

The formal South African waste sector (2012)

It's contribution to the economy, employment and innovation

Godfrey, L., Strydom, W., Muswema, A., Oelofse, S., Roman, H. and Mange, M
 CSIR Natural Resources and Environment, PO Box 395, Pretoria 0001
 Email: LGodfrey@csir.co.za – www.csir.co.za

INTRODUCTION

The South African waste sector survey for 2012 was undertaken by the CSIR on behalf of the Department of Science and Technology (DST), and provides a good understanding of the 'core' of the formal waste sector (waste companies), and insight into the peripheral sector players. The aim of the survey has been to establish a baseline of the sector from which growth can be monitored and which will inform future investment in waste R&D, innovation and HCD. The focus of the survey has been on organisational information (employment, skills, financial size, innovation activity, etc.) and has not addressed quantities of waste.

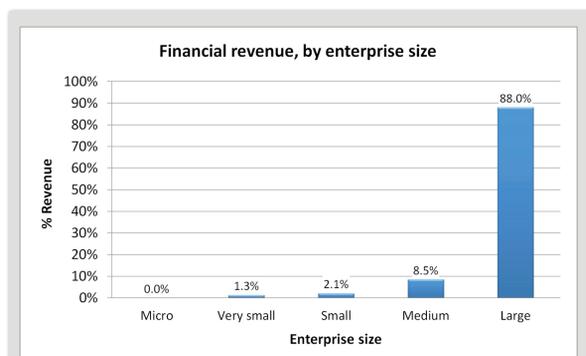


Figure 1: Waste revenue by enterprise size

The **minimum financial value** of the formal South African waste sector (public and private) (for 2012) is **R15.3 billion, or 0.51% of GDP**. The majority of this revenue is situated within large enterprises (88.0% of private sector revenue) and metropolitan municipalities (80.4% of public sector revenue). Approximately 62% of the total revenue generated from waste activities was by companies which had been in the industry > 25 years. Companies which started up waste activities in the past five years contributed at least R188m into the economy in 2012.

The **minimum number of people employed** within the formal waste sector (public and private) (for 2012) is **29,833 people**. The majority of these employees are situated within large enterprises (77.5% of private waste sector employees) and metropolitan municipalities (64.9% of public sector employees).

	Number of waste employees	
	DEA [R] (2009)	Sector value [R] (2012)
Private	3 000 000 000	6 961 644 605
Public	7 000 000 000	8 323 879 000
Total	10 000 000 000	15 285 523 605

Waste-related employment within municipalities has levelled-off at around ±20 000 persons. If SA is to achieve the NWMS goal of creating 69 000 new jobs and 2600 SMEs and cooperatives participating in waste

Sector value >R15.3m, or 0.51% of GDP & formally employing nearly 30 000 people

service delivery and recycling by 2016, we will have to look towards the formal private waste sector and the informal sector for opportunities. This requires support and intervention from government, industry and society, that will aid job creation and enterprise development while moving waste away from landfilling towards alternative waste management options.

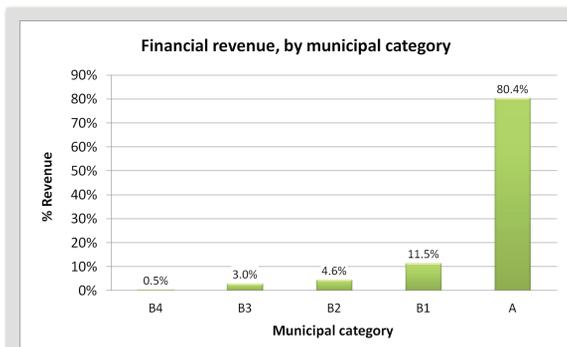


Figure 2: Percentage of waste employees per enterprise size

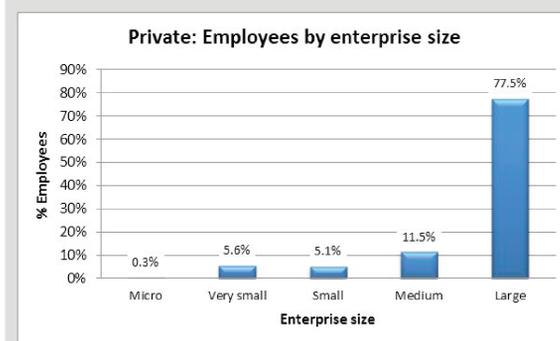


Figure 3: Percentage of waste employees per municipal category

The sector has shown **positive employee and organisational transformation** over the past two decades with 77.2% of private sector respondents BBBEE certified, with an **average BBEEE level 4**.

A complimentary role between the private and public waste sectors is evident. The introduction of new technological and non-technological innovations by the

private waste sector into the SA waste market, suggests that the private sector is an important partner to support the transfer of **innovations** from supplier (local and abroad) into municipalities. Government must identify a means of **encouraging and supporting innovation across the waste sector**, so as to support a shift away from landfilling towards alternative waste management options. Mechanisms to address the relatively slow uptake of innovation by micro, very small and small enterprises in the waste sector must also be explored.

Spend on waste R&D and HCD remains low for the waste sector. The minimum spend on waste R&D for 2012 was R50.2m, approximately 0.33% of the value of the total sector. Spend on waste HCD was R429m, approximately 2.8% of the value of the sector. The public sector showed a four times greater spend on HCD than the private sector, yet still shows a greater percentage of unskilled employees. This investment in HCD is therefore still to manifest in an actual change in employee skill levels.

Spend	Waste R&D [R] (2012)	Waste HCD [R] (2012)
Private	37 251 663	84 396 037
Public	12 996 567	344 166 234
Total	50 248 230	428 562 271

In terms of higher **qualifications**, there are at least 1,324 diplomas, 1,066 degrees, 119 Masters degrees, and 14 PhDs employed in the South African waste sector. However, these figures are rather low, considering the number of graduates exposed to waste modules during their studies. The sector, in conjunction with Government, will need to look at how it attracts and retains highly qualified graduates in the waste sector, so as to stimulate technological and non-technological innovation.

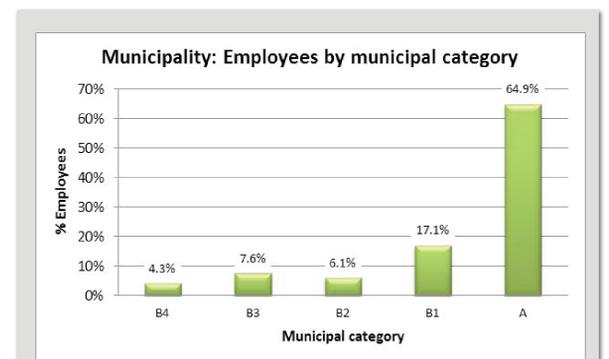


Figure 4: Highest qualifications of employees within the public and private waste sector

While legislation has the potential to stimulate new sector development, if over-regulated it can hinder or slow innovation. The goal will therefore be for government to find a balance between 'encouraging' and 'controlling'. High level support and commitment by national and provincial government is essential in seeing the local waste sector grow.