

# Bush Telegraph

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2010

## Rethinking Waste



through  
Pollution Solutions

# POLLUTION & WASTE MANAGEMENT



Look around your home, school and community. Are there any pieces of rubbish on the ground? Does the air ever smell bad from burning? If you live on the coast, have you ever seen plastic washed up on the shore? Does your neighbour's outside light keep you awake at night? If so, these are all signs of pollution.

## WHAT IS POLLUTION?

Pollution is when humans add harmful things to the environment such as plastic, old batteries, engine oil, factory smoke, car exhaust and broken glass. There are many different forms of pollution.

Draw a line connecting the drawing to the correct type of pollution.



Air

Water

Noise

Visual



Land

## HOUSEHOLD WASTE:

If we are not careful, our household waste can become pollution. Bad waste management can lead to unhealthy living conditions, dangers for humans, wildlife and unsustainable use of natural resources.

### A Breeding Trap

Household rubbish, such as old plastic, glass or tin containers, can turn into a breeding area for mosquitoes and other unwanted animals such as rats. If these items are lying around, they can collect water when it rains. This is a perfect environment for mosquitoes to breed in. Unfortunately when mosquitoes bite they can spread certain diseases such as malaria and yellow fever from person to person. (Note: HIV



cannot be transmitted in this way!) Therefore most people use insect sprays (often poisons) to kill the mosquitoes. Our household rubbish has now created even more pollution! Our rubbish will not disappear on its own — so we must find a way to manage it well.

### What do you do with your household waste?

We are going to **Rethink** what we do with our household waste and look for pollution solutions to protect the environment, our health and save resources.

# INTO THE RUBBISH BIN

Let's take a closer look at household waste. What is actually in your rubbish bin? What happens to it after it leaves your house?

**Directions:** Look in your kitchen rubbish bin and circle all the pictures that represent what you find. Take care not to cut yourself on any sharp edges.



Write down anything else that you find here:

1. ....
2. ....
3. ....
4. ....
5. ....

## WHERE DOES IT GO?

Depending on where you live, your household rubbish will end up in a different place.

**Landfill:** If you live in a town and receive municipal services, your rubbish is dumped in a landfill.

**Burning pit or drum:** If you live on a farm or do not have municipal services, you may be burning your rubbish. It therefore turns into air pollution.

**Anywhere & everywhere:** Maybe you just put your rubbish in your backyard or on the street. Now your household rubbish has become litter. This unfortunately also happens to many landfills due to wind, broken infrastructure or mismanagement.



Hi, I am Pollution Solution Sam!

When it comes to waste, many people have an "out of sight, out of mind" philosophy! It is time to change this by having good waste management. Have you heard of the 3 R's? The 3 R's of waste management are:

**Reduce** — to make less waste

**Reuse** — to use waste again

**Recycle** — to process waste into something new

## REDUCE

The best way to start to manage your household waste is to **Reduce** it. If we have less waste to start with, then we do not have to get rid of all of it! Do you know how to **Reduce** your household waste? Read the story below about Martha and Sam to get some ideas.

Both Martha and Sam invite over their friends for a party. They both go to the grocery store to buy some cool drinks and chips.



Look and compare Martha's shopping with Sam's. Fill in the chart:

Question	Martha	Sam
How many pieces of rubbish did they each make?		
How did they carry their shopping home?		
Whose shopping trip produced less waste?		
What can you do on your next shopping trip to <b>Reduce</b> waste?		

Answers: Martha - 14 (6 x chips, 6 x cool drink, 2 x plastic bags, 2 x cloth bag); Sam - 4 (2 x chips, 2 x cool drink).



### Pollution Solution Sam's Top 5 Tips to **Reduce** household waste:

- 1) Buy things with less packaging!
- 2) Buy larger containers instead of many small containers!
- 3) Bring your own cloth bag, instead of plastic bags!
- 4) Borrow things instead of buying them!
- 5) **Reuse**, instead of buying more!

## REUSE & RECYCLE

Of course it is quite difficult to completely avoid having household waste. But, we can save lots of energy and resources by **Reusing** and **Recycling** our waste instead of just throwing it away.

### REUSE

To **Reuse** is to simply use something again. So instead of buying a new bottle of water every time you are thirsty, **Reuse** the one you already have. Lots of food containers can be **Reused** as storage boxes or as planters for seedlings. Check out this old tyre!

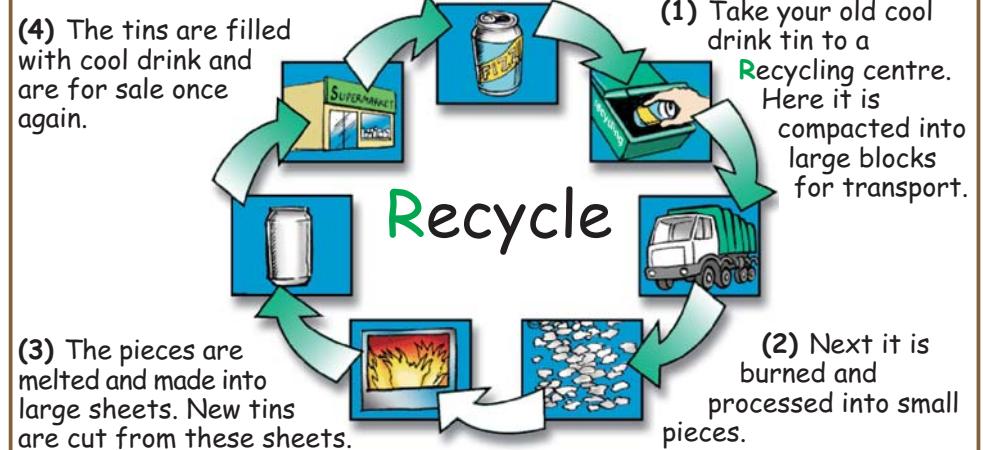


### RECYCLE

To **Recycle** is to process waste into something new. How is this different from **Reusing**? **Recycling** involves a lot more energy and transformation. The original item has been completely changed through the input of energy (and often water). Check out this waste paper bin made from old stamps, cardboard and newspapers.



### The Recycling Process: What happens to your empty cool drink?



### Did you know?

- It takes 96% less energy to make a cool drink tin out of **Recycled** materials than for the first time!
- One **Recycled** tin can save enough energy to run a TV for 3 hours!

## Decade of Education for Sustainable Development WASTE MANAGEMENT

The Decade of Education for Sustainable Development (DESD) 2005-2014 believes that education is key to achieving the United Nations' Millennium Development Goals (MDGs). The United Nations recently had a summit in September whereby they reaffirmed their commitment to end poverty and meet the MDGs by 2015.

We must not fail the billions who look to the international community to fulfil the promise of the Millennium Declaration for a better world. Let us keep the promise.

- UN Secretary-General Ban Ki-Moon

The Namibian government has recently announced that the national unemployment rate is at 51%. This is not only a problem here, but worldwide the financial crisis has reversed the progress previously made to achieve **MDG #1: Eradicate extreme poverty and hunger.**



How can Rethinking waste help us to end poverty? Implementing Reusing and Recycling nationwide can create new jobs. A national Recycling programme can create jobs for many people in collecting, transporting, sorting and processing waste to be Recycled into a new product. On a local level, self-employment projects can be initiated to Reuse and Recycle waste into crafts or household products.

### Why must we Rethink our approach to waste management?

The classic example of dealing with waste is a clean-up campaign. Unfortunately litter clean-ups are like trying to put a plaster on a broken bone: you may cover up the outer scratches, but you haven't fixed the real problem! Shortly after the litter clean up is finished, there is more waste lying around. This creates diseases and threatens biodiversity.

### What can environmental education in the Decade of Education for Sustainable Development do?

Environmental education can create knowledge and understanding about the dangers of poorly managed waste. With an increasing population, urbanisation and consumerism, waste is on the increase. Namibia needs empowered citizens to manage waste in a sustainable manner. In this way we can work towards **MDG #6: Combat HIV/AIDS, malaria and other diseases** and **MDG #7: Ensure environmental sustainability**.



## PERSONALITIES IN CONSERVATION

Name: Maya Chipepo



Organisation: City of Windhoek-Department of Infrastructure, Water and Waste Management

Job Title: Section Engineer: Licensing + Special Projects



Number of years on the job: 7

What does the Solid Waste Management Division do?

It is our job to ensure that all waste generated within the City of Windhoek is managed properly. Previously we just kept the city clean, but now the aim is to shift from pollution control towards waste prevention and Reduction.

Let us just focus on household waste. How will Windhoek fulfill this aim? We developed a policy (launched in October 2010) to guide the implementation of better waste management. All efforts will be made to first prevent waste, then to Reduce, Reuse or Recycle it. Only as a last resort is waste to be disposed as our landfills have limited space. We have started by partnering with the private sector (Enviro-Fill Namibia and Rent-A-Drum) to implement a household Recycling programme.

How does the new Recycling programme work?

Started in September, the household Recycling programme intercepts the Recyclable waste before it gets to the landfill site. Four suburbs received a clear plastic bag to Recycle their glass, tin, paper and plastic waste. This is collected on Monday (the regular waste collection day) by Rent-A-Drum.

Where do the Recyclables go?

Rent-A-Drum has a new Material Recovery Facility (MRF) off the bypass to Daan Viljoen Game Park. There, the Recyclables are sorted, baled and transported to various Recycling stations.

Has it been successful so far?

Yes. So far we had a 57% participation rate and collected 28 tons of Recyclables that otherwise would have gone to the landfill site.

Are there any problems?

Yes, but they are being sorted out with our partners. Some residents have complained that their Recycling bags are stolen, while others complain about the supply of bags and removal of the Recyclables. We are open to suggestions to improve implementation of this system.

When will other suburbs have the programme?

We hope to move to the next area at the beginning of 2011.

Many people live outside of Windhoek and also want to Recycle. What can they do?

Recyclables can be brought straight to the MRF, however to address transport constraints, I encourage communities to find ways to Reduce, Reuse and Recycle their waste locally.

**Maya's Message for Namibia's youth:** It is time to start looking at waste as a resource, not just as a nuisance, so let us be innovative and put the "waste" around us to good use!

## SAY "NO, THANK YOU!" TO PLASTIC BAGS

Out of all of our household rubbish, plastic- especially plastic bags- is a real problem. Many times plastic bags rip or they blow away with the wind and end up as litter. Worldwide it is estimated that between 500 billion and 1 trillion plastic bags are produced per year!

### The Plastic Bag Problem

Unfortunately plastic bags are not biodegradable meaning that they cannot decompose. Instead they photodegrade. This means



that the sun slowly breaks the plastic bag into lots of smaller pieces of plastic. These pieces do not disappear and instead pollute our land and water. Even the most remote places of the world, like Antarctica have plastic bag litter! There marine animals, like this albatross, mistake the plastic as food and die.



Is this Namibia's national flower?

So if I shouldn't use a plastic bag, how do I get my shopping home?  
Check out these suggestions:



Pollution Solution Sam says,  
"Just say no to plastic bags!"

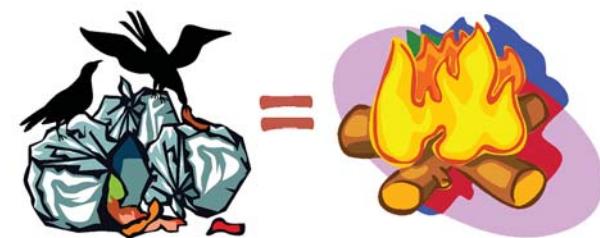
Next time you are in a shop, politely tell the cashier that you do not need a bag and then put your purchases into your own carrying container!

**Did you know?** By using your own carrying container, you can save at least 7,000 plastic bags in your lifetime. That is 14,000,000,000 plastic bags if all Namibians just said no!

## WASTE = ENERGY



Did you know  
that there is  
actually  
energy in your  
household  
rubbish?



### What is energy?

Energy is the ability to do work. It comes in many different forms such as light, heat, chemical and potential energy. When household rubbish is burned, it gives off heat energy that simply is lost to the air. Heat is a form of energy that we need everyday. We need heat to cook our food, boil our water and to stay warm. What type of energy do you use for heating?

### Waste = Heat Energy

By Recycling it, any waste paper product can be turned into a useful source of heat. This has the double benefit of Recycling our waste and Reducing our consumption of electricity, gas and/or firewood. Learn how to make your own Recycled Paper Firebricks below:

### RECYCLED PAPER FIREBRICK DIRECTIONS:

#### Materials

- Any sort of waste paper material
- Sawdust (optional)
- Compressing tool (brickmaker, tin or own hands)

1. Collect and sort waste paper such as newspapers, office paper, egg cartons, cereal boxes and food wrappers.
2. Rip waste paper into small pieces (i.e. size of a potato chip).
3. Combine the same amount of each material in a large bucket.
4. Add just enough water to soak.



5. Mash the waste paper that it is like stamp mielies and add some saw dust (if available).
  6. Using a compressing tool, press the water out of the mash. Reuse the water on your compost (see pg. 10).
  7. Dry firebricks in a sunny area.
  8. Burn them in a fuel-efficient stove for cooking or to boil water.
- A photograph of two traditional metal stoves with lids, each containing a rectangular firebrick made from recycled paper. Both stoves are burning brightly with orange flames.
- A photograph of several rectangular firebricks made from recycled paper, stacked in a neat pile. They have a light-colored, textured surface.
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## ACTIVITY PAGE: Make your own compost



Did you know that nature is a great Recycler?

You can learn how to compost and let nature help you to Recycle your organic household waste into fertile soil for your plants!



### What is compost?

Compost is plant and animal matter (organic material) that has been decomposed into a nutrient-rich soil. It can then be added to soil to help plants such as trees, bushes and vegetables grow better.

### What can I compost?

- Food scraps
- Garden refuse (leaves, twigs)
- Ash
- Tea bags
- Egg cartons



### What can't I compost?

- Meat scraps
- Bones
- Anything that is not organic (plastic, tin, sweet wrappers)



In most households 50% or more of the waste is organic and can be composted!

### HOW TO START A COMPOST

- 1) Choose an area in your yard that is reachable from the kitchen, but out of the way. Make sure it is rubbish free.
- 2) Contain the area. You can make a small fence or buy a compost bin to prevent unwanted animals such as dogs digging in the compost.
- 3) Start with a few shovels of compost or garden soil.
- 4) Add kitchen scraps and garden refuse (See What can I compost? box).
- 5) Add water. Keep your compost pile moist, but not too wet.
- 6) Turn or layer your compost every week to maintain airflow and to mix new and old materials. Your compost will be ready in 2-3 months depending on the weather conditions, how much new material you add and how well you maintain it. Now add it to your garden.



### COMPOST TROUBLESHOOTING

#### 1. Why does my compost stink?

You are probably adding too much water. Your compost should not be rotting. Turn your compost more often and add less water.

#### 2. How do I know if the compost is ready?

When your compost pile smells earthy and you can no longer recognise the food scraps and garden refuse.

## Chinga's & Nzovu's Corner



Dear friends,

We love answering your questions about the environment. If you have any, send them to: Chinga & Nzovu, NaDEET, PO Box 31017, Pioniers Park, Windhoek



Dear Chinga and Nzovu,  
Is it possible to see with my eyes when water is polluted?

Timotheus in Windhoek

Dear Timotheus,

There are two types of water pollution:  
organic and inorganic. Organic pollution is from sewage, human and animal waste, salts and minerals, while inorganic pollution is from toxic chemicals such as pesticides and heavy metals and rubbish. Some pollution is easy to see or smell. The pollution is large objects, or different colours or has a strong odour.



However some water pollution you cannot see and can be very hazardous to your health. Water pollution from human or animal waste contain harmful germs such as bacteria and viruses and can cause diseases such as cholera, typhoid and hepatitis.

Chinga and Nzovu

Dear Chinga and Nzovu,

How do people figure out what kind of animal something is and how does it get its name?

Genoviene in Mariental

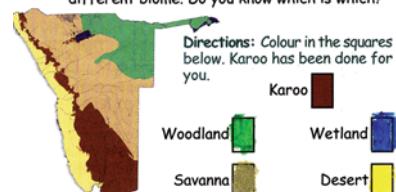
Dear Genoviene,  
In the past, there was no system to animal and plant names. A scientist discovered that people were using different names to refer to the same living thing. Therefore he developed a system whereby all animals and plants are organised and classified. This helps us to know which animals are related and which are not. The name of an animal can be very descriptive of what it looks like or acts or lives. Sometimes it can be named after the person who described it first.

If you want to find out what kind of animal you see, you can use an identification book to help you. There you can also read more about where and how the animal lives and what it eats.

Chinga and Nzovu

## UPDATES FROM LAST ISSUE

Each colour on the Namibian map represents a different biome. Do you know which is which?



HUMAN USES

Directions: Draw lines to match each section of the circle with all the human uses around the edges.



- Pg 4:
1. Beetle
  2. It might become too much
  3. Snake
  4. It might die off because it is hungry

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**Written by:** Viktoria Keding & Elissa Brown

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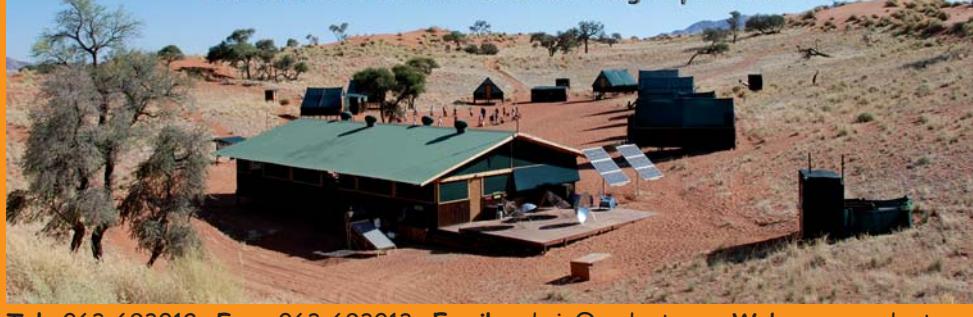
**Photographs & illustrations:** E. Brown, M. Gaugler, C. Jordan, NaDEET

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### **NaDEET Centre: A Sustainable Living Experience**



**Tel:** 063-693012 **Fax:** 063-693013 **Email:** admin@nadeet.org **Web:** www.nadeet.org

**NaDEET Centre offers week-long programmes for school, youth, educator and adult groups in the Namib Desert. The programme aims to engage participants in sustainable living through first-hand learning and living experiences.**

#### **Join the BUSH TELEGRAPH Reader Club**

The Bush Telegraph is a mini-magazine for Namibian youth. It aims to increase knowledge of and improve attitudes towards our environment through reading. It is distributed twice a year for free. Just fill in this form and send it to this address: **Namib Desert Environmental Education Trust (NaDEET), P.O. Box 31017, Pioniers Park, Windhoek**



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