

# SOLID WASTE MANAGEMENT



# What is Waste?

## **Definition of Waste:**

- **Verb**
  - Use or expend carelessly, extravagantly, or to no purpose.
- **Noun**
  - An act or instance of using or expending something carelessly, extravagantly, or to no purpose: "it's a waste of time".

*"Wastes are materials that are not prime products (that is products produced for the market) for which the initial user has no further use in terms of his/her own purposes of production, transformation or consumption, and of which he/she wants to dispose. Wastes may be generated during the extraction of raw materials, the processing of raw materials into intermediate and final products, the consumption of final products, and other human activities. Residuals recycled or reused at the place of generation are excluded."*

**UN Statistics Division, *Glossary of Environment Statistics***

## **Definition of Waste according to the NEM: Waste Act, 2008 (Act No. 59 of 2008):**

- **Waste** means any substance, whether or not that substance can be reduced, re-used, recycled and recovered❖
  - That is surplus, unwanted, rejected, discarded, abandoned or disposed of;
  - which the generator has no further use of for the purposes of production;
  - that must be treated or disposed of; or
  - 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:❖
    - a by-product is not considered waste; and
    - any portion of waste, once re-used, recycled and recovered, ceases to be waste

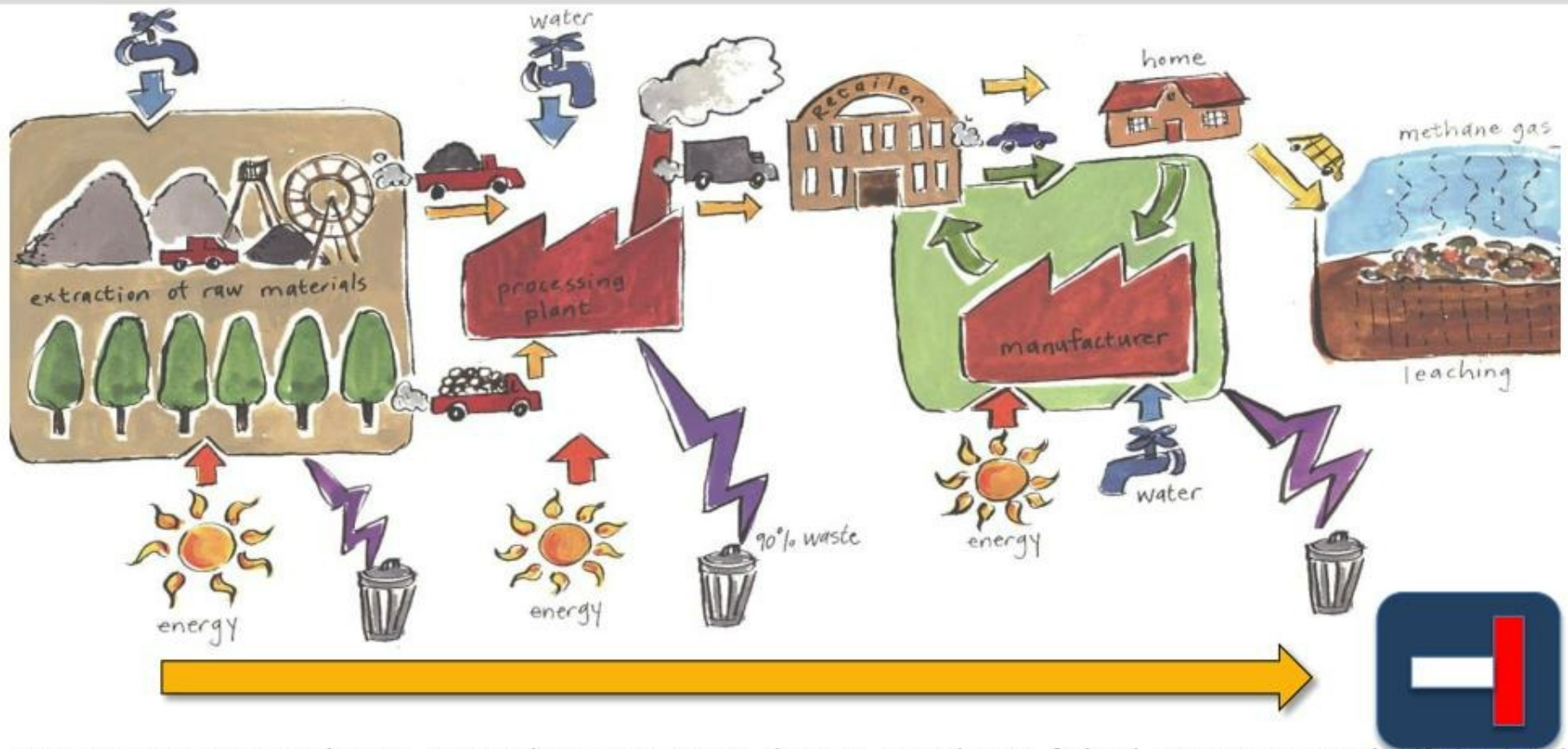
# IN NATURE:



- Natural systems are cyclical and all waste becomes food.



# The problem with modern made-man waste:



- Human systems are linear. Natural resources are dug up, cut down, fished out or cropped off the land, then processed, packaged, sold, used and finally dumped. They are not returned to a place where they can be recycled, either by humans or by nature.
- The quantities of waste produced by humans are so great that the processing capacity of ecosystems can be exceeded.
- The quality of waste, in terms of complexity and toxicity, can make it almost impossible to recycle, either industrially or naturally.

# Different categories of waste:

**Municipal solid waste (MSW), also called urban solid waste, is mainly made up of household waste.**

- **Biodegradable waste:** food and kitchen waste, paper (can also be recycled).
- **Recyclable material:** paper, glass, bottles, cans, metals, certain plastics, etc.
- **Inert waste:** construction and demolition waste, dirt, rocks, debris.
- **Composite wastes:** chemically dyed fabric, Tetra Paks, plastic toys, spoons etc.
- **Domestic hazardous waste & toxic waste:** medication, e-waste, paints, chemicals, light bulbs, fluorescent tubes, spray cans, fertilizer and pesticide containers, batteries, shoe polish.



Have somewhere close at hand to store your recyclables until you can take them to a community waste drop-off facility. If you have the space, have a container (plastic bag or box) for each type of recyclable:

- Paper
- Plastic
- Glass
- Tins
- Wet waste
- Non-recyclable material



Rinse and dry recyclable items before putting them in their allotted container. Factor into your week a trip to a community waste drop-off facility. Wet waste such as vegetable peelings and left over food should be placed in a prepared compost heap in the garden.

When bathing, use as little water as possible and when showering, be as quick as you can. Cover your swimming pool to prevent evaporation. Plant indigenous or drought resistant plants in your garden. Mulch your flower beds and water only in the early morning or evening to avoid evaporation during the heat of the day. Sweep your driveway and paving instead of hosing them off.



- Wet or dirty paper
- Tetrapack containers like wax coated milk cartons and foil lined juice cartons
- Paper with self adhesive strips
- Carbon paper
- Dog food bags
- Polystyrene food containers and cling wrap
- Disposable nappies

Place your fridge in a cool place where the sun can't reach it. Never leave lights on in unoccupied rooms. Plan your television viewing and don't leave the TV on when no body is watching it. Switch off all appliances at the wall. A television or DVD/video player in stand-by mode wastes electricity. Plan meals that use little or no oven time and ensure that the stove is only on when needed.

SITE LOCATION	GARDEN WASTE	HOUSEHOLD WASTE	RECYCLED	PAPER	CARDBOARD	GLASS	PLASTIC	ELECTRONIC WASTE
Adkins, Leffers Way	Only 1 ton truck of clean builder's rubble will be accepted.							
Alkins, Dossenberg Rd	✓	✓	✓	✓	✓	✓	✓	
Bolton, Adam Twp Rd	✓	✓	✓	✓	✓	✓	✓	
Lockes Mills, Lockes Mills Rd, Coxsack	✓	✓	✓	✓	✓	✓	✓	
De Groot, 57 Ave, Plover	✓	✓	✓	✓	✓	✓	✓	
Duffy, Federal St	✓	✓	✓	✓	✓	✓	✓	
Gordon's Bay, Sir Lowry's Pass Rd	✓	✓	✓	✓	✓	✓	✓	
Hoof Bay, Main Rd	✓	✓	✓	✓	✓	✓	✓	
Kilmer, Potlatch Rd	✓	✓	✓	✓	✓	✓	✓	
Kommersly, Kommersly Rd	✓	✓	✓	✓	✓	✓	✓	
Maccusa, Kramel Rd	✓	✓	✓	✓	✓	✓	✓	
Montgomery, De Villiers Rd, Chatsworth	✓	✓	✓	✓	✓	✓	✓	
Rosenboom, Industrial Ring Rd	✓	✓	✓	✓	✓	✓	✓	
Robt, 104 Ave	✓	✓	✓	✓	✓	✓	✓	
Schappraal, 801 Schappraal Rd	✓	✓	✓	✓	✓	✓	✓	
Steen's Town, Main Rd	✓	✓	✓	✓	✓	✓	✓	
Tygerdal, Orange St	✓	✓	✓	✓	✓	✓	✓	
Wolpeberg, Abdenkie St	✓	✓	✓	✓	✓	✓	✓	
Wynberg, Rensselaer Ave	✓	✓	✓	✓	✓	✓	✓	✓
Woodstock, Beach Rd	✓	✓	✓	✓	✓	✓	✓	

**City of Cape Town - Solid Waste Management Department**  
For further information and enquiries please: City of Cape Town call centre number 086 010 3080 or fax: 021 400 4302 e-mail: [Wastewise@capetown.gov.za](mailto:Wastewise@capetown.gov.za)  
Post: Director Solid Waste Management, PO Box 298, Cape Town 8000.  
City of Cape Town community waste drop-off sites operating hours:  
Monday to Sunday 07:30 to 17:30, including all public holidays.  
Please make use of the free drop-off facilities.



If you use less, you spend less. By re-using what we can and recycling what we can't re-use, we go a long way to combating global warming.

For every can or container made from plastic, glass or metal and every cardboard box or piece of paper that we don't send to the dump, we save the natural resources and the huge amounts of energy that would have gone into making the item from scratch. In fact, when a product is made from scratch, 90% of the raw materials and energy used in its manufacture are wasted.

Let's start with your children: If we don't act now, they are going to inherit a very different world to the one we inherited from our parents. They will inherit a planet torn apart by the effects of global warming. Their lives will be something we wouldn't wish on our worst enemy, so why should we wish it on our own children?

The other people who benefit are the unemployed. The process of recycling takes a lot of manpower. It provides work for people who can't find employment. It enables them to feed and clothe their families without turning to crime.

## CARBON FOOTPRINT? YES, YOU HAVE ONE!

A carbon footprint is a rough measure of how much carbon dioxide, methane and other "greenhouse" gasses we are responsible for creating.

Your carbon footprint is directly linked to your lifestyle. The more things you have, the more things you use and the more things you do, the bigger your footprint gets.

In our homes, we must reduce our consumption of electricity, water, gas, petrol or diesel and products of every kind; we must recycle glass, plastic, paper, drink and food cans and we must re-use as much as we can, including vegetable scraps and our bath water.

Only by changing our lifestyles, can we have an impact on our carbon footprints and on the amount of waste that goes to our already over-burdened landfill sites.

Nature knows no waste – nor should we.  
Reduce, re-use, recycle and stop littering!

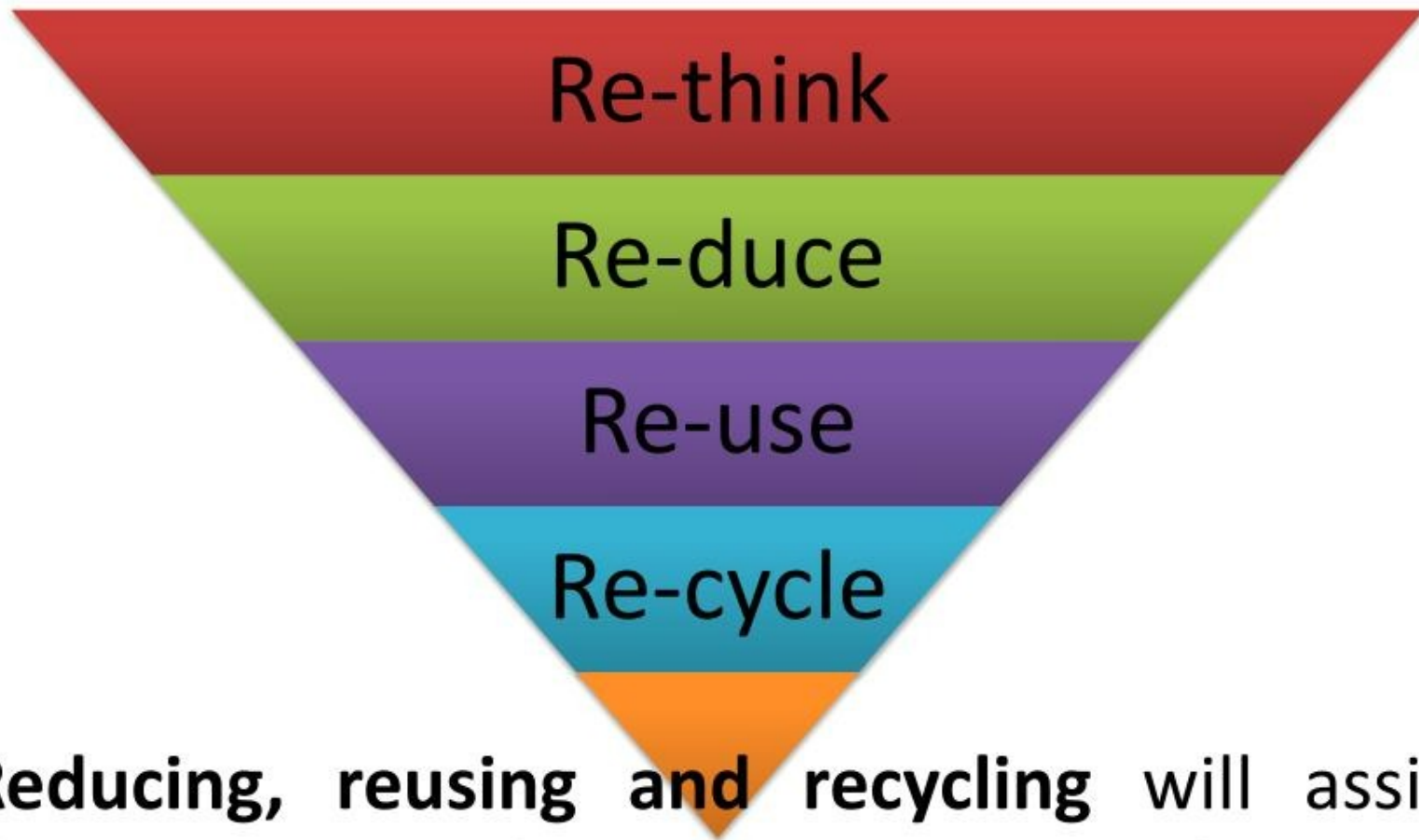
City of Cape Town - Solid Waste Management Department

Recycling and reduction has to begin at source. In other words, in our homes. Read through the tips and facts in this brochure and decide where you would like to start adjusting your lifestyle. Don't try to change everything at the same time. Set yourself and your family targets and aim to introduce a new Footprint Reducing Activity to your home every week or fortnight.

**Remember: There's a chain of responsibility - It Begins With You.**

- Make a Difference – Reduce
- Stop the Waste - Re-use
- Save Our Resources - Recycle
- Take Responsibility for a Clean Environment  
- Prevent Litter. Start recycling at school





- **Reducing, reusing and recycling** will assist in decreasing greenhouse gas emissions from waste.
- Ultimately, product design and production with **cradle-to-cradle** management in mind will move our society towards zero waste.

# Why recycle?

- To produce 1 ton of paper requires 100 tons of water.
  - Making recycled paper uses half as much water as making paper from wood pulp.
  - For every ton of paper recycled, 17 trees are saved.
- Recycling a one litre glass bottle saves enough electricity to light a 100W bulb for 4 hours.
- For every ton of glass recycled, 1.2 tons of raw materials are saved.



# Ways to disposed of Waste

- Recycling & Up-cycling
- Composting & Anaerobic Digestion
- Incineration, Autoclaving, Gasification
- Landfilling (should always be the last resort!)
- LFGtE

# Up-cycling

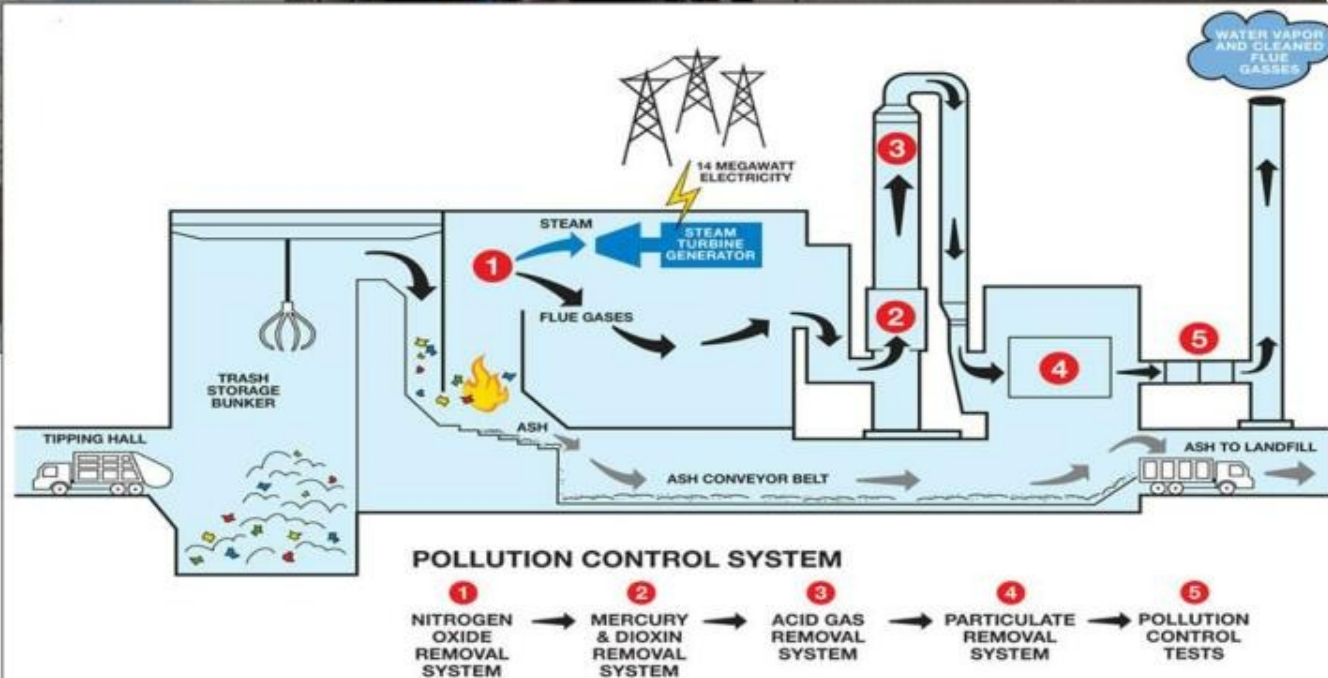
- process of converting waste materials or useless products into new materials or products of better quality or for better environmental value.*





# Oslo Running Out Of Trash, How Much Is Yours Worth?

Oslo, Norway is a city of 1.4 million people that finds itself in the enviable position of having to import garbage. In fact half of Oslo's residents need a steady supply of garbage in order to power appliances and heat their homes.



The following diagram show a typical garbage burning plant with outputs of electricity, landfill, water vapor and “cleaned” flue gasses:

## Waste-to-Energy

- 90% reduction of trash volume
- Power generation
- Pollution control

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# Resources & Sources

- Cape Town Municipality:
  - <http://www.capetown.gov.za/en/Solidwaste2/Pages/default.aspx>
    - [http://www.capetown.gov.za/en/Solidwaste2/Documents/SWM\\_IWMP\\_2013\\_2014.pdf](http://www.capetown.gov.za/en/Solidwaste2/Documents/SWM_IWMP_2013_2014.pdf) (Draft Sector Plan)
    - [http://www.capetown.gov.za/en/Solidwaste2/Documents/IWM\\_Policy.pdf](http://www.capetown.gov.za/en/Solidwaste2/Documents/IWM_Policy.pdf) (IWMP)
    - <http://www.capetown.gov.za/en/EnvironmentalResourceManagement/Pages/SmartLivingHandbook.aspx> (Smart Living Handbook)
- YouTube:
  - <http://www.youtube.com/watch?v=Se12y9hSOM0> (Story of Bottled Water)
  - <http://www.youtube.com/watch?v=FrAShtolieg#> (Charles Moore: Sailing the Great Pacific Garbage Patch)

- Websites:

- <http://indaloyethu.com/index.php?q=node/2407>  
(Indalo Yethu: SA Environmental Agency)
- [http://www.90x2030.org.za/view.asp?pg=downloads&show\\_cats=yes](http://www.90x2030.org.za/view.asp?pg=downloads&show_cats=yes) (Project 90 by 2030)
- [http://www.africageographic.com/ag\\_online/BTC\\_ebook.pdf](http://www.africageographic.com/ag_online/BTC_ebook.pdf) (Bending the Curve – free e-book)

**When You Throw  
it Away**

**Think.**

**There is no Away**

