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GOVERNMENT NOTICE

DEPARTMENT OF ENVIRONMENTAL AFFAIRS

No. 344

4 May 2012

**NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO.
59 OF 2008)****NATIONAL WASTE MANAGEMENT STRATEGY**

I, Bomo Edith Edna Molewa, Minister of Water and Environmental Affairs, hereby under section 6 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), establish the National Waste Management Strategy in the Schedule for implementation.



**BOMO EDITH EDNA MOLEWA
MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS**

SCHEDULE



National Waste Management Strategy



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

November 2011

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List of Acronyms

DCOG	Department of Cooperative Governance
DEA	Department of Environmental Affairs
DTI	Department of Trade and Industry
DMR	Department of Mineral Resources
DWA	Department of Water Affairs
ECA	Environment Conservation Act
EIA	Environmental Impact Assessment
EMI	Environmental Management Inspector
EMPR	Environmental Management Programme
EPR	Extended Producer Responsibility
IDP	Integrated Development Plan
IndWMP	Industry Waste Management Plan
ITAC	International Trade Agreement Commission
IWMP	Integrated Waste Management Plan
MEA	Multilateral Environmental Agreement
MEC	Member of Executive Council
NEAS	National Environmental Authorisation System
NEMA	National Environmental Management Act
NGO	Non-Governmental Organisation
NWMS	National Waste Management Strategy
POP	Persistent Organic Pollutant
PPP	Public Private Partnership
SABS	South African Bureau of Standards
SADC	Southern African Development Community
SANAS	South African National Accreditation System
SANS	South African National Standards
SARS	South African Revenue Service
SAWIS	South African Waste Information System
SMME	Small, Medium and Micro Enterprise
WCMS	Waste Classification and Management System
WEEE	Waste of Electric and Electronic Equipment
WIS	Waste Information System
WMO	Waste Management Officer

Executive Summary

The National Waste Management Strategy (NWMS) is a legislative requirement of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), the "Waste Act". The purpose of the NWMS is to achieve the objects of the Waste Act. Organs of state and affected persons are obliged to give effect to the NWMS.

Waste management in South Africa faces numerous challenges and the NWMS provides a plan to address them. The main challenges are:

1. A growing population and economy, which means increased volumes of waste generated. This puts pressure on waste management facilities, which are already in short supply.
2. Increased complexity of waste streams because of urbanisation and industrialisation. The complexity of the waste stream directly affects the complexity of its management, which is compounded by the mixing of hazardous wastes with general waste.
3. A historical backlog of waste services for, especially, urban informal areas, tribal areas and rural formal areas. Although 61%¹ of all South African households had access to kerbside domestic waste collection services in 2007, this access remains highly skewed in favour of more affluent and urban communities. Inadequate waste services lead to unpleasant living conditions and a contaminated, unhealthy environment.
4. Limited understanding of the main waste flows and national waste balance because the submission of waste data is not obligatory and where available is often unreliable and contradictory.
5. A policy and regulatory environment that does not actively promote the waste management hierarchy. This has limited the economic potential of the waste management sector, which has an estimated turnover of approximately R10 billion per annum². Both waste collection and the recycling industry make meaningful contributions to job creation and GDP, and they can expand further.
6. Absence of a recycling infrastructure which will enable separation of waste at source and diversion of waste streams to material recovery and buy back facilities.
7. Growing pressure on outdated waste management infrastructure, with declining levels of capital investment and maintenance.

¹ Stats SA Community Household Survey 2007 refuse removal data on 'kerbside' collection.

² Michael Goldblatt of Palmer Development Group, "Macroeconomic trends, targets and economic instruments", paper prepared for Department of Environmental Affairs as part of NWMS process, August 2009

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8. Waste management suffers from a pervasive under-pricing, which means that the costs of waste management are not fully appreciated by consumers and industry, and waste disposal is preferred over other options.
9. Few waste treatment options are available and so they are more expensive than landfill costs.
10. Too few adequate, compliant landfills and hazardous waste management facilities, which hinders the safe disposal of all waste streams. Although estimates put the number of waste handling facilities at more than 2000³, a significant number of these are unpermitted.

The objects of the Waste Act are structured around the steps in the waste management hierarchy, which is the overall approach that informs waste management in South Africa. The waste management hierarchy consists of options for waste management during the lifecycle of waste, arranged in descending order of priority: waste avoidance and reduction, re-use and recycling, recovery, and treatment and disposal as the last resort.

The NWMS is structured around a framework of eight goals, which are listed in table 1 together with the targets for each goal that must be met by 2016:

Table 1: Summary of NWMS Goals

	Description	Targets (2016)
Goal 1:	Promote waste minimisation, re-use, recycling and recovery of waste.	<ul style="list-style-type: none"> • 25% of recyclables diverted from landfill sites for re-use, recycling or recovery. • All metropolitan municipalities, secondary cities and large towns have initiated separation at source programmes. • Achievement of waste reduction and recycling targets set in IndWMPs for paper and packaging, pesticides, lighting (CFLs) and tyres industries.
Goal 2:	Ensure the effective and efficient delivery of waste services.	<ul style="list-style-type: none"> • 95% of urban households and 75% of rural households have access to adequate levels of waste collection services. • 80% of waste disposal sites have permits.
Goal 3:	Grow the contribution of the waste sector to the green economy.	<ul style="list-style-type: none"> • 69 000 new jobs created in the waste sector • 2 600 additional SMEs and cooperatives participating in waste service delivery and recycling

³ DEA (2007), Assessment of the Status of Waste Service Delivery and capacity at Local Government level. Directorate: General Waste Management, August 2007, Draft 3.

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	Description	Targets (2016)
Goal 4:	Ensure that people are aware of the impact of waste on their health, well-being and the environment.	<ul style="list-style-type: none"> • 80% of municipalities running local awareness campaigns. • 80% of schools implementing waste awareness programmes.
Goal 5:	Achieve integrated waste management planning.	<ul style="list-style-type: none"> • All municipalities have integrated their IWMPs with their IDPs, and have met the targets set in IWMPs. • All waste management facilities required to report to SAWIS have waste quantification systems that report information to WIS.
Goal 6:	Ensure sound budgeting and financial management for waste services.	<ul style="list-style-type: none"> • All municipalities that provide waste services have conducted full-cost accounting for waste services and have implemented cost reflective tariffs.
Goal 7:	Provide measures to remediate contaminated land.	<ul style="list-style-type: none"> • Assessment complete for 80% of sites reported to the contaminated land register. • Remediation plans approved for 50% of confirmed contaminated sites.
Goal 8:	Establish effective compliance with and enforcement of the Waste Act.	<ul style="list-style-type: none"> • 50% increase in the number of successful enforcement actions against non-compliant activities. • 800 EMIs appointed in the three spheres of government to enforce the Waste Act.

Details of the objectives, indicators and targets to achieve each goal are in Section 2 and actions to achieve the goals (with the responsible actors) are in Appendix 1.

To achieve these eight goals, the Act provides a toolbox of waste management measures:

- **Waste Classification and Management System** – provides a methodology for the classification of waste and provides standards for the assessment and disposal of waste for landfill disposal.
- **Norms and standards** – establishes baseline regulatory standards for managing waste at each stage of the waste management hierarchy.
- **Licensing** – lists activities that require licences (with conditions) and those that do not if undertaken according to conditions or guidelines.
- **Industry waste management plans** – enables collective planning by industry to manage their products once they become waste and to collectively set targets for waste reduction, recycling and re-use.
- **Extended Producer Responsibility (EPR)** – regulates that industry is responsible beyond point of sale for particular products that have toxic constituents or pose waste management challenges, particularly where voluntary waste measures have failed.

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- **Priority wastes** – identifies categories of waste that, due their risks to human health and the environment, require special waste management measures, particularly where a solution requires the involvement of multiple role-players.
- **Economic instruments** – encourages or discourages particular behaviour and augments other regulatory instruments.

Section Three describes these measures in detail.

The NWMS is an institutionally inclusive strategy because its achievement relies on participation by numerous role-players in the public sector, private sector and civil society.

To implement the Waste Act, government must:

- Draft regulations, standards and Integrated Waste Management Plans.
- Regulate waste management activities through licences and enforce their conditions.
- Implement the South African Waste Information System (SAWIS).
- Coordinate waste management activities using a system of Waste Management Officers.
- Give effect to multilateral agreements and ensure proper import and export controls.
- Progressively expand access to at least a basic level of waste services and plan for future needs.
- Facilitate the establishment of a national recycling infrastructure.
- Provide the framework for the remediation of contaminated land.
- Work in partnership with the private sector and civil society.

The private sector must:

- Take responsibility for their products throughout the products' life cycles.
- Institute cleaner technology practices and minimise waste generation.
- Establish systems and facilities to take back and recycle waste at the end of their products' lifecycle.
- Develop waste management technologies to ensure that all the waste produced in the country can be managed according to the waste management hierarchy.
- Prepare and implement Industry Waste Management Plans.

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- Comply with licence conditions and regulations.

Civil society must:

- Separate waste at household level.
- Participate in waste awareness campaigns.
- Participate in recycling initiatives.
- Comply with waste regulations, prevent littering, and help to monitor compliance.

Section Four describes these obligations (and the instruments used to meet them) in more detail, as well as the extra capacity needed to implement the Waste Act.

1. Background

1.1 Introduction

The purpose of this Section is to describe the context within which the National Waste Management Strategy (NWMS) has been developed. This includes the methodology followed in developing the NWMS, the legislative context that frames the development of the NWMS, and a problem statement which the NWMS seeks to address.

This NWMS seeks a common platform for action between stakeholders to systematically improve waste management in South Africa. The country is faced with a rapidly growing, urbanisation and consumerist population but our environment has a finite ability to absorb solid and liquid waste.

Through the country's commitment to sustainable development, South Africa aims to balance the broader economic and social challenges of a developing and unequal society while protecting our environmental resources. There is a need to eliminate the unnecessary use of raw materials and the need to support sustainable product design, resource efficiency and waste prevention. This means re-using products where possible; and recovering value from products when they reach their life span through recycling, composting or energy recovery. While the elimination of waste in its entirety may not be feasible, it is possible through the systematic application of the waste management hierarchy to reach a point within the next few decades where, re-use, recycling, recovery and treatment overtake landfills as preferred options for waste management.

The NWMS is a legislative requirement of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), here after referred to as the "Waste Act". The purpose of the NWMS is to achieve the objects of the Waste Act, which defines its scope and specifies its contents. Organs of state and affected persons are obliged to give effect to the NWMS.

The Waste Act indicates that the Minister must review the strategy at intervals of not more than five years. While the period that the strategy covers is not specified, the bulk of its provisions will relate to the five year period prior to the next review of the strategy.

The NWMS consists of five sections, each containing a number of sub-sections:

1. **Section One** describes the methodology followed in developing the NWMS, establishes the legislative context framing the NWMS, and sets out the challenges facing the management of waste.
2. **Section Two** sets out the overall goals and approach to implementing the NWMS, and the strategies to be followed to achieve each of the goals.
3. **Section Three** describes each of the regulatory and economic instruments that will be used to give effect to the strategy set out in Section Two.
4. **Section Four** deals with institutional mechanisms for implementing the NWMS, and sets out the roles, responsibilities, coordination and review mechanisms.

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5. The last section is an action plan that sets out how the three spheres of government and industry will give effect to the NWMS is in Appendix One.

1.2 Approach and methodology

The development of the NWMS has been guided by a consultative process⁴, including public participation and consultation with relevant national and provincial departments. Involving stakeholders in the process has been more than merely a legislative requirement, since crucial aspects of waste management, such as waste separation and recycling, are performed by households, businesses and organisations outside of government.

Developing the strategy followed a consultative process in four phases shown in the table below.

Table 2: Phases for developing the NWMS

PHASE	ACTIVITIES AND OUTPUTS
INCEPTION PHASE March - June 2009	<ul style="list-style-type: none"> • Review of previous policies & drafting of NWMS framework. • Establishment of Project Steering Committee. • Launch of NWMS website as part of online consultation process. <p>Key outputs: Stakeholder Consultation Report, NWMS Framework, & NWMS website</p>
SITUATION & BASELINE STUDIES June - September 2009	<ul style="list-style-type: none"> • Research conducted on identified key topics. • Consultation on baseline research reports. • Synthesis paper summarising key issues arising out of the baseline research reports and consultation process, and the development of a strategic issues paper. <p>Key outputs: Research Papers, Research Conference & Strategic Issues paper</p>
STRATEGY FORMULATION September 2009 – April 2010	<ul style="list-style-type: none"> • Consultation on strategic issues paper. • Review of stakeholder comments, engagement with Project Steering Committee and key government agencies. • Preparation of first draft of the NWMS. <p>Key outputs: agreement on key strategic issues, first draft of NWMS</p>
CONSULTATION & FINALISATION May 2010 – July 2011	<ul style="list-style-type: none"> • Publication of draft NWMS for comment. • Extensive consultations on the NWMS with the three spheres of government, industry and civil society. • Based on stakeholder inputs, finalisation of the NWMS. • Approval of NWMS by Cabinet. <p>Key outputs: Publication of NWMS</p>

⁴ As required by sections 72 and 73 of the Waste Act.

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An innovative feature of the consultation process has been a website (www.wastepolicy.co.za/nwms/) to facilitate public participation and comments on the key policy documents produced as part of the drafting of the NWMS.

Consultation with government departments, provinces and municipalities has ensured that the NWMS is an integrated strategy for the whole of government, and is aligned with institutional capacity and intergovernmental systems. The NWMS seeks to mainstream waste management in government planning and reporting systems.

1.3 Constitutional and legal framework

The Constitution of South Africa, 1996 (the Constitution) provides the foundation for environmental regulation and policy in South Africa. The right to environmental protection and to live in an environment that is not harmful to health or well-being is set out in the Bill of Rights (section 24, Chapter 2). This fundamental right underpins environmental policy and law, in particular the framework environmental legislation established by the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

The Waste Act fundamentally reforms the law regulating waste management, and for the first time provides a coherent and integrated legislative framework addressing all the steps in the waste management hierarchy. The waste management hierarchy provides a systematic and hierarchical approach to integrated waste management, addressing in turn waste avoidance, reduction, re-use, recycling, recovery, treatment, and safe disposal as a last resort.

NEMA introduced a number of additional guiding principles into South African environmental legislation, including the life-cycle approach to waste management, producer responsibility, the precautionary principle and the polluter pays principle. Chapter 5 of NEMA provides instruments for integrated waste management. NEMA also places a duty of care on any persons who may cause significant pollution or degradation of the environment, requiring them to institute measures to either prevent pollution from occurring, or to minimise and rectify the pollution or degradation where it cannot reasonably be avoided. The Waste Act echoes the duty of care provision by obliging holders of waste to take reasonable measures to implement the waste management hierarchy.

The Constitution assigns concurrent legislative competence to national and provincial government with respect to the *environment* and *pollution control* (section 146 of the Constitution). It assigns exclusive provincial legislative competence to the local government matters of *cleansing and refuse removal*, *refuse dumps* and *solid waste disposal*. The Constitution allows national legislation to set national norms and standards relating to these matters in cases where national uniformity is required to deal effectively with the issue.

Norms and standards are therefore the foundation of the regulatory system established by the Waste Act. The Waste Act obliges national government to develop norms and standards on key regulatory matters, while it may develop additional norms and standards on certain ancillary matters. Provinces and municipalities may also develop standards provided they do not conflict with national standards.

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The Waste Act needs to be read in conjunction with the body of legislation that regulates local government, including the Local Government: Municipal Finance Management Act, 2003 (Act No. 56 of 2003), and the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000), which create the overall framework for planning, budgeting, service delivery and reporting at local government level.

The Waste Act establishes cooperative governance mechanisms for dealing with matters such as waste planning, designation of waste management officers and performance reporting. National and provincial government departments are also constitutionally obliged to support municipalities in the execution of their functions.

The Waste Act also needs to be read in conjunction with other sectoral legislation. For example, section 39(3)(d)(iii) of the Minerals and Petroleum Resources Development Act, 2002 states that Environmental Management Plans must comply with any prescribed waste standard or management standards or practices.

The Waste Act does not apply to areas that are regulated by their sectoral legislation, including: radioactive waste⁵, residue deposits and residue stockpiles⁶; the disposal of explosives⁷; and the disposal of animal carcasses⁸.

1.4 Definition and scope

The Waste Act introduced a definition of waste, which has major implications for those activities that were traditionally not treated or regarded as waste. The Waste Act defines waste as follows:

“waste” means any substance, whether or not that substance can be reduced, re-used, recycled and recovered –

- (a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of;*
- (b) which the generator has no further use of for the purposes of production;*
- (c) that must be treated or disposed of; or*
- (d) that is identified as a waste by the Minister by notice in the Gazette, and includes waste generated by the mining, medical or other sector; but –*
 - (i) a by-product is not considered waste; and*

⁵ Radioactive Waste regulated by the: Hazardous Substances Act, 1973 (Act No. 15 of 1973), the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999), and the Nuclear Energy Act, 1999 (Act No. 46 of 1999)

⁶ Residue deposits and stockpiles regulated by: the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002.)

⁷ Disposal of explosives regulated by: the Explosives Act, 2003 (Act No.15 of 2003)

⁸ Disposal of animal carcasses regulated by: the Animal Health Act, 2002 (Act No. 7 of 2002)

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(ii) any portion of waste, once re-used, recycled and recovered, ceases to be waste;

Given the exclusion of by-products, their definition in terms of the Waste Act is important:

“by-product” means a substance that is produced as part of a process that is primarily intended to produce another substance or product and that has the characteristics of an equivalent virgin product or material;

To clarify some of these definitions, DEA has published its intended interpretation of the definition of waste and by-product as used in the Waste Act to help stakeholders understand the Department’s intentions.

1.5 International obligations

The NWMS must give effect to South Africa’s international obligations in terms of waste management⁹.

The modern system of global environmental governance is to a large degree a consequence of the Rio Earth Summit 1992 and Agenda 21, which set in motion a series of multilateral environmental agreements (MEAs). In relation to hazardous substances and waste, four principal conventions apply:

1. The Rotterdam Convention, acceded to by South Africa in 2002, promotes and enforces transparency in the importation of hazardous chemicals.
2. The Basel Convention, acceded to by South Africa in 1994, addresses the need to control the transboundary movement of hazardous wastes and their disposal, setting out the categorization of hazardous waste and the policies between member countries.
3. The Stockholm Convention on Persistent Organic Pollutants (POPs), to which South Africa became a signatory in 2001 and ratified in 2002, requires that member countries phase out POPs and prevent their import or export.
4. The Montreal Protocol, to which South Africa became a signatory in 1990 and ratified subsequent amendments, phases out the production of certain substances and so protects the ozone layer.

The South African government must give effect to the provisions of the international conventions to which the country has acceded. Section 4.6 will explore in more detail the mechanisms that are already operational or that will be established to give effect to the waste related conventions.

⁹ Section 6(1)(b), section 43(1)(b) and section 43(1)(d) of the Waste Act.

1.6 Problem statement

Waste management in South Africa faces numerous challenges and the NWMS sets out plans, targets and measures to address them. The main challenges are:

1. A growing population and economy, which means increased volumes of waste generated. This puts pressure on waste management facilities, which are already in short supply.
2. Increased complexity of the waste stream because of urbanisation and industrialisation. The complexity of the waste stream directly affects the complexity of its management, which is compounded when hazardous waste mixes with general waste.
3. A historical backlog of waste services for, especially, urban informal areas, tribal areas and rural formal areas. Although 61%¹⁰ of all South African households had access to kerbside domestic waste collection services in 2007, this access remains highly skewed in favour of more affluent and urban communities. Inadequate waste services lead to unpleasant living conditions and a polluted, unhealthy environment.
4. Limited understanding of the main waste flows and national waste balance because the submission of waste data is not obligatory, and where data is available, it is often unreliable and contradictory.
5. A policy and regulatory environment that does not actively promote the waste management hierarchy. This has limited the economic potential of the waste management sector, which has an estimated turnover of approximately R10 billion per annum¹¹. Both waste collection and the recycling industry make meaningful contributions to job creation and GDP, and they can expand further.
6. Absence of a recycling infrastructure which will enable separation of waste at source and diversion of waste streams to material recovery and buy back facilities.
7. Growing pressure on outdated waste management infrastructure, with declining levels of capital investment and maintenance.
8. Waste management suffers from a pervasive under-pricing, which means that the costs of waste management are not fully appreciated by consumers and industry, and waste disposal is preferred over other options.
9. Few waste treatment options are available to manage waste and so they are more expensive than landfill costs.

¹⁰ Stats SA Community Household Survey 2007 refuse removal data on 'kerbside' collection.

¹¹ Michael Goldblatt of Palmer Development Group, "Macroeconomic trends, targets and economic instruments", paper prepared for Department of Environmental Affairs as part of NWMS process, August 2009

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10. Too few adequate, compliant landfills and hazardous waste management facilities, which hinders the safe disposal of all waste streams. Although estimates put the number of waste handling facilities at more than 2000¹², significant numbers of these are unpermitted.

The rest of this document explains how the NWMS will address these challenges.

2 Overall approach for NWMS

2.1 Introduction

The purpose of this chapter is to set out the overall approach of the National Waste Management Strategy (NWMS), including the eight priority goals and accompanying objectives for its achievement. It also sets out the indicators to measure the achievements against targets which are to be met within a five-year time-frame. These targets will be reviewed five years after the NWMS adoption.

The overall purpose of the strategy is to give effect to the objects of the Waste Act, which are to protect health, well-being and the environment through sound waste management and application of the waste management hierarchy. The strategy provides a plan to give practical effect to the Waste Act, and as such it seeks to ensure that responsibility for waste management is properly apportioned.

The legacy of inadequate waste services, poorly planned and maintained waste management infrastructure, and limited regulation of waste management persistently threaten the health and wellbeing of everyone in the country. Addressing this legacy and its negative environmental and social consequences, advances people's constitutional right to a healthy environment. The NWMS aims to redress the past imbalances in waste management. For example, waste licensing will not permit landfill sites within a particular radius of a human settlement.

The eight strategic goals around which the NWMS is structured are as follows:

Goal 1: Promote waste minimisation, re-use, recycling and recovery of waste.

Focuses on implementing the waste management hierarchy, and with the ultimate aim of diverting waste from landfill.

Goal 2: Ensure the effective and efficient delivery of waste services.

¹² DEAT (2007), Assessment of the Status of Waste Service Delivery and capacity at Local Government level. Directorate: General Waste Management, August 2007, Draft 3.

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Promotes access to at least a basic level of waste services for all and integrates the waste management hierarchy into waste services, including separation at source.

Goal 3: Grow the contribution of the waste sector to the green economy

Emphasises the social and economic impact of waste management, and situates the waste strategy within the green economy approach.

Goal 4: Ensure that people are aware of the impact of waste on their health, well-being and the environment.

Seeks to involve communities and people as active participants in implementing a new approach to waste management.

Goal 5: Achieve integrated waste management planning.

Creates a mechanism for integrated, transparent and systematic planning of waste management activities at each level of government.

Goal 6: Ensure sound budgeting and financial management for waste services.

Provides mechanisms to establish a sustainable financial basis for providing waste services.

Goal 7: Provide measures to remediate contaminated land.

Addresses the massive backlog of public and privately owned contaminated land in South Africa.

Goal 8: Establish effective compliance with and enforcement of the Waste Act.

Ensures that everyone adheres to the regulatory requirements for waste management, and builds a culture of compliance.

Details of the objectives, indicators and targets to achieve each goal follow later in this chapter.

2.2 Link to Government-wide Monitoring and Evaluation System

Waste management is a crucial element in a suite of environmental interventions to sustainably manage development in South Africa. As such, waste management gives effect

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to Outcome 10 of the Government-wide Monitoring and Evaluation System (GWM&E)¹³, namely that 'environmental assets and natural resources are well protected and continually enhanced'. This outcome consists of several outputs and sub-outputs, and waste management contributes to two of its outputs. For 'Output 2: Reduced greenhouse gas emissions, climate change and improved air quality', waste minimisation, diversion of waste from landfill, composting and reduced resource consumption will help to reduce CO₂ emissions. For 'Output 3: Sustainable Environmental Management', less and better managed waste is a key component of sustainable environmental management.

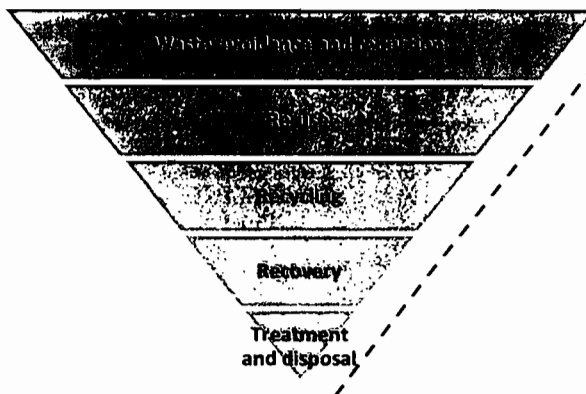
The NWMS also contributes to a number of other high level outcomes, namely:

Outcome 4: Decent Employment through Inclusive Economic Growth

Outcome 8: Sustainable Human Settlements and Improved Quality of Household Life

Outcome 9: Responsive, Accountable, Effective and Efficient Local Government System

2.3 Waste Management Hierarchy



The objects of the Waste Act are structured around the steps in the waste management hierarchy, which is the overall approach that informs waste management in South Africa. Therefore, the NWMS follows the waste management hierarchy approach.

The waste management hierarchy consists of options for waste management during the lifecycle of waste, arranged in descending order of priority. All stakeholders must apply the waste management hierarchy in making decisions on how to manage waste.

Figure 1: Waste management hierarchy

The foundation of the hierarchy, and the first choice of measures in waste management, is avoidance and reduction. This step aims for goods to be designed in a manner that minimises their waste components. Also, the reduction of the quantity and toxicity of waste generated during the production process is important.

¹³ The Presidency: Department of Performance Monitoring and Evaluation (2010) Measurable Performance and Accountable Delivery, Outputs and Measures, Outcome 10: Environmental Assets and Natural Resources that are well protected and continually enhanced draft, 10 May 2010.

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The next stage of the hierarchy is re-using waste. Re-using an article removes it from the waste stream for use in a similar or different purpose without changing its form or properties.

After re-use comes the recycling of waste, which involves separating articles from the waste stream and processing them as products or raw materials.

These first four stages of the waste management hierarchy are the foundation of cradle-to-cradle waste management. This approach seeks to re-use or recycle a product when it reaches the end of its life span. In this way, it becomes inputs for new products and materials. This cycle repeats itself until as small a portion as possible of the original product eventually enters the next level of the waste management hierarchy: recovery.

Recovery involves reclaiming particular components or materials, or using the waste as a fuel.

As a last resort, waste enters the lowest level of the hierarchy to be treated and / or disposed of, depending on the safest manner for its final disposal.

Where the quantity of waste cannot be reduced during production, the purpose of implementing the waste management hierarchy is to use waste as a resource and divert these potential resources from landfill. Although landfill is widely considered the most affordable way to manage waste, this view does not take into account factors such as the environmental impacts of landfills; the costs of developing and maintaining additional landfill capacity to accommodate the increasing rate of waste disposal; and the cost of closing and remediating the landfill.

The goals of waste avoidance and reduction and the shift from landfilling waste to using it as a resource will be discussed in greater detail in relation to Goal 1.

2.4 Partnerships and Co-regulation

Implementing the waste management hierarchy and achieving the objects of the Waste Act will require coordinated action by many players, including households, businesses, community organisations, NGOs, parastatals and the three spheres of government. This means that a consultative and partnership based approach is essential for realising the NWMS; government action alone cannot be effective. Therefore, government is committed to following a co-regulatory and consensual approach that brings different actors on board and allows scope for local initiative and creativity.

As a first step, the various waste management measures that the Act envisages will be designed and implemented in a consultative manner. This includes monitoring the effectiveness and impact of the measures after implementation. The Act¹⁴ requires public consultation when developing each waste management measure, including national and provincial norms and standards, integrated waste management plans, industry waste management plans under certain circumstances, and declaration of priority wastes.

¹⁴ Section 73

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Implementing the waste management hierarchy requires a shift in consciousness, attitudes and behaviour for businesses, organisations and households. It also requires a country wide infrastructure to enable re-use and recycling. Partnerships around effective waste management must have concrete expression in local collaboration around initiatives to improve waste management. Municipalities and local stakeholders must play an active role in establishing such partnerships and participatory community projects. The role of education, advocacy and awareness is the subject of Goal 4, where the role of partnerships will be discussed in greater detail.

Industry, organisations and households have a critically important role to play in managing their own waste streams. In several examples of successful self-regulation, businesses have come together to manage a similar waste stream because managing waste collectively is more efficient than managing it individually. The greater the extent of responsible self-regulation, the less government needs to intervene and regulate. This frees up scarce government resources for more constructive initiatives. Furthermore, well organised industries can better identify the form of regulatory support they require from government. This approach is embodied in the notion of co-regulation, where mutually defined regulatory support enhances industry's ability to manage a waste stream.

Even in the traditional government area of regulatory compliance, partnerships are needed for compliance monitoring. Both business and civil society play a crucial role in identifying areas of risk and alerting government to the need for enforcement or legal action. This will be the subject of Goal 8, which addresses the role of compliance monitoring and enforcement.

2.5 Regulatory model

To achieve the goals and objectives of the NWMS, a tiered and consensual approach will be followed. This approach will optimally combine regulation and compliance measures with self regulatory components, voluntary initiatives, economic incentives, and fiscal mechanisms. The approach establishes baseline regulations for the waste sector as a foundation for a co-regulatory system that relies on industry initiative and voluntary compliance. In cases where industry response proves insufficient for dealing with waste challenges or where a market failure prevails, more interventionist regulatory tools may be deployed. The approach treats the measures set out in the Waste Act as a "tool box" of instruments that are able to address specific waste management challenges.

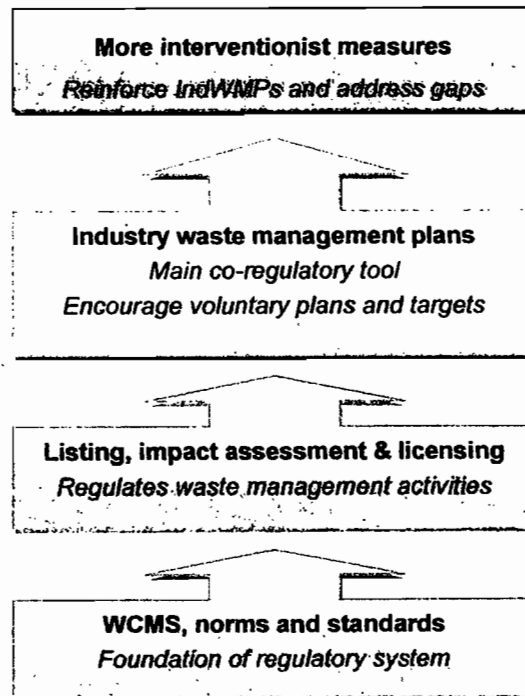


Figure 2 shows how the tiered and consensual regulatory approach uses the toolbox of instruments. Details of this approach and the instruments are in section 3.

Figure 2: NWMS tool box of measures

2.6 Description of goals

This section discusses each of the goals outlined in the introduction to Section 2 in greater detail. It explains the objectives that underpin the goal, the strategy to achieve the goal, the indicators that will measure if the objectives have been met and the targets for the next five years.

Goal 1: Promote waste minimisation, re-use, recycling and recovery.

One of the primary intentions of the NWMS and the Waste Act is to implement the waste management hierarchy. Goal 1 addresses the first four stages of the waste management hierarchy, and is structured around two objectives. The first objective is to promote waste minimisation in the design, composition and manufacturing of products. The second objective is to promote re-use, recycling and recovery of goods and waste materials.

The Waste Act creates a general duty for waste holders to avoid generating waste and, failing that, to minimise the amount and the toxicity of the waste generated. Thereafter, they are expected to re-use, recycle or recover waste. Various instruments in the Act give effect to this duty of care, including norms and standards, integrated waste management plans, industry waste management plans, extended producer responsibility, and priority wastes.

Promoting waste minimisation goes beyond the remit of environmental policy and depends in part on industrial policy and supporting economic instruments. Government and industry will coordinate their actions in a waste minimisation programme that knits together the different policy strands and that identifies the goods and services to which the provisions can feasibly apply. The following measures to promote waste minimisation will be implemented:

- Design principles that incorporate the re-use of goods or their dismantling into components for re-use. This measure will rely on greater investment in research and development. The existing 150% Research and Development Tax Rebate will support this measure. The Technology Innovation Agency, which facilitates innovation in design, will also promote this measure.
- The quantity and toxicity of waste produced during the manufacturing processes are concerns of the Cleaner Production Development Strategy that the National Cleaner Production Centre is implementing. Furthermore, the Waste Act's Extended Producer Responsibility provisions require the implementation of cleaner production measures.
- Industry waste management plans (IndWMPs) will set targets for waste reduction and for re-use, recycling and recovery. In 2011, plans are being prepared by the paper and packaging industry, the pesticide industry, the lighting industry (focusing on compact fluorescent lamps) and the tyres industry. IndWMPs will also be requested for selected electronic waste (e-waste) streams and batteries.

In relation to the second objective, increasing the re-use, recycling or recovery of goods and waste materials requires a coordinated effort by generators of waste, including households, businesses and organisations. Promoting the re-use, recycling or recovery of waste materials will be achieved through:

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- Producer responsibility initiatives in which industry takes responsibility for the lifecycle of products that they produce, establishes methods and funding mechanisms to manage the products once they become waste, and sets targets for re-use, recycling or recovery in IndWMPs.
- Mandatory Extended Producer Responsibility (EPR) schemes declared by the Minister where IndWMPs have been ineffective and the Minister wishes to determine how certain waste streams are to be managed.
- Collection and sorting of general recyclable waste materials, supported by a recycling infrastructure. General recyclable waste collection systems will be coupled to existing waste collection services and disposal sites will be transformed into waste management sites. Material recovery facilities and buy-back centres will be established in different municipalities, and space will be provided to sort waste into re-useable and recyclable waste.
- Nationally coordinated awareness campaigns which support separation of recyclables from the domestic waste stream at source for all households, businesses and organisations¹⁵.
- Diverting particular waste streams from landfill within prescribed periods. Local control measures for general waste entering landfill sites will reinforce diversion of recyclable waste from these sites. Municipalities will take responsibility for diverting organic waste¹⁶, which they can compost or use in biogas digesters.
- Some waste management activities which stimulate the re-use, recycling and recovery of wastes will be listed as activities that do not require a waste management licence¹⁷, thereby decreasing regulatory constraints on these activities. Applications must demonstrate that the proposed waste management activity can be implemented and conducted consistently and repeatedly in a controlled manner without unacceptable impact on, or risk to the environment and health.
- For waste types that cannot be re-used or recycled, various options exist for energy recovery, including biogas projects and methane gas from landfills¹⁸. The Renewable Energy White Paper¹⁹ will set out the mechanisms that government will implement to facilitate renewable energy technologies, including the Renewable Energy Feed-in

¹⁵ Details of the awareness campaigns are described under Goal 4

¹⁶ Defined by the South African Waste Categorisation and Management System as comprising garden and food waste

¹⁷ This is contained in the provisions in Part 4 of the Waste Classification and Management Regulations.

¹⁸ Biogas from landfill sites will be exploited in the short term, as significant benefits arise from reducing methane emissions because of its high global warming potential. Other technologies such as thermal energy from biogas digesters are in an embryonic phase, but have potential for future development.

¹⁹ The Renewable Energy White Paper is currently being updated and revised from the 2003 version, and will be finalised in 2011.

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Tariff. Thermal treatment of waste must conform to air emissions standards to mitigate the impact on health and the environment.

- In some instances, the Minister of Environmental Affairs will declare a required percentage of recycled material in a product to actively promote markets for recycled material. The Waste Act provides for such a declaration.

A fundamental change in waste disposal practices will be supported by the development of a national recycling infrastructure through partnerships among the various role-players. The infrastructure will enable separation at source of organic waste, hazardous waste and clean general recyclable waste, and the collection of particular waste types that contaminate general household waste through specialised infrastructure. The responsibility of different role players for providing the recycling infrastructure for management of the different waste streams is set out in the following table.

Table 3: Role players' contribution to re-use, recycling and recovery of waste

Role	General Waste	Organic Waste	Recyclables (paper, plastic, metal, glass and tyres)	Hazardous (batteries, solvents, CFLs etc.)
Advocacy and education	Municipality	Municipality (with national and provincial support)	Industry in partnership with municipality	Industry
Providing bins at source or take back facilities	Municipality	Municipality	Municipality to provide additional bins at source, Industry to provide accessible take back facilities	Industry
Collecting waste	Municipality	Municipality	SMEs supported by industry	Industry
Processing waste	Municipality	Municipality	MRFs run by SMEs and supported by industry	Industry
Dispose of waste	Municipality (landfill)	Municipality (composting facility)	No disposal as per set targets	Industry

The fiscal instruments that support Goal 1 include full-costing accounting, cost-reflective tariffs, cost-recovery and, eventually, volumetric charging. The consequent increases in disposal fees will discourage waste generation. Goal 6 addresses fiscal instruments more comprehensively.

Three indicators will measure if the goal to promote waste minimisation, re-use, recycling or recovery of waste is achieved.

The first indicator will measure how the paper and packaging industry, pesticide industry, waste tyre industry and lighting industry perform against targets for waste minimisation, re-use and recycling set in their industry waste management plans. The aim is to fully achieve the targets in these four IndWMPs.

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The second indicator measures the percentage of waste diverted from landfill. The target is to divert 25% of recyclables from landfill for re-use, recycling or recovery by 2015.

The third indicator will measure the number of municipalities in which separation of waste at source for households, businesses and organisations have been initiated. The target is for all metropolitan municipalities, secondary cities and large towns²⁰ to have initiated separation at source programmes by 2015.

Goal 2: Ensure the effective and efficient delivery of waste services.

Waste services involve collecting waste from households, organisations and businesses, and disposing of this waste safely. Waste services are the Constitutional responsibility of local government, and municipalities are the primary interface between the public and government around waste management. The objectives of Goal 2 are to progressively expand access to at least a basic level of waste services, and to ensure that waste that cannot be re-used, recycled or recovered is disposed of safely in properly permitted landfill sites. These objectives address historical backlogs and inequalities in access to waste services, and improve the quality of life for the entire community by providing a cleaner place to work and live. Expanded waste services will also create jobs and so contribute to Goal 3.

Various regulatory, planning and fiscal instruments support the programme for effective and efficient delivery of waste services. They include:

- The National Domestic Waste Collection Standards²¹, which are minimum standards that municipalities must meet for waste services in urban, peri-urban and rural contexts. The standards aim to redress past imbalances in waste collection services. Municipalities will use the standards to determine the level of service to provide and to select options for waste collection, separation at source, provision of receptacles, collection vehicles, and health and safety standards.
- A policy that gives indigent households access to essential refuse removal services (the National Policy for the Provision of Basic Refuse Removal Services for Indigent Households²²) supports the provision of waste services to those who cannot afford to pay for the services. This policy specifies appropriate service levels based on settlement densities, composition and volume of waste generated, and the subsidy mechanisms for targeting services to the indigent.
- Municipal and provincial Integrated Waste Management Plans (IWMPs) will set out the strategy to achieve appropriate waste collection standards in each community. In these plans, municipalities set targets and describe how they will achieve them. The IWMPs will also contain methods to monitor and measure progress against targets.

²⁰ Referred to as Category A, B1 and B2 municipalities in the Municipal Infrastructure Investment Framework, DCOG & DBSA, 2008

²¹ Government Gazette No. 33935 Government Notice No.21 of 2011. National Domestic Waste Collection Standards.

²² Government Gazette No. 34385 General Notice 413 of 2011 National Policy for the Provision of Basic Refuse Removal Services to Indigent Households.

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- Municipal by-laws will set service standards for separating, compacting, and storing solid waste, managing and directing solid waste disposal, and controlling litter. These by-laws will be based on national standards. The DEA will develop and circulate a generic by-law to assist municipalities in developing their own by-laws. Environmental Management Inspectors will monitor compliance with the requirements for storing waste.
- Fiscal mechanisms, such as appropriate tariff setting and full-cost accounting for waste services, will help to fund the expanded waste services. Goal 6 describes these mechanisms in more detail.
- Coordinated action by different spheres of government is required to address the fiscal and capacity problems faced in waste service provision. An interdepartmental committee consisting of DEA, National Treasury, DCOG, SALGA and Department of Human Settlements (DHS) will be established to address waste service delivery issues and support requirements to municipalities to expand waste services.

Using the basic service levels defined in the National Policy on the Provision of Basic Refuse Removal to Indigent Households, it is estimated that 90% of urban households and 47% of rural households have access to adequate levels of service²³. Government will ensure access to basic waste collection services within 10 years. The strategy to achieve this has been set out in the Municipal Waste Sector Plan for Addressing Waste Service Backlogs²⁴.

Municipalities struggle to effectively manage landfills and it will become more difficult when waste collection services expand. The DEA will help municipalities to better manage landfills through the following interventions:

- DEA will publish a standard for disposal of waste to landfill. It will include regulation on standard engineering design as well as acceptance and disposal requirements for different classes of landfills. Restrictions will specify the types of waste restricted or prohibited from disposal. Guidelines will also be developed for thermal waste treatment.

²³ The service levels reported in the StatsSA data are not specific and do not accurately match the basic service levels defined in the National Policy on Free Basic Refuse Removal. To resolve these issues, the following assumptions have been made:

- All communal dumping as recorded in the StatsSA data is considered inadequate as a basic level of service
- On-site disposal is considered inadequate in urban areas
- 50% of rural on-site disposal is considered to be inadequate

The above assumptions result in the following revision of the StatsSA figures. The figures for 2015 and 2020 show the Government's targets:

% adequate	Urban	Rural
2010	90%	47%
2015	95%	75%
2020	100%	100%

²⁴ Department of Environmental Affairs "Addressing Challenges with Waste Service Provision in South Africa: Municipal Waste Sector Plan Draft May 2010.

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- DEA will publish a standard to assess the level of risk associated with the disposal of waste to landfill.
- DEA will publish waste classification and management regulations that include criteria for and restrictions on waste disposal to landfill.
- Compliance with the norms and standards for hazardous wastes (established in the waste classification and management system) is crucial to achieve safe disposal of waste.
- DEA will complete a nation-wide assessment of the steps required to standardise management and licensing of existing disposal sites. This assessment will be the basis for designing and implementing a programme to licence landfill sites.
- A feasibility study on the regionalisation of waste disposal facilities will examine the costs and benefits of having regional disposal facilities.

The Minister, an MEC or municipality may require general waste transporters to register with the relevant Waste Management Officer (WMO) at national, provincial or local level. Transporters must prevent any spillage of waste or littering from a vehicle used to transport waste and the waste must be disposed of in an area authorised to accept such waste²⁵. The Waste Classification and Management regulations require implementation of a waste manifest system for hazardous waste which will augment the current regulations which manage the transportation of hazardous waste.

By 2015, 95% of urban households and 75% of rural households will have access to adequate levels of service²⁶. Annual Statistics SA surveys monitor the number of households receiving a waste management service. More detailed indicators are described in DEA's Waste Sector Targets and Performance Indicators²⁷ and subsidiary indicators.

DEA will also monitor the percentage of waste disposal sites that are licenced. The target for 2015 is that 80% of the disposal sites will have licences.

Goal 3: Growing the contribution of the waste sector to the green economy.

Effective waste management has important economic and social impacts in addition to environmental benefits. The waste management sector is an important part of the emerging green economy, and a well regulated, formalised waste sector will improve the efficiency of the overall economy.

The objectives of this goal are to stimulate job creation and broaden participation by SMEs and marginalised communities in the waste sector. These objectives include creating decent

²⁵ Section 25 of the Waste Act.

²⁶ The targets to expand access to waste services are based on the service levels defined in the National Policy on Free Basic Refuse Removal.

²⁷ Department of Environmental Affairs "Addressing Challenges with Waste Service Provision in South Africa: Waste Sector Targets and Performance Indicators Draft August 2009."

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work through formalising the role of waste pickers and expanding the role of SMEs and cooperatives in waste management. New jobs will also be created by investing in recycling infrastructure to facilitate re-use, recycling and recovery²⁸.

In line with the Green Economy Plan, measures will be implemented to strengthen and expand the waste economy so that it can generate and sustain jobs as well as formalise existing jobs in the waste economy. Growing the waste management sector will be primarily achieved through:

- Using labour intensive methods to extend domestic waste collection services to un-serviced communities where appropriate.
- Extending and formalising jobs in the various stages of the recycling value chain, including collection, sorting, re-use and repair, product recovery, processing and manufacturing of recyclable materials.
- Developing new markets for recycling of wastes.

While the extension of domestic waste collection services is the subject of Goal 2, the method of collection has a major impact on job creation in South Africa. For their waste services, municipalities are encouraged to use labour intensive, community-based collection methods, particularly in areas that are difficult to access or service through conventional collection methods. The Expanded Public Works Programme has successfully piloted community-based collection methods and lessons learnt there will be applied in the roll-out of waste services in the country.

Goal 1 sets out the measures to increase the rate of recycling in South Africa. This will be achieved by the creation of a country-wide infrastructure that can significantly expand jobs in recycling. DEA will provide guidance to municipalities and industry on measures to improve the working conditions of waste-pickers, establishment of Material Recovery Facilities and expand the role of SMEs and cooperatives in domestic waste collection services

Job creation initiatives in the waste sector will be supported by the R9 billion jobs fund, as well as investment by development finance institutions. Government will provide financial and non-financial support to SMEs and cooperatives in the waste sector through Khula, the South African Micro-Finance Apex Fund and the IDC's small business fund. Government is considering merging these three agencies' services to maximise administrative efficiency²⁹.

The indicators that will measure if this goal is achieved are the number of new jobs created and the number of additional SMEs and cooperatives participating in waste service delivery and recycling. The targets for 2015 are:

- 69 000 new jobs created within the waste sector³⁰.

²⁸ The subject of Goal 1: Promote waste minimisation, re-use, recycling and recovery.

²⁹ Announced in State of the Nation Address, 2011.

³⁰ Based on the estimated jobs impact of targets for expanding waste service delivery and diversion of waste from landfill contained in Department of Environmental Affairs, "Cost Estimate of the National Waste Management Strategy: Final Report", February 2011.

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- 2 600 additional SMEs and cooperatives participating in waste service delivery and recycling.

Goal 4: Ensure that people are aware of the impact of waste on their health, well-being and the environment.

Awareness of the impact of waste on health, well-being and the environment is very uneven across different communities, as evidenced by the extent of littering. The objectives of this goal are to create awareness of waste management issues and to add practical waste projects to basic education curricula. For maximum effectiveness, waste awareness and anti-littering campaigns will be linked to the recycling infrastructure and to extended waste services. This will be particularly important in separating waste at source. For this reason, municipal campaigns designed and implemented in partnership with local stakeholders, including labour, industry, civil society and NGOs, form the foundation of the strategy to create awareness about waste.

DEA will launch a long term awareness campaign on waste management, to be implemented in a sustainable and incremental manner, with the objective of achieving behaviour changes. DEA will work with SALGA to develop a coordinated national approach to waste awareness that will provide common messages and promotional materials to support the municipal campaigns.

To create incentives for municipalities, existing recognition programmes such as the Cleanest Town competition will be expanded and strengthened as part of DEA's "Cleaning and Greening" programme. Specific criteria for municipal performance will inform recognition programmes. These include sustainable and equitable provision of waste services and community awareness and participation in waste management.

The national approach to waste awareness will take into account existing provincial initiatives and will use the experience and expertise of NGOs already active in this field. Indalo Yethu, the government's environmental campaign, has a key role to play in waste awareness through its branding of environmentally friendly products and its involvement in DEA's Cleaning and Greening programme. Industry has an important role to play in educating consumers about appropriate disposal of products, and in implementing take-back programmes for products, such as compact fluorescent lights and batteries, that cannot be discarded in domestic waste streams.

DEA will work with Department of Trade and Industry (the dti) to ensure that the implementation of provisions in the Consumer Protection Act that support Extended Producer Responsibility is aligned with the National Waste Management Strategy. Consumer awareness programmes must be integrated into Industry Waste Management Plans. Similarly, labour has an important role to play in raising health and safety issues relating to waste management and in ensuring that workplaces comply with waste management standards and regulations.

Waste management is currently included as a cross-cutting issue at the higher levels of the school curriculum, along with broader principles of environmental protection and water conservation. Waste as a topic in the curriculum will be strengthened through practical projects such as recycling and litter control. DEA will help the Department of Basic Education

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to develop and review guidelines for these projects. The target is for 80% of schools to be implementing waste awareness programmes, such as recycling projects, by 2015.

The target for local awareness campaigns is for 80% of municipalities to be running campaigns about waste and littering. Ultimately, awareness and recognition programmes around waste should result in visibly cleaner towns and cities, a reduction in illegal dumping, and the successful implementation of separation at source programmes.

Goal 5: Achieve integrated waste management planning.

Among others, backlogs in the waste collection services, aging vehicles and equipment, growing human settlements and decreasing airspace in landfills are stark challenges that require a coordinated approach by each sphere of government. Integrated waste management plans (IWMPs) are the principal tool to achieve this coordination. This goal has two primary objectives: to establish an effective system of IWMPs, in particular at local government level, and to establish and maintain an information base on waste flows.

Integrated waste management planning at each level of government will align and integrate the actions of national, provincial and local government. The IWMPs will set targets and describe plans for the three tiers of government and give practical effect to the policies and instruments set out in this NWMS. IWMPs will importantly link to mainstream budgeting and resource allocation, and to systems for performance monitoring and reporting.

Municipalities are the primary providers of waste collection and disposal services, and establishing an effective system of IWMPs at local government level is a priority. The Waste Act requires all municipalities to develop implementable IWMPs. IWMPs need to be outcomes focused, and must include priorities, objectives, targets, and implementation and financing arrangements. DEA will publish guidelines for Integrated Waste Management Planning which will inform the second generation of IWMPs³¹ to be aligned with the Waste Act.

IWMPs will be developed in a consultative manner, and will follow the provisions of Section 29 of the Municipal Systems Act.

IWMPs are approved in a tiered system, with municipal IWMPs submitted to the MEC for approval. The MEC must ensure alignment with other IWMPs and relevant plans. The Minister approves national and provincial IWMPs, which amongst others will set out how they intend to support municipalities to fulfil their obligations.

The Waste Act requires an annual review of all IWMPs, and annual performance reports describe the successes and challenges with implementing the IWMP.

To integrate waste services within broader municipal plans, municipalities need to amend their Integrated Development Plans (IDPs) to take account of the provisions in the IWMP. To align the preparation of IWMPs with the local government IDP planning cycle (linked to local elections every 5 years), municipalities will aim to complete their IWMPs during 2012. These

³¹ Many municipalities have already completed "first generation" IWMPs which predated the promulgation of the Waste Act.

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IWMPs can then inform the new IDPs to be adopted within one year of the 2011 local government elections.

Waste planning requires accurate information on waste flows. Comprehensive information on waste flows from each waste management facility will be reported into the South African Waste Information System (SAWIS), which will contribute to an accurate national waste balance. The National Waste Information Regulations regulate the reporting of waste information for the protection of the environment and the management of waste. By 2016, all specified waste management facilities that are required to collect and report to the SAWIS are to have waste quantification systems.

To measure the progress of achieving integrated waste management planning, DEA and the provinces will monitor the percentage of municipalities who have prepared IWMPs and integrated them with IDPs. All municipalities must have IWMPs integrated with IDPs by 2015.

Goal 6: Ensure sound budgeting and financial management for waste services.

Sound budgeting and financial management are essential to sustainably provide waste services. In most municipalities waste services are under-priced and under-funded with aging capital infrastructure and insufficient capital investment. The objectives of this goal are for municipalities to use full-cost accounting and to implement cost reflective and, where feasible, volumetric tariffs.

Full-cost accounting is used to determine the complete cost of waste service provision. These costs include operational and capital expenditure for collection, transportation, landfill development and closure, street cleansing, fee collection, credit control, monitoring and enforcement costs, interest payments and depreciation. Full-cost accounting lays the basis for managing waste services as a financially sustainable service for all. It also enables municipalities to accurately project the costs of expanding the service. Using this information, municipalities can implement cost reflective tariffs and ultimately move onto more complex volumetric tariffs. Full-cost accounting will also indicate whether it is more cost effective to have internal or external waste service providers.

National Treasury will issue a municipal circular to provide guidelines for waste service budgets and the associated accounting practices required to make subsidy levels more transparent.

Waste management is an under-provided basic service and inadequate refuse removal is a negative externality that will require internal and external sources of revenue to compensate. The National Policy for the Provision of Basic Refuse Removal Services to Indigent Households³² provides guidance on financing mechanisms and implementation strategies to budget for basic refuse removal from indigent households. Revenue for these services comes from internal sources (cross-subsidies within the municipality) and external sources

³² Department of Environmental Affairs. National Policy for the Provision of Basic Refuse Removal Services to Indigent Households. October 2010

(transfers from the national fiscus through the Equitable Share Grant and the Municipal Infrastructure Grant).

Cost recovery by means of the customer's municipal bill, which includes the billing for waste services, is essential for a financially sustainable waste service. Municipalities will structure the tariffs for waste services such that they can fund the maintenance, renewal and expansion of the infrastructure required to provide the services. DEA will provide updated tariff setting guidelines,³³ which include volumetric charging for waste service tariffs and establishment of revenue collection systems.

Tariff increases will be appropriately phased in so that consumers and businesses can manage their impact. Increasing user charges will take the number of indigent households and local economic conditions into account. Municipalities must justify in their budget documentation all increases in excess of the 6 percent upper boundary of the South African Reserve Bank's inflation target. Excessive increases in property rates and other tariffs, which might result in higher levels of non-payment and increased bad debts, must be avoided. Nevertheless, in the long term above-inflation increases in user charge rates will be unavoidable.

To avoid the unintended consequences of tariff increases (in particular increases in illegal dumping) the enforcement capacity in municipalities will be increased in parallel. Municipalities will ensure that by-laws are updated to support the enforcement of regulatory measures.

National Treasury will align equitable share provisions, Municipal Infrastructure Grants and other grant systems to support the extension of waste services and provide for minimum levels of refuse removal as a basic service. DEA and National Treasury will investigate and establish financing mechanisms to ensure that capital expenditures in the sector increase, to create a robust pipeline of municipal projects, and to develop an appropriate capital financing mix. DEA and National Treasury will also investigate the merits of a dedicated fund for supporting the extension of municipal waste services to un-serviced communities, using an Expanded Public Works Programme (EPWP) type delivery model.

DEA will participate in municipal budget reviews that National Treasury undertakes, and in performance monitoring of metropolitan councils, to ensure that waste sector objectives are met in relation to municipal financial management.

As a result of these actions, it is planned that by 2015 all municipalities that provide waste services will have established full-cost accounting for waste services and will have implemented cost reflective tariffs. This will be monitored using municipalities' annual financial reports to National Treasury, and consolidated in the annual Municipal Budget and Expenditure Review.

Goal 7: Provide measures to remediate contaminated land

³³ Solid Waste Tariff Setting Guidelines for Local Authorities. DEAT. 2002.

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The measures to remediate contaminated land in Part 8 of the Waste Act address the historical lack of regulation around contaminated land. The aim is to progressively mitigate the health risks arising from contamination by hazardous wastes. Due to the historical absence of statutory obligations to report contaminated land, little data is available on the number and extent of contaminated sites. The first objective for remediation is to quantify the extent of contaminated land caused by current and past high risk activities. Contaminated land needs to be quantified in terms of geographical extent and in terms of financial liability, in order to secure adequate funding for remediation. The register of contaminated lands will be the primary instrument for this. The second objective of this goal is to prepare remediation plans for contaminated land.

DEA will set out its approach to implementing Part 8 of the Waste Act in the Framework for the Management of Contaminated Land³⁴. To give effect to the measures in Part 8, a set of regulations will be gazetted in 2011. These regulations will require land owners to perform site assessments where high risk activities, such as the unauthorised disposal, storage, re-use, recycling, recovery or treatment of hazardous waste, have taken place.

Norms and standards will be established to define what constitutes contamination, and what is required for remediation. The Framework for the Management of Contaminated Land will set out technical standards and protocols for site assessments and remediation plans.

Promulgating these standards and protocols is a prerequisite for establishing the Register of Contaminated Lands, which will link to the national Deeds Register. After due consultation, guidelines will be issued that spell out the implications for affected sectors, and that describe the roles and responsibilities of affected organisations and persons, such as owners of contaminated lands, financial institutions involved in land transactions, property developers and estate agents.

DEA will assess the extent of the state's liability in terms of remediation so that appropriate funding arrangements in terms of a National Remediation Fund can be negotiated with the National Treasury.

The percentage of sites reported as contaminated to the contaminated land register which have had site assessments performed will measure progress with addressing contaminated land. The target for 2015 is to have completed assessments on 80% of the sites on the Register of Contaminated Lands. By 2015, DEA intends to have approved remediation plans for 50% of the confirmed contaminated sites. The number of site assessments that need to be performed, and the cost of remediation in terms of approved remediation plans will provide the basis for establishing funding requirements for contaminated lands.

Goal 8: Effective compliance with and enforcement of the Waste Act

While the Waste Act creates a comprehensive legal framework for waste management, its provisions will be meaningless without measures to monitor and, where necessary, enforce compliance. Government cannot do this alone. Business and civil society have a vital role to play in creating a culture of compliance, and in reporting instances of non-compliance. For

³⁴ The Framework for the Management of Contaminated Land was published for public comment in May 2010 by the Department of Environmental Affairs.

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its part, government will systematically monitor compliance with the Waste Act, which includes regulations published in terms of the Act, licences, industry waste management plans and integrated waste management plans. This is the first objective of this goal. The second objective is for government to extend the current Environmental Management Inspectorate's capacity so that it can enforce the Waste Act.

Compliance monitoring is supported by a range of reporting provisions contained in the Waste Act. In addition to compliance reports for waste management licences and norms and standards, the Act has provisions for annual performance reports on the implementation of provincial and local Integrated Waste Management Plans. Industry Waste Management Plans are subject to review at intervals to be determined by the authority that mandated the plan. Furthermore, Environmental Management Inspectors and Waste Management Officers can request a Waste Impact Report where they suspect a contravention of the Act, licence conditions or exemption conditions. The existing national hotline for waste-related environmental crimes as well as the whistle-blower provisions contained in NEMA will augment the reporting mechanisms described above. These mechanisms will help to identify non-compliance and initiate enforcement actions. The information from these reporting mechanisms will be used to develop a programme for strategic compliance and enforcement inspections in relation to the Waste Act.

Government itself has a serious challenge in terms of the current state of treatment facilities and disposal sites, and as indicated under Goal 2 a national programme will be implemented to systematically bring these facilities into compliance. The Operating Procedure for non-compliant organs of state will guide how to address non-compliance. The Operating Procedure will be finalised and disseminated to all relevant organs of state.

The capability to monitor compliance with and enforce the provisions of the Waste Act requires that the Environmental Management Inspectorate expands substantially. Approximately 800 additional Environmental Management Inspectors (EMIs) will be appointed; two-thirds of them will operate at provincial and local government level. The desirable number of EMIs in each municipality and province will be quantified. Recommendations for their designation will be made, including options for leveraging the existing skills base and, in particular, the inclusion of Environmental Health Practitioners (EHP). The qualifications of both types of enforcement officials will be aligned by including EMI Basic Training Material into the EHP National Diploma. An EMI Training Manual consisting of a set of Standard Operating Procedures will be developed to standardise and harmonise their compliance and enforcement activities.

DEA will monitor the compliance and enforcement through two indicators: the number of enforcement actions against non-compliant facilities, and the number of EMIs dealing with Waste Act issues at local, provincial and national level. Three sub-indicators will measure enforcement actions: the number of accused convicted, the number of Section 105A agreements (plea bargains), and the number of final directives/compliance notices issued.

The targets for 2015 are a 50% increase in the number of enforcement actions, and the appointment of 800 EMIs.

The objectives, indicators and targets for each goal are summarised in Table 4 below. Reference numbers next to text refer to notes at the end of the table.

Table 4: Goals, objectives, indicators and targets for the NWMS

Goal 1: Promote waste minimisation, re-use, recycling and recovery	Proposed indicators	Targets
Objective 1: Promote waste minimisation in the design, composition, and manufacturing of products	Targets and measures for waste minimisation in the paper and packaging industry, pesticide industry, lighting industry and waste tyre industry's IndWMPs	Full achievement of targets set in the four IndWMPs
Objective 2: Promote re-use, recycling and recovery	% of recyclables diverted from landfill sites for re-use, recycling and recovery	25% of recyclables diverted from landfill sites for re-use recycling or recovery ² by 2015
	No. of municipalities in which separation of waste at source initiatives are being implemented	All metropolitan municipalities, secondary cities and large towns ³⁵ have initiated separation at source programmes by 2015.
Goal 2: Ensure the effective and efficient delivery of waste services	Proposed indicators	Targets
Objective 1: Progressively expand access to waste services to at least a basic level of service	% of households receiving basic waste collection services	95% of urban households and 75% of rural households have access to adequate levels of waste collection services
Objective 2: Safe disposal of waste in licenced landfill sites	% of licenced waste disposal sites	80% of waste disposal sites have licences
Goal 3: Growing the contribution of the waste sector to the green economy	Proposed indicators	Targets
Objective 1: Stimulate job creation in the waste sector	No. of new jobs created in the waste sector	69 000 new jobs created in the waste sector ¹

³⁵ Referred to as Category A, B1 and B2 municipalities in the Municipal Infrastructure Investment Framework, DCOG & DBSA, 2008

Objective 2: Broaden participation by SMEs and marginalised communities in the waste sector	No. of additional SMEs and cooperatives participating in waste service delivery and recycling	2 600 additional SMEs and cooperatives participating in waste service delivery and recycling ¹
Goal 4: Ensure that people are aware of the impact of waste on their health, well-being and the environment	Proposed Indicators:	Targets (2015)
Objective 1: Municipalities to create awareness of waste management issues	% of municipalities running local awareness campaigns	80% of municipalities running local awareness campaigns
Objective 2: Add waste content to the school curriculum and ensure that there are practical waste projects in the basic education curricula	% of schools implementing waste awareness programmes	80% of schools implementing waste awareness programmes
Goal 5: Achieve integrated waste management planning	Proposed Indicators:	Targets (2015)
Objective 1: Establish an effective system of IWMPs at local government level.	The % of municipalities that have integrated their IWMPs into their IDPs	100% of municipalities have integrated their IWMPs with their IDPs
	The % of municipalities that have met the targets set in IWMPs	100% municipalities have met the targets set in their IWMPs
Objective 2: Establish and maintain an information base on waste flows.	The % of waste management facilities with waste quantification systems.	All waste management facilities required to report to SAWIS have waste quantification systems that report information to WIS.
Goal 6: Ensure sound budgeting and financial management for waste services	Proposed Indicators:	Targets (2015)
Objective 1: Ensure full-cost accounting for waste at municipal level	% of municipalities that provide waste services that have conducted full-cost accounting for waste services	100% of municipalities that provide waste services have conducted full-cost accounting for waste services
Objective 2: Implement cost reflective and volumetric tariffs	% of municipalities that provide waste services that have implemented cost reflective tariffs.	100% of municipalities that provide waste services have implemented cost reflective tariffs

Goal 7: Provide measures to remediate contaminated land	Proposed Indicators	Targets (2016)
Objective 1: Quantify the extent of contaminated land	The % of sites reported to the contaminated land register which have site assessments performed	Assessment completed for 80% of sites reported to the contaminated land register
Objective 2: Prepare and approve remediation plans for contaminated land	The % of confirmed contaminated sites with approved remediation plans	Remediation plans approved for 50% of confirmed contaminated sites
Goal 8: Effective compliance with and enforcement of the Waste Act	Proposed Indicators	Targets (2016)
Objective 1: Systematically monitor and enforce compliance with regulations, authorisation conditions and plans	% of successful enforcement actions against non-compliant facilities	50% increase in the number of successful enforcement actions against non-compliant facilities ⁵
Objective 2: EMI capacity expanded to enforce the Waste Act	Number of EMIs dealing with Waste Act at local, provincial and national level	800 EMIs appointed in the three spheres of government to enforce the Waste Act. ⁵

Explanatory Notes

1. Based on the estimated jobs impact of targets for expanding waste service delivery and diversion of waste from landfill contained in Department of Environmental Affairs, "Cost Estimate of the National Waste Management Strategy: Final Report", February 2011.
2. A 25% diversion of municipal waste from landfill for the purposes of re-use, recycling or recovery is informed by the target committed to in the Minister's Performance Agreement: *Outcome 10: Environmental Assets and Natural Resources that are well protected and continually enhanced*. This diversion will be achieved through the diversion of organic waste, construction waste and paper and packaging waste
3. All metropolitan municipalities, secondary cities and large towns, referred to as Category A, B1 and B2 municipalities in the Municipal Infrastructure Investment Framework, DCOG & DBSA, 2008, to initiate separation at-source programmes.
4. 50% increase in the number of successful enforcement actions against non-compliant facilities will be calculated from the combination of the following three sub-indicators: the number of accused convicted, the number of Section 105A agreements (plea bargains), and the number of final directives/compliance notices issued.
5. The appointment of 800 EMIs is based on estimates of the number of EMIs required in each province and municipality. At a municipal level, the intention is for Environmental Health Practitioners to undertake EMI duties as soon as an EMI bridging training for existing EMIs is put into effect and in the longer term, the mainstreaming of the EMI Basic Training into the EHP National Diploma or BTEch.

3 Instruments for implementing the NWMS

3.1 Introduction

This section describes the regulatory and economic instruments that will give effect to the strategy set out in Section Two. The Act provides a toolbox of waste management measures to deal with the challenges of particular waste streams. Regulations issued in terms of the Act will give effect to these measures.

The measures described in this section are:

- **Waste Classification and Management System** – provides a methodology for the classification of waste and provides standards for the assessment and disposal of waste for landfill disposal
- **Norms and standards** – baseline regulatory standards for managing waste at each stage of the waste management hierarchy.
- **Licensing** – the Act provides for a list of waste activities that require licensing and the setting of licensing conditions. The Act also provides for listing waste management activities that do not require a licence if undertaken according to specified norms and standards or requirements.
- **Industry waste management plans** – enables collective planning by industry to manage their products once they become waste and to collectively set targets for waste reduction, recycling and re-use.
- **Extended Producer Responsibility (EPR)** – identifies particular products that have toxic constituents or that pose waste management challenges, and regulates industry responsibility for these products beyond point of sale.
- **Priority wastes** – identifies categories of waste that require special waste management measures due to the risks of these wastes to human health and the environment.
- **Economic instruments** – encourages or discourages particular behaviour and augments other regulatory instruments.

3.2 Waste classification and management system

Chapter 2, Part 2 of the Waste Act requires that national norms and standards for the classification of waste should be developed. The waste classification and management regulations provide a waste classification system for all wastes managed under the Waste Act. Waste is to be classified according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)³⁶. GHS classifies hazardous substances according to the

³⁶ As specified in SANS 10234

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type and degree of risks that chemical compounds in different physical states (i.e. solid, liquid or gas) pose to human health and the environment.

Waste streams that are clearly identifiable will be pre-classified. Waste generators will not need to classify these wastes in terms of the WCMS. Examples of pre-classified wastes include domestic waste, uncontaminated building and demolition waste, business waste collected by municipalities, tyres, garden waste, post consumer packaging, asbestos wastes and health care risk waste.

The waste classification and management regulations set timeframes in which waste must be classified and managed, including wastes stored in lagoons. The regulations prohibit the mixing of waste prior to classification and require that co-disposal of domestic waste and industrial waste be phased out. Timeframes are also set for the phase out of macro encapsulation of waste.

Section 19(3)(a) of the Waste Act specifies that the Minister may, by notice in the gazette, indicate:

- a) whether a waste management licence is required for listed waste management activities; and
- b) the requirements or standards that will apply to listed activities for which licensing is not required.

To encourage re-use and recovery of industrial wastes the WCMS establishes a procedure for submitting motivations to the Minister for the listing of waste management activities that do not require a waste management licence. In the motivation to the Minister the applicant must provide details of local and international specifications or standards relating to the waste and the waste management activity as well as supply proposed requirements or standards specific to the waste management activity that would ensure that the activity can be implemented and conducted consistently and in a controlled manner. The use of slag as aggregates for road building and the use of ash for cement extenders and brick making are good examples of wastes activities for which licences may not be required should certain requirements be fulfilled.

The WCMS regulations will replace the DWAF Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste. For hazardous waste, the WCMS institutes a management system consisting of waste manifests, safety data sheets, container labelling and detailed storage records:

- All generators of classified hazardous wastes must complete a waste manifest document that accompanies the waste until a manager at the point of disposal issues a receipt for the waste on the manifest.
- Apart from the waste manifest, the WCMS requires that a safety data sheet³⁷ accompanies all hazardous wastes, including contaminated general waste.

³⁷ In accordance with SANS 11014

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- Containers that store hazardous wastes must be labelled and storage facilities must keep detailed records.

This system will improve the management and quality of data available on hazardous wastes and ensure reporting to SAWIS.

The WMCS includes two new standards: the Standard for Assessment of Waste for Landfill Disposal and the Standard for Disposal of Waste to Landfill.

The first standard contains the requirements to assess the level of risk associated with the disposal of waste to landfill. The level of risk is based on identifying contaminants present in the waste and comparing these with determined limit values³⁸. The second standard provides for landfill classification and containment barrier design requirements³⁹, which supersede the liner design requirements for landfills contained in the Minimum Requirements for Waste Disposal by Landfill⁴⁰. The standards also include waste disposal restrictions and timeframes in which the wastes may no longer be disposed to landfill. This will encourage the development of alternative options for the management of these waste streams.

3.3 Norms and standards

The Waste Act allows for an integrated system of norms and standards across the three spheres of government. The drafting of certain norms and standards at a national level are obligatory, while others are at the discretion of the Department of Environmental Affairs. In addition, provinces may set norms and standards that are not in conflict with national norms and standards. Municipalities may also set local waste service standards. The system of norms and standards will be developed in a sequenced manner, with the priority to develop obligatory standards, which include:

7(1)(a)⁴¹ classification of waste;

7(1)(b)⁴² planning for and provision of waste management services; and

7(1)(c)⁴³ storage, treatment and disposal of waste, including the planning and operation of waste treatment and waste disposal facilities.

³⁸ Both the total concentrations (TC) and the leachable concentrations (LC) for specified contaminants are to be determined. These concentrations must then be compared to the four levels of threshold specified. Risks are associated with each threshold. The standard prescribes the test methods for both the total concentration tests and the leachable concentration tests.

³⁹ It provides for containment barrier designs, for class A, B, C and D wastes and identifies which type of waste can be disposed on which liner design. Furthermore, the disposal of very high risk waste to landfill is not allowed. The waste must be treated and re-assessed. High risk waste may be disposed of to a Class A landfill design. Moderate Risk waste to a Class B landfill design. Low Risk Class C landfill design. Inert Waste Class D landfill design.

⁴⁰ 2nd Edition, 1998; Department of Water Affairs and Forestry

⁴¹ Section 7(1)(a) of the Waste Act.

⁴² Section 7(1)(b) of the Waste Act

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In relation to the classification of waste, the waste classification and management regulations discussed in Section 3.2 will be finalised in 2012.

In relation to waste services (section 7(1)(b))⁴⁴, the National Domestic Waste Collection Standard addresses the collection of waste and includes requirements for separating waste at source, measures to promote recycling, and prescriptions for collection frequency.

In terms of discretionary national norms and standards, the priority is to develop technical standards for waste management activities that do not require a licence. These standards will promote re-use, recycling and recovery of wastes. Standards will also be developed for soil quality and remediation of contaminated land. These standards will be finalised in 2012.

Other discretionary norms and standards will be identified and developed using the following criteria:

- Contribution to achieving the waste management hierarchy, with particular focus on the re-use, recycling and recovery of wastes.
- Extent of the environmental impact.
- Impact on availability of landfill space.
- Relationship to other priority sectors (such as waste-to-energy and its contribution to the climate change mitigation strategy).
- Existence of established, proactive industries that adhere to additional operating standards.
- Existence of standard operating procedures which may be converted into standards for particular sectors or companies with multiple sites.
- Elements of the waste transportation sector that have not been properly regulated.

To prevent a proliferation of norms and standards, provisions for provincial and local government norms and standards will only be used where national provisions cannot effectively address provincial or local waste management issues. Instances where possible regional variation might be required will be identified and discussed in the appropriate inter-governmental forums.

⁴³ Section 7(1)(c) of the Waste Act.

⁴⁴ Section 7(1)(b) of the Waste Act.

3.3.1 Mechanisms for developing standards

There are two primary mechanisms to develop norms and standards. Standards that are non-technical, or on which there is already clear consensus, will follow DEA's internal procedures for standard setting as with the development of the National Domestic Waste Collection Standards. The development of complex technical standards that must be scientifically exact will use the standard setting procedure of the South African Technical Infrastructure (SATI), which falls under the South African Bureau of Standards (SABS).

SABS standards are developed via a consensual process using multi-stakeholder committees that involve those responsible for meeting the standards in the development of their content. In instances where consensus on the standards is not achieved within a realistic timeframe, DEA will exercise its prerogative to promulgate the standards based on its own technical assessment.

While standards developed through SABS are voluntary, the Waste Act empowers the Minister to make such standards mandatory. Once a standard has been developed through SATI, it will be promulgated in terms of regulations issued under the Waste Act. Where required, additional regulatory provisions will support the promulgated standards.

Agents accredited by the South African National Accreditation System (SANAS) will certify compliance with the developed SABS standards. The SABS will use globally standardised measurements, which the metrology unit of SABS provides on request. Whilst SANAS will not offer training to private agencies, it will provide accreditation training for their assessors.

DEA and the SABS will sign a memorandum of understanding that sets out the basis on which the Department can develop certain technical standards through the SATI mechanisms.

3.4 Licensing Waste Management Activities

The purpose of licensing is to ensure that specific conditions regulate identified waste management activities (as currently listed⁴⁵) that may have a detrimental effect on the environment. Chapter five of the Waste Act provides for licensing waste management activities. Licence conditions are monitored and enforced to ensure environmental protection.

3.4.1 Listing of waste management activities

The requirement for licensing applies to a range of listed waste management activities including the storage of waste; recycling, recovery; treatment of waste; disposal of waste; and the construction or decommissioning of facilities and associated structure and infrastructure. The list has Category A and B and what differentiates the activities in A & B is the threshold.

⁴⁵ Department of Environmental Affairs (2009) National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) List of waste management activities that have, or are likely to have a detrimental effect on the environment. Government Notice No.718, 3rd July 2009.

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The Waste Act requires that the notice listing the waste management activities must indicate whether a waste management licence is required for that activity or, if not, the standards or requirements that govern the activity. Where a standard or requirement has been set, listed waste management activities that are exempt from licensing requirements must comply to that standard. In addition, they must register with and report regularly to the SAWIS.

Applications can be made to the Minister through the process identified in the Waste Classification and Management regulations for activities to be exempted from requiring a licence on the grounds of its contribution to waste minimisation or diversion of waste from landfill.

3.4.2 Licensing process

The Waste Act provides for a licensing regime specific to waste management activities. It replaces the historical system of permits issued in terms of the repealed section 20 of the Environment Conservation Act, 1989 (ECA). Transitional arrangements allow existing permits granted in terms of ECA to be regarded as licences in terms of the Waste Act until the Minister requires a licence application as per the Waste Act.

The category of the waste management activity (A or B as explained in the previous section) determines the environmental assessment procedure (which is the equivalent of the EIA regulations' requirements) required to obtain a licence.

Category A activities need a basic assessment as defined in the environmental impact assessment (EIA) regulations provided in NEMA. A basic assessment is appropriate where the environmental impact of a particular activity is well understood and limited in scope.

Category B activities require a full assessment report in terms of the EIA regulations. A full assessment is appropriate where the potential scope and extent of environmental impacts is not well understood, or is likely to be significant.

The waste management licence applications will be captured in the National Environmental Authorisation System (NEAS).

An independent Environmental Assessment Practitioner (EAP) will manage all licence applications. The independence of the practitioner will be established through a formal disclosure of interests by that person in the waste management licence application form.

The Minister is the licensing authority with respect to hazardous waste, international obligations, activities performed by a provincial environmental authority or statutory body other than a municipality, or an activity that takes place in more than one authority or that traverses international boundaries. National EMIs will monitor compliance with licences for which the Minister is the licensing authority.

The MEC is the licensing authority for waste activities for which the Minister is not the licensing authority. The Minister is also empowered to delegate licensing authority for a particular waste management activity to the MEC and the MEC can request the Minister to be a licensing authority for activities which the MEC is the licensing authority. Provincial EMIs will monitor compliance with licences for which the MEC is the licensing authority.

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DEA integrated environmental information systems will provide the capacity to address the significant number of new licence applications. The framework will use a workflow engine that will automatically route licensing applications and the relevant documentation along the chain of approvals and authorisations. Furthermore, the applicant will be able to track their application online and reporting tools will assist DEA to identify and resolve bottlenecks in the system.

DEA's overall intention is to simplify and expedite the licensing process as well as promote the streamlining and integration of multiple licensing processes. DEA has implemented an integrated permitting system for activities that require both a waste licence as well as an environmental authorisation per the EIA regulations. Furthermore, a standard operating procedure for integrated permitting has been established to facilitate integrated permitting at provincial level.

In the long term, DEA's goal is to provide integrated licensing systems for activities requiring environmental authorisation in terms of NEMA and other sectoral statutes. This will require an adjustment to the National Environmental Authorisation System (NEAS) so that it can accommodate the licensing requirements of activities that may require authorisation by other organs of state.

3.5 Industry Waste Management Plans

The industry waste management plan (IndWMP) is a planning instrument that will identify how a specific waste stream will be managed by industry. The IndWMP gives industry the opportunity to set out the additional standards that it will meet for waste management activities and how it will adhere to these. The IndWMP will commit the industry to targets for the management of the waste which may include recycling, recovery or re-use targets or in some cases waste collection targets depending on the waste stream. The industry will be required to report on these agreed targets, which will indicate the success or not of the plan.

IndWMPs can be waste stream specific or company specific, and can be submitted on a voluntary basis or as directed by the Minister through a notice in a government gazette. IndWMPs will assist industries to:

- Identify management and financing mechanisms for specific waste streams.
- Identify waste avoidance and minimisation targets for industrial sectors or companies.
- Set performance targets for the management, recycling, re-use and recovery of either a specific waste stream or wastes from a specific industry.
- Support a licence application.
- Identify the regulatory support required to achieve maximum compliance with the plan among industry stakeholders.

3.5.1 Mandatory and Voluntary IndWMPs

The Waste Act provides for mandatory and voluntary industry waste management plans. The Minister or MEC may give directions that a person, category of persons or an industry that generates waste prepares an IndWMP. The Minister is the regulatory authority for IndWMPs in which waste generating activities affect more than one province or are conducted in more than one province.

The following industries are preparing mandatory IndWMPs in consultation with DEA:

- Tyre industry for waste tyres.
- Paper and Packaging for packaging and paper waste.
- Lighting industry for mercury containing lamps e.g. CFLs.
- Pesticide Industry for residual pesticides and pesticide containers.

Over the course of the next five years, IndWMPs will be required for different forms of e-waste and batteries, and other waste streams that are best managed through an IndWMP.

3.5.2 Plans for waste streams or individual companies

IndWMPs apply to a waste stream or an individual company.

A waste stream IndWMP applies to producers of products that result in a particular type of waste. Producers include importers of a product or product type. Examples of waste streams that would be considered for this type of plan include various types of batteries, waste tyres, residue pesticides and pesticide containers, paper and packaging, and various types of waste electric and electronic equipment (WEEE).

Individual company plans would apply to large companies that have multiple waste management activities that require licensing and / or comprise of multiple sites that have multiple licensing requirements. A company IndWMP can support multiple permit applications where waste management activities have been listed and must be licenced. The plans could also support a motivation to the Minister for listed waste management activities not to require a licence.

3.5.3 Content of IndWMPs

Section 30 of the Waste Act specifies the minimum requirements for a mandatory plan, but the Minister or MEC may include additional requirements. Elective plans should also provide at least the information stipulated in section 30. DEA's Generic Guideline Document for Preparing Industry Waste Management Plans elaborates on the requirements for the different types of plan. The guideline emphasises that an IndWMP should support decision-making by generators of waste. The guideline reinforces the need for accurate information, including a detailed status quo analysis of the current waste management system, realistic targets for waste minimisation, milestone indicators with achievable time-frames for different interventions and sound record-keeping systems. The IndWMP must remain current through regular reviews and updates.

3.5.4 Preparation of plans

IndWMPs must be produced in a consultative manner in line with the directions given by the Minister or MEC, and the contents of a proposed IndWMP must be brought to the attention of relevant organs of state, interested persons and the public. Any comments submitted in respect of the IndWMP must be considered, and a copy of all comments received must be submitted with the proposed plan to the Minister or MEC.

On occasion the Minister or MEC may give directions that an independent person prepares an IndWMP for the cost of the persons or industry responsible for the waste-generating activities. The Minister or MEC will only invoke this measure if no representative body or structure is capable of preparing an IndWMP, or if the fragmented nature of an industry precludes the industry from agreeing on a suitable person to prepare the plan, or if the responsible party doesn't satisfactorily comply with an initial request.

The Minister may require that an organ of state, excluding a municipality, prepares an IndWMP, and similarly, the MEC may request that the provincial department responsible for environmental affairs prepare an IndWMP. Organs of state may be required to prepare an

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IndWMP where the industry is largely dominated by state owned entities, or the industry relates to defence of the state or deals with information that is deemed sensitive to the security of the state. The industry responsible for producing the waste must pay the cost of preparing the plan.

3.5.5 Approval of plans

On receipt of the plan the Minister or MEC may approve the plan with amendments, or require a revised plan or reject the plan with reasons⁴⁶.

An approval must appear in the gazette and stipulate the period for which the approval applies. An approved plan prepared by an organ of state or provincial department must indicate in the gazette how and when the plan will be implemented.

If the Minister or MEC requests amendments and the person(s) preparing the plan do not meet these within the stipulated timeframes, it constitutes a failure to submit an IndWMP. The Minister or MEC will reconsider a plan if it is the first resubmission.

If the Minister or MEC rejects an IndWMP more than once, or if a person required to produce a plan fails to do so, then the Minister or MEC may specify the waste management measures that must be taken⁴⁷, ensuring that the industry is not advantaged by the failure to submit an approved plan.

IndWMPs must be reviewed at intervals specified in the written approval or the gazette. IndWMP review periods will take into account the review periods of waste management licences.

3.6 Extended Producer Responsibility

IndWMPs can include voluntary producer responsibility schemes for particular waste streams whereby producers, importers or retailers take responsibility for the waste generated by their products beyond point-of-sale and choose the most effective way of meeting their responsibilities.

The Waste Act also provides for the declaration of mandatory Extended Producer Responsibility (EPR) schemes whereby the Minister prescribes how a waste stream should be managed and the required funding mechanism to do so. Mandatory EPR schemes can be declared when voluntary schemes provided for by IndWMPs have failed to effectively manage a waste stream.

⁴⁶ As per section 32 of the Waste Act.

⁴⁷ As per section 33(1) of the Waste Act.

3.6.1 Identifying products, groups of products or waste streams for EPR

It is the Minister's prerogative to declare the application of EPR to a product, group of products or waste stream. The declaration must be done in consultation with the Minister of Trade and Industry by notice in the government gazette. The Minister must also consult the Minister of Finance regarding any financial arrangements for an EPR programme. This is especially pertinent where the EPR programme is likely to require changes to product design, or impact significantly on the economy or economic sectors.

The characteristics of a product determine if an EPR programme is appropriate for it. Products with the following characteristics are candidates:

1. **Products with toxic constituents** that may become a problem at the end of life. Examples include: batteries, electronics, used oil, pharmaceuticals, paint and paint products (latex oil-based paints and thinners), pesticides, radioactive materials, products containing mercury and cadmium including thermometers, thermostats, electrical switches (including automotive), and fluorescent lamps.
2. **Large products** that are not easily and conveniently thrown out as waste. Examples include: carpets, building materials, TVs, computers, appliances, tyres, propane tanks and gas canisters.
3. **Products with multiple material types** that make them difficult to recover in traditional recycling systems. Examples include: packaging, electronics, and vehicles.

A risk-based evaluation will establish if a product, group of products or waste stream is suitable for EPR and its consequences. This may include an assessment of legal and administrative difficulties, such as the potential impact on waste avoidance, economic implications (including job creation), potential for contravention of competition requirements, enforcement and the potential for illegal activities. The risk-based evaluation will draw on scientific information and take into account the country's obligations with respect to any applicable international agreements.

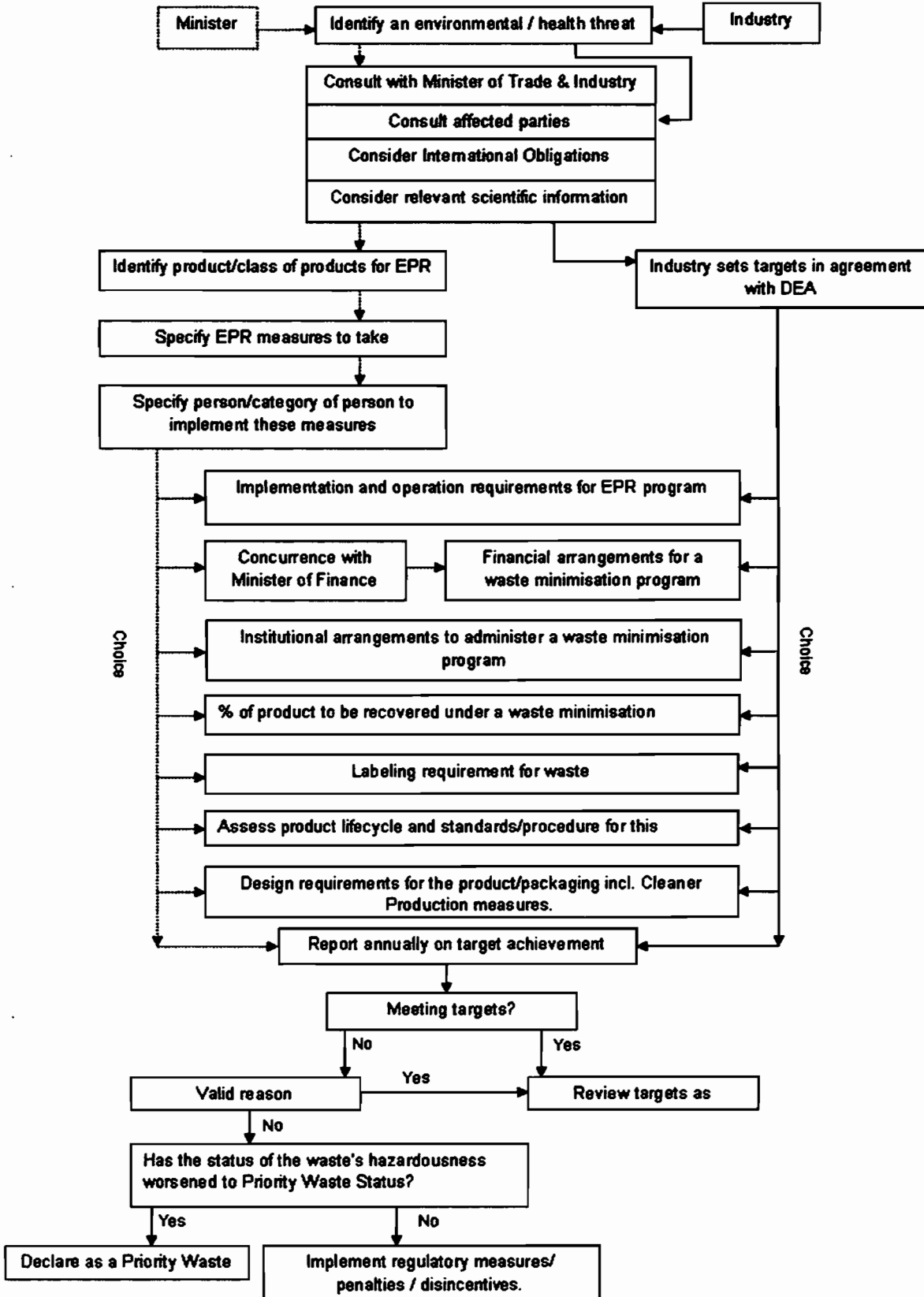
The design of the EPR measures for mandatory schemes will include appropriate funding mechanisms to attract consumer participation, the establishment of cost-effective collection and return networks for discarded products, the identification of markets and uses for returned products and materials, and achieving co-operation where multiple firms are involved. This will be done in consultation with the affected producers of the product, group of products or waste stream under consideration.

DEA will develop a set of guidelines in consultation with industry to assist with the development of voluntary and mandatory EPR programmes.

It is important to note that the state is not obliged to fund EPR initiatives, and that the primary obligation for funding rests with producers, retailers and consumers along the value chain. Financial arrangements will need to be tailored to individual EPR programmes, and the key challenge will be to establish who along the value chain bears what portion of the costs. DEA will develop a guideline on the distribution of costs for EPR programmes in consultation with industry.

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Figure 3: Process for declaring an EPR programme



3.7 Priority wastes

The declaration of a priority waste is a regulatory measure in terms of the Waste Act that applies to wastes that pose a serious threat to health and the environment. The consequent waste management measures can severely limit or prohibit the generation of the waste. Such a declaration may also require detailed registration and reporting on the waste, limit its import and export, and ultimately culminate in a waste being phased out completely. The criteria for declaring a priority waste will therefore be considered very carefully prior to declaration.

3.7.1 Application

A waste may be declared a priority waste by the Minister, or the Minister on behalf of the MEC, by notice in the Gazette⁴⁸. The Minister must have reasonable grounds to believe that the waste poses a threat to health, well-being or the environment because of the quantity or composition of the waste. It must also be demonstrated that:

- a) specific waste management measures are required to address the threat, or
- b) that specific waste management measures may improve the reduction, re-use, recycling and recovery rates or reduce the health and environmental impacts of the waste.

3.7.2 Process for declaring a priority waste

The Waste Act requires the Minister to consult with stakeholders that may be affected by the declaration. A steering committee consisting of affected departments, industries and civil society organisations will guide the process of declaring a priority waste.

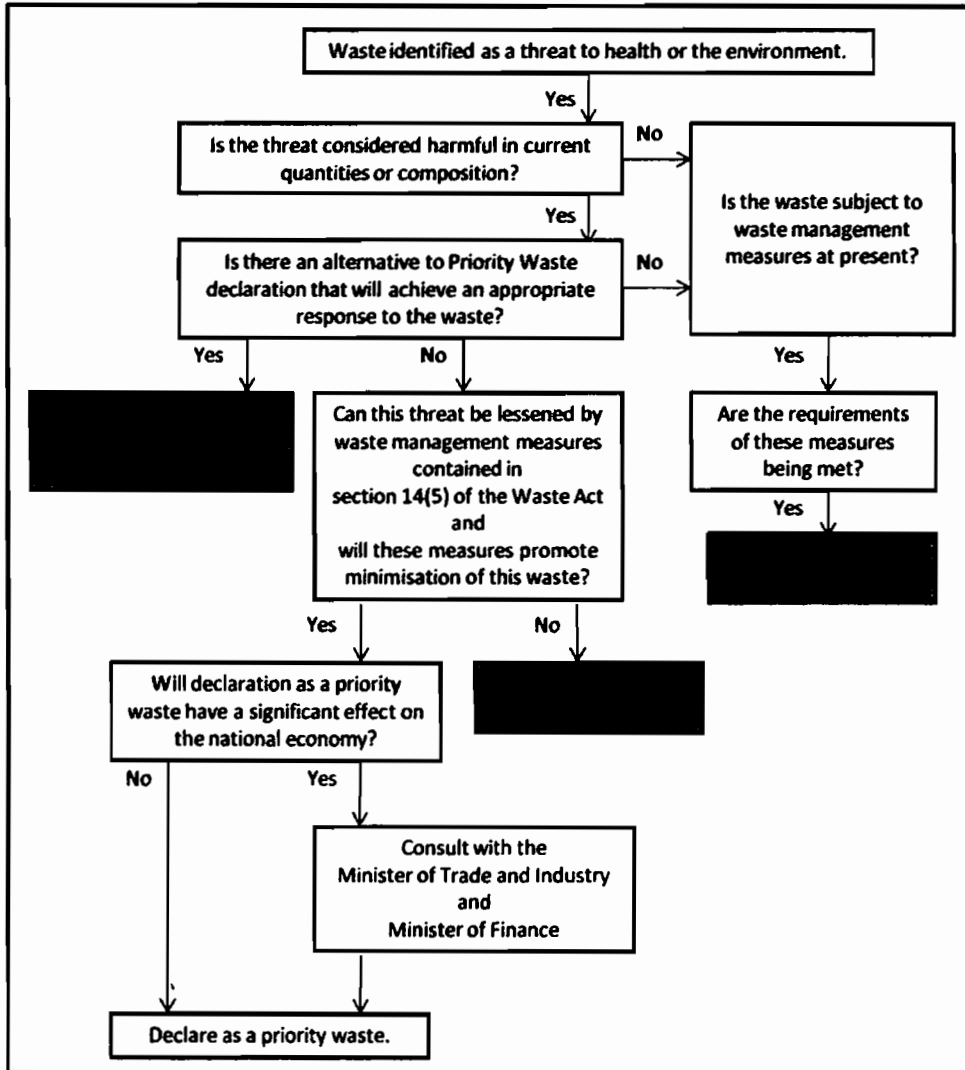
Informed decision making will be supported by scientific research, analysis of applicable waste management measures and regulatory and economic impact analyses.

If the declaration of the priority waste will have a significant impact on the national economy, the Minister must consult with the Minister of Trade and Industry and the Minister of Finance before making the declaration.

The following diagram illustrates the process for identifying and declaring a priority waste:

⁴⁸ Section 14(1) of the Waste Act.

Figure 4: Decision Making Process for Declaring Priority Wastes



Once the declaration of the priority waste and its waste management measures has been decided, the administrative and regulatory mechanisms needed to implement the declaration (including requirements for registering, monitoring, and reporting) will be set out in a plan.

The plan will include the specific consequences of the declaration. Possible consequences may be the prohibition on the import, export, processing, manufacture, or sale of priority wastes (or products likely to generate priority wastes), unless such activities comply with the regulatory measures and requirements in the implementation plan.

3.8 Economic instruments

The Waste Act⁴⁹ provides for economic instruments, and empowers the Minister, in concurrence with the Minister of Finance, to make regulations for incentives and disincentives to encourage a change in behaviour towards waste generation and management. Economic instruments can change behaviour indirectly by creating a set of incentives and disincentives through pricing. Pricing can offer a more cost-effective and dynamic form of regulation than the traditional command and control approach.

Economic instruments will be applied within the overall fiscal and taxation policy of government.

The selection and use of economic measures, including pricing, taxation, subsidies, incentives and fiscal measures will also be aligned with the principles established by NEMA, including the 'polluter pays' principle. According to the 'polluter pays' principle, all generators of waste (including businesses and households) are responsible for the costs of managing the waste generated. These include not only the direct financial costs of collection, treatment and disposal of waste, but also externalities such as health and environmental impacts.

Before economic instruments can be more widely applied, the pervasive under-pricing of waste services needs to be addressed. The under-pricing of waste services creates the wrong set of incentives, undermines waste minimisation efforts, and ultimately undermines the polluter pays principle. Additional economic instruments will create distortions and be ineffective in this context. DEA and National Treasury will conduct an annual review of pricing, and review the effectiveness of measures to correct pricing of waste services. This will be the focus of activities for the next three years.

During this period additional economic measures will be investigated, and evaluated in terms of their effectiveness, and potential impacts on income distribution and competitiveness. Consultation with industry and stakeholders will take place prior to the application of market-based instruments.

DEA and National Treasury will undertake further research into implementing or extending the following instruments once under-pricing has been corrected:

- **Deposit Refund Schemes:** These schemes are most suitable for products that are easy to identify and handle; feasible to re-use or recycle; require careful disposal; and where co-operation is feasible between producers, retailers and consumers. Currently the private sector implements such a scheme for a specified range of glass bottles, where the consumer pays a deposit per bottle and the consumer receives a refund per bottle upon return to a retailer.
- **Waste Disposal Taxes:** These taxes address the external social and environmental costs of waste disposal and provide pricing that influences waste generation and disposal decisions by private actors. Waste disposal taxes require that effective regulation and monitoring of landfill sites are in place.

⁴⁹ Section 69(1)(bb).

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- **Product Taxes:** Product taxes will be directed at products or materials that a policy intends to reduce or remove from production. An example of this instrument is the Plastic Bag Levy⁵⁰ that consumers who choose to buy plastic bags pay directly.
- **Tax interventions for hazardous waste disposal:** Tax interventions for hazardous waste disposal will be considered in instances where more effective management of hazardous waste generators is required.
- **Tax rebates and benefits:** Industries could receive a tax benefit if they promote or implement recycling infrastructure.

As per the National Budget 2010/11 the following waste related environmental taxes and charges are being investigated:

- A wastewater discharge levy in terms of the Water Act.
- Levies on the waste streams of various products.
- A landfill tax at municipal level.

Further research is required into fiscal instruments for integrated waste management as follows:

- **National Remediation Fund:** DEA together with National Treasury will examine a remediation fund for contaminated land as discussed under Section 2.6 Goal 7.
- **Solid Waste Project Development and Finance:** DEA and National Treasury will investigate ways to ensure that capital expenditure in the sector increases; create a robust pipeline of municipal projects; and develop an appropriate capital financing mix. Support for capital financing of waste projects is needed from the private banking sector and Development Financial Institutions, and National Treasury and DEA will examine ways to improve the bankability of municipality's waste management projects.

DEA will work closely with National Treasury to monitor the implementation of the above economic mechanisms and to implement the necessary policy and regulatory tools.

⁵⁰ The Plastic Bag Levy is a tax which charges R0.04 per plastic bag in the 2010/11 budget.

4 Implementation

4.1 Introduction

This section deals with the mechanisms necessary to implement the NWMS, and sets out the roles, responsibilities, coordination and review mechanisms that will give effect to the approach and instruments set out in sections 2 and 3.

The Department of Environmental Affairs and its provincial counterparts are responsible for the overall implementation of the Waste Act. However the implementation of the NWMS requires coordinated action by many players, including households, businesses, community organisations, NGOs, parastatals and the three spheres of government. Partnerships between these actors will lay the basis for waste awareness campaigns, recycling initiatives, and compliance monitoring, amongst others.

4.2 The role of the private sector

Industry is expected to proactively take responsibility for the waste generated throughout the life cycle of a product. Mechanisms to do so include industry waste management plans and extended producer responsibility programmes. Industry must institute cleaner technology practices to help minimise waste and have accessible take-back facilities for particular products or waste streams. To improve the quality of information on waste, industry must collect information on the waste that it generates and supply this information to the Waste Information System. Where required, industry must apply for licences and comply with licence conditions. Private sector representative bodies must ensure that their members understand, implement and comply with the provisions of the Act.

Private service providers play key roles in all stages of waste management, including in waste service delivery and recycling. An expansion of waste services to un-served communities will require municipalities to explore alternative service delivery mechanisms, including public private partnerships. The private sector is encouraged to actively engage in making universal service provision a reality and growing the green economy. The private sector should also respond creatively to new technologies in the fields of waste processing and treatment, and establish capacity in these areas as technologies become commercially viable.

4.3 The role of civil society

Consumers and households play an important role in the generation of waste from the products they consume. As end users they need to reduce, re-use and recycle waste wherever feasible, and dispose of this waste responsibly. They should be aware of the environmental impact of the products that they buy, and pass on a sense of environmental responsibility to families and colleagues.

NGOs, non-profit organisations, community based organisations, cooperatives and trade unions play important roles in all phases of the waste management hierarchy, including in

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recycling initiatives, delivery of waste management services, compliance monitoring, and education and advocacy.

Civil society formations are encouraged to participate in the development and implementation of the NWMS and Waste Act's provisions.

4.4 The role of government

Informed by the Constitutional assignment of powers and functions to the different spheres of government, the Waste Act assigns clear responsibilities for waste management activities to each sphere. Some of these responsibilities require partnerships between government, communities and the private sector.

Local government must provide waste management services, which include waste removal, storage and disposal services, as per Schedule 5B of the Constitution. Municipalities must work with industry and other stakeholders to extend recycling at municipal level. Municipalities must provide additional bins for separation at-source, and are responsible for diverting organic waste from landfill and composting it. Municipalities must facilitate local solutions such as Material Recovery Facilities and buy-back centres, rather than provide the entire recycling infrastructure themselves.

Municipalities must designate a waste management officer from their administration to co-ordinate waste management matters. They must also submit an IWMP plan to the MEC for approval. The IWMP must be integrated to the municipal integrated development plans (IDPs), and the municipal annual performance report must include information on the implementation of the IWMP. Municipalities must also register transporters of waste above certain thresholds on a list of waste transporters.

At their discretion, municipalities may set local waste service standards for waste separation, compacting, management and disposal of solid waste, amongst others. Local standards must be aligned with any provincial and national standards where these exist.

Provincial government is the primary regulatory authority for waste activities, except for activities for which the Minister is the authority. It must promote and ensure the implementation of the NWMS and national norms and standards. Similar to local government, it must designate a provincial waste management officer responsible for co-ordinating waste management matters in the province. It must also prepare a Provincial IWMP and an annual performance report on its implementation, both of which must be submitted to the Minister for approval. Provinces have a number of discretionary powers, some of which may only be exercised in consultation with the Minister. These powers include setting provincial norms and standards, declaring a priority waste, listing of waste management activities, registering waste transporters, requesting the preparation of industry waste management plans, identifying contaminated land and establishing a provincial waste information system. To provide a nationally harmonised regulatory environment for waste management, the provinces will only exercise these discretionary powers where clear and compelling reasons exist, after consultation with DEA.

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National government, and in particular DEA, is ultimately responsible for ensuring that the Waste Act is implemented and that the various provisions are harnessed in the most appropriate and effective way. The Waste Act specifies various mandatory and discretionary provisions that DEA must address.

In terms of mandatory provisions, DEA is responsible for:

- Establishing the National Waste Management Strategy.
- Setting national norms and standards.
- Establishing and maintaining a National Contaminated Land Register.
- Establishing and maintaining a National Waste Information System.
- Preparing and implementing a National Integrated Waste Management Plan.

As discussed earlier, the Minister is the licensing authority for hazardous waste, activities performed by a provincial environmental authority or statutory body other than municipalities, or an activity that takes place in more than one authority or that traverses international boundaries. The Minister is responsible for international obligations relating to waste.

The Minister must designate a waste management officer from the DEA's administration to co-ordinate waste management matters.

DEA has numerous discretionary responsibilities that it may invoke. These include developing national norms and standards for waste minimisation, re-use, recycling, recovery and tariffs. DEA can declare priority wastes; identify products for extended producer responsibility programmes, list waste management activities, request industry waste management plans, register transporters of waste and initiate investigations of land that may be contaminated.

Other national departments play important regulatory and supportive roles in implementing the Waste Act, and waste management more broadly. The following table summarises the main national departments and their areas of responsibility:

*National Waste Management Strategy***Table 5: Roles of government departments**

Department	Area of responsibility	Description
Department of Co-operative Governance	Waste services planning, delivery and infrastructure	<ul style="list-style-type: none"> • Support municipalities to prepare IWMPs and integrate with IDPs. • Make MIG funds accessible for development and upgrading of municipal landfill sites.
Department of Trade and Industry	Industry regulation and norms and standards	<ul style="list-style-type: none"> • Manage the overall system of industry regulation. • Apply Consumer Protection Act. • Develop norms and standards using the Technical Infrastructure. • Support the development of markets for recycled materials. • Support the establishment of SMEs for waste collection services and recycling.
National Treasury	Fiscal regulation and funding mechanisms	<ul style="list-style-type: none"> • Oversee financial integrity of intergovernmental transfers to provincial and local government. • Manage the overall system of taxation and implement tax measures that support the goals and objectives of the NWMS. • Determine budget allocations for waste management functions at national level.
Department of International Relations	International agreements	<ul style="list-style-type: none"> • Give effect to Multilateral Environmental Agreements.
South African Revenue Services	Import and export control	<ul style="list-style-type: none"> • Ensure waste management measures are aligned with the product codes in the Schedules to the Customs and Excise Acts.
Department of Water Affairs	Water quality and licensing	<ul style="list-style-type: none"> • Collaborate with DEA in issuing integrated waste disposal licences.
Department of Mineral Resources	Waste management in the mining sector	<ul style="list-style-type: none"> • Regulate waste management in the mining sector that falls outside the ambit of the Waste Act (including residue deposits and stockpiles), and remediate land that mining activities have contaminated.
Department of Health	Health care risk waste	<ul style="list-style-type: none"> • Address health care risk waste and advise DEA and provincial departments on the appropriate standards and measures for the sector.
Department of Defence	Contaminated land	<ul style="list-style-type: none"> • Remediate land contaminated by explosives waste.

4.5 Co-operative governance

The Constitution requires the spheres of government and organs of state to exercise their powers and functions in a mutually supportive and cooperative manner. The existing intergovernmental systems for coordinating environmental management provide the basis for cooperative governance in relation to waste management. These structures are:

- **MINMEC: Environment** is a standing intergovernmental body consisting of the Minister of Environmental Affairs, members of the provincial Executive Councils (MECs) responsible for environmental management functions, and SALGA. MINMEC meets quarterly.
- **MINTEC: Environment** is a standing intergovernmental body that gives technical input to MINMEC. MINTEC consists of the Director-General of the DEA, the heads of the provincial departments responsible for environmental management functions, and SALGA. MINTEC also meets quarterly.
- **Committee for Environmental Co-ordination** The object of the Committee is to integrate environmental functions of the relevant organs of state, and to coordinate the environmental implementation plans and environmental management plans of departments and provinces. This is the appropriate forum to align the activities of DEA with other government departments, and to integrate the national IWMP into departments' strategic plans.

The Waste Act specifies areas that require co-operative governance: waste management licensing, integrated waste management plans, waste minimisation, regulations and compliance and enforcement.

A **waste management licence** may only be issued with the required approvals from other organs of state that are legally mandated to consent to that activity⁵¹. Furthermore, the Act provides for integrated licensing by means of an integrated environmental authorisation as contemplated in NEMA section 24L. Integrated licences are required for waste management activities that also affect air or water quality. DEA, DWA and MECs will collaborate to issue integrated licences.

IWMPs will mainstream waste management in local government. The MEC for local government and the MEC for environment will support and monitor the development and implementation of integrated waste management plans. DEA will consult with the Department of Co-operative Governance to develop guidelines for these plans.

In terms of **industry regulation and economic measures**, a number of issues raised in the NWMS require coordination between the DEA and the Departments of Trade and Industry and the National Treasury. A dedicated co-ordinating committee will be established to address the application of the South African Technical Infrastructure; the declaration of priority wastes and EPR schemes; the implications of the Consumer Protection Act; recycling schemes and the implications for competition policy; and incentives for cleaner

⁵¹ Section 44 of the Waste Act.

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production. The committee will also evaluate proposals that promote reduction, re-use, recycling or recovery of waste, as well as their economic impact.

In **land remediation**, coordination is particularly important because this is a concurrent mandate. An existing Government Task Team comprising the Departments of Mineral Resources, Environmental Affairs and Water Affairs focuses on mine closures and addresses remediation after mining activities. The mandate of this committee will be broadened to address remediation in its entirety. DEA will convene and provide the secretariat for this committee.

MINTEC Working Group 4 deals with **compliance and enforcement**, and it will clarify clarifying the roles and responsibilities of EMIs at national, provincial and local levels. EMIs coordinate their activities closely with the South African Police Services (SAPS), who play a crucial role in enforcing environmental legislation. In terms of NEMA, all police officers also have the powers of an EMI. EMIs cannot prosecute cases in court, so the results of their investigations are handed over to staff at the National Prosecuting Authority (NPA) to prosecute. The Department of Environmental Affairs and the NPA will collaborate to ensure the successful prosecution of environmental crimes.

4.6 Waste Management Officers

The Waste Act creates a specialised official, a Waste Management Officer, to coordinate waste management at each level of government. This addresses the historical fragmentation of waste management functions within government by ensuring that a dedicated authority in each sphere of government is responsible for implementing the policy and regulations of the Waste Act. The DEA has produced guidelines for the designation of WMOs, setting out their role, powers, profile and rank. The duties and responsibilities that the Waste Act and the NWMS assign to each sphere of government determine the roles and powers of their WMOs.

WMOs perform a regulatory function and should be located in functional divisions separate from service-delivery functions where possible. This is particularly important for overseeing adherence to national norms and standards, which is fundamental to achieving the objectives of the Waste Act.

The Act assigns specific regulatory powers to the National WMO and Provincial WMO's. They may request that holders of waste management licences appoint waste management control officers⁵², and they may require waste impact reports when waste management licences are being reviewed⁵³.

The responsibilities of the national, provincial and local Waste Management Officers are in

Table 6.

⁵² Section 58(1) of the Waste Act.

⁵³ Section 66(2).

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Table 6: Responsibilities of National, Provincial and Local WMOs

National Waste Management Officers	Provincial Waste Management Officers	Local Waste Management Officers
Chairperson of the National Waste Forum.	Chairperson of Provincial Waste Forum	
Advises the Minister about the declaration of priority waste, EPRs, and mandatory Industry Waste Management Plans.	Advises the MEC.	
Sorting out co-operative governance issues.	Sorting out co-operative governance issues.	
Address overlapping mandates, particularly at national and provincial level.		
Manage stakeholders in Waste Act implementation.	Manage stakeholders in Waste Act implementation.	Manage stakeholders in Waste Act implementation.
Liaise with national EMI compliance monitoring activities.	Liaise with provincial EMI compliance monitoring activities.	Liaise with EMI compliance monitoring activities in the municipality.
National IWMP: align planning and reporting cycles.	Provincial IWMP: align planning and reporting cycles	Municipal IWMP: planning and reporting cycles.
Build capacity in relation to Waste Act implementation.	Build capacity in relation to Waste Act implementation	Build capacity in relation to Waste Act implementation.
Formulate and oversee Waste Act implementation plan.		Monitor adherence to norms and standards in the delivery of waste services.

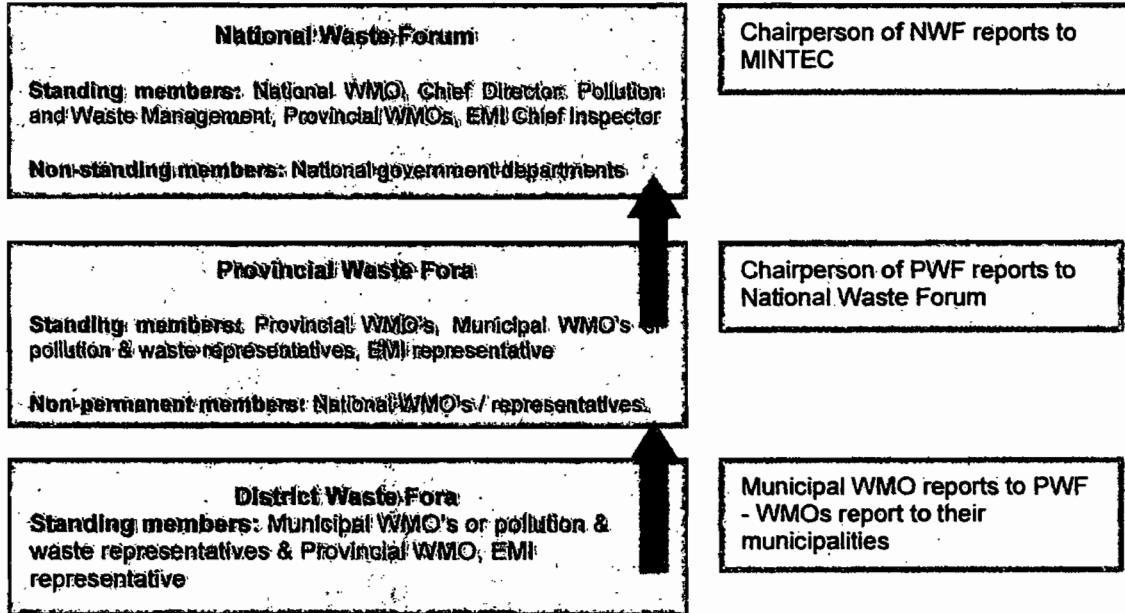
As part of their regulatory functions, the WMOs support the EMIs who enforce the provisions of the Waste Act. This requires a close working relationship between WMOs and EMIs. The WMOs will assist the Environmental Management Inspectorate to identify priorities for monitoring activities that present a significant threat to health and the environment. WMOs and EMIs will also work together to prepare Waste Impact reports⁵⁴. Under certain circumstances, both the EMI and WMOs can request a waste impact report, which will be done in consultation and co-operation with each other.

DEA will establish dedicated mechanisms to co-ordinate the efforts of WMOs (see Figure 5). Waste forums will be created at district, provincial and national level.

⁵⁴ Provided for in terms of Section 66 of the Waste Act.

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Figure 5: Coordination mechanisms for WMOs



To effectively co-ordinate regulatory and policy-making roles in relation to waste management, the chairperson of the National Waste Forum will report to Working Group II.

4.7 Capacity building

Implementing the Act requires additional capacity in the three spheres of government. This includes adequate human resources as well as appropriate skills and training. The table below identifies the main capacity challenges in government that need to be addressed.

Table 7: New capacity required to implement the Waste Act

Sphere of Government	Functional Area	Requirements
All	Integrated waste management plans	Staff who can draw up plans for waste service provision
All	Monitoring and enforcement	800 additional EMIs, two thirds of them at local government level. Specialised training in the Waste Act for these EMIs
National	Norms and standards	Dedicated unit with technical experts, including process and chemical engineers and legal drafters.
National	Remediating contaminated land	New division that can administer the system.
National	Industrial waste management issues	Staff who understands industry waste management. Working relations with industry
National	Information management	Dedicated staff to collect, analyse and disseminate all waste and waste management information.

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Sphere of Government	Functional Area	Requirements
National and provincial	Licensing	Staff to interpret EIAs. Standards for EAPs.
Municipal	Planning	Staff who can plan for the appropriate levels of service, extension of services, and landfills.
Municipal	Delivering waste services	Staff that can manage internal waste service delivery or manage contracts with private service providers.
Municipal	Waste separation and recycling	Staff who can plan and establish such facilities.
Municipal	Financial management	Staff who can undertake full cost accounting, ring fence waste service budgets, establish and implement cost reflective and volumetric tariffs, and implement the free basic services policy through subsidies for the indigent.
Municipal	Financial planning	Staff who can plan capital expenditure based on infrastructure modelling
Municipal	Communications	Staff who can effectively communicate with communities about proper waste management practices.

The capacity challenge at local government level is particularly acute. A nationally coordinated capacity building programme for local government will aim to address the above challenges. DEA, the provinces and SALGA will jointly develop the programme. It will align with the overall strategic framework for local government capacity building that DCOG coordinates. The programme will include national policy guidance on systems and procedures, training and information programmes for officials and councillors, expert advice and placement for limited periods, and capacity building grants to support local initiatives. The programme will be implemented in 2012.

4.8 Waste Information System

In terms of section 60 of the Waste Act the Minister has established a national waste information system for recording, collecting, managing and analysing waste data. The South African Waste Information System (SAWIS) addresses the lack of reliable data on the waste sector.

SAWIS will provide information to inform Integrated Waste Management Plans and Industry Waste Management Plans, and to evaluate their implementation. The information in SAWIS must inform public health and safety management, and help to assess the impact of waste on health and the environment. It must also provide information on waste to educators and researchers to raise public awareness.

Access for the public and industry to information stored on SAWIS is a statutory requirement of the Waste Act. However, safeguards will be put in place to ensure that companies have access to their own information only and that aggregated information is available for industrial sectors. Proprietary company information will not be exposed to third parties.

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DEA will publish National Waste Information Regulations which will make reporting to SAWIS obligatory, and which will provide the volumetric or mass thresholds at which SAWIS registration and reporting is required. The volumetric or mass thresholds avoid the need for reporting by small scale recyclers. The regulations will stipulate sanctions for non-compliance.

Section 60(3) of the Waste Act provides for an incremental implementation of SAWIS⁵⁵.

DEA will undertake a baseline study of the current quantities of waste which are generated, reduced, re-used, recycled, recovered, stored, transported, treated and disposed of for each of the waste types set out in the National Waste Information Regulations. This will inform the further development of SAWIS, and create a baseline for interpreting SAWIS information.

Provinces may optionally create their own waste information systems⁵⁶. Provincial waste information systems should include all the information that the national system requires. Some provincial WIS systems already exist and dual reporting requirements are undesirable. To avoid multiple reporting, the Minister may exempt entities reporting to a provincial system from requirements to report to the national system once mechanisms exist to replicate information from the provincial system to the national system.

SAWIS will be implemented within the new technology framework for information systems described in Section 3.4.2. Horizontal integration of SAWIS with other waste regulation and information systems is required for licensing procedures (currently captured on NEAS). A new framework that integrates business procedures using a single underlying data base will enable this horizontal integration. The current implementation of SAWIS will move to the new framework.

An integrated procedure for licensing and registration on SAWIS is desirable, but does not exempt licencees from separately registering with SAWIS. Facilities that fail to meet licensing requirements or are granted exemptions from licensing requirements will still be required to register with SAWIS. A standard categorisation system exists for waste information submitted to SAWIS and it will align with the WCMS and reporting requirements stipulated in licences.

4.9 Monitoring and evaluation

The NWMS aligns with the Government-wide Monitoring and Evaluation System (GWM&E)⁵⁷ outputs. Section 2, Table 4 of the strategy establishes national targets and indicators for monitoring and reporting on the NWMS. DEA will collate and review information on each of these indicators at least once a year.

⁵⁵ For instance, generators of hazardous waste are currently not required to submit waste data. Instead, waste managers submit this data on their behalf.

⁵⁶ Section 62 of the Waste Act.

⁵⁷ The Presidency: Department of Performance Monitoring and Evaluation (2010) Measurable Performance and Accountable Delivery, Outputs and Measures, **Outcomes** draft, 10 May 2010.

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The national targets and indicators for monitoring and reporting on the NWMS will be translated into specific targets and indicators for each provincial and municipal IWMP⁵⁸.

Effective monitoring requires annual performance reports on the implementation of the national, provincial and municipal IWMPs. These performance reports must include:

- The extent to which the plan has been implemented during the period.
- Waste management initiatives undertaken during the reporting period.
- Delivery of waste management services.
- Level of compliance with the IWMP and applicable waste management standards.
- Measures to secure compliance with waste management standards.
- For Provinces, the extent to which municipalities comply with the plan and reasons for any non-compliance.

The Waste Act⁵⁹ specifies further requirements for the reports and the Minister may prescribe more.

Provinces submit their annual performance report to the MEC and the Minister for approval. Municipalities submit their reports in accordance with section 46 of the Municipal Systems Act. The first report will provide a baseline and each year's performance will become the following year's baseline.

Local municipalities submit their IWMP annual performance report to the district municipality, who then submits their IWMP annual performance report to the province. Provincial IWMP annual performance reports are then submitted to the national department who produce a national IWMP annual performance report. Deadlines and approval requirements in the Waste Act for annual performance reports are listed in table **Error! Reference source not found.8**:

Table 8: Reporting requirements for IWMP annual performance reports

	National Department	Provincial Department	Municipality
Deadline for receipt of annual performance report	No later than 31 May each year		No later than 31 August each year
Report required	Annual performance report on implementation of IWMPs		Annual performance report to include progress reports on IWMPs
Approval required	Minister	MEC and Minister	Respective councils; copy to MEC; Minister DEA and DCOG

⁵⁸ See goal 5 in Section 2 for more details about IWMPs.

⁵⁹ Section 13 (2).

4.10 Mechanisms to give effect to international obligations

Various international agreements to which South Africa has acceded relate to waste management. A number of non-binding conventions and protocols are also relevant to waste management. This section summarises the main actions in the NWMS related to implementing international agreements.

4.10.1 The Basel Convention

The Basel Convention, adopted in 1989, has the greatest bearing on the Waste Act as it addresses the trans-boundary movement of hazardous wastes and their disposal, setting out the categorization of hazardous waste and the policies between member countries.

DEA is developing MOUs with the International Trade Administration Commission (ITAC) and the South African Revenue Service (SARS) that effectively address the provisions of the Basel Convention.

DEA is considering accession to the amendments to the Basel Convention that ban the import and export of hazardous wastes. DEA is also currently developing a policy on imports and exports of waste that will address this.

DEA and DTI are jointly addressing the import and export control aspects of the Basel Convention, together with the chemical conventions. Control will happen through ITAC permits and SARS tariff codes.

4.10.2 The Montreal Protocol

The Montreal Protocol Treaty, revised in 1999, protects the ozone layer by phasing out the production of several substances that contribute to ozone depletion, with the aim of ozone layer recovery by 2050. This has relevance for waste management in instances where such obsolete products enter the waste stream. DEA will finalise and publish the National Implementation Plan for the Montreal Protocol. The plan will include the development on an Ozone Depletion Substance (ODS) strategy and regulations will provide for the phasing out of specified substances and their safe disposal. These will be gazetted for public comment in 2012.

4.10.3 The Rotterdam Convention

The Rotterdam Convention promotes and enforces transparency in the importation of hazardous chemicals and whilst it explicitly excludes waste, its implementation may lead to bans on listed chemicals. Some of these chemicals may occur in stockpiles of obsolete chemicals such as pesticides that have been identified as a major waste management challenge. Extended producer responsibility schemes will be used to effectively manage obsolete chemicals.

A study to investigate the extent of manufacture, use, import and export of new chemicals listed in the Rotterdam Convention will determine whether South Africa should ratify the newly added chemicals. This document will be finalised in 2012. A process to identify and

ban pesticides and industrial chemicals listed in Annex III (that South Africa has not yet banned) has started. Responsible departments will finalise arrangements for banning orders in 2012.

4.10.4 The Stockholm Convention

The Stockholm Convention on Persistent Organic Pollutants (POPs), which entered into force in 2004, requires that member countries phase out POPs and prevent their import or export. Parties to the Convention are also required to undertake the following responsibilities:

- Develop and implement appropriate strategies to identify stockpiles, products and articles in use that contain or are contaminated with POPs.
- Manage stockpiles and wastes in an environmentally sound manner.
- Dispose of waste in a way that destroys or irreversibly transforms POPs content.
- Prohibit recycling, recovery, reclamation, direct re-use or alternative use of POPs.
- Endeavour to develop strategies to identify contaminated sites and perform eventual remediation in an environmentally sound manner.

A National Implementation Plan has been developed and it will be reviewed in light of the Waste Act and finalised in 2012.

Furthermore, a study has been initiated to investigate the extent of manufacture, use, import and export of new POPs listed in this convention. The study will determine if South Africa should ratify the newly added POPs. This document will be finalised in 2012.

4.10.5 New Mercury Convention

Negotiations on a global convention on mercury were initiated in Stockholm in June 2010 and will cover all mercury uses and emissions. It is anticipated that a legally binding treaty to control mercury pollution will be adopted.

4.10.6 Various conventions dealing with dumping waste at sea

Despite decades of regulation at the International Maritime Organisation and elsewhere, and bans on discharging and dumping of nearly all shipping waste streams, such wastes routinely find their way into the sea with little evidence that these discharges are diminishing. The disincentive to use the Port Reception Facilities (PRF) can be removed by incorporating the cost of PRF use into the general harbour dues that all ships pay. Such an approach is generally known as a "no-special-fee" system, and is already in place in other parts of the world. Accordingly, the Department of Transport, in conjunction with DEA, will investigate and implement a "no-special-fee" system in all South African ports, and actively promote this as a standard international requirement.

4.10.7 Coordination mechanisms

DEA and the DTI have established the Interdepartmental Committee for the Sound Management of Chemicals to coordinate the implementation of national legislation and action plans to manage chemicals in line with international agreements and instruments. This committee integrates the previously separate coordination structures for activities relating to the Rotterdam Convention (the Chemical Review Committee) (CRC) and the Stockholm Convention (the POPs review committee) (POPRC).

The committee consists of representatives from all affected government departments, including the SABS, ITAC, South African National Defence Force (SANDF) and South African Police Service (SAPS). The committee also convenes a multi-stakeholder forum that includes representatives from provincial and local government, labour, business, civil society, and academic and research institutions.

The work programme for the Interdepartmental Committee includes recommendations on whether to accede to international agreements, and advice on programmes of action for agreements to which South Africa has already acceded, including proposals for drafting the necessary regulations.

4.10.8 Import and export control

The systems for controlling the import and export of chemicals and hazardous waste have now been integrated with the provisions of the International Trade Administration Act (Act 71 of 2003). This Act created a permit system to control the import and export of goods specified by regulation. The system falls under a directorate in the DTI – ITAC. ITAC's primary function is to administer the provisions of the International Trade Administration Act.

The Minister of Trade and Industry issues regulations to either ban the import of specified goods or class of goods, or require that they adhere to the conditions stated in a permit that the Commission issues. DEA will identify the tariff codes of and restrictions on chemicals and other products and submit these to the DTI. The Minister of Trade of Industry will then issue regulations for these goods under the International Trade Administration Act. SARS's Customs and Excise division in turn uses the tariff codes to enforce the prohibitions or restrictions associated with a particular tariff code.

To assist DEA and the DTI with the administration of this system, the relevant Multilateral Export Agreement (MEA) Convention secretariats will be requested to assist member countries to identify the relevant international tariff codes. Aligning mechanisms for import and export control with the MEAs is one of the central mechanisms to give effect to our international obligations.

5 Conclusion

The development of the NWMS is an important milestone in the process of implementing the Waste Act, and in establishing an integrated approach to waste management across government and society more broadly. As stated in Section 1, South Africa faces particular challenges in relation to waste management that require a coordinated effort by government

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and stakeholders. Addressing these challenges will not be easy, given the capacity and resource constraints we face as a developing country with large income inequalities and competing development priorities. Nevertheless, the implementation of the waste management hierarchy and achievement of the objectives outlined in this strategy is integral to achieving a sustainable future and a better life for all South Africans.

The NWMS provides the framework within which the actions of different stakeholders are located. This strategy is addressed to stakeholders in all spheres of government, industry, labour unions, community based and non-governmental organisations, and the public at large. It sets out the different roles and responsibilities that need to be taken up by each stakeholder and level of government.

The NWMS is a living document, which needs to be regularly updated and revised to keep it relevant. The Waste Act requires that the NWMS be reviewed and updated at least every five years.

The process of producing this NWMS involved extensive consultation with a variety of stakeholders. Many people have given very generously of their time and experience in making inputs to this document. Government wishes to thank all the stakeholders for the contribution they have made to the compilation of this NWMS, and for their commitment to implementing its provisions.

Appendix One: Action Plan

Action	Responsibility	Time frame	Dependency
Goal 1: Promote waste minimisation, re-use, recycling and recovery of waste.			
Implement the Cleaner Production Strategy to promote waste minimisation at production.	DEA, DTI, Industry	Ongoing	Establishment of DEA-DTI-Treasury forum; NCPD
Develop standards to promote waste minimisation, re-use, recycling or recovery of waste materials.	DEA, Industry	Ongoing	Establishment of DEA-DTI-Treasury forum
Develop guidelines for IndWMPs in consultation with industry.	DEA	2011/12	
Develop an IndWMP for the paper and packaging industry.	PACSA	2011/12	
Develop an IndWMP for the pesticide industry.	AVCASA	2011/12	
Develop an IndWMP for the management of CFLs.	Lighting Industry	2011/12	
Develop an IndWMP for the tyre industry.	Tyre industry	2011/12	
Investigate feasibility of an IndWMP for batteries.	DEA	2012/13	
Develop an IndWMP for the ITC Industry	ITASA industry	2012/13	
Investigate feasibility of IndWMP for identified e-waste streams.	DEA	2013/14	
Development of a strategy for diversion of green waste from landfill by municipalities	DEA	2012/13	
Roll out buy back centres in identified municipalities including identification of partnerships and funding opportunities.	DEA, Municipalities	Ongoing	
Publish for implementation the WCMS regulations.	DEA	2011/12	

Action	Responsibility	Time frame	Dependency
Goal 2: Ensure the effective and efficient delivery of waste services.			
Develop a household hazard strategy to address the contamination of general household waste.	DEA & municipalities	2013	
Gazette, implement and monitor the National Policy for the Provision of Basic Refuse Removal Services to Indigent Households.	DEA, Municipalities, DCOG & SALGA	Ongoing	Gazette of standards
Implement and monitor the National Domestic Waste Collection Standards.	DEA & Municipalities DCOG, SALGA	Ongoing	
Develop and circulate generic by-law to assist municipalities in developing their own by-laws.	DEA	2011/12	
Adopt/adapt generic or amend municipal by-laws for the separation, compacting, and storage of solid waste, the management of solid waste and the control of litter.	Municipalities	Ongoing	
Publish a standard for disposal of waste to landfill	DEA	2011/12	Gazette of standards
Publish a standard for the assessment of waste to landfill disposal which prescribes the requirements for the assessment of the level of risk associated with the disposal of waste to landfill.	DEA	2011/12	Gazette of standards
Undertake a feasibility study for municipalities to implement options for waste to energy.	DEA, DOE, DCOG, SALGA	2012/13	
Review and raise awareness among municipalities regarding sewage sludge guidelines.	DEA & DWA in consultation with DCOG	2012/13	
Establish an interdepartmental committee between DEA, National Treasury, DCOG, SALGA, and DHS to address waste service delivery issues and implement a programme to build the capacity of government officials in waste management.	DEA, National Treasury, DCOG, SALGA, DHS	2011/12	

Action	Responsibility	Time frame	Dependency
Goal 3: Grow the contribution of the waste sector to the green economy			
Establish an inter-departmental forum between DEA, the dti and Treasury to coordinate actions around cleaner production, economic instruments, priority wastes, EPR programmes, and consumer protection.	DEA, the dti and Treasury	2011/12	
As part of Green Economy Strategy, implement measures to support job creation within waste services collection.	DEA, DCOG Municipalities, and EDD	2012/13	Establishment of DEA-DTI-Treasury forum
Gazette the intention to declare saline waste as a priority waste	DEA	2012/13	
Finalise the Industrial Recycling Strategy, including measures to boost markets for recyclates and establish legally compliant waste exchange programmes.	DTI	2012/13	
Finalise and publish the National Implementation Plan for the Montreal Protocol, to include a phase out plan for specified substances.	DEA	2012/13	
Finalise and implement the action plan for the National Implementation Plan for the Stockholm Convention.	DEA	2011/12	
Develop the Import Export Policy for waste and Near End-of-Life Electronic Equipment.	DEA	2012/13	
Finalise joint strategy for import and export control in relation to MEAs.	DEA, SARS, ITAC, and Industry	2012/13	
Goal 4: Ensure that people are aware of the impact of waste on their health, well-being and the environment.			
Implement a national awareness campaign strategy around waste management	DEA, Indalo Yethu Industry bodies	2012/13	
80% of municipalities running local awareness campaigns	DEA, CoG SALGA	2015/16	
Develop guidelines for the implementation of recycling and litter collection programmes by schools.	DEA, Department of Basic Education	2013/14	

Action	Responsibility	Time frame	Dependency
Develop revised criteria and programme for the Cleanest Town competition.	DEA, DCOG, Indalo Yethu	2012/13	
Goal 5: Achieve integrated waste management planning.			
Gazette the regulations on SAWIS for implementation.	DEA	2011/12	
Establish baseline information on waste flows for accurate waste planning.	DEA	2012/13	Funds allocated to support research
Produce annual statistics from SAWIS on waste management.	DEA	2014/15	Implementation of the new technology system for DEA
Finalise and publish the Integrated Waste Management Planning guidelines for municipalities.	DEA	2011/12	
Prepare national and provincial IWMPs, including indicators and targets, and submit for approval.	DEA and provinces	2014/15	IWMP guidelines
Prepare municipal IWMPs, including indicators and targets, and integrate with municipal IDPs.	Municipalities	2012/13	IWMP guidelines
Prepare and submit annual performance reports in terms of IWMPs.	DEA, Provinces, Municipalities	Annually	Preparation of IWMPs
Government capacity in place to fulfil integrated waste management planning.	Provinces	2012/13	MTEC allocation for additional capacity
Municipal capacity available to sustainably provide waste management services and to proactively plan and manage landfill disposal.	Municipalities	2013/14	Sustainable financing arrangements for waste services
Undertake a feasibility study on the development of Regional HCRW for the public sector	DEA and DoH	2013/14	
Develop HCRW policy and regulations	DEA and DoH	2012/13	

Action	Responsibility	Timeline	Dependency
Goal 6: Ensure sound budgeting and financial management for waste services.			
Develop tools for Full Cost Accounting	DEA, Treasury	2012/2013	
Full cost accounting of waste management services is conducted by all municipalities.	Municipalities	2015/16	Municipal circular
Draw up and circulate municipal circular that provides guidelines for waste service budgets and the associated accounting practices required to make subsidy levels more transparent relative to the cost of service delivery.	National Treasury DCOG, SALGA & DEA	2012/13	
Update waste service tariff setting guidelines and include provision for volumetric charging in waste service tariffs.	DEA, National Treasury and DCOG	2012/13	
Phase in tariffs to reflect full cost of waste services.	Municipalities	2015/16	Guidelines on waste service tariffs
Facilitate the increase of the Municipal Infrastructure Grant (MIG) funds that are dedicated for solid waste management.	DEA, National Treasury and DCOG	2012/13	
Align Municipal Infrastructure Grants, equitable share allocations and other grants to provide for refuse removal as a basic service as per national performance agreements.	National Treasury, DCOG, DEA.	2012/13	
Investigate financing mechanisms for solid waste project development, capital grants and private financing.	DEA, National Treasury, and DCOG	2012/13	Budget process and MTEC allocation
Investigate mechanisms to support the extension of municipal waste services to un-served communities, using an EPWP type delivery model.	DEA , National Treasury, and DCOG	2012/13	

Action	Responsibility	Time-frame	Dependency
Goal 7: Provide measures to remediate contaminated land.			
Finalise regulations and norms and standards in terms of the Framework for Contaminated Lands.	DEA	2012/13	
Establish register of contaminated lands, linked to the Deeds Register.	DEA	2012/13	
Publish guidelines for roles and responsibilities in terms of contaminated lands for financial institutions, property developers, estate agents, conveyancers and other affected parties.	DEA	2012/13	
Establish remediation fund or funding mechanism.	DEA, National Treasury	2012/13	Budget process and MTEC allocation
Investigate and broaden the mandate of the Government Task Team dealing with mining remediation to include all forms of remediation.	DEA, DMR and DWA	2012	Consultation with DMR and DWA
Goal 8: Establish effective compliance with and enforcement of the Waste Act.			
Promote the use of the hotline to report transgressions in relation to the Waste Act.	DEA	Ongoing	
Develop a programme for Strategic Compliance and Enforcement inspections in relation to the Waste Act.	DEA	Ongoing	
Develop and publish norms and standards for treatment, processing and disposal, including for thermal treatment of waste.	DEA	2012/13	
Develop and publish best practice guidelines for landfills operation and management	DEA & DCOG	2013/14	
Develop strategy to regularise the management and permitting of existing landfills, and planning for new landfill sites.	DEA	2012/13	

Action	Responsibility	Time frame	Dependency
Implement full programme to permit landfill sites and assess compliance.	DEA	2012	
Finalise and disseminate Standard Operating Procedure for non-compliant organs of state for waste management facilities.	DEA	2012/13	
Determine number of EMIs required at each level of government for Waste Act compliance and enforcement.	DEA	2012/13	
Finalise EMI training manual consisting of a set of Standard Operating Procedures for waste management activities.	DEA	2012/13 - ongoing	
Include EMI Basic Training Material in the EHP National Diploma.	DEA	2012/13	
Train and designate additional EMIs	DEA, Provinces, Municipalities	2011 and beyond	MTEC allocation for additional capacity