



## National Waste Management Strategy- Phase 2 Research

Regulation, compliance and enforcement in  
implementing the Waste Act, 2008



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

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### **Regulation, compliance and enforcement in implementing the Waste Act, 2008**

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This research paper has been commissioned as part of the process of preparing a National Waste Management Strategy for South Africa. The views expressed in this paper are those of the researcher only, and do not necessarily reflect the views of either the Department of Environmental Affairs or of the consultant team preparing the NWMS. This research paper has been prepared for the purposes of stimulating discussion and informing debate prior to the commencement of the drafting process. In order to comment on the issues raised in this paper, and for more information regarding the process of preparing the NWMS please visit [www.deat.gov.za/waste/](http://www.deat.gov.za/waste/)

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## Acronyms

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CFCs	Chlorofluorocarbons
CFLs	Compact Fluorescent Lamp
DEA	Department of Environmental Affairs
DF	Department of Finance
DTI	Department of Trade and Industry
DWAF	Department of Water Affairs and Forestry (former)
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMI	Environmental Management Inspector
ERP	Extended Producer Responsibility
EU	European Union
GHS	Globally Harmonised System
HCFCs	Hydrochlorofluorocarbons
HW	Hazardous Waste
HCRW	Healthcare Risk Waste
IAPs	Interested and Affected Parties
IDP	Integrated Development Plans
IMO	International Maritime Organisation
IT	Information technology
ITA	International Trade Administration
ITAC	International Trade Administration Commission
IWMP	Integrated waste management plan
MEA	Multilateral Export Agreement
MEC	Member of the Executive Council
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
MRF	Materials Recycling Facility
MSA	Municipal Systems Act
MTEF	Medium Term Expenditure Framework
NCMS	National Compliance Monitoring System
NEAS	National Environmental Authorisation System
NEMA	National Environmental Management Act
NMISA	The National Metrology Institute for South Africa
NPA	National Prosecuting Authority
NRCS	National Regulator for Compulsory Systems
NWIS	National waste information system
NWMS	National Waste Management Strategy
PCBs	Polychlorinated Biphenyls
PIC	Prior Informed Consent
POPs	Persistent Organic Pollutants
PRF	Port waste Reception Facilities
SABS	South Africa Bureau of Standards
SACU	Southern African Customs Union
SAIMC	Strategic Approach to International Management of Chemicals
SANAS	South African National Accreditation System
SANDF	South African National Defence Force
SANParks	South African National Parks

SAPS	South African Police Service
SARS	South African Revenue Service
SAWIS	South African Waste Information System
SQAM	Standards, Quality Assurance, Accreditation and Metrology
TORs	Terms of Reference
UN	United Nations
WIS	Waste Information System
WMO	Waste Management Officer

## Executive Summary

The Waste Act 2008 is a culmination of a policy process aimed at shifting waste management practices in South Africa towards the achievement of the waste management hierarchy. There has been a steady evolution of the policy and legislative framework for environmental management over the last decade, which has paralleled the growing importance and capacity of the environmental department and Ministry within government. Central to this has been the environmental rights set out in the Constitution, and the constitutional allocation of powers and functions between the three spheres of government.

The paper examines the architecture of the system of environmental legislation that informs waste management, and provides an approach to the implementation of the Waste Act. The starting point for this is the clarification of the definition of waste in the legislation, and the paper recommends that further interpretative guidelines are issued as regulations in this regard.

National norms and standards are a central mechanism in implementing the Waste Act, and the paper outlines what norms and standards are required, the processes that are underway to develop them, and any additional considerations that need to be taken on board by DEA during the process. Provincial and local standards may also be developed in terms of the Act, provided that they do not conflict with national standards. Nevertheless, the paper raises some serious concerns regarding regional variance in standards, and the associated economic consequences and complexity of administering such a system.

Some standards such as the provision for storage of waste are set out in the Waste Act itself. This paper makes specific recommendations for the areas where there is believed to be an immediate need for the development for norms and standards or their application. This has already been initiated with regard to the classification of hazardous waste and the waste service delivery projects.

The categorisation and classification of waste is critical to implementing many measures provided for in the Act, including the Waste Information System, licensing, identifying contaminated land and achieving remediation. Informed by the Basel Convention on Hazardous Wastes, the currently applicable system of waste classification is based on the DWAF Second Edition Minimum Requirements for Waste Categorisation. The category and class of a waste determines the acceptable processes for handling and disposal. Due to the evolving nature of the waste stream, the classification system is currently being reviewed. Based on the definitions provided in the Act, and the main producer categories of waste, a draft categorisation system is put forward for discussion. Based on this categorisation system, which covers general and hazardous waste, it is recommended that a standard set of fields are used for the WIS, the licensing process and other databases that utilise or capture waste information.

The paper recommends that national norms and standards are implemented through the mainstream standard setting, verification and accreditation system for industry, known as the South African Technical Infrastructure and managed by the DTI. There are four key institutions for managing the technical infrastructure required to implement the legislation. In order to support the work of the technical infrastructure institutions, it will be important to secure DTI support for waste management as a priority sector, and ensure that sufficient funding is provided for this through the Medium Term Expenditure Framework. A bilateral coordinating committee is proposed with DTI, as well as the necessary stakeholder forums for standard setting processes.

With respect to waste management planning, the Act makes provision for two sets of waste management plans. Those prepared by government – integrated waste management plans – and those prepared typically by industry – industry waste management plans. This research paper describes the content, integration and procedures for these plans. Furthermore, the Waste Act sets out a series of reporting requirements against the IWMPs, which establishes a nationally integrated performance monitoring and management system.

Whilst the Waste Act does not give clear time-frames for the preparation of IWMPs or for the annual cycle of reporting, there is a strong imperative for the annual cycle of reporting to be aligned with the main planning and reporting systems for government. This paper assesses and suggests systems for the planning of and reporting on IWMPs.

The provisions and content of industry waste management plans are described, and procedural requirements including the role of the Minister or MEC are analysed. The paper emphasises the benefits of a voluntary system of submission for industry waste management plans, and discusses the purpose, role and way forward for the guideline to assist industry planning. It is proposed that the guideline, as amended after the consultation phase, be used as a baseline evaluation tool.

The Waste Act provides for a national Waste Information System to be established. The current dearth of accurate and reliable information to inform planning and support decision making and waste policy impact assessment underlines the central importance of a well functioning and reliable waste information system. This paper points out that the current national waste information system meets neither current reporting requirements nor the requirements set out in the Waste Act. However, the information system is designed in such a way that it can be expanded to include the required data over time. Provisions for access to information by stakeholders and the public need to be implemented in order to fulfil a key requirement of the Waste Act. The paper notes the progress made with implementing the new waste information system, and looks at the challenges with meeting the requirements as per the Act. Ultimately, the success of the waste information system will depend on the extent to which it is able to streamline information requirements, and align these with related information systems used for the purposes of licensing and compliance monitoring

In addition to the system of norms and standards, the regulation of waste activities is the other main regulatory mechanism established by the Act. The paper details the two key components of regulation; the identification of waste management activities and the consequences of listing such as licensing. Waste management activities are identified at various stages of the waste management value chain, both in the Act and in subsequent regulations. The consequences of such identification are either a requirement for licensing of the activity or the application of required standards. The paper notes that the option for setting standards as an alternative to licensing has not been exercised by the Department, and it sets out criteria that should be considered for exemption to the licensing requirement. The Waste Act allocates responsibility for licensing to the provincial sphere of government, with national government dealing only with certain circumstances such as hazardous waste licenses. In general, the level of government at which licensing authorisation takes place is also the level at which compliance monitoring takes place.

In addition to the planning and regulation of waste management activities, there are additional special measures which have been identified by the Waste Act. In general these measures provide for serious economic and other consequences in terms of regulation, and affect amongst others product design and production process. The paper characterises these mechanisms as a second line of defence, and argues that the starting point for addressing waste management challenges should be through the voluntary and planning measures provided in the Act.

The Act provides for specific regulatory measures to be taken with respect to priority wastes. The process for identifying a priority waste and the consequences of this are considered, and criteria are proposed for the identification of priority wastes. The concept of extended producer responsibility is explored, particularly in terms of voluntary and industry driven initiatives. The requirement for interdepartmental co-operation around these measures is emphasised.

The extensive provisions for contaminated land, and the investigative and decision making process that are set out in the Act are explored. The retrospective application of the provisions is potentially open to legal challenge, and will need to be tested by the courts. Whilst there are clear benefits arising from the new provisions, especially in terms of the voluntary actions it will trigger, several concerns are raised regarding the legal definitions, scope of application, and administrative burden of dealing with land remediation. The paper makes proposals regarding areas that need to be tightened up, and the need for a mechanism to finance land remediation where the responsible parties cannot be identified.

Special measures for those transporting waste for gain are provided, including the requirement to register with the relevant waste management officer or acquire a permit. Some concerns regarding the use of private service-providers are raised, and the paper cautions against triggering administrative overload.

The key international obligations are examined in terms of the mechanisms required to give effect to the Republic's international obligations. A recent government initiative led by the Department of Environmental Affairs and the Department of Trade and Industry has established the interdepartmental committee for the sound management of chemicals. The remit of this committee includes implementing of restrictions on the import and export of controlled substances and products, and recommendations regarding whether or not to cede to certain international instruments. Alignment of this system with the SARS tariffs codes and the issuing of licenses by the International Trade Administration (ITAC) will significantly improve the efficiency of the permitting and import control systems.

Institutional roles and responsibilities for all three spheres of government are provided for in the Waste Act. The paper comprehensively describes both mandatory and discretionary measures for each sphere of government as per the Waste Act. The interconnection and interdependence among the different measures is noted as an important issue requiring attention in the NWMS, and this will also provide an opportunity to streamline some processes. There are some areas that require additional clarity before the system can be established effectively.

The Waste Act provides for various offences and penalties, which this paper describes and classifies systematically. Principally the system of compliance monitoring and enforcement will implemented in terms of NEMA Chapter 7, and will rely on the role of Environmental Management Inspectors working in conjunction with Waste Management Officers. The capacity of the environmental management inspectorate will need to be significantly increased in order to deal with the additional regulatory burden arising from the Waste Act.

The paper considers the role of the Waste Management Officers, and, in addition to the coordination role assigned by the Waste Act, it is recommended that they take on an independent regulator role, focusing on ensuring compliance with the norms and standards set in terms of the Act. Co-ordination structures will be key to the successful implementation of the system of Waste Management Officers, and these are described in some detail. It is recommended that a dedicated national structure for co-ordinating WMO activities is created.

Looking forward, it is intended that this research paper will inform the discussion and process around the development of the national waste management strategy. There are a number of recommendations contained in the paper, which require further debate and elaboration. There may also be some aspects of the regulatory system that this paper has overlooked. The inputs and debates, both from stakeholders and government, will be crucial to the next phase of the process, and ultimately enable all parties to effectively implement the provisions of the Waste Act.

# 1 Introduction

The research paper explores the regulatory activities and compliance actions to be undertaken by the three spheres of government in relation to the requirements of the Waste Act, 2008, which came into effect on 1 July 2009. The paper addresses the swathe of regulatory actions either provided for or anticipated in this Act as well as associated actions in terms of the National Environmental Management Act (NEMA) as amended.

The paper is one of five research papers commissioned as part of the second phase of the process to develop the National Waste Management Strategy (NWMS). The NWMS is contemplated in section 6 of the Act and is intended to give effect to the provisions of the Act. The second phase of preparing the NWMS, which focused on situation and baseline studies, addressed five main themes, and this paper specifically addressed the regulatory aspects of the Act. The intention is to use these research papers to engage with stakeholders as a basis for identifying and exploring the essential issues that should be addressed and prioritized in the ultimate formulation of the strategy. Based on stakeholder engagement around the research papers, a synthesis paper will be prepared, which will draw together the strategic issues and debates as a foundation for the strategy itself.

The research paper is structured according to seven primary themes, which are closely aligned to the provisions of the Act. The first addresses the legislative context including the constitutional allocation of powers and functions, an approach to conceptualising the Waste Act, and issues relating to the definition of waste. The second theme looks at the mechanism of norms and standards, which is seen as a foundation of the regulatory system for waste. The third theme concerns provisions for information, planning and reporting and includes an overview of the interlocking integrated waste management planning system as well as the provisions for industry waste management planning and the effective functioning of the waste information system. The fourth theme focuses on the regulation of waste activities in respect to the listing of waste management activities and associated licensing requirements and procedures. The fifth theme addresses the more interventionist forms of regulation, which entails the declaration of priority wastes, extended producer responsibility, land contamination and its remediation, and regulation of transportation of waste. The sixth theme describes our obligations with respect to multilateral environmental agreements and how to give effect to these as is required by the Act. The last theme attends to the institutional implications of the regulatory requirements of the Act, including the division of responsibilities among the three spheres of government, the system of Waste Management Officers, and the compliance and enforcement measures and the attendant role of Environmental Management Inspectors.

The **methodology** in the preparation of this paper was based on a review of the relevant policies, legislation, regulations and guidelines, both from the Department of Environmental Affairs (DEA) and from associated government departments such as

Trade and Industry (DTI). This was complemented by interviews with officials from the Department of Environmental Affairs (DEA) and business and waste management experts. The researchers were also informed by stakeholder inputs and views made during the process of drafting the Waste Act, and comments on the NWMS framework document released earlier in the process. Where relevant international regulatory systems were reviewed, and the lessons derived for application in South Africa. Sources consulted have been included in the reference section.

The approach to the recommendations made in the paper is informed by careful consideration of the environmental and waste management objectives set in policy and legislation. The achievement of administrative efficiency and simplicity coupled with the alignment of actions with the available government capacity to implement them were also very influential concerns. Where possible, the option for integration of processes as well as the linking up different component of government, essential to the notion of “joined up government”, were factored in.

In undertaking the review, the authors are mindful of the need to strike a balance between “hard” and “soft” regulatory mechanisms, and how to balance voluntary initiatives and incentives with command and control mechanisms. It is envisaged that compliance and enforcement mechanisms, as a general rule, should constitute a second line of defence in achieving the objectives of the Act, and the primary objective should be to incentivise adaptation and voluntary initiatives within industry and households to achieve a “low waste” future. The system of economic measures and incentives is the subject of a separate research paper, and it is therefore not covered by this paper.

## 2 Legislative context

The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) is the foundation of the system of environmental regulation and policy, and creates a human rights foundation for society and government that includes ‘third generation’ development rights. Section 24 of Chapter 2 – the Bill of Rights establishes that:

*Everyone has the right -*

- a) to an environment that is not harmful to their health or well-being; and*
- b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –*
  - i. prevent pollution and ecological degradation;*
  - ii. promote conservation; and*
  - iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”*

Since the adoption of the Constitution, a number of significant policy and legislative steps have been taken to give effect to these environmental rights in relation to waste management, and they include:

- The 1997 White Paper on Environmental Management, which first defined a hierarchy of waste management practices that remains a key principle of our waste management policy
- The White Paper on Integrated Pollution and Waste Management (1998);
- National Water Act (1998); and
- The promulgation of the National Environmental Management Act (NEMA) (1998), which established the principles that govern all environmental management activities.

NEMA establishes the following principles which are relevant to waste management policy and implementation:

- The waste hierarchy approach that establishes avoidance or minimization of waste as the most important objective of waste management;
- A life cycle approach to waste management encompassing extended producer responsibility;
- The Precautionary Principle which requires that decision-making on environmental issues takes into account the limits of current knowledge about the consequences of decisions and actions;
- A requirement for planning to anticipate, and therefore prevent, minimize, and remedy negative impacts on the environment and human health;
- The “polluter pays” principle, which indicates that the environmental and health costs of pollution must be paid for by those responsible for harming the environment.

By providing a coherent framework of principles for environmental planning within the context of co-operative governance, NEMA paved the way for the development of the first National Waste Management Strategy (NWMS), published in October 1999. NEMA and its amendments has also provided a detailed regulatory framework for the performance of Environmental Impact Assessments (EIAs) that will continue to play a role in the licensing of waste management activities.

The first DEAT National Waste Summit held at Polokwane in September 2001 resulted in the Polokwane Declaration, which set ambitious targets for waste reduction, some of which may need to be re-examined in terms of current economic realities.

One of the shortcomings of the 1999 NWMS was the lack of an enforceable regulatory system for waste management, and this is substantially addressed in the 2008 Waste Act. The Waste Act, 2008, is a turning point for waste management, in that for the first time, there is a legal basis for much of the waste policy developed over last decade. The

Act was developed over a number of years, and involved a prolonged consultation process with stakeholders. There is a strong focus on regulatory measures, and compliance with waste legislation and policy, which has concerned a number of stakeholders. However not all the regulatory provisions are mandatory, and a number of the tools provided by the Act can be utilised as the situation demands them. The main components of the Act are:

- Provision for national norms and standards to be established for waste, as well as provincial and local standards.
- Measures to regulate the delivery of waste services by municipalities.
- Establishment of the waste information system, and mandatory provisions for reporting into the system.
- Establishment of an integrated system of waste management planning and reporting on performance against plans.
- Regulation of waste management activities through a system of listing and licensing activities.
- Various legal measures for waste minimization, including recycling, re-using, and recovering waste.
- Measures to regulate treatment and safe disposal of waste as a last resort.
- Measures for the remediation of contaminated land.

In order to understand the architecture of the Waste Act, and hence develop an approach to its implementation, it is important to read it within the context of the Constitution and its allocation of powers and functions. This is analysed further in the following section.

## 2.1 Constitutional allocation of powers and functions

The Constitution of the Republic of South Africa, 1996, lists *environment* and *pollution control* as areas of concurrent legislative competence, which means that both national and provincial legislatures may pass legislation dealing with these matters. Section 146 of the Constitution indicates that national legislation prevails over provincial legislation in certain instances, including where, in order for a matter to be dealt with effectively, it requires national uniformity through establishing national norms and standards, frameworks and policies. To the extent that waste management issues and measures relate to the environment and pollution control, these Constitutional provisions will pertain.

The establishment of a national system for managing waste therefore turns on the need for national uniformity in regard to the *environment* and *pollution control* through establishing national norms and standards, frameworks and policies. It is clear that the Waste Act seeks to achieve such uniformity, at the same time as recognising areas of independent jurisdictional competence for other spheres of government.

The Constitution also lists *cleansing and refuse removal, refuse dumps and solid waste disposal* as local government matters that are areas of exclusive provincial legislative competence (Schedule 5B matters). Municipalities have executive authority in relation to *cleansing and refuse removal, refuse dumps and solid waste disposal* including the ability to pass and administer by-laws. National and provincial government are required by the Constitution to support and strengthen municipalities' ability to manage their own affairs, exercise their powers and perform their functions. National and provincial governments have the legislative and executive authority to see to the effective performance by municipalities of their functions, but they may not impede or interfere with local government's basic right to exercise its executive powers.

The power of the national legislature with respect to Schedule 5B matters, including *cleansing, refuse removal, refuse dumps and solid waste disposal* is circumscribed. Parliament may only pass legislation dealing with areas of exclusive provincial legislative competence, including Section 5B local government matters, under certain circumstances. As far as waste management is concerned, these circumstances include instances when it is necessary to maintain essential national standards, or minimum standards for rendering a service.

The Waste Act therefore approaches the regulation of municipal functions relating to waste in an extremely cautious manner, and bases its entire approach in this regard on *essential national standards*, and on *minimum standards for rendering a service*. This underlines the importance of the norms and standards provisions set out in the Waste Act. These are essentially the foundation of the regulatory system created by the Waste Act, and all other regulatory tools and mechanisms flow from them. The importance of a properly functioning system of standards, and the mechanisms for setting and monitoring compliance with standards, therefore cannot be overemphasised.

Another important issue to consider in relation to the Waste Act is the definition of waste, and hence the scope of regulatory activities relating to waste.

## 2.2 The Definition of Waste

The definition of waste in the Waste Act states that “**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
  - ii. any portion of waste, once re-used, recycled and recovered, ceases to be waste.

In order to effectively regulate the waste sector, it is important to clarify exactly when waste becomes waste, and when it ceases to be waste. It is generally accepted that after recovery or treatment, a waste material becomes a product and ceases to be a waste, provided that it has market value within its geographic location. There is thus a need to determine at what point waste materials such as recovered paper, plastic, and glass (i.e. clean recyclates) become a resource in a production process, or a fuel for a thermal process, as this would impact on the storage requirements for these materials. In terms of licensing and regulation, this could also have significant financial implications.

It is important to note that with respect to (d)(ii) above, and in terms of the respective definitions in the Act, “re-used” and “recycled” imply that those processes have been completed, whereas “recovered” (or recovery) implies that certain materials have been extracted from the waste stream in preparation for use in the production of a product. Although separated paper, plastics, glass and metal cans or scrap can be described as “recovered” and hence cease to be waste, other wastes such as chemical or hazardous wastes will still require special care or handling measures.

It is also interesting to note that the definition in the Act makes no mention of the potential impact of waste on human health or the environment, although it is mentioned in the definitions for “general waste” and “hazardous waste”. The question then arises as to the status of recovered recyclates, which are still contaminated and can still have an impact on human health. Such recyclates are normally recovered from a mixed waste stream or in a “dirty” materials recovery facility (referred to as a dirty MRF). Clean recyclates, which can be recovered through separation at source from co-mingled waste or in a clean separation process, can, however, be considered to have ceased being waste.

In order to clarify when certain waste materials cease to be wastes, it is recommended that technical guidelines be developed to assist with the legal interpretation of the definition.

In terms of mining waste, and in particular residue deposits and residue stockpiles, these are excluded from the ambit of the Waste Act as they are regulated under the Mineral and Petroleum Resources Development Act, 2002. Mine residue means any waste rock, slimes or tailings derived from any mining operation or from processing of any minerals; it includes the part of the material that remains or results after processing to extract those constituents or parts which are extracted at the time, but excludes material used for backfill in underground mines and overburden removed in the course of open cast mining.

The management of mine residue deposits (MRDs) – dump, heap, pile, filling or tailings dam - includes two components, namely:

1. A mandatory Code of Practice (CoP) prepared in accordance with section 9(2) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996), which addresses the

- design and operational aspects of the MRD throughout the life cycle of the deposit, and
2. An approved Environmental Management Programme Report (EMPR) required in terms of the abovementioned act, which addresses the management of environmental impacts.

The above two components are closely related and should be treated in an integrated manner.

Failure to comply with the CoP is not a breach of the Mine Health and Safety Act in itself, but where failure to comply also constitutes a breach of any of the employer's obligations under this Act in terms of health and safety, the employer could be liable for an administrative fine.

Whilst residue deposits and stockpiles are clearly excluded from the ambit of the Act, there is an opportunity to address current and future mining waste as the definition of waste in the Waste Act mentions that the Minister can identify "waste generated by the mining ... sector", by notice in the Gazette, without any further clarification.

At this point, it would appear that mining waste is adequately controlled or managed by the DME through the Mine Health and Safety Act and Minerals Acts and should not be included within the ambit of the Waste Act. However, the issue of contaminated land arising from poorly operated or abandoned mines may need to be considered for inclusion.

### **3 Norms & standards**

As indicated in the preceding Chapter, the Waste Act places great emphasis on the development of national norms and standards, largely as a result of the Constitutional framework that it has to negotiate. The South African constitution also establishes access to a clean and healthy environment as a constitutional right. The Waste Act provides the legislative basis for the realisation of this constitutional imperative in terms waste management, and it is appropriate that it establishes a national system of norms and standards as the foundation of the regulatory system for waste management.

Two approaches to norms and standards are adopted in the Waste Act. In the first instance, the Waste Act establishes mandatory requirements for the development and implementation of specific norms and standards that provide definition to measures in the Act as a whole, and establish baseline requirements for waste management. In the second instance, norms and standards are treated as an optional instrument for the achieving broad policy objectives defined in the Act. Provinces are also permitted to develop their own norms and standards in so far as they do not conflict with minimum norms and standards that will have been established nationally.

The national norms and standards whose development and implementation are mandatory in terms of the Act are:

- A standard classification system for waste
- National norms and standards for the storage, treatment and disposal of waste
- National norms and standards for the delivery of waste management services.

The Act specifically allows these mandatory standards to differentiate between different geographical areas, and to differentiate between different classes or categories of waste. It also allows for the phasing in of the norms and standards.

Norms and standards may also be set at a national level as an instrument for achieving the objectives of the Act in terms of:

- Waste minimisation, re-use, recycling and recovery
- Waste separation
- Extended producer responsibility;
- Regionalisation of waste services
- Remediation of contaminated land
- Technical criteria in terms of the scope and content of Integrated Waste Management Plans at the Provincial and Municipal levels of government.

The Minister can also set national standards for tariffs for municipal waste services, but only with the concurrence of the Minister of Finance. The Municipal Finance Management Act, No. 56 of 2003, already prescribes a detailed system for municipal budgeting, revenue management and financial control, and any norms and standards would need to be developed in a manner that complements this system.

As stated previously, provincial MECs have the power to set norms and standards that are not in conflict with any national norms and standards. The Act includes the proviso that such standards must, amongst other things, facilitate and advance:

- planning and provision of waste management services;
- regionalisation of waste management services within the province;
- minimisation, re-use, recycling and recovery of waste (but excluding any standards that will have national implications or impact on the national economy); and
- treatment and disposal of waste, including the planning and operation of waste treatment and waste disposal facilities, licensed by provincial authorities.

While it is the Constitutional prerogative of provinces to regulate in these areas, it is recommended that serious consideration is given to the implications of multiple different jurisdictions with different standards for waste management. The process of setting, certifying and monitoring compliance with a national set of standards is complex enough to administer, and pronounced provincial differences in approach will severely test capacity to administer such a system. There is also the danger of industries shopping

around between the provinces for laxer norms and standards, and consequent distortions and inefficiencies arising within the industrial and manufacturing sectors.

The Waste Act also directly sets certain standards, such as the provisions for storage of waste that are set out in Section 21. Where it is believed that there is an immediate need for the development of norms and standards, or where existing norms and standards should be applied with respect to the above measures, recommendations are made under the relevant sections of this paper.

It is important to note that the norms and standards set in terms of the Waste Act are legally enforceable in terms of section 67 and 68 of the Act, which make the contravention by any person of a norm or standard in terms of the Act a punishable offence with a fine of R5 million or imprisonment not exceeding 5 years, or both. This is in addition to any other penalty or award that may be imposed or made in terms of NEMA.

### **3.1 Categorisation and classification of waste**

The development of national norms and standards for the classification of waste, as well as being an explicit requirement of the Waste Act, is critical to the implementation of many of the measures described in the Act, and particularly the special measures with respect to licensing of listed waste management activities, declarations of priority wastes, and contaminated lands.

The type of licensing procedure that needs to be followed for listed waste management activities will in many cases be determined by whether the activity involves waste that is classified as hazardous. Similarly, the classification of hazardous wastes will inform the identification of priority wastes and the assessment process for lands added to the register of contaminated lands.

The current system of waste classification derives from a DWAF initiative to develop a waste classification system as part of the requirements for fulfilling international obligations in terms of the Basel Convention on Hazardous Waste. The classification system is set out in the Minimum Requirements for the Handling, Classification, and Disposal of Hazardous Waste.

#### **3.1.1 Minimum Requirements for the Handling, Classification, and Disposal of Hazardous Waste**

On the assumption that all waste is potentially hazardous, the Minimum Requirements adopt a risk-based approach to waste classification, with low-risk waste being classed as *general waste* and high-risk waste classed as *hazardous waste*.

A four step process is utilised for the classification of hazardous waste:

- 1) Waste or waste streams are identified as 'probably' hazardous.
- 2) Testing and analysis is undertaken to determine the hazardous properties, characteristics or components of the waste or waste stream. This will confirm whether the waste is hazardous or not.
- 3) The waste or waste stream is classified and treated in accordance with the SABS Code 0228 for "The Identification and Classification of Dangerous Substances and Goods".
- 4) An analysis is undertaken and a Hazard Rating assigned to the waste or its residue, in order to determine the Minimum Requirements for disposal.

If a waste is not a *hazardous waste*, it is deemed to be a *general waste* and is only categorised in terms of its point of origin, i.e. domestic, commercial, industrial or builder's rubble. It is recognised that domestic waste is likely to include small quantities of hazardous waste from sources such as batteries, insecticides, weed killers, and medical waste.

In terms of the Minimum Requirements, general waste can be disposed of at any landfill site.

In the Minimum Requirements, hazardous waste is defined as an inorganic or organic element or compound that, because of its toxicological, physical, chemical or persistency properties, may exercise detrimental acute or chronic impacts on human health and the environment.

Hazardous waste is evaluated in terms of a specific set of risks that might be presented by each hazardous waste, which include:

- Explosion or fire
- Infections, pathogens, parasites, or their vectors
- Chemical instability, reactions, or corrosions
- Carcinogens and mutagens
- Toxicity, including persistence in the food chain and ecological system

Various potential types of hazardous waste are also identified, including organic and inorganic chemicals, oily wastes, putrescent animal or vegetable matter, and high volume wastes with a low concentration of hazardous substances such as heavy metals and oils.

Additionally, various potential sources of hazardous waste are identified, including sewage sludge, medical and laboratory waste, explosive waste, harbour dredging spoil, and building rubble.

Hazardous wastes are classified in terms of four categories (1-4) based on the level of risk, and these categories are indicative of the type of landfill site at which they can be disposed.

**Table 1 Hazardous waste classification**

<b>Classification</b>	<b>Example</b>	<b>Category of disposal site</b>
• HR 1: Extreme Hazard	• Hg and PCBs	• HH
• HR 2: High Hazard	• Mn and Zn	• HH
• HR 3: Moderate Hazard	• Ni and phenol	• Hh
• HR 4: Low Hazard	• Ethanol	• Hh
• Non-toxic/Non-hazardous	• Domestic waste	• G

Waste from the first two categories of risk (extreme and high) can only be disposed of at landfill sites with an H:H rating, at which appropriate measures have been taken to mitigate risk. Categories 3 and 4 (moderate to low) can be disposed of at landfills with either an H;H rating, or a H:h rating.

The Minimum Requirements also refer to the 9 classes of hazardous waste defined in the SABS 0228 standards for the transport of hazardous waste. All hazardous waste needs to be defined in terms of these standards:

- Class 1: Explosives
- Class 2: Gases
- Class 3: Flammable liquids
- Class 4: Flammable solids
- Class 5: Oxidising substances and organic peroxides
- Class 6: Toxic and infectious substances
- Class 7: Radioactive substances
- Class 8: Corrosives
- Class 9: Other miscellaneous substances.

A third edition of the Minimum Requirements for Waste Disposal by Landfill in South Africa (DWAF, 2005) was drafted to specifically address problematic hazardous wastes such as medical and asbestos waste; as well as the limitations regarding analytical detection limits. A protocol for improving the downstream use of hazardous wastes was also included.

### **3.1.2 Revision of the Hazardous Waste Classification System**

Since the nature of the waste stream and scientific understanding of it is not static, classification systems need to be constantly revised and updated, for instance, relatively new categories such as e-Waste need to be understood and classified as a component of the waste stream. DEA has accordingly initiated a review of the classification of hazardous waste, which will culminate in a new classification system to replace DWAF's minimum requirements for waste categorization (2nd version, 1988). DEA has appointed

an international and local consultant team to identify gaps in the current classification system and set out the needs of a revised classification system, drawing amongst others on the experience of provinces in processing EIA's for waste management.

The project will produce a draft hazardous waste classification system, with a technical support document and a HW-classification system regulation to replace the "Minimum requirements for the handling, classification and disposal of hazardous waste". The project will develop a classification system implementation mechanism and plan. In addition the project will develop a standard leach test criteria for landfilling in the form a draft SABS standard. A guideline will be developed with treatment options for hazardous waste. Classification regulations will be formulated, setting out methods for the way in which particular waste streams need to be managed. Lastly the Minimum Requirements for waste disposal by landfill will be revised and published.

### **3.1.3 Categorisation of waste**

Currently, the Waste Information system categorises waste in terms of the following types:

- General
- Hazardous
- Recyclables
- HCRW (health care risk waste)

The Waste Act indicates that norms and standards may differentiate between different classes or categories of waste. In order to better coordinate and align the information requirements of the various information, licensing and regulatory activities envisaged under the Waste Act, it is proposed that a more detailed system of categorising waste is developed. Such a system should be informed by the categories of waste already established in the Act.

The definitions in the Act distinguish between general and hazardous waste. General waste is further broken down into:

- (a) domestic waste;
- (b) building and demolition waste;
- (c) business waste; and
- (d) inert waste.

It is suggested that the categorisation system also distinguishes between the different sources of waste. The table below provides a suggestion for a more detailed categorisation of waste in terms of source that remains aligned with the classification of waste in terms of General and Hazardous as per the Minimum Requirements.

With respect to the table, it should be noted that there is some inevitable overlap of categories – for instance, e-Waste can be found in domestic, industrial, commercial, and health-care waste streams. Similarly, part of the waste stream arising from industry and commerce would consist of domestic waste. The logic of the categories is that each

waste stream has particular general characteristic warranting specific consideration, even though there may be overlap in specific components of the waste streams.

An inert waste either does not degrade or change in composition, or degrades very slowly. For instance, although paper does degrade, in practice it can have a life of up to 50 years in conventional landfill sites. In some cases, a waste may change its characteristics if it is burnt. Tyres, for instance, become a hazardous waste when they are burnt. Separating out inert and non-inert wastes can present a particular waste management challenge. In the Construction and Demolition waste stream, for instance, building rubble often contains both inert and non-inert waste.

**Table 2 Suggested waste categorization**

Source	General		Hazardous
	Inert	Non-inert	
<b>Domestic</b> (Households, education, sport & recreation facilities)	Inert domestic waste	Organic waste Garden waste Other domestic waste	Batteries, insecticides, light bulbs, fluorescent tubes, etc. (small quantities)
<b>Health care waste</b> (medical waste)	Inert health care general waste (similar to domestic inert)	Other health care general waste	Health care risk waste, Health care risk liquid waste
<b>Commercial</b>	Glass, Plastics, Metal cans, other inert commercial waste	Paper, other general commercial waste	Batteries, Fluorescent lamps, Insecticides etc, (small quantities), Other hazardous commercial waste
<b>Construction &amp; Demolition (C&amp;D)</b> (builders rubble)	Inert C&D waste (soils, bricks, concrete)	Other general C&D waste (timber, paper, craft)	Asbestos, other hazardous C&D waste
<b>Industrial</b>	Glass, Scrap metal, Plastics, Other inert industrial waste	Tyres, Sewage sludge, Other general industrial waste	Oily wastes, Contaminated waste water sludge, Hazardous industrial waste
<b>Agricultural</b>	Inert agricultural waste	Other general agricultural waste	Pesticides, Pharmaceuticals, Abattoir wastes, Other hazardous agricultural wastes
<b>Mining</b>	Inert mining waste (soil, rock, etc)	Residue deposits and stockpiles, Discard, Other general mining waste	Hazardous residue deposits and stockpiles, Other hazardous mining waste
<b>Power Stations</b>	Inert power station waste, Ash	Other general power station waste	Hazardous power station waste
<b>eWaste</b> (originates from all above sources)	Inert eWaste	Other general eWaste	Hazardous eWaste

### 3.2 Norms and standards for waste services

The setting of national norms and standards in terms of delivery of waste services at the municipal level is particularly important mandatory requirement stipulated in the Act, as these standards will form one of the criteria that need to be met by the Integrated Waste Management Plans that need to be developed at a Provincial and Municipal level. To this end, DEA have initiated the Waste Services Delivery Project, which is being conducted by the CSIR, and involves a consultation process to develop standards for waste delivery services that are sustainable in terms of cost-recovery, while at the same time meeting the constitutional imperative to provide universal, affordable access to waste delivery services.

Two sets of standards for waste service delivery are being proposed by the CSIR – the first set of standards revolve around the provision of free basic waste services and involve defining the circumstances under which waste services are provided for free, and the level of service that will be provided. The second set of standards revolve around the collection of waste, and include recommendations for separation of waste at source, measures to promote recycling, and prescriptions in terms of the frequency of collection.

In terms of the Waste Act, these norms and standards can differentiate between different users and different types of waste management services, provided this is done on an equitable basis. Standards can also be used to ensure that funds obtained from waste services are ring-fenced for waste management services. Tariffs can also be imposed for the use of waste management infrastructure or facilities.

In addition to any national or provincial standards that may be set for waste services, it is important to note that a municipality can also set its own local standards for, amongst other things:

- separation, compacting and storage of solid waste
- avoidance and minimisation of the generation of waste and the re-use, recycling and recovery of solid waste;
- directing solid waste to specific waste treatment and disposal facilities;
- control of litter.

### 3.3 Technical Infrastructure for Administering Standards

The enforceability of any norms and standards will depend to a large extent on their technical specificity, and it is important to emphasise that the technical process of preparing norms and standards, together with the required process for public and stakeholder involvement, needs to be diligently followed. The process of regulating and administering standards involves determining product standards, conformity assessment such as product certification, testing and inspection, pre- or post market requirements as well as sanctions if the products fail to meet the technical regulation. The available

capacity to support this lies outside of DEA. The norms and standards that are set in terms of the Waste Act need to be aligned with the overall industry wide system for determining standards for products and services, and ensuring their measurement and certification. This system is referred to as the Standards, Quality Assurance, Accreditation and Metrology (SQAM) infrastructure, or more simply the South African Technical Infrastructure. It falls under the DTI, and over the last few years has been comprehensively overhauled in terms of the DTI policy paper: Modernising the South African Technical Infrastructure of June 2004. The South African technical Infrastructure is governed by four key pieces of legislation, namely:

- The Standards Act, Act 8 of 2008;
- The National Measurement Unit and Measurement Standards Act, Act 18 of 2006;
- The Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 Act No. 19 of 2006;
- The National Regulator for Compulsory Specifications Act, Act 5 of 2008.

This body of legislation has established four key institutions for the purposes of managing the Technical Infrastructure. These are described in more detail below.

### **3.3.1 The South African Bureau of Standards (SABS)**

The South Africa Bureau of Standards (SABS) was re-constituted on 1 September 2008 as the apex body responsible for standardisation and related conformity assessment services. SABS is responsible for the development of national standards and lists technical specifications and procedures to ensure that a material, product, method or service is fit for its purpose and performs in the manner it was intended for. The SABS also provides testing, inspection and certification services to the industry on a commercial basis. For example, SABS supported the chemical industry through the implementation of a standard for the Globally Harmonised System for the classification and labelling of chemicals (GHS). SABS also did the preparatory work to develop the national standard for the regulation of plastic bags. The SABS will play a key role in the development of technically complex standards, at the request of DEA, which can then be made mandatory in terms of regulations promulgated under the Waste Act.

### **3.3.2 The National Regulator for Compulsory Specifications (NRCS)**

National Regulator for Compulsory Specifications (NRCS), previously the regulatory function of the South African Bureau of Standards, was split off into a separate public entity in 2008. The NRCS is mandated to protect the public from products that do not meet the minimum safety standards, and the environment from specific products that can be harmful. The NRCS administers compulsory specifications in various industry sectors. The NRCS also works closely with the South African Revenue Services to prevent entry into the South African borders of non-compliant unsafe products. Where necessary, the NRCS removes non-compliant unsafe products from the South African market. These roles will be important in dealing with hazardous waste, priority wastes,

and product conformity with any national norms and standards set in terms of the Waste Act.

### **3.3.3 National Metrology Institute of South Africa (NMISA)**

The National Metrology Institute of South Africa (NMISA) was established on 1 May 2007 and is responsible for the development, maintenance and dissemination of national measurement standards and units. NMISA must primarily ensure that the South African measurement standards and units are internationally comparable and scientifically valid. Such measurement standards will be particularly important in technically complex areas such as hazardous waste and contaminated land.

### **3.3.4 The South African National Accreditation System (SANAS)**

SANAS was established as a public entity in 2006, in order to manage the accreditation of conformity assessment service providers i.e. to ensure their technical competency and provides formal and independent recognition to such bodies. It ensures that service providers have the competence to perform specific types of calibration, testing, measurement, certification and inspection against a published schedule of activity. In instances where certification of compliance with certain waste standards is required, SANAS will play a key role in accrediting the certification bodies.

### **3.3.5 Using the Technical Infrastructure to implement Waste Act**

In order to ensure that the Technical Infrastructure is able to support the implementation of the Waste Act, it will be important for the DTI to identify waste management as a lead sector requiring priority attention. Consultation between DEA and DTI will be important in this regard. It is recommended that a bilateral engagement or committee, that brings together the necessary Technical Infrastructure institutions with the departmental policy makers, is established to coordinate activities. It will also be necessary for the Technical Infrastructure institutions to fast track the establishment of the various advisory forums for NMISA, SABS and SANAS that will facilitate stakeholder consultation around standards. In addition, it will be important to secure sufficient funding through the Medium Term Expenditure Framework (MTEF) to support the work of the Technical Infrastructure institutions.

## 4 Information, planning and reporting

### 4.1 Planning arrangements

#### 4.1.1 Introduction

The Act makes provision for two distinct sets of waste management plans, those to be prepared by the three spheres of government (“integrated waste management plans”) and those to be prepared by industry (“industry waste management plans”). Section 11(1) of the Waste Act describes the process for developing IWMPs by local, provincial and national government and Section 12 provides for the content of these IWMPs. In terms of industry waste management plans, these are provided for by Sections 28 to 34 of the Act.

The 1999 NWMS regarded the implementation of an Integrated Waste Management Planning system essential for the alignment and coordination of the activities of government and industry to optimise waste management, maximise efficiency and minimise the associated environmental impacts and financial costs of waste. This was identified as a high priority short term initiative in the 1999 NWMS.

The following diagram represents the core of the integrated waste management planning system, which requires integrated hazardous waste management plans, integrated general waste plans and industrial waste management plans.

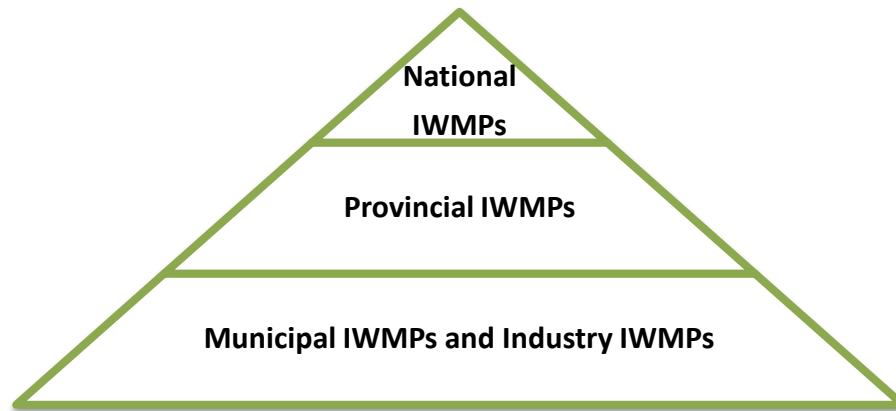
**Figure 1 Integrated waste management planning system**



#### 4.1.2 Integrated Waste Management Planning

The Act now provides for an interlocking set of national, provincial and local IWMPs, which is an evolution of the 1999 NWMS conception, which only provided for IWMPs at a local level.

**Figure 2 IWMP Hierarchy**



Section 11(1) of the Waste Act (2008) prescribes the requirement for Integrated Waste Management Plans (IWMPs) to be developed by the National Department and Provincial Departments responsible for waste management. Neither is obligated to include these plans into other national or provincial plans although this is deemed desirable as it would assist in the integration of waste management with other key environmental programmes.

Municipal IWMPs must be submitted to the MEC for approval and are to be incorporated into municipal Integrated Development Plans (IDPs) as per the requirements of the Municipal Systems Act.

Provincial approval powers are somewhat limited by the Act, with MECs only empowered to “request” amendments to plans on the grounds of substantive or procedural non-compliance with the Act or misalignment with the plans of other spheres. Provincial and national waste management plans are required to take into account the plans of municipalities.

***Contents of the IWMP***

DEAT (2000) issued a “Starter Document for Guidelines for the Compilation of Integrated Waste Management Plans” that emphasized the importance of integrated and optimised waste management “in order to maximise efficiency and minimise the associated environmental impacts and financial costs, and to improve the quality of life of all South Africans”. These guidelines adhered to the conventions of a strategic planning process, taking users through the current situation, projections of future requirements, objective setting, institutional issues, plan development and monitoring and review processes. The Waste Act largely repeats this framework, requiring IWMPs to undertake a situational analysis and set out how national, provincial and local priorities will be addressed. This is required to include the establishment of priorities, objectives, targets and implementation and financing arrangements.

The content of the IWMPs is described in Section 12 (1) and (2) of the Waste Act. The contents of these plans are also to be informed by Chapter 3 of NEMA (procedures for co-operative governance) and Chapter 5 of the Municipal Systems Act (Integrated Development Planning).

The following table provides the content of each plan as provided for by the Act:

**Table 3 Contents of IWMPs**

Applicable section	Focus	National IWMP	Provincial IWMP	Local IWMP
S12(1)(a)(i-iv)	Situational Analysis: population and development profile; waste quantities and types; services and waste management hierarchy; service backlogs.	Yes	Yes	Yes
S12(1)(b)(1-vii)	Ch 3 of NEMA; identify and address negative impacts of poor waste management; implementation of waste management hierarchy; international agreements; best environmental practice.  <b>Unique to municipalities: universal waste services</b>	Yes	Yes	Yes
S12(1)(c)	Measures to support the municipalities to give effect to the objects of the Act.	Yes	Yes	<b>No</b>
S12(1)(d)	Priorities and objectives in respect to waste management.	Yes	Yes	Yes
S12(1)(e)	Targets for the collection, minimization, re-use and recycling of waste.	Yes	Yes	Yes
S12(1)(f)	Approach to the provision of disposal facilities and decommissioning of existing facilities.	Yes	Yes	Yes
S12(1)(g)	Financial resources to give effect to the plan.	Yes	Yes	Yes
S12(1)(h)	Implementation of the plan.	Yes	Yes	Yes
S12(1)(i)	Compliance with requirements prescribed by the Minister.	Yes	Yes	Yes
S12(2)	Give effect to the requirements of Chapter 5 (Integrated Development Planning) of the Municipal Systems Act insofar as the national and provincial IWMPs affect a municipality.	Yes	Yes	<b>No</b>

This table highlights that the three levels of IWMP are largely expected to contain the same content, however, the national and provincial IWMPs also need to focus on the support that will be rendered to municipalities to ensure their achievement of the objectives of the Act as well as the need to give effect to the requirements of Chapter 5 of the Municipal Systems Act in the event that the national or provincial IWMP affects a particular municipality.

### ***Integrated Waste Management Planning Process***

The process of preparing integrated waste management plans is clearly set out in the Waste Act. In the case of national and provincial government, the plans must be prepared by the national and provincial departments responsible for waste management respectively. In the case of local government, the municipality is identified as the responsible body, not any particular department within the Municipality.

All spheres of government are required to follow a consultative process in compiling and finalizing their IWMPs. In the case of national and provincial government, this process must be done in accordance with sections 72 and 73 of the Waste Act. These sections require the Minister or MEC to consult with other affected Ministries or Departments, as well as other organs of state, and to solicit public input and comment before finalizing the plans.

Municipalities must follow a consultative process in accordance with section 29 of the Municipal Systems Act, which sets out the process of informing and consulting the public regarding an integrated development plan. As part of this process, the local community must be consulted on its development needs and priorities, and provision must be made for the local community to participate in the drafting of the IDP. In addition, relevant organs of state, including traditional authorities, must be identified and consulted on the drafting of the IDP. The Waste Act indicates that the application of this process to the IWMP can be integrated and aligned with the IDP process itself.

There is a tiered system for approving IWMPs. In the case of both national and provincial IWMPs, these are submitted to the Minister for approval. Local IWMPs are submitted to the MEC for approval, who must check alignment with other relevant plans, and may request amendments to the IWMP or require adherence to the planning procedures set out in the Waste Act.

With respect to all the IWMPs, provision is made for their integration with broader development or environmental plans. The national department may incorporate its IWMP into any national environmental plan (which could include the annual strategic of the department). The province may incorporate its IWMP into any relevant provincial plan – this could include the strategic plan for the department, or more broadly the provincial development plan. Municipalities are given a tighter mandate, which is that their IWMP must be integrated with the municipal IDP. This is important in order to mainstream the IWMP within the overall planning, monitoring and reporting systems set up for municipalities.

The following table summarises the procedural requirements for IWMPs for each of the three spheres of government.

**Table 4 Procedural requirements for IWMPs**

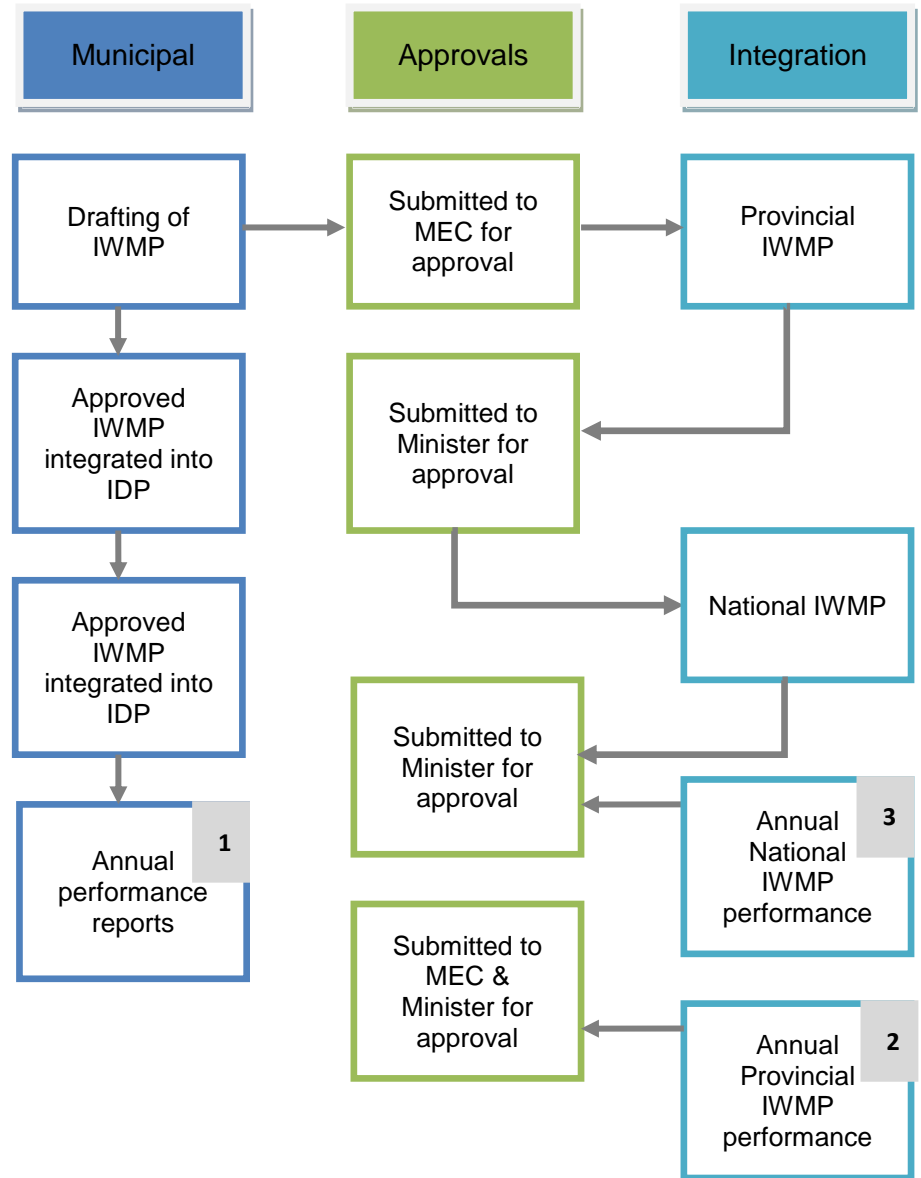
<b>Requirement</b>	<b>National IWMP</b>	<b>Provincial IWMP</b>	<b>Local IWMP</b>
<b>Plan prepared by</b>	National department responsible for waste management	Provincial department responsible for waste management	Municipality
<b>Consultation process</b>	Must follow a consultative process in accordance with sections 72 and 73 of Waste Act	Must follow a consultative process in accordance with sections 72 and 73 of Waste Act	Must follow a consultative process in accordance with section 29 of Municipal Systems Act; can be integrated with IDP process
<b>Approval process</b>	Submitted to Minister for approval	Submitted to Minister for approval	Submitted to MEC for approval. MEC must check alignment with other plans, and may request amendments or adherence to procedures
<b>Integration requirements</b>	May incorporate IWMP into any national environmental plan	May incorporate IWMP into any relevant provincial plan	Must be integrated with IDP
<b>Reporting requirements</b>	Annual performance reports submitted to Minister for approval	Annual performance reports submitted to MEC and Minister for approval	Reporting on IWMP integrated with annual performance report in terms of Section 46 of MSA

**Figure 3 Reporting requirements for IWMPs**

The Waste Act set out a series of reporting requirements on progress against IWMPs, which are extremely significant in that they establish a nationally integrated performance monitoring and management system. The national department must submit an annual performance report to the Minister for approval. Provincial departments must submit annual performance reports to both the MEC and the Minister for approval. At municipal level the process of reporting on the IWMP is integrated with the overall annual performance report for the municipality in terms of Section 46 of the Municipal Systems Act.

The Waste Act does not give clear timeframes for the preparation of IWMPs, or for the annual cycle of reporting. However, there is a strong imperative for the annual cycle of planning and reporting to be aligned with the main planning and reporting systems for government. In 2004, the Cabinet initiated plans for a **government-wide monitoring and evaluation system**, and the Presidency subsequently developed the **Government-wide Monitoring and Evaluation Framework**. This framework set out the relationship between the processes of planning, budgeting and reporting within each sphere of government, and describes the relationship between these processes. There are four key phases to the cycle, which are:

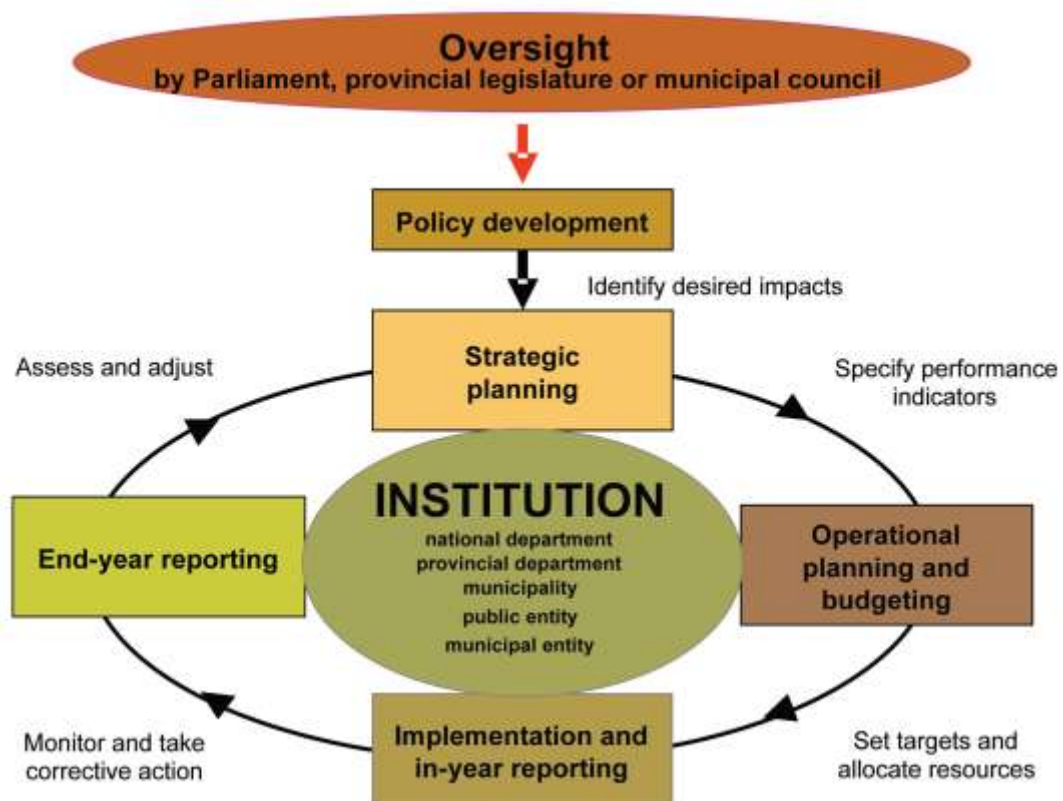
- Strategic planning – this would be the phase during which the IWMP would be prepared, and it should be aligned with the overall strategic plan of the institution concerned;



- Operational planning and budgeting – importantly, this would be the phase in which the budget implications of the IWMP are set out, and operational plans for its implementation developed;
- Implementation and in-year reporting – the progress with implementing the IWMP would be monitored at the same time;
- End-year reporting – the performance reports on implementation of IWMPs would coincide with this phase.

The system is summarized in the diagram below:

**Figure 4 Framework for managing programme performance information**



Source: *Framework for Managing Programme Performance Information, National Treasury, May 2007.*

Integral to the design of the system is the principle that the executive of each sphere of government is accountable to its relevant elected representative body for the entire process. In order to ensure proper accountability and reporting, a system of regular reports is required at each stage of the process.

The system described above in relation to any single budget year is further complicated, in that at any given time within government, the cycles and associated information from

multiple budget years is being considered. While organs of state are preparing plans and budgets for next year, they are busy with implementation for the current year, and at the same time are in the process of reporting on last year's performance.

It is recommended that the system of planning and reporting on IWMPs for each sphere of government is closely aligned with, and indeed mainstreamed within, the Government-wide Monitoring and Evaluation Framework. It is recommended that an annual calendar for the preparation of IWMPs and performance reporting on the plans is produced. It must be noted that due to the discrepancies in financial years for the different spheres of government, this calendar will need to be tailored to the needs and budget cycles of each sphere of government.

The Minister is empowered to make regulations regarding waste management planning, and it is recommended these regulations address the process of alignment and the consequent timeframes and deadlines for IWMPs and annual performance reports.

#### ***Integrated Waste Management Planning Guidance***

The Department has prepared a National Framework Guideline for the Development of Integrated Waste Management Planning (January 2009), primarily directed at provincial departments and municipalities. It is comprehensive in terms of the contents of the IWMPs, although it does not address the contents of the National IWMPs nor does it deal with the process for achieving an interlocking system of waste management plans.

It is recommended that further guidance is given as to how the plans of various agencies will be coordinated and integrated. Although each plan must be submitted to national or provincial authorities for approval, incorporated within relevant national and provincial plans, and aligned with other plans, strategies and programmes, the actual sequencing of these processes, and the consequent annual calendar for planning and reporting, needs further development.

It is also recommended that guidelines for IWMPs must take into account the varying contexts and capabilities of provinces and municipalities; provide guidance on key priorities and sequencing of interventions in differing contexts; and factor in the considerable resourcing constraints and associated issues that face the sector.

#### **4.1.3 Industry Waste Management Plans**

##### ***Provision for Industry Waste Management Plans***

Industry Waste Management Plans are provided for by Part 7 of the Waste Act, and are a key mechanism for rolling out the provision of the Waste Act to industry. While a large part of this section of the legislation focuses on instances in which these plans may be requested by the Minister or relevant MEC, it must be noted that plans may also be developed and submitted by industry on a voluntary basis. As will be discussed later in this section, this latter provision is in fact the preferable route to follow, and the focus on

the more heavy handed regulatory approach should be viewed as a second line measure.

The Minister or relevant MEC may require an industry waste management plan from either a person, a category of persons or industry (referred to for brevity as “the affected party”) or from an organ of state, other than a municipality. Plans from an affected party may only be requested where waste generation or the waste management activity occurs in more than one province. In the event that the Minister has already requested the plan, the MEC may not submit a further request.

The rationale for requesting the preparation of an industry waste management plan must be informed by the following three criteria for consideration: 1) the potential impact of the waste on health and the environment and how this can be reduced; 2) the environmental sensitivity and/or quantity of a natural resource consumed during the production/manufacturing process and how to conserve this resource; and 3) whether the plan will contribute to waste minimization, risk mitigation and resource conservation.

With respect to the plans to be prepared by an organ of state, the purpose of this provision is to take into account circumstances in which the affected party has failed to produce or amend a plan, in which the capacity of the affected party to prepare the plan is limited, or where for reasons of industry structure (such as highly fragmented or dispersed industries) it is not feasible for the industry to produce a plan.

***Content of industry waste management plans***

Section 30(1) states that the Minister, or MEC, must specify the information to be included in the plan and Section 30(2)(a-l) provides a list of issues that may be addressed in such a plan. Draft guidelines have also been developed to elaborate on the content of the IWMPs.

***Procedural requirements***

There are certain procedural requirements to be complied with by the Minister or MEC in respect to the industry waste management plans as provided in this table:

**Table 5 Procedural requirements of IWMPs for the Minister or MEC**

<b>Section</b>	<b>Action</b>	<b>Process</b>
28(1)(2)	Request for IWMP from a person, category of person or industry	These parties must be consulted before receiving notice of request for IWMP.
28(1) & 29(1)(2)	Request for IWMP from a person or organ of state	This is to be supplied by written notice.
28(1)(2)	Request for IWMP from a category of person or industry	This is to be supplied by gazette notice.
29(5)(2)	Request for information in preparation of IWMP by organ of state or provincial department	By way of written notice, they may require any person to provide information for the preparation of the IWMP.

Section	Action	Process
29(6)	Preparation of IWMP by organ of state or provincial department	They must follow a consultative process in the preparation of the plan as provided by Section 72 and 73.
30(1)	Contents of the IWMPs	The Minister or MEC must publish these in a notice.
31(2)	Preparation of IWMP by organ of state or provincial department where a person has failed to do so	They must bring the contents of the plan to the attention of relevant organs of state, interested persons and the state.
32(6) and 34(1)	Approval of IWMP	Notice must be given in the relevant Gazette of an approved IWMP prepared in accordance with Section 28 as well as the review intervals
32(7) and 34(1)	Approval of IWMP	An IWMP prepared by an organ of state or provincial department that has been approved by the Minister or MEC must be published in the relevant Gazette with an indication of when and how the plan must be implemented and reviewed.
33(1)	Specification of measures to be taken	If a IWMP has been rejected or not prepared, the Minister or MEC, by notice in writing specify the waste management measures that must be taken by the person
34(1)	Review of IWMP	The approved IWMP must be reviewed according to the intervals specified in the approval

In terms of the process to be followed, the Minister or MEC must provide a person or organ of state with a written notice, and in respect of a category of persons or industry, a notice must be published in the Gazette. However, this cannot be done without prior consultation with the affected party (i.e. person, category of person, industry).

The Minister or MEC also has the discretion to request the appointment of an independent person to prepare the plan at the expense of the affected party.

### ***Status of Industry Waste Management Planning***

To date, DEA has prioritised four industries to prepare industry waste management plans; these are tyres, paper and packaging, light fittings containing mercury including CFLs, and pesticides (both agriculture and veterinary).<sup>1</sup> These four industries are considered the first wave or phase of industries to be approached and the Department is currently applying its mind to the next phase of industries to be approached. It is expected that the NWMS will provide some direction in this regard.

At the time of the research, a draft tyre industry waste management plan had been submitted to the Department for review.

In selecting priority industries for the preparation of industry waste management plans, it is useful to reflect back on the criteria set out in the Act that should guide the Minister

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<sup>1</sup> Dee Fischer, pers. comm., 07/08/09

and MEC in this regard. Industries should be selected in which there is a high actual or potential impact of the waste generated by that industry on health and the environment. Industries should also be selected in which high quantities of environmentally sensitive natural resources are consumed during the production or manufacturing process. It should be clear that a coordinated planning approach will be able to make a positive contribution to waste minimization, risk mitigation and resource conservation. By carefully selecting the first generation of industry waste management plans, it will be possible to establish some important precedents and benchmarks for further roll-out and application.

### ***Voluntary submission of industry waste management plans***

The voluntary submission of industry waste management plans is preferable in a number of ways. In the first instance, it aligns with the concept of general duty of care, as contemplated in section 16, which requires that a holder of waste take steps to implement the waste management hierarchy and dispose of waste in an environmentally responsible manner. An industry waste management plan may be seen as an articulation of how the duty of care will be effected. In the second instance, if a plan is prepared on a voluntary basis, there is likely to be higher level of goodwill and support from interested and affected parties, and hence its implementation is likely to be more effective. In the third place, it reduces the administrative burden on the state to identify approach and pursue persons for the fulfilment of industry waste management plans. There will also be no failure to produce the plan in terms of the Act if it is undertaken on a voluntary basis, although that is not to suggest that the state will not have to ensure that the contents of the plan align to provisions in the draft guidelines.

The option for the voluntary preparation of industry waste management plans, as contemplated by Section 28(7) of the Act, is currently constrained by the absence of final guidelines on the preparation of industry waste management plans. Thus far, a generic guideline for developing industry waste management plans has been developed and circulated in December 2008 for comment.

Whilst the guideline is a step in the right direction, there are several ways in which they could be strengthened. In terms of the scope of the guideline, it should be clear that it is focusing on waste generation only, and that a separate guideline is needed for dealing with contaminated land. The guideline ought to elaborate on the circumstances under which the development of an industry waste management plan would be required. The tone of the guidelines is more educational than technical, aimed at an audience that is not very familiar with industry waste management planning. The guideline does not address all the key elements of an industry waste plan. The guideline does not factor in the plethora of requirements applicable to most of the processes described in the guideline. It should also make adequate reference to the different regulatory authorities involved in waste management. In terms of definitions, the guideline should make a clear distinction between a waste generator and waste treatment or disposal operators as well as draw a distinction between a company level and sector level plans. It would

also be useful if the guideline reflect the terminology of the Act, and is closely aligned to the provisions of the Act.

It has been recommended that this guideline be gazetted for comment and on the basis of public comments, amended and finalized. The final guideline should then serve as a baseline compliance tool especially in relation to the review of the IWMPs submitted by industry.

## 4.2 Waste information system

Section 60 of the Waste Act, 2008 requires the Minister to establish a national Waste Information System (WIS) for the recording, collection, management and analysis of waste data and information. As has been demonstrated during the NWMS research process, there is a profound lack of accurate information regarding waste streams and activities to support informed decision making. A comprehensive WIS is an important tool in the process of effective waste management and should track waste from generation through to its ultimate state, to ensure that it is not inappropriately handled or disposed of, resulting in pollution.

Section 61 provides that provincial waste information systems may be established and must as a minimum include the information required by the national information system. To date, Gauteng and Western Cape provinces have established provincial waste information systems, which should be aligned with the requirements of the national waste information system.

The **vision** for the WIS is to support local, provincial and national government with respect to the management of waste, by collecting reliable, national data on waste, and by providing “accessible information to interested and affected parties, that will support effective integrated pollution and waste management” (DEAT, 2000). Furthermore, the intention is to collect this data without placing an undue financial and capacity burden onto industry and the private sector, which are responsible for providing the data, and government, which is responsible for collecting, verifying and disseminating the data and information.

A WIS was established as part of the implementation of the 1999 NWMS implementation project, with the development of the required software and launch of an online database. The system is currently underutilized as reporting to date has been done on a voluntary basis. The Waste Act has now made the supply of this information mandatory, which will ensure that a comprehensive database of waste information can be generated.

The current WIS meets the requirements of the Chapter 6 of the Waste Act in some respects. It allows for the registration of licensed waste management activities, including details of the license holders and the location of the licensed waste management activity. It also enables the recording, collection, management and

analysis of data and information of a) quantity of waste generated, b) type of classifications of waste and c) quantity of waste disposed.

In other respects the WIS does not meet the requirements of the Waste Act. However it is evident that the system has been designed such that it can be incrementally expanded to include the required data and information, and over time comply with the provisions of Chapter 6 of the Waste Act.

Chapter 6 states that the objectives of the NWIS are to a) store, verify, analyze, evaluate and provide data for the protection of the environment and management of waste; b) provide information for the development of the IWMP; and c) provide information to the organs of state and the public.

To give effect to these abovementioned objectives, **draft Waste Information Regulations** were published for comment in Government Gazette No 32220 of 8 May 2209, regulating the procedures for registration, the submission and process of the required information and any other matters as contemplated in Chapter 6 of the Waste Act.

In assessing the current arrangements for the WIS, including the draft regulations, a critical issue to be considered is whether the streamlining of information collection has been achieved and the burden of reporting lessened. Given that the licensing system is in the process of being established, there is an important opportunity to integrate the waste management license process and the process to register on and report to the WIS database. It appears that the regulations have set up a waste registration system, together with an ensuing waste registration certificate, as totally separate from the waste licensing system. By requiring waste license holders to submit information again, possibly in a different format, subsequent to an application for a waste management license, the department is doubling the administrative burden both for itself and for license holders. It is therefore recommended that the licensing system and the WIS are run as an integrated system, using a common database and IT system, and that this integration is duplicated at the provincial level.

A second issue concerns the designation and role of the Waste Information Authority. The regulations indicate that suggest that the Minister, or MEC in respect to the provincial WIS, fulfills this role. However, this function clearly needs to be delegated to a dedicated official, and it seems desirable that the Waste Management Officer, responsible for coordinating matters pertaining to waste management, fulfills the role of Waste Information Authority. The same principle applies in respect to the provincial Waste Management Officer.

A third issue involves the independent verification of information that is supplied to the WIS. The regulations do not clarify what is meant by an “audit report” or an “independent person”. It is recommended that an accredited certification body, accredited via the South African National Accreditation System (SANAS), could

provide a certificate of verification of the information provided to the authority, thereby nullifying the need for a separate form.

A fourth issue concerns access to information by stakeholders and the public. Section 64 of the Act provides for access to information contained in the WIS. This is important both for purposes of transparency, and to inform public policy, business decision making and research. There is also an important quid pro quo exchange relating to information submitted to the WIS – the effort made in submitting timely and accurate information has an important corollary in being able to obtain accurate information regarding the functioning of the entire waste sector. Specific regulations should spell out the procedures for access to information.

Ultimately the success of the WIS depends on the establishment of a system in which information providers are not overloaded with reporting demands, from which they can directly extract some value from the information that they provide, and the information of which is independently verifiable. This suggests that streamlining of information collection and the development of verification mechanisms, analysis and dissemination protocols will be important considerations. It is therefore proposed that the regulations need to factor in these criteria in their proposed reformulation.

## 5 Regulation of waste management activities

The Waste Act provides a comprehensive framework for the regulation of waste management activities, which, following the establishment of norms and standards, is another principal regulatory mechanism established by the Act. DEA has already commenced with the implementation of the provision regulating waste management activities, and the NWMS should seek to describe the regulatory mandates established in the Act, set out a recommended approach to implementing these provisions, and deal with the institutional context for regulation, particularly with respect to licensing.

The mechanisms invoked by the Waste Act consist of two main components, namely:

- The process of identifying waste management activities, which is done in the Waste Act itself, as well as through a subsidiary regulatory mechanism of “listing” activities;
- The consequences of listing, which is that the activity is either subject to a licensing process, or that the activity must comply with certain standards set for that activity.

Both components of the regulatory mechanism are described in further detail below.

It is important to note the range of activities included within the definition of waste management activities in the Waste Act. These are:

- a) the importation and exportation of waste;

- b) the generation of waste, including the undertaking of any activity or process that is likely to result in the generation of waste;
- c) the accumulation and storage of waste;
- d) the collection and handling of waste;
- e) the reduction, re-use, recycling and recovery of waste;
- f) the trading in waste;
- g) the transportation of waste;
- h) the transfer of waste;
- i) the treatment of waste; and
- j) the disposal of waste.

These activities therefore cover the full spectrum of the waste value chain, and include activities prior to the generation of the actual waste. The intention of the Act is therefore to regulate each step in the process of generation, handling and disposal of waste. This is an ambitious undertaking, with very extensive regulatory and administrative requirements. The implications of this undertaking are considered further later in this section.

## 5.1 Listing waste management activities

The listing of a waste management activity is a crucial step in regulating that activity, as it establishes either a particular licensing regime for that activity, or a set of standards that need to be adhered to when engaging in the activity.

The Waste Act includes a detailed list of waste management activities in Schedule 1 of the Act. These activities can be further expanded upon in terms subsidiary regulations. Section 19 of the Waste Act empowers the Minister or the provincial MEC to amend the list of waste management activities included in Schedule 1 of the act by notice in the government gazette. Before publishing such a notice, the Minister or MEC is obliged to follow a public consultation process. In addition the MEC must consult with the Minister before publishing such a notice.

In one of the first measures to implement the Act, such a notice was gazetted on the 3<sup>rd</sup> July 2009, providing a list of waste activities that differs from the existing descriptions in the Act in that it specifies activities involving quantities and types of waste with respect to which licensing measures apply.

In the notice on the 3<sup>rd</sup> of July, the Minister established two categories of waste management activities, both of which require licensing:

- **Category A:** These activities require a basic assessment process as defined in environmental impact assessment (EIA) regulations provided in NEMA to be completed in order to obtain a license for the activity. This includes a requirement for a public participation process and the registration of Interested and Affected Parties (IAPs). A basic assessment process is appropriate where the

environmental impact of a particular activity is well understood and limited in scope.

- **Category B:** As a licensing requirement, these activities require a full assessment report in terms of the EIA regulations, which in addition to a more extensive public participation process require the production of a scoping report and environmental management plan with respect to the activity. A full assessment process is appropriate where the potential scope and extent of environmental impacts is not well understood, or is likely to be significant.

These activities are at the same time removed from the list of activities requiring an EIA published in terms of NEMA. The intention is therefore that the requirements of the EIA process are merged with the licensing process for waste management activities.

In terms of the notice, category A activities fall below set thresholds for health and environmental safety, and include:

- storage of general waste and tyres, temporary storage of hazardous waste;
- reuse, recovery and recycling of general waste;
- treatment of general waste and certain minimum and maximum quantities of effluent, flaring or burning of biogas and natural gas;
- the disposal of non-hazardous waste;
- the storage and treatment of animal waste;
- the construction or decommissioning of facilities and infrastructure for Category A waste management activities.

Category B activities, while covering the same types of activities, include hazardous waste, and exceed thresholds or quantities of waste set for Category A requirements. All incineration of waste falls under this category.

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 the standards that must be adhered to when conducting the activity. It appears that DEA has not elected to utilise this latter provision of setting standards for activities, since the current notice only lists activities that require licensing. As part of the process of preparing this research paper, a preliminary estimate was made of the anticipated number of licenses that would be required in terms of the current listed activities. While accurate information has been difficult to obtain, the preliminary estimate based on knowledge of the local industry has been summarised in Annexure C. This indicates that there could be well over 5000 licenses required as a consequence of the current list. This number of licenses will pose an excessive administrative burden on both industry and government, and the consequences of proceeding with the list in its current form need to be carefully evaluated.

The mechanism of specifying standards that must be adhered to for particular activities is an alternative to licensing that allows for a level of regulation without incurring the administrative burden associated with licensing. This could be particularly useful for

setting standards for small scale economic activities related to waste management (small-scale recycling, for instance) without creating onerous barriers to entry. The instances in which an exemption from licensing requirements (and a consequent requirement to comply with certain standards) would seem appropriate include activities where:

- Environmental risk is insignificant, trivial, or low.
- What risk exists is easily mitigated using simple general rules and does not require an EIA.
- The activity can be performed anywhere, or the restrictions on the location are easy to define.
- No particular competence is required, or competence is easily determined through accreditation.
- Regular inspections and record-keeping are unlikely to be required.

In general, this is likely to apply to situations in which the types of wastes involved are consistent and well-understood, and it is in the public's interest to avoid the requirement for licensing. For instance, the burning of garden refuse at a household level should not require licensing, but it may be a good idea to define standards in terms of what constitutes "garden refuse" and the maximum quantities involved.

In terms of exemptions from licensing requirements, an important category of waste management activity would be low-risk activities for which licensing is not a requirement, but which should be registered in some way, and particularly those activities for which registration in the Waste Information System (WIS) is (or will be) a regulatory requirement. An example of such an activity would be small-scale operators involved in the transport of waste, where registration is desirable, but licensing would represent an unnecessary administrative burden.

Criteria need to be developed to define activities where the setting of standards would be a more appropriate form of regulation than licensing. The Waste Act itself provides little guidance as to the criteria for listing activities, and merely states that they are activities that have, or are likely to have, a detrimental effect on the environment. The following criteria are proposed for incorporation into the NWMS:

**Table 6 Criteria for exemption from licensing requirements**

<b>Indicators for exemption</b>	<b>Indicators for licensing</b>
Environmental risk easily assessed and is insignificant/trivial or low	Medium, high risk
Risk easily mitigated by simple general rules	Risk mitigated by complex rules/ conditions
Either can be carried out anywhere or restrictions on locations can be easily defined	Have site specific considerations that require assessment
Regulator does not need to carry out risk assessment/screening required	Regulator needs to carry out risk assessment/screening
Waste types well characterised and consistent	Waste types not well characterised and /or inconsistent
In the public interest to take a low regulatory approach	In the public interest to regulate via a permit
Certainty of outcome	Risk of abuse
Operator competence either not needed or easily accredited	Operator competence needed
Unlikely to need regular inspection/ other compliance assessment	Needs regular inspection/other compliance assessment
Recordkeeping unlikely to be needed	Recordkeeping needed for regulatory and other waste management purposes.
Cessation of operations unlikely to need assessment.	Cessation of operations likely to need assessment

The exempted activities would be subject to the standards that are set out in the notice listing the activities. It is recommended that these standards are aligned with the DTI's technical infrastructure system for setting standards, and accrediting compliance with those standards. Any standards for waste management activities should be drawn up in consultation with the South Africa Bureau of Standards (SABS). While the SABS standards are voluntary standards, the Waste Act empowers the Minister to make such standards mandatory. By linking these standards to the national technical infrastructure, the accreditation of those standards by the South African National Accreditation System (SANAS) is facilitated. It is recommended that all listed waste management activities which are exempted from licensing requirements must be required to submit a certificate of compliance with the set standards, issued by SANAS. In addition they must be required to register with and regularly report to the WIS.

Another matter to note in relation to the list of waste management activities in the notice on the 3<sup>rd</sup> of July is that it includes waste water treatment plants. Since these plants are already regulated and permitted under the Water Act, this constitutes a duplication of processes, and it is recommended that they are removed from the list. However the system of environmental impact assessments will still apply to such facilities, and waste water treatment plants should consequently be reinserted in the list of activities promulgated under NEMA which require a basic and full assessment.

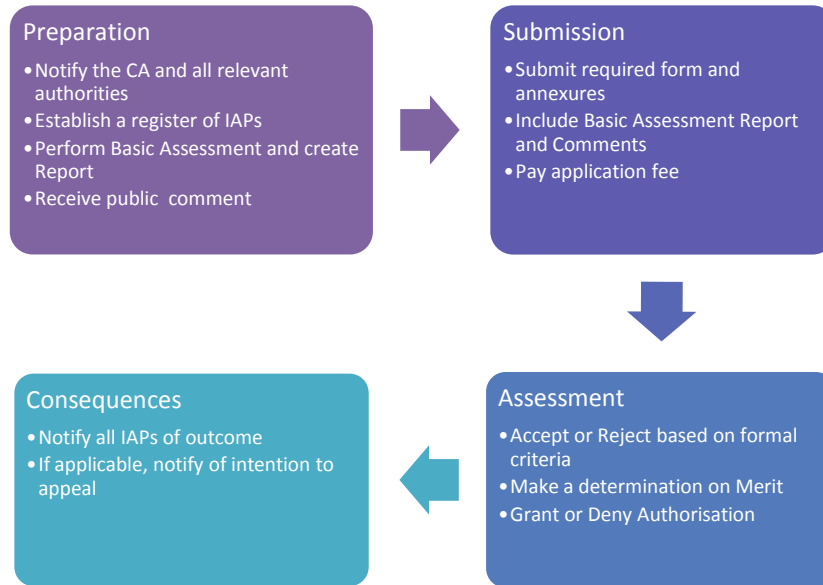
## 5.2 Licensing of activities

The Waste Act provides a licensing regime specific to waste management activities that supersedes the current system of permits issued in terms of the EIA regulations in NEMA. However, the requirements for basic and full assessments in terms of licensing applications will need to be captured in the National Environmental Authorisation System (NEAS). NEAS is a web-based workflow application that assists the public and private sector in keeping track of all EIA applications. It has now been implemented in all nine provinces for the capturing of applications.

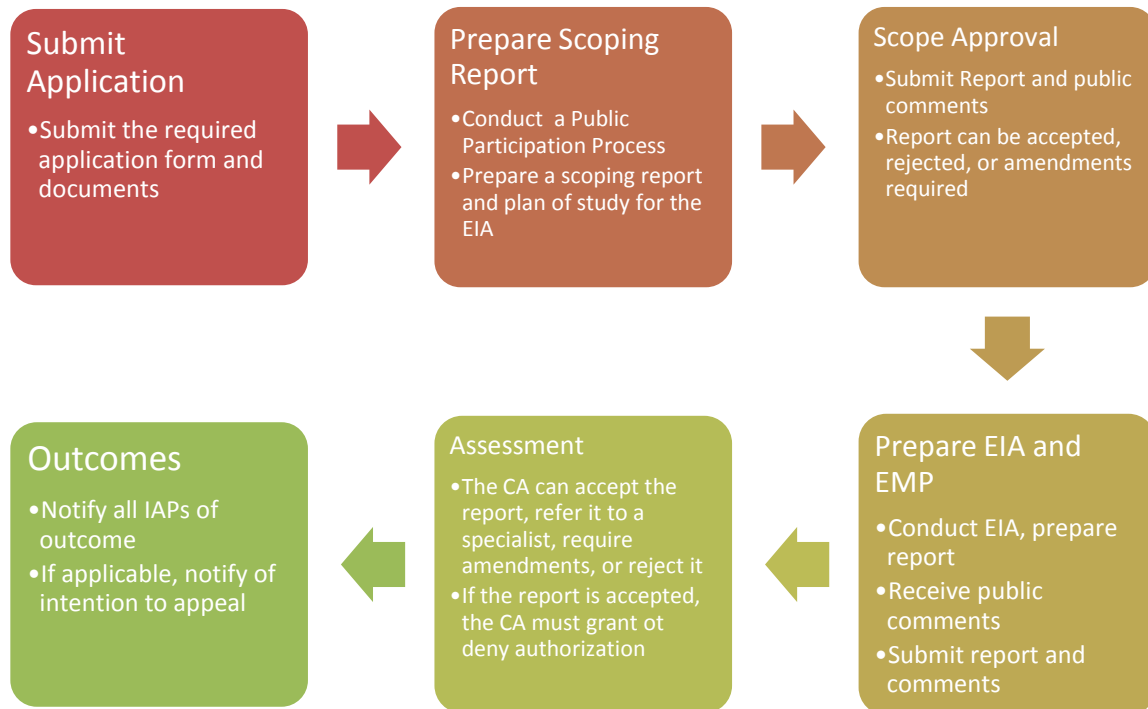
Currently, in respect to waste activities, permit holders are also required to register with the South African Waste Information System (SAWIS) and the National Compliance Monitoring System (NCMS). The NCMS consists of systems and processes for the compliance monitoring of not only waste management, but also EIAs, air quality management, and environmental emergency incidents.

The processes in relation to a basic assessment procedure and a full assessment procedure are graphically summarised in the diagrams below:

**Figure 5 Basic Assessment Process**

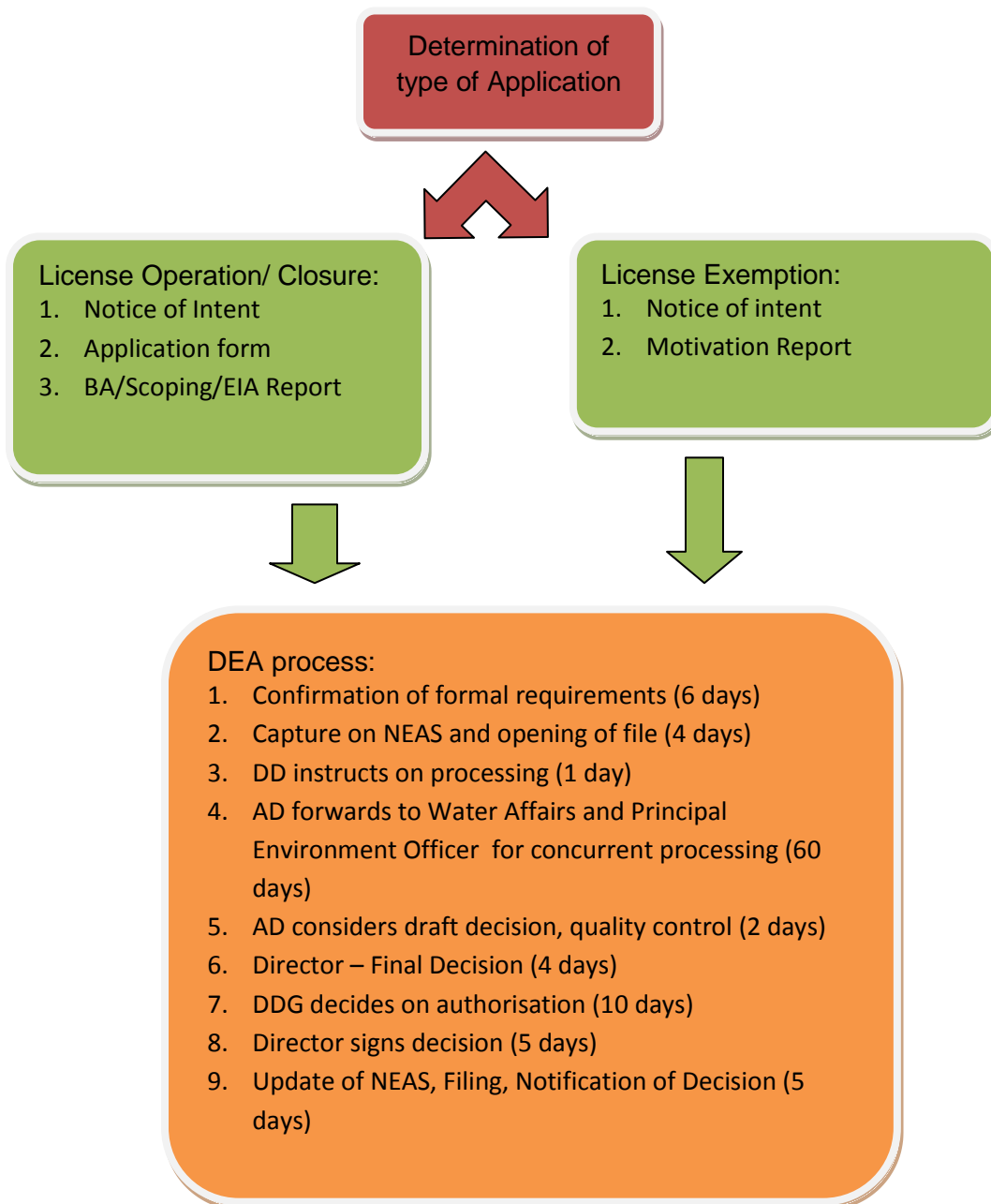


**Figure 6 Full Assessment Procedure**



A graphical overview of the process by which a decision is made to authorise or deny a license application or an application for exemption from a license is described in the diagram below.

Figure 7 Licensing Process



The Waste Act provides for the Minister to optionally require a license application to be managed by “an independent and suitably qualified person”. This raises the issues of the circumstances in which this requirement should arise, and the criteria for identifying a suitable person. The NWMS should provide guidance with respect to these instances and criteria.

The full assessment procedure specified for Category B license applications is a technically demanding process that already requires the appointment of an independent Environmental Assessment Practitioner (EAP). Currently, an effort is underway to set standards for EAPs and a Certification Board for Environmental Assessment Practitioners in South Africa has been established. The board's certification criteria include both academic qualifications and professional experience and take into account ethics and values.

As a minimum requirement, all license applications requiring a full assessment procedure should be managed by an independent, certified EAP – with the independence of the practitioner established through a formal disclosure of interests by that person (this is already a procedural requirement). Furthermore, it is recommended that a risk analysis be performed by the department on all listed activities falling under Category A to determine the circumstances under which licensing applications should be managed by a certified EAP.

The Waste Act also specifies that a waste management officer may require the appointment of a waste management control officer, although this is not framed as a requirement of the application process, but rather as an administrative measure to provide oversight with respect to the licensed activities. The duties of the waste management control officer include:

- Ensuring compliance with licensing terms and conditions and reporting non-compliance
- Waste minimization through the identification of clean production technologies and the reduction, recovery, reuse and recycling of waste

The Act specifies that the “nature and size” of the waste management activity should determine whether a waste management control officer is required. In terms of the nature of the activity, it is in the public's interest that waste management activities that involve hazardous waste on any significant scale be carefully monitored, and this would relate to most, if not all, licences issued in terms of Category B listed activities. Where sufficient volumes of waste are involved in Category A activities or where such activities involve priority wastes, waste minimization becomes an important factor.

The Department's goal is to provide integrated licensing systems for activities requiring environmental authorisation both in terms of NEMA, and other relevant statutes. To this end, section 44 of the Waste Act, “Co-operative governance in waste management license applications”, explicitly provides for integrated licenses. The intention is to streamline licensing for activities that may require licensing in terms of multiple statutes, and for which different government departments may be the licensing authority.

An integrated license must stipulate the statutory provisions in terms of which it has been issued, the authorities that have issued it and to whom applications for

amendments or cancellations should be addressed, and the appeal procedure that should be followed.

In practical terms, since the value of an integrated license rests in large part on an integrated license application procedure, the implication is that the NEAS system needs to be sufficiently flexible to accommodate not only licensing requirements for basic and full assessment processes in terms of NEMA, but also licensing requirements in respect to activities that may require authorisation by multiple organs of state in terms of different statutes in order to commence.

This represents both a technical and procedural challenge. For instance, currently there is no exchange of data between the NEAS, SAWIS, and NCMS databases, although this has been recognised as a need. In terms of procedure, application forms or processes that integrate the requirements of the different systems have not been developed. It is recommended that the process of developing an integrated application form for waste management licenses be expedited, and priority be given to the integration of the different IT systems needed to facilitate this.

In general, DEA seeks to realise the principle that compliance and monitoring should take place at the level at which licensing authorisation takes place. In most cases licensing authorities are located at a provincial level, except where licensing is established as a national competency, such as licensing with respect to:

- Hazardous waste
- International obligations
- Activities by national departments and provincial environment departments
- Cross boundary activities
- Activities that take place at the same site as a nationally licensed activity

Whilst nominal authority for licensing is vested with the Minister or MEC, in practise this authority will be delegated to appropriate persons within the respective departments to manage.

## 6 Special measures for addressing waste

In addition to the provisions for listing and licensing waste management activities, and the provisions for industry waste management plans, both described above, the Waste Act includes a number of additional measures for addressing waste management challenges. As set out at the beginning of this paper, these measures invoke regulatory powers that are quite extensive in their reach, and affect amongst others the design and manufacturing process for products, as well as financial mechanisms for product recovery and recycling. In general these measures should be invoked only in instances where industry has failed to develop voluntary responses to the challenges, despite being requested to do so by government. Due to their complexity and economic impact, the special measures are not recommended as a first line of solutions to waste management challenges. The following section described four principal measures, namely:

- The declaration of priority wastes.
- Provisions for extended producer responsibility.
- Regulation of the transportation of waste.
- Provisions for waste reduction, reuse, recycling and recovery.

Contaminated land, which is also listed in the Waste Act as a waste management measure, is dealt with in a separate chapter.

### 6.1 Priority wastes

The Waste Act provides for specific regulatory measures to be taken with respect to wastes that are declared to be “priority wastes” by means of a notice in the government gazette. In terms of the Act, the minister can declare a priority waste on the basis of the threat to health and the environment presented in terms of both the quantity and quality of the waste if specific measures are warranted due to:

- a) the nature of the threat to the environment; or
- b) the potential for waste reduction, reuse, recycling, and recovery to mitigate harm to health or the environment

This means that the scope of application of this section of the act ranges from largely inert waste such as plastic bags and tyres (which are a problem in terms of quantity) to hazardous chemicals defined in an international agreement (in terms of quality).

In declaring a priority waste the Minister is obliged to adhere to certain procedural requirements. Consultation must take place with any potentially affected persons before publishing the notice. If there is a likely significant impact on the economy, consultation is required with the Ministers of Trade and Industry, and Finance. In addition, the notice

declaring the priority waste must specify waste management measures to be undertaken.

The regulatory measures for priority wastes that are explicitly contemplated in the act include:

- The requirement for categories of persons in industries that produce a particular priority waste to formulate and submit an Industrial Waste Management Plan in relation to the priority waste.
- A prohibition on the generation of a priority waste, or alternatively, measures for the minimization, storage, reuse, recycling, recovery, treatment and disposal of priority waste.

Specific consequences in relation to the declaration of a priority waste are stipulated, that include:

- A 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 relevant regulatory measures and requirements.
- A prohibition on waste management activities in relation to the priority waste that are not in compliance with the relevant regulatory measures and requirements.

In terms of the prohibition and restrictions on the import, export and selling of priority wastes, alignment of priority wastes with the product codes maintained by SARS in the Schedules to the Customs and Excise Acts will need to take place. This mechanism is elaborated further in the Chapter 8 dealing with international obligations.

The measures contemplated in the Act are sufficiently broadly framed to allow the Minister to stipulate any measure that fulfils the objects of the Act as a whole, with the proviso that in cases where the economic implications of measures with respect to a priority waste are potentially significant, consultation with DTI and National Treasury is required.

The broad regulatory powers conferred on the Minister in terms of the declaration of priority waste require that this section of the Act be interpreted not simply in terms of negative prohibitions on priority wastes, but also in terms of the potential for measures that positively enforce specific behaviour in relation to priority wastes, specifically in relation to recycling and extended producer responsibility (as in the case of plastic bags and tyres).

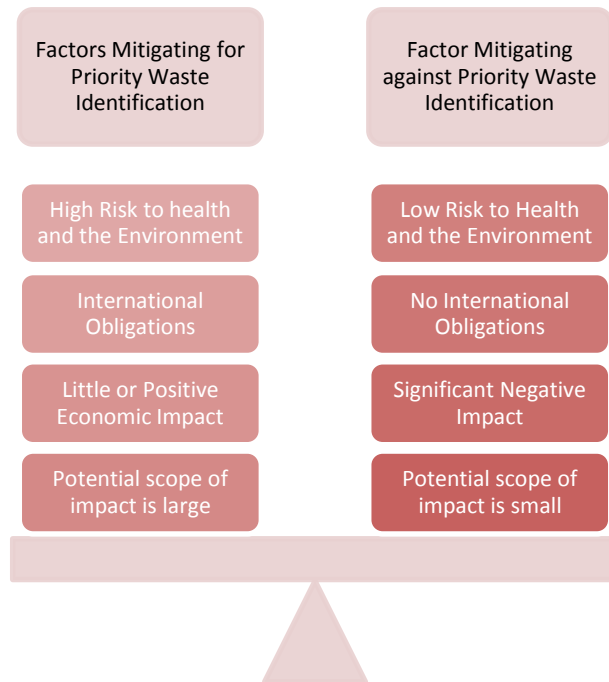
In developing criteria for the declaration of priority wastes, the NWMS should therefore not only consider the potential threat posed by particular hazardous substances, but also the potential beneficial impact of regulation with respect to a particular waste. For instance, priority waste measures can potentially be used to stimulate economic activity in the recycling sector.

The Strategy for Cleaner Production and Sustainable Consumption developed by DEA, and the National Cleaner Production Centre, a joint initiative between DEA and DTI, provide important reference points for identifying potential industrial processes in which priority waste legislation would be appropriate. There is a clear need for inter-departmental cooperation between DEA and DTI in the identification of priority waste measures, particularly in terms of the recycling sector and cleaner production. It is recommended that this is accomplished through the creation of an inter-departmental committee on priority wastes involving DEA, DTI, and National Treasury, which would also serve the purpose of streamlining the consultative requirements for the declaration of priority wastes. This committee could also be utilised for the purposes of dealing with the EPR measures outlined below.

In terms of identifying priority wastes that present a particular threat to health and the environment, South Africa's obligations in terms of multi-lateral agreements on hazardous wastes, dangerous chemicals, and persistent organic pollutants should play a role not only in triggering the identification of priority wastes, but also in formulating appropriate regulatory measures, particularly with respect to the registration and monitoring of priority wastes.

The considerations for identification of a priority waste are summarised in the diagram below:

**Figure 8 Identifying Priority Wastes**



As stated earlier, due to the severe implications of this provision, before proceeding with the declaration of a priority waste, DEA should be satisfied that baseline regulatory measures such as setting norms and standards, licensing waste management activities,

and requiring industry waste management plans have proved inadequate to deal with the nature of the threat i.e. that special measures over and above the existing measures are required.

## 6.2 Extended producer responsibility

The Waste Act explicitly refers to the concept of Extended Producer Responsibility (EPR) as a mechanism for bringing about waste reduction in South Africa, through the minimisation, reuse and recycling of waste products. Regulatory provisions in the Act include identification of products or classes of products for EPR. The Minister may prescribe EPR measures and identify responsible persons for:

- Establishment of EPR programmes
- Financial and institutional arrangements for waste minimisation
- Percentage of products to be recycled
- Labelling
- Lifecycle assessments
- Design of, and restrictions on, packaging

The Waste Act also requires that the Minister establish national norms and standards for EPR.

There are quite extensive procedural requirements for the utilisation of this measure. The Minister must consult with the Minister of Trade and Industry, and the Minister of Finance must concur with any requirements for financial arrangements. The Minister must follow a public consultation process, as well as specifically consulting affected producers. Before promulgating the EPR provisions, the Minister must take into account the obligations of any relevant international agreements, and must consider any relevant scientific information.

The principle underpinning EPR is to create mechanisms that encourage producers to take responsibility for their products throughout their product's life-cycle, including after the product has been bought and consumed. EPR measures seek to minimise the extent to which post-production costs arising from pollution are externalised by producers. Incorporating waste reduction principles into the design and packaging of products at the point of manufacture is more efficient than focussing only on post-consumption responses.

A clear synergy exists between the regulatory mandate provided by the Waste Act in terms of EPR, and the cleaner production programmes initiated by DTI and the National Cleaner Production Centre. As with the identification of priority wastes, there is a clear need to establish formal structures and protocols to achieve cooperation between DEA and DTI in terms of EPR measures. DTI is well placed to provide guidance on the impact and feasibility of EPR measures such as the requirement for specified percentage of a category of products to be recycled. Creating regulations for recycling requirements

without giving due cognisance to the current and potential capacity of the recycling industry would be ineffectual.

The recycling industry can be divided into two phases: (1) the separation and collection of recyclables, which can range from low efficiency (manual sorting) to high efficiency (mechanised sorting); and (2) the reuse of recyclables in the manufacturing process. Whilst the first phase can be manipulated to achieve recycling targets etc, the second phase is highly dependent on market demand and hence market conditions will determine the prices obtained for recyclables collected in the first phase. This makes the recycling market rather volatile and makes it difficult to sustain particularly with respect to job creation and employment. Recycling should always be considered as an integral component within an integrated waste disposal system, which includes waste treatment and possibly waste to energy.

EPR measures tend to be effective in reducing the toxicity of waste results, but their effectiveness in terms of reductions in quantity of waste is less well established.

In terms of norms and standards for EPR, an area in which government intervention is contemplated by the Waste Act is in terms of labelling requirements. While “eco-labelling” is usually a voluntary initiative, in cases where particular risks are presented in terms of pollution, mandatory labelling requirements should be established. A good example of where this is appropriate is in terms of labelling for energy-efficient compact fluorescent light bulbs, which contain mercury and present a significant environmental hazard. This product should be labelled in a manner that alerts the consumer to the need for the product to be disposed of in an appropriate manner.

Using the same example, fluorescent light bulbs represent a good example of a category of product where a mandatory take-back programme would be appropriate. The Consumer Protection Act establishes that products that cannot be disposed of as general domestic waste must be accepted back at the point of retail for ultimate disposal by the manufacturer. However, in respect of particular categories of product, further regulation may be required to ensure that this take place.

Compact fluorescent light bulbs also represent a good example of the sort of criteria that should be met when contemplating EPR requirements for a particular product:

- The threat represented in terms of pollution is significant
- The products are widely used (ESKOM has been actively promoting them)
- In the absence of EPR regulations, significant costs will be incurred to mitigate the pollution threat

An existing example of EPR regulations in South Africa is the initiative in relation to reduction and management of the waste stream from plastic bags, implemented in terms of a Memorandum of Understanding (MOU) between government, business and labour. The principle mechanisms used were:

- The imposition of a consumer levy on plastic bags.

- Regulation of the plastic bag product through the development of SABS standards, including standards for thickness, printing, and labelling, and making these standards mandatory.
- The creation of a public Section 21 company, Buyisa-e-Bag, to promote recycling and waste reduction and create jobs in the sector.

A recent DEA report evaluating the success of the plastic bag initiative indicates that the imposition of the consumer levy on plastic bags has had an impact in terms of reducing their use. However, it has also been the subject of controversy due to the lack of a mechanism for ring-fencing the proceeds of the levy for re-investment in clean production, recycling, and waste reduction in relation to plastic bags.

Furthermore, to date Buyisa-e-Bag has not proved effective in developing recycling capacity in relation to plastic bags or job creation. This suggests that it may be more appropriate to develop economic instruments that incentivise private sector involvement in the recycling industry.

A further weakness identified in the implementation of the MOU has been the lack of coordination between DEA and DTI, which has meant that standards in terms of recycle requirements for plastic bags have not yet been developed. There has also been inadequate enforcement of the SABS standards that have been developed.

Given the potentially serious economic consequences that could arise from inappropriate utilisation of this section, it is recommended that DEA undertakes a pilot application of this section in relation to one or two products before considering it for broader use. Such a pilot should be undertaken in an area of clearly identified need, and implemented in a cooperative and coordinated manner with the affected industries. As indicated earlier, compact fluorescent light bulbs are an area of already identified need, and may be a good place to start.

### **6.3 Transportation of Waste**

In terms of the Act, the Minister, an MEC or a municipality may, by notice in the Gazette, require any person or category of persons who transports waste for gain to register with the relevant waste management officer in the Department, province or municipality as the case may be.

The transport of domestic wastes and commercial wastes can be carried out by both municipalities and the private sector. Where this function is performed by municipalities themselves, in accordance with national norms and standards, it constitutes a public service paid for by the ratepayers. As such it is not performed for gain, and would logically be excluded from the requirement for registration. However, when a private contractor transports waste for gain in terms of a municipal contract, registration should be required.

A number of municipalities, through the use of by-laws, already require private waste contractors, including those providing waste transportation services, to register with the municipality and in some cases require a permit or license to operate within the municipality's area of jurisdiction.

The City of Johannesburg, for instance, requires all commercial providers of waste services to be both registered and licensed. With respect to service providers who include waste disposal facilities as part of their services, licensing represents a clear requirement, and local authorities need to ensure that their procedures are aligned with national requirements in this respect. However, in terms of contractors only providing transport services, it is possible that licensing (as opposed to simply registration) represents an unnecessary barrier to entry in the sector for SMEs. Additionally, there is some concern in relation to lack of competition, with the risk of municipalities reserving the more lucrative waste services for themselves, and thereby creating an inefficient market.

Transporters of wastes should register as a minimum and be required to provide services in accordance with accepted norms and standards and relevant transportation legislation requirements. In addition, the transporters of hazardous and health care risk wastes should have a waste manifest system in place.

Another area in which regulatory requirements need careful consideration concerns the status of persons transporting separated or co-mingled recyclables. These can range from persons with trolleys through to LDVs and large trucks as the collection and transport process moves higher up the supply chain. Currently, many small operators (SMMEs) are transporting recyclables with LDVs and purpose built trailers. While it is important for data and statistics for transported wastes and recyclables to be entered into the SAWIS, in order to avoid an administrative overload, the criteria for registration could be based on a minimum daily volume or tonnage of waste transported, with smaller quantities of wastes or recyclables recorded at the relevant transfer, recycling, treatment or disposal facilities.

#### **6.4 Provisions for waste reduction, reuse and recycling**

The Waste Act includes some additional measures to promote waste reduction, reuse and recycling. Section 17 of the Waste Act applies to any person who undertakes an activity involving the reduction, re-use, recycling or recovery of waste. The obligation is placed on all recyclers and others covered by the section to ensure that their activity uses less natural resources than would ordinarily be consumed through the disposal of the waste. They are also obligated to ensure that the activity is less harmful to the environment than disposal of the waste.

While on the face of it these are desirable objectives, they may have unintended consequences. It is not clear how many existing operations relating to waste recovery and recycling would in fact fully comply with these provisions. There may be a large

number of such initiatives which do not on their own meet the requirement of consumption of less natural resources, but which could form an essential part of the overall value chain. The challenges faced by small and informal operators in the sector could well be compounded by the administrative burden on conducting such an assessment.

It is therefore recommended that a full assessment of the recovery and recycling industry is undertaken to ascertain the extent to which the industry complies with the provisions of section 17, and that recommendations regarding this aspects of the legislation and its implementation are then formulated.

Section 17 has some additional provisions which can be invoked by the Minister regarding activities involving the reduction, re-use, recycling or recovery of waste. The Minister can require any person who manufactures or imports a product to provide for the reduction, re-use, recycling and recovery of that product or its components. In addition, the Minister can require that a determined percentage of recycled material is included in a product. These measures can be further clarified in terms of regulations.

Before exercising these powers, the Minister must consult with the Minister of Trade and Industry. The Minister is also obliged to follow a public consultation process.

In line with the previous recommendations in relation to priority wastes, it is recommended that the interdepartmental consultation is accomplished through the creation of an inter-departmental committee involving DEA, DTI, and National Treasury. The committee would evaluate proposals for the promotion of reduction, re-use, recycling or recovery of waste, as well as their economic impact, in order to guide their further implementation. This committee could also be utilised for the purposes of dealing with priority wastes and the EPR measures outlined above.

## **7 Contaminated land and Duty of Care**

South Africa, like most countries, has a substantial legacy of land pollution, arising from past and present commercial and industrial activities. In many cases, levels of contaminants are sufficiently low that there is no appreciable risk. However, sometimes there can be significant risks to people or the environment. It is only when such risks exist that land is considered to be “contaminated land”.

The government’s long-term aim is to work towards a future where all the contaminated land in South Africa has been identified and dealt with. The scale of the task means this is likely to take decades to achieve.

### **7.1 Legislative framework**

Historically environmental legislation did not apply retrospectively, and imposed very specific requirements for conduct (prescriptive approach). More recently, promulgated

legislation has included provisions that do apply to situations that occurred prior to the legislation, but only sets out specific control mechanisms and requirements where the harm is potentially severe.

Three acts which extend the scope of liability are: the National Environmental Management Act (1998) (“NEMA”), the National Water Act (1998) (“NWA”) and the Waste Act (2008), all of which contain duty of care provisions that have a particular bearing on waste management. The following section provides a comparative overview of the three Acts in terms of contaminated land and duty of care, followed by a set of observations, issues and recommendations, with a biased focus on the Waste Act 2008.

A comparative table of these three pieces of legislation in terms of their application to contaminated land and remediation can be found in annexure B.

## **7.2 Provisions of the National Environmental Management: Waste Act 2008**

One of the most significant new areas of regulation in terms of the Waste Act is that of contaminated lands. The Act requires that a register of contaminated lands be established, with accompanying provisions to remediate, and it is retroactive in that it applies to land that was contaminated prior to the promulgation of the Act, or which experiences contamination now as a result of activities that took place prior to the Act’s promulgation. The possibility of legal challenges to this section of the Act in terms of its retroactive nature has been raised.

In dealing with existing contaminated land, there are two main types of contaminated site:

- Sites where there is a “voluntary” solution. Often land is remediated as it is being redeveloped under the planning system, or because land owners want to increase the utility and value of their land.
- Sites where there is unlikely to be a voluntary solution. This includes contaminated sites which have been developed without being cleaned-up; sites where remediation would be prohibitively expensive; and sites where the person/organisation that polluted the land, and/or the current owner, is unable to be traced or is unwilling to deal with the problem voluntarily.

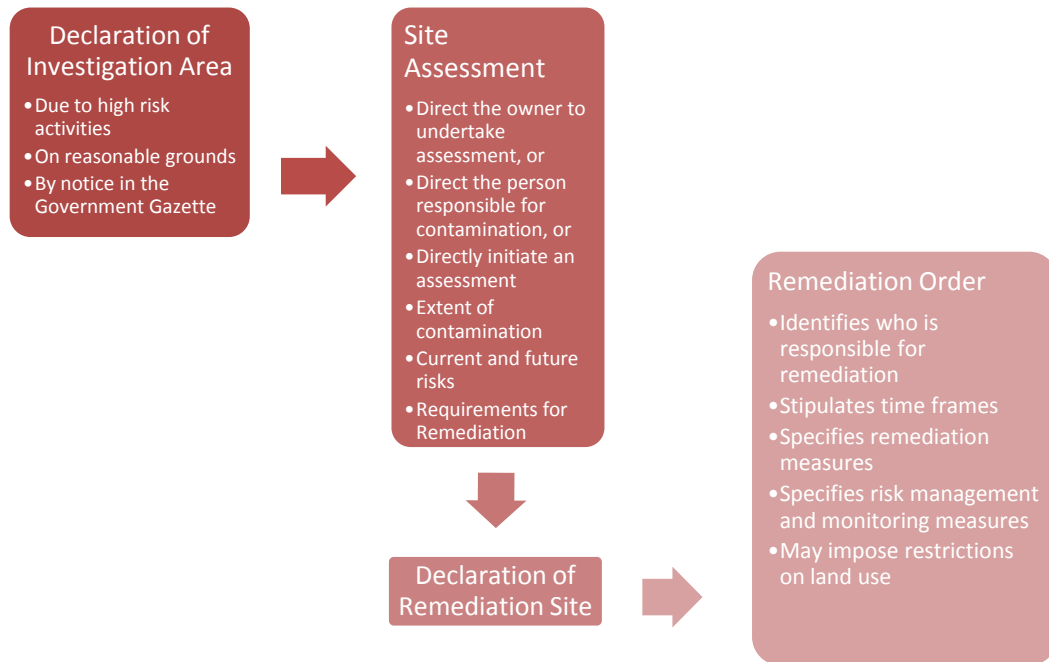
Before the Minister can issue notices with respect to areas of investigation as contaminated lands, the establishment of the register of contaminated lands requires a consultation process. To this end, a team of consultants is being appointed to develop the technical requirements that will inform how the register is constituted, and what remediation measures are envisaged. This means that there will be some delay in the implementation of this legislation.

The Act does, however, clearly describe the procedure through which contaminated land is identified, and the procedural consequences of land being declared to be contaminated. These are graphically represented in the diagram below.

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Regulation, compliance & enforcement

**Figure 9 The procedure for identifying contaminated land**



The Act does provide some detail on the information that needs to be included in the site assessment report which forms the basis for the Minister declaring a remediation site. In addition to determining the current levels of risk in terms of toxicity and bio-accumulative hazards to health and the environment of any contamination that is found, the report needs to include information on future risks, including those associated with any proposed change in land use. The report also needs to include any assessment of the risk of potential migration of contamination from the area under investigation.

If land is found to be contaminated, in declaring a remediation site the Minister can order urgent remediation measures, stipulate a time frame within which remediation must be accomplished, or only require that monitoring and risk management be undertaken.

Land is added to the register of contaminated land as a result of the minister declaring an investigation area. The Act does allow for the transfer of contaminated lands, but requires that:

- The person to whom the land is transferred is notified of its status
- In the case of a remediation site, the Minister, MEC and Registrar of Deeds are notified.

## 7.3 Concerns with respect to the Contaminated Land legislation

### ***Liability implications***

Section 38(4) of the Waste Act provides that, unless otherwise directed, a remediation order or an order to take measures must be complied with at the cost of the person to whom the order is issued.

Banks and investors, whether in terms of land they have 'ownership' of as security, or the temporary control of a business they are recuperating funds from, would then become liable for the land and related provisions. This is both a threat to the value and security of their assets, as well as their operating procedures as it will trigger the obligations firstly to report any contamination identified to the authorities as the owner of the land, and, secondly, will require the bank to take any remediation measures necessary in order to address the contamination.

It is normal practice for banks and investors to undertake due diligence exercises when acquiring land or financing particular projects of a particular size or scale. However, the provisions of the Act require that these take place without exception, and to this end, they are considered unreasonable.

A further concern is related to the identification of a "contaminated site". The wording of Sections 37 and 38 imply that a site is identified first as an area "requiring investigation" and (subject to the findings of an assessment report) is then designated as a "remediation site", which is subjected to a remediation order. This will therefore mean that even land which is contaminated, but does not require immediate or urgent remediation (i.e. in those instances where the level of contamination or the risks associated with it are not deemed to be significant), will nevertheless still be subject to the limitation on transfer provisions.

### ***Risk-based Standards***

Sections 36 and 37 of the Act imply that managing land affected by contamination involves the identification of any unacceptable risks posed by the presence of the contamination, then acting to reduce and control those risks to an acceptable level so that the land is 'suitable for use'. However, South African legislation currently does not have soil (contamination) standards, thresholds or guideline values. Without a clear definition of what constitutes a "high risk activity" or what "reasonable grounds for contamination" may be, or specifying the "applicable standards", it is not possible to report, "manage or neutralise the risk".

In the absence of these, international standards and guidelines need to be applied. There is no mention of this in the Act.

### ***Activities/processes that trigger the legislation***

Implicit in the Act, there are several ways that potentially contaminated sites can come to the attention of the Ministry. Most of the circumstances for notification rely heavily upon voluntary disclosure, except in the case of a property transfer, or a development requiring an EIA. The triggers for the compilation of the contaminated land register as well as subsequent actions are weak.

There is no mention in the Act of any penalties that are imposed on any person/organisation that fails to report contamination (these provisions exist in the National Water Act and NEMA, but not in the Waste Act). In fact, there are few enforcement clauses to resolve conflicts arising in Part 8 of the Act.

### ***Funding***

Section 38(4) of the Waste Act provides that, unless otherwise directed, a remediation order or an order to take measures must be complied with at the cost of person to whom the order is issued. The Waste Act does not explain what will happen in a situation where the person to whom the order is issued is unable to pay for remediation or related measures. In this respect, it is proposed that a financial “guarantee” should be a necessary part of the licensing of high risk projects or activities, just as the mining sector must, in terms of the Minerals Act, provide an Environmental Management Plan and financial provision for remediation.

The financial services sector believe that the onus should be on the owner of the land or the owner of the business (at the time of development of the land, or at the point of transfer) to provide proof of guarantees or insurance in the event that a remediation order is issued, just as current mortgage requirements necessitate proof of insurance to cover infrastructure damage. In addition, the owner of the land/business must demonstrate that the land is not contaminated (this could be in the form of standard tests that are conducted by accredited laboratories, and a certificate issued to the financier). The institution may then refuse credit, and/or report the issue to the authorities for further investigation.

This requirement could be required for all new transactions of a certain size, scale or impact (to be defined). For historical sites or activities, the requirements could be phased in. The insurance policies or guarantees would then have to be ceded to the Bank/financial institution, which would provide security for the creditor in cases of foreclosure or liquidation.

A major area of concern is the issue of unpermitted municipal landfill sites or dump sites where extensive contamination may have occurred due to past and current poor waste management practices. The cost of remediation may be beyond the capability of the municipalities and consideration may need to be given to establishing a remediation fund by government. Funding for remediation could possibly be obtained from MIG funding.

It is therefore important to address this issue and identify sites that require remediation and include them in a register. A cooperative approach should be adopted and industry should be encouraged to voluntarily register contaminated sites where these are known. A detailed review and investigation of municipal, industrial and mining areas should be carried out to identify potentially contaminated sites. The sites should then be prioritised in terms of the requirement for remediation and a timeframe set for carrying out the work in terms of a mutual agreement with the owner of the site.

In accordance with the polluter pays principal, owners or operators of the sites should be responsible for the costs of remediation and where sites have been abandoned or ownership is difficult to establish, the costs could be covered by a rehabilitation or remediation fund established by government.

### ***Capacity issues***

There are numerous methods for managing the risks associated with land contamination. The choice of management response will be site-specific and depend upon the nature and extent of contamination, the level of risk to human health and/or the environment and the cost benefit.

The quantification of risks posed by substances in, on or under the land and the identification of the most appropriate management response must be achieved through the Site Assessment Reports (Section 40) which will require a multi-disciplinary approach and the use of appropriately trained and experienced specialists.

This will impose a considerable specialist capacity burden upon officials in each sphere of government as well as banks and other institutions that hold land as security.

It is unlikely that officials will have the expertise required, not only to evaluate the Assessment Reports, but also to monitor and manage the risk, as required in the Act.

This will be a major challenge with respect to the implementation of the provisions of the Act.

Unlike the Duty of care provisions in the NEMA and the National Water Act, the Waste Act does not explain what will happen in a situation where the person to whom the order is issued is unable to pay for remediation or related measures.

## **7.4 Conclusions and Recommendations**

There are a number of gaps emerging from the Waste Act in terms of remediation and duty of care that must be addressed in the Strategy, and forthcoming regulations.

The extent to which the duty applies to actors throughout the lifecycle of waste is not specific in the legislation. A key requirement for the duty to be triggered is that the pollution or degradation must be 'significant'. There are currently no soil contamination standards or thresholds in South African legislation which indicate what is considered 'significant', or a 'reasonable measure', and if the significance of a single activity is considered, or if the cumulative effects of a persons' activities can be considered.

In the absence of criminal deterrent mechanisms, there is a risk that recalcitrant people may effectively force government to undertake the required measures and to claim the associated costs by means of the institution of a civil action. If this were to happen regularly, government would bear a substantial financial and administrative burden.

By creating a broad definition of the relevant authority, the Act potentially creates jurisdictional ambiguity and overlaps. Whilst the jurisdictional hierarchy is provided in section 30(2) of NEMA, it is immediately qualified by a provision for any relevant authority to take necessary steps if no other person from the jurisdictional hierarchy has done so.

Therefore some suggested requirements are:

1. Definitions of terms, for example, “high risk activities”, reasonable measures” and “significant contamination”.
2. Applicable standards and technical guidelines.
3. Strengthening the processes that trigger the enforcement of legislation.
4. Funding and apportionment of liability.
5. Jurisdictional conflict resolution and clarity.
6. Specialist capacity in government departments (in particular) to make these complex decisions.

It is proposed that the following principles be incorporated:

- 1 Implementation of Part 8 on contaminated land must be based on a tiered risk-based approach;
- 2 In the absence of National Soil Contamination / Threshold Standards and Guidelines, internationally-accepted protocols must be followed;
- 3 Remediation planning and progress should, where possible, be integrated with risk assessments prescribed within other legislation and the EPR Regulations;
- 4 For all sites, baselines/background levels of contaminants must be taken into account and balanced with the risks associated with potential exposures;
- 5 Remediation targets based on scenarios of potential exposure for the specific site;
- 6 It is imperative that the approach to rehabilitation be flexible and be able to accommodate a wide range of scenarios; and
- 7 Funding for remediation must be considered, particularly in cases where the owner of the land/business can no longer be identified, or if they are unwilling or unable to pay for remediation, and a land remediation fund established.

Some proposed exemptions from liability are:

- 1 a government body involuntarily acquiring ownership of contaminated land;
- 2 a person who “innocently” acquired the land;
- 3 a person whose site is contaminated only by migration from another site;
- 4 a consultant assisting a developer in the remediation of a site, provided the consultant is not negligent;
- 5 construction contractors and transporters of contaminated soil who did not contribute further to the contamination at a site; and
- 6 secured creditors who act only to protect their financial interest and do not, in any way, cause or increase contamination.

By strengthening the provisions for contaminated land in the above manner, the ambitious intentions of this part of the legislation will be better realised, and some important precedents established for wider roll out.

## Mechanisms to give effect to international obligations

Section 6.(1)(b) of the Waste Act requires that the National Waste Management Strategy must establish “mechanisms, systems and procedures for giving effect to the Republic’s obligations in terms of relevant international agreements”. There are various international agreements that relate to the issue of waste management, and to which South Africa has acceded, including:

- the Basel Convention, 1989, controlling the transboundary movement of hazardous waste;
- The Montreal Protocol, 1989, which phases out ozone depleting substances (many of which can be classified as waste);
- The Rotterdam Convention, 1998, which provides for prior informed consent regarding the importation of hazardous chemicals;
- The Stockholm Convention, 2004, on persistent organic pollutants; and
- Various conventions dealing with dumping of waste at sea.

There are also various conventions and protocols of a non-binding nature that are nevertheless relevant to the issue of waste management. The main relevant international agreements that should be considered in relation to the NWMS are summarised below.

### 7.5 Basel Convention, 1989

South Africa is a signatory to the Basel Convention, which came into force on 5<sup>th</sup> May 1992. The Basel Convention is intended to control and limit the movement of hazardous waste across national borders, and particularly from developed to less developed countries. It does not apply to radioactive waste.

Annex I to the Basel Convention provides a list of Hazardous Waste substances that meet the criteria of being explosive, flammable, toxic, or corrosive (as described in Annex III). However, the convention applies to any waste that is defined as hazardous by any country through which the waste travels, or is imported or exported from. In other words, the convention can apply to any hazardous waste identified in national legislation.

The Basel Convention provides for the import and export of hazardous waste on the basis of informed consent and stringent tracking of all transboundary movement of hazardous waste. The South African government still needs to decide whether South Africa should accede to amendments that strengthen Basel by providing for absolute bans on the import and export of hazardous wastes. Similarly, South Africa needs to make a decision in terms of accession to the Bamako Convention, which is a regional convention that places a prohibition on the import of hazardous wastes into African countries, and places obligations on the export of waste from African countries similar to those established by the Basel Convention.

The Basel Convention is administered by the Sub-directorate: Hazardous Waste in the Branch: Environmental Quality and Protection. The Convention is currently implemented as if there is national legislation in place, but in fact there are no currently no regulation to give effect to the Convention. It is recommended that this is addressed in terms of regulations issued in terms of the Waste Act. Together with the chemical conventions, the import and export control aspects of the convention are being addressed in a joint strategy currently under development by DEA and the DTI. The proposed system of issuing permits for the transboundary movement of hazardous waste is described in more detail under the permitting section.

## **7.6 Montreal protocol, 1989**

South Africa is a signatory to the Montreal protocol, which is designed to protect the Ozone layer by progressively phasing out the use of a variety of gases (CFCs and HCFCs) that have been found to deplete the ozone layer in the atmosphere.

It is likely that the chemicals covered by the treaty will be declared priority wastes in terms of the Waste Act. In terms of the act, priority wastes are substances that require specific waste management measures due to the threat that they pose to health and the environment.

The NEMA: Air Quality Act and the National Framework for Air Quality Management provide an additional regulatory framework that should be referenced when specifying the specific measures that pertain to ozone depleting substances.

The Montreal Protocol is administered by the Directorate: Air Quality in the Branch: Environmental Quality and Protection. As in the case for the Stockholm convention, although this convention does not deal specifically with waste management, it is likely that the Waste Act may be used to declare chemicals controlled under the convention as priority wastes for ease of control including phase out. A National Implementation Plan has been under development for some time and it is important that this plan is now finalised and published. A phase out plan for some substances controlled under this protocol also needs to be developed.

## **7.7 Rotterdam Convention, 1998**

The Rotterdam Convention sets out shared responsibilities in relation to importation of hazardous chemicals and defines a Prior Informed Consent (PIC) procedure that specifies standards for labelling and documentation of banned or severely restricted chemicals that must be adhered to during their import and export. It also defines criteria for a notification process by which countries can add to the list of chemicals to which the PIC procedure will apply in their jurisdiction. Furthermore, it specifies that each signatory must designate a national authority responsible for preventing or regulating the import

and export of hazardous chemicals, including maintaining a national database of such chemicals.

Although this convention explicitly excludes waste, implementation of the convention can lead to banning of listed chemicals, which in turn particularly in the case of pesticides leads to the challenge of stockpiles of obsolete pesticides which can be a major waste management challenge. The provisions of the Act for regulation in relation to the import and export of priority wastes clearly provide a potential mechanism for the implementation of the Rotterdam Act, as do the provisions for extended producer responsibility.

As the custodian of the environment, it seems logical that this national authority be vested in the Department of Environmental Affairs. The Rotterdam Convention is administered by the Sub-directorate: Chemicals Management in the Branch: Environmental Quality and Protection. There is an internal DEA action plan for the implementation of this Convention, which should be reviewed, updated in the light of the mechanisms set out in the Waste Act, and published for public comment.

## **7.8 Stockholm Convention on POPs, 2004**

The Stockholm Convention on Persistent Organic Pollutants (POPs) deals with a category of chemical compounds that harmfully accumulate in the food chain and therefore damage the integrity of ecological systems.

Although this convention does not deal specifically with waste management, it is likely that the Waste Act may be used to declare chemicals controlled under the convention as priority wastes for ease of control including phase out. The Stockholm Convention is administered by the Sub-directorate: Chemicals Management in the Branch: Environmental Quality and Protection. A National Implementation Plan has been under development for some time and it is important that this is now finalised in the light of the recently promulgated Waste Act. It is recommended that certain priority actions are taken in regard to phasing out persistent organic pollutants, including:

- Issuing regulations for phasing out PCBs, with clear deadlines for implementation.
- Establishing requirements for measurement of dioxins from incineration facilities.
- Examining the problems relating to cane burning, and the appropriate remedial actions.

## **7.9 Various conventions intended to prevent pollution of the seas**

Although under the control of the Department of Transport rather than DEA, several Maritime conventions deal with disposal of waste at sea, with varying levels of international ratification. The UN body that coordinates Maritime conventions is the

International Maritime Organisation (IMO), and it currently coordinates 7 conventions that deal directly with pollution and dumping of waste at sea.

In terms of shipping waste, one of the most important and widely ratified conventions is the International Convention for the Prevention of Pollution from Ships (MARPOL), 1973, which has subsequently been amended frequently. South Africa has ratified the following Annexes from the original convention:

- Annex I: Prevention of pollution by oil
- Annex II: Control of pollution by noxious liquid substances
- Annex III: Prevention of pollution by harmful substances in packaged form.
- Annex IV: Prevention of pollution by garbage from ships

Despite decades of regulation at the International Maritime Organisation (IMO) and elsewhere, and the prohibition of the discharge and dumping of nearly all ship waste streams, large quantities of oil, garbage and other wastes routinely find their way into the sea. Indeed, there is little real evidence that these discharges are diminishing.

One traditional reason given for ships failure to discharge their waste to shore has been inadequate provision of port waste reception facilities (PRFs). While this may still play some part, low levels of usage in ports that have excellent PRF provision suggest that the real reason for dumping at sea is often to save on the fees that ports normally charge for the use of such facilities. Ships can save these fees and dump at sea with little chance of being caught.

This disincentive to PRF use can be removed by incorporating the cost of PRF use into the general harbour dues which all ships pay (regardless of whether they use the PRFs), thereby removing an obvious and substantial reason for ships choosing to dump at sea. Such an approach, generally known as a “no-special-fee” system, is already in place in the Baltic Sea, and Seas at Risk has been lobbying for its introduction at North Sea and EU level. It is recommended that South Africa implements a “no-special-fee” system in all its ports, and actively promotes this as a standard international requirement.

## 7.10 Johannesburg Plan of Implementation

The Johannesburg Plan of Implementation that was adopted at the World Summit on Sustainable Development in 2002 contains a number of references to waste. Including the following commitment in paragraph 22 of the plan:

*“Prevent and minimize waste and maximize reuse, recycling and use of environmentally friendly alternative materials, with the participation of government authorities and all stakeholders, in order to minimize adverse effects on the environment and improve resource efficiency, with financial, technical and other assistance for developing countries. This would include actions at all levels to:*

- a) *Develop waste management systems, with the highest priority placed on waste prevention and minimization, reuse and recycling, and environmentally sound disposal facilities, including technology to recapture the energy contained in waste, and encourage small-scale waste-recycling initiatives that support urban and rural waste management and provide income-generating opportunities, with international support for developing countries;*
- b) *Promote waste prevention and minimization by encouraging production of reusable consumer goods and biodegradable products and developing the infrastructure required. “*

From the above, it is clear that the Waste Act and the National Waste Management Strategy are important components of the national response to the World Summit of Sustainable development, in that they provide a regulatory framework for achieving the summit's goals.

In respect of paragraph 23 of the Plan, which includes hazardous waste, the Strategic Approach to International Management of Chemicals (SAIMC) is the main vehicle through which the paragraph is being implemented internationally.

### **7.11 Strategic Approach to International Management of Chemicals (which includes hazardous waste)**

The first review of the SAICM was recently held at the second international conference on chemical management, which is the designated review mechanism for SAICM. A strong focus on Extended Producer Responsibility issues was clear in the emerging issues identified at the conference, particularly with respect to nano-technology, chemicals in products, lead in paint, and hazardous chemicals arising from e-Waste.

As a developing country, South Africa is often on the receiving end of sales or “donations” of electronic goods nearing the end of their productive life-cycle, which is tantamount to the import of e-Waste. This represents a dual challenge, both in terms of regulation of imports, and developing local processing capacity for e-Waste. The SAICM is considering the possibility of amending the Basel agreement to take cognisance of the situation with respect to the export of used electronic products to developing countries that do not have the technical capacity to safely process the e-Waste that inevitably results.

Potentially e-Waste presents significant economic opportunities, and in developed countries such as Germany a strongly profitable economic sector based on the processing and recovery of metals from e-Waste has emerged. Consideration needs to be given to the regulation of e-waste as a priority waste, with due consultation with DTI in relation to the economic potential.

## 7.12 Coordination mechanisms

A recent government initiative led by DEA and DTI that is directly relevant to South Africa's international obligations in terms of hazardous waste and chemicals is the Interdepartmental Committee for the Sound Management of Chemicals. Its terms of reference include providing advice on the implementation of national legislation and action plans for chemicals management that are aligned with international agreements and instruments. This committee integrates previously separate structures for coordination of activities relating to the Rotterdam Convention (the Chemical Review Committee) and the Stockholm Convention (POCROC).

The committee is comprised of the representatives from all affected government departments, including the SABS; the International Trade Administration Commission (ITAC), South African National Defence Force (SANDF); and South African Police Service (SAPS). It is also tasked with convening a multi-stakeholder forum that includes representatives from provincial and local government, labour, business, civil society, and academic and research institutions.

The Waste Act is one of the key legislative instruments at the disposal of the committee, and leveraging the provisions in the Act, particularly in terms of priority waste measures, listed activities, and the Waste Information System, has the virtue of utilising an existing framework for regulation, as opposed to developing new national legislation for each international agreement.

The work programme for the Interdepartmental Committee includes decisions on whether to accede to international agreements. It also advises on programmes of action with respect to agreements to which South Africa has already acceded, including proposals regarding the drafting of the necessary regulations.

## 7.13 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) which makes provision for control, through a permit system, of the import and export of goods specified by regulation. The system falls under a directorate in DTI, the International Trade Agreement Commission (ITAC), the primary function of which is the administration of the provisions of the International Trade Administration Act. The issuing of import and export permits takes place in terms of Section 6 of the Act, and investigations and enforcement of these provisions in terms of part E of the Act. An investigations unit is responsible for enforcement of the act, and ensuring compliance with the conditions contained in permits.

The control of imports is done in terms of regulations issued by the Minister of Trade and Industry, who can either ban the import of goods of a specified class or kind, or require that they must adhere with the conditions stated in a permit issued by the Commission.

The ITA Act distinguishes between the importation of new goods, used or second-hand goods, and waste and scrap.

With regard to new goods, 208 tariff sub-headings are subject to import control measures. These tariff items include oils and other fossil fuels, inorganic acids, radioactive chemical elements, hydrocarbons, tyres, base metals, firearms and ammunition, and other miscellaneous chemicals, ethers and carboxylic acids. Imports of all used and second-hand goods are subject to control measures, largely to ensure that such goods do not erode the manufacturing base in Southern African Customs Union (SACU). In regard to export control, 177 tariff lines are subject to export control measures.

In terms of implementing all of the above environmental conventions, DEA is required to identify the relevant tariff codes and associated restrictions required for chemicals and other products, which are submitted to DTI and promulgated by the Minister of Trade and Industry in terms of regulations issued under International Trade Administration Act. The tariff codes are in turn utilised by the Customs and Excise division of SARS, which automatically acts in terms of the prohibitions or restrictions associated with a particular tariff code.

In order to assist both DEA and DTI with the administration of this system, it is important that the relevant Multilateral Export Agreement (MEA) Convention secretariats assist member countries with identifying the relevant tariff codes, which are used internationally.

This alignment of mechanisms for import and export control with the MEAs described above has revolutionised the implementation of these conventions in South Africa, and is one of the central mechanisms to give effect to our international obligations.

## 8 Institutional roles and responsibilities

### 8.1 Division of responsibilities between three spheres

#### 8.1.1 Introduction

As indicated in the introductory sections of this paper, the Constitution assigns different legislative and executive powers to the three spheres of government in relation to the environment, pollution control and waste management. The Waste Act steers a careful course through the above Constitutional requirements, and consequently places great emphasis on national norms and standards. The Act sets out a clear set of responsibilities among the three spheres of government, all of which play an important role in the protection of the environment and effective waste management in terms of this legislation and a large body of related environmental legislation. There are some powers and functions that are distinct to particular spheres of government and others that are shared or concurrent. The Act also identifies certain functions as mandatory and others as discretionary. This section of the report will identify which responsibilities are to be fulfilled by which sphere of government and distinguishes between mandatory and discretionary functions.

In summary, the roles and responsibilities of the different spheres of government can be summarized as follows:

**Table 7 Roles and responsibilities of different spheres of government**

<b>National Department of Environmental Affairs</b>	As the national lead agent for environmental management and pollution control, including the related matters of waste management, DEA must prepare regulations, frameworks, policies, and norms and standards for coordinated and integrated waste management.
<b>Provincial environmental departments</b>	As the provincial lead agents for environmental management, including waste management, provincial environmental departments must provide provincial regulations and norms and standards for co-ordinate waste management.
<b>Municipalities</b>	Municipalities have exclusive functions and responsibilities with respect to cleansing, refuse removal, refuse dumps and solid waste disposal, and they are required to perform these functions, and develop municipal standards and by-laws to ensure compliance with the waste management legislation.

### 8.1.2 DEA's mandatory requirements

The following table presents the items of the Act which must be undertaken by the Minister and the national Department of Environmental Affairs:

**Table 8 Items of the Act which apply to the Minister and the DEA**

Section	Measure	Comment
6.(1)	The Minister must establish the <b>National Waste Management Strategy</b> within two years of the promulgation of the Act.	This will be submitted to Cabinet in June 2010.
7.(1)(a)(b)(c)	The Minister must set <b>national norms and standards</b> for (a) the classification of waste	The hazardous waste classification system is being developed and will be available in November 2010.  The DWAF minimum requirements apply for other waste types.
	b) the planning for and provision of waste management services	Domestic waste collection standards are in the process of being developed and will be ready in March 2010.
	(c) Storage, treatment and disposal of waste, including the planning and operation of waste treatment and waste disposal facilities.	The DWAF Minimum Requirements apply and the target date for new norms and standards is 2011.
9.(4)	The Minister must seek to support and strengthen the municipality's ability or right to perform its functions in relation to waste management activities.	DEA is currently implementing a pilot waste services project, which includes a technical assistance programme. Lessons from pilot to be used for wider roll-out.
10.(1)	The Minister must designate in writing an officer in the Department as the <b>national waste management officer</b> responsible for co-ordinating matters pertaining to waste management in the national government.	A draft guideline for the appointment of Waste Management Officers has been developed.
11.(1)	The Department must prepare an <b>integrated waste management plan</b> . This must be submitted to the Minister for approval.	This is likely to be produced in 2011 and a <b>guideline</b> for its development is recommended.
13.(1)	<b>Annual performance reports</b> on the implementation of the integrated waste management plans must be submitted to the Minister for approval.	A <b>template</b> for the annual performance reports should be developed.
41.(1)	The Minister must keep a <b>national contaminated land register</b> of investigation areas.	This is a starting point for the measures proposed to address contaminated land.
43.(1)	The Minister is the <b>licensing authority</b> where	DEA has already published a

Section	Measure	Comment
	the activity involves hazardous waste, international obligations, performed by a provincial department of environmental affairs or other statutory bodies with the exclusion of municipalities, an activity that takes place in more than one province or traverses international boundaries, two or more activities at a facility where the Minister is a licensing authority of one activity.	draft list of waste management activities that require licensing, and has set up the processes for managing waste license applications.
60.(1)	The Minister must establish a <b>national waste information system</b> for the recording, collection, management and analysis of data and information.	The WIS is up and running and draft regulations were gazetted for comment. Please refer to Section 4.2

### 8.1.3 DEA's discretionary measures

Table 9 DEA's discretionary measures

Section	Measure	Comment
7.(2)(a)(b)(c)(d)	The Minister may <b>set national norms and standards</b> for: (a) the minimisation, re-use, recycling and recovery of waste, including the separation of waste at the point of generation; (b) extended producer responsibility; (c) the regionalisation of waste management services; and (d) the remediation of contaminated land and soil quality.	Guidelines for recycling of solid waste available. DEA has set 2011 as target date for implementation.
7.(3)	With the agreement of the Minister of Finance, the Minister may set <b>national standards</b> in respect of <b>tariffs for waste services</b> provided by municipalities.	DEA has set 2011 as target date for implementation.
11.(3)	The Department may incorporate its integrated waste management plan in any relevant national environmental plan.	This could include the Department's Strategic Plan and Environmental Sector Plan and in so doing escalates the implementation of the Act and seeks integration with its overall strategic priorities and programmatic interventions.
11.(4)	Despite the requirement for the preparation of an integrated waste management plan, the Minister may specify in writing a <b>different mechanism</b> for the reporting on integrated waste management plans if necessary to improve the co-ordination of waste management.	The need for an alternative mechanism can only really be established once industry waste management plans have been requested, submitted and reviewed.
14.(1)	The Minister may declare a waste to be a	Please refer to section 6.1

Section	Measure	Comment
	<b>priority waste</b> if s/he believes that the waste poses a threat to health, well-being or the environment and requires a specific waste management measure.	
16.(4)	The Minister may issue regulations to provide guidance on how to discharge this general duty of care, or identify specific requirements that must be given effect to.	
17.(2)	The Minister may, after consultation with the Minister of Trade and Industry require any person or category of persons to (a) provide for the reduction, re-use, recycling and recovery of products or components of a product manufactured or imported by that person; or (b) include a determined percentage of recycled material in a product that is produced, imported or manufactured by that person or category of persons.	
18.(1)	The Minister may identify a product or class of products in for the application of <b>extended producer responsibility</b> , specify the EPR measures and who must take responsibility.	Please refer to section 6.2
19.(1)	The Minister may publish a <b>list of waste management activities</b> that have, or are likely to have, a detrimental effect on the environment.	List published to coincide with promulgation of Act.
25.(1)	The Minister may require any person or category of persons who <b>transports waste</b> for gain to register with the relevant waste management officer in the Department.	Please refer to section 6.3
28.(1)	The Minister may request the preparation of an <b>industry waste management plan</b> for any activity that results in the generation of waste that affects more than one province or where such activity is conducted in more than one province.	A draft generic guideline was circulated for comment in December 2008. Please refer to section 4.1
29.(1)	The Minister may require an <b>industry waste management plan</b> to be prepared by an <b>organ of state</b> , excluding a municipality.	A draft generic guideline was circulated for comment in December 2008. Please refer to section 4.1
36.(1)	The Minister may identify for investigation (a) land on which high-risk activities have taken place or are taking place that are likely to result in <b>land contamination</b> ; (b) land that the Minister believes to be contaminated.	Please refer to section <b>Error! Reference source not found.</b>

## 8.1.4 Provinces' mandatory measures

**Table 10 Provinces' mandatory measures**

Section	Measure	Comment
8.(1)	The relevant MEC must ensure the implementation of the national waste management strategy	The strategy will go to Cabinet in June 2010 and thereafter implementation plans and guidance for these may be developed. There will also be consultation with the provincial and municipal authorities before the strategy is finalized.
8.(1)	The relevant MEC must ensure the implementation of the national norms and standards	Please refer to section 3.2
9.(4)	The MEC must seek to support and strengthen the municipality's ability or right to perform its functions in relation to waste management activities.	Important to integrate this with broader capacity building efforts for local government, including Five Year Strategic Local Government Agenda.
10.(2)	The MEC must designate in writing an officer in the provincial administration as the <b>provincial waste management officer</b> responsible for co-ordinating matters pertaining to waste management in that province.	The Department has produced a draft guideline on the appointment of the WMOs. They need to be appointed by January 2010 and the provincial waste fora must be functional by April 2010. Please refer to section 8.3
11.(1)	The provincial departments responsible for waste management must prepare <b>integrated waste management plans</b> . This must be submitted to the Minister for approval.	A draft guidelines for the development of IWMPs aimed at provincial and local authorities was released for comment in January 2009. It does not provide timeframes for the preparation of provincial IWMPs, which are contingent on the preparation of local IWMPs, for which there are no time-frames either. Please refer to section 4.1
13.(1)	Annual performance reports on the implementation of the integrated waste management plans must be submitted to the MEC and Minister for approval.	Annual report in terms of Section 46 of MSA must be tabled one month after audit of financial statements is completed. MFMA Section 121 states that annual report must be tabled within 9 months of end of financial year.
43.(2)	The MEC of the province in which the waste management activity is being or is to be carried out is the licensing authority (excluding those	Please refer to section 5.2

Section	Measure	Comment
	activities for which the Minister is deemed the licensing authority).	

### 8.1.5 Provinces' discretionary measures

**Table 11 Provinces' discretionary measures**

Section of the Act	Measure	Comment
8.(2)	The relevant MEC may set <b>provincial norms and standards</b> that are not in conflict with national norms and standards contemplated in section 7.	Please refer to section 3.2
11.(2)	A provincial department may incorporate its <b>integrated waste management plan</b> in any relevant provincial plan.	The draft guideline for the development of IWMPs does not provide any clarity on this and further guidance is sought here.
14.(2)	The MEC may in writing request the Minister to declare a waste to be a <b>priority waste</b> in the manner contemplated in S14.(2).	Please refer to section 6.1
16.(4)	The MEC may issue regulations to provide guidance on how to discharge this <b>general duty of care</b> , or identify specific requirements that must be given effect to.	
19.(5)	The MEC, in agreement with the Minister, may publish a <b>list of waste management activities</b> that have, or are likely to have, a detrimental effect on the environment in the province concerned	Please refer to section 5.1
25.(1)	The MEC may require any person or category of persons who <b>transports waste</b> for gain to register with the relevant waste management officer in the province.	Please refer to section 6.3
28(2)	The MEC may request the preparation of an <b>industry waste management plan</b> in respect of any activity within the province concerned that results in the generation of waste provided that the Minister has not already requested the preparation of such a plan.	A guideline has been prepared to inform the preparation of industry waste management plans. Please refer to section 4.1
29.(2)	An MEC may require an <b>industry waste management plan</b> to be prepared by the provincial department responsible for environmental affairs.	A guideline has been prepared to inform the preparation of industry waste management plans. Please refer to section 4.1
36(1)	The MEC in respect of an area which affects the relevant province, may, after consultation with	The Minister has a concurrent power. Please refer to section

Section of the Act	Measure	Comment
	the Minister of Water Affairs and Forestry and any other organ of state concerned, may identify for investigation (a) land on which high-risk activities have taken place or are taking place that are likely to result in <b>land contamination</b> ;(b) land that the MEC believes to be contaminated.	<b>Error! Reference source not found.</b>
62.(1)(2)	The MEC may establish a provincial waste information system, which must at least include the information required by the national information system.	Please refer to section 4.2

### 8.1.6 Municipalities' mandatory measures

**Table 12 Municipalities' mandatory measures**

Section of the Act	Measure	Comment
9.(2)	Municipalities must exercise their executive authority and perform their duty by ensuring access to all to waste services, including waste collection, waste storage and waste disposal services, at an affordable price, in line with their tariff policy, and keeping separate financial statements, including a balance sheet of the services provided.	Regulated by Municipal Systems Act and Municipal Finance Management Act
10.(3)	Each municipality authorised to carry out waste management services by the Municipal Structures Act, 1998 (Act No. 117 of 1998), must designate in writing a <b>waste management officer</b> from its administration to be responsible for co-ordinating matters pertaining to waste management in that municipality.	The Department has produced a draft guideline on the appointment of the WMOs. They need to be appointed by January 2010 and the provincial waste fora must be functional by April 2010. Please refer to section 8.3
11.(4)(a)(i)(ii)	Each municipality must submit its <b>integrated waste management plan</b> to the MEC for approval; and include the approved integrated waste management plan in its integrated development plan contemplated in Chapter 5 of the Municipal Systems Act.	The draft guideline for the development of IWMPs does not provide any clarity on this and further guidance is sought here.
13.(3)	The <b>annual performance report</b> prepared in terms of section 46 of the Municipal Systems Act must contain information on the implementation of the municipal integrated waste management plan.	Annual report in terms of Section 46 of MSA must be tabled one month after audit of financial statements is completed. MFMA Section 121 states that annual report must be tabled within 9 months of end of financial year.

## 8.1.7 Municipalities' discretionary measures

**Table 13 Municipalities discretionary measures**

Section of the Act	Measure	Comment
9.(3)	<p>Municipalities can set local standards for:</p> <ul style="list-style-type: none"> <li>• separation, compacting and storage of solid waste</li> <li>• avoidance and minimisation of the generation of waste and the re-use, recycling and recovery of solid waste;</li> <li>• directing solid waste to specific waste treatment and disposal facilities;</li> <li>• control of litter.</li> </ul>	Please refer to section 3.2
25.(1)	A municipality may require any person or category of persons who <b>transports waste</b> for gain to register with the relevant waste management officer in the municipality	Please refer to section 6.3

In terms of the implementation of the Act, there are particular sections that have been delayed as follows:

**Table 14 Sections of the Act with delayed implementation**

Section	Measure	Reason
28.(7)	Preparation of industry waste management plans by certain persons	Guidelines first to be developed on how these plans should be developed. Please refer to section 4.1
46.(1-2)	Appointment of persons to manage waste license applications	Regulations must be developed to clarify who a "suitably qualified person" is, how an application for a waste management license as well as who may manage such applications.
Part 8 of Ch 4	Contaminated land	All section in Part 8 will be delayed until there are standards for remediation of contaminated land.

### **8.1.8 Concluding remarks**

In the process of identifying mandatory and discretionary elements of the legislation and in relation to different spheres of government, two key issues come to the fore. The first issue is the interconnection and interdependence among the different measures. For example, provincial and local standards for waste services need to be developed within the context of any national norms and standards. Also, in order for either the provincial and or local authorities to prepare informed integrated waste management plans, access to comprehensive and reliable information is required via the WIS. This, in turn, is dependent on the WIS regulations being promulgated. Simultaneously, there is a strong opportunity to streamline licensing and registration on the WIS database to minimise the administrative burden for both the Department and the applicants.

A second issue is that there are numerous provisions of the Act on which more clarity is required before an effective administrative system can be put into place. This clarity needs to be provided both in the form of guidelines and regulations. The development of these guidelines and regulations should be prioritized in order to enable implementation of the Act to take place in a smooth and coordinated manner.

These issues underline the fact that the successful implementation of the Act requires a detailed implementation plan that shows the sequencing of the different measures, the interdependence between these different measures and very clear, achievable time-frames. The NWMS needs to propose such an action plan.

## **8.2 Compliance monitoring and enforcement**

Compliance and enforcement matters are dealt with in Chapter 7 of the Waste Act, which describes the compliance powers of the Minister of Water Affairs and Forestry, waste impact reports, offenses and penalties. This section must be read in conjunction with Chapter 7 of the National Environmental Management Act, 107 of 1998, as amended, which establishes a system of compliance monitoring and enforcement for all environmental legislation, including the appointment of Environmental Management Inspectors (EMIs) at all levels of government.

The Waste Act also provides for the appointment of Waste Management Officers, whose main role is to co-ordinate waste management activities within and across the respective spheres of government. The role of WMOs includes certain compliance monitoring and enforcement functions. Their role in this respect must also be aligned and coordinated with the compliance monitoring and enforcement role fulfilled by EMIs, which is addressed later in this section.

## 8.2.1 Compliance measures under the Waste Act

### *Offences and penalties*

Chapter 7 of the Waste Act sets out a system of offences and penalties. These have been summarized in Annexure 1, which provides a list of offences identified by Section 67 of the Waste Act as well as the associated penalties as provided by Section 68. This information has been presented per sphere of government and a fourth table represents a list of compliance matters where they occur across all three spheres of government.

### *Waste impact reports*

Waste impact reports are an additional compliance monitoring measure created by the Waste Act that can be utilized to deal with instances of suspected non-compliance or transgression of norms and standards. The following table outlines the two circumstances in which a waste impact report may be requested.

**Table 15 Circumstances for requesting a waste impact report**

66.(1)	Environmental Management Inspector	Suspected contravention of failure to comply with the Act or any conditions of a waste management license or exemptions, which has had a detrimental effect on health or the environment.
66.(2)	Waste management officer	May request the preparation of a waste impact report if a waste management license is under review (S53).

Issues that need to be resolved in relation to the waste impact report include the circumstances under which a WMO can request a waste impact report and its format, and who the independent person is that has the required qualifications to prepare such a report. A possibility is that this independent person has the same accreditation as those required to verify the information submitted to the WIS. It is recommended that guidelines are developed on these issues.

### *Compliance powers of the Minister of Water Affairs and Forestry*

The Waste Act empowers the Minister of Water Affairs and Forestry to exercise the Minister's powers under section 19, 53 and 155 or the National Water Act, 1998, in regard to contraventions of the Waste Act that impact on a water resource. Since the water legislation has now been assigned to the Minister of Water and Environmental Affairs, these powers are now vested in the same Minister. Therefore this is read as the Minister of Water and Environmental Affairs may exercise her powers conferred to her in respect of listed waste management activities (S19) and review of waste management licenses (S53). She also has powers in respect of the National Water Act where a person contravenes or fails to comply with any condition of a waste management license, a remediation order or measures specified in terms of section 38(3) that may impact negatively on a water resource.

## 8.2.2 The Environmental Management Inspectorate

The primary arrangements for compliance monitoring and enforcement of the Waste Act are in fact not covered by the Waste Act, but by an amendment to the National Environmental Management Act, 107 of 1998 (NEMA), which came into effect on 1 May 2005. Chapter 7 of NEMA provides for Environmental Management Inspectors (EMIs) to be designated by the Minister and MECs. The compliance monitoring and enforcement system is managed by the Chief Directorate: Regulatory Services which is part of the Environmental Quality and Protection Branch, as indicated in the following diagram:

**Figure 10 Compliance, monitoring and enforcement system**



The Environmental Management Inspectorate is a network of environmental enforcement officials drawn from different government departments at national, provincial and local level. Officials from DEA, provincial environment departments, other provincial organs of state, municipalities and parastatal bodies can be appointed as EMIs.

EMIs must monitor compliance with and enforce the specific environmental legislation that they have been mandated to enforce. These mandates are determined when EMIs are designated by the Minister or relevant MEC. It is envisaged that the Waste Act will form part of this assignment, and that it may be assigned to dedicated EMIs responsible for its enforcement. EMIs can also be mandated to enforce a range of legislation depending on their particular functions, and it is possible for EMIs dealing with the Waste Act also to enforce related legislation such as NEMA, and the regulations promulgated under NEMA, and the Air Quality Act. EMIs are also empowered to enforce any authorisations issued under their mandated legislation, including permits, licenses and EIA authorisations (records of decision).

EMIs have a number of important powers and responsibilities that enable them to enforce environmental legislation. These powers include:

- Powers of inspection, such as entering premises to check compliance, and seizing evidence of non-compliance;
- Powers of investigation, such as interrogating witnesses, seizing documents, taking samples and removing waste;
- Powers of enforcement, such as search and seizure of premises, containers, vessels, and vehicles, establishing roadblocks and making arrests;
- Administrative powers such as issuing compliance notices.

The above powers are awarded to EMIs based on a ranking system, depending on experience, qualifications and seniority. A Grade 1 EMI has more powers than any other Grade of EMI.

There is a general rule that the EMIs from whichever body has issued a license (national government issues hazardous waste licenses and the provincial environmental authority issues general waste licenses) are responsible for monitoring and compliance in regard to that license.

The compliance monitoring procedure that is followed involves two forms of inspections – proactive inspections and reactive inspection. Proactive inspections, also known as strategic compliance and enforcement inspections, involve the prioritization of sites for inspection and physical inspections involving multi-task teams. The audit is based on the conditions of the license, NEMA S28 (duty of care) and NEMA S30. A report is compiled and the offending party has 30 days in which to respond verbally. Thereafter an enforcement strategy is prepared, which may either follow a criminal route if there is evidence of blatant disregard of the law or the preparation of a pre-directive followed by a directive. If the directive is not complied with, the matter becomes a criminal one. Reactive inspections are conducted on the basis of complaints received.

A compliance notice can be issued by certain EMIs when that EMI has reasonable grounds for believing that a person has not complied with environmental legislation, or with a term of a permit issued under that legislation. NEMA Chapter 7 makes it a criminal offence to fail to comply with a compliance notice.

If a person fails to comply with a compliance notice issued by an EMI (which has to be done in writing in accordance with a prescribed procedure), the Minister or relevant MEC may revoke or vary that person's permit, take the necessary steps and recover the costs from the offender, and refer the matter to the National Prosecuting Authority for prosecution.

In addition, NEMA Chapter 7 provides that all offences under NEMA or any specific environmental management Act are now Schedule 1 offences under the Criminal Procedure Act, 55 of 1977.

The court convicting a person of an offence in terms of NEMA or the Waste Act can withdraw any permit or authorisation under NEMA or the Waste Act if the rights under that permit had been abused. The courts can also disqualify that person from obtaining a permit or other authorisation for up to five years, and notify all other permitting authorities of this disqualification.

### **8.2.3 Specific EMIs responsibilities in relation to the Waste Act**

Annexure A provides a very detailed list of issues that would require monitoring and enforcement in relation to the Waste Act. In appointing EMIs specific consideration needs to be given to the allocation of these responsibilities to the different role-players. In addition, the Waste Act does make specific mention about the role of EMIs in relation to three aspects.

#### **1. Waste impact reports**

Waste impact reports are a compliance monitoring measure created by the Waste Act that can be utilized to deal with instances of suspected non-compliance or transgression of norms and standards.

In terms of section 66.(1) an Environmental Management Inspector may request a waste impact report if there is a suspected contravention or failure to comply with the Waste Act or any conditions of a waste management license or exemptions, in instances where this has a detrimental effect on health or the environment.

This function needs to be coordinated with the function of the WMO, who, in terms of section 66.(2) may request the preparation of a waste impact report if a waste management license is under review (S53).

#### **2. Provision of information**

Section 67(1)(l) provides that it is an offence to knowingly supply false or misleading information to an EMI for the purpose of the Act, which may result in a fine not exceeding R5m and/or 5 years imprisonment.

#### **3. Contents of waste management licenses**

Section 51(2)(g) of the Waste Act states that the EMIs have the discretion to request information from waste management license holders in respect of their licenses and that this information must be supplied as a certified statement. The information that the EMIs may request include the status of implementation of the conditions and requirements of the license, details of any implementation failures and the reasons for this as well as the required course of action to remedy such failures.

#### **8.2.4 Capacity of the Environmental Management Inspectorate**

The first 26 EMIs were designated in DEAT and South African National Parks (SANParks) on 14 July 2005, and since then a further approximately 600 employees of SANParks have been designated as EMIs. This amounts to two-thirds of EMIs as there are now approximately 900 EMIs in national and provincial government institutions across the country, designated by the Minister and MECs.

Before EMIs can be designated, officials must successfully complete an EMI training course. This training has aimed to develop core competencies required by an official to undertake basic compliance and enforcement duties autonomously and qualify him/her as Environmental Management Inspector in terms of S31B and C of NEMA.

The realization that municipal officials bear significant compliance and enforcement duties in relation to the environmental legislation has led to the inclusion of local authorities in the scope of officials to receive basic training since 2007. To date, around 60 EMIs have been trained at a local level.

The Department of Environmental Affairs acknowledges that, despite significant progress, there are still too few EMIs to successfully enforce environmental legislation, and there are particular concerns about provincial capacity to ensure compliance and enforcement. A discussion document has been prepared by the Environmental Management Inspectorate to develop a national strategy for the roll-out of the Inspectorate to municipal level. This will not only fulfil the constitutional obligation of national and provincial government to support and strengthen the capacity of municipalities to exercise their powers and perform their functions as stipulated in S154 of the Constitution, but also ensures that the roll-out takes place in a consistent and systematic manner. The discussion document also intends to serve as a guideline to authorities designating municipal officials as environmental management inspectors.

Given the extensive responsibilities created by the Waste Act, it is recommended that a full assessment of the number and capacity of the EMIs required to enforce the Waste Act is undertaken, and a strategy developed to build this capacity in an incremental manner.

#### **8.2.5 Coordination of roles and responsibilities**

MINTECH Working Group 4 deals with compliance and enforcement issues, and it is working on clarifying the respective roles and responsibilities between national, provincial and local levels. It will be important for the Working Group to also establish the respective roles of the EMIs and the envisaged WMOs.

EMIs also coordinate their activities closely with the South African Police Services (SAPS), who play a crucial role in enforcing environmental legislation. EMIs work closely with police officials in the investigation of environmental crimes. In terms of NEMA, all police officers also have most of the powers of an EMI.

Coordination with the National Prosecuting Authority is extremely important for the prosecution of environmental crimes. EMI's are not empowered to prosecute cases in court, and the results of their investigations are handed over to prosecutors of the NPA to prosecute. The Department of Environmental Affairs and the NPA are collaborating to ensure the successful prosecution of environmental crimes.

### 8.3 System of Waste Management Officers

The Waste Act creates a specialized system of officers charged with coordinating waste management matters at each level of government. This system responds to the historical difficulty in implementing legislation and the importance of achieving the objectives of the Act. The Waste Act has responded to these institutional challenges by providing for what are termed Waste Management Officers (WMOs), as set out in Chapter 3 Sections 10 to 13. WMOs are to be appointed at national, provincial and municipal level.

*10 (1) The Minister must designate in writing an officer in the Department as the National Waste Management officer responsible for coordinating matters pertaining to waste management in the national government.*

*(2) The MEC must designate in writing an officer in the provincial administration as the provincial waste management officer responsible for coordinating matters pertaining to waste management in that province.*

*(3) Each municipality authorized to carry out waste management services by the Municipal Structures Act, 1998 (Act no.117 of 1998), must designate in writing a waste management officer from its administration to be responsible for coordinating matters pertaining to waste management in that municipality.*

The Waste Act therefore primarily envisages a coordination function for WMOs, although it leaves the precise determination of their functions to the NWMS and regulations by the Minister. The Act states that WMOs must co-ordinate their activities with other waste management activities in the manner set out in the NWMS, or in terms of notice published by the Minister in the Gazette.

The Department has developed a guideline for the appointment of WMOs, which seeks to further define the role, powers, profile and rank of the WMOs. This guideline needs to be read in conjunction with the National Co-ordination Plan for the Implementation of the Waste Act and its regulations.

#### 8.3.1 WMO powers and duties

The guideline stipulates that the WMOs will be responsible for coordination of all functions and powers assigned by the Act to their respective principal (Minister, MECs or municipalities). Thus the national WMO will support the Minister in ensuring that all the responsibilities imposed on the Minister by the Act are fulfilled. Similarly the designated provincial WMOs will support the provincial environmental MECs in respect

to their functions, and municipal WMOs will support the Mayors of their respective municipalities.

The generic duties of all WMOs are to coordinate matters relating to waste management and to ensure implementation and coordination of the National Waste Management Strategy. The WMOs may be delegated to perform other duties by their respective administration over and above their stipulated role in the guideline.

In addition to this coordination of waste management activities, the Act assigns specific regulatory powers to the National WMO and Provincial WMOs. In terms of Section 58 (1) they may request the appointment of waste management control officers by holders of waste management licenses, and in terms of Section 66(2) they may require the preparation of waste impact reports when the waste management licenses are being reviewed.

These latter regulatory functions assigned to WMOs in terms of the Act raise an important debate regarding the oversight and regulatory role that should be played by WMOs. In the research paper on **Co-operative Governance, local government and municipal domestic waste services** it is proposed that a clear distinction needs to be made between waste service delivery and policy making on the one hand, and independent oversight and regulation on the other. The paper suggests that WMOs should form the basis of an independent sector regulator, and should be ring-fenced from policy-making activities<sup>2</sup>. The advantage of this independent regulatory role is that WMOs would be tasked with ensuring that national and provincial norms and standards are adhered to by both public and private waste service providers. Importantly the WMOs would be separated from service provision activities, particularly at municipal level. This means that WMOs should be appointed outside of existing solid waste departments or agencies, such as in the Office of the Municipal Manager. (Savage 2009:21)

Given the strong emphasis on norms and standards set out in the Waste Act, there is a strong advantage to be gained from an independent system of WMOs at each level of government charged with the responsibility of making sure that the standards are implemented. This regulatory role can be further clarified in terms of regulations issues in terms of the Act. In particular, the regulations should specify the authority and powers of these officers, the requirement to firewall them from policy-making and service provision activities, and communication and management arrangements that will enable these officers to establish an effective regulatory system across the country. (Savage 2009:21)

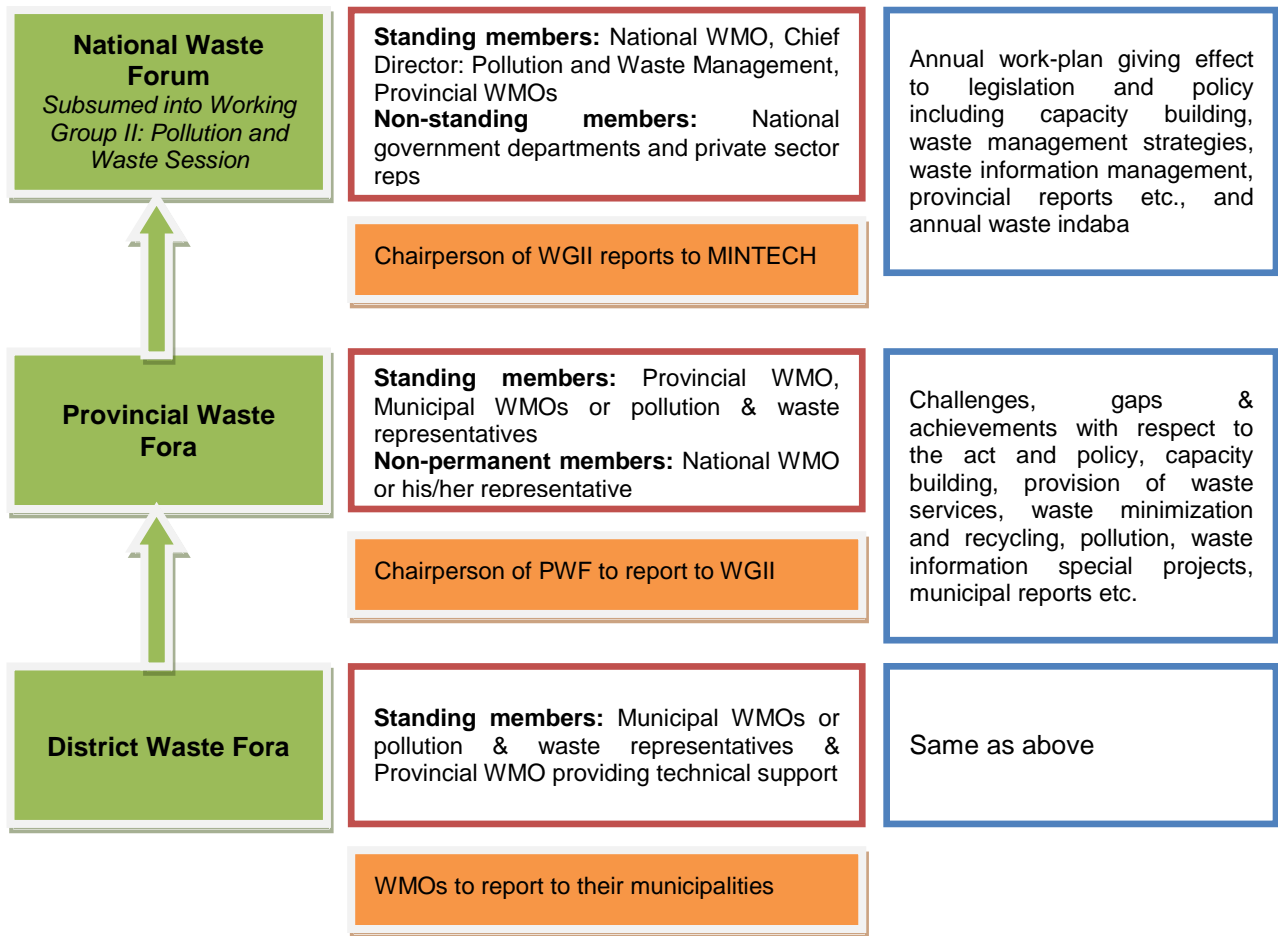
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<sup>2</sup> Policy making functions encompass both the establishment of norms, standards and targets, the system of planning for service expansion and improvement, as well as coordination and policy activities. At present, all spheres of government perform these functions.

### 8.3.2 Co-ordination structures

The coordination of functions and activities between WMOs at the different levels of government requires a set of structures that are designed for this purpose. The Department has set out a three tiered system of coordination, and the following diagram represents the coordination structures anticipated by the Department to give effect to the legislation.

**Figure 11 Coordination structures for WMOs and Government**



An important issue to note is that a separate National Waste Forum would not be created, and rather integrated into the existing Working Group II: Pollution and Waste Session. However, this will tend to blur the distinction between the independent regulatory role of WMOs, and the policy making and standard setting function of Working Group II. It is therefore recommended that a dedicated national structure for coordinating WMO activities is created.

Secondly, there are no specific terms of reference for each of the envisaged structures and each will develop its own TORs and ratify them. It is important to consider the exact duties of each structure in relation to the Act so that they may be given clear guidance about the nature of their activities, thereby enabling them to draft specific terms of reference.

## 9 Conclusion

The Waste Act is an ambitious piece of legislation, and read in the context of the whole body of environmental legislation, provides a comprehensive framework for addressing the challenges of the waste hierarchy. This paper has construed the regulatory provisions of the Waste Act as forming part of a continuum of measures extending from a “soft” voluntary and incentivised approach to a “harder” form of command and control. Voluntary initiatives by industry, including the development of industry waste management plans, need to be encouraged as part of a baseline response to the regulatory challenge. The appropriate incentives to do this are dealt with by other research papers as part of this series.

The scope of regulatory activities in relation to the Act is informed primarily by what constitutes waste. There are two main areas of ambiguity in the definition, firstly concerning mining waste in as far as it causes land contamination, and secondly the need to clarify when certain wastes cease to be wastes. These necessitating a technical guideline to assist with the legal interpretation of the definition of waste.

The starting point for the regulatory system is the establishment of national norms and standards, which form the foundation for the further development of this regulatory system. Amongst others, these must address the need for a standard classification system for waste, norms and standards for the storage, treatment and disposal of waste and the delivery of waste management services. National norms and standards may also be established for the waste management hierarchy; waste separation; extended producer responsibility; regionalisation of waste services; and remediation of contaminated land.

The revamping of the classification system, in particular the hazardous waste classification is an important initiative. Building on the definitions of waste provided in the Waste Act, this paper highlights the need for a standard approach to the categorisation of waste, and offers a unique contribution by outlining a suggested framework for waste categorisation. This categorisation should form a common set of data fields for waste information and licensing systems.

The regulation and administration of norms and standards is a complex process, and the role of the South African Technical Infrastructure is highlighted as an important part of ensuring the integrity and enforceability of any norms and standards. It is a recommendation of this paper that a bilateral engagement or committee between DEA and DTI is prioritised, with the purpose of bringing together the necessary technical institutions and departmental policy makers in the interests of effective and efficient standard development, certification and enforcement for waste management .

The Waste Act gives effect to a intergovernmental planning and reporting system that promises a more coordinated approach to waste management between the three spheres of government, and which aligns the processes of integrated planning,

resourcing, monitoring and evaluation. This paper highlights the importance of linking the waste management planning and reporting measures with mainstream processes of strategic planning, budgeting and reporting in government. This will ensure that waste management receives the priority attention and resources that it deserves. A planning calendar and guidelines are needed to clarify how integrated waste management plans can be optimally integrated into local, provincial and national planning cycles and relevant strategic plans with concomitant resourcing.

The paper highlights the importance of an effectively functioning national waste information system, aligned with the licensing system, in order to support policy and decision making. This in turn will enable informed integrated waste management planning. Essential issues to be addressed include whether there is optimal streamlining of information provision to the regulatory authority, reducing the administrative burden on both industry and government regardless of the required use of the information (WIS, licensing, compliance).

The paper has highlighted various special measures provided by the Act for promoting the waste hierarchy. These include industry waste management plans, the declaration of priority waste, extended producer responsibility and land contamination and remediation. The challenges regarding implementation of these measures have been explored, and recommendations made regarding various guidelines, legislative reviews, financing and coordination mechanisms.

The tools to ensure standardised interpretation and application of the Act, and provide a sufficient level of detail of the plethora of regulatory measures will be invaluable. Thus far, two guidelines (integrated waste management planning and industry waste management planning) have been published for comment. This paper has pointed out some shortcomings in these documents that should be addressed if they are to be effective. Furthermore, the Act requires a detailed, sequential implementation plan that demystifies the interconnected processes for realising the intentions of the Act. The NWMS will need to set out such a plan.

The capacity to implement the regulatory measures anticipated in the Act is the most important challenge faced by government. This paper has followed an approach that seeks to utilise the capacity that exists in different government agencies and departments, and create a seamless system of “joined up government” for implementing the Act. Crucial roles will need to be played by existing role-players such as the Environmental Management Inspectors, as well as the new cadre of officials provided for by the Act, namely the Waste Management Officers. There are concurrent and specific roles and responsibilities assigned to every sphere of government, the paper sets out a clear framework of who performs which role. The paper raises the importance of an independent regulatory function for waste management, and argues that for the regulatory function to be effective, it needs to be separated from the operational and policy-making aspects of the Act so that it has the independence and space to ensure full compliance with the provision of the Act.

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## 10 Annexure A: Offences and penalties per chapter 7 of the Waste Act

### National Government

SECTION	OFFENCES	PENALTY
14 (4)	<p><b>DECLARATION OF PRIORITY WASTE</b></p> <p>Contravenes or fails to comply with a waste management measure specified in terms of section 14(4)</p> <p>(<b>National</b> – The Minister declares priority waste, the consequences should be dealt with by the national Department.)</p>	Fine not exceeding R5m and/or 5 years imprisonment
15	<p><b>CONSEQUENCES OF DECLARATION OF PRIORITY WASTES</b></p> <p>This section prohibits any person from importation, exportation, selling, manufacturing and processing of a priority waste or product likely to result in the generation of a priority waste.</p> <p>(<b>National</b> – The Minister declares priority waste, the consequences should be dealt with by the national Department)</p>	Fine not exceeding R10m and/or 10 years imprisonment
18(1)	<p><b>EXTENDED PRODUCER RESPONSIBILITY</b></p> <p>Prevent any employee or any person under his or her supervision from contravening this Act, or</p> <p>(All spheres of government)</p> <p>Reduction, re-use, recycling and recovery of products or <b>section 18(1)</b> Extended producer responsibility.</p> <p>(Minister issues this notice, <b>National</b> must deal with compliance)</p> <p>This section prohibits any person from commencing, undertaking or conducting a waste management activity without authorization.</p> <p>(The principle is that the department issuing an authorization should take primary responsibility for its compliance monitoring and enforcement. <b>National</b> for Hazardous Waste Activities)</p> <p>Contravenes or fails to comply with a provision of section 21 – storage of waste.</p> <p>(The principle is that the department issuing an authorization should take primary responsibility for its compliance monitoring and enforcement. <b>National</b> for Hazardous Waste Activities.)</p> <p>It prohibits any person from unauthorized disposal, unless the disposal of waste is authorized by law since unauthorized disposal can cause pollution of the environment or harm to health and well-being.</p> <p>(The principle is that the department issuing an authorization should take primary responsibility for its compliance monitoring</p>	Fine not exceeding R10m and/or 10 years imprisonment

SECTION	OFFENCES	PENALTY
	and enforcement. <b>National</b> for Hazardous Waste Activities.)	
28	<p><b>PREPARATION OF INDUSTRY WASTE MANAGEMENT PLANS BY CERTAIN PERSONS</b></p> <p>Fails to prepare and submit an industry waste management plan when required to do so in terms of <b>section 28</b>.</p> <p>(<b>National</b> where Minister requested the plan)</p>	Fine not exceeding R5m and/or 5 years imprisonment
29	<p><b>PREPARATION OF INDUSTRY WASTE MANAGEMENT PLANS BY ORGANS OF STATE</b></p> <p>Fails to provide the information contemplated in section <b>29(5)</b> (information required for the industry waste management plan)</p> <p>(<b>National</b> – where information has to be provided to National)</p>	Fine and/or imprisonment for no longer than 6 months
63 (4)	<p><b>WASTE INFORMATION – PROVISION OF INFORMATION</b></p> <p>Fails to provide the information contemplated in section <b>63(4)</b>(information required for the national WIS).</p> <p>(<b>National</b> – where information has to be provided to National)</p>	Fine and/or imprisonment for no longer than 6 months
33(1)	<p><b>INDUSTRY WASTE MANAGEMENT PLANS – SPECIFICATION OF MEASURES TO BE TAKEN</b></p> <p>Details specification of measures to be taken if the person who is required in terms of <b>section 28(1) or (2)</b> to prepare an industry waste management plan fails to do so or in the case that such a person fails to amend a plan as required by the Minister or the MEC in terms of section 32(1) which involves the Minister or MEC having to issue a notice in writing (without criminal proceedings being affected) in which the Minister or MEC specify the waste management measures that must be taken by that person to ensure that person is not unduly advantaged by the failure to submit a plan</p>	Fine not exceeding R5m and/or 5 years imprisonment
36(5)	<p><b>CONTAMINATED LAND – IDENTIFICATION AND NOTIFICATION OF INVESTIGATION AREAS</b></p> <p>An owner of the land that is significantly contaminated, or a person who undertakes an activity that caused the land to be significantly contaminated, must notify the Minister and MEC of that contamination as soon as that person becomes aware, of that contamination.</p> <p>(<b>National</b> will have to deal with those.)</p>	Fine not exceeding R5m and/or 5 years imprisonment
37(1)	<p><b>CONTAMINATED LAND – CONSEQUENCES OF IDENTIFICATION AND NOTIFICATION OF INVESTIGATION AREAS</b></p> <p>Fails to conduct a site assessment or submit a site assessment report in terms of <b>section 37(1)</b>.</p> <p>(<b>National</b> – where Minister exercised the power)</p>	Fine not exceeding R10m and/or 10 years imprisonment

SECTION	OFFENCES	PENALTY
38(2) or (3)	<p><b>CONTAMINATED LAND – CONSIDERATION OF SITE ASSESSMENT REPORTS</b></p> <p>Remediation order under <b>section 38(2) or (3)</b> in which the Minister or MEC may give an order that an investigation area of a contaminated land be remediated or order that specific measures be taken to monitor and manage the risk of contamination on investigation area; or</p> <p>(<b>National</b> – where Minister issued the remediation order)</p>	Fine not exceeding R10m and/or 10 years imprisonment
40(1)	<p><b>CONTAMINATED LAND – TRANSFER OF REMEDIATION SITES</b></p> <p>No person may transfer contaminated land without informing the person whom the land is to be transferred that the land is contaminated and, in the case of remediation site, without notifying the Minister or MEC and complying with any conditions that are specified by the Minister or MEC, as the case may be.</p> <p>(<b>National</b> should deal with the matter)</p>	Fine not exceeding R5m and/or 5 years imprisonment
44	<p><b>LICENSING OF WASTE MANAGEMENT ACTIVITIES – CO-OPERATIVE GOVERNANCE IN WASTE MANAGEMENT LICENSE APPLICATIONS</b></p> <p>Contravenes or fails to comply with a condition or requirement of a waste management license or an integrated license contemplated in <b>section 44</b></p> <p>(The principle is that the department issuing an authorization should take primary responsibility for its compliance monitoring and enforcement. <b>National</b> for Hazardous Waste Activities)</p>	Fine not exceeding R10m and/or 10 years imprisonment
67(1)(d)	<p><b>COMPLIANCE AND ENFORCEMENT - OFFENCES</b></p> <p>Contravenes or fails to comply with an industry waste management plan;</p> <p>(<b>National</b> where Minister requested the plan)</p>	Fine not exceeding R5m and/or 5 years imprisonment
67. (1)(f)	<p><b>COMPLIANCE AND ENFORCEMENT - OFFENCES</b></p> <p>Contravenes or fails to comply with a norm or standard established in terms of this Act;</p> <p>(<b>National, Province or Municipality</b>, depending on who set the norm or standard)</p>	Fine not exceeding R5m and/or 5 years imprisonment
67. (1)(k)	<p><b>COMPLIANCE AND ENFORCEMENT - OFFENCES</b></p> <p>Knowingly supplies false or misleading information in any application made in terms of this Act;</p> <p>(<b>National</b> – where application was made to National)</p>	Fine not exceeding R5m and/or 5 years imprisonment
76. (3)	<p><b>EXEMPTIONS AND APPEALS – DECISIONS ON APPLICATIONS FOR EXEMPTION</b></p>	Fine not exceeding R5m

SECTION	OFFENCES	PENALTY
	<p>Contravenes or fails to comply with a condition subject to which the exemption from a provision of this Act was granted in terms of section 76(3)(c).</p> <p>(National- where Minister issued exemption)</p>	and/or 5 years imprisonment

### **Provincial Government**

SECTION	OFFENCES	PENALTY
16.(1)(c)	<p><b>GENERAL DUTY IN RESPECT OF WASTE MANAGEMENT</b></p> <p>A holder of waste must, within the holder's power, take all reasonable measures to, where waste must be disposed of, ensure that waste is treated and disposed of in an environmentally sound manner.</p> <p>(Province – will be better responded to by provincial department. Local government may contravene this provision, as they cannot police themselves)</p>	Fine not exceeding R10m and/or 10 years imprisonment
16.(1)(d)	<p><b>GENERAL DUTY IN RESPECT OF WASTE MANAGEMENT</b></p> <p>Manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odour or visual impacts.</p> <p>(Province – will be better responded to by provincial department. Local government may contravene this provision, as they cannot police themselves.)</p>	Fine not exceeding R10m and/or 10 years imprisonment
16.(1)(f)	<p><b>GENERAL DUTY IN RESPECT OF WASTE MANAGEMENT</b></p> <p>Prevent the waste from being used for an unauthorized purpose.</p> <p>(Province – will be better responded to by provincial department.)</p>	Fine not exceeding R10m and/or 10 years imprisonment
20	<p><b>WASTE MANAGEMENT ACTIVITIES – CONSEQUENCES OF LISTING WASTE MANAGEMENT ACTIVITIES</b></p> <p>This section prohibits any person from commencing, undertaking or conduction a waste management activity without authorization.</p> <p>(General Waste Activities)</p>	Fine not exceeding R10m and/or 10 years imprisonment
21	<p><b>STORAGE, COLLECTION AND TRANSPORTATION OF WASTE – GENERAL REQUIREMENTS FOR STORAGE OF WASTE</b></p> <p>Contravenes or fails to comply with a provision of <b>section 21</b> – storage of waste</p> <p>(General Waste Activities)</p>	Fine not exceeding R5m and/or 5 years imprisonment
26.(1)	<b>TREATMENT, PROCESSING AND DISPOSAL OF WASTE –</b>	Fine not

SECTION	OFFENCES	PENALTY
	<p><b>PROHIBITION OF UNAUTHORISED DISPOSAL</b></p> <p>It prohibits any person from unauthorized disposal, unless the disposal of waste is authorized by law since unauthorized disposal can cause pollution of the environment or harm to health and well-being; or</p> <p>(General Waste Activities)</p>	<p>exceeding R10m and/or 10 years imprisonment</p>
28	<p><b>PREPARATION OF INDUSTRY WASTE MANAGEMENT PLANS BY CERTAIN PERSONS</b></p> <p>Fails to prepare and submit an industry waste management plan when required to do so in terms of <b>section 28</b>.</p> <p>(<b>Province</b> - where the MEC requested the plan)</p>	<p>Fine not exceeding R5m and/or 5 years imprisonment</p>
29.(5) or 63(4)	<p><b>PREPARATION OF INDUSTRY WASTE MANAGEMENT PLANS BY ORGANS OF STATE</b></p> <p>Fails to provide the information contemplated in section 29(5) or 63(4)</p> <p>(<b>Province</b> – where information has to be provided to Province)</p>	<p>Fine and/or imprisonment for no longer than 6 months</p>
33.(1)	<p><b>INDUSTRY WASTE MANAGEMENT PLANS – SPECIFICATION OF MEASURES TO BE TAKEN</b></p> <p>Details specification of measures to be taken if the person who is required in terms of <b>section 28(1) or (2)</b> to prepare an industry waste management plan fails to do so or in the case that such a person fails to amend a plan as required by the Minister or the MEC in terms of section 32(1) which involves the Minister or MEC having to issue a notice in writing (without criminal proceedings being affected) in which the Minister or MEC specify the waste management measure that must be taken by that person to ensure that that person is not unduly advantaged by the failure to submit a plan.</p> <p>(<b>Province</b> – where the MEC requested the plan)</p>	<p>Fine not exceeding R5m and/or 5 years imprisonment</p>
36.(5)	<p><b>CONTAMINATED LAND – IDENTIFICATION AND NOTIFICATION OF INVESTIGATION AREAS</b></p> <p>An owner of the land that is significantly contaminated, or a person who undertakes an activity that caused the land to be significantly contaminated, must notify the Minister and MEC of that contamination as soon as that person becomes aware, of that contamination.</p> <p>(<b>Province</b> will respond better except where contamination happened across provincial borders)</p>	<p>Fine not exceeding R5m and/or 5 years imprisonment</p>
37.(1)	<p><b>CONTAMINATED LAND – CONSEQUENCES OF IDENTIFICATION AND NOTIFICATION OF INVESTIGATION AREAS</b></p> <p>Fails to conduct a site assessment or submit a site assessment</p>	<p>Fine not exceeding R10m and/or 10 years imprisonment</p>

SECTION	OFFENCES	PENALTY
	<p>report in terms of <b>section 37(1)</b></p> <p>(Province – where MEC exercised the power)</p>	
<b>38.(2) or (3)</b>	<p><b>CONTAMINATED LAND – CONSIDERATION OF SITE ASSESSMENT REPORTS</b></p> <p>Remediation order under <b>section 38(2) or (3)</b> in which the Minister or MEC may give an order that an investigation area of a contaminated land be remediated or order that specific measures be taken to monitor and manage the risk of contamination on investigation area.</p> <p>(Province – where the MEC issued the remediation order)</p>	Fine not exceeding R10m and/or 10 years imprisonment
<b>40.(1)</b>	<p><b>CONTAMINATED LAND – TRANSFER OF REMEDIATION SITES</b></p> <p>No person may transfer contaminated land without informing the person to whom the land is to be transferred that the land is contaminated and, in the case of a remediation site, without notifying the Minister or MEC and complying with any conditions that are specified by the Minister or MEC, as the case may be.</p> <p>(Province-will be better responded to by provincial department)</p>	Fine not exceeding R5m and/or 5 years imprisonment
<b>44</b>	<p><b>LICENSING OF WASTE MANAGEMENT ACTIVITIES – CO-OPERATIVE GOVERNANCE IN WASTE MANAGEMENT LICENSE APPLICATIONS</b></p> <p>Contravenes or fails to comply with a condition or requirement of waste management license or an integrated license contemplated in <b>section 44</b>.</p> <p>(Province – General Waste Activities)</p>	Fine not exceeding R10m and/or 10 years imprisonment
<b>67.(1)(d)</b>	<p><b>COMPLIANCE AND ENFORCEMENT – OFFENCES</b></p> <p>Contravenes or fails to comply with an industry waste management plan.</p> <p>(Province- where the MEC requested the plan)</p>	Fine not exceeding R5m and/or 5 years imprisonment
<b>67.(1)(k)</b>	<p><b>COMPLIANCE AND ENFORCEMENT – OFFENCES</b></p> <p>Knowingly supplies false or misleading information in any application made in terms of this Act.</p> <p>(Province – where application was made to Province)</p>	Fine not exceeding R5m and/or 5 years imprisonment

SECTION	OFFENCES	PENALTY
67.(2)	<p><b>COMPLIANCE AND ENFORCEMENT – OFFENCES</b></p> <p>A person who is in control of a vehicle, or is in position to control the use of a vehicle, that is used to transport waste for the purpose of off loading that waste, is guilty of an offence if that person</p> <p>(a) Fails to take all reasonable steps to prevent spillage of waste or littering from the vehicle;</p> <p>(b) Intentionally or negligently cause spillage or littering from the vehicle;</p> <p>(c) Dispose of waste at a facility which is not authorized to accept such waste;</p> <p>(d) Fails to ensure that waste is disposed of at a facility that is authorized to accept such waste; or</p> <p>(e) Fails to comply with any duty as set out in section 25(4)</p> <p>(Province – where MEC issued exemption)</p>	Fine not exceeding R5m and/or 5 years imprisonment

### **Local Government**

SECTION	OFFENCES	PENALTY
22.(1)	<p><b>STORAGE, COLLECTION AND TRANSPORTATION OF WASTE – STORAGE OF GENERAL WASTE</b></p> <p>Storage of waste in containers provided by municipality.</p> <p>(Municipality – this is a local government matter and it should also be covered in most by-laws)</p>	Fine not exceeding R5m and/or 5 years imprisonment
24	<p><b>STORAGE, COLLECTION AND TRANSPORTATION OF WASTE – COLLECTION OF WASTE</b></p> <p>Collection of waste</p> <p>(Municipality – this is a local government matter and it should also be covered in most by-laws)</p>	Fine not exceeding R5m and/or 5 years imprisonment
27.(2)	<p><b>TREATMENT, PROCESSING AND DISPOSAL OF WASTE</b></p> <p>Littering</p> <p>(Municipality – this is a local government matter and it should also be covered in most by-laws)</p>	Fine not exceeding R5m and/or 5 years imprisonment
67. (2)	<p><b>COMPLIANCE AND ENFORCEMENT – OFFENCES</b></p> <p>A person who is in control of a vehicle, or is in position to control the use of a vehicle, that is used to transport waste for the purpose of offloading that waste, is guilty of an offence if that person –</p> <p>(a) Fails to take all reasonable steps to prevent spillage of waste or littering from the vehicle;</p> <p>(b) Intentionally or negligently cause spillage or littering from the vehicle;</p>	Fine not exceeding R5m and/or 5 years imprisonment

SECTION	OFFENCES	PENALTY
	(c) Dispose of waste at a facility which is not authorized to accept such waste; (d) Fails to ensure that waste is disposed of at a facility that is authorized to accept such waste; or (e) Fails to comply with any duty as set out in section 25(4)  <b>(Local government may contravene this provision, so they can't police themselves)</b>	

***All spheres of government***

SECTION	OFFENCE	PENALTY
16.(1)(e)	<b>GENERAL DUTY IN RESPECT OF WASTE MANAGEMENT</b> Prevent any employee or any person under his or her supervision from contravening this Act.	Fine not exceeding R10m and/or 10 years imprisonment
66.(1) or (2)	<b>COMPLIANCE AND ENFORCEMENT – WASTE IMPACT REPORTS</b> Fails to submit a waste impact report required in terms of section 66(1) or (2).  <b>(All three spheres – depending on who request the waste impact report)</b>	Fine not exceeding R5m and/or 5 years imprisonment
67.(1)(f)	<b>COMPLIANCE AND ENFORCEMENT – OFFENCES</b> Contravenes or fails to comply with a norm or standard established in terms of this Act.  <b>(National, province or municipality, depending on who set the norm or standard)</b>	Fine not exceeding R5m and/or 5 years imprisonment
67.(1)(l)	<b>COMPLIANCE AND ENFORCEMENT – OFFENCES</b> Knowingly supplies false or misleading information to a waste management officer or environmental management inspector for the purpose of this Act.  <b>(All three spheres - depending on where the information was supplied to)</b>	Fine not exceeding R5m and/or 5 years imprisonment

## 11 Annexure B A comparative overview of legislation for remediation of land and duty of care

Legislation	Who it applies to	Clarification of investigation areas	Measures	Who enforces	Enforcement provisions	Other provisions
<b>National Environmental Management Act 1998</b>	Owners or people in control of land or premises (even if it is not themselves that undertake the activity) including successors-in-title.	The threat/risk of <i>'significant'</i> pollution is sufficient to trigger the imposition of duty.	Measures are not prescribed but can include: <ul style="list-style-type: none"> <li>investigate, assess and evaluate the impact of the environment;</li> <li>inform and educate employees about the environmental risks of their work and the manner in which their tasks must be performed;</li> <li>cease, modify or control any activity or process causing the pollution or degradation;</li> <li>contain or prevent the movement of pollutants;</li> <li>eliminate any source of the pollution or degradation; and</li> <li>remedy the effects of the pollution or degradation.</li> </ul>	Government: the Director-General or Provincial Head of Department	1. May issue a directive to a person to investigate, evaluate and assess the impact of activities and to take specific measures within a certain time period. <sup>3</sup>  2. May intervene in respect of emergency incidents where the responsible person does not comply.	Failure to comply with these provisions has not been criminalized.
	People who have the right to use the land or premises.	Applies to potential, current, future or historical pollution or degradation.		Private parties	May institute a private prosecution in the public or environmental interest, in respect to any (threatened) breach of duties imposed by legislation.	This excludes public duties, private enforcement of which would happen based on, for example, the Constitution.
	People who negligently fail to stop the pollution.					

<sup>3</sup> Section 28(3) of the National Environmental Management Act 1998.

Legislation	Who it applies to	Clarification of investigation areas	Measures	Who enforces	Enforcement provisions	Other provisions
		Emergency Incidents.	Provides specific duty of care in respect to emergency incidents, including notifying a range of people.			
	Every person that has or may cause significant pollution or environmental degradation.		The state is entitled to expect that other <i>'reasonable'</i> measures are adopted if necessary.			
<b>National Water Act 1998</b>	Owners or people in control of land or premises (even if it is not themselves that undertake the activity) including successors-in-title.	Applicable to activities that may cause, or are likely to cause the pollution of water resources.	Measures are not prescribed but can include: <ul style="list-style-type: none"> <li>• cease, modify or control any act, activity or process causing the pollution;</li> <li>• comply with any applicable waste standard or management practise;</li> <li>• investigate, assess and evaluate the impact of the environment;</li> <li>• contain or prevent the movement of pollutants or the consequent degradation;</li> <li>• eliminate any source of the pollution; and</li> <li>• remedy the effects of any</li> </ul>	The Department of Water Affairs	Direct any person to whom it applies to take measures that it considers necessary to remedy the situation.	The failure to comply with a duty or directive to take measures to prevent or remedy a situation is a criminal offence.

Legislation	Who it applies to	Clarification of investigation areas	Measures	Who enforces	Enforcement provisions	Other provisions
			disturbance to the bed and banks of a watercourse. <sup>4</sup>			
	People who have the right to use the land or premises.	Pollution is not qualified by its 'significance', and therefore any pollution is considered.		Water Management Institutions including Catchment Management Agencies.	May take specific steps to prevent pollution in certain circumstances, and recover the costs from the applicable person(s).	
	People who negligently fail to stop the pollution.	Where waste is suspended, dissolved or transported in water, or where water is or may be polluted by waste. Or any other water use activities as set out in section 21 of NWA.			May intervene in respect of emergency incidents where the responsible person does not comply.	
	Every person that has or may cause significant pollution or environmental degradation.	Emergency Incidents	In respect to emergency incidents, the responsible person is obliged to undertake specific duty of care, including notifying an elected person. As well as any additional measures that the Catchment Management Agency may			

<sup>4</sup> Section 19(2) of the National Water Act 1998

Legislation	Who it applies to	Clarification of investigation areas	Measures	Who enforces	Enforcement provisions	Other provisions
			specify.			
<b>National Waste Act 2008</b>	Owners of the land	Applies to historical & future contamination, including that which results in a change to pre-existing contamination.	The applicable person must notify the enforcer(s) of significant contamination, as soon as they become aware of it.	The Minister or MEC after consultation with the Minister.	Notice of land indentified as an investigation area must be given in the Gazette by the Minister or relevant MEC.	Notice gazetted after a consultative process.
	Person(s) who has undertaken/ is undertaking the activity which has or may result in contamination	Land on which high risk activities have taken/are taking place, and that the enforcer, on reasonable grounds believes to be contaminated.	Measures can include: <ul style="list-style-type: none"> <li>remediation, either urgently or within a specified time period; or</li> <li>monitoring and management of the risk.</li> </ul>		Direct any person, to whom it applies, to cause a site assessment, conducted by an independent person, at own cost, and submit the report to the enforcer within a given period.	Enforcer may instruct any official within his or her department to ensure the remediation order is complied with.
						Declare the land to be a remediation site.

Legislation	Who it applies to	Clarification of investigation areas	Measures	Who enforces	Enforcement provisions	Other provisions
					Amend remediation order if the land is transferred and the new owner assumes remediation responsibility in writing, or if new information warrants an amendment.	The Minister must keep a National Contaminated Land Register of investigation areas.

## 12 Annexure C: Preliminary estimate of no. of licenses required in terms of listed waste management activities

<b>CATEGORY A</b>		
<b>Activity</b>	<b>No of licenses</b>	<b>Comments</b>
Storage of waste (genwaste >100m <sup>3</sup> , hazwaste >35m <sup>3</sup> , lagoons, tyres >500m <sup>2</sup> )	1000+	Could include large no of factories, businesses.
Reuse, recycling and recovery (genwaste >10t/m, scrap vehicles >500m <sup>2</sup> , recycling >1t/d, hazwaste >500kg/d, genwaste >3t/d)	500+	Recycling, buy-back centres, scrap yards, factories.
Treatment of waste (genwaste >10t/d, effluent: 2000-15000m <sup>3</sup> pa)	500+	Biogas plants (not too many), all small WWTW (not sure if all waste water treatment works are included)
Disposal of waste (inert 25-25000t, genwaste >50m <sup>2</sup> <200m <sup>2</sup> cap <25000t)	1000+	Farms, industry. Many unpermitted small landfills.
Storage, treatment and processing of animal waste (>1t/d)	100+	Biogas facility, feedlots.
Construction, expansion or decommissioning of facilities (category A activities)	-	Normally included in the above activities.
<b>CATEGORY B</b>		
<b>Activity</b>	<b>No of licenses</b>	<b>Comments</b>
Storage of hazardous waste (lagoons)	50+	Factories
Reuse, recycling and recovery of waste (hazwaste, recovery >500kg/d)	50+	On-site treatment at factories.
Treatment of waste (hazwaste >500kg/d, effluent >15000m <sup>3</sup> pa, incineration)	500+	Contradiction between items (4) and (5). (5) implies <u>all</u> treatment of hazwaste. All large WWTW (see note above). All incinerators – unclear if at industries as well
Disposal of waste on land (hazwaste, genwaste >200m <sup>2</sup> )	1500+	Communal sites (many). >1000 unpermitted landfills
Construction, expansion or decommissioning of facilities (category B activities)	-	Normally included in the above activities.
<b>Total estimated no of licenses:</b>	<b>5200++</b>	

### NOTES:

- 1) Some of the above activities could take place simultaneously with others within the same project or facility. It is assumed that this implies that one single license is granted.
- 2) Category A includes scrap motor vehicles, not clear if this includes general scrap metals yards.

- 3) Waste water treatment works (waste water, effluent, sewage) appear to be included, but these are also licensed under the Water Act.
- 4) The above would appear to include many of the informal communal landfill sites which are currently not permitted or under control.
- 5) It would appear that certain activities need to be prioritized in terms of licensing and then phased in over a period of time.