

THE CHALLENGE OF PLASTICS IN NAMIBIA

Much of Namibia looks like this



Background

- Plastics are synthetic compounds, organic polymers (very large molecules)
- Mainly derived from petrochemicals
- Cheap & easy to manufacture, versatile, stable & impervious to water
- Very useful to people – used for most things, from plastic bags to spaceships
- However, they break down very slowly in the environment
- Their impact on the environment became a concern in the mid-20th century
- Recycling of plastics was introduced (Namibia has a recycling plant in Okahandja)
- However, recycling on its own has not solved the problem
- Other measures are also needed

Environmental problems

- A large amount of plastic products are designed for one-off use, then discarded
- Most plastic currently goes into land-fill – takes up space, slow to break down, poses risk of pollution – soil and ground water
- Plastics at waste sites are difficult to contain – blow about (even Namibia's best-managed waste site – Windhoek – characterised by plastic bags in thorn tree and across surrounding countryside)
- Unsightly – bad for tourism, bad for Namibia's image
- But far more important – health hazard as plastics contribute to ...
 - Poor sanitary conditions
 - Malaria - mosquitos breed in trapped water
- Cause of illness and death in domestic stock and wildlife – feeding on waste plastics
- Animals get trapped in plastic
- **However, the worst impacts are in the world's oceans – thus an international issue with Namibia playing its part**
- 4.8 – 12.7 million tons of plastic / year
- From poles to equator and mid-ocean
- Plastics make up 95% of waste in oceans – mainly plastic bags, food containers & drinks bottles & fishing gear
- 90% of seabirds have plastic in stomach
- **By 2050 the mass of plastic in oceans will be more than mass of fish if nothing is done ...**



Human health problems

- Plastics break down very slowly in the oceans – first into fragments - an estimated 46,000 to 1,000,000 per sq mile of ocean
- Then into microbeads (< about 2 mm) – an estimated 15-51 trillion in the oceans
- Then into nanobeads – those smaller than about 30 microns – absorbed by plankton and taken up into food chain
- Nanobeads are absorbed into tissue of animals, e.g. fish and shellfish
- Nanobeads are absorbed via human digestive system, circulate in blood, enter tissue
- Seafood eaters can ingest as much as 11,000 tiny pieces of plastic per year
- Full implications on human health not yet fully understood, but risks include:
 - Increased arthritis (nanobeads accumulate in joints)
 - Potential blood clots, strokes and heart attacks
 - Development of tumours

Some solutions

Plastic bags

- Ban import of plastic bags (RSA) containing CaCO₃ – difficult to recycle
- Impose a statutory charge of 50c per bag – income to go into recycling fund (not to GRN)

Plastic drinks bottles

- Enforce a deposit on all plastic drinks bottles on sale in Namibia, 20c per bottle
- All drinks companies must collect returned empties
- All drinks companies are responsible for recycling their used drinks bottles

Plastics recycling fund

- Collects all income from sale of plastic bags
- Fund pays for return of plastic drinking bottles already in system
- Fund pays for establishment of SMEs for production of material / canvas shopping bags with a focus on unemployed women in towns around Namibia
 - Provides sewing machines to SMEs
 - Provides starter pack of templates and material to SMEs
 - Innovative retailers should provide branded material to SMEs
- Retail outlets to brand canvas shopping bags and make them available to their customers free or at subsidised rate for first two months after start of new system.

This is what some parts of the world look like ...



Who are the players?

- Plastics manufacturers (about 11 companies) under Manufacturers Association
- Retailers (shops) providing plastic bags
- Recycling organisations in Namibia under Recycle Namibia Forum
- Recycling companies in RSA (because Namibia cannot handle some materials)
- GRN Ministries (MET, MoF, MHSS, MIT&SMED)
- Namibian NGOs
- Waste to energy (Ohorongo, NamPower?)
- International community (global issue)

Plastic is a substance the earth cannot digest

REFUSE SINGLE-USE PLASTIC



What is the plan?

- ✓ Set up a Plastics Committee (MET, Manufacturers, Retailers, Recyclers, NGOs & Waste-to-energy) with one rep from each sector
- ✓ Develop a common Vision and Objectives, e.g. "Plastics eliminated from our ecosystems by 2020"
- ✓ Develop a national Action Plan
- ✓ Get national buy-in via social media and parliament
- ✓ Create the necessary legislation to enforce the Action Plan
- ✓ Monitor effectiveness and fine tune as necessary.