

South Africa

Waste Management

Compiled by: Jonathan Lincoln

Swiss Business Hub South Africa

Pretoria December, 2011

Download from: www.osec.ch

Abstract

Historically, South Africa followed the “end-of-pipe approach to waste management. i.e. Generated waste was collected by the municipalities and disposed of in landfill sites. The focus, at the time, was on finding more space for more landfill sites. Environmental issues have now become a matter of public concern and environmental awareness is growing resulting in pressure to change from this behaviour.

Having said that, waste disposal remains the predominant means of managing waste in South Africa. Waste disposal sites are controlled under Chapter 5 of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) with effect from 1st July 2009. Technical guidance on the development, operation and monitoring of waste disposal sites is provided through Government's Minimum Requirements

Over 42 million cubic metres of general waste is generated every year across the country, with the largest proportion coming from the Gauteng province (42%) (DWAF 1997). In addition, more than 5 million cubic metres of hazardous waste is produced annually, mostly in the provinces of Mpumalanga and KwaZulu-Natal (this is due to the concentration of mining activities and fertiliser production in these provinces). The average amount of waste generated per person per day in South Africa is 0.7 kg. This is closer to the average produced in developed countries (73 kg in the UK and 0.87 kg in Singapore), than to the average in developing countries such as 0.3 kg in Nepal (DWAF 1997).

By far the biggest contributor to the solid waste stream is mining waste (72.3%), followed by pulverized fuel ash (6.7%), agricultural waste (6.1%), urban waste (4.5%) and sewage sludge (3.6%) (van der Merwe & Vosloo, 1992).

General

Waste management in South Africa is based on the principles of the White Paper on Integrated Pollution and Waste Management (IP&WM) and the National Waste Management Strategy (NWMS) published by the Department of Environmental Affairs and Tourism in 1999 and 2000 respectively and the subsequent enhancement of the new National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).

South Africa now supports the waste hierarchy in its approach to waste management, by promoting cleaner production, waste minimisation, reuse, recycling and waste treatment with disposal seen as a last resort in the management of waste.

Waste Classifications as defined in the NEM: Waste Act, 2008

Waste in SA is divided into two classes based on the risk it poses - general waste and hazardous waste. "General waste" means waste that does not pose an immediate hazard or threat to health or to the environment, and includes:

- (a) Domestic waste;
- (b) Building and demolition waste;
- (c) Business waste; and
- (d) Inert waste;

"Hazardous waste" means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment.

Legislation

WASTE Act, 2008 (Act No. 59 of 2008)

Waste in South Africa is currently governed by means of a number of pieces of legislation, including:

- The South African Constitution (Act 108 of 1996)
- Hazardous Substances Act (Act 5 of 1973)
- Health Act (Act 63 of 1977)
- Environment Conservation Act (Act 73 of 1989)
- Occupational Health and Safety Act (Act 85 of 1993)
- National Water Act (Act 36 of 1998)
- The National Environmental Management Act (Act 107 of 1998)
- Municipal Structures Act (Act 117 of 1998)
- Municipal Systems Act (Act 32 of 2000)
- Mineral and Petroleum Resources Development Act (Act 28 of 2002)
- Air Quality Act (Act 39 of 2004)
- National Environmental Management: Waste Act, 2008 (Act 59 of 2008)

The National Environmental Management: Waste Bill was signed by the President of the Republic of South Africa in March 2009. The Act took effect from 01 July 2009. The intention of this Act is to address the current fragmentation in waste legislation in South Africa.

Copies of legislation mentioned above, can be sourced from <http://www.polity.org.za/pol/acts/>

Progress

Johannesburg, Cape Town and eThekweni (Durban) have started pilot projects to increase the amount of waste that is recycled. Johannesburg's waste collection company, Pikitup, wants 80% of the city's waste to be treated in this way. The company currently has four landfill sites which at the present rate of disposal will be full in 12, 9, 7 and 3 years respectively.

Some municipalities are also looking at capturing methane gas from landfill sites. eThekweni has already completed one such landfill gas-to-electricity (the first in SA) and are planning on opening a second. It is claimed that the two sites could produce 7.5MW of power.

The Industrial development Corporation (IDC) are also looking into waste disposal with a view to producing biogas / fuel from biomass as well as the more conventional ways of producing electricity. Initially they are looking at these technologies for use in the Gauteng province and are seeking tried and tested solutions in the U.S.A., UK and Switzerland.

Statistics relating to landfill, waste processors, waste exporters and waste generators can be found in the attachments in the Appendices to this report along with websites of relevant government and provincial departments and other organisations responsible for waste management.

e-WASA

The e-Waste Association of South Africa was established in 2008 to manage the establishment of a sustainable environmentally sound e-waste management system for the country. W-Wasa was supported by the "Global Knowledge Partnerships in e-Waste Recycling" program, initiated by the Swiss State Secretariat for Economic Affairs ([SECO](#)) and implemented by the Federal Laboratories for Materials Testing and Research ([Empa](#)), several projects were initiated successfully in three South African provinces (namely KwaZulu-Natal, Western Cape and Gauteng) as early as in 2004. And this is an ongoing concern.

Recycling waste is a growing industry in SA whereby the most common materials recycled are paper, glass, plastic and metal. Numerous companies have been established to recycle these waste products. However, the whole industry is in its infancy when compared to Europe and Switzerland and Germany in particular.

Sources

- 1999 State of Environment Report for South Africa (DEAT, 1999).
- The Institute of Waste Management Southern Africa (www.iwmsa.co.za/)
- South African Waste Information Centre (www.sawic.org.za) (**very good website for detailed information**)
- The e-Waste Association of South Africa (eWASA) www.ewasa.org
- The National Recycling Forum www.nrf.co.za
- Engineering News (www.engineeringnews.co.za)

Date: 20th December 2012
Author: Jonathan Lincoln, Trade Officer
Author's address: **Swiss Business Hub South Africa**
c/o Embassy of Switzerland, Pretoria, South Africa

Physical address:
225 Veale Street
New Mucklenneuk 0075
Pretoria
South Africa

Postal address:
PO Box 2508
Brooklyn Square 0075
Pretoria
South Africa

Tel: +27 12 452 06 60
Fax: +27 12 346 66 05

pre.sbhsa@eda.admin.ch
www.eda.admin.ch/pretoria
www.osec.ch/sbhsa

Appendix 1

Waste Information System:

- As the information is based on a. interactive database, please follow this hyperlink for details:
<http://www.sawic.org.za/?menu=15>

Appendix 2

South African Government Links (National)

- www.environment.gov.za Department of Environmental Affairs
- www.dwaf.gov.za Department of Water Affairs and Forestry
- www.dplg.gov.za Department of Provincial and Local Government

South African Government Links (Provincial)

- State) Tourism, Environmental and Economic Affairs (Free
- ment (Gauteng) Department of Agriculture, Conservation and Environ-
- (KwaZulu Natal) Department of Agriculture and Environmental Affairs
- Provincial Department (Limpopo)
- Department of Agriculture and Land Administration
- (Mpumalanga) Department of Tourism, Environment and Conservation
- (Northern Cape) Department of Agriculture, Conservation, Environment
- and Tourism (North West) Department of Environmental Affairs and Development
- Planning (Western Cape)

Other South African waste links

- www.iwmsa.co.za Institute for Waste Management of Southern African
- www.iwmsa.co.za Health care waste interest group (IWMSA)
- Gauteng DACE Health Care Waste Management Project
- Gauteng Waste Information System (www.sawic.co.za)
- Cape Town Waste Exchange System
- (<http://www.capetown.gov.za/en/iwex/Pages/default.aspx>)
- www.basel.int Basel Convention Regional Centre Preto-