

Plastic Pollution



Stop whatever you were doing and have a look around. Count the number of things you can see that are made of plastic or that have plastic in them. Did you check your shoes? What about your clothes?

Many types of fabric have plastic in them (we're looking at you, polyester). What about your phone? The switch on the wall? Your drink bottle? That little sticker on your apple?

There's no denying it: our lives are deeply connected to plastic; we are dependent on it.

It wasn't always this way. Plastic was only invented at the turn of the 20th century. However, in the last 50 years, we have been producing plastics on a mass scale to a point where it has now permeated the mainstream and become ubiquitous in the modern world.

The quantity of plastic produced today is truly staggering. It is estimated that plastic production accounts for approximately 8% of the world's oil production (4% for the plastic itself plus an additional 4% to produce the energy required to make it).

The problem is that for about 50% of the plastic we use, we use it just once and throw it away. The other problem is that nearly every piece of plastic ever made still exists today. Why?

Plastic never truly breaks down. Other waste materials – like paper or glass – break down eventually. However, plastic just breaks into smaller and smaller pieces.

Some pieces of plastic enter the marine system as tiny pieces. Found in things like cosmetics and toothpaste, or washed out of items of clothing such as fleece, microplastics are tiny pieces of plastic that are almost too small to see.

Plastics in the Ocean

Over 6 million tonnes of rubbish makes its way into the world's oceans each year,⁴ and scientists have concluded that 60-80% of marine debris is initially discarded on land. The main component of this litter is usually plastic. Wind blows plastic rubbish out of littered streets and landfills, and from trucks and trains on their way to landfills. It gets into rivers, streams and storm drains and then gets carried by tides and currents out to sea. Litter dropped by people at the beach is also a major source.

The other 20% of the marine debris found in the ocean comes from boats, offshore oil rigs and large cargo ships that dump or lose debris directly into the water. The majority of this debris is fishing nets.

The Great Pacific Garbage Patch

The Great Pacific Garbage Patch is a collection of marine debris in the North Pacific Ocean.

A recent investigation into the scale of the Great Pacific Garbage Patch suggests that the heart of the Garbage Patch is thought to be around 1 million square kilometers, with the periphery spanning a further 3.5 million square kilometers.

All this waste is accumulating because most of it is not biodegradable. Many plastics won't break down but instead just break up into smaller and smaller pieces (microplastics), and it is estimated that 8 million tons of plastic are dumped in our oceans every year.

When you think about it in this way you begin to understand that the Great Pacific Garbage Patch isn't really a floating garbage patch but instead is more like a plastic soup, whose ingredients include microplastics that often can't be seen with the naked eye but instead make the water look murky, interspersed with larger pieces of plastic like plastic bags, fishing line and shoes.

Other facts about plastic

- Packaging accounts for over 40% of total plastic usage.
- Approximately 500 billion plastic bags are used worldwide each year, with more than one million bags used every minute.
- Your average plastic bag has a typical 'working life' of just 15 minutes.
- Only 1% of plastic bags are recycled worldwide.
- Over the last ten years we have produced more plastic than during the whole of the last century.
- 14% of all litter comes from drink containers. When caps and labels are considered, the number is higher.
- The polyester fabric shirt you bought will not decompose for between 20 years and 200 years.
- Each year marine waste kills at least 100,000 marine animals and 1 million sea birds.

Find out more

- Take 3 for the sea - <http://www.take3.org/>
- When balloons fly, seabirds die - <https://www.zoo.org.au/get-involved/act-for-wildlife/balloons>
- Australian Marine Conservation Society - <https://www.marineconservation.org.au/>
- The Story of a Spoon - <https://www.youtube.com/watch?v=eg-E1FtjaxY>
- The Story of Stuff - <https://www.youtube.com/watch?v=9GorqroigqM>
- The Majestic Plastic Bag - A Mockumentary - <https://www.youtube.com/watch?v=GLgh9h2ePYw>
- The Life of a Plastic Bag - <https://www.youtube.com/watch?v=pj5F2TD8nsA>