ASSESSMENT OF LOCAL GOVERNMENT ORGANIZATIONAL CAPACITY AND THE EXTENT TO WHICH FISCAL FRAMEWORKS MAKE PROVISION FOR ENVIRONMENTAL PERFORMANCE

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EXECUTIVE SUMMARY

As the Republic of South Africa strives for economic restructuring and improving the livelihood of the country, the need to ensure ecological and environmental protection will need to be strengthened. Therefore, Government and indeed local authority are required to respond to environmental management as an urgent issue.

In an attempt to improve local Government performance in environmental protection, DEA partnered with SALGA in facilitating provincial working sessions to assess South African Local Government Organizational Capacity and the Extent to which Local Government fiscal frameworks make provision for effective performance of municipal environmental functions. Questionnaires to address the assessment topics were sent to all municipalities in South Africa except those in Kwazulu Natal Province by both SALGA Provincial offices and DEA national offices. The actual working sessions took place between 6th of April to the 23rd of April 2011. SEF on behalf of SALGA National sent invitations to its provincial offices to mobilise district and local municipalities within their jurisdictions to attend and present their environmental performance capabilities at the working sessions.

The working sessions, attended by local government officials, outlined environmental management and protection measures currently employed by different municipalities.
across the provinces and also yielded numerous recommendations to be considered in the issue of municipal capacity building to ensure environmental performance. Participating Local government capabilities responses outlined in Section 2 were categorised according to municipal typologies Local, District and Metropolitan municipalities. It is significant to note that for most municipalities current municipal capabilities mainly focused on waste management (refuse collection) and environmental health services such as refuse collection due to skills and finance constraints for other aspects of the municipal environment. The other aspects being compromised due to capabilities constraints are air quality management, integrated waste management, biodiversity management, climate change and water quality management amongst others.

In terms of environmental performance tools, a number of environmental and sustainability tools have been developed and implemented by municipalities, which assist indirectly or directly with environmental performance. These include, among others, environmental impact assessments, strategic environmental impact assessments; environmental management frameworks, catchment management plans, biodiversity frameworks, open space frameworks, conservation plans, wetland audits and management plans, delineation of high agricultural potential areas, etc. However, it became apparent that because of the resource constraints of lack of technical skills and finance in several municipalities, these documents are unable to serve their purpose of performance management. In some other municipalities, the resources to even develop such strategic performance tools are not even available.

To this effect, environmental management will vary depending on the geographic location and capacity to respond, with the coastal municipalities being more vulnerable to climate change impacts due to sea level rise. Smaller municipalities (B3 and B4) are less equipped with skills and funds to protect the environment. From the responses gathered, it is apparent that the larger municipalities (A and B1) are generally better prepared and committed to addressing environmental protection when compared to B2, B3 and B4 municipalities.

Section 3 of the report outlines gaps identified as deterrent to municipal environmental performance. Some of these are:

- No dedicated environmental management units in most municipalities;
- Lack of human resources and expertise dedicated to Environmental performance in many municipalities;
- Few environmental professionals that exists are often unskilled for the positions;
- Difficulty in enforcing environmental performance due to appointments of environmental professionals at often more junior and underpowered levels;
• Lack of funds to effectively ensure environmental performance within municipalities;
• Environmental health prioritized over environmental management in most municipalities;
• General lack of understanding between Environmental health and Environmental management;
• An over dependence on Environmental Health Practitioners to perform environmental management functions within municipalities;
• Environmental management is not regarded as service essential to improving quality of life; therefore, little attention is given to it;
• Council does not view environmental management function as important because most of the functions are not revenue generating;
• Budget restrictions;
• Imbalance between income and expenditure;
• Funding for non-income generating and zero-rated tariff services;
• Inadequate public awareness;
• Lack of effective/ enforced bylaws;
• Insufficient support from internal support departments and poor internal communication within municipalities; and
• Supply chain management systems and contract management – unlawful awarding of tenders resulting in poor service.

Participants in the workshops were unanimous in their view that capacity building on environmental protection must be a priority with a key need for all municipalities to have a dedicated unit to manage environmental performance with at least one skilled official. Another issue attributed to poor environmental performance in the municipalities was the lack of sustainable funds. The challenges that were raised resulted in the identification of the following strategic recommendations in Section 4. It is recommended that the aspects of these recommendations be tabled for discussion in formulating the local government environmental performance road map:

• Improve organizational Capacity;
• Reviewing municipal organization structure to include dedicated environment team;
• Improving Financial capacity of municipalities to address their environmental challenge;
• Adopt capacity building techniques that will ensure environmental performance; and
• Implement collective and national interventions to address environmental performance at the local level.
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ABBREVIATIONS

AQMP Air Quality Management Plan
BRT Bus Rapid Transit
CCI Clinton Climate Initiative
CBO Community-Based Organisation
CDM Clean Development Mechanism
CEF Central Energy Fund
CER Certified Emissions Reduction
CFL Compact Fluorescent Lamp
CITES Convention on International Trade in Endangered Species for Wild Fauna and Flora
COP Conference of Parties
CO₂ Carbon dioxide
DEA Department of Environmental Affairs (erstwhile DEAT)
DEAT Department of Environmental Affairs and Tourism
DM District Municipality
DME Department of Minerals and Energy
DoE Department of Energy (former Department of Minerals and Energy)
DPLG Department of Provincial and Local Government
DSM Demand-Side Management
DST Department of Science and Technology
DWAF Department of Water Affairs and Forestry
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>EHP</td>
<td>Environmental Health Practitioners</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EMF</td>
<td>Environmental Management Framework</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<tr>
<td>HPCSA</td>
<td>Health Professions Council of South Africa</td>
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<tr>
<td>IDP</td>
<td>Integrated Development Planning</td>
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<tr>
<td>IPP</td>
<td>Independent Power Producers</td>
</tr>
<tr>
<td>IWMP</td>
<td>Integrated Waste Management Plan</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicators</td>
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<tr>
<td>LED</td>
<td>Local Economic Development</td>
</tr>
<tr>
<td>LM</td>
<td>Local Municipality</td>
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<td>LTMS</td>
<td>Long Term Mitigation Scenarios</td>
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<td>MOSS</td>
<td>Municipal Open Space System</td>
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<tr>
<td>NMT</td>
<td>Non-Motorised Transport</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<tr>
<td>PPP</td>
<td>Public Private Partnership</td>
</tr>
<tr>
<td>PV</td>
<td>Photovoltaic</td>
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<tr>
<td>RDP</td>
<td>Reconstruction and Development Programme</td>
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<tr>
<td>REFIT</td>
<td>Renewable Energy Feed-in Tariff</td>
</tr>
<tr>
<td>SALGA</td>
<td>South African Local Government Association</td>
</tr>
<tr>
<td>SANBI</td>
<td>South African National Biodiversity Institute</td>
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<tr>
<td>SANS</td>
<td>South African National Standards</td>
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<tr>
<td>SARED</td>
<td>South African Renewable Energy Database</td>
</tr>
<tr>
<td>SARVA</td>
<td>South African Risk and Vulnerability Atlas</td>
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<td>SEA</td>
<td>Sustainable Energy Africa</td>
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<td>SEF</td>
<td>Strategic Environmental Focus (Pty) Ltd</td>
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<tr>
<td>SDF</td>
<td>Spatial Development Framework</td>
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<td>SoER</td>
<td>Sate of the Environment Report</td>
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<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>WSA</td>
<td>Water Services Authority</td>
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<tr>
<td>WESSA</td>
<td>Wildlife and Environment Society of South Africa</td>
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</table>
1 INTRODUCTION AND BACKGROUND

1.1 Overview of National Policy Frameworks for Environmental Performance

The imperative of protecting the Natural environment is housed in South African legislation as well as the country’s commitments to International Environmental Treaties and conventions such as Convention on International Trade in Endangered Species for Wild Fauna and Flora, the Montreal Protocol for the protection of the ozone layer and the Bonn Convention on the Conservation of Migratory Species of Wild Animals.

The Constitution of South Africa provides an overarching obligation to manage the environment sustainably, which requires local governments to deliver services in a sustainable manner and to ensure a safe and healthy living environment for all communities. Government’s commitment to sustainable development presupposes the need to address Environmental management issues at a national and strategic level as a cross-cutting issue.

On a National level, below is a list of Policy frameworks that anchor environmental performance in various sectors of South Africa.

*The Constitution (Section 24)*

Two key components in terms of the constitution of South Africa are that everyone has the right to:

- An environment that is not harmful to their well being; and
- Have the Environment protected, for the benefit of the present and future generations, through reasonable legislative and other measures.

To this end several other legislative frameworks exist that ensures various components of the natural environment are protected and preserved from anthropogenic degradation.

*National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998)*

The purpose of NEMA is to ensure that individual aspects of the South African natural Environment are protected from direct harm. As an actively developing society, pressure is being put on the ecosystems, which reduces the Natural Environment’s ability to produce valuable services that underpin our social, economic and personal well-beings.
The object of NEMA is to provide a framework for co-operative environmental governance (making sure that the government authorities’ co-ordinate their efforts to manage the environment) and aims to achieve this by establishing:

- Procedures for state decision-making and functions which impact on the environment, and
- State institutions which co-ordinate these decisions and functions.

NEMA sets out a range of **national environmental management principles**, some of which are set out below:

- Environmental management must put people and their needs first;
- Development must be socially, environmentally and economically sustainable;
- There should be equal access to environmental resources, benefits and services to meet basic human needs;
- Government should promote public participation when making decisions about the environment;
- Communities must be given environmental education;
- Workers have the right to refuse to do work that is harmful to their health or to the environment;
- Decisions must be taken in an open and transparent manner and there must be access to information;
- The role of youth and women in environmental management must be recognized;
- The person or company who pollutes the environment must pay to clean it up;
- The environment is held in trust by the state for the benefit of all South Africans; and
- The utmost caution should be used when permission for new developments is granted.

NEMA’s purpose is to filter pollution by providing regulations that provide criteria or controlling the extent of environmental degradation from anthropogenic interference. The Act makes provisions for clear guidelines relating to the submission, processing and consideration of, and on decision of activities in order to avoid detrimental impacts on the environment. Where avoidance of environmental impacts is impossible, NEMA also ensures the mitigation and management of impacts to acceptable levels.

**National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)**

Within the framework of the National Environmental Management Act as described above, the Biodiversity Act aims to ensure that all species of plants and animals, and the natural environment that support them is conserved and protected. The conservation of
South African biodiversity is important because biodiversity supports the vital benefits we get from the natural environment.

**National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)**

The Air Quality Act sets out South African Air Quality Standards and objectives for reducing levels of health-threatening pollutants. These include the criterion pollutants such as Sulphur dioxide (SO$_2$), Oxides of nitrogen (NO$_x$), Carbon monoxide (CO), Particulate matter (PM$_{10}$), Lead (Pb), Benzene (C$_6$H$_6$) and Ozone (O$_3$). These levels of reduction were set based on medical and scientific effects on health and the receiving environment of these pollutants. Other factors such as the practicality in meeting these standards were also considered.

Whilst National standards have been identified and established, Provincial Governments are required to identify and establish through a process stricter air quality guidelines for any geographical areas within the Province than the national standards. Like wise, if deemed necessary, local authorities may in terms of local by-laws establish through a process stricter air quality guidelines for the municipality than established Provincial and National guidelines. Provincial authorities can however not alter national standards and neither can local authorities alter established National and Provincial air quality standards.


Within the framework of NEMA, the Waste Act for South Africa controls the generation, reduction, transportation and disposal of waste within the Republic. It covers controlled waste, duty of care, registration of carriers and brokers, environmental permitting in terms of authorizations, landfill, hazardous waste, producer responsibility, packaging waste, end-of-life vehicles amongst others. In terms of the recent amendment to the Act, the revision gives a clear guidance to the implementation of Integrated Waste Management Plan as an obligation for all municipalities. The Act provides guidance on waste-related activities which require waste management licensing prior to their commencement. Some other relevant pieces of legislation are the:

- National Water Act, 1998 (Act No. 36 of 1998);
- Water Services Act, 1997 (Act No. 107 of 1997);
- Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);
- Minerals Act, 2002 (Act No. 28 of 2002); and
1.2 Overview of South Africa’s Fiscal Frameworks

**National Treasury**

The National Treasury is responsible for managing South Africa’s national government finances. Supporting efficient and sustainable public financial management is fundamental to the promotion of economic development, good governance, social progress and a rising standard of living for all South Africans. The Constitution of the Republic (Chapter 13) mandates the National Treasury to ensure transparency, accountability and sound financial controls in the management of public finances (National Treasury, 2011).

The National Treasury’s legislative mandate is also described in the Public Finance Management Act (Chapter 2). The National Treasury is mandated to promote government’s fiscal policy framework; to coordinate macroeconomic policy and intergovernmental financial relations; to manage the budget preparation process; to facilitate the Division of Revenue Act, which provides for an equitable distribution of nationally raised revenue between national, provincial and local government; and to monitor the implementation of provincial budgets (National Treasury, 2011).

**Public Finance Management Act (PFMA) 1 of 1999**

The Public Finance and Management Act regulate the management of finances in national and provincial government. It sets out the procedures for efficient and effective management of all revenue, expenditure, assets and liabilities. It establishes the duties and responsibilities of government officials in charge of finances. The Act aims to secure transparency, accountability and sound financial management in government and public institutions.

**Municipal Finance Management Act**

The Municipal Financial Management Act (MFMA) aims to modernize budget and financial management practices by placing local government finances on a sustainable footing. It also aims to put in place a sound financial governance framework by clarifying and separating the roles and responsibilities of the mayor, executive and non-executive councilors and officials. It consequently serves to maximize the capacity of municipalities to deliver services to all its residents, customers, users and investors (National Treasury, 2011).
1.3 Municipal Mandate to Environmental Performance

In South Africa, Environmental Governance in the form of policies and regulatory frameworks as indicated above is the formal structure that determines the performance and quality of the natural resources within the republic.

The impact of development activities is more immediate and direct at the local level. Thus, in order to ensure environmental performance is managed at this level of source, the involvement within localities or sites serving as hosts is crucial to preventing environmental degradation. The role of the local authority in ensuring environmental performance can be trivialized from legislative or functional perspective.

Part B of schedules 4 and 5 of the constitution mandates municipalities to administer functions in respect of environmental management amongst which are:

- Air pollution;
- Building regulations;
- Noise pollution;
- Municipal parks and recreation;
- Refuse removal, refuse dumps and solid waste disposal;
- Cleansing;
- Child care facilities;
- Storm water management system in built up areas;
- Electricity;
- Pontoons, ferries, jetties, piers and harbours;
- Fire fighting services;
- Local tourism;
- Beaches and amusement facilities
- Municipal airports;
- Municipal planning;
- Municipal public transport;
- Trading regulations; and
- Water and Sanitation services (domestic water use and sewage disposal systems).

The mandate on Local Government as directed by the constitution supports a ‘Local Governance and sustainability’ model as opposed to a Local Government and Environmental level. This model ensures sustainability is not divulged from any level of governance at the municipal level. Municipalities are therefore empowered to ensure that they are able to predict, investigate, prevent and if necessary manage harmful impacts of proposed or existing activities and developments to its receiving environment.

1.4 Significant Environmental Issues

South Africa is faced with a number of Environmental issues. These include inland water, biodiversity and ecosystems, land, Air Quality and Marine and Coastal issues. Whilst certain issues are across board on a National scale, a combination of
geographical attributes depicts the environmental issues experiences in different parts of the country.

**Water: Quality and Quantity**

Water is perhaps South Africa’s most critical resource – one of low abundance and growing needs (*WWF Environmental Problems in South Africa, 2011*). The demand on South Africa’s scarce water resources is increasing, and a deficit in available water is projected by 2025, if not earlier. The water quality of the resources appears to be variable, with an overall deterioration. These, and other issues, have increased the stress on South Africa’s aquatic ecosystems, including wetlands. The multitude of demands – ecological, domestic, industrial, and agricultural – needs to be balanced equitably, and the release of the NWRS in 2004 is seen by the DWAF as the main driver for ensuring that the balance can be achieved (*State of the Environment Report, Department of Environmental Affairs, 2007*)

**Air Quality**

Air Quality as another environmental issue in South Africa is affected by anthropological and natural emissions to the atmosphere and the capability of the atmosphere and ecosystem to absorb and remove pollutants. High sulphur dioxide and fine particulate levels due mainly to fuel burning within residential, industrial and power generation sectors continue to be of concern. In informal settlements, coal burning for domestic uses poses both health and air quality challenges for the receiving environment. Likewise, industrial activities such as coal-powered electricity generation, mining and industrial transportation of coal are major contributors to poor air quality within the country. Vehicle emissions and the rise of vehicular uses on the roads is considered an emerging a quality issue that needs to be addressed.

**Biodiversity**

According to State of the Environment Report for South Africa, neither biodiversity nor the pressures that threaten it are evenly distributed across South Africa. The land of the "fine-leaved plants", the South African Fynbos, is one of the world’s most impressive botanical kingdoms that are richer than any other comparable sized area in Africa. An estimated 8,500 species of vascular plants, of which 70% are endemic (they are found nowhere else in the world), are reported here. However, the fact that this area has been heavily settled for several centuries, large swathes of natural vegetation, particularly in the lowlands, have been cleared for agriculture and urban development (*WWF Environmental Problems in South Africa, 2011*). Similar problems face the Namib-Karoo-Kaokoveld desert, a very distinctive and floristically rich eco-region with highly diverse endemic plant communities. Here, poor land management, conversion of marginal lands for cultivation, dam
construction, mining, and illegal extraction of selected succulents for black market trade, pose a suite of threats.

Areas of high biodiversity, and which contain global biodiversity hotspots, are often also areas under greatest pressure. They include the Southwestern Cape region, the central grasslands, and the eastern coastal areas. Although the northern and eastern parts of the country experience some of the greatest pressures, the established bioregional programmes are mostly focused in the southern region, but it is hoped that the newly established Grasslands Biome Programme, Mpumalanga Programme, and Wild Coast Conservation and Development Project will help to correct some of this bias. These parts of South Africa (particularly the Eastern Cape) are home to many poor and rural communities who, indirectly, are even more profoundly affected by the pressures of biodiversity loss, because they rely so heavily on the natural environment and its services. It is a matter of great urgency, therefore, to develop appropriate conservation responses for these important and threatened areas (State of the Environment Report, 2010).

**Climate Change**

South Africa is likely to experience a general temperature increase of between 1 and 3 degrees Celsius; with the higher end of this temperature range being experienced by inland areas (see Box 1). Precipitation frequency and intensity are harder to predict, but modelling suggests a general national decrease of approximately 10 to 15%; with indications that the western areas of the country might become noticeably drier. This condition is contrasted by the possibility of the north-eastern areas experiencing increased summer rainfall (SANBI, 2000).

The South African Country Studies Programme (2000) identifies the health sector, maize production, plant and animal biodiversity, water resources, and rangelands as areas of highest vulnerability to climate change and thus requires these areas to be targeted for adaptation measures. With regard to vital industries, the mining and energy sectors are particularly vulnerable to climate change. The South African economy is also vulnerable to the possible response measures implemented by developed countries following the UNFCCC 15th Session of the Conference of Parties (COP 15) since the economy is highly dependent on income generated from the production, processing and export of coal. This vulnerability extends across virtually all facets of the mining and energy sectors (SANBI, 2000).
Box 1: Climate change impacts on South Africa

<table>
<thead>
<tr>
<th>▪ A warming of between 1 and 3 deg C.</th>
<th>▪ Nominal increases in rainfall in the northeast of the country during the winter season.</th>
</tr>
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<tr>
<td>▪ Broad reductions of approximately 5 – 10 % of current rainfall, but with higher rainfall in the east and drier conditions in the western parts of South Africa.</td>
<td>▪ Increased daily maximum temperatures in summer and autumn in the western half of the country.</td>
</tr>
<tr>
<td>▪ Increased summer rainfall in the northeast and the southwest, but a reduction of the duration of the summer rains in the northeast, and an overall reduction of rainfall in the southwest of the country.</td>
<td>▪ An extension of the summer season characteristics.</td>
</tr>
<tr>
<td>☑</td>
<td>▪ Wetter conditions with a reduction in frost could see malaria mosquitoes expand their range into the Highveld.</td>
</tr>
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Source: Climate Change, Development & Energy Problems in SA: Another world is possible, Oxfam & Earthlife Africa Johannesburg (2009).

1.5 Approach to the preparatory sessions

The Department of Environmental Affairs partnered with SALGA in facilitating provincial working sessions to assess South African Local Government Organizational Capacity and the Extent to which local Government fiscal frameworks make provision for effective performance of municipal environmental functions. Questionnaires to address the assessment topics were sent to all municipalities in South Africa except those in Kwazulu Natal Province by both SALGA Provincial offices and DEA national offices. The actual working sessions took place between 6th of April to the 23rd of April 2011. SEF on behalf of SALGA National sent invitations to its provincial offices to mobilise district and local municipalities within their jurisdictions to attend and present their environmental performance capabilities at the working sessions.

The service provider appointed through the DEA-SALGA partnership facilitated eight (8) of these working sessions; one in each of the following provinces: Gauteng, Mpumalanga, North West, Northern Cape, Eastern Cape, Limpopo, Western Cape and the Free State.

It must be stated that due to limited time, budgetary constraints and limited participation by municipalities this report provides just a small sample (see figure 1 below) of assessment of current local government organizational and fiscal capacity to ensure environmental performance. There is a need to establish an ongoing monitoring mechanism in order to understand the depth, spread and impact of fiscal frameworks and organizational capabilities for effective environmental performance in South African municipalities.
The focus of this Assessment Document is on reporting what the municipal responses have been to environmental performance and to assess the potential of existing fiscal frameworks and organizational capacity supports on environmental performance. Thus far, it is advised that this assessment be deemed a commencement exercise to explore and enhance environmental performance at local Government level based on sound international and local pollution prevention best practice.
Figure 1: Municipal Participatory Map
Municipal performance of environmental functions is largely determined by the level of institutional, human resource and financial capabilities of municipalities and this is reflected in their responses to date. This section of the report provides an outline of current municipal capabilities to perform their environmental functions. Data used in this section have been from completed and returned questions and municipalities’ presentation at the workshop sessions. Due to the varying capacities of municipalities, the Environmental performance measures have differed significantly across the spectrum of municipal typologies. In order to better understand the functional measures currently employed by municipalities, as well as opportunities available to them, the discussion has revolved largely around an analysis of municipal typologies and their inherent characteristics. The section further provides a detailed analysis of environmental performance capabilities available to participating municipalities, in view of its inherent geographical, economical and institutional constraints.

2.1 Municipal Typologies

The South African Constitution identifies 3 categories of municipality (A, B and C) but, within the B (local) and C (district) categories, there are situations which vary from large highly urbanised municipalities, with relatively strong economies, to municipalities primarily responsible for rural areas which have relatively weak economies and low population densities. The variation within local government categories has led to the need to consider sub-categories in order to allow for the different circumstances to be analysed and understood so that national policy and strategy can take this variety of circumstances into consideration. The proposed types of municipalities are:

- **A**: Metros, 6 in total. Average population for metropolitan municipalities is 2,4million with 82% urbanised. More than 20% of the households have an income greater than R6 400. 85% of the population has adequate water supply;
- **B1**: Secondary cities: the 21 local municipalities with the largest budgets. B1 municipalities have an average population of 350 000 with 63% urbanised. 12% of households have income greater than R6 400;
- **B2**: Local municipalities with a large town as core (29 in total). The average population for a B2 municipality is 132 000 with 52% urbanised. Households with income greater than R6 400 make up 11% of the population;
- **B3**: Local municipalities with small towns, with relatively small population and significant proportion of urban population but with no large town as core (111 in total). B3 municipalities have an average population of 54 000 people, 48%
urbanised, 7% of households with income exceeding R6 400. 73% of the population has adequate water supply;

- B4: Local municipalities which are mainly rural with, at most, one or two small towns in their area (70 in total). B4 municipalities have an average population of 182 000 with only 6% urbanisation. 3% of the population have an income greater than R6 400 and only 36% of the population has adequate water supply;
- C1: District municipalities which are not water services authorities in areas that largely overlap with B1, B2 and some B3 municipalities (30 in total); and
- C2: District municipalities which are water services authorities in areas that largely overlap with B4 and some B3 municipalities (21 in total).

An attempt has been made in this report to assess the organizational and financial capabilities to perform necessary environmental functions for Metropolitan (A), Local (B) and District (C) categories of municipalities.

2.2 Assessment of Current Environmental Functions

The data presented here was sourced from the workshop presentations, questionnaire responses and from municipality documents such as; Integrated Development Plans; Integrated Waste Management Plans; Integrated Air Quality Management Plan and other available Environmental Framework documents.

The assessment is based on a Provincial categorization with a further breakdown at district, metropolitans and local levels respectively.

2.2.1 Eastern Cape Province

The Eastern Cape has a total of 6 District Municipalities (DM) two Metros and 38 Local Municipalities (LM). The six (6) DMs are:

- Cacadu DM; (No Questionnaire)
- Amatole DM; (No Questionnaire)
- Chris Hani DM; (No Questionnaire)
- Joe Gqabi DM; (No Questionnaire)
- O R Tambo DM; and (No Questionnaire)
- Alfred Nzo DM.

The two Metros are:

- Nelson Mandela Metro; and
- Buffalo City Metro.
2.2.1.1 Cacadu District Municipality

The Cacadu DM consists of nine (9) local municipalities (Category B Municipalities) and four other portions collectively known as the District Management Area (DMA). Two of the four areas are National Parks, namely the Addo Elephant National Park and the Tsitsikamma National Park. The nine municipalities are as follows: Camdeboo; Blue Crane Route; Ikwezi; Makana; Ndlambe; Sundays River Valley; Baviaas; Kouga; and Kou-Kamma. The Cacadu District is predominantly rural in nature and is characterized by a small rural population living in scattered towns and settlements. There is very minimal mining that is carried out in the District and it is mainly for construction material. There is river-sand mining in the Sunday’s River Valley as well as in the Kouga region.

The main environmental issues that the Cacadu DM should focus on and put more resources to address are water resources, terrestrial biodiversity. Some of the key threats compromising the district’s natural resource assets include:

- Alien vegetation and fish;
- Inappropriate development within river catchments and estuaries and sensitive dune systems;
- Land degradation and over-grazing;
- Uncontrolled or poorly planned urbanization and resort development;
- Management of rivers and ground water supplies;
- Inappropriate agricultural development and land use practices; and
- Sand mining, both terrestrial and in river beds.

It is critical for Cacadu DM to manage its rivers and groundwater suppliers effectively because the district depends predominantly on ground water for human consumption and agricultural activity. Agriculture is one of the main drivers of the economy in the district. The low inland rainfall results in sporadic droughts consequently drying up supply boreholes to towns and villages. The water quality during these periods deteriorates to levels that are unsafe for human consumption.

The three major dams, Churchill, Impofu and Lourie are situated in Kouga and Kou-Kamma Municipalities, which predominantly serves the Nelson Mandela Metropolitan municipality with limited supply to Humansdorp, Jeffreys Bay and St Francis Bay. There is one water board in Ndlambe Municipality; the Albany Coast Water Board that services Bushmans River Mouth and Kenton-on-Sea. All nine (9) Local Municipalities in Cacadu District are Water Services Authorities.

The biomes represented in the district contain biodiversity of high global and national significance. Three of these fall within globally recognized biodiversity hotspots, namely the Cape Floristic Region, the Succulent Karoo Hotspot and the Maputaland-Pondoland-
Albany Hotspot. The National Spatial Biodiversity Assessment (2004) identified nine broad priority areas for conservation action in South Africa and three of these are represented within the CDM (Cacadu DM, 2009).

According to the National Spatial Biodiversity Assessment (2004), all of the main river systems in the Cacadu DM are endangered or critically endangered and much of the region is highly susceptible to alien plant invasion. The temporary open estuaries and estuarine lakes that abound along the coast are either vulnerable or threatened and the permanently open estuaries are endangered. All of these estuaries are either hardly protected or not protected at all (Cacadu DM, 2009).

The biodiversity outside of formal protected areas in the Cacadu is subject to many competing pressures which not only cause direct biodiversity loss, but also lead to decreased farm productivity, decreased potential for ecotourism, increased restoration costs and lost opportunities for clean air, water and other essential products and services. Despite this situation, there are many opportunities in the District to integrate biodiversity management and conservation with sustainable development and the creation of sustainable livelihoods (Cacadu DM, 2009).

*Environmental functions performed within the Cacadu DM*

As reported, the environmental management functions within the Cacadu DM falls under the Municipality Health Services (MHS). The Cacadu DM is responsible for the following environmental functions:

- Air pollution, Noise pollution and Water pollution control including local municipalities within its jurisdiction;
- The Atmospheric Emission License is conducted by the Provincial Department of Environmental Affairs (DEA) on behalf of the district due to lack of capacity in the district;
- Cacadu DM performs the water service authority function on behalf of most LMs because they are not capacitated to perform the duties themselves;
- Monitoring of waste management services;
- Health surveillance of premises;
- Vector Control;
- Food Control;
- Environmental pollution control within the district;
- Cacadu DM provides resource support to local municipalities in terms of legislated Environmental obligations e.g. alignment of Policies to changes in the amended National Waste Act; and
- Other environmental functions performed outside the jurisdiction of the MHS includes; transport planning; town planning and zoning; land use and
management and institutional IDP. These services are performed by the Planning Unit of the DM.

The local municipalities within the Cacadu DM are responsible for the following environmental functions:

- Environmental health functions as stipulated in the Health Act;
- Waste management;
- Cleansing;
- Parks and open space;
- Cemeteries;
- Nature reserves;
- Commonage; and
- Cacadu DM entered into Service Level Agreement (SLA) with the six weak LM for the provision of waste management (refuse collection and disposal). Cacadu DM bears the costs this service.

**Organizational capacity to perform environmental function within the Cacadu DM**

All the LMs within the district have one Environmental Health Practitioner (EHP) deployed to the LMs by Cacadu DM to deal with environmental health and environmental management issues. However, by training and experience the EHP mainly concentrates on environmental health issues. Environmental management issues are dealt with on a reactive basis when incidents occur or complaints are received. In contrast with most DM in the Eastern Cape, the Cacadu DM EHPs are situated within the LMs.

**Current Environmental programmes implemented within the Cacadu DM**

- All the LMs have Integrated Waste Management Plans (IWMP) in place which were funded by Cacadu DM;
- Projects identified in each LM’s IWMP have been integrated into the respective Integrated Development Plan; and
- Cacadu DM is planning reviews of IWMPs for the LMs to ensure they align to the new Waste Management Act as they were developed before the promulgation of the new Act and the LMs are of the opinion that it is the Cacadu DM responsibility.

**Challenges faced by Cacadu DM to perform environmental function**

- Cacadu DM is seriously constrained in terms of funding for environmental functions; and
• Both the district and the local municipalities are not capacitated with the human resource and funding to perform their environmental functions.

Fiscal frameworks support for Environmental performance

• Cacadu DM receives funding from equitable share but the funds are not always enough. The district supplements the equitable share funding because there is always a deficit of R 4.50 to render the service; and
• Cacadu DM is funding all the health services rendered by the LM within its jurisdiction.

2.2.1.2 Amathole District Municipality

The Amathole DM is made up of the following local municipalities: Amahlathi; Nxuba, Nkonkobe; Ngqushwa; Great Kei, Mnquma and Mbhashe. The main environmental challenges faced by Amothole DM includes: freshwater environment, terrestrial biodiversity, coastal and marine environment, air quality, water services and waste management. The Amathole DM should focus on these areas in performing their environmental functions.

The western region of Amathole DM is dominated by agriculture and is being affected by irrigation return flows which increases the naturally high sediment load and salt content of the Great Fish River. The central region which is dominated by the urban/industrial complexes of King Williams Town & East London and the ever-increasing population & industrial development threaten the water quality of the major rivers (Buffalo & Nahoon). Effluent discharge (both domestic & industrial) is a major problem within the central region of Amothole DM (Amathole DM, 2009).

The eastern region which is made up of former Ciskei & Transkei is largely undeveloped, with most of the population living in rural settlements. The major problems rivers in this region suffers from include microbial contamination due to inadequate access to sanitation, solid waste pollution as a result of lack of disposal sites and increased sediment load and nutrient concentrations from erosion from over-grazing & vegetation clearing (Amathole DM, 2009).

The Amathole DM has a high diversity of plant species. Five biomes and 21 vegetation types are represented in the area. It is located almost completely within the Centre of Floristic Endemism and has a relatively high species richness level of endemism. The majority of larger animal species are extinct from the area. Invertebrates, herpetofauna and amphibians face many pressures, primarily resulting from habitat destruction from human related pressures. The main pressures facing the Amathole biodiversity include;
increased rural urbanization; unsustainable use of terrestrial resources for fuel, medicines and grazing; habitat loss; fragmentation; alien infestation and utilization of land by the agricultural and forestry sectors (Amathole DM, 2009).

The Amathole DM’s coastline covers 26% of the provincial coast and stretches over 251km. The coastline includes Buffalo City, Ngqushwa, Great Kei, Mnquma and Mbhashe Municipalities. The Amathole DM is well renowned for its scenic coastline (Wild Coast and Sunshine Coast), beaches and wealth of marine biodiversity. The coastal environment of the Amathole DM consists of beaches, rocky shores, estuaries, sand dunes and coastal vegetation and the offshore environment. Much of the area is in a pristine condition, but faces pressure, which threaten the ecological systems and biodiversity (Amathole DM, 2009).

The key pressures include:

- Industrial activities and development;
- Subsistence and non-subsistence exploitation of marine invertebrates;
- Recreational, subsistence and commercial fishing;
- Residential, resort and tourism development;
- Pollution and waste management;
- Mining; and
- Alien species infestation.

The Amathole DM does not have serious air pollution challenges but the industrial sector, as it is throughout the country, is the primary cause of air pollution problems in the district. Air pollution statistics indicate that Amathole DM has relatively good air quality, which is attributed to good dispersion during windy periods.

Air quality is poorer during the winter months as the Amathole DM is subject to temperature inversions and more fossil fuels are burned during colder conditions. Air pollution levels that may be harmful to human health are most likely to occur during these conditions (Amathole DM, 2009). The key pressures include:

- **Industrial Emissions** – Buffalo City contains a number of industrial clusters, such as the East London IDZ, the West Bank Industrial Complex, Berlin Industrial Area, Wilsonia Industrial Park, Fort Jackson Industrial Area, R102 Industrial Corridor and the Dimbaza Industrial Area. The types of industries vary from light commercial to heavy industrial (Amathole DM, 2009);
- **Traffic** – Buffalo City has the highest traffic densities within Amathole DM and vehicle emissions have been identified as a significant source of air pollution in the area;
- **Quarries, Borrow Pits and Mines** – The district has a number of these sources of dust emissions scattered throughout the municipality;
• **Unpaved Roads** – Dust emissions from unpaved roads is a significant source especially outside of the main urban centers;

• **Wildfires and Biomass Burning** – Wildfires are a source of air pollution within the municipality which includes scheduled burning of firebreaks and highway verge burning; and

• **Indoor Air Pollution** – results from the use of wood and paraffin as a source of heating and lighting energy;

The Amathole DM was declared as Water Services Authority (WSA) in terms of the powers and functions devolved by the Local Government Municipal Structures Act, 117 of 1998. The Amathole DM became responsible for the planning and provision of water services in its area of jurisdiction as from 1st July 2003. The function includes the local municipalities of Mbhashe, Mnquma, Great Kei, Amahlathi, Ngqushwa, Nkonkobe and Nxuba..

60% of residents in the Amathole DM do not have access to solid waste services. The 60% comprises mainly rural and informal urban settlements.

*Environmental functions performed by Amathole DM*

The environmental management functions performed by Amathole DM include:-

- Water pollution control and monitoring;
- Cleansing services and local waste disposal sites;
- Buffalo City has developed a regional landfill site near Berlin to serve the general waste needs of the municipality and the hazardous waste disposal needs of the broader district;
- Air pollution, and Noise pollution control and monitoring; and
- Environmental Health function in terms of the Health Act.

The local municipalities within the Amathole DM are responsible for the following environmental functions:-

- Cleansing services and local waste disposal sites to urban areas;
- The rural villages in the district are not being provided with cleansing services and residents are disposing waste on site by either burying or burning;
- Better capacitated LMs such as Mnquma who were present at the workshop perform the following environmental management functions:
  - Environmental impact management;
  - Biodiversity management;
  - Coastal management;
  - Environmental education, law enforcement and compliance;
Illegal dumping and cleaning and clearing of vacant or undeveloped properties;
• Solid waste management; and
• Environmental health management functions as stipulated in the Health Act.

Capacity required to Perform Environmental Management functions in Amathole DM

As Amathole district municipality and its local municipalities were neither present at the workshop (except Mnquma LM) nor responded to the questionnaire, the following are identified Environmental functions required to be performed by the district:-

• Integrated Environmental Management;
• Air Pollution control for the industrial areas;
• Biodiversity management;
• Marine and Coastal management; and
• Climate change mitigation and adaptation.

Mnquma Local Municipality

The environmental functions are performed under the Solid Waste and Environmental Management sub-directorate which falls under the Community Services.

The key environmental functions include the following:

• Environmental management issues;
• Coastal management;
• Environmental Education;
• Management of the following;
  o Cemeteries;
  o Parks and gardens; and
  o Open Spaces.

Organizational capacity to perform environmental function within the Mnquma LM

The sub-directorate is headed by an Environmental Manager who has three Chief Environmental Officers for Environmental Management Issues, Environmental Education, and Coastal and Sea activities, respectively. Each Chief Environmental Officer has Principal Officers reporting under him. Several Environmental Officers report to Principal Officers.
Current Environmental programmes implemented within the Mnquma LM

Information not provided.

Challenges faced by Mnquma LM to perform environmental function

Most essential environmental positions are vacant. These include:

- Lack of budget.

Fiscal frameworks support for environmental performance

The sub-directorate gets its funding from:

- Equitable share; and
- 60% of the budget is allocated for rendering the core services.

2.2.1.3 Chris Hani District Municipality

Chris Hani DM is located within the centre of the Eastern Cape Province. It is made up of the following eight local municipalities and one District Management Area (DMA): Unxuba Yethemba; Tsolwana; Inkwanca; Lukhanji; Intsika Yethu; Emalahleni; Engcobo; Sakhisizwe; and Mt Zebra National Park (DMA).

Most of the local municipalities within the Chris Hani DM suffer from lack of clean and unpolluted water with Tsolwana in particular, the Thornhill area being the most affected. Limited access to clean water affects mainly Emalahleni, Intsika Yethu, Sakhisizwe, Engcobo and Lukhanji. Inkwanca and Inxuba Yethemba suffer from lack of a guaranteed water supply (Chris Hani, 2009).

Limited and poor sanitation within the district creates numerous environmental problems, such as water pollution due to the waste being washed into the rivers by rain. Such water pollution is often directly attributable to a variety of water-borne diseases which affect children playing in these contaminated areas. The foul odour from improper sanitation also contributes to the poor quality of life of residents. Like the other DMs in the Eastern Cape, Chris Hani DM is also faced with environmental management issues such as air pollution and solid waste (Chris Hani, 2009).


**Environmental functions performed by Chris Hani DM**

The environmental management functions performed by Chris Hani DM include the following:

- Municipality health services as stipulated in National Health Act;
- Waste reduction and management;
- Water and sanitation;
- Air quality control and monitoring;
- Environmental compliance; and
- Health, water and air quality services to LMs within the district.

As reported and assessed, the local municipalities within the Chris Hani DM currently perform the following environmental functions.

- **Inkwanca Local Municipality:-**
  - Environmental function within the Inkwanca LM is only limited to waste management and noise control;
  - Refuse collection is conducted on a weekly basis from the households and industrial area;
  - Monitoring and conducting analysis of portable water and sewage effluent discharge;
  - Ensuring compliance with Department of Water Affairs (DWA) drinking water regulations (SANS 241);
  - Assisting and advising on the optimization of the water treatment plant;
  - Issuing of plastic bags to schools as part of the cleaning campaign; and
  - Issuing seedlings to the community to plant in their gardens.

- **Intsika Yethu Local Municipality:-**
  - The environmental management function is only limited to the waste removal, collection and disposal from households, business and streets in within the Town. Grass cutting and open space cleaning are also activities being performed; and
  - The other environmental functions such as air quality and water control are carried out by the Chris Hani DM.

- **Sakhisizwe Local Municipality:-**
  - The environmental management functions rendered by Sakhisizwe LM are limited only to water quality monitoring, waste removal, collection and disposal grass cutting and open space cleaning.
• **Inxuba Yethemba Local Municipality:-**
  
  o Waste Management including disposal sites;
  o Management of the following facilities;
    ▪ Sports facilities;
    ▪ Swimming Pools;
    ▪ Cemeteries;
    ▪ Parks and Gardens; and
    ▪ Libraries.
  o HIV/AIDS co-ordination including local aids council;
  o Disaster management; and

*Organizational capacity to perform environmental function within the Chris Hani DM*

The following are information provided and assessed as the organizational capacity of the municipalities to perform their Environmental functions:

**Inkwanca Local Municipality:**

- Environmental management function falls within the Community Service Management Unit;
- There are 32 permanent staff and 32 non permanent staff in the waste management unit;
- The Manager is a trained educator by profession with very limited knowledge on the Environmental management principle;
- Two supervisors exist under this management who carry out community services such as open space cleaning with the support of 30 general workers; and
- No capacity exists to perform core environmental functions within the municipality.

**Intsika Yethu:-**

- Environmental management functions are rendered under the Community Services Department;
- There is no dedicated Environmental management team within the municipality;
- The general workers are not permanent; they are employed on a three months rotational basis from all the wards within the LM; and
- The casual workers are mainly responsible for street cleaning, grass cutting, and open space cleaning.
Sakhisizwe Local Municipality:

- The LM has a Water Technician and the Water Quality Technician who deals with water service and quality issues. They both report to WSP Area Manager who in turn reports to the Technical Services Manager; and
- The Technical Services Manager is responsible for waste management with supervisors reporting to him.

Inxuba Yethemba Local Municipality:

- Environmental management function falls within the Community Service Directorate.

*Current Environmental Programmes implemented within the Chris Hani DM*

Inkwanca Local Municipality:

- There are no official recycling activities within the municipality;
- Waste management by-laws were developed and are currently with the council for approval;
- Few people are conducting iron and zinc recycling within the municipality;
- The Inkwanca LM has two permitted landfills in Montano and Dextroom;
- The municipality is putting prohibiting dumping notices on all illegal dump sites; and
- The Inkwanca LM received 1500 wheel bins and a compactor from the Chris Hani DM for winning the competition for being the cleanest municipality in the country.

Intsika Yethu Local Municipality:

- The Intsika Yethu LM has a transfer station and a landfill site that is outsourced and privately managed;
- The landfill and the transfer station are registered and licensed;
- Sorting of waste is conducted at source and on site by community cooperative;
- The municipality uses a compactor truck, two tractors, skip carrier, steel drums and refuse bags for handling waste;
- In rendering the waste management function, the Intsika Yethu LM is associated with the Chris Hani DM, Buyisa e Bag, Department of Environmental Affairs (DEA) and the Institute of Waste Management (IWM);
- The following are short term plans that the municipality is planning to engage on:
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- Engage household contractors for refuse collection;
- Continue with the composting project – DEA gave Intsika Yethu LM R5million over a 2 year period for composting;
- Greening of public spaces;
- Review and align workings with EHPs; and
- Enforce by-law compliance.

• Medium term plans;
  - Enforce waste sorting at source; and
  - Establish Buy-back centres.

• Inxuba Yethemba Local Municipality:

Information not provided.

Challenges faced by Chris Hani DM to perform environmental function

Inkwanca Local Municipality:-
- Insufficient environmental personnel within the municipality to ensure effective environmental performance; and
- Limited funds available to perform environmental functions.

Intsika Yethu Local Municipality:-
- Very limited funds available to effectively perform environmental functions;
- Funding from equitable share is insufficient to perform environmental functions;
- Little support from municipality management for the environmental management function;
- Waste management is not prioritized by municipality management;
- Lack of knowledge on environmental issues by the community;
- Shortage of necessary equipment; and
- Little access to information.

Sakhisizwe Local Municipality:-
- Shortage of personnel; and
- Lack of funding.

• Inxuba Yethemba Local Municipality:

Information not provided.

Fiscal frameworks support for environmental performance in Chris Hani DM

Inkwanca Local Municipality:
• Municipality receives funding from equitable shares;
• The budget allocated for environmental function is small compared to the activities required to be performed;
• The municipality generates limited funding from old furniture auctions, hall and chair hire, and cemetery, refuse collection and skip bin hire. These funds are however limited and insufficient for service provision;
• Bigger percentage of the waste management budget goes to salaries (52%) and a smaller percentage is left for the actual services (20%); and
• The Inkwanca LM is a low income municipality and has limited resources as a result the LM is allocated a small share from the national treasury.

Intsika Yethu
• Funding is limited for environmental functions; and
• There is a lack of personnel.

• Inxuba Yethemba Local Municipality:-

Municipality receives funding from equitable shares and revenue from waste collection. The budget is allocated as below:

• Salaries: 45%;
• Infrastructure: 10%;
• Skills Development: 0%;
• Vehicles: 24%;
• Service and repair of infrastructure and vehicles: 5.4%;
• Sub-consultants: 0%; and
• Core service.

2.2.1.4 OR Tambo District Municipality

O.R. Tambo DM in the Eastern Cape Province covers about 80% of what used to be marginalized homeland of Transkei and is formed by seven Local Municipalities, namely: King Sabata Dalindyebo LM (Mthatha & Mqanduli); Nyandeni LM (Libode & Ngqeleni); Mhlontlo LM (Qumbu & Tsolo); Port St. Johns LM; Ingquza Hill LM (Flagstaff & Lusikisiki); Ntabankulu LM; and Mbizana LM (Bizana). The O.R. Tambo DM is largely rural (it is estimated that some 93% of the district population resides in rural areas with a consequent dispersed settlement pattern) and low urbanisation rate (OR Tambo DM, 2010).

The threats to the environment that have been identified within the area of O.R. Tambo DM Jurisdiction, includes (OR Tambo DM, 2010).
• Destruction of indigenous forests;
• Uncontrolled settlement on valuable agricultural soils and sensitive coastal habitats;
• Spread of invasive alien plants;
• Poor solid waste management;
• Inadequate application of Integrated Environmental Management procedures; and
• Over-use of inter-tidal and marine resources.

**Environmental functions performed by O.R Tambo DM**

The environmental management functions performed by O.R. Tambo DM include the following:

- The O.R Tambo is a Water Service Authority and Water Service provider. Among other things that comes with this responsibility the DM is responsible for water quality monitoring, development of water by-laws, water conservation and water management demand;
- Other environmental management functions include:
  - Provision of sanitation services;
  - Waste management;
  - Water monitoring: rivers and wetlands management;
  - Waste water effluent monitoring;
  - Monitoring of terrestrial and aquatic biodiversity;
  - Urban edge delineation;
  - Environmental compliance monitoring; and
  - Conservation planning.

**Capacity required to Perform Environmental Management functions in O.R Tambo DM**

As O.R Tambo district municipality and its local municipalities were neither present at the workshop nor responded to the questionnaire, the following are identified Environmental functions required to be performed by the district:-

- Integrated Environmental Management;
- Integrated Waste Management;
- Water Quality Management;
- Biodiversity management;
- Marine and Coastal management; and
- Climate change mitigation and adaptation;
2.2.1.5 Alfred Nzo District Municipality

The Alfred Nzo DM is composed of two local municipalities, Matatiele and Umzimvubu.

The Alfred Nzo District area is prone to natural and man-made disasters namely: Floods, Tornadoes, Veldt fires, Snow, Road Accidents and Environmental Degradation. Environmental constraints to development manifest themselves in form of (Alfred Nzo, 2007):

- Land degradation in the form of Dongas, Gullies, and soil erosion; and
- Proneness of the area to disasters caused by tornadoes, and hail storms and adverse climatic conditions in summer. (Floods, hailstorms, violent thunderstorms & tornadoes).

**Environmental functions performed by Alfred Nzo DM**

The environmental management functions performed by Alfred Nzo DM include the following:

- Water and Sanitation;
- Waste management;
- Water monitoring: rivers and wetlands;
- Air Pollution;
- Climate Change; and
- Atmospheric Emission Licensing.

The environmental functions are performed under the Environmental Management Sub-directorate which falls under the Water Service Authority Directorate.

The key environmental functions include the following:

- Facilitate and establish environmental projects such as donga rehabilitation, alien eradication projects;
- Establish nurseries;
- Establish waste buy-back centres;
- Conduct waste awareness programs;
- Develop IWMP;
- Develop EMP;
- Develop State of the Environment Report;
- Develop and Implement Water Quality Sampling programme;
- Develop an Internal Water Testing Laboratory;
• Ensure drinking water quality in compliance with SANS 241;
• Ensure compliance with the specific wastewater standards as issued by DWA as a regulatory body;
• Ensure provision of effective, efficient and sustainable water services;
• To capacitate water services personnel;
• Develop groundwater management plan;
• Prepare cholera strategic management plan;
• Develop and implement H&H promotion program -link with WMIS;
• Prepare Dam Safety Management Plan;
• Formalize links between Health Section and WSA and ensure that roles and responsibilities are clearly defined.

Organizational capacity to perform environmental function within the Senqu LM

The sub-directorate is headed by a Safety and Health and Environmental Manager.

Current Environmental programmes implemented within the Senqu LM

Information not provided.

Challenges faced by Senqu LM to perform environmental function

Most essential environmental positions are vacant. These include:

• Water quality technologist;
• Water quality specialists;
• Water quality samplers; and
• Environmental Management Officers.

Fiscal frameworks support for environmental performance

The sub-directorate gets its funding from:

• Equitable share; and
• DWA grant funding.

Matatiele Local Municipality:-

Environmental management related issues vary with the type of each settlement; e.g. from farming to waste management and sanitation in the urban areas to other services in
the rural areas. As assessed and reported, the following are the environmental functions performed by the LM:

- Building regulations;
- Trading regulations;
- Business licensing;
- Refuse collection;
- Landfill, and refuse removal;
- Waste management; and
- Illegal dumping, cleaning and clearing of vacant or undeveloped.

Umzimvubu Local Municipality:-

The key environmental functions performed by Umzimvubu LM are as follows;

- **Solid Waste Management:**
  - Planning (IWMP, waste collection map etc);
  - Domestic Waste Collection (litter picking, street swimming and waste bin services);
  - Cleansing;
  - Refuse removal;
  - Landfill site management;
  - Waste bin provision;
  - Illegal dumping site rehabilitation; and
  - Pollution control.

- **Environmental Services:**
  - Landscaping and greening;
  - Vegetation control; and
  - Public open spaces maintenance.

- **Management of Municipal Amenities:**
  - Parks;
  - Libraries;
  - Museum;
  - Public Halls;
  - Swimming pool;
  - Sports field;
  - Cemetery; and
  - Tax ranks.
**Organizational capacity to perform environmental function within the Alfred Nzo DM**

**Matatiele Local Municipality:**

- The following environmental portfolios falls under the Community Services and Environment Directives:
  1. Air Pollution control and monitoring;
  2. Climate Change;
  3. Atmospheric Emission Licensing;
- The building regulations, trading regulations, and business licensing fall within the Economic Development and Planning Directive;
- Waste Management services such as refuse collection, Landfill, refuse removal, waste management, illegal dumping, cleaning and clearing of vacant or undeveloped properties are performed within Technical Services Waste Management; and
- Municipal Planning functions are performed within the Integrated Development Planning unit.

**Umzimvubu Local Municipality:**

The environmental management functions fall under the Waste Management and Municipal Amenities sub-directorate which is under the Community Services Directorate.

**Current Environmental programmes implemented within the Alfred Nzo DM**

**Matatiele Local Municipality:**

- The municipality has the following management planning frameworks in place:
  1. Integrated Development Plan (IDP);
  2. Integrated Waste Management Plan (IWMP);
  4. Spatial Development Framework;
  5. Growth and Development Strategy;
  6. Environmental by-laws; and

**Umzimvubu Local Municipality:**

Information not provided.
Challenges faced by Alfred Nzo DM to perform environmental function

Matatiele Local Municipality:-

Areas of concern include within the LM include:

- Shortage of internal personnel;
- Lack of capacity for the enforcement of legislation;
- Lack of capacity for the development of relevant policies; and
- Lack of sufficient budget.

Umzimvubu Local Municipality:-

Information not provided.

Fiscal frameworks support for environmental performance

Matatiele Local Municipality:
- Insufficient budget to perform environmental functions; and
- Insufficient budget to employ environmental personnel

Umzimvubu Local Municipality:

Information not provided.

2.2.1.6 Joe Gqabi District Municipality

Joe Gqabi District is made of four local municipalities namely: Gariep; Maletswai; Senqu; and Elundini (Ukhahlamba DM, 2009). The environmental management function of the district is performed within the Environmental Services Department that is made up of Municipality Health Services (MHS) and the Environmental Management Department (EMD).

Environmental functions performed by Joe Gqabi DM

- The following environmental related services are performed by the Municipality Health Services (MHS) according to the requirements of the national Health Act:
  - Water quality monitoring;
  - Food control;
Waste management;
- Health surveillance of premises;
- Surveillance and prevention of communicable diseases, excluding immunisations;
- Vector control;
- Environmental pollution control;
- Disposal of the dead; and
- Chemical safety.

- The Air pollution control and monitoring functions have now been added to the MHS.
- Generally the MHS is focused on prevention, monitoring and compliance with the Health Act;
- The Environmental Management functions rendered by the Environmental Management Department consist of the following:-
  - Environmental Planning;
  - Biodiversity planning;
  - Climate change awareness; and
  - Implementing Working for Water (WfW) and Working for Wetlands (WfWet) programmes.

**Organizational capacity to perform environmental functions within the Joe Gqabi DM**

- **Staffing within the MHS:**
  - There are currently 11 Staff within the MHS all of which are Environmental Health Practitioners (EHP);
  - The DM is hoping to get additional 14 EHPs from the Province by July 2011 after the devolution of function/powers to the DM.; and
  - The DM is experiencing high staff turnover mainly to the province, bigger DMs or to the private sector (the average employment period of EHPs in a local municipality is two and a half years).

- **Qualifications of the EHPs within the DM:**
  - A good number of EHP possess a National Diploma in Environmental Health and whilst others possess Bachelors of Technology in Environmental Health;
  - Registration with the HPCSA; and
  - There is more experienced staff within the DM with more than 16 years of experience than limited experienced employees with less than three years of experience.

- **Staffing within EMD:**
o There is only one person within the EMD who deals with environmental management matters at district and local municipality levels;
o The staff is an EHP by profession and does not have formal qualifications in environmental management; and
o The staffs are assisted by an official from DEA who is seconded to the DM.

**Challenges faced by Joe Gqabi to perform environmental function**

- The DM is overburdened due to the lack of capacity in terms of skilled personnel to perform environmental functions in Local municipalities within the district;
- There are no sufficient funds to perform environmental function as health care is more of priority; and
- There is lack of personnel within the DM to perform the environmental function.

**Fiscal frameworks support for environmental performance**

- The environmental functions are funded through equitable share;
- Major challenges experienced with allocated funds for Environmental performance is that not only are these funds insufficient to perform the required functions, but they are also not ring-fenced. Therefore, whenever funds are depleted from other portfolios within the DM, funds allocated for environmental functions are easily acquired and redirected for use on other non-Environmental functions of the municipality;
- The municipality seeks for opportunities and services to supplement funds allocated from national treasury to perform environmental functions because it is always insufficient;
- The incipient fear that the problem of insufficient funding will be exuberated by the devolution of EHPs to the DM which will increase the budget by R5m; yet the allocation from national treasury will not increased by the same; and
- The allocated funds are used largely for operational costs with very little towards any special interventions or projects.

**Senqu Local Municipality**

*Environmental functions performed by Senqu LM*

The environmental functions are performed under the Community Services and Social Services directorate.

The key environmental functions include the following:
• Establishing and maintenance of hall and facilities;
• Managing the following;
  o Cemeteries;
  o Sports facilities; and
  o Libraries.
• Waste management;
• Licensing;
• As an agency for providing environmental health services.

Organizational capacity to perform environmental function within the Senqu LM

Information not provided.

Current Environmental programmes implemented within the Senqu LM

Information not provided.

Challenges faced by Senqu LM to perform environmental function

Information not provided.

Fiscal frameworks support for environmental performance

Information not provided.

2.2.1.7 Nelson Mandela Metropolitan Municipality

Nelson Mandela Metropolitan municipality and the Buffalo City are the only two Metropolitan Municipalities in the Eastern Cape Province.

Environmental functions performed by Nelson Mandela Metropolitan Municipality

• Environmental Management function lies within the Public Health (PH) Department;
• Environmental services cover functional areas such as environmental management, waste management, parks and cemeteries;
• Environmental Management functions includes:
  o Air Quality and Noise pollution control;
  o Waste Management function that includes:
    ▪ Refuse collection service to all formal urban & peri-urban households;
- Basic refuse collection service to all informal urban and peri-urban households; and
  - Management of biodiversity;
  - Environmental compliance and monitoring; and
  - Education and awareness in terms of environmental issues;
- The parks and Cemeteries Department functions includes the following:
  - Development of Parks within 500m of each urban and peri-urban household;
  - Undertaking one major beautification project per annum;
  - Planting street trees along identified major traffic routes; and
  - Managing and maintenance of cemeteries within the Metro.
- Environmental Health Services in terms of the Health Act which includes:
  - Water monitoring;
  - Food control;
  - Monitoring of waste management services;
  - Health surveillance of premises;
  - Surveillance and prevention of communicable diseases;
  - Vector control;
  - Environmental pollution control;
  - Disposal of the dead;
  - Noise control and monitoring; and
  - Radiation monitoring and control.

**Organizational capacity to perform environmental function within the Nelson Mandela Metropolitan Municipality**

The Public Health directorate is headed by an Executive Director (ED). Reporting to the ED are six (6) Assistant Directors. Three of these Assistant directors head the Municipal Health Services sub districts A, B, and C respectively. The fourth Assistant Director heads the air pollution and noise control, and the fifth heads the Centralised Services which includes; health education; dairy control and traditional circumcision mobilization. The sixth Assistant Director heads the Vector and Animal Control.

**Current Environmental programmes implemented within the Nelson Mandela Metropolitan Municipality**

- The following Environmental Management Frameworks are in place within the Nelson Mandela metro:
  - Environmental Policy;
  - State of the Environment Report (SoER)
Challenges faced by Nelson Mandela Metro to perform environmental function

- Shortage of Staff; and
- Insufficient funding to perform all the required environmental functions within the municipality.

Fiscal frameworks support for environmental performance

The Public Health Department gets its funding from the National Treasury: The Capital Expenditure (Capex) stands at R 852,550.00 and the biggest percentage goes to primary health care provision and waste management. The Operational expenditure (Opex) budget is R156m and just like the Capex, the largest percentage of this amount is allocated to primary health care and waste management services.

Other sources of funding for the department are from Atmospheric Emission Licensing, law enforcement and permits and licences. Funds generated from these services are however limited to the functions required to be performed.

45% of the overall budget is used for salaries and only 30% is allocated to the core services. Infrastructure, skills development and vehicles are allocated 10% whilst the maintenance of infrastructure and vehicles is allotted 10% of the budget.

2.2.1.8 Buffalo City Metropolitan Municipality

Buffalo City is a metropolitan municipality situated on the east coast of Eastern Cape Province, South Africa. It includes the towns of East London, Bhisho and King William's Town, as well as the large townships of Mdantsane and Zwelitsha.

The municipality was established as a local municipality in 2000 after South Africa's reorganisation of municipal areas, and is named after the Buffalo River, at whose mouth
lays the only river port in South Africa. On 18 May 2011 it was separated from the Amathole District Municipality and converted into a metropolitan municipality.

The area has a well-developed manufacturing base, with the auto industry playing a major role. DaimlerChrysler has a large assembly plant located next to the port of East London, which produces a variety of vehicles for export. The climate is mild, with year-round sunshine. Average rainfall is 850mm (33.5 inches).

**Environmental functions performed by Nelson Mandela Metropolitan Municipality**

The environmental functions are performed under the Environmental Services Department which falls under Communities Services directorate.

The key functions of this division include:

- Public open spaces;
  - Maintenance and hiring of public open space for community functions.
- Vegetation control;
  - Maintenance of street trees, bush clearing and eradication of alien plants and noxious weeds.
- Playgrounds and parks;
  - Development and maintenance of playgrounds and parks for recreational purposes.
- Nature reserve;
  - Bird sanctuary situated in Gonubie, home to a variety of 150 bird types.
- Nursery;
  - Two commercial nurseries situated at James Pearce Park and Duncan Village.
- Cemeteries and crematoria; and
- There are 29 formal and 90 informal cemeteries with one crematorium.

**Organizational capacity to perform environmental function within the Nelson Mandela Metropolitan Municipality**

The department is headed by a manager who has two assistant managers reporting directly to him. Each Assistant manager has two district officers who directly report to him.

**Current Environmental programmes implemented within the Nelson Mandela Metropolitan Municipality**
Information not provided.

**Challenges faced by Nelson Mandela Metro to perform environmental function**

- Lack of funding; and
- Lack of qualified and experienced staff.

**Fiscal frameworks support for environmental performance**

The Environmental Services department gets its revenue from Grants and its own funding.

The budget is allocated as below:

- Salaries: 30%;
- Infrastructure: 2%;
- Skills Development: 2%;
- Vehicles: 2%;
- Service and repair of infrastructure and vehicles: 2%;
- Sub-consultants: 2%; and
- Core service: 2%.

**2.2.2 Free State Province**

The Free State has a total of 5 District Municipalities (DM) and 20 Local Municipality (LM) and one (1) Metropolitan Municipality. The 5 District municipalities are:

- Fezile Dabi DM
- Xhariep DM (No Questionnaire)
- Motheo DM (No Questionnaire)
- Lejweleputswa DM (No Questionnaire)
- Thabo Mofutsanyane (No Questionnaire)

The Metropolitan Municipality is Mangaung Metro

**2.2.2.1 Fezile Dabi District Municipality**

The Fezile Dabi DM is made up of the following local municipalities: Matsimaholo; Moqhaka; Ngwathe and Mafuba. Fezile Dabi was the only municipality from Free State Province that participated in the assessment exercise.
Environmental functions performed by Fezile Dabi District Municipality

The Environmental functions of the district municipality are performed within the Health and Environmental Service directorate. The following are a list of environmental functions performed by Fezile Dabi DM:-

- Waste management;
- Parks and cleansing;
- Atmospheric Emission Licensing;
- Air pollution control and monitoring;
- Noise pollution and control;
- Chemical safety;
- Climate change;
- Environmental Health functions as stipulated in the Health Act;
- Refuse removal, refuse dumps and solid waste disposal; and
- Fezile Dabi DM is neither a Water Service provider nor a Water service Authority.

The local municipalities within the Fezile Dabi DM do not have environmental management units and most of the environmental functions at a local level is performed by the DM when the capacity exists. The following are some of the environmental functions performed by the LM within the district:

- Refuse removal;
- Refuse dumps;
- Building regulations;
- Waste disposal and Landfill;
- Business licensing; and
- Illegal dumping, cleaning and clearing of vacant or undeveloped properties.

Organizational capacity to perform environmental function within the Fezile Dabi DM

- The municipality has a Health and Environmental Service Department which is headed by a Director who is PhD holder in Public Administration and generally has a public administrative educational background;
- The little Environmental functions performed within the DM is performed by Environmental Health Practitioners (EHP) within the Municipality Health Services department;
- To provide organizational and skill support to the district, the DEA has five (5) DEA personnel who were seconded to the district and distributed to the local municipalities that fall within the district; and
• There is no functional environmental management unit in all the LMs within the district. For the LM to perform their environmental functions, they support and assistance from the EHPs at the District level and DEA officials.

**Challenges faced by Fezile Dabi DM to perform environmental function**

• Environmental management lacks political support from the councillors. Priority for service delivery is often associated with the ‘big 5’ (water, roads, electricity, housing, and sanitation) of which environmental management is not part of it; and
• Councillors are ignorant of environmental issues, a situation with a consequential impact of lack prioritization.

**Fiscal frameworks support for environmental performance**

• Insufficient funding to perform all the required environmental functions within the municipality; and
• Insufficient Equitable shares from National Treasury.

### 2.2.3 Gauteng Province

The Gauteng province has a total of two District Municipalities (DMs), nine (7) Local Municipalities (LMs) and three metropolitan Municipalities. The two DMs are:

• Sedibeng DM (DC42); and
• West Rand CBDM (CBDC8)       (No Questionnaire)

The metropolitan municipalities are City of Tshwane, City of Johannesburg and Ekurhuleni metropolitan municipalities. Only one official from Ekurhuleni attended the workshop; however none of the metros in Gauteng returned a completed questionnaire.

#### 2.2.3.1 Sedibeng District Municipality

Sedibeng DM is situated in the southern part of the Gauteng Province and covers the entire southern area of the Province. The Sedibeng DM comprises of three local municipalities namely Emfuleni, Lesedi and Midvaal.

Sedibeng DM is known to be faced with serious environmental challenges, particularly air quality issues. The major source of air pollution emanates from heavy steel and chemical industrial activities, coal and wood smoke from the townships (*Sedibeng, DM, 2008*).
Another environmental problem experienced in Sedibeng DM is water pollution in river systems and water bodies, notably the Kliprivier and Blesbokspruit which are polluted from runoffs from industrial areas, townships and waste water treatment works. In addition, the Vaal River is sometimes contaminated by raw sewerage spillages due to the aging infrastructure in Emfuleni (Sedibeng, DM, 2008). Ground water quality is also threatened by industrial activities within the DM.

**Environmental functions performed by Sedibeng DM**

The Sedibeng DM has a dedicated environmental management Department. The environmental functions performed by the district municipality are:

- Waste management;
- Water quality monitoring and control;
- Air quality monitoring and control;
- Atmospheric emission licensing;
- Environmental Health functions as stipulated in the National Health Act;
- Reviewing and commenting on EIA applications within the municipality;
- No capacity to conduct environmental monitoring and compliance;
- No capacity to manage Biodiversity issues; and
- The DM has no capacity to deal with energy issues, climate change, cleaner production and solar heating issues.

The local municipalities within the Sedibeng DM are unable to perform their environmental functions because of lack of capacity and when possible, the district municipality renders the services on their behalf.

**Organizational capacity to perform environmental function within the Sedibeng DM**

- The organizational structure of the environmental management Department makes provision for five (5) sub directorates but currently, only the following three (3) in place;
  - Air Quality;
  - Environmental Protection and Coordination; and
  - Municipal Health Services (MHS).
- The Department comprises of Environmental Health Practitioners who perform most of the environmental management functions in addition to their trained environmental health functions;
- Sedibeng DM entered into a Service Level Agreement (SLA) with its Local Municipalities to render waste and environmental management services on their behalf. The DM is bears the cost of all services rendered on behalf of the LM;
The Environmental Management Directorate has experienced employees but with limited qualifications;
The human resource complement within the Department is small compared to environmental services required to be performed;
The structure within the air quality sub directorate makes provision for three air quality positions but only one position has been filled;
Appointment of successful specialist positions is often delayed, for an example, an Assistant Manager for Air Quality was interviewed some months back but there have been delays in approving the appointment; and
Similarly, the Environmental Manager Coordination and Planning is in an acting role, though candidate was interviewed years back, but still not appointed.

Current Environmental programmes implemented within the Sedibeng DM

The Sedibeng DM is partnering with National Cleaner Production South Africa on Industrial Waste; and
The Sedibeng DM developed Industrial Waste System using service providers. However, capacity constraints within the municipality have affected the operation of the system.

Environmental Challenges faced by Sedibeng DM

Local municipalities within Sedibeng DM lack capacity to carry out environmental functions which in turn puts constraints on the organizational capacity of the district municipality;
Core environmental functions suffer from funding because the Environmental sub-directorate is organizationally structured with basic services delivery of water, sanitation and electricity who have priority access to funds;
The current organizational structure makes it difficulty to coordinate services;
There is no proper alignment of Sedibeng DM structure within the LM framework and this in turn makes decision making difficult to manage;
Financial constraints affect the prioritization of necessary environmental functions;
Environmental professionals within the municipality are not adequately skilled to efficiently execute their functions;
Deliverables as identified in the municipality IDP is not convincing enough to generate sufficient funding; and
The department is faced with lack of capacity to review and comments on EIA applications within the municipality.
Fiscal frameworks support for environmental performance

- The budget for the directorate is divided into three (3) based on the sub directorates function and the MHS is allocated the largest percentage of the overall budget;
- 90% of the funds in directorate’s budget is from external donor funds;
- Internal funding for the environmental management functions from the municipality is very small;
- The Department received a huge DANIDA grant but the programme is coming to an end; and
- The Environmental Management Directorate recommends that National Treasury make funding available for the performance of environmental functions as over 90% of Sedibeng DM funds for environmental performance are from external non-treasury sources.

2.2.3.2 West Rand District Municipality

The West Rand DM is located in the west of the Gauteng Province. The district municipality consists of four local municipalities, namely: Mogale City; Merafong City; Randfontein; Westonaria and District Management Area.

The West Rand DM like other municipalities in the Gauteng province has the highest population density, high concentration of industries and mines, largest vehicle population which results in very high levels of air pollution. Air pollution levels are also high in areas where coal is used as a primary domestic.

Environmental functions performed by West Rand DM

The West Rand DM renders the following environmental management functions:

- Co-ordination of environmental functions undertaken by LMs within the district;
- Waste management;
- Air Pollution control and monitoring;
- Noise pollution control and monitoring;
- Atmospheric Emission Licensing; and
- Biodiversity Management.

The following environmental functions are performed by the local municipalities within the West Rand DM:-

Merafong City LM:-

- The Environmental Management unit falls within the Spatial Planning and Environmental Management department;
- The roles and responsibilities of the Merafong City Environmental Management Unit are as follows:
  - Review and commenting on EIA Reports;
  - Monthly audit of all waste management facilities. i.e. Landfill site & transfer stations;
  - Attend meetings and workshops and give feedback reports;
  - Environmental Management administrative issues including Monthly report writing for environmental management;
  - Attending to enquiries & investigating environmental related complaints such as illegal dumping etc;
  - Compliance monitoring & enforcement of environmental legislations;
  - Providing technical inputs to all council projects regarding environmental issues;
  - Air quality management and monitoring;
  - Participate in other greening programs, e.g. Bontle ke Botho project etc;
  - Environmental Education & Awareness raising; and
  - Stakeholders’ liaison on environmental management issues.

Mogale City LM:-

- Mogale City has a dedicated environmental management department consisting of Parks, Health and Environmental management;
- Landfill management, Integrated waste management, Environmental Health (filled but seconded to another department) and Operations management are units within the Municipal Health sub-directorate;
- The following activities are undertaken by the Environmental management unit
  - Commenting on EIA applications;
  - Commenting on town planning projects;
  - Commenting on infrastructure related projects;
  - Commenting on housing projects; and
  - Monitoring compliance on project within Mogale City LM.

Current Environmental programmes implemented within the West Rand DM

West Rand District Municipality (WRDM):

- The WRDM compiled an Integrated Waste Management Plan for the district which has been adopted by Council and approved by GDARD;
• The WRDM needs to fully implement the projects or activities identified in the IWMP in order to ensure effective & efficient waste management in the district;
• The WRDM has been mandated as an Atmospheric Emission Licensing (AEL) authority with effect from April 2010;
• An Air Quality Official has been appointed to deal with the AEL function;
• Integrated AQMP was completed and submitted to DEA & GDARD for endorsement. Implementation of the AQMP is scheduled for the next financial year (2011/12);
• WRDM is in the process of developing a comprehensive Emission Inventory and carrying out dispersion modelling as recommended in the AQMP;
• Currently WRDM has two air quality monitoring stations, located in Mogale City LM and Randfontein LM;
• WRDM is in the process of sourcing funds for additional stations in Westonaria and Merafong City LMs;
• WRDM appointed a service provider to review the 2006 SoER for all local municipalities in the district. The final documents should be available by June 2011;
• The review of the current EMF will start in July 2011;
• WRDM is in the process of appointing a service provider to compile a detailed Biodiversity Management Plan with the inclusion of the implementation and action plans for each local municipality in the region;
• WRDM have not initiated the development of the regional Climate Change Response Plan pending the finalization and outcome of the Provincial (GDARD) Climate Change Strategy which is currently in its developmental stage;
• In the next financial year (2011/12), WRDM plans to appoint an officer specifically to deal with issues of compliance & enforcement (C&E) in the region;
• This C&E officer will mainly undertake enforcement of Environmental licenses or permits issued by the Municipality (i.e. AEL etc) and NEMA & its SEMAs.
• The following are other programmes WRDM will be undertaking in the next financial year (2011/12):
  o Establish a Waste Information System and buy back centres
  o Establish a database for medical and hazardous waste stream and transporters in the region as well as permitting of waste transporters;
  o Subject Air Quality & Waste by-laws to a Public Participation Processes and gazette them; and
  o Basa Njengo Magogo-top down fire making method etc.
• WRDM will require access to sustainable funds in order to implement all projects mentioned for the next financial year; and
• Limited available funds to the municipality make it expensive to fill identified environmental positions.
Merafong City Local Municipality: -

- The Environmental unit expects to receive funding from the Municipality revenue, the Provincial and National Governments;
- Once funding is secured, the unit proposes to carry out the following projects:
  - Filling vacant Environmental positions;
  - Roll out of more environmental management programs; and
  - Development of environmental management policies/tools.
- Most service delivery related environmental functions are outsourced to third party service providers;
- Insufficient budget is allocated to the performance of environmental functions;
- Insufficient management and political support for the fulfilment of environmental management functions within the municipality structure; and
- The municipality has the following Environmental Management Planning Frameworks in place:
  - Integrated Development Plan;
  - Integrated Waste Management Plan;
  - State of the Environment Report;
  - Spatial Development Framework; and
  - Growth and Development Strategy.

Mogale City Local Municipality (MCLM):

- The following are four (4) waste management projects the MCLM is embarking on:
  - Recycling and composting plant at the Luipaardsvlei Landfill Site. The project is a Clean Development Mechanism (CDM) project. Public Participation process is underway for the project. The major challenge faced at Luipaardsvlei Landfill Site is ineffective leachate control infrastructure and lack of funds. A business plan was submitted to MIG to source funding;
  - The development of a new Magaliesburg Landfill site, for which the EIA process is being conducted. The new site is required because the current site has reached its full capacity as there remains a maximum of two (2) Air space capacity. MIG application for funding has been submitted;
  - Eradication of Illegal Dumping in all the wards. Clean-up campaigns and educational & awareness sessions with communities are being conducted. These include school competition on recycling and school waste management programs. Rehabilitation of illegal dumping hotspots is being done where they are transferred into parks. An Illegal dumping survey was conducted to determine the extent and magnitude of illegal
dumping within the municipality. In dealing with the waste, the MCLM is faced with the following challenges:

a) Social engineering – Mindset changes to waste management;

b) Access to funds to convert sites into parks; and

c) The fact that regional fines have to be approved by courts before they can be implemented. To mitigate the challenges regarding the regional fines, the MCLM is having discussions with Dept of Justice to approve fine structure.

o Refuse removal strategy is implemented including its Standard Operations Procedures. The plans for provision of refuse removal in unserviced areas are in place. The challenges faced by MCLM regarding refuse removal include insufficient fleet to provide effective collection of refuse and high operational costs due to overtime and downtime of old fleet. A cost benefit analysis was done to mitigate the challenges. The MCLM is considering the option of utilizing a service provider for refuse collection.

• MCLM developed rural cemeteries and handed them over to the communities. There is however the challenge of no electrical connections to the cemeteries and the MCLM is in consultations with ESKOM to resolve this;

• Kagiso Regional Park development is in progress and it was funded to the tune of R23 million through MIG;

• Feasibility study for CDM Luipaardsvlei Landfill Site is completed;

• Another CDM project with feasibility study completed is the Bulk Recycling Plant. The major challenge with this project is that the quantities of waste only provide marginal feasibility;

• Municipality is in need of qualified air quality specialists which are currently considered as a scarce skill in the country;

• EHPs are currently used for air pollution control.

• Financial constraints are a major challenge that is affecting the prioritization and performance of necessary environmental functions.

Organizational capacity to perform environmental function within the West Rand DM

The West Rand District Municipality Environmental Management unit has the following personnel:

• Environmental Manager;

• Environmental Officer: Air Quality and noise pollution;

• Environmental Officer: Waste management, water quality and biodiversity management; and

• Environmental Awareness Program Officer.
The **Merafong City Local Municipality** Environmental Unit has the following personnel:

- Only one (1) personnel which is the Senior Environmental Management Officer. This officer is responsible for all the environmental management issues within the municipality; and
- Currently there are three (3) vacant positions for Environmental Management.

The **Mogale City Local Municipality** has the following personnel in its Environmental management unit:

- The following positions have been identified by the unit: Environmental law and auditing (Vacant), Environmental planning management and Environmental protection (vacant) specialist positions;
- The Parks management manager has the Cemeteries, facilities and Horticulture specialist reporting to him.

*Environmental Challenges faced by West Rand District Municipality*

**West Rand DM:**

- Financial Problems experienced by WRDM in executing mandatory functions (from both national and provincial) is that funds allocated are supposed to be in sync with function, but this often not the case. This places a huge financial burden on the district and LMs.

**Merafong City:**

- The Environmental Management unit is faced with the following challenges:
  - Lack of staff due to shortage of funds to perform environmental functions;
  - The incorrect placement of the Environmental Management Unit within the municipal organizational structure. The preferred department will be the Community Services;
  - Inadequate senior management commitment to environmental management;
  - Lack of political support and commitment to environmental performance; and
  - Ignorance of environmental issues by both the community and the municipality management
**Fiscal frameworks support for environmental performance**

- There is no budget for environmental management functions. Environmental issues are attended to on a reactive basis to incidents or problems;
- Proposed R100,000 for environmental programs was recommended for the new financial year; and
- R500,000 for the review of SoER also proposed for the new financial year

### 2.2.4 Limpopo Province

The Limpopo province has a total of 5 District Municipalities and 26 Local municipalities within the 5 districts. The 5 DMs are:

- Capricorn DM
- Sekhukhune DM
- Mopani DM (No Questionnaire)
- Vhembe DM (No Questionnaire)
- Waterberg DM (No Questionnaire)

#### 2.2.4.1 Capricorn District Municipality

Capricorn District Municipality has five local municipalities under its jurisdiction, namely Aganang; Blouberg; Lepelle-Nkumpi; Molemole and Polokwane comprising 547 settlements.

Capricorn DM is faced with the following environmental problems (Capricorn DM, 2007):

- Deforestation;
- Ooaching;
- Uncontrolled fires;
- Illegal dumping and littering;
- Unplanned settlements;
- Asbestos pollution;
- Provision of water and poor water quality;
- Absence of sanitation facilities and poor standards; and
- Air pollution.
Environmental functions performed within the Capricorn DM

Capricorn District Municipality:

The Environmental management function and roles of Capricorn District are as follows:

- Waste Management Planning;
  - Establishment of Landfills;
  - Recycling;
  - Planning & Policies;
  - Ensuring Compliance & enforcement;
  - Funding for equipment & waste collection; and
  - Development of tools, e.g. waste information system, waste exchange, etc. These have been included in the IDP but haven't been implemented.

- Environmental & Resource Management undertakes the following responsibilities
  - Sustainable development and LA21;
  - Environmental impact assessments – the unit registers stakeholders and provides comments;
  - Compliance & enforcement (Environmental Management Inspectorate - EMI). Huge resources were put into training staff as EMI and the municipality is hoping that the MEC will be designating the trained staff soon. The municipality is getting a lot of support from the North West University.
  - Environmental management training to municipal officials; and
  - Environmental management tools, e.g. ISO 14001, Sustainability indicators, SoER, EMP, etc. The municipality has all these tools in place but the challenge is that they are not being used or implemented due to lack of trained staff.

- Environmental Education & Awareness (EE & A):
  - Environmental Education & Awareness Strategy;
  - Development of educational pamphlets, booklets etc;
  - Development of training materials & resources (Ward Committee training);
  - Website development / availability of information and statistics. The website has been developed but the quality and quantity of data needs improvement;
  - Distribution of information to stakeholders (newsletters, mailing list etc.);
  - Awareness training to Councillors and staff which is an ongoing project the municipality has been conducting for years;
• Establishment of Environmental Education Centres which is deemed important by the municipality. The municipality is currently seeking donor funding for the centres; and
• Partnerships e.g. WESSA Eco-Schools, Donor funding, etc.

• Air Quality Management:
  • Atmospheric Emission Licensing;
  • Monitoring of ambient air quality. The municipality has purchased equipment for monitoring;
  • Reporting and dissemination of information (live monitoring through web portal). The municipality would like to incorporate air quality data from private monitoring station into this web;
  • Air Quality Education & Awareness;
  • Carbon footprint calculator;
  • Energy efficiency guides, etc
  • Climate Change; and
  • Development of adaptation and mitigation strategies which is proposed for the next financial year.

Aganang Local Municipality:

• No waste management services are being carried out by the municipality – municipal citizens burn their own waste themselves.

Lephelle Nkumpi Local Municipality:

• Municipality has an environmental function that renders water quality, waste management, and refuses removal functions;
• Other functions such as Air Quality and Environmental Health are provided on their behalf by the DM;
• Noise pollution is the responsibility of the environmental unit but there is no capacity to perform it. The function has been budgeted for in the next financial period; and
• The air quality function is under Social Services but there are currently no skilled personnel and budget.

Polokwane Local Municipality:

Polokwane has a fairly capacitated environmental management unit. The unit is responsible for the following:
• Parks and open space systems management;
• Side walks and hard surface management;
• Nature conservation and tourism;
• Integrated environmental management;
• Cemetery and burial site management;
• Environmental education and awareness;
• City entrances and beneficiation;
• Refuse removal;
• Refuse dumps;
• Landfill waste;
• Waste management;
• Illegal dumping, cleaning and clearing of vacant or undeveloped properties;
• Water treatment and water quality monitoring; and
• Air Pollution control and monitoring.

Organizational capacity to perform environmental function within the Capricorn DM

Capricorn District Municipality:

• Capricorn DM has a dedicated Environmental management portfolio within the municipality;
• Most of the portfolios responsibility is to provide support to the LMs; and
• The unit is not involved in the day to day waste collection issues though it gives support to other LMs that are not coping with waste collection.

Aganang Local Municipality:-

• There is no dedicated structural unit in the municipality for the performance of Environmental functions.
• Environmental functions in the municipality are situated within the Economic Development Planning (EDP) unit as there is no dedicated environmental management department within the municipality.
• The EDP department has no manager.
• There is no dedicated manager responsible for environmental functions within the municipality.
• EDP includes environmental management, waste management, LED, Town Planning, etc.
• On the organogram, there are 50 positions within the EDP department but currently only four (4) are filled.
• The municipality is not doing anything in terms of waste; and
• Environmental functions are performed by an environmental planner and two LED officers.

Lephelle Nkumpi Local Municipality:-

• The air quality function is identified within Social Services but there is currently no personnel and budget to perform the function;
• There are six personnel in the town planning section with a budget to perform their duties;
• The municipality is a water supply authority;
• There are 43 personnel employed in the water section;
• There are 36 personnel employed in sanitation section for sewer and wastewater treatment and ponds;
• There are nine personnel in the social services dealing with cemeteries; and
• There are 35 people in the social services department responsible for refuse removal.

Polokwane Local Municipality:-

• The environmental management unit has waste and environmental managers, Assistant managers and Senior Superintendents at Levels 1, 3 and 5 respectively. Supervisors are at a lower level;
• A biodiversity unit exists within the municipality in order to manage the endangered species within its metropolis; and
• Air quality management function of the municipality is performed from the DM and there are eight air quality monitoring stations within the DM.

Current Environmental programmes implemented within the Capricorn DM

Capricorn District Municipality:-

• Greening projects (tree planting, permaculture & urban agriculture etc.);
• Green building guidelines / energy & resource efficiency, eco-friendly designs, green landscaping etc;
• Improved low cost housing (location, EIA studies, eco-efficiency etc.)
• Cemetery planning & developmental guidelines;
• SDF’s & LUMS, development nodes, SEA’s (Town Planning);
• GIS, spatial information, aerial photographs, data collection, etc; and
• All the above programmes and policies are developed but yet to be implemented.
Aganang Local Municipality:

- Capricorn DM allocated funds for the development of a landfill site at Aganang as there was no landfill site within the LM. This fund was later withdrawn and allocated to another LM; and
- Aganag LM only has an Environmental Management Plan and Spatial Development Framework in place.

Lephelle Nkumpi Local Municipality:

- Lepelle Nkumpi LM has a SLA with Eskom and Exarro to supply water to some areas of the Lepelle Nkumpi LM;
- Lepelle Nkumpi LM received 35% for the Green drop assessment; and
- IWMP is being developed with a plan to finalize before the end of June 2011.

Polokwane Local Municipality:

- The municipality is working towards a regional water treatment plant;
- The municipality has the following environmental planning frameworks in place:
  o Integrated Development Plan;
  o Integrated Waste Management Plan;
  o Integrated Air Quality Management Plan developed by the district;
  o State of the Environment Report;
  o Spatial Development Framework;
  o Growth and development Strategy;
  o Environmental Health Plan; and
  o Health By-laws.

Challenges faced by Capricorn DM to perform environmental function

Capricorn District Municipality:

- Limited available funds to the municipality makes it expensive to fill identified environmental positions; and
- Greater need for management and political support for the fulfilment of environmental management functions within the municipality structure.
Aganang Local Municipality:

- There are no funds to either employ or outsource environmental functions and this leads to further environmental degradation; and
- The council is not taking seriously issues of environmental management.

Lephelle Nkumpi LM:-

- The following are some of the challenges faced by the municipality regarding environmental issues:
  - Lack of waste disposal site in rural areas;
  - Lack of solid waste management programme;
  - Lack of public drop off facilities;
  - Structurally, environmental awareness is under various directorates
  - The current IWMP funded by National Government was irrelevant and hence should be reviewed and updated;
  - Lephelle is growing fast but there is no complementary staff to meet the growth; and
  - The existing facility fleet for waste removal is growing outdated and therefore inefficient.

Polokwane Local Municipality:

- Lack of skilled employee capacity in the unit to perform environmental functions;
- The unit is challenged by illegal dumping and the disposal of pampers;
- The developed IWMP was never approved and implemented; and
- The municipality is faced with the challenges of old fleet and lack of capacity.

Fiscal frameworks support for environmental performance

Capricorn District Municipality:

- Budget Availability for the Capricorn DM;
  - Development of landfills;
    - +R25-million / R15-million per landfill.
  - Day-to-day management of landfill sites;
    - R1,5 million / R100 000 per month;
  - Air Quality / Monitoring equipment;
    - R750 000.00 / 1-monitoring station per municipality; and
    - Requirement: R3-million.
  - Waste equipment;
    - R5,5-million.
Recycling initiatives;
   a) Separation at source, recycling depots, buy-back centres, markets, etc. The municipality is not fully performing this activity

Policies & Plans;
   a) R4-million over last 4-years.

Training for municipal officials and Councillors;
   a) R2-million over last 4-years.

Community based waste collection;
   a) R5.4-million / ± R20 per collection point / 6-months; and
   b) 2012/13 - +R10-million.

Other anticipated short-term costs (1-3-years);
   a) R3-million.

Alternative finding sources required;
   a) MIG, donations, grants, etc.

Accessibility to MIG funds to the municipality has been difficult because it is currently dependent on diminishing equitable shares; and

The portfolio recommends that the fund allocated for the provision of environmental function is ring-fenced to prevent them being diverted for use on electricity, roads and water as is often the case.

Aganang Local Municipality:

- There is a budget of R310 000 for (Economic, Development and Planning) EDP for the next financial year for environmental functions which includes environmental awareness programmes, Town Planning and LED programmes; and
- Municipality does not generate revenue from waste management as it does not offer any waste collection and disposal services.

Polokwane Local Municipality:-

The environmental unit gets its funding from equitable share and municipal revenue. 15% of the budget is allocated for salaries and 10% is allocated for the core services. Infrastructure and Skills development get allocated 50% and 3 % respectively. Vehicles gets 5%, service ad repair of infrastructure is allocated 10%. The environmental management unit allocates 7% of their budget to sub-consultants/ service providers.

2.2.4.2 Sekhukhune District Municipality

- The DM consists of five LMs namely; Fetakgomo, Groblersdal, Makhuduthamaga, Marble Hall and Tubatse;
• Elias Motsoaledi and Tubatsi are the major Towns in the DM;
• Population is 1.3million; and
• Much of the district area is largely rural.

**Environmental functions performed within the Sekhukhune DM**

• The Municipality Health is responsible for health functions in terms of the National Health Act with the EHPs performing the environmental functions;
• Air pollution control and monitoring;
• Atmospheric Emission Licensing;
• Climate Change;
• Landfill waste;
• Waste management;
• Issuing of permits in terms of public health by-laws; and
• Water treatment and water quality monitoring

**Organizational capacity to perform environmental function within the Sekhukhune DM**

• There are two managers responsible for Municipal Health and Disaster management respectively;
• EHP based at the Province are seconded to provide organizational support to the LM; and
• Only three EHPs are responsible for performing environmental functions including waste and air quality management.

**Current Environmental programmes implemented within the Sekhukhune DM**

• There are three licensed landfill sites in the DM and three other projects for waste recycling, cemeteries and greening and environmental awareness.

**Challenges faced by Sekhukhune DM to perform environmental function**

• Capacity constraints make Environmental health more of a focus of GSDM than environmental management.

**Fiscal frameworks support for environmental performance**

• The environmental function has an OPEX budget of R13.2 million. and
• 14% of the budget is used for salaries and 53% is set aside for Infrastructure. Core environmental service is allocated 13% of the budget and 17% goes to service and repair of infrastructure. There is no budgetary allocation for skills development and vehicles. Services provided by consultants are allocated 3%.

2.2.4.3 Mopani District Municipality

The Mopani District municipality is situated in the North-eastern part of the Limpopo Province, 70 km from Polokwane (main City of the Limpopo Province). It is bordered in the east by Mozambique, in the north, by Zimbabwe and Vhembe District Municipality, in the south, by Mpumalanga province through Ehlanzeni District Municipality and, to the west, by Capricorn District Municipality and, in the south-west, by Sekhukhune District Municipality. The Mopani DM is made of five municipalities namely: Greater Giyani, Greater Tzaneen, Greater Letaba, Ba-Phalaborwa and Marulaeng (Mopani DM, 2007).

The Mopani District, by virtue of the Kruger National Park as a District Management Area, is part of the Great Limpopo Transfrontier Park; the park that combines South Africa, Mozambique and Zimbabwe (Mopani DM, 2007).

The Mopani District Municipal area is faced with environmental risks and trends that lead to environmental degradation (Mopani DM, 2007). Below is synopsis of the environmental situation in the district highlighting existing environmental concerns and risks:

Air Pollution

Air Pollution is a major environmental problem affecting most areas in the Mopani District. Vehicles, mines and industries pollute the air by releasing harmful gasses, especially in urban areas. In the villages, air pollution is caused by the burning of wood and coal to make fire releasing carbon dioxide. Another source of air pollution is leakage of sewage and companies burning their waste, causing bad odour (Mopani DM, 2007).

Water Pollution

Water pollution in the district affects most people as many of them stay in the rural areas and depend on river water supply. The major cause of water pollution is the sewage leakage and release of industrial waste into streams as well as illegal solid waste dumping along the river system. People washing their clothes in rivers using detergents also cause water pollution. The usage of herbicides and pesticides by farmers results in these chemicals finding their way into rivers and, thus, increase the growth of algae and
reduces oxygen levels in water. The most noted water pollution takes place in the Murhogolo stream between Giyani shopping complex and government offices, the Thabina River from Mogoboya downstream, at the Klein and Greater Letaba rivers as well as Molotodzi which is highly choked with solid waste (Mopani DM, 2007).

Deforestation

Deforestation is one of the identified major environmental problems affecting most areas in the district; in particular, every forest or veld in the District. This problem is caused by irresponsible traditional healers, wood carvers, firewood collectors, farmers and villagers residing around deforested areas (Mopani DM, 2007).

Veld Fires

The Mopani area often experiences uncontrolled veld fires during winter. These fires have a negative environmental and economic impact. The veld fires are also a threat to human and animal life. The major cause of this problem is poaching, firewood collection, uncontrolled burning for green bite, lack of knowledge about veld fire destruction, lightning and negligence (Mopani DM, 2007).

Soil erosion

Soil erosion has a negative effect on the environment as it affects the larger part of the Mopani area. This affects people residing around eroded areas, by worsening floods and decreasing agricultural production. The major causes of this condition are deforestation, overgrazing and poor land use management (Mopani DM, 2007).

Chemical Spills and Hazardous Accidents

There are numerous areas in the district that are subject to chemical spills and hazardous accidents that have a detrimental impact on the lives of people. This occurs mainly near industries and along major routes, polluting the air and ground (Mopani DM, 2007).

Overgrazing

Overgrazing on agricultural land around villages in the district is a common phenomenon. The major cause of this condition is overstocking by farmers as well as drought and floods (Mopani DM, 2007).
Informal Settlements

Informal settlements have major negative effect to the environment because through its practice, vegetation is destroyed when buildings are illegally built. This is a major problem that affects the whole of Mopani District. The major cases of informal settlements are poverty, unemployment, population growth and urbanization (Mopani DM, 2007).

*Environmental functions performed within the Mopani District Municipality*

Greater Giyani Local Municipality:

- Waste management and refuse removal;
- Environmental management including commenting on EIA applications;
- Cemetery and Parks management; and
- Landfill site management.

Greater Tzaneen Local Municipality:-

- Waste management;
- Cemeteries and parks;
- Refuse collection and street cleaning;
- Noise pollution control and monitoring;
- Air pollution control and monitoring;
- Refuse dumps;
- Landfill waste; and
- Illegal dumping and cleaning of vacant or undeveloped properties.

*Organizational capacity to perform environmental function within the Mopani DM*

Greater Giyani LM:

- There are no personnel to perform parks and cemeteries functions.

Greater Tzaneen LM:

The environmental management functions are performed under the Community services which is headed by a Director. Three managers who are responsible for Environmental Management issues, waste management and Parks cemeteries, sports and recreation report to the Community services Director respectively.
Current Environmental programmes implemented within the Mopani DM

Greater Giyani LM:

- The district has no landfill;
- The municipality has IWMP and waste by-laws; and
- The municipality got support for environmental issues from Indalo Yethu for Thulamila and Giyani LM to the tune of R31 million each.

Fiscal frameworks support for environmental performance

Greater Giyani:

- The annual budget for environmental function is between R2 million to R3 million;
- Half of the budget is used for salaries and a quarter of it on the core service. The remainder of the budget goes to infrastructure and vehicles; and
- This budget excludes services provided for by consultants.

2.2.5 Mpumalanga Province

The province of Mpumalanga has 3 District Municipalities and 26 Local Municipalities. The DMs are:

- Gert Sibande (No Questionnaire)
- Nkangala (No Questionnaire)
- Ehlanzeni (No Questionnaire)

2.2.5.1 Gert Sibande District Municipality

Gert Sibande DM previously known as the Eastvaal District Municipality is one of the 3 districts of Mpumalanga province. The seat of Gert Sibande is Secunda. The DM is bordered by Ekurhuleni Metro to the west and Sedibeng District Municipality to the south west respectively both in Gauteng Province. It is bordered by Ehlanzeni District Municipality to the north east and Nkangala District Municipality to the north respectively both in Mpumalanga Province, Amajuba District Municipality in KwaZulu-Natal Province to the south east, and Swaziland to the east. The DM is made up of the following LM, namely, Albert Luthuli; Msukaligwa; Mkhondo; Pixley Ka seme; Lekwa; Dipaleseng and Govan Mbeki (Gert Sibande, 2008).
The District with its vast landscapes, mining activities, wetlands, industries, sewerage treatment plants and farming, has a significant challenge of managing its natural environment (Gert Sibande, 2008).

*Environmental functions performed within the Gert Sibande DM*

The following are the Municipal Health Services rendered by the DM (Gert Sibande, 2008):

- Water quality monitoring;
- Food quality monitoring;
- Waste management monitoring;
- Health surveillance of premises;
- Communicable disease control;
- Vector control;
- Environmental pollution control;
- Disposal of the dead; and
- Chemical safety

*Challenges faced by Gert Sibande DM to perform environmental function*

The key issues pertaining to Environmental Management affecting Gert Sibande DM amongst others include the following (Gert Sibande, 2008).

Waste Management:

- Unpermitted & illegal land fill sites;
- Increase in waste generation with insufficient corresponding plan for mast management disposal sites;
- Unmaintained land fill sites;
- Use of old and obsolete equipment with unreliably sustained operations;
- Increased maintenance costs;
- Lack of skilled waste management personnel within the municipality;
- Current IWMP inability to address the current waste management issues; and
- Existence of some sections of the community not receiving waste collection service.

Health and Environmental management (Gert Sibande, 2008):

- Implementing Council By-Laws on keeping of animals;
• Allocating stock camps for grazing purposes and control measures to avoid overgrazing; and
• Conducting continuous Environmental Impact Assessments that will prevent unnecessary pollution of land, air and water.

2.2.5.2 Nkangala DM

The Nkangala District Municipality is one of the three (3) District municipalities in Mpumalanga Province. The headquarters of Nkangala District Municipality is in Middelburg (Steve Tshwete Local Municipality). It is composed of six (6) local municipalities namely; Victor Khanye / Delmas Local Municipality, Emalahleni Local Municipality, Steve Tshwete Local Municipality, Emakhzeni Local Municipality, Thembисile Hani Local Municipality and Dr J S Moroka Local Municipality (Nkangal DM 2009).

Organizational capacity to perform environmental function within the Nkangala DM

Nkangala District Municipality:

• Air pollution control and monitoring;
• Atmospheric Emission Licensing;
• The following are the MHS rendered by the DM:-
  o Water quality monitoring;
  o Food quality monitoring;
  o Waste management monitoring;
  o Health surveillance of premises;
  o Communicable disease control;
  o Vector control;
  o Environmental pollution control;
  o Disposal of the dead; and
  o Chemical safety

Steve Tshwete Local Municipality:-

The following are the environmental management functions performed by the Steve Tshwete LM:

• Air pollution monitoring which is outsourced because of lack of capacity;
• Commenting on the EIA application;
• Water monitoring and sanitation;
• Control of hazardous substances;
• Waste management and general hygiene monitoring;
• Noise pollution control and monitoring;
• Chemical safety permitting;
• Food premises inspection;
• Monitoring of industrial premises;
• Environmental education and awareness; and
• Prevention of communicable diseases and outbreak.

Current Environmental programmes implemented within the Nkangala DM

Steve Tshwete LM has the following environmental management planning frameworks in place:
• Integrated Development Plan;
• Integrated Waste Management Plan;
• Spatial Development Framework;
• Environmental Health Plan;
• Environmental by-laws; and
• Health by-laws.

Challenges faced by Nkangala DM to perform environmental function

Some of the major challenges include:

• Lack of waste management services (such as dustbins) and refuse disposal at household;
• Lack of health and environmental By-laws;
• Inadequate old waste collection;
• Illegal land mining;
• No access roads to informal settlements; and
• Lack of funds.

2.2.5.3 Ehlanzeni District Municipality

Ehlanzeni is one of the 3 districts of Mpumalanga province of South Africa. The seat of Ehlanzeni is Nelspruit. Ehlanzeni is surrounded by: Mopani to the north; the republic of Mozambique to the east; the kingdom of Swaziland to the south; Gert Sibande to the south; Nkangala to the south-west and Sekhukhune to the north-west. The DM consists of five (5) LM, namely; Mbombela; Nkomazi; Thaba Chweu; Umjindi and Bushbuckridge and the District Management Area.
The DM is known for the gold mining taking place in the district. Most of the Mpumalanga’s gold is produced at Ehlanzeni district, mainly in the Barberton, Lydenburg and Pilgrim’s Rest areas. The five mines operating in the Barberton area are: Agnes, Fairview, Consort, Makonjwaan Imperial open-cast and Sheba (Ehlanzeni DM 2010).

**Challenges faced by Ehlanzeni DM to perform environmental function**

A large portion of households in the Ehlanzeni DM area and in particular rural areas do not have full access to potable water or sanitation services. The number of cholera cases reported in the Ehlanzeni DM reached unacceptable levels, since the beginning of January 2009 (2010 IDP). The most affected areas being Mbombela and Bushbuckridge local municipalities. Ground water is an undisputed major source of potable water in large parts of Ehlanzeni DM. Water borne diseases such as cholera are increasing, causing a huge scare that that ground water in some areas may be polluted (Enhlanzeni I2010).

There are backlogs with regards to waste management services that need to be addressed so that there is visibility and an impact of services rendered and experienced by communities. Most rural areas are using communal type of waste management and systems and programmes are lacking. There are no air quality monitoring stations though air quality is an issue within the DM (Enhlanzeni, 2010).

**2.2.6 Northern Cape Province**

The Northern Cape has a total of 5 District Municipalities and 27 Local Municipalities. The 5 DMs are:

- Namakwa (No Questionnaire)
- Pixley Ka –Seme DM (No Questionnaire)
- Siyanda DM
- Frances Baard DM (No Questionnaire)
- John Taolo Gaetsewe DM (No Questionnaire)

**2.2.6.1 Namakwa District Municipality**

Namakwa DM is one of the 5 districts of the Northern Cape province of South Africa. The seat of Namakwa is Springbok and the region is also known as Little Namaqualand. The Namakwa DM is made up of the following local municipalities namely: Richterveld; Nama Khoi; Kamiesberg; Hantam; Karoo Hoogland; and Khai-Ma.

**Environmental functions performed within the Namakwa DM**
The DM is responsible for the delivery of Municipal Health Services in terms of the National Health Act to the six LM within its jurisdiction (Namakwa, 2007). Other services rendered by the DM are as follows:-

- Air pollution control and monitoring;
- Atmospheric Emission Licensing;
- Climate change issues;
- Waste Management;
- Nature Conservation; and
- Water quality monitoring.

**Organizational capacity to perform environmental function within the Namakwa DM**

The environmental health function falls is carried out within the Community Services Department which is headed by a Manager. Below the Manager is the Head for Environmental Health who has a Senior Environmental Health Practitioner (EHP) with eight junior (8) EHPs reporting to him.

**Current Environmental programmes implemented within the Namakwa DM**

The DM has the following environmental framework polices in place:-

- Integrated Development Plan;
- Integrated Waste Management Plan;
- Waste Management Strategy; and
- Indoor Air Quality policy.

**Challenges faced by Namakwa DM to perform environmental function**

- Shortage of qualified personnel. In particular air quality specialist; and
- Limited funding for environmental management functions.

**Fiscal frameworks support for environmental performance**

The Environmental Health section gets its funding from the equitable share and it is distributed as follows:

- 40% is allocated to salaries;
- 30% allocated to vehicle operation and maintenance; and
The remaining 30% is allocated to core service delivery.

2.2.6.2 **Pixley Ka Seme District Municipality**

The Pixley ka Seme district lies in the south-east of the Northern Cape Province and shares its borders with three other provinces, namely, the Free State province to the east, the Eastern Cape to the south-east and the Western Cape to the south-west. The DM consists of eight LMs and one DMA. The LMs are as follows: Emthanjeni; Kareeberg; Thembelihle; Siyathemba; Renosterberg; Ubuntu; Siyancuma and Umsobomvu.

The following environmental issues affect the Pixley Ka Seme DM:

**Water quality**

The following sources have been identified as the most likely contributors to poor water quality (Pixley Ka-Seme DM IDP, 2009):

- Sewerage pollution;
- Intensive agricultural use of fertilizers and pesticides;
- Industrial wastes;
- Mining and soil erosion;
- Lack of education;
- Waste disposal sites in urban areas and
- Littering.

Typical pollutants from the agricultural sector include high salt loads, pesticides, nitrates and phosphates from fertilizers. All these contribute to algal growth and lead to eutrophication of water courses and heightened risk to human health from ingestion. There has been abundant evidence of eutrophication in the two main rivers of Orange and Vaal which are degraded and polluted (Pixley Ka-Seme DM IDP, 2009).

**Air quality**

According to the 2009 IDP, no air quality monitoring has been conducted in the region; therefore, it would be difficult to determine the extent to which air is polluted or its quality. The most likely local source of air pollution is:-

- Dust storms;
- Burning waste at the refuse disposal sites;
- Household coal burning;
• Mining activities – dust and processing plants;
• Medical facilities – coal powered heating systems and/or incinerators; and
• Agricultural areas – burning of crop residues, veld management or accidental fires.

Cultural and historical sites

The region is richly endowed within cultural and heritage sites. Rock Art is found throughout the area with especially good examples in the Thembelihle municipal area. Various battle grounds and cemeteries dating the Anglo-Boer War are also found in the region (Pixley Ka-Seme, 2009).

In and around the towns are several buildings with particular environmental, architectural or historical value which form part of the national heritage.

2.2.6.3 Siyanda District Municipality

Siyanda District Municipality forms the mid-northern section of the Northern Cape Province on the frontier with Botswana. It covers an area of more than 100,000 square kilometers (almost 30% of the entire Province) out of which 65,000 square kilometers comprise the vast Kalahari Desert, Kgalagadi Transfrontier Park and the former Bushman Land. Siyanda DM is made up of the following LMs; !Kai! Garib Municipality; Mier Municipality; Khara Hais Municipality; !Kheis Municipality; Tsantsabane Municipality; Kgatelopele Municipality. The 2008-2009 IDP identified the following environmental challenges being faced by Siyanda DM.

Ground Water

Underground water is not very commonly found in this area. Various farms in this area are uninhabitable because of the absence of good quality underground water. The underground water usually lies very deep beneath the surface and is often too brackish for use, even by animals.

Surface Water (river)

The most important river in the region is the Orange River. Without this river, very little development would be possible. The Orange River is perennial with a flow which varies between 50 and 1800 cubic meter per second depending on the season.

The quality of the water from the Orange River has systematically been degrading. Reasons for this are the increasing agricultural and industrial activities which are
upstream from Upington, as well as the lessening of the inflow of high quality water from Lesotho.

Dams

Within the region, there are no significant dams on the Orange River. There are however various containment dams from which water for irrigation or urban settlement is diverted through canals. Examples of these are Boegoeberg Dam near Groblershoop and the Neusberg Dam near Kakamas.

Vegetation

As a result of the low rainfall, the area has a unique vegetation since two field types are found in the area, i.e. the Orange River scattered field and the Kalahari-Dune field, with a large bio-diversity of plants and animal species, which are endemic to the respective field types.

Air quality:

The air quality of the area can be described as good because there is very little air pollution compared to urban areas. Problems such as acid rain do not occur in the area. The few cases of air pollution which occur are mostly as a result of smoke from the burning of vegetation such as reeds along the river, and, to a lesser extent, from certain households.

2.2.6.4 Frances Baard District Municipality

Frances Baard District Municipality (FBDM) municipality is the smallest district in the Northern Cape Province.

There are four local municipalities and the District Management Area (DMA) within the DM namely: Sol Plaatje; Phokwane; Magareng; Dikgatlong and the DMA.

The main environmental issues as highlighted in the District Integrated Environmental Management Plan (Frances Baard DM IDP 2010 is:

- About one fifth (18%) of FBDM region natural environment has either been degraded or affected by urbanization, mining or cultivation;
- The district has limited (5%) centre of biodiversity; and
- The district receives only 400mm of rain per annum.
The main issues highlighted in the current Integrated Waste Management Plan are:-

- Lack of disposal infrastructure;
- Lack of Waste Collection infrastructure;
- Poor institutional capacity
- Limited financial resources;
- Poor management of illegal activities; and
- Inappropriate waste management methods.

The DM is faced with the following issues regarding environmental health:

- Inadequate water quality monitoring systems;
- Poor waste management systems;
- LM within the district are unable to implement the National Environmental Management Waste Act (59) 2008;
- Inadequate surveillance and prevention of communicable diseases; and
- Poor pollution control measures within the district.

Environmental functions performed within the Frances Baard DM

FBDM has an Environmental Health Unit which renders the following service within the district:

- Water quality monitoring;
- Food control;
- Waste management;
- Health surveillance of premises;
- Surveillance and prevention of communicable diseases;
- Vector control;
- Environmental pollution control;
- Disposal of the dead; and
- Chemical safety.

Organizational capacity to perform environmental function within the Frances Baard DM

The Environmental Health Unit consists of a Manager, and three Environmental Health Practitioners

Current Environmental programmes implemented within the Frances Baard DM

FBDM has the following environmental planning frameworks in place:
• Integrated Waste Management Plan;
• Environmental Management Framework;
• Air Quality Management Plan; and
• District HIV and AIDS Plan.

**Challenges faced by Frances Baard DM to perform environmental function**

The DM is faced with the following challenges:

• There is a wide-spread need for skilled environmental specialist in the DM.
• The developed Air Quality Management Plan was developed is not implemented due to shortage of trained specialized personnel;
• The budget for waste management is inadequate;
• The DM has been unable to operate and manage the landfill sites effectively; and
• The DM is affected by the devolution of Municipal Health services to DM because of resource incapacitation to manage this function.

**Fiscal frameworks support for environmental performance**

The Environmental Health Unit receives its funding from Equitable Share from National Treasury. The funds are allocated as follows:-

• 40% to salaries;
• 1% for skills development;
• 4.6 % towards vehicles; and
• 44.4 % is allocated towards the core service.

**2.2.6.5 John Taolo Gaegeset District Municipality**

**Environmental functions performed within the John Taolo Gaegeset DM**

• Environmental functions within GTGDM falls within the municipal health services which performs the following:-
  
  o Water quality monitoring;
  o Food quality monitoring;
  o Waste management monitoring;
  o Health surveillance of premises;
  o Communicable disease control;
  o Vector control;
  o Environmental pollution control;
  o Disposal of the dead; and
• Chemical safety.

- GTGDM focuses more on Environmental health services than on environmental management performance.

**Organizational capacity to perform environmental function within the John Taolo Gaegeset DM**

- The Air Quality Management (AQM) function lies within the province as there is no capacity to perform this function on a district level;
- There is no one in the DM responsible for the environmental function;
- There is no Biodiversity, Climate Change and Environmental Awareness functions taking place in the municipality; and
- There is a serious shortage of environmental personnel within the municipality and the council is not willing to employ.

### 2.2.7 North West Province

The North West Province has a total of 4 DMs and 19 LMs. The 4 DMs are:

- Ngaka Modiri Molema DM (No Questionnaire)
- Dr Ruth Segomotsi DM (No Questionnaire)
- Bojanala Platinum DM
- Dr Kenneth Kaunda DM

#### 2.2.7.1 Ngaka Modiri Molema District Municipality

The Ngaka Modiri Molema District Municipality (NMMDM) is one of the four District Municipalities of the North West Province of South Africa. The DM is home to Mafikeng, the capital of the province. There are five local municipalities within the district as follows: Maikeng, Ditsobotla, Ramotshere Moiloa, Tswaing, and Ratlou municipalities.

**Environmental functions performed within the Ngaka Modiri Molema DM**

The major existing environmental challenges faced by the DM as identified in the district 2010/2011 IDP are as follows:

- Littering and illegal dumping of garden refuse and building rubble on open plots, peri-urban areas and skips;
Residents of NMMDM are faced with environmental health risks due to pollution from the following sources:
  - Settlements Areas e.g. litter and illegal waste dumping; smoke pollution due to wood fires mainly in the rural areas;
  - The Industrial Area - air pollution
  - Agriculture-related pollution, example the use of insecticides, herbicides, fertilizing nutrients leading into water bodies;
  - Sewage treatment works;
  - Landfill sites; and
  - Cement factories.

Mafikeng LM produces the majority of waste due to its high population density and larger industrial area, followed by Ditsobotla, Ramotshere Molwa, Tswaing and Ratlou respectively;

Past mining activities in NMMDM have resulted in environmental degradation. This is particularly the case in areas in Majemantsho. Soil mining activities for brick-making also has damaged the land and needs rehabilitation;

Poor living conditions - Communities in informal settlements do not have adequate access to basic facilities such as sewerage and potable water;

Habitat destruction - Agricultural practices such as overstocking and overgrazing, ploughing of marginal land for crops, cutting down of trees or clearing of land for human use causes destruction of habitats;

Veld degradation - Land degradation includes deforestation due to cutting down of trees for domestic use; loss of vegetative cover as a result of veld trampling patterns by domestic animals; bush encroachment due to increase of cover of indigenous trees; invasion of alien plants; . The south-western parts of NMMDM, constituted of Tswaing and Ditsobotla LM, both of which are characterized by commercial farming, are largely dominated by areas of degraded unimproved grassland of land. Thicket and bush land dominates in Ramotshere LM, Ratlou and Mafikeng covering 1968.86 ha in general. Thickets eventually cause bush encroachment which is a serious threats in Ramotshere Molwa;

Soil erosion - Soil erosion is a problem particularly in areas where it is associated by use of land for crop production and livestock farming practices.

The environmental issues affecting NMMDM according to the districts 2010/2011 IDP are as follows:

- Air quality which is affected by emissions from industries and domestic activities;
- Heritage resources, some of which are not properly taken care of due to lack of skilled personnel and are thus under the threat of deterioration;
- Waste management issues which includes landfill sites permitting and proper management; eradication of illegal dumping sites; provision of essential
resources for waste management (machinery, air quality monitoring stations; waste transfer stations etc);

- Water scarcity which is worsened by pollution of water by domestic, agriculture and industrial activities;
- Soil quality which is affected by natural resource exploitation, population mobility, population growth, climate change etc;
- Biodiversity and species conservation which is affected by continued pressures such as habitats change and environmental degradation;
- Empowerment and capacity building of communities on environmental issues and
- Poor environmental governance amongst spheres of government

2.2.7.2 Dr Ruth Segomotsi Mompati District Municipality

Dr Ruth Segomotsi Mompati District Municipality (formerly Bophirima District Municipality) is one of the 4 DMs of the North West Province. The seat of Mompati DM is Vryburg. The DM consists of the following LMs; Greater Taung LM; Lekwa Teemane; Mamusa LM; Kagisano Molopo LM; and Naledi LM.

Environmental functions performed within the Dr Ruth Segomotsi Mompati DM

Environmental functions within Dr Ruth Segomotsi Mompati DM are as follows;

- Water quality monitoring;
- Food quality monitoring;
- Waste management monitoring;
- Health surveillance of premises;
- Communicable disease control;
- Vector control;
- Environmental pollution control;
- Disposal of the dead; and
- Chemical safety

Organizational capacity to perform environmental function within the Dr Ruth Segomotsi Mompati DM

Naledi Local Municipality:

- Environmental practitioners within the municipality do not necessarily have Environmental sciences background
- Lack of funds and skilled personnel is affecting environmental performance within the municipality
2.2.7.3 **Bojanala Platinum District Municipality**

Bojanala Platinum District Municipality (BPDM) is one and the largest of the four DMs within North West Province. The DM is located in the north-eastern side of the North West Province. The DM is made up of the following LMs; Rustenburg; Kgetlengrivier; Madibeng; Moses Kotane and Moretele.

The environment and natural resource of Bojanala Platinum DM is faced with many threats because of unsustainable agricultural and mining practices, township development, domestic and industrial pollution (Bojanala DM IDP 2009/2010).

Large parts of the Bojanala Platinum District Municipality are characterized by high levels of biodiversity as determined in the North West Biodiversity database. These include the areas along the Magaliesburg stretching from the southern parts of Madibeng Local Municipality in the east to Rustenburg and further north westwards up to the north western parts of the Rustenburg Local Municipality. It also includes areas in the central parts of the Kgetleng Rivier local municipality, as well as large parts of the Moses Kotane Local Municipality west of the Pilanesberg National Park (Bojanala DM IDP 2009/2010).

**Environmental functions performed within the Bojanala Platinum DM**

Bojanala Platinum DM:

- Air pollution control and monitoring;
- Atmospheric Emission Licensing;
- Biodiversity Management;
- Municipality Health Services includes the following;
  - Water quality monitoring;
  - Food quality monitoring;
  - Waste management monitoring;
  - Health surveillance of premises;
  - Communicable disease control;
  - Vector control;
  - Environmental pollution control;
  - Disposal of the dead; and
  - Chemical safety
- Waste Management.
Rustenburg LM:

- Air pollution control and monitoring;
- Atmospheric Emission Licensing;
- Biodiversity Management;
- Municipality Health Services includes the following;
  - Water quality monitoring;
  - Food quality monitoring;
  - Waste management monitoring;
  - Health surveillance of premises;
  - Communicable disease control;
  - Vector control;
  - Environmental pollution control;
  - Disposal of the dead; and
  - Chemical safety.
- Waste Management.

Organizational capacity to perform environmental function within the Bojanala Platinum DM

Bojanala DM:

- The environmental management functions are rendered in the department of community environmental services which was implemented in 2009;
- The department is made of air quality management and regulatory services, waste management and biodiversity and the municipal health and environmental education units;
- Various units have environmental management plans on how to address environmental performance within the municipality.

Rustenburg LM:

- In performing its environmental function, Rustenburg LM has an Environmental Impact Management (EIM) unit and a Waste Management unit;
- Three sub-division of the EIM unit are Environmental Impact assessment, Environmental education and awareness and Air quality management; and
- The Waste management unit whose organizational structure is currently being reviewed performs the waste removal functions of the municipality.
Current Environmental programmes implemented within the Bojanala Platinum DM

Rustenburg LM

- Municipality has the following environmental planning tools such as:
  - Strategic Environmental management;
  - Rustenburg open space and Heritage management plan;
  - Rustenburg wetland inventory (Phases 1 and 2) in conjunction with SANBI;
  - Environmental Management Framework (EMF);
  - Air pollution bye – law;
  - Air monitoring network;
  - Air quality management plan;
  - Food for Waste project at Freedom park;
  - Expanded public works programme which a is a poverty alleviation scheme;
  - Townlands landfill site development which a CDM project;
  - Waterval landfill facility development; and
  - The proposed Material Biological Treatment (MBT) plant.

Challenges faced by Bojanala DM to perform environmental function

Bojanala DM:

- Municipality is faced with difficulties in recruiting specialized environmental positions, particularly Air quality specialists. This is of particular concern because air quality management is a focus of BDPM by virtue of the thriving mining industry within the district; and
- Promulgation of bye-laws which have a direct impact on BDPM environmental performance has been a challenge.

Rustenburg LM:

- Whilst management tools exist within the LM, the necessary skilled personnel to manage their implementation do not exist. e.g. municipality lacks an air quality specialist;
- Both financial and human resources to implement bye-laws are lacking;
- The limited budget available for awareness programs makes effective environmental performance difficult in all the 36 wards within the LM;
- Municipal waste management services exist but are managed within a separate unit and this makes it difficult to coordinate services.
Fiscal frameworks support for environmental performance

Bojanala DM

- Municipality is able to improve its environmental performance because it has access to donor funds from the Finnish Government. This is especially useful for CDM projects; and
- Some of the municipality funding is from equitable share from the national treasury.

2.2.7.4 Dr Kenneth Kaunda DM (KKDM)

The Dr Kenneth Kaunda DM consists of four local municipalities namely, Matlosana, Potchefstroom, Maquassie Hills and Ventersdorp. The majority of the Dr. Kenneth Kaunda District population resides within the City of Matlosana LM followed by Tlokwe LM (16%). The two LMs Maquassi and Ventersdoro have the smallest population. The DM has a Department of Municipal Health Services which is responsible for environmental health issues and the Local Government support Unit which deals with environmental management issues.

Environmental functions performed within the Dr KK DM

- KKDM focuses more on Environmental Health Services than on environmental management functions;
- The following are the MHS rendered by the DM;
  - Water quality monitoring;
  - Food quality monitoring;
  - Waste management monitoring;
  - Health surveillance of premises;
  - Communicable disease control;
  - Vector control;
  - Environmental pollution control;
  - Disposal of the dead; and
  - Chemical safety.
- The local municipality within KKDM depend largely on KKDM to provide environmental health and management services;
- The following are the Environmental Management services rendered by the DM;
  - Waste Management;
  - Air quality pollution control and monitoring;
  - Atmospheric Emission Licensing;
  - Management of Recreational Facilities and Parks;
o Commenting on EIA applications;
o Management of wetlands;
o Compilation of environmental management by-laws;
o Enforcement and compliance of environmental legislation;
o Assist local municipality in sourcing funding for environmental
management activities;
o Conduct environmental awareness campaigns; and
o Represent the environmental functions on IDP to make sure the
environmental projects are included in the IDP.

**Organizational capacity to perform environmental function within the Dr KK DM**

Dr KKDM:-

- Environmental performance within the district municipality falls within the
department of Municipal Health and Environmental services;
- The personnel components within the department are basically Environmental
Health Practitioners (EHP); therefore, the district municipality (and indeed the
four local municipalities within it) lacks skilled environmental management
practitioners;
- There is insufficient funds to fill up much needed environmental vacancy within
the municipality;
- The MHS is headed by a Director. Under the Directorate are five (5) Managers.
There are 21 EHPs and four vacant posts for EHPs. The MHS has three
Administrative clerks, two General workers, two Pest Control Officers and three
Assistant Pest Control Officers; and
- There are three vacant posts each for General workers, Pest Control Officers
and Assistant Pest Control Officers.

Matlosana LM:-

- Municipality has a cleansing services department which is responsible for
cleaning and refuse removal;
- Municipality requires skilled environmental management;
- Budgetary constraints have hampered on effective environmental performance;
and
- Municipality depends on third party service providers to deliver on cleansing
services.

Tlokwe LM:-
There are no funds to either employ or outsource environmental functions. This leads to further environmental degradation.

Fiscal frameworks support for environmental performance

KKDM gets its funding from equitable share and the budget for environmental functions is insufficient compared to the services required to be rendered.

2.2.8 Western Cape Province

The Western Cape has 5 DMs, 1 Metro (City of Cape Town) and 30 LMs. The 5 DMs are:

- Boland DM (No Questionnaire)
- Overberg DM (No Questionnaire)
- Central Karoo DM (No Questionnaire)
- Eden DM (DC4)
- West Coast DM (DC1)

2.2.8.1 West Coast District Municipality (WCDM)

Three local municipalities of Saldanha, Cederberg and Swartland municipalities make up WCDM.

Environmental functions performed within the West Coast DM

West Coast DM:

The environmental function rendered by West Coast DM includes:

- Integrated Coastal Management;
- Climate Change – adaptation, mitigation and awareness;
- Estuary management;
- Alien vegetation removal programme;
- Environmental education and awareness;
- Attending to environmental complaints and legislation;
- Biodiversity management; and
- Commenting on EIA applications and NEMA legislation and assisting during section 30 disaster and disaster management.
Cederberg LM:

- No dedicated environmental management functions exist in the municipality as municipality has the capabilities of employing very few personnel;
- Most service delivery related environmental functions are outsourced to consultants; and
- The municipality deals with environmental issues as they arise.

Swartland LM:

- There is very little happening in terms of environmental management within the local municipality; and
- Environmental health practitioners combines and perform most environmental management functions.

**Organizational capacity to perform environmental function within the West Coast DM**

West Coast DM:

- There is only one person carrying out the environmental management function; and
- Additional capacity is urgently required to cope with the work load and to render a high quality environmental service to the community.

Cederberg LM:-

- There is only one person carrying out the environmental management and Health function at Cederberg.

Swartland LM

- The Environmental function is split between two departments the Cleansing Services and Environmental Health;
- The Cleansing Services fall under the department of Civil Engineering Services;
- The Cleansing Services Is responsible for the landfills, public facilities, transfer stations, refuse removal and cleanliness of open spaces within the municipality area;
- The section does not experience problems with getting qualified skills and retaining staff;
- The Environmental Health falls under the department of Development Services; and
The Environmental Health department is responsible rendering health services as stipulated in the National Health Act. It is responsible for air pollution control, noise control, cleaning of rivers, issuing of trade licenses and pest control.

**Current Environmental programmes implemented within the West Coast DM**

- The municipality has the following environmental management planning frameworks in place:
  - Integrated Development Plan;
  - Integrated Waste Management Plan;
  - Integrated Air Quality Management Plan;
  - Spatial Development Plan;
  - Growth and development strategy;
  - Energy and Climate Change Strategy;
  - Environmental Health Plan;
  - Environmental by-laws;
  - Health by-laws;
  - Coastal management by-laws;
  - Inland water management by-laws; and
  - Estuary Management by-laws.

- West Coast DM recommends that NEMA should be specific with regards to municipal functions relating to integrated environmental management;
- NEMA should be clear and prescriptive in terms of roles and responsibilities as the National Health Act does with regards to Municipality Health Services; and
- Recommended that a provision in the constitution for municipal functions will mandate the availability of funds and political buy-in to ensure effective environmental performance in municipalities.

Swartland LM:-

- The LM municipality has the following policy documents in place:
  - State of the Environment report,
  - Spatial development framework and
  - Environmental by-laws.

**Challenges faced by West Coast DM to perform environmental function**

- Capacity constraints makes Environmental health more of a focus of WCDM than environmental management;
- Cederberg LM Landfill site not always operational due to closures when waste compacted because of capacity constraints; and
• Swartland LM lacks qualified and skilled environmental professionals

Fiscal frameworks support for environmental performance

West Coast DM:

• 80% of the budget allocated from National Treasury is spent on salaries and only 1.7% of the budget is left for the performance of core service; and
• Money budgeted for environmental management function is at times taken to other services such as water and electricity because it is not listed in the Bill of Rights.

Cederberg LM:-

• Municipality severely stretched financially, as is recently recovering from being under administration therefore environmental performance is not as prioritized as it should be; and
• Revenue basis for the municipality is small which in turn affects environmental performance.

Swartland LM:-

• The Cleansing Services receives its funding from Service delivery – Refuse Removal;
• 43% of the budget is used for salaries, 7% for infrastructure, 1% for skills development, 15% for vehicles, 19% for repairs, 1.5% for sub consultants and 14.5% for core services;
• About 12% of the municipal budget is allocated to Environmental functions; and
• Financial constraints affect the prioritization of necessary environmental functions.

2.2.8.2 City of Cape Town Metro (CCTMM)

Organizational capacity to perform environmental function within the City of Cape Town Metro

Environmental Management

• CCTMM has an Environmental Resource Management unit that performs the strategic environmental functions of the City;
• Biodiversity, Heritage and Environmental Management fall within the same unit
• The unit is structured in line with the Hub and Spoke’s Model;
• It has satellite links in other line functions within the City departments;
• Every service department within the municipality such as water, waste management, electricity, roads etc has an environmental responsibility to perform;
• The unit gives support and key advisory services to other departments;
• However, the unit does not have authority to instruct other departments if there is a non-compliance, the City Manager and the Auditing department are the only ones with the authority
• Salaries are fairly competitive with general industry rates e.g. biodiversity
• Good retention rate contributed by competitive salaries of environmental professional has contributed to the success of environmental performance of the municipality;
• CTMM have had difficulty finding specific skills such as Heritage, Air Quality, Climate Change and Energy Specialist and Architects; and
• Environmental directorate has highly experienced staff to ensure quality environmental performance of the municipality.

Environmental Health:-

• Environmental health forms part of the directorate and provides services according to the provisions of the National Health Act;
• The Environmental Health Services has 8 sub districts within the City and each has a sub district manager, head environmental health and head personal health services;
• The 8 sub districts are supported by a Specialized Health Service Unit who provide specialist input on food, water, air, waste, noise and mechanical ventilation;
• The Air Quality Management function which includes Atmospheric Emission Licensing resides with the City Health head;
• The CTMM has one EHP to 27000 people as opposed to the recommended WHO ratio of one EHP to 15,000 people;
• The Air Quality unit has 12 professional staff; and
• There are three noise specialist and one senior mechanical engineer and three engineering assistance who deal with mechanical ventilation.

Legal Department:-

• The legal department from the Property and Planning Law Unit has invested significantly on Environmental law;
• The legal department works closely with the Environmental Resources Management Unit assisting them with advices, opinions, litigations and notices;
• The directorate has a functional environmental legal unit who draft policies and bye-laws for the municipality; and
• To avoid potential conflicts, delays from advent imminent national policies and legislation have affected the implementation of local policies and by-laws.

Current Environmental programmes implemented within the CCTMM

Environmental Management:-

• CCTMM approved its Integrated Metropolitan Environmental Policy which is supported by other strategies such as the water by-law and the air quality by-law;
• CCTMM have a natural resource management policy; and
• Integrated Environmental Management is a highly functional and robust arm of the municipal services with highly developed policy frameworks in place.

Challenges faced by City of Cape Town Metro to perform environmental function

• The City is keen to have more Lawyers specialized in Environmental law within its organizational and this has been quite a challenge to achieve;
• Limited available funding affects the implementation of on-the-job skills development;
• Skills development for Air Quality staff is a challenge because the courses are expensive and often require additional and unavailable travelling costs to attend; and
• The National challenge of appointing skilled Air Quality specialists is also a challenge for the city because of their national shortage.

Fiscal frameworks support for environmental performance

Environmental Management

• City Health has an operational budget of R700 million and a Capital budget of R16 million;
• CCTMM have access to external funding such as DANIDA who have injected R45 Million for staff training and energy efficiency projects for Cities buildings; and
• The Environmental Management unit relies significantly on external funding.
3 GAP ANALYSIS OF LOCAL GOVERNMENT ENVIRONMENTAL PERFORMANCE

During the assessments, a number of challenges faced by municipalities in ensuring environmental performance were identified. The sampled municipalities raised the following priority challenges that require urgent attention to augment capacity in order to ensure sustainable service delivery:

- No dedicated environmental management units in most municipalities;
- Lack of human resources and expertise dedicated to Environmental performance in many municipalities;
- Few environmental professionals that exists are often unskilled for the positions they occupy;
- Difficulty in enforcing environmental performance due to appointments of environmental professionals at often more junior and underpowered levels;
- Lack of funds to effectively ensure environmental performance within municipalities;
- Environmental health prioritized over environmental management in most municipalities;
- General lack of understanding between Environmental health and Environmental management;
- An over dependence on Environmental Health Practitioners to perform environmental management functions within municipalities;
- Environmental management is not regarded as service essential to improving quality of life; therefore, little attention is given to it;
- Council does not view environmental management function as important because most of the functions are not revenue generating;
- Budget restrictions;
- Imbalance between income and expenditure.
- Funding for non-income generating and zero-rated tariff services;
- Insufficient public awareness;
- Unsatisfactory levels of recycling;
- Lack of effective/enforced bylaws;
- Insufficient support from internal support departments and poor internal communication within municipalities;
- Supply chain management systems and contract management – unlawful awarding of tenders resulting in poor service; and
- Skills development and training.
In details, below are institutional frameworks that affect Environmental performance at the Local Government level.

### 3.1 Organizational Capacity

With local authorities being the major players in the local economy and, as the government level closest to the citizen, they have an important influence on the environmental behaviour of the general public. In order to effectively play this role, this section will be addressing gaps identified during the assessment exercise in order to determine response scenarios to the challenges being faced by local Government in ensuring environmental performance.

#### 3.1.1 Municipal Organizational Structure

Whilst the entire Metropolitan, some of the districts and a few of the local municipalities have a dedicated unit for the provision of environmental functions, a lot of other municipalities lack this. It must however be noted that all municipalities present seem to perform at least one environmental function. However, the lack of dedicated unit of the function has presented the following consequences in municipalities:

- Environmental functions are placed within certain units in the municipal organizational structure which has created passivity in the provision of the functions;
- Lack of dedicated environmental units in most instances has led to its placing in the wrong portfolio with the core function of the portfolio being prioritized over environmental management; and
- Environmental management is often perceived as a weakened concept at the local level because its portfolio management is often managed by a differently-skilled manager who may naturally not prioritize its functions.

#### 3.1.2 Skills Challenge

Skills or lack of it thereof, is a burden borne by the municipalities in the performance of environmental functions. From the assessments, there is a nation-wide need for Environmental practitioners within the municipalities who are skilled enough to perform the necessary environmental functions prevalent to its community.

The skills challenges identified are in the form of:

- Lack of technical capabilities to perform specialist functions such as Air quality, waste management, climate change etc;
• Lack of adequate experience to manage and influence decisions that affect environmental performance;
• Misnomer of accepting Environmental Health Practitioners (EHP) as Environmental management practitioners within the municipalities. This has led to the ongoing practise of deliberately employing EHPs to perform the dual functions of Environmental Health and Environmental management;
• The often wrong portfolio placement of environment functions results in differently-skilled individuals managing the complex science of integrated environmental management;
• In some cases, low-skilled individuals with no tertiary level of education are tasked with the responsibility of managing the environmental functions of the municipality;
• The scientific and engineering components of environmental management have been greatly underrated at the local municipality level. This has led to wrongly-placed practitioners performing environmental functions in South African municipality;
• Legislative development not in direct tandem with nation-wide skills availability. E.g. Fulfilment of the recent amendments to the National Air Quality Act requires specialist skills which is currently very scarce in the country;
• Environmental legislation not prescriptive enough in terms of specifying qualifications, experience, roles and responsibilities for the performance of Environmental functions. It is believed that this has contributed to the ambiguity that exists in terms of personnel required to perform environmental functions;
• There is currently no standardized skills-level for Environmental practitioners in the Country; and
• Lack of general environmental awareness with the echelon of the municipal structure is directly related to the lack of support environmental management receives at the local.

3.2 Environmental Policy Frameworks

In Municipalities’ response to national environmental challenge, clarity on the difference between environmental health and environmental protection measures needs to be redressed and balanced. Whilst Environmental health relates mainly to factors in the environment which influence human development, health and well being Environmental protection relates to activity or processes to restore or maintain the quality of the receiving environment in order to prevent environmental degradation.

At present, the municipalities have more plans, measures and capacity in place for ensuring environmental health as opposed to the glaringly inadequate capacity to ensure environmental protection and management. The common argument given to support this phenomenon is because health is a core service and as such the National Health Act
Local Government Environmental performance capacity Discussion Document

gives a prescriptive mandate to the municipalities to ensure environmental health of communities. However the functional powers of South African municipalities make them a natural niche for environmental protection initiatives. The roles of policy and how they can be strengthened to ensure this is discussed below.

3.2.1 Strengthening the National Environmental Management Act 107 of 1998

South Africa being a developing country with serious concerns on water availability and food security with exploitable natural resources, environmental protection and management is a fundamental concern for the country. Environmental protection no doubt needs to be given greater attention and the use of regulatory tools play a significant role in natural resource protection. As highlighted in previous sections, South Africa has a robust set of Environmental-related legislation that protects the receiving environment. Whilst these policies have contributed to sustainable development in the within the powers given to municipalities, there remains room for improvements in the following areas:

- **Functional powers of NEMA not prescriptive enough:** Municipalities who participated in the assessment exercise clearly indicated that NEMA needs to be more prescriptive in the roles and responsibilities given to Municipalities to perform environmental functions. NEMA was compared to the National Health Act which prescribed functional roles and powers to EHPs for different categories of municipalities. This prescriptive nature of the National Health Act has created an enabling environment for municipalities to carry out Environmental health protection function on a systematic and regimented basis. For environmental protection to get the cognizance and importance due it in the resource-constraint municipal environment, NEMA should consider going the prescriptive route to foster sustainable environmental protection at the local level.

- **No Standardisation of Environmental Practitioners:** Till date, service delivery across municipalities in South Africa has not been consistent. Technical capabilities to ensure environmental performance often differs significantly from one municipality to the other. This has not only contributed towards poor service delivery, but has acted as a deterrent towards skills attraction to work in municipalities. Environmental sector at the Local Government level has suffered from poor retention of skilled staff. Skilled practitioners will normally function better in an environment that is engaging and stimulating to their career growth. In order to ensure a nationally consistent service delivery in terms of Environmental performance, NEMA should ensure a uniform standard of qualification and experience for Environmental practitioners.
3.2.2 Regulatory Development not in Tandem with Skills Availability

In recent times, Environmental legislation has evolved with new promulgations over time. Whilst this legislative development is positive considering the big picture, it is apparent that municipalities are seriously struggling to meet the demands of this development in terms of technical skills availability. An example will be the National Environmental Management Air Quality Act 39 of 2004 with a recent amendment in 2010, requesting district and metropolitan municipalities to issue emission licenses and local municipalities to have air quality officers who monitor and enforce the conditions of the issued licenses. However, the reality with municipalities is that they do not have these Air Quality officer skills in-house nor do they have the resources to acquire the technical skills as prescribed by the amended Act. Municipalities will therefore not be able to perform their functions as prescribed by the act due to skills unavailability.

3.2.3 Regulatory Development not in Tandem with Financial Capabilities

As described in section 3.2.2 above, Environmental legislative has seen recent developments and promulgation, especially in terms of functions specified for municipalities. Amendments to environmental legislation require resources for recruiting, developing management plans and monitoring for municipalities. Often, municipalities lack the financial capabilities to employ the often highly competitive specialist skills required to perform the functions. e.g. Air Quality officers as described above. In order municipalities legislation requires all municipalities to have policy documents such as Air Quality Management Plans and Integrated Waste Management Plan. Several municipalities are unable to afford the development of such policy frameworks. Some local municipalities have hidden under the umbrella of their District municipality under the claim that it encompasses them. This however, is strictly not true as management issues could differ concisely from municipality to municipality. Other municipalities simply do not have this policy documents and on the chance that it exists, in some cases municipalities have attested to their inability to conform to the requirement of the document. This leaves very few municipalities who can afford to develop, monitor and manage their policy frameworks in accordance with legislative guidelines. Access to funds plays a major role in fulfilling legislative promulgation.

3.3 Fiscal Frameworks

3.3.1 Revenue Arrangement and Operational Budgets

Most municipalities operate through the standard financial model where all collected revenue from the ratepayers is paid into a central municipal fund, which is managed by
the Finance Department. Environmental departments typically access operational funds through annual budget requests through the IDP process.

Key obstacles with regards to Revenue Arrangements and Budgets include:

- Tariff systems are centralized for all services and there is often little relationship between revenue collected for environmental services such as waste versus expenditure on the same service;
- Environmental management is not recognized as a priority service and typically gets allocated the left over budget after electricity, water, roads etc.;
- Environmental management is not recognized as a priority service by Municipal Councils who are responsible for budget allocations;
- Top-up funding for unplanned events are unaccounted for as budgets are only reviewed annually through the IDP process;
- Budget increases do not mirror waste volumes handled. For example, in some municipalities the waste volumes generated have increased well above the growth rate of the municipality and as such their service costs have escalated at a rate that is higher than predicted. This brings about a situation where the allocated budgets are not representative of actual costs;
- Budgets are focused on the “end of pipe” waste management (collection and disposal) and little on waste minimization and recycling initiatives;
- Not only have waste volumes increased, but as a result of changing consumer behaviour, waste streams have changed. New waste types have therefore not been budgeted for (excess packaging etc);
- The unplanned development of informal settlements adds to collection areas and waste volumes, which consume extra budgets.
- Transportation is recognized as the most expensive activity in waste management. As existing landfills are filled, new ones are constructed relatively far from urban centers and as such, the extra transportation costs contribute significantly to expenditure.
- Application fees for Atmospheric Emission License applications have not been finalized by DEA but the DM and Metros are currently required to process these applications at no charge. Clients will be charged later once the fees have been determined.
- Training budgets are typically controlled by Human Resource Departments with the result that there is a focus on municipal systems and little training on technical issues.
3.3.2 CAPEX Funding

In general, municipalities fund their capital expenditure (CAPEX) through the following:-

- Municipal Infrastructure Grant (MIG);
- The Department of Environmental Affairs (DEA) initiatives; and
- The Development Bank of South Africa (DBSA).

Capital expenditure in terms of air quality management may include the acquisition and installation of air quality monitoring stations, IT and for waste management can include the development of landfill facilities, transfer stations, vehicles, plant, IT etc.

International funding agencies such as the Swedish International Development Cooperation Agency (SIDA) and the Danish International Development Agency (DANIDA) because of their country’s emission reduction mandate through the Kyoto Protocol also fund and give technical support to the municipalities for their infrastructure projects.

Key obstacles with regards to CAPEX funding include:

- Only a minor portion of a municipality’s allocated MIG funding can be spent on environmental management. Other services such as housing, electricity and water get proportionally much larger allocations;
- MIG funding cannot be spent on certain assets, such as refuse removal vehicles, air quality monitoring stations that municipalities regard as capital assets. This constraints access to national funding for capital equipment for environmental management services;
- Capital investment in landfill sites, transfer stations and air quality monitoring stations is typically very “lumpy” and rigid which implies that it is difficult to finance on annual CAPEX allocations via MIG or other facilities. CAPEX funding approaches for environmental services therefore may require some allowance for lumpy investments and alterations in the MIG approaches to become more effective, flexible and sustainable;
- Where there is capital funding allocated for large facilities there tends to be sufficient funding for infrastructure itself, but little funding for operations of facilities;
- MIG applications require intensive administration and reporting of which the skills capacity is often lacking, particularly in low-capacity municipalities. As such MIG application is typically outsourced to consultants and the application/reporting process is divorced from the municipalities themselves. This detachment from the application process is often problematic for the municipalities at a later stage in terms of adequacy of the funds to the expenditure to be undertaken; and
Donor agencies often have strict requirements in terms of the projects that they intend funding. For example Buyisa-e-Bag will only fund recycling initiatives where the recycling of plastics is the focus and DANIDA will fund Climate Change issues and not air quality monitoring.

3.3.3 Tariffs / Rates Collection

Most municipalities collect revenue for waste, effluent and sewage by means of rates. Tariffs are usually set per household or business where there is individual title or ownership. Revenue can also be collected at disposal sites where people pay for disposal of their waste as well as through revenue generated through the selling of recyclables that have been separated out of the waste stream.

Key obstacles with regards to Tariffs and Rates Collection include:

- Rate payment is poor, with little effective enforcement for defaulters;
- There is no direct relationship between revenue collected versus expenditure for waste, effluent and sewage. (Collection tariffs are not necessarily reflective of collection and disposal costs).
- Collection tariffs are standardized and are seldom linked to waste volumes produced. Generally in most municipalities, tariffs are not structured in such a way as to favor those who recycle and minimise their waste.
- There is no direct financial recovery of certain waste services such as litter picking and removal of illegal dumping remains;
- Where District Municipalities operate Regional Waste Disposal Sites, there is no funding through rate collections as rates are typically collected by the affected Local Municipalities who are managing waste collection and transportation.
- Better tariff modeling is needed and the tools can be developed;
- Tariff collection is laborious and often unmanageable because it is not as effective to cut people off from waste services as it is for electricity or water – enforcement is difficult. The alternative to cutting defaulting residents from waste services is for the municipality to suffer from illegal dumping.

3.3.4 Provision / Costs of Unpaid Services

In terms of service requirements, municipalities are obliged to collect waste from all urban households. Traditionally, waste was only collected from formal households and commercial areas. People living in informal settlements however, have the right to basic services including waste collection. Informal settlements are typically serviced at the expense of ratepayers which obviously causes a dip into the municipality’s purse. All municipalities have pro-poor or indigent policies that cater for the poor people who cannot afford to pay for the municipal services.
Key obstacles with regards to financing free basic services include:-

- There is no financial recovery for the waste service in informal settlements in the form of rates;
- No billing system can be established for informal settlements as there is no title or ownership structure for individual houses;
- In order to meet the basic needs for all the residents in the municipalities, the municipalities must ensure that indigent residents have access to free lifeline basic services. The indigent and pro poor policies force the municipalities to render free basic services to the people who cannot afford to pay for such services.

3.4 Non-Local Government Support

One of the key things that often came up during the assessment exercise from the municipalities is the seemingly insufficient support from Non-Local Government organizations like the DEA, SALGA and Provincial Governments. Environmental practitioners at the local Government level are of the opinion that this level of support be improved to ensure environmental performance at the municipal level.

Key issues identified by municipalities in this regard are:

Key obstacles in terms of support from national and provincial government include:

- There is an unclear understanding of roles and responsibilities within the municipal structure and this results in duplication of effort in certain activities;
- Local municipalities have minimal interaction with DEA. They interact more with their respective provincial environmental departments and the Districts.
- Not all provincial environmental departments have dedicated environmental representatives within the local government;
- Some rural local municipalities lack basic communication resources like emails or stable internet access. This severely hampers on communication;
- Local and district municipalities do not get financial gains from Environmental approvals (permits, EIAs and Section 24G) yet they are required to monitor the environmental issues identified in those applications with their own resources;
- DEA are under-capacitated with many of the provincial environmental departments have no capacity at all to process permits.
3.5 Political Support

During the assessment, municipalities revealed that they not receive enough support for environmental performance. Councillors are often unaware of the importance of environmental protection and how it can affect livelihood of the community. This lack of adequate support has led to the following:

- Non prioritization of environmental functions;
- Insufficient allocation of funds to environmental performance;
- Deployment of differently skilled individuals to manage environmental performance; and
- Poor environmental performance of municipalities.
4 SOME STRATEGIC RESPONSE FOR LOCAL GOVERNMENT ENVIRONMENTAL PERFORMANCE

4. Organizational Capacity Model for Environmental Performance

This section documents the recommendations made by municipalities that participated in the assessment process and presents model organizational structures and financial frameworks which would enhance environmental performance for local, district and metropolitan municipalities.

The chapter explores three different elements of capacity. They are:

- Organizational Capacity;
- Technical Capacity; and
- Financial Capacity;

4.1 Organizational capacity

All the municipalities that have been assessed indicated lack of organizational capacity as a major challenge for rendering environmental function. The new Air Quality Act and the National Waste Act for example, came with new mandates for the local governments but the municipalities are not well capacitated to perform their new duties. According to the Air Quality Act, municipalities are required to appoint an Air Quality Officer who will perform the Atmospheric Emission Licensing function, but only a few metros and DMs have been able to appoint qualified personnel. The assessment conducted revealed that in most municipalities, the function of environmental management is performed by Environmental Health Practitioners (EHPs) because most municipalities are unable to hire Environmental Managers or Scientists. Most of the EHPs who participated indicated that they are required to perform the environmental management function which is difficult and ineffective as they are not qualified, trained or experienced in this field. The areas they find most challenging is air quality, biodiversity wetland and aquatic management. Structurally, most municipalities are either ignorant of the need for the environmental specialists or are not willing to or are unable to hire them because of lack of finances.

Different organizational models for performing environmental functions are adopted by municipalities with various degrees of outsourcing displayed. Outsourcing is used to augment institutional capacity where there are skills shortages, or simply resource shortages. The Nelson Mandela Metropolitan Municipality performs the waste management function (operations) themselves and there is no outsourcing. At the City of Johannesburg the entire waste management function is outsourced to Pikitup a
Municipal Owned Entity, which is registered as a separate company. The Cacadu DM in the Eastern Cape Province has a Service Level Agreement (SLA) with the Provincial Department of Environmental Affairs to render the Atmospheric Emission licensing function while the Capricorn DM in Limpopo Province has a dedicated Air Quality Unit that performs the function.

Typically, where technical skills are lacking within the LMs, the DM takes over the responsibility but in some cases outsourcing of services is done. This includes air and water quality monitoring, landfill operations, transfer station operations etc. In most municipalities the environmental function is limited to waste management and most of them due to lack of capacity, simply manages the cleansing, collection, transportation and disposal of waste and the outsourcing contracts for the service providers.

In the more rural municipalities, staff compliments for waste management are very low and the management function is often shared amongst other functions such as parks and recreation management. Here the effort is on waste collection and street cleansing, rather than other softer elements such as awareness, enforcement and waste minimization.

### 4.2 Organizational Structure

In terms of organizational structure environmental management is not standardized and is often situated under various internal departments within the municipalities e.g.:-

- Municipal Health Services: Cacadu DM, Fezile Dabi DM
- Community services: Nelson Mandela Metro, Buffalo City, Intsika Yethu LM
- Infrastructure Department: Ekurhuleni Metro
- Environmental Management: Capricorn DM

In most municipalities the environmental function is scattered over different departments and this make coordination, management and funding of the service very difficult. However, some municipalities have separate Environmental Management Departments. In some municipalities, there is a recent trend to centralize the environmental management under an “umbrella department” known as “Environmental Management’ e.g. Bojanala Platinum DM and Rustenburg LM. However, in most municipalities the environmental function is performed by one person who is also performing several other unrelated functions and there is no structure existing.

During the workshops conducted, the participating municipalities all recommended that each municipality must have a dedicated environmental management unit. They opined that all the environmental management services within the municipality be rendered
through this unit. It was strongly emphasized that this unit must be capacitated with both human and financial resources. The unit must be capacitated in such a manner that it responds to the predominant environmental issues affecting that area. For example the West Rand District Municipality with its prevalent air quality and acid mine drainage issues, should have an organizational composition complemented wit air quality and water quality specialists. The following section presents organizational structure model proposed by municipalities for environmental functions at each province visited.

**Gauteng Province**

The Gauteng province proposed separation of Environmental Health Services from the Environmental Management Unit and kept as a separate unit to avoid the over prioritization of one at the expense of another as is generally the case, today. The following are the proposed structures:

**Municipal Health Services**

![Figure 2: Proposed MHS organizational structure for Gauteng Municipalities](image)

The Gauteng province proposed a similar structure for Environmental Management Unit for both LMs and DM for easy coordination of services.
Figure 3: Proposed Environmental Management Unit organizational structure for Gauteng Province Municipalities
Limpopo Province

The following structure was proposed for Environmental Management Unit for Limpopo Province local municipalities.

![Proposed Environmental Management Unit organizational structure for Limpopo Province LMs](image)

**Figure 4:** Proposed Environmental Management Unit organizational structure for Limpopo Province LMs

The Assistant Directors will have the following responsibilities:

**Environmental Management:**

- Development Applications (EIAs);
- Land fill sites;
- Water Quality monitoring;
- Pollution Control;
- Air Quality Management;
- Climate Change;
- Compliance and Enforcement; and
- Environmental legislation and Environmental Management Plans

**Environmental Health:**

- Water quality monitoring;
- Food quality monitoring;
• Waste management monitoring;
• Health surveillance of premises;
• Communicable disease control;
• Vector control;
• Environmental pollution control;
• Disposal of the dead; and
• Chemical safety.
The following structure was proposed for the DMs in the Limpopo Province:

Figure 5: Proposed Environmental Management Unit organizational structure for Limpopo Province DMs

Environmental Management Director
- Waste Management
  - Manager
    - Asst. Manager
    - Supervisors
    - General Workers
- Air Quality
  - Manager
    - Air Quality Officers
- Biodiversity
  - Manager
- Water monitoring
  - Manager
- Parks
  - Asst. Director
  - Analysts
Mpumalanga Province

The Mpumalanga Province municipalities proposed the following organizational structure for the LMS in the province:

![Diagram showing the proposed organizational structure for the local municipalities in the Mpumalanga Province](image)

**Figure 6: Proposed organizational structure for the local municipalities in the Mpumalanga Province**

The DM in Mpumalanga proposed the following structure:
Figure 7: Proposed organizational structure for the district municipalities in the Mpumalanga Province
North West Province

The Local municipalities proposed the following structure for the LMs in the North West Province:

![Organizational Structure for Local Municipalities in North West Province](image)

**Figure 8: Proposed organizational structure for the local municipalities in the North West Province**

The following organizational structure was proposed for district municipalities in the province:

![Organizational Structure for District Municipalities in North West Province](image)

**Figure 9: Proposed organizational structure for the district municipalities in the North West Province**
The North West Province proposed that the Municipality Health Services be separated from the Environmental Management.

**Northern Cape Province**
The Local municipalities proposed the following structure for the LMs in the Northern Cape Province:

![Proposed organizational structure for the local municipalities in the North Cape Province](image)

*Figure 10: Proposed organizational structure for the local municipalities in the North Cape Province*
Figure 11: Proposed organizational structure for the district municipalities in the North Cape Province
Western Cape Province

The local municipalities in the Western Cape proposed a “one man’s” show for performing the environmental functions within the local municipalities. The individual must have at least a Diploma in Environmental Management or Sciences and must be well vast in several aspects of environmental management. This individual is typically a generalist and can manage day to day environmental management functions in small low-capacity municipalities. The participants indicated that there was no need for an independent structure since the unit consists of one person. It was further indicated that this generalist position could be located within the Community Services Department or any department that may support the functions better.

However, due to the delegated powers of the districts, particularly in terms of the National Health Act, the following structure was recommended for the district municipalities in the Western Cape Province.

The following skills were recommended for each position:

- Policy development;
- Financial management;
- People management; and
- Conflict management.
The City of Cape Town Metropolitan municipality proposed that all departments within the metros (water, electricity, roads, etc) must have an environmental role and appoint an environmental officer/representative who will be resident in the department to perform the day-to day environmental management functions. The reasoning behind this is that all departments within municipalities affect the environment one way or the other and the technically-skilled staff is better suited to deal with the environmental issues. The City further proposed that an Environmental Resources Management unit be established that will give support and advice to the designated officer. The main function of the Environmental Resources Management unit would be to deal with strategic environmental issues and acting as an internal environmental management auditor. The structuring of this unit is in line with the Hub and Spokes Model which the municipality is currently adopting.

4.3 Organisational Capacities recommended for different municipality categories.

Based on the information gathered from the plenary sessions, comments received, literature review and SEF experience, the following organizational capacities are recommended for the various municipality categories in South Africa.
Table 1: Organizational capacities are recommended for the various municipality categories in South Africa

<table>
<thead>
<tr>
<th>Municipality Category</th>
<th>Recommended Structure</th>
<th>Recommended Portfolios/subunits</th>
<th>Positions</th>
<th>Qualifications Requirements</th>
<th>Skills Requirements</th>
<th>Experience</th>
<th>Professional Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metros</strong> – urbanised metropolitan municipalities. 63% urbanised</td>
<td>A</td>
<td>X</td>
<td>• Waste Management • Air Quality Management • Climate Change • Biodiversity • Water Monitoring • Parks, Horticulture and Resorts Management • Environmental Policy and Strategy</td>
<td>• Director • Sub-director • Senior Managers • Managers • Senior Officers • Officers • Senior Scientists • Scientist • Technician s</td>
<td>• MSc./MTech/MA/MA • MSc/MTech • BSc/Btech • BSc/MTech • BSc/MTech/HND • ND • MSc/MTech • BSc/BTech • HND/NDC</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><strong>Secondary cities. LM with large budgets</strong></td>
<td>B1</td>
<td>X</td>
<td>• Waste Management • Air Quality Management • Climate Change • Biodiversity • Water Monitoring • Parks, Horticulture and Resorts Management • Environmental Policy and Strategy</td>
<td>• Director • Sub-director • Senior Managers • Managers • Senior Officers • Officers • Senior Scientists • Scientist • Technician s</td>
<td>• MSc./MTech/MA/MA • MSc/MTech • BSc/Btech • BSc/MTech • BSc/MTech/HND • ND • MSc/MTech • BSc/BTech • HND/NDC</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><strong>LMs with a large town</strong></td>
<td>B2</td>
<td>X</td>
<td>• Waste Management • Air Quality</td>
<td>• Managers • Senior Officers</td>
<td>• BSc/BTech • BSc/MTech/HND • ND</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>
### Local Government Environmental performance capacity Discussion Document

<table>
<thead>
<tr>
<th>Category</th>
<th>Management</th>
<th>Officers</th>
<th>Science/Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM with small towns, relatively small population. No large town. 48% urbanised.</td>
<td>• Climate Change • Biodiversity • Water Monitoring • Parks, Horticulture and Resorts Management • Environmental Policy and Strategy</td>
<td>• Managers • Senior Officers • Officers</td>
<td>• BSc/BTech • BSc/BTech/HND • ND</td>
</tr>
<tr>
<td>LMs. Mainly rural. 6% urbanised</td>
<td>Environmental Unit with no subunits/One mans unit OR One qualified person can be employed to the job</td>
<td>• Managers • Senior Officers • Officers</td>
<td>• General Management • Environmental Science/Management</td>
</tr>
<tr>
<td>DM with areas that largely overlap with B1, B2 and B3 municipalities</td>
<td>Waste Management • Air Quality Management • Climate Change • Biodiversity • Water Monitoring • Parks, Horticulture and Resorts Management • Environmental Policy and Strategy</td>
<td>• Director • Sub-director • Senior Managers • Managers • Senior Officers • Officers • Senior Scientists • Scientist Technicians</td>
<td>• General Management • Environmental Science/Management</td>
</tr>
<tr>
<td>DM with areas that largely overlap with B4 and B3 municipalities</td>
<td>C2</td>
<td>X</td>
<td>Environmental Unit with no subunits/One or two official qualified to do the job</td>
</tr>
</tbody>
</table>
4.4 Technical capacity

The provision of specialized services such as water, air pollution control and monitoring, atmospheric emission licensing and GIS is a challenge to most municipalities and this service is usually outsourced to or provided by the DM or the province. To address technical capability issues, the following strategic responses are recommended to address the skills challenge at municipalities:

- Municipalities should be empowered to appoint technically skilled personnel with the optimum level of experience to perform environmental functions through provision of funds and guidance;
- Review portfolio placements of all environmental functions at a local municipalities to improve their functionality and decision making capabilities;
- Like the provisions of the EHPs in municipalities, NEMA should promote prescriptive standards such as membership of professional bodies for Environmental practitioners in municipalities;
- On a national level, DEA should promote national skills development projects in accordance with the demands of legislation; and
- Environmental education for municipal officials will promote the burdensome perception of environmental protection to its significant social and economic well being implication.

In an attempt to improve technical capabilities of environmental performance in municipalities, below are recommendations of required personnel for specific short-skilled specialist environmental roles.

4.4.1 Air Quality Management Personnel Requirements for each municipality

- One Senior Atmospheric Scientist (University degree with experience) at the District Level;
- One Air Quality Liaison Officer;
- One Air Quality Officer; and
- One Air Quality Technician.

4.4.2 Senior Atmospheric Scientist

This person must have a broad knowledge and understanding of air quality related issues and air quality management. This person will be responsible for the co-ordination of air quality management at the municipality. Main tasks include:

- Provide air quality management support to the LMs;
- Assist in rolling out the emissions reduction strategies in the LMs;
• Oversee emissions inventory development, dispersion modelling, database management and GIS;
• Assist with LM AQMP development and implementation; and
• Assist with emission reduction strategies development.

4.4.3 Air Quality Liaison Officer

This person is responsible for aiding the municipalities with public participation in terms of informing the public of air quality issues within the municipality. The main responsibilities include:

• Distribute air quality information to media sources such as newspapers and radio stations;
• Organise public participation meetings; and
• Involvement in awareness raising campaigns and implementation of emission reduction strategies.

4.4.4 Air Quality Officer

This person will be accountable for the management and co-ordination of air quality at both Municipality level. This person should have a good local knowledge of the air pollution related issues in the municipality. Main tasks that this person will be responsible for include:

• Implementation of the recommended emissions reduction strategies;
• Management of everyday air quality concerns within the municipality;
• Develop and maintain a comprehensive emissions inventory of all sources in the municipality;
• Undertake dispersion modelling simulations of predicted pollutant concentrations;
• Licensing and control of non-domestic fuel burning and listed activities; and
• Responsible for the initiation of public awareness programmes around air quality issues.

4.4.5 Air Quality Technician

This person will be responsible for the maintenance and calibration of the ambient air quality monitoring stations as well as the proposed passive monitoring network. Other tasks will include:

• Data collection and collation;
• Reporting to the Air Quality Officer; and
• Management of air quality laboratories
Due to the chemical nature of Air Quality management, air quality officials should ideally possess a degree of BTech in Chemistry/Chemical engineering and Environmental sciences. Additional and often necessary short courses on air quality management are offered by the University of Johannesburg and University of Pretoria in connection with the National Association of Clean Air (NACA). The updates on air quality courses on offer can be found from NACA website www.naca.org.za or contact Bev Terry on 071 683 9770 or bev@naca.org.za

4.4.6 Biodiversity Management Personnel Requirements for each municipality

Municipalities have an increasingly important role to play as both users and managers of natural resources but they often do not have resources to deal with many of these issues. Each municipality will need at least one Biodiversity official with the following qualifications and skills:

- BSc/BTech degree/Diploma in Conservation Management or Biological Sciences;
- As a minimum the personnel must have the following abilities:
  - Knowledge and experience of biodiversity management science, legislation, policy, guidelines, monitoring and evaluation and implementation programmes;
  - Analysis and identification of threatened terrestrial ecosystems;
  - Developing and promoting materials and other tools to support integration of biodiversity in environmental assessments and land use planning;
  - Knowledge of guideline and policy development processes; and
  - Research skills.

The employees are advised to register with the South African National Biodiversity Institute and the South African Biodiversity Information Facility who offer additional training in Biodiversity Management. Enquiries on educational programmes offered by SANBI can be directed to Vivian Malema on 012 843 5020 or education@sanbi.co.za. The details of the contact person at SANBIF are as follows: Mr Kgoale Mphahlele; Tel: +27 (012) 317-4502; website: http://www.sabif.ac.za.

4.4.7 Environmental Management Personnel Requirements for each municipality

Each municipality as minimum is advised to employ an Environmental Officer. The categories of environmental officers vary and depending on the issues experienced by each municipality area, different officers can be engaged as follows:

- Sustainability officers, that provide advice to local government and industries on how to reduce their greenhouse gas emissions;
• Strategists, that help develop and implement codes of practice;
• Scientists, that analyse pollution to identify sources, assess the effects, and recommend methods of control and prevention;
• Communicators, that run education programmes, and investigate and report on breaches of environmental guidelines;
• Field officers that assess and rehabilitate areas affected by logging, mining, construction or degradation, etc; and
• Planners, that review and research development proposals and make recommendations to reduce the impact that the land use will have on the environment.

The minimum qualifications proposed for environmental officers are as follows:
• BSc/BTech/Diploma in Natural Sciences (Chemistry, Biology, Zoology, etc, with courses in Environmental Science;
• BSc/BTech/Diploma in Environmental Sciences or Management; and
• BSc/BTech/Diploma in Nature Conservation or Biological Sciences;

4.5 Financial capacity

The following are fiscal frameworks that need to be strengthened to ensure environmental performance in municipalities.

4.5.1 Provide Sustainable Access to Environmental Protection funds

The separation of revenue from budget allocation is a standard principle of public finance and in and of itself should not be a problem with regards to environmental management services as long as tariffs are set appropriately to ensure cost recovery. Whilst ring-fencing of Environmental funds are important, that alone is not necessarily the solution to the sustainable financing of environmental management services. Environmental management departments should be able to motivate successfully for adequate funds from the National Treasury. The constraints related to funding may relate to the skills and capacity for environmental management departments to adequately budget and source funding. The prioritization of other services over environmental management services is a concern that needs to be addressed through improved awareness at the political level (Councilors) of the importance of effective environmental management to health, safety and the environment.

4.5.2 Budget inflation costs of providing Environmental services

Municipalities need to be aware of structural factors that are increasing the costs of environmental management services such as solid waste service and budget accordingly as well as putting in suitable mitigation strategies – for example, as waste transport costs increases, the relative economic merits of recycling also increases.
4.5.3 Promote environmental cost-benefit analysis

Awareness should be created of the financial merits of environmental protection as opposed to pollution remediation. As an example, invest in promoting waste minimization and waste reduction as opposed to end-of-pipe solutions especially for small municipalities with no landfill sites. Some of the waste minimization initiatives may need to be developed at a national level (such as packaging standards). Conversely, cost-benefit analysis of restraining reactive environmental protection costs such as promoting national interventions that will constrain landfill developments will promote innovative waste minimization solutions from manufacturers.

4.6 Capacity Building to Ensure Environmental Performance

The working sessions have clearly identified the lack and need thereof for overall municipal and public awareness, leadership and championship on environmental protection. Improved public awareness and environmental education will enable municipalities to prepare fully for the impacts of environmental degradation, climate change and provide opportunities to effectively implement strategies to respond to them. The debate needs to move away from international, national and policy institutionalization and to take root at city and municipal levels. The subject, its implications, limitations and local impacts should be clearly understood by both the local authorities and the wider public.

a. Establish Community Education programmes

Environmental community education programs should be implemented in all municipalities to educate, motivate and support the community towards taking positive steps in addressing the issue of environmental protection. The goals of such programs should be to take individual and participatory actions towards environmental management. Opportunities exist for establishing focus groups, incorporating environmental education into school curriculums, awareness campaigns and the use of media instruments.

b. Training modules in ward committees

During the assessment, it became apparent that support for environmental performance can not be achieved without political awareness. To help local authority officials and policy makers address environmental management at the municipal level, the subject needs to be clearly understood by all officials as it cuts across all municipal departments. As service providers to communities responsible for taking actions to manage developmental impacts on the receiving environment, it should become part of the training modules in the local ward committees.
c. Define ownership of Environmental management

The leadership challenge of Environmental protection needs to be addressed. The integration of Environmental management into municipal activities and responsibility requires ownership at the governing level. This will help to ensure that environmental protection is approached more from a performance-based rather than (only) a compliance-based perspective. In this way, environmental management and indeed the bigger impact on climate change will be treated as an important strategic issue that forms an integral part of the municipal board's efforts to secure long-term value generation from the local environment.

4.6.1 Institutional capacity building: Administrative

Capacity building for climate change refers to the development or strengthening of personal skills, expertise and relevant institutions and organizations to reduce anthropogenic effects and/or to reduce vulnerability to Environmental impacts. Capacity building involves the participation of multiple stakeholders; policy makers, local communities, non-governmental organizations (NGO) research institutions, private sector and international organization. To do this, capacity building for administration, financing, policy-making and implementation should be identified and enhanced to address the administration of environmental performance within the local authorities.

a. Roles and Responsibilities: Key Performance Indicators

Roles and responsibilities for addressing environmental performance should be clearly delineated without causing confusion. For accountability purposes, these roles should consist of ‘ad-hoc’ and ‘generic role-players’. To ensure the receiving environment is duly managed, over all responsibility for responding to environmental protection should be clearly defined within an executive office and incorporated to Municipal key performance indicators (KPI). Environmental and Climate change initiatives must be mainstreamed into existing scorecards or KPI of existing officials, outlining clear action plans associated with these new areas (SEA, 2009b).

b. Ensuring environmental objectives of the IDP is effective

To effectively achieve the numerous National Environmental protection policy objectives, environmental management needs to be incorporated into planning and implementation objectives of South African Provinces and municipalities. Whilst this currently exists, it has not been effective enough to ensure effective environmental performance. The purpose of mainstreaming environmental protection plans into local development plans is to ensure that planners engage in a systematic and comprehensive effort to reduce the negative impacts human impacts on the environment through integration into the overall development and planning process of each Municipality. Inclusion of energy efficiency and sustainable energy
development into municipal IDPs is being explored by the National Energy Efficiency Association and SEA’s City Energy Support Unit. Some discussion still needs to take place on whether this should include climate change, or simply focus on energy.

c. A clearly-defined process for ensuring environmental performance

To effectively manage environmental performance and its diverse components, a cross-cutting process should be clearly-defined to achieve successful outcomes. Appropriate entry points for integrating environmental information into developmental planning are required. Land-use planning processes such as those exist for EIAs, EMFs are valuable tools that currently exist but should not be ignored as they are in several municipalities. Policy makers within municipalities can decide on a process or tool kit peculiar to their jurisdictions in addressing environmental management.

4.6.2 Institutional Capacity building: Strategic

Beyond the administrative capacity of environmental management, the scientific and engineering components need to be enhanced. The developments in science, research and development are key contributors to the available global information on the receiving environment and indeed climate change. All municipalities should have access to action plans that will address the needs (Engineering, Scientific, Social and Financial) and priorities of their local climate and environment and its potential for change.

Capacity building should seek to build, develop, strengthen, enhance and improve existing scientific and technical skills and capabilities of individuals, institutions or societies to perform the actions needed to monitor, adapt to and mitigate the effect of climate change. These strategic actions should be adopted and institutionalized within the Provinces.

a. Partnering for Research and Development

South Africa and indeed local municipalities as a whole needs institutionalized capacity building for environmental protection, particularly for climate change research and development. Partnering with research institutions as well as non-governmental organisations is important. Sound scientific and technological policies and measures that are based on municipal inter-relation collaboration that will contribute to reducing the rate of environmental degradation are needed. Hence municipalities should benefit from experience and collaboration with their international counterparts and the metropolitan municipalities and they should adopt and implement measures for fostering such collaboration.
b. Implement ‘low-hanging fruits’ on environmental protection

In reality, ‘low-hanging fruits’ on environmental protection such as behavioural changes are mitigation measures that will make a difference in the short term. To have achieve these results, SALGA with the support of the DEA through all municipalities, should create opportunities for these behavioural changes in addressing environmental management in the short to medium term. We must start to take action on what we already know can work. Reducing industrial air pollution and ensuring waste minimization has an immediate effect. These are enforceable low-hanging fruits that are easily adopted across board.

4.7 Collective / National Interventions

4.7.1 Promote environmental initiatives of bigger municipalities in smaller municipalities

Metros, high capacity and district municipalities through DEA, SALGA and international collaborators should work together to build capacity and raise awareness on environmental protection. Pilot projects on institutional CDM capacity building with support from the Danish Government currently exists within the metro municipalities. Immediate opportunities for more of such projects in other smaller municipalities need to be utilized. It is understood that SALGA is currently in the process of setting up a CDM Support Centre to assist municipalities with the initial phases of establishing CDM initiatives as smaller municipalities are unable to access CDM opportunities because of its rigorous and capital intensive application process.

4.7.2 Collaborative support from National and Provincial Governments

The provincial and national government should act in a supportive and complementary role to the local municipalities. This can be achieved by:-

- The development of policy guidance on private sector participation and cost recovery to enable municipal managers take necessary political steps in ensuring environmental performance;
- Developing legal deterrents against e.g. air pollution, illegal harvesting of flora and fauna, illegal dumping of wastes and the use of open dumps, coupled with adequate capacity for enforcement; and
- The development of guidance and standards to support municipalities, particularly the smaller, inadequately-capacitated ones.
4.7.3 Financial Interventions

The following focus areas should be targeted to ensure sustainable environmental management service delivery:

- Funds allocated for environmental issues from national treasury must be ring-fenced;
- Equitable share should be increased for environmental functions;
- SALGA should inform all municipalities of available funds;
- Implementation of full cost accounting services for all municipalities such that they can account for all costs and expenditures for environmental management operations and maintenance. This should cover air quality, water quality sampling and analysis, waste collection, transportation, landfill, street cleansing, fee collection, debt payment and depreciation at a minimum.

This will enable municipalities to:

- Plan more accurate budgets;
- Set realistic tariff charges and rates; and
- Collect more revenue.

It will also help alleviate operational costs via:

- Reducing surplus workforce;
- Reviewing routes for collection, street sweeping;
- Performing vehicle optimisation studies; and
- Utilising the private sector through public-private partnership.

4.7.4 Improving National policies and legislation

To prioritize environmental performance and its response, some current policies and legislation need to be amended, with improvements to accommodate the inevitable demands of climate change. For instance, National Government should create opportunities for the improvement of the Municipal Finance Management Act (MFMA) to assist with long-term environmental protection funding. More so, the need for policies that prevents dangerous anthropogenic interference with the environment while addressing the energy needs of disadvantaged people is a central challenge that needs to be addressed.

The National process of the promulgation of bye-laws that affect environmental performance created by local municipalities needs to be reviewed. Several environmental-related bye-laws developed by local municipalities to ensure environmental performance are not implemented because of reasons induced by National legislation and processes. The process of bye-laws promulgation needs to be expedited to ensure proactive environmental management at the local level.
4.8 Monitoring and Evaluation of Environmental Performance

Some basic tools and systems to monitor environmental performance at local Government level should be adopted and readily available in all municipalities. These tools could range from maps and atlas to computer generated data. They should be developed to monitor actual change and predicted change to the receiving environment. Architecture and technology should be established to monitor and evaluate the variables of climate change from the impact of the receiving environment. Each municipality can use the tools as a guide to evaluate the societal consequences on environmental protection. Such tools and system should be such that they can be readily validated. They include:

- Geographic Information System (GIS);
- Remote Sensing;
- EIA review;
- Weather information;
- Environmental Management System auditing;
- Implementation of all relevant and applicable SANS;
- Community Environmental awareness forum; and
- Use of performance monitoring and management tools such as including environmental performance in municipal Key Performance Areas (KPA)

4.9 Implementation Strategy for organizational capacity building and fiscal frameworks to perform environmental functions for local government

This section of the report focuses on the objectives, targets and policies which SALGA and DEA should agree to, and strives to commit to, covering short-term (0 to 3 years) medium-term plans (3 to 5 years) and long-term (5 to 10 years). The section is informed by the Status Quo and Gap Analysis sections.

The overarching objectives for the local government environmental performance capacity assessment should include the following:

- Assessing the existing and required organizational capacity and technical skills within the B3, B4 and C2 municipalities in respect of their performance in environmental functions;
- Determining all skills and assessment of municipal officials on the required environmental focus areas;
- Assessing the existing and all required fiscal frameworks in terms to effective performance of the environmental functions by all municipalities.
Table 2: Gaps, needs analysis and action plans for local government environmental performance capacity

<table>
<thead>
<tr>
<th>INSTITUTIONAL CAPACITY</th>
<th>STATUS QUO GAPS and NEEDS ANALYSIS</th>
<th>ACTIONS TO ACCOMPLISH OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Human resources</td>
<td><strong>Objective and target:</strong> Ensure that all DMs and LMs have the necessary capacity for effective environmental management by end 2016.</td>
<td><strong>Short-term</strong> (DM, Metros and LM – all categories) by 2014</td>
</tr>
<tr>
<td></td>
<td>Lack of human resources and expertise dedicated to Environmental performance in most municipalities especially category B3, B4 and C2 municipalities;</td>
<td>• Undertake a skills audit of existing environmental management personnel;</td>
</tr>
<tr>
<td></td>
<td>Few environmental professionals that exists at category B3 and B4 municipalities are often unskilled for the positions they occupy and are not adequately equipped to deal with complex environmental management issues;</td>
<td>• Develop a recruitment action plan;</td>
</tr>
<tr>
<td></td>
<td>Difficulty in enforcing environmental performance due to appointments of environmental professionals at often more junior and less influential levels;</td>
<td>• Advertise and fill all vacant and new posts;</td>
</tr>
<tr>
<td></td>
<td>Some of the officers in B3 and B4 and C2 municipalities do not have a Natural Sciences qualification, and are trained educators; and</td>
<td>• Develop financing models for capacity building; and</td>
</tr>
<tr>
<td></td>
<td>Municipalities are unable to compete with private companies for natural scientists because of the low salaries offered by municipalities.</td>
<td>• Identify training needs for management and environmental officials and undertake in-house training;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Medium-term</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DMs and LMs in all municipality categories to ensure that recruitment and training of staff is undertaken by end 2016.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Each category B3, B4 and C2 municipality should at least employ one person who has the minimum qualification and experience to handle various environmental management issues relevant to that particular municipality. The person should be an “all rounder) in the field of environmental management. By end 2016.</td>
</tr>
</tbody>
</table>
### STATUS QUO GAPS and NEEDS ANALYSIS

#### 2. Dedicated Environmental Management units

**Objective and target:** To optimise efficiency within existing municipal structures (environmental management), and to ensure sufficient institutional capacity to allow the appropriate rendering of environmental management functions. By 2016.

<table>
<thead>
<tr>
<th>Medium to long-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each municipality, specifically the category B3, B4 and C2; will need to take responsibility for reviewing their own existing structures, while effective communication and co-operation between DM, LMs, SALGA and DEA will be essential in ensuring improved efficiency of the said structures and decide what works for them in terms of performing environmental functions. By 2014;</td>
</tr>
<tr>
<td>Environmental functions must be grouped in one unit or under one individual depending on the size of the municipality. Category B3, B4 and C2 municipalities; can have one person dealing with all the environmental management issues. By 2016;</td>
</tr>
<tr>
<td>Environmental Health services must be separated from the Environmental Management Services. By 2016.</td>
</tr>
</tbody>
</table>

- No dedicated environmental management unit in most municipalities especially category B3, B4 and C2 municipalities;
- In most local (LM) and district Municipalities (DM) environmental functions are scattered over the Municipal Departments;
- Most municipalities are only involved in waste collection and disposal and the rest of the environmental functions like water, air and noise quality monitoring, biodiversity management are delegated to the district or province;
- Environmental health receives more attention than environmental management in most municipalities because it is a traditional service that has always been rendered by most municipalities and that environmental management is considered new;
- Environmental Health services must be separated from the Environmental Management Services;
- Environmental Health Practitioners must be divorced from rendering environmental management services so that they can concentrate on environmental health issues;

#### 3. Internal and national support to perform environmental function

**Objective and target:** Ensure that environmental functions get priority and support from internal and national key stakeholders. By 2016

<table>
<thead>
<tr>
<th>Medium-term (by 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify key stakeholders to assist in the development and execution of the programmes to capacitate municipalities especially category B3, B4 and C2 municipalities.</td>
</tr>
<tr>
<td>Develop strategies to increase communication between departments within each municipality, between municipalities themselves, and between with the</td>
</tr>
</tbody>
</table>
### STATUS QUO GAPS and NEEDS ANALYSIS

- because most of the functions are not revenue generating;
- Little budget is allocated to environmental functions;
- Inequality in budget distribution with the “big five” (water, roads, electricity, housing, roads & sanitation) getting most of the share;
- Inadequate public awareness on environmental issues;
- Lack of environmental by-laws enforcement and environmental management planning frameworks such as the IWMP, in most category B3, B4 and C2 municipalities;
- Actions plans relating to environmental management issues stated in most B3, B4 and C2 municipalities are not implemented;

### ACTIONS TO ACCOMPLISH OBJECTIVES

- provincial and national government;
- Increase public awareness to increase participation in environmental management initiatives.
- Undertake a public capacity building campaign highlighting the benefits associated with environmental management.
- Hold a series of workshops to identify and discuss opportunities associated with environmental management..
- Extend public campaigns into informal and high density settlement areas.
- The municipality departments that may result in causing potential adverse effects to the environment within municipalities should be given regular in-house training on environmental management issues;
- Councillors and municipality managers should also be given in-house training on environmental management issues at least once a year

**Long-term (By 2022)**

- Develop environmental by-laws and environmental management planning frameworks such as IDP, IWMP, AQMP for category B3, B4 and C2 municipalities.

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### 4. Environmental Management vs Environmental Health

**Objective:** Ensure that environmental management functions are performed within the right portfolio to get maximum attention.
<table>
<thead>
<tr>
<th>STATUS QUO GAPS and NEEDS ANALYSIS</th>
<th>ACTIONS TO ACCOMPLISH OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medium –term By 2014</strong></td>
<td><strong>Actions to accomplish objectives</strong></td>
</tr>
<tr>
<td>• The function of environmental management in most B and C municipalities is performed by Environmental Health Practitioners (EHP’s) because most municipalities are unable to hire Environmental Managers or Scientists or aware that they need them;</td>
<td>• The Department of Environmental Affairs in conjunction with the Department of Health (DoH) should devise plans and programmes to separate environmental health from environmental management and set boundaries;</td>
</tr>
<tr>
<td>• Most of the EHP’s are required to perform environmental management function but they are faced with challenges of performing effectively because they are not qualified, and experienced in this field; and</td>
<td>• Decide on which EHPs stay on rendering environmental management functions (especially at B3, B4 and C2 municipalities) then capacitated them to render the service;</td>
</tr>
<tr>
<td>• Most EHPs indicated that they are challenged by performing environmental management functions such as air quality monitoring, biodiversity management, review of EIAs etc, which they have not been trained on.</td>
<td>• The dedicated EHP must solely provide environmental management services and if possible their titles should change to their new positions.</td>
</tr>
<tr>
<td>• Lack of funds to effectively ensure adequate environmental performance within municipalities.</td>
<td>• This should only be done at B3, B4 and C2 municipalities which are faced with challenges of recruiting new staff due to financial constraints; and</td>
</tr>
<tr>
<td>• DEA should regulate the functions and duties of environmental management officials in the same manner as the DoH does with EHP</td>
<td>• DEA should regulate the functions and duties of environmental management officials in the same manner as the DoH does with EHP</td>
</tr>
</tbody>
</table>

5. Services rendered

**Objective and target:** DMA, new developments and un-serviced areas incorporated into serviceable areas by end 2014.

<table>
<thead>
<tr>
<th>Short-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Outsource specialised environmental services but proper appointment procedures and management of the service providers must be correctly done;</td>
</tr>
<tr>
<td>• Provide the internship and bursary to university students studying towards environmental management/science qualifications with conditions that they will come and work for the municipality for a specific number of years after completion;</td>
</tr>
<tr>
<td>• Develop partnerships with institutions such as universities, NGOs and research institutions to assist in rendering such services.</td>
</tr>
</tbody>
</table>

6. Funding

**Objective and target:** Establish at least 2 waste transfers within the DM by June 2014 (applications to be done simultaneously with the Regional landfill site application)
### STATUS QUO GAPS and NEEDS ANALYSIS

- Little budget is allocated to environmental functions.
- Inequality in budget distribution with the “big five” (water, roads, electricity, housing, roads & sanitation) getting most of the share.
- Lack of funds to effectively ensure environmental performance within municipalities;
- Budget restrictions;
- Imbalance between income and expenditure.
- Funding for non-income generating and zero-rated tariff services;

### ACTIONS TO ACCOMPLISH OBJECTIVES

#### Short-term (By 2014)

- Develop a financial strategy/plan for funding each project; which will include identifying sources of funding both national and international;
- Priorities projects based on feasibility studies;
- Negotiate for internal and national funding to be increased;
- Funds allocated for environmental issues from national treasury must be ring-fenced;
- Equitable share should be increased for environmental functions; and
- SALGA and DEA should inform all municipalities equally, especially the B3, B4 and C2 municipalities of available funds and assist then in making proposals required to access the funds.

#### 7. By-Laws

**Objective and target:** Establish at least 2 waste transfers within the DM by June 2014 (applications to be done simultaneously with the Regional landfill site application)

- Most local municipalities especially the B2, B3, and B4 municipalities do not have environmental by-laws which makes it difficult to ensure compliance and monitoring.

#### Short-term

- All municipalities especially the B3, and B4 municipalities should develop their own environmental management by-laws or adopt the DEA model by-laws by 2014.

#### 8. Environmental Management Planning Frameworks

**Objective and target:** Establish at least 2 waste transfers within the DM by June 2014 (applications to be done simultaneously with the Regional landfill site application)

- Most local municipalities especially the B2, B3, and B4 municipalities do not have environmental management planning frameworks such as IWMP, AQMP, Spatial Development Frameworks, Environmental Management Systems etc;
- Those few the B2, B3, and B4 municipalities that have these tools in place do not have the personnel to implement the plans; and
- They (B2, B3, and B4 municipalities) do not have the funding to review the plans at the stipulated review periods.

#### Short-term

- The B3 and B4 municipalities who do not have the environmental management frameworks in place should as a matter of agency seek funding and develop these plans. Some of the tools includes the following:
  - Integrated Development Plan;
  - Integrated Waste Management Plan;
  - Integrated Air Quality Management Plan;
  - Spatial Development Plan;
  - Growth and development strategy;
  - Energy and Climate Change Strategy;
<table>
<thead>
<tr>
<th>STATUS QUO GAPS and NEEDS ANALYSIS</th>
<th>ACTIONS TO ACCOMPLISH OBJECTIVES</th>
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<tr>
<td>-</td>
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<tr>
<td>9. Environmental Education and awareness</td>
<td>Objective and target: Establish environmental education and awareness unit or personnel for each category B and C by June 2016</td>
</tr>
<tr>
<td>- Most communities residing in B2, B3, B4 and C2 municipalities are not aware of the environmental issues within their areas.</td>
<td>o Biodiversity management plan;</td>
</tr>
<tr>
<td>- They are not aware of the importance of managing and preserving their environment sustainable;</td>
<td>o Coastal area management plan, etc.</td>
</tr>
<tr>
<td>- Environmental management is not prioritised by communities especially in B2, B3, B4 and C2 municipalities because they are most concerned with food, water, shelter and electricity needs and they do not see any direct benefit from preserving the environment;</td>
<td>- These plans will assist municipalities in identifying resources that may be needed to perform the environmental functions within their jurisdictions.</td>
</tr>
<tr>
<td>- Environmental management is not regarded as a service essential to improving quality of life; therefore, little attention is given to it;</td>
<td></td>
</tr>
<tr>
<td>- Councils do not view environmental management function as important because most of the functions are not revenue generating;</td>
<td></td>
</tr>
<tr>
<td>- Other departments within municipalities such as engineering are not very cooperating in ensuring that their activities are not impacting on the environment. It is either due to the fact that they are not aware or are just reluctant to cooperate.</td>
<td></td>
</tr>
</tbody>
</table>

***Short-term (by 2016)***
- The B3, B4 and C2 municipalities with support from DEA and SALGA should develop Public Awareness/Education Strategy aimed at promoting awareness over environmental management related issues within each municipality;
- The strategy should be focused on identifying priority focus groups within each municipality to target during active awareness campaigns;
- Different communication mediums (Television, radio, posters, billboards, flyers) should be identified and evaluated, in terms of their anticipated effectiveness, in the development of the strategy;
- The required strategy should make allowance for an initial focused six month campaign role out at each district level. Subsequent to this, awareness campaigns should be rolled out at LM level particular the B2, B3, B4 and C2 municipalities (also over a six month period) to cement the achievements made by the district level campaign. Thereafter, it is recommended that bi-annual campaigns be undertaken by each respective LM to ensure that there is a constant awareness amongst residents over environmental management issues and achievements by the districts and LMs (B3, B4 and C2 municipalities);
- The municipality departments that has the potential of causing adverse effects to the environment within municipalities should be given regular in-house training on environmental management issues;
- Councillors and municipality managers should also be given in-house training
### LOCAL GOVERNMENT ENVIRONMENTAL PERFORMANCE CAPACITY DISCUSSION DOCUMENT

<table>
<thead>
<tr>
<th>STATUS QUO GAPS and NEEDS ANALYSIS</th>
<th>ACTIONS TO ACCOMPLISH OBJECTIVES</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>on environmental management issues at least once a year.</td>
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</table>

10. Annual Review of proposed plans to address local government organizational capacity and fiscal frameworks.
**Objective and target:** Compilation of an annual Audit Report by municipalities for submission to DEA and SALGA for consideration.

**REVIEW**

- The above mentioned action plans (1 to 9) should be reviewed internal (municipalities) and external (DEA and/or SALGA) to monitor the achievements of the municipalities, and to address the failures, in terms of non-implementation (or failed implementation) of the project the above Implementation Plan.

**Short-term**

- Annual review of the Implementation plans
- The monitoring/audit report should provide sufficient information for assessing the achievements of the goals and strategic objectives. This process of review will ensure the re-evaluation of the plans and assessment of the appropriateness of policies, goals and strategic objectives. The audit will also direct the way forward in terms of required amendments or adjustments to the aforementioned goals, policies and strategic objectives.
4.10 Financial Planning Matters

This section of the report deals with the financial planning requirements for implementation of the plans proposed dealing with the local government organizational capacity and fiscal frameworks to perform environmental functions. This is not a detailed quantitative analysis, but rather a basis for the development of individual financial plans for implementation, once more definitive information is available on the specifics of the plan elements to be implemented. This section focuses on the development of the elements of a financial plan for municipalities.

4.10.1 OBJECTIVE OF A FINANCIAL PLAN

In terms of the IWMP, the objective of the financial Plan is to present guidance for key elements, which need to be considered for implementation of the IWMP. It is not the intention to develop detailed financial analyses for the plan, as such analyses would require far more detailed and comprehensive cost estimating information, and would be impractical at this stage, due to the large number of variables in terms of implementation, as well as the variable factors (such as: subsidisation, contractual agreements, etc.), which exist in the DMs, LMs and Metros.

The information provided below provides a basis for the DMs, LMs and Metros to draw up detailed Financial Plans and identify sources of funding. Financing is a critical aspect that needs considerable attention when developing the various projects associated with the implementation of capacity building. A number of mechanisms for funding projects have been listed in Section 76 of the Municipal Systems Act, 2000 (Act No. 32 of 2000), which could also aid the municipalities in their financial planning of projects. Table 3 explains various types of costs related to environmental management, including examples where these costs are used.

4.10.2 FINANCIAL PLAN DEVELOPMENT

Until the responsible person for implementing all the components of the plan has been identified, it is premature to accurately estimate costs, budgets, etc.. The onus now rests on the DMs, LMs and Metros and DEA to finalise and investigate the true project costs (capital and professional services) for each priority project accepted into the Implementation Plan. Certain components of the plan may be implemented by the DMs, LMs and Metros, others by the DEA and SALGA, or by the private sector through Municipal Service Partnerships.

However, irrespective of who is responsible for implementing projects, the DMs, LMs and Metros will be required to increase their institutional capacities for environmental
management. In conjunction with the increases in institutional capacity, the following will have to be considered in terms of the operational budget for each municipality:

- Related specifically to human resources – salaries, pensions, medical aid contributions, infrastructure and equipment (computers, offices, furniture, etc.), capacity building and education, etc; and
- Plans, projects, programmes –, additional surveys, feasibility studies, programme and/or project development, public education and awareness campaigns, public participation processes, EIAs, etc.

With respect to the human resources component of costing, cost for the various aspects, as well as the quantity for each needs to be considered. Table 3 gives an indication of the various cost items that the DMs, LMs and Metros should consider when budgeting to capacitate their organisational structures. The costing would be developed for different models of organisational staffing arrangements relevant for each category of municipality.

**Table 3: Cost items to be considered for an Environmental Management Department’s budget calculations**

<table>
<thead>
<tr>
<th>Costing for a Waste Management Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost aspects</td>
</tr>
<tr>
<td>Salaries/packages</td>
</tr>
<tr>
<td>Pensions</td>
</tr>
<tr>
<td>Medical aid contributions</td>
</tr>
<tr>
<td>Infrastructure and equipment</td>
</tr>
<tr>
<td>• Computers</td>
</tr>
<tr>
<td>• Offices</td>
</tr>
<tr>
<td>• Furniture</td>
</tr>
<tr>
<td>Capacity building and education</td>
</tr>
<tr>
<td>Outsourcing services</td>
</tr>
<tr>
<td>Monitoring equipment (such as air quality monitoring stations etc)</td>
</tr>
<tr>
<td><strong>TOTAL COST/Model</strong></td>
</tr>
</tbody>
</table>

To ensure the success and sustainability of the projects identified, each project will require detailed financial planning and budgeting, which can be conducted in the following manner and will have to be considered prior to implementation:

- Each component of the project that would need financing needs to be identified. Various components of the plan are defined in terms of scope and duration;
- Identify practical models for ownership and operation of the project or parts of it. This confirms the public and/or private parties, which will be seeking project financing. These models represent structural alternatives for implementation, from planning through construction, operation, maintenance, monitoring and
decommissioning/rehabilitation. All stakeholders are identified in these models, and the proposed roles of the public and private sector will have been determined;

- Conduct a financial risk analysis to identify the primary risks, which lenders and investors will face when considering involvement in the different components of the plan. The analysis should be conducted at a preliminary level, and should consider aspects for the outside investor such as construction risk, operational risk, market risk, regulatory risk, and political risk. The evaluation includes an assessment of practical measures for risk management and mitigation;
- Identify the domestic and international sources of financing, considering lending, insurance and equity involvement. Domestic and international financing sources could be approached and these could include international governments, banks, development banks, development agencies, financial corporations, and private businesses (donors);
- Investigate revenue generation from the project and the viability of financing the project. Parameters are investigated for each entity, the term, the guarantee requirement, and the interest rates. In all cases the focus is on determining the applicability and likelihood of financing from each source;
- Evaluate the financing potential of the project as well as each component over a certain period. This provides the projected rate of return and the debt to equity ratio. Analyse the financial performance of the project and its components; and
- Analyse the financial impacts and economic cost to the ratepayer. The economic impact basically defines the incremental or cumulative effect of the undertaking on the various classes of users, presented in a per-person, per-user, and/or a per-tonne basis.

Various elements of the plan as well as components within each element will need to have financial backing to enable its implementation. At this stage however, it cannot be determined which types of agreements or associations will be required for the different elements, whether they should be municipal undertakings or private undertakings. Each element should be dealt with individually and decisions made accordingly.

4.10.3 TYPES AND SOURCES OF FINANCE

Finance sources for projects arising from the assessment of local government organizational capacity and fiscal frameworks to perform environmental functions are discussed below. This discussion is presented in two categories: domestic and international. The focus is on finance sources which could potentially be accessed by the private sector. Finance sources for the DMs, LMs and Metros could come from a number of areas such as provincial and national government, as well as international donors. It
must however be noted that the South African Government is familiar with financing opportunities for government-sponsored projects.

Please take note that the sources listed below are not exhaustive. Further, it must be recognised that some sources could provide financing for project planning, whilst others may be better suited to project implementation.

4.10.3.1 Local sources of finance

- The Municipal Infrastructure Investment Unit, a source for support for municipalities, which are committed to investigating Municipal Service Partnerships;
- The Development Bank of Southern Africa;
- MIG funding;
- The Industrial Development Corporation publicly committed to funding infrastructure projects;
- Capital Expenditure Programme, which finances capital projects;
- The South Africa Infrastructure Fund, which is composed of numerous insurance and pension fund members, with an interest in funding infrastructure projects in South Africa;
- Black Empowerment Groups (investment groups);
- Companies with international affiliations, which may have access to greater and/or lower cost capital through their international partners;
- Department of Trade and Industry/Department of Transport, through the Spatial Development Initiative, may provide support to initiatives which can encourage direct foreign investment;
- DEA through its social responsibility funding programme; and
- Buyisa-e-Bag funding. Though this funding is focused on collection and recycling of plastic bags, it could be accessed in the development of buy-back centers and material recycling facilities.

4.10.3.2 International sources of finance

- International Finance Corporation, a member of the World Bank Group, a private sector division, which finances private sector projects in developing countries and helps companies to access financing in international markets. It promotes sustainable private sector investment in developing countries as a way to reduce poverty and improve people’s lives;
The Southern Africa Enterprise Development Fund, which is a United States of America (USA) Government-funded, privately managed venture capital fund, which takes an equity position of up to 25% in its investments;

New African Advisors, a USA based private venture capital fund with guarantees provided by the Overseas Private Investment Corporation (OPIC);

The OPIC Global Environment Fund, a USA based investment fund, which sponsors and manages investment entities with equity involvement in infrastructure projects; and

Various USA based private investment funds, which have expressed interest in South African infrastructure projects.

The following agencies can assist in obtaining, structuring, and/or insuring investments:

Various merchant banks in South Africa, which have declared an interest in structuring financing for Municipal Service Partnerships;

The Export-Import Bank of the United States (also known as the Ex-Im Bank), which helps to finance sales of the USA goods and services outside the USA;

The Multilateral Investment Guarantee Agency, a member of the World Bank Group, which provides insurance to private investors against risks such as currency transfer, expropriation and civil disturbance, as well as technical assistance; and

The OPIC, a USA Government Agency, which provides both financing and insurance to USA companies involved in international investments.

4.10.4 RISKS ASSOCIATED WITH FINANCING

A number of potential risks to investors for projects include such risks as construction risk, operational risk, regulatory risk, market risk and political risk. A detailed risk analysis should, however, be part of a financial analysis of the various projects and elements of the project. The following discussion provides a brief description of the different risk groups listed above, together with comments on mitigating the risks from the perspective of investors in private sector projects and/or PPPs.

Construction risk is the risk that the project elements will not be constructed (or completed) on time, within budget or to the parameters originally specified. This risk can be mitigated by various measures, including the use of qualified construction companies, the use of insurance and the provision of bonus and penalty clauses in construction contracts.

Operational risk is the risk that the project elements will be faulty and not operate efficiently or within the parameters specified by the owner and/or by the regulatory
agencies. A certain amount of operational risk is unavoidable, therefore lenders must protect their position through, for example, minimum debt service coverage ratio, limitations on capital expenditures, limitations on long-term debt and limitations on guarantees.

Regulatory risk refers to the potential for the regulatory controls on the project elements to change during the life of the project, thereby influencing the requirements for project performance. Should the performance requirements change, the costs of investments for upgrading, and the increased operational costs, must be addressed. Strategies used to manage regulatory risk include the appropriate identification of responsibilities for upgrading in contracts.

Market risk fluctuates depending upon the implementation model within which the project elements operate. For example, in an unregulated competitive market, such as the recycling market, the project faces risks related to the market size, the price and the payments. However, if the market is regulated, the market size is controlled, and price and payments can be controlled through a regulatory agency. Several strategies are used by lenders to reduce market risks, including guarantees by government agencies, letters of credit, limitations on debt exposure and independent appraisals.

Political risk signifies a variety of potential events, which can be triggered through local political actions, and which cannot reliably be predicted, such as: expropriation, confiscation and nationalisation of assets; forced abandonment; currency inconvertibility; funds transfer risk; and violence such as strikes, riots, civil commotion, or malicious damage. Certain political risks can be mitigated through insurance.

4.10.5 RECOMMENDATIONS IN THE DEVELOPMENT OF THE FINANCIAL PLAN

The Financial Plan for implementing the organizational capacity building and fiscal frameworks to perform environmental functions for local government is based on the individual elements of the plan, which need to be implemented and financed as a result. It is therefore important at the outset that the project elements are identified and suitable models or alternatives for implementation can be reviewed, after which finance sources can be established. The terms and conditions of this financing can be confirmed and a pro-forma analysis can be conducted in order to quantify the economic impact of the project.
4.10.6 NATIONAL TREASURY FUNDING

Since 2005, there has been a substantial increase in local government share mainly targeted towards the provision of free basic services and the extension of services to areas not presently serviced. National transfers to local government are divided into three major categories:

- The Equitable Share Grant;
- Infrastructure conditional grants (mainly the MIG);
- Capacity Building and Restructuring conditional grants; and
- The Department of Science & Technology funds research and operational studies that promote technological development.

4.10.7 EQUITABLE SHARE GRANT

The Equitable Share Grant from national government is provided in support of the accelerated implementation of free basic services to poor households. All municipalities are therefore being put under pressure by national government to prioritise the provision of free basic services to poor households, including better targeting and performance reporting.

The 2005 Division of Revenue Bill read together with the Municipal Finance Management Act, 2003 (Act No. 56 of 2003) has developed a new local government equitable share formula (explained in Annexure E to the Bill), that takes account of the particular municipality's revenue raising capacity, as well as a two tier subsidy for serviced and un-serviced households. Of particular interest to waste management service provision are the new recommended service subsidies for serviced and un-serviced households, viz.

- Serviced households R 30 per household per month
- Un-serviced households R 10 per household per month

If the municipalities access the Equitable Share Grant based on the above subsidies, there should be no reason why they cannot provide basic waste collection (door-to-door) and disposal services to all residents, through private sector contractors. Even in the case of the un-serviced subsidy of R 10, a communal skip system can be implemented for this amount.

The Equitable Share formula makes allowance for variations in functions performed between the (Category C) and LMs (Category B), with allocations directed to the municipality that carries out that function.
4.10.8 MUNICIPAL INFRASTRUCTURE GRANT

According to National Treasury, the MIG complements the equitable share allocations to give effect to national objectives to:

- Expand the delivery of basic services to all households, including the delivery of free basic services to poor households and other poverty alleviating objectives; and
- Stimulate local economic development and job creation over the medium-term.

Municipalities are also required to use their capital budgets to promote labour-based infrastructure methods (Expanded Public Works Programme) for projects where this is appropriate.

In direct contrast with the former Consolidated MIG funding, the MIG does not fund specific projects, but is designed to complement the capital budget of a municipality. Reporting on MIG, therefore focuses on the entire capital budget of a municipality.

The DMs has a responsibility to ensure that low capacity LMs are supported in their applications for MIG funds, and that they will comply with the requirements of the Municipal Finance Management Act, 2003 (Act No. 56 of 2003) and the 2005 Division of Revenue Bill in terms of budgeting. Section 37(2) enables municipalities to receive MIG funding provided that they prepare sector plans showing how backlogs are being addressed relating to the key sectors such as electricity, water, sanitation, waste removal, roads and transport.

4.10.9 CAPACITY BUILDING AND RESTRUCTURING GRANT

The capacity building grants were set up to assist municipalities in improving management, planning, technical and financial management skills and capacity for effective service delivery, with the major portions of grants flowing directly to municipalities. The following programmes are being supported from this grant:

- Financial Management Grant;
- Municipal Systems Improvement Programmes; and
- Restructuring Grant.

The DMs is required to build the capacity of weak LMs to perform their service delivery functions, rather than taking over such functions. For the successful implementation of the this project, both the DMs and the LMs (B2, B3, B4 and C2 municipalities) will require significant additional capacity in environmental management skills, and funding
for this capacity building should be accessed from the Capacity Building and Restructuring Grant.

### 4.11 IMPLEMENTATION PLAN

The Implementation Plan is the end result of the assessment process (apart from implementation and yearly monitoring thereof) and outlines the sequential role out of identified priority projects over the 10 year planning horizon. The identified priority projects are staggered over a 10 year period due to anticipated budgetary constraints that limit the possible implementation thereof over a shorter time-frame (Figure 13). In addition, the initiation and development of subsequent priority projects may be dependant on the successful execution of a predecessor in the list of required priority projects. The following are *inter alia* typical examples of such circumstances that are realised in this proposed Implementation Plan:

- Increasing environmental management services to communities (Project no. 6) is hinged on the successful completion of Projects 1 to 5 relating to organizational capacity building and fiscal framework development;
- Without adequate recruitment and technical training of municipal officials (Project no. 1), the success of priority Project 4 is doubtful; and
- The DMs, LMs and Metros need to develop comprehensive environmental management By-Laws (Project no. 7) before municipal officials can be expected to monitor and enforce the implementation of environmental management planning frameworks (IWMP, AQMP) (Project No. 8).

In a so-called ideal world, devoid of the real life financial and capacity constraints currently realised in many DM and LM set-ups, it would be feasible to implement all identified priority projects over a 10 year period (Figure 13).
Figure 13: Proposed Implementation Plan for local government environmental performance capacity the role-out over a 10 year
5 CONCLUSION

Environmental degradation is a global reality that will have local impacts which South Africa cannot escape. Government accepts the fact that South Africa is contributing to environmental protection and has taken deliberate steps towards combating the causes of climate change and environmental protection. Included in these steps is the country’s decision to become parties to several international commitments to protect the Natural environment.

A poorly impacted natural environment will have far-reaching effects on South Africa; severely impacting on the health sector, agricultural production, plant and animal biodiversity, water resources, and rangelands. With regard to vital industries, the mining and energy sectors are particularly vulnerable to a degraded environment and this should be prevented through optimum environmental performance at the local level.

The results of the provincial working sessions indicates that category A and B1 municipalities are generally prepared and better capacitated to addressing environmental protection, whilst the smaller B2, B3 and B4 municipalities generally struggle to ensure the barest of environmental performance. Municipalities subsequently identified the key challenges regarding environmental management as being: a lack of understanding of environmental protection and resources to address it; a lack of integrated planning; a vacuum of leadership and champions for environmental performance at certain levels; no political mandate for environmental protection and the complexity of sourcing funds to manage environmental projects. Furthermore, municipalities considered these challenges and offered recommendations on how these challenges could be addressed. This report concludes with suggestions of possible policy direction themes to inform technical and financial capabilities to ensure environmental performance at the local level. These suggestions centre on the issues of: capacity development and awareness raising, financing instruments to fund environmental initiatives, and addressing the relationship between environmental performance and the fiscal frameworks to support environmental performance.
6. References


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