH INVOLVES CAUSING HARM TO THE ENVIRONMENT, IS JUST LIKE ANY OTHER CRIME. BY HARMING THE ENVIRONMENT, THE ENVIRONMENTAL CRIMINAL CAN HARM OR EVEN KILL THE PEOPLE, PLANTS AND ANIMALS THAT DEPEND ON THE NATURAL ENVIRONMENT TO SURVIVE.

The Western Cape **Department of Environmental Affairs and Development Planning** has a specialised unit, namely the Environmental Compliance and Enforcement Directorate, which consists of Environmental Management Inspectors (EMIs) who ensure that citizens adhere to the national environmental legislation.

Environmental Management Inspectors, also known as 'Green Scorpions', monitor the environment and investigate environmental crimes such as the illegal dumping of waste, illegal deep-sea fishing, smuggling of ivory, and illegal property development. These Green Scorpions function to enforce Section 24 of the Constitution which guarantees every individual the right to an environment that is not harmful to their health and well-being.

This constitutional right is effected via the National Environmental Management Act (Act 107 of 1998), abbreviated to NEMA, which confers a wide range of powers on EMIs to investigate environmental crimes such as investigative powers, the seizing of items, as well as the powers to stop, enter, and search vehicles, vessels, and aircrafts. EMIs also have the right to enter and inspect any building, land, or premises and may issue notices and directives without a warrant. (Continued...)





A-B: ENVIRONMENTAL MANAGEMENT INSPECTORS (EMIS) ASSESS THE IMPACT OF ENVIRONMENTAL VIOLATIONS SUCH AS ILLEGAL DUMPING





C: EMI OFFICIALS "GREEN SCORPIONS" CAN BE IDENTIFIED DURING

D: PROVINCIAL MINISTER: MR. ANTON BREDELL JOINS SENIOR DEPARTMENTAL OFFICIALS ON A JOINT BLITZ INVESTIGATION WITH A TEAM FROM THE CITY OF CAPE TOWN.





Co-operative investigation

The constant threat to the natural state of our environment is a primary concern for the Green Scorpions, however the number of environmental violations continue to escalate. The Environmental Management Inspectors (EMIs) in an attempt to address these escalations plan joint investigations with officials from other spheres of government such as municipalities and the police services.

INVESTIGATIONS ARE CAREFULLY PLANNED BY THE GREEN SCORPIONS TEAM. THIS INVOLVES IDENTIFYING SITE LOCATIONS, CONDUCTING INTERVIEWS AND ENTERING BUILDINGS TO IDENTIFY THE TYPE OF ENVIRONMENTAL VIOLATION.



COASTAL HOME OWNERS EITHER ILLEGALLY CONSTRUCTED WALKWAYS (A) ON SAND DUNES OR EXTENDED THEIR PRIVATE GARDENS (B) ONTO PUBLIC OPEN SPACES



Coastal Blitz

A coastal blitz, arranged by the Green Scorpions, was conducted in collaboration with City of Cape Town officials on twelve beachfront properties in the coastal area of Melkbosstrand. The blitz was in response to reports that the property owners had triggered listed activities that were in contravention of NEMA regulations according to Listing Notice 1 No. R 386, on the properties. The inspection revealed a number of infringements on the properties such as property owners that had illegally erected private boardwalks to gain access to the beach, which in so doing either damaged or removed the indigenous vegetation.

Many of the homeowners were surprised to find out that large parts of their existing gardens were in fact illegal extensions onto the public property. "In reality, this means anyone could pack a picnic and settle in on the lawns of these residents to enjoy the view of the beach as the property belongs to the public," comments Wazeer Essop, a senior EMI. By expanding their gardens onto public property - whether actively or passively - these residents are benefitting illegally by increasing the value of their homes by displaying the extra land as part of their property and depriving the public of their right to enjoy the space.

The legislation in terms of coastal properties clearly stipulates that no construction or earth moving activities in the sea or within 100 metres inland of the high-water mark of the sea, in respect of fixed or floating jetties and slipways, tidal pools, embankments, stabilising walls, buildings, or infrastructure are permitted. For many coastal home owners, this translates into any form of a private jetty or walkway to the beach, in other words, in contravention to the environmental law.

The NEMA regulation, Listing Notice 1 No. R 386, also applies to home owners who have removed dune systems so as to accommodate for ocean views or planted lawns for beautification as it prevents the free movement of sand and damages the vital indigenous vegetation of more than $10m^2$ that many unique coastal eco-systems rely on for survival

Waste Blitz

The Green Scorpions additionally performed a waste blitz in the Phillipi area of Cape Town to inspect properties of which the owners were engaging in serious illegal dumping, the operating of waste disposal sites without a licence, and sand mining activities. These listed activities are in direct contravention of Section 20 of the national Environmental Management Waste Act. The Phillipi area is best known as an agricultural area with rich soils and a high water table where these types of illegal activities cause pollution to agricultural land, contaminate the water bodies in the area, and negatively affect the health and well being of the people in the area

Of the sites inspected, the owner of a brick-making company was issued with a warning letter for illegal storage and disposal of waste while the property owner of the second site was issued with a compliance notice after failing to take action to rehabilitate the land after a first warning letter was issued by the department.

"It is a trend that people want to comply. Out of the annual approximation of 200 complaints, only 90 will receive warning letters to comply, a further 40 will require the issuing of a Compliance Notice and a only a final three of those cases will lead to prosecution," states Dr Eshaam Palmer, Director of Law Enforcement and Administration for the department. ET



PROVINCIAL MINISTER: MR. ANTON BREDELL WITH A SENIOR DEPARTMENTAL OFFICIAL FROM THE DIRECTORATE: WASTE MANAGEMENT ON SITE IN THE PHILLIPI HORTICULTURAL AREA DURING THE JOINT BLITZ. ILLEGAL SAND DUNE MINING WAS THE ENVIRONMENTAL VIOLATION THAT SUBSEQUENTLY IMPACTED ON THE WATER TABLE

WHAT IS A WARNING LETTER?

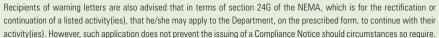
Warning letters are served to transgressors to inform them of the Department's intention to issue him/her with a Compliance Notice in terms of section 31L of the NEMA

The letter outlines that the individual has illegally commenced with an activity(ies), listed in terms of Government Notice 33306 of 18 June 2010, promulgated in terms of section 24(2) and 24D of the NEMA and/or Government Notice 718 of 3 July 2009 promulgated in terms of section 19(1) and 20 of the NEM: Waste Act.

The individual is also informed of the Department's intention to issue a Compliance Notice which will direct him/her to:(i) immediately cease physical activity on the site; (ii) rehabilitate the site to its original condition; and(iii) carry out any other measure necessary to rectify the effects of the unlawful activity.

The transgressor has a period of 7 (seven) calendar days from the date of receipt of this warning letter to make written representations to the Department as to why a Compliance Notice should not be issued.

If the transgressor informs the Department, that he/she intends to correct the unlawful activity, the individual must submit to the Department, within 30 (thirty) calendar days of receipt of the warning letter, a detailed rehabilitation plan compiled by a suitably qualified and experienced independent Environmental Assessment Practitioner.







WHAT IS A COMPLIANCE NOTICE?

The Compliance Notice relates to the non-compliance with the provisions as stated above in the warning letter and the transgressor's failure to adhere to the requirements of the Department's warning letter which had been previously issued.

He/she will immediately have to cease their activities on site and submit within 30 (thirty) calendar days of receipt of the compliance notice, a detailed rehabilitation plan compiled by a suitably qualified and experienced independent Environmental Assessment Practitioner.



The Compliance Notice will also outline the Procedure for lodging an objection to a Compliance Notice (section 31L and 31M of NEMA). The Compliance notice will inform the transgressor of the consequences of failing to comply with the Compliance Notice, which are:

If you fail to comply with this Compliance Notice, you will have committed a criminal offence and be prosecuted, punishable on conviction with a fine of up to R5 million or a maximum of 10 years imprisonment, or both such fine and such imprisonment.

The Minister may also:(i) revoke any authorisation to which the Compliance Notice relates; and/or(ii) take any steps necessary to ensure compliance with the provisions of the law or authorisation to which the Compliance Notice relates and recover from the transgressor the cost of doing so.

In relation to the compliance notice, a follow-up inspection will be conducted the following day to ascertain whether the transgressor has complied.

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING.

CONTACT DETAILS

National 24 hour Toll-has Environmental Crimes and 0800 205 005

Western Cape commat complaints email: leccompl@pgwc.gov.za

Cape Town Office:

Director: Dr. €. Polmor, opelmor@pgwc gov.te. 021 483 3506

Deputy Director: Wit F. Abrahams, feabraha@pgwc.gov.za 021 483 8779

A JOINT INVESTIGATION TEAM COMPRISING SAPS, LOCAL MUNICIPAL AND PROVINCIAL OFFICIALS



VIOLATIONS AND PENALTIES

Penalties for the failure to comply with environmental legislation can result in fines of up to R10 million and/or 10 years imprisonment. Penalties are determined using fines calculators whereby various variables are generated and a specific fine generated

victed offenders may also be held liable for the t of rehabilitation or the damaged environment, committing the environmental crime, as well as having to forfeit any equipment used to commit the crime to the State.

ENVIRONMENTAL CRIMES HAVE LEGAL CONSEQUENCES



R5 million and/ 5 years imprisonment.



R10 million and/ or 10 years imprisonment. Section 20 of the NEM:WA



r 10 years imprisonment.

filling and excavating within a wetland.



or 10 years imprisonment. NEM:WA



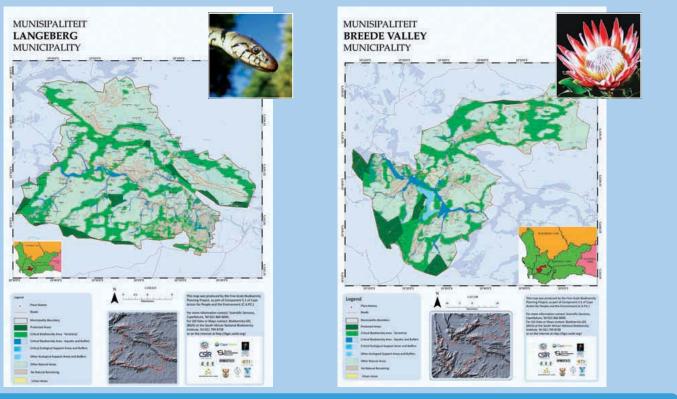
R1 million and/ or 1 year imprisonment.



THE TEAM LEAVE A SITE INSPECTION AFTER A LONG DAY.



AS CUSTODIANS OF THE ENVIRONMENT, IT IS OUR RESPONSIBILITY TO CREATE A DELICATE BALANCE BETWEEN PROTECTING THE ENVIRONMENT WHILE ENSURING THAT THE SOCIO-ECONOMIC NEEDS OF OUR CITIZENS ARE ADDRESSED BY ADVANCING SUSTAINABLE DEVELOPMENT. WHAT DOES THIS MEAN AND MORE IMPORTANTLY, HOW ARE WE ENSURING THAT THIS RESPONSIBILITY IS MANAGED?



The Biodiversity sector plans prepared for the Langeberg and Breede Valley Municipalities.

DEPARTMENT STEERS Breakthrough in Sustainable DEVELOPMENT

It was indeed a milestone when the Provincial Minister of Local Government, Environmental Affairs and Development Planning, Mr Anton Bredell together with key stakeholders that included among others CapeNature and the South African National Biodiversity Institute (SANBI) launched a world first: Biodiversity Sector Plans. The formulation and development of these plans have been a progressive project that spanned more than six years of hard work, dedication and reflects the true commitment of officials not only to accept the responsibility of maintaining the delicate balance, but understand the responsibility both to the citizens and the environment.

The current concern

Our existing nature reserves and national parks are not enough to conserve representative portions of our biodiversity. As a result, certain ecosystems are fairly well protected while others have no protection at all. Furthermore, it is estimated that 80% of the country's most scarce and threatened habitats are privately owned. Habitat loss is the greatest challenge to the conservation and sustainability of biodiversity. This means that our least protected vegetation and freshwater ecosystems are most vulnerable to land-use pressures such as urban and agricultural expansion. infrastructure development, as well as prospecting and mining.

In order to secure the integrity and sustainability of our natural environment, conservation management is required of more than 42% of our landscape. Allocating this percentage of landscape into formal conservation is, however impractical and not conducive to development. The most important point to consider is that urbanised communities start to lose their connection to nature. and individual human well-being declines as a result. Migration patterns over the years have revealed the move of rural populations to urban areas in search of improved livelihoods. This has placed significant challenges on biodiversity management around towns and cities.

All these factors obligate us to focus our efforts outside the protected areas. There is a need to integrate biodiversity into the way we use and manage our production landscapes and settlements.

How do these maps enable us to do just that?

The Biodiversity Sector Plans are a new generation of planning tools that provide planners, environmental managers and land-users with a wealth of biodiversity information. These plans promote the integrated use and management of natural resources by highlighting priority biodiversity areas (called Critical Biodiversity Areas) where loss of habitat should be avoided. Areas where ecological degradation should be prevented, also referred to as Ecological Support Areas, are indicated on these maps. This means that planners are able to make more informed decisions about land use and that proposed developments are ecologically sustainable.

It remains critical for the Department of Environmental Affairs and Development Planning to secure ecological sustainable development while promoting justifiable economic and social development. This vision demands vigilance of biodiversity conservation and its direct relevance to the conservation community, developers and the broader public.

The Department, alongside SANBI, forms the driving force behind the implementation of the plans, while CapeNature and the South African National Parks (SANParks) will serve as the main executors of the project. Other key stakeholders in the production of the plans include the National Department of Water Affairs and its respective regional office and several NGO's and specialist consultants. The Department has engaged with 12 municipalities over the past 18 months to build capacity and prepare for the application of the plans.

Speaking at the launch of the plans, Provincial Minister: Mr Anton Bredell summed up the importance of making sound development decisions with as little impact on the environment: "Ultimately, we are responsible for being biodiversity custodians who make decisions which are informed and that will holistically benefit our citizens socially and economically without compromising our present environment and that of future generations."



TOUCHING THE EARTH LIGHTLY

THE KOGELBERG AREA HAS BEEN REFERRED TO AS BEING THE FLORISTIC HEART OF THE GLOBALLY UNIQUE CAPE FLORAL KINGDOM WHICH HAS THE LARGEST FLORA AND HIGHEST LEVELS OF ENDEMNISM. THE PLANT SPECIES RICHNESS INCLUDES MORE THAN 1 650 PLANT SPECIES, 77 LOCALLY ENDEMIC TAXA, AND 116 RED DATA LISTED SOUTH AFRICAN PLANTS.







THE QUESTION IS: HOW DO YOU GET TO ENJOY THIS BEAUTIFUL LANDSCAPE THAT HAS EXCEPTIONALLY HIGH CONSERVATION SIGNIFICANCE WITHOUT COMPROMISING ITS NATURAL STATE?

CapeNature, in its continued endeavour to unlock the tourism potential of the protected areas in the Province, and through this allow the public to experience nature, announced the Oudebosch "green" tourism development.

The primary aim of the Oudebosch development is to create a project that is in harmony with its environment and which is based on long term sustainable ecological principles. The project integrates globally sustainability principles with regional ecological and planning imperatives, and innovative appropriate spatial design solutions rooted in a thorough understanding of the locale. The project will actively restore existing impacts, reduce ecological footprint and minimise impacts on ecological processes, use of resources and energy.

Although the Oudebosch location was identified as appropriate for limited development as part of a systematic reserve-wide planning process, the precinct includes a large proportion of sensitive seep, valley bottom and natural wetlands where habitat loss or indirect impacts should be avoided. Other natural fynbos habitat types present at the site are very well conserved across the broader landscape, but any loss of natural habitat in nature reserves should be avoided as a general principle.

This area is also subject to periodic natural fires. These important factors significantly influenced the planning phase of the Oudebosch development. A project team consisting of an architect, quantity surveyor, engineer, civil engineer, energy specialist, ecological planner and freshwater specialist worked hand in hand to ensure that careful mapping of these habitats was necessary to allow layout design to prevent significant impacts on any wetland, and minimise long-term fire management costs and risk to infrastructure.

The existing tourism product consists of old forestry-style staff accommodation, with units located very close to one another, and very poorly oriented with regard to the surrounding environment. In order to optimise layout for tourism use, the architect and design team considered it essential to provide larger spacing between units and re-orient units:

- to take advantage of the superb natural views of the Palmiet River Valley;
- to allow for passive solar heating as per green building best practice; and
- for better privacy. (Continued...)



EXISTING OLD FORESTRY-STYLE ACCOMMODATION AT THE RESERVE.





A-B: MODELS DEPICTING THE NEW DESIGNS OF THE ACCOMMODATION UNITS THAT WILL BE CONSTRUCTED AS PART OF THE DEVELOPMENT.



A further concept used to guide the project is the idea of "touching the earth lightly". This idea establishes as primary the natural landscape, ecology and environment and directs that development be tailored to "fit" this particular place. All measures were and are taken to minimise and mitigate impacts and manage the process of development from conception to operation.

Permanent foundations and heavy conventional structures will not be used during the construction of the new units. This is in line with the International Union for the Conservation of Nature principles of sustainable development, which are endorsed by the United Nations Educational Scientific and Cultural Organisation in the World Heritage Site guidelines.

The final planned layout is structured as two phases located at two separate sites: Phase 1 of the project will see the replacement of the six (6) existing accommodation units (current peak accommodation capacity is 36 overnight guests) with five (5) upgraded units with a total capacity of 20 overnight guests and a communal recreation facility/multipurpose centre. During Phase 2 of the project, three (3) units with two (2) bedrooms each, 10 single bed units and one communal recreation facility which together can accommodate 32 guests, will be constructed.

Final layouts accommodate the planned capacity of 52 overnight guests with no direct impact on pristine habitats, minimal impact on one degraded wetland area, a very compact overall ecological footprint, and reduced water use and river abstraction impact relative to the existing situation. Careful architectural and services planning in consultation with the ecological planner substantially mitigated construction, operation and potential future decommissioning impacts of the buildings themselves through a number of design features

Provincial Minister of Local Government, Environmental Affairs and Development Planning, Mr Anton Bredell while visiting the site expressed his stamp of approval: "To initiate a project in this significant area, you have to ask yourself what do you do in the Heart of the Fynbos? The idea that we who are indeed responsible for "environmental governance and oversight, have a spatial, ecological and ethical responsibility in developing this site as it is central to all the work that has been undertaken in this project. I am pleased that the developers took into account best 'green' practices for sanitation and water services, as well as building for a fire-prone zone. This is a clear indication that CapeNature is leading the industry to start thinking ahead, to ensure that a new dawn of green thinking becomes common practice in the conservation and tourism industry". ET



PROVINCIAL MINISTER: MR. ANTON BREDELL LISTENS INTENTLY WHILE A TEAM MEMBER EXPLAINS THE DESIGN ASPECTS OF THE NEW STRUCTURES.



THE PROJECT TEAM JOIN THE PROVI TO COMMENCING A MILESTONE PROJECT





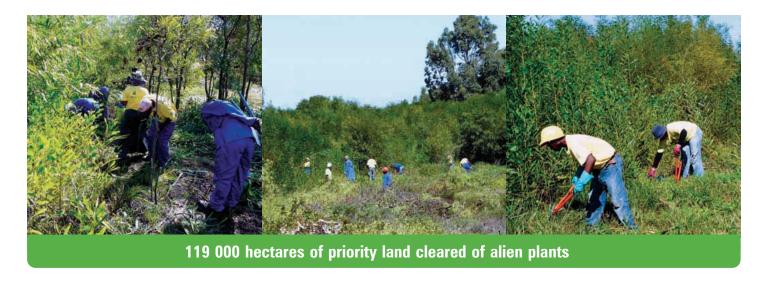
Sustainability means integrating a design with



MAN ON A MISSION: PROVINCIAL MINISTER OF LOCAL GOVERNMENT, ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING, MR ANTON BREDELL HOLDING AN ARCHITECTURAL MODEL OF THE NEW UNITS. BUILDING MATERIALS INCLUDE WOOD-FRAMED STRUCTURES – LARGELY PREFABRICATED OFF-SITE TO REDUCE ON SITE IMPACTS, WHILE MATERIALS WILL BE SOURCED LOCALLY WHEREVER POSSIBLE TO REDUCE

CAPENATURE DECLARES WAR ON THIRSTY INVADERS

INVASIVE ALIEN PLANTS. CONSIDERED TO BE THE SINGLE BIGGEST THREAT TO BIODIVERSITY IN THE WESTERN CAPE. HAVE INFESTED OVER 10 MILLION HECTARES OF SOUTH AFRICA. THE WESTERN CAPE IS THE MOST HEAVILY INVADED PROVINCE. AT AROUND A THIRD OF THE TOTAL NATIONAL AREA.



Some of the most common invaders in the province include Pines, Hakeas and Black Wattle. These alien plants compete for growing space with our own indigenous plants, known as fynbos, and impact negatively on the quality of ecosystem services that our biodiversity delivers. Large strands of dense alien plants also provide a high fuel load that can cause exceptionally hot fires which ultimately affect the makeup of the soil, damaging its structure and causing high incidence of flooding during the wet winter

An estimated 60% of the Western Cape's water catchment areas are covered by invasive alien vegetation - consuming up to 50% of the region's river run-off which supplies water to our major storage dams. Most of the alien species consume more water than indigenous plants and are also depleting the valuable underground water resources.

The current reduction in water yield due to alien plants is estimated at 85 million cubic metres per annum and scientific predictions are that this may increase to more than 340 million cubic meters in years to come, if the current rates of infestation levels are not controlled. In response to the above situation, CapeNature has succeeded in removing invasive alien plants from 119 000 hectares of priority conservation land across the province.

This achievement spells out the success of the staff who have exceeded the organisational targets by almost 30% within one financial year. CapeNature Executive Director: Operations, Mr Fanie Bekker confirmed that the organisation deployed an army of 1000 workers and 92 experienced contractors to remove invasive alien plants in nature reserves, mountain catchments including river riparian areas, wetlands and marshlands as well as private land with high biodiversity value across the Western

During clearing operations contractors and their teams cut the invasive alien plants down and apply herbicide to prevent these species from growing again. Regular follow up clearing operations reduces infestations and the further spread of invader plants. By removing invasive alien plants that use up valuable water, compete with indigenous plants and damage the soil, CapeNature aims to ensure that there will be sufficient water for everyone and that land will become productive again. This project is economically viable as it creates job opportunities by employing contractors as well as facilitating the usage of cleared plants for furniture making. ET



KOGELBERG BIOSPHERE: KOGELBERG BIOSPHERE, A UNESCO RECOGNISED BIOSPHERE RESERVE. CLOSE TO BETTY'S BAY IS HAILED AS THE FINEST EXAMPLE OF MOUNTAIN FYNBOS IN THE WESTERN CAPE WITH 0,1% ALIEN INFESTATION DUE TO REPEATED CLEARING EFFORTS FROM CAPENATURE

A BIOSPHERE RESERVE

which accommodates and benefits both the natural environment and the communities



ACHIEVEMENTS

Over its last financial year CapeNature has utilised a management. The cost to clear one hectare of infested land can vary between R1 000,00 - R15 000,00, depending

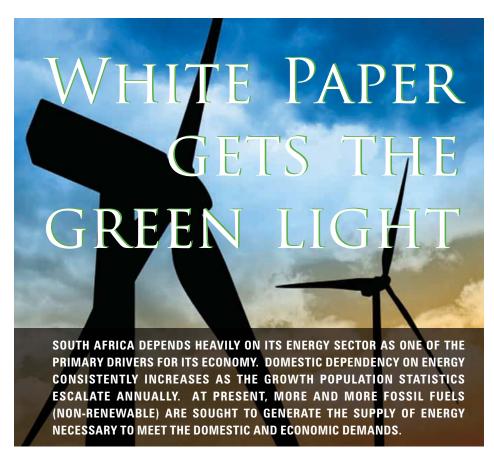
CapeNature targets VS achievements between April

2009 and March 2010. PLANNED INITIAL CLEARING:

DID YOU KNOW?

countries for their beauty, economic value or some





Approximately 95% of the energy use in the Western Cape is generated by burning fossil fuels. This is completely unsustainable in the long term as these are non-renewable resources. The generation and use of energy from non-renewable carbon based sources has significant environmental consequences globally and regionally. One such consequence is global warming - due primarily to an increase in greenhouse gas emissions from the burning of

In South Africa, and in particular the Western Cape, it is expected that global warming impacts will include more droughts, floods and fires, the acceleration of species extinction, and sea level rise will threaten coastal areas. Communities that depend on agriculture and fishing for their livelihoods will be vulnerable to the impact of global warming as ecosystems are at risk of being destroyed.

The need to harness alternative sources of energy is no longer a quick-fix for the distant future. It is a reality which we must consider now to enable our country to conserve our natural resources for future generations. Energy efficiency and increased use of renewable energy reduces the atmospheric emission of harmful substances such as smoke, sulphur oxides and nitrogen oxides. These substances are known to have adverse effects on health and are frequently a primary cause of common respiratory ailments. These threats and the above indicated predictions justify the urgency and need to reduce greenhouse gas emissions.

Leading by example

It was only fitting for the **Department of Environmental** Affairs and Development Planning, as an immediate and practical approach to mitigate the impacts of global warming to conduct an energy audit in six (6) key public buildings with the view of providing recommendations to improve energy efficiency. The energy audits reports reflected electricity consumption analyses of the buildings together with recommendations for energy efficiency interventions. Awareness workshops were hosted with staff to advance behavioural change of daily energy use.

This pilot project paved the way for the provincial administration to benefit from significant energy savings and more importantly reduce carbon emissions

Some of the Kev Recommendations outlined from the energy analysis

- Implement an energy awareness programme
- 2. Use the HVAC Control System as effectively as possible
- 3. Optimise lighting in the building
- 4. Implement intelligent energy loggers
- Reduce the number of printers
- Use laptop computers as opposed to workstations 6.
- Install occupancy sensors
- Implement an automated computer switching system

AN INTELLIGENT ENERGY LOGGER INSTALLED AT THE DEPARTMENT

From pilot project to changing the face of renewable energy in the Province

In July 2010, Cabinet approved the Western Cape's White Paper on Sustainable Energy prepared by the Provincial Department of Environmental Affairs and Development Planning.

The White Paper on Sustainable Energy sets out the vision, policy, principles, goals and objectives to develop a sustainable energy system which is built around the sustainable development goals aimed at social, environmental and economic development. The White Paper also serves as a institutional framework through which the Department will co-ordinate an integrated energy strategy and programme that will incorporate local and national government objectives and plans.

Targets set as part of this strategy include reducing electricity use in selected provincial buildings such as hospitals and schools by 5-10 percent by 2014. The strategy will further aim to reduce the provincial carbon emission ratio by 10 percent during the same time-frame. These targets will be realized by shifting the provincial reliance on energy generated from burning fossil fuels to renewable energy dependence of 15 percent by 2014.

Municipalities will be the key implementers of these policies and strategies in ensuring that the Province is able to meet its targets. Furthermore, the strategy outlines the key energy concerns and opportunities facing the Western Cape and advances the Province to develop a sustainable portfolio of energy solutions while also reducing pollution and increasing access to energy for all citizens in the Province. Fundamental to the outcome of this strategy is the importance to promote energy efficiency in households, commerce, industry and in all provincial offices, hospitals and schools.

The Strategy a reality

Service delivery remains a challenge: however through innovative. collaborative working relations and with the hope to change the socio-economic conditions of people – there is the possibility to realise a vision. Project teams celebrate the outputs of projects as successes, but the outcomes are experienced by the beneficiaries in their daily lives. The Department of Environmental Affairs and Development Planning in an endeavor to mitigate the effects of global warming and to change the lives of citizens in indigent communities embarked on a solar water heater programme to install solar water heaters in the homes of

The programme served as testament that the lives of people can indeed be changed. Through working relations with the various municipalities, the Department identified households in Kwanokuthula, Riversdale, Elsies River, Nyanga, Atlantis, Prince Albert, Oudtshoorn, Mossel Bay and Darling that qualified to recieve solar water heaters. These households will enjoy the benefit of cost savings on electricity bills while saving the present environment for future generations. More than 1000 solar water heaters were installed across municipal districts. One of the measurable outcomes of the programme are the estimated 300 individuals who received industry solar heater installation training during these projects. These trainees from the recipient communities are now equipped with the necessary skills to perform routine maintenance work on the solar water heaters.



THE INSTALLATION OF SOLAR WATER HEATERS WILL MITIGATE THE EFFECTS OF GLOBAL WARMING BY REDUCING RELIANCE ON ENERGY GENERATED FROM THE BURNING OF FOSSIL FUELS.

CMU - MANAGING LAND, SEA AND MAN

COASTAL MANAGEMENT IN SOUTH AFRICA HAS EXPERIENCED A NUMBER OF PARADIGM SHIFTS SINCE THE 1970S, EACH WITH DIFFERENT POLICY APPROACHES AND MANAGEMENT PRACTICES. THIS "EVOLUTION" OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: INTEGRATED COASTAL MANAGEMENT ACT (NEM: ICM ACT 24 OF 2008) HAS CULMINATED IN A LEGAL TOOL OR ACT OF PARLIAMENT THAT RECOGNISES THE ECOLOGICAL, SOCIAL AND ECONOMIC INTERACTIONS BETWEEN THE OCEAN AND HUMANS.

This legislative framework essentially provides "guidelines" that allows the different spheres of government to govern mutually sustainable relationships that (1) allows communities to harness the economic benefits of the ocean, (2) at the same time focus on preserving the natural state of the ocean ecosystems to prevent degradation of the marine habitats.

In response to effecting the legislative frameworks for the Western Cape, the Provincial Minister of Local Government, Environmental Affairs and Development Planning, Mr Anton Bredell recently designated the Department's Coastal Management Unit (CMU) as the lead agency in the Province to promote sustainable coastal development and integrated coastal management. The Coastal Management team of the Department of Environmental Affairs and Development Planning is now responsible for the important task of managing the implementation of the Integrated Coastal Management (ICM) Act in the Province.

The most important view of the ICM Act is to foster the inclusion of all stakeholders (private and public) to be part of the coastal management process by influencing positive working relations and express the shared responsibility of the National Department, the Western Cape as a coastal province and its respective coastal municipalities to wisely manage the coastal areas with its unique natural resources. Co-operative governance is clearly one of the primary elements that will determine the efficacy of the implementation of the Act.

The team, in terms of the Act, will monitor coastal management in the Province to ensure that it is undertaken in an integrated, effective and efficient manner and most importantly, in accordance with the NEM:ICM. Their responsibilities, together with the other relevant stakeholders would he to:

- monitor the state of the environment and relevant trends affecting the coastal zones:
- identify provincial priority issues relevant to the Act and stakeholders;
- co-ordinate the preparation of a provincial state of the coast report in terms of Section 93(2).

The Provincial Coastal Committee (PCC)

A Provincial Coastal Committee (PCC) established in the Western Cape, and led by the CMU team will provide logistical and administrative support, in collaboration with other appropriate bodies and organizations, to train, educate and implement awareness programmes relevant to the protection, conservation and enhancement of the coastal environments. The PCC will also be at the heart of advocating for the sustainable use of the coastal resources to ensure that the coastal habitats are preserved for future generations.

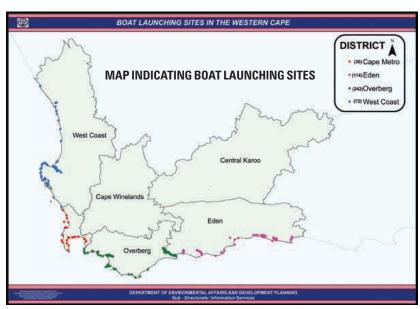
Milestones achieved

This unit has also shown significant will power and a tenacious spirit to deliver provincial imperatives by recently concluding a provincial boat launching inspection and survey. The survey indicates that an estimated 500 boat-launching sites (licensed and unlicensed) exist along the coastal zones of the Province. These sites are either located in estuaries, along municipal coastlines or on private property. Of these sites an estimated



A-B: THE ACT SEEKS TO COORDINATE AND REGULATE THE VARIOUS HUMAN ACTIVITIES THAT TAKE PLACE ON THE COAST IN ORDER TO ACHIEVE ITS CONSERVATION AND SUSTAINABLE USE, VARIOUS BOAT LAUNCHING SITES SUCH AS THESE IN THE HOLLT RAY AND LANGERAAN AREAS WILL BE CARFFULLY MONITORED BY THE DEAPARTMENT





BOAT-LAUNCHING SITES ARE MANAGED IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA). REGULATIONS PROVIDE FOR THE GENERAL PROHIBITION OF THE RECREATIONAL USE OF VEHICLES IN THE COASTAL ZONE PROVIDE FOR DEMARCATION OF LIMITED RECREATIONAL USE AREAS, CERTAIN PERMISSIBLE USES AND CERTAIN ACTIVITIES WHERE THE APPLICATION OF A PERMIT IS REQUIRED TO USE VEHICLES IN THE COASTAL ZONE AND/OR A LICENCE IS REQUIRED IN ORDER TO OPERATE A BOAT-LAUNCHING SITE.



Defining a Green Ambassador

This edition would have provided you with the necessary insight to understand why protecting our natural environment is so important, not only for today but to ensure that future generations will enjoy the beauty we experience today. We, through our careless activities are destroying our home as we deplete the natural resources, pollute rivers and compromise the ecosystems. Future generations will not have the privilege of a world without pollution or waste. Not unless we act now.

It is on this premise that we have prepared this publication titled Green Ambassador. A Green Ambassador is the ordinary man or woman on the street who thinks twice about the impact that his or her actions will have on the natural environment. This individual knows that water is precious; hence not one drop goes to waste. The Green Ambassador embraces the benefits of technology, yet remains wary of the effects of overconsumption of the ecosystem.

The Green Ambassador may not necessarily be the owner of a recycling company, but unplugs the cell phone charger when not in use, takes a short shower, walks, cycles or uses public transport. Most importantly, the Green Ambassador inspires others to do the same and advocates that small changes in behaviour can have a huge impact on the planet. Become a Green Ambassador - act daily with this cut out checklist

YOUR ACTION IS WHAT COUNTS.

Consider the environment. Consider me. Consider your community. Consider YOU.



The Department of Environmental Affairs and Development Planning's primary mandate as per Schedules 4 and 5 of the Constitution Act, relate to the environment, nature conservation, provincial planning, pollution control, regional planning and development, urban and rural development, as well as local government matters related to, among others, air pollution, municipal planning, noise pollution, refuse removal, refuse dumps and solid waste disposal

 $\textbf{\it CapeNature} \ \ \text{is a public institution with the statutory responsibility for biodiversity conservation in the Western Cape. It is governed by the Western Table 1 and 1 and 2 and 2 are stated as a state of the state of$ Cape Nature Conservation Board Act 15 of 1998 and mandated to: promote and ensure nature conservation; render services and provide facilities for research and training; and generate income. The organisation aims to develop and apply effective knowledge management systems to identify and inform sustainable conservation management and priorities, to expand the protected area network, to facilitate effective wildlife management and crime prevention, youth and community development including environmental awareness, and equitable access linked to enhanced





"Knowing is not enough, we must apply. Willing is not enough, we must do "

- Johann van Goethe

Global warming, environmental activism, sustainable living. By now, these are all words and concepts that have become part of our vocabularies. We are constantly reminded to reduce, reuse and recycle, and to save electricity and water as far as possible. We are told to "live green" by incorporating resource-efficient practices into all aspects of our lives. But does it end there?

While we may be aware of all the little things we can all do to preserve the environment, we must also take cognisance of our collective duty to ensure that others

This edition of Green Ambassador aims to empower readers with the necessary tools to take that much needed action. We showcase the work done by the Department of Environmental Affairs and Development Planning to protect the environment to the benefit of all citizens of the Western Cape. We highlight, amongst others, your right to clean air, what constitutes environmental crime, and the need to conserve our biodiversity whilst supporting economic growth.

Global warming is likely to become the dominant direct driver of biodiversity loss by the end of the century. Current climate estimates predict increased temperatures of 1.4 to 5.8 degrees Celsius by 2100. This will affect species in several ways, such as changes in distribution, increased extinction rates, changes in reproduction timings, and changes in length of growing seasons for plants.

We do not live in a vacuum. Every action, no matter how small, has an impact on the state of our environment. You may not think that your lack of action has an adverse effect on the planet, but it does. It takes only one ripple to start a wave. In other words, it takes only one small act of ignorance to contribute to the vast destruction of the Earth.

When you take into consideration that we will soon require 1.4 planets to support our needs, the question is no longer whether you should

take action: the question is

When will you take action?

EDITORIAL TEAM

Editor Chief

Mr Aziel Gangerdine Tel: 021 483 4643 E-mail: agangerd@pgwc.gov.za

Editor - DEA&DP

Ms Robyn Hendriks Tel: 021 483 2120

E-mail: rhendriks@pgwc,gov,za

Editor - CapeNature

Mrs Marietjie Engelbrecht Tel: 021 483 0077

E-mail: mengelbrecht@capenature.co.za