

Global waste production

Global waste production is not evenly distributed. ACs (advanced countries) such as USA and large parts of Europe, and EDCs (Emerging Developing countries) such as China and India produced huge amounts of waste. Whereas LIDCs (Low Income Developing Countries) such as parts of Africa and South America produce much less waste.

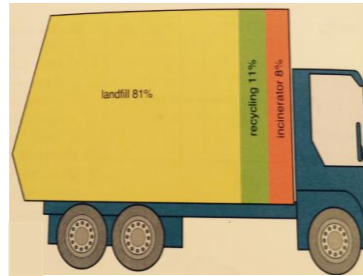
How long is waste around for?

Waste varies in the amount of time it stays on the Earth based on the material it is made from. Some things can stay around for millions of years



Where does waste come from?

Waste is produced from all aspects of our lives and in everything we do. However certain activities hugely increase the amount of waste we produce.



Where does waste go?

Waste goes to one of 3 places as shown in the diagram: Landfill (81%) gets buried underground, Recycling (11%) gets made into something else, and incineration (8%) which gets burnt.



What waste do we produce?

Waste can be split into categories:

- 1) Biodegradable waste – this will be broken down on its naturally or will completely decompose by itself. Examples include; food waste and garden waste
- 2) Non-biodegradable waste – this waste is tough to separate and doesn't break down/decompose easily. There are 2 types:
 - a. Recyclable waste: cardboard, plastic bottles, tins, cans etc
 - b. Toxic waste: paint, aerosols, nuclear waste.

What a load of rubbish!

Advantages and disadvantages of landfill

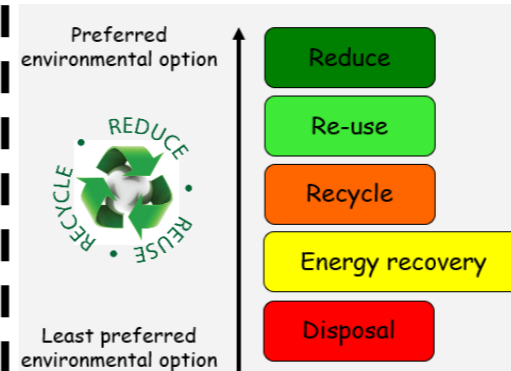
Advantages	Disadvantages
<ul style="list-style-type: none"> • They are located away from urban areas where most people live. • Landfill is a good way of using up big holes in the ground that could not be used for anything else. 	<ul style="list-style-type: none"> • The countryside has run out of places for new landfill sites. • Chemicals can leak into the ground polluting water supplies. • Methane gas is given off which contributes to global warming. • Landfill can attract wildlife that can become sick from eating the rubbish. • Looks horrible. • Smells bad.

The 3R's

- Recycle:** This is when items are converted into new products.
- Re-use:** An item's life is extended by finding new ways to use the product or material again without reprocessing it. It might be used for its original purpose or a different one.
- Reduce:** Creating less waste should be the most important strategy in waste management as it is better not to produce waste in the first place.

The waste hierarchy

The waste hierarchy is an order of ways of getting rid of waste, in order of how good they are for the environment. Reduce is the most environmentally friendly way of getting rid of waste. Disposal (landfill) is the least environmentally friendly method of waste management. Note: Energy Recovery = incineration.



The Great Pacific Garbage Patch

The GPGP covers an area 3 times the size of France and is 1.6million km². The patch contains 1.8 trillion pieces of plastic (250 pieces for every human being). It has a total mass of 80,000 tonnes. Plastic found in the patch will breakdown into micro-plastics under the effects of the sun and waves.



What causes the Great Pacific Garbage Patch?

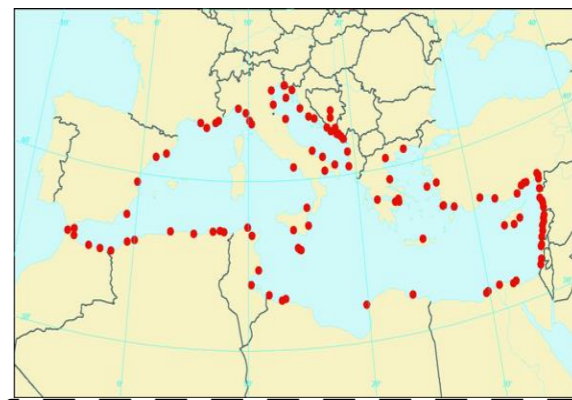
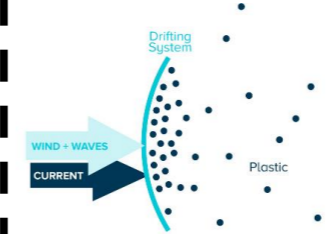
Gyres - The Great Pacific Garbage Patch is created by the North Pacific gyre. An ocean gyre is a large system of circular ocean currents formed by global wind patterns and currents created by the Earth's rotation.

Impacts of the GPGP

- Turtles** – plastic straw stuck up its nose.
- Albatross** – contents of bird stomach contains high levels of plastic.
- Marine animals and humans** – through plastic moving up the food chain.

Management of the GPGP

The Ocean Clean-up Project – a 600m long, 3m deep device that floats on the surface of the ocean and collects plastic. It uses the forces of the wind, waves and currents to navigate to areas of most plastic. When full, boats go out and empty it of rubbish. It is the 1st one of 50 planned devices.

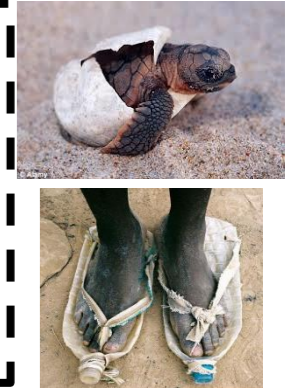


Pollution hotspots on the Mediterranean Sea.

Areas where plastic often collects due to ocean currents.

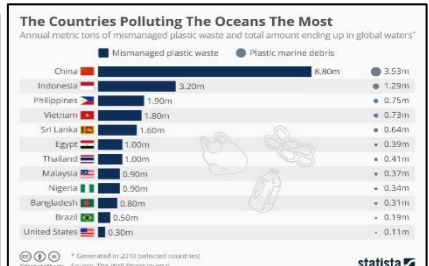
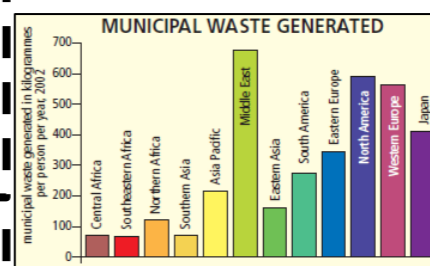
Loggerhead turtle facts:

- An adult weighs 170-500 pounds and can be 45 inches long.
- When they first hatch, they are 2 inches long.
- They live up to 50 years or more.
- They are carnivores.
- They lay eggs on the beaches.



The impacts on sea turtles.

Problems	Solutions
<ul style="list-style-type: none"> • People walking on beaches can stand on the nests and destroy the eggs. • Beach furniture can cause hazard and obstacles for baby turtles, so they can't get back to the water. • Light behind the beach can cause baby turtles to head inland instead of towards the water. 	<ul style="list-style-type: none"> • Only walk along the edge of the water and put fences around known nest sites. • Move all beach furniture off the beach at night-time, and keep it close to the water edge away from nests • Turn off all lights at night so turtles head towards the moonlight and into the water.



Comparing countries:

- AC** – advanced countries
- EDC** – emerging and developing countries
- LIDC** – low income developing countries

Why do LIDCs produce less waste?

- Since they have less money, they have less disposable income so create less waste.
- They are more careful with what they waste and recycle lots to save themselves money.
- They have less access to single use plastic.