



## Did you know?

- Australia produces more than 1.3 million tonnes of plastic every year - more than 71 kg for every person.<sup>1</sup>
- Plastics are made from oil, gas and coal, which are limited natural resources.
- On Clean Up Australia Day 2005, plastic items represented 32% of the total rubbish collected.
- Sites at Shops/Malls had the largest proportion of plastic rubbish items on Clean Up Australia Day 2005.
- Recycling one tonne of plastic saves enough energy to run a refrigerator for a month.<sup>1</sup>
- It takes 125 recycled plastic milk bottles to manufacture one 140 litre wheelie bin from recycled plastic.<sup>1</sup>
- Manufacturing plastics from recycled materials uses 30% of the energy required to make plastic products from fossil fuels.<sup>1</sup>
- Plastic shopping bags can be returned to your supermarket for recycling.

# Plastics

**Plastics are the most common litter item found on Clean Up Australia Day. Plastics persist in the environment for hundreds of years, turning our streets and waterways into unsightly and unhygienic rubbish dumps and endangering local wildlife.**

## Plastic in the environment

### What are plastics?

Plastics were first invented in 1860, but have only been widely used in the last 30 years. They are light, durable, mouldable, hygienic and economic, making them suitable for a wide variety of applications including food and product packaging, car manufacturing, agriculture and housing products.

Plastics are made up of long chain molecules called polymers. Polymers are made when naturally occurring substances such as coal, natural gas and oil are transformed into other substances with completely different properties. These polymers can then be made into granules, powders and liquids, becoming the raw materials for plastic products.<sup>2</sup>

Plastic production worldwide now exceeds 80 million tonnes a year, with Australia contributing almost 1.3 million tonnes to that total.<sup>1</sup>

### The impact of plastic on the environmental

#### **Natural resources**

Plastics are made from natural resources such as crude oil, natural gas and coal. Once depleted these resources cannot be replaced.

#### **Persistence in the environment**

Most plastic is not biodegradable and will persist in the environment for hundreds of years. For example, plastic film containers last for 20-30 years while plastic bottles can last indefinitely.<sup>3</sup> Plastic is also lightweight and moisture resistant which means it can float easily in air and water, often travelling long distances.

### Landfill space

Australians use more than 1.3 million tonnes of plastic every year. At current rates of waste disposal, it is expected that NSW will reach its present landfill capacity by 2010.<sup>5</sup>

### Greenhouse gases

When oil, gas and coal are used in the production process they emit dangerous greenhouse gases. Landfills and plastic incineration also generate toxic emissions such as carbon dioxide and methane. These greenhouse gases contribute to worldwide climate change.

### Marine life

There are about 46,000 pieces of plastic floating in each square mile of our oceans.<sup>4</sup> Discarded plastic has even been found on uninhabited South Pacific islands.<sup>3</sup>

It is estimated that plastic kills up to 1 million sea birds, 100,000 sea mammals and countless fish each year<sup>2</sup>, with many getting entangled in plastic six-pack rings, plastic strapping and nylon ropes.<sup>3</sup>

### **The best way to minimise plastic waste is to follow four easy steps:**

**Avoid** buying plastic products whenever possible.

**Reduce** the amount of plastic used by buying refill packs and rejecting products with excess packaging.

**Reuse** plastics products to give them a long life.

**Recycle** any surplus plastic items

*Clean up - inspiring and working with all Australians to clean up, fix up and conserve our environment.*

# Avoid, Reduce, Reuse & Recycle

*Throughout Australia most local councils have created kerbside collection programs and collection depots for their communities.*

*By making small adjustments in your home you can prevent the devastating effects plastic has on the environment.*

By following the four steps to plastic minimisation you can help conserve valuable natural resources used in new plastic production, reducing the need to drill for oil and dig for minerals.

**Avoiding, Reducing, Reusing and Recycling** plastics will also prevent them going to landfills or incinerators, reducing environmental degradation.

## Tips!

- Avoid using plastic wrap by storing leftovers in the refrigerator in bowls covered with a saucer or plate or in washable containers.
- Reject products with multiple layers of packaging and avoid individually wrapped single serve items.
- Reuse plastic containers to store leftovers, soups, grains, spices, and as lunchboxes.
- Use empty detergent squeeze bottles as bottles for watering plants or filling a steam iron.
- Collect buttons, yoghurt, margarine and ice-cream containers for kindergartens, day care centres and schools.
- Use small, empty plastic soft drink bottles as drink bottles for school or outings.

## What is recyclable?

Although all plastics can be recycled, not all plastics are recycled through kerbside recycling schemes.

**Contamination** threatens the viability of kerbside recycling by increasing the costs to collectors, recyclers and the community, so make sure you are certain about what plastics can and cannot be recycled. To prepare plastics for recycling, rinse residue from bottles and containers (using dishwashing water), remove labels and lids and squash bottles.

## Identifying plastics

A Plastics Identification Code is stamped on all plastic products. This doesn't mean all plastics with a number are recyclable, but it does help you to identify products that can be collected.

**Generally, plastics labelled 1, 2 and 3 can be recycled. For example:**

 **PET (Polyethylene Terephthalate)**  
Soft drink, juice and water bottles plus some plastic jars.

 **HDPE (High Density Polyethylene)**  
Milk bottles, juice bottles, cream containers, bottles for shampoo and cleaners.

 **PVC or V (Vinyl)**  
Detergent, shampoo and cordial bottles.

**Try reusing or finding alternatives to these non-recyclable plastics:**

 **LDPE (Low Density Polyethylene)**  
Garbage bags, garbage bins and recycle bins.

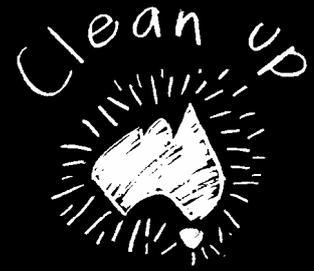
 **PP (Polypropylene)**  
Straws, microwave ware, plastic-hinged lunch boxes.

 **PS (Polystyrene)**  
Yoghurt Containers, plastic cutlery, foam hot drink cups.

 **Other**  
All other resins and multiple blend plastic materials.

Check with your local council for a list of what they accept for recycling. Find your local council at:

[www.alga.asn.au/links/councils.php](http://www.alga.asn.au/links/councils.php)



## References

- <sup>1</sup> VISY Recycling  
[www.visyrecycling.com.au](http://www.visyrecycling.com.au)
- <sup>2</sup> Zero Waste, South Australia  
[www.zerowaste.sa.gov.au/pdf/factsheets/plastics.pdf](http://www.zerowaste.sa.gov.au/pdf/factsheets/plastics.pdf)
- <sup>3</sup> Australian Marine Conservation Society  
[www.amcs.org.au](http://www.amcs.org.au)
- <sup>4</sup> Worldwide Home Environmentalists Network  
[www.vicnet.net.au/~when/plastic.htm](http://www.vicnet.net.au/~when/plastic.htm)
- <sup>5</sup> NSW Department of Environment and Conservation  
[www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)
- <sup>6</sup> EcoRecycle, Victoria  
[www.ecorecycle.vic.gov.au](http://www.ecorecycle.vic.gov.au)
- <sup>7</sup> Clean Up Australia  
[www.marinedebris.cleanup.com.au](http://www.marinedebris.cleanup.com.au)

### If throwing plastic away:

- Make sure any plastic rings from bottle necks and six-pack holders are cut, to reduce risk of harm to animals.
- Tie plastic bags in a knot to prevent them from being blown away.



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