

# Reduce, Reuse and Recycle

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## BACKGROUND

The adoption of the internationally accepted waste management hierarchy (Sakai *et al*, 1996) into South African policy has changed the focus from “end of pipe” waste management towards waste minimisation (reuse, recycling and cleaner production). However, while over 80% of local municipalities reported that they are initiating recycling activities in some way or another, they are struggling to get the initiatives off the ground due to lack of capacity or infrastructure (DEAT, 2007). The National Environmental Management: Waste (Act 59 of 2008) also requires municipalities to provide households with receptacles for recyclables.

## PROBLEM STATEMENT

The following are some of the problems associated with recycling initiatives in municipalities:

### 1) The proximity of the recycling centres:

The proximity of recycling centres in relation to the source of the recyclables plays an important role in the sustainability of recycling initiatives such as buy-back centres. The further the industries, the more the transport costs and the smaller the profit margins for the pickers.

### 2) Lack of real incentives for communities to participate in recycling initiatives:

Without real incentives (in the form of reduced rates or financial returns for the reclaimers) most community members are reluctant to participate in recycling initiatives.

### 3) Cost limitations:

Most municipalities are struggling to cope with their current general waste collection and disposal mandate due to cost limitations. The added requirement of facilitating waste minimisation is thus perceived as an additional burden.

### 4) Lack of separation of waste at source:

Most municipalities have not initiated separation at source. The implications are:

- Encouraging salvaging at landfill sites as valuable recyclables can still be found at this stage;
- Contaminated recyclables of low value as a result of recyclables being mixed with general waste;
- Increased disposal rates which necessitate an increased demand for land for new landfill sites. This also results in increased environmental degradation.

### 5) Lack of regulations regarding waste reclaimers:

Salvaging at landfill sites poses health and safety risks to the pickers. This places the liability thereof on municipalities. It is therefore imperative for municipalities to regulate this practice. This will ensure sustenance of the pickers' livelihoods and the recycling sector while complying with relevant legislation.



## METHOD

Case studies of existing recycling initiatives within selected municipalities were documented. These areas were visited in order to establish and understand the operations, challenges and successes of such programmes with the view of sharing the learning with other municipalities. It is envisaged that such learning will assist other municipalities as they embark on further rolling out waste minimisation programmes within their areas of jurisdiction.

## SOLUTIONS

### 1) Creating an enabling environment for the private sector to operate and drive recycling initiatives including source separation:

- Endorse and encourage private sector involvement in source separation projects;
- Establish facilities such as Materials Recovery Facilities (MRFs), drop-off centres and buy-back centres; and

*Municipalities can play a fundamental role in facilitating and promoting recycling, while at the same time creating jobs and encouraging community involvement in waste management.*

- Allow the use of appropriate municipal-owned facilities as drop-off centres, buy-back centres and MRFs by private companies. For example, use garden refuse sites as drop-off and buy-back centres, as well as using landfill sites for the erection of MRFs.



### 2) Integrating recycling into municipal waste collection schedules:

- Provide households with receptacles for recyclables. *Collection of recyclables* can be done by the municipality itself or outsourced to private contractors. Collect recyclables on the same day as general waste so that badly sorted recyclables can be picked up as part of the general waste collection;



- Establish *regulated sorting areas* on those landfill sites with high value recyclable material to allow entrepreneurs to salvage usable recyclables before final disposal. For example, bricks, planks, tiles and other building material can be resold or used to produce other items such as dog kennels;



- Create incentives* for waste minimisation such as establishing Pay-As-You-Throw systems where people only pay for the amount of waste they dispose. This will encourage separation at source;
- Contribute towards *creating sustainable markets* for products made from recyclable material, such as implementing green procurement policies in municipalities;
- Regulate activities of waste reclaimers*, especially at landfill sites, to ensure that the input of this informal recycling sector is not lost while at the same time conforming to set regulations and standards (environmental health and safety); and
- Make optimal and effective use of available resources*. For example, the use of rail at night for the transportation of waste in areas where such infrastructure already exists; and the use of sorting tables, which are more labour intensive as opposed to mechanised sorting facilities (motorised conveyor belt) which may be more costly.



### 3) Establishing innovative cash generating recycling programmes:

- Certain waste types have the potential for generating cash for the municipality. For example, selling compost made from garden refuse or selling tar remnants back to the road construction industry; and
- Electricity generation from landfill gas. This can be used to subsidise municipal electricity supply while carbon credits can also be awarded for such projects.



## CONCLUSIONS

Reducing, reusing and recycling play an important role in the waste management cycle and should be encouraged. Municipalities can play a fundamental role in facilitating and promoting recycling through a wide range of programmes such as investing in and establishing facilities and creating an enabling environment in which the public sector can operate. The value of fully functional partnerships should also not be overlooked. The sustainability of such programmes can have added advantages in the form of job creation and community involvement in waste management.

## REFERENCES

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