



World Environmental Day 3 – Ocean of Plastics

Sarah Judkins

Proud history, bright future.



Ocean Plastics Pollution

Plastics accumulating in our oceans and on our beaches has become a global crisis. Billions of pounds of plastic can be found in swirling convergences that make up about 40 percent of the world's ocean surfaces. At current rates plastic is expected to outweigh all the fish in the sea by 2050.

Plastic pollution has a direct and deadly effect on wildlife. Thousands of seabirds and sea turtles, seals and other marine mammals are killed each year after ingesting plastic or getting entangled in it. Endangering wildlife like the Hawaiian monk seals and Pacific loggerhead sea turtles which are among nearly 700 species that eat and get caught in plastic litter each year.

The preparation of these slides has opened my eyes to the crisis that is unfolding, before us, some content on the following slides is graphic and upsetting, there are many more pictures that are far worse on the internet, that demonstrate the suffering the human race is responsible for. Please read on and look for ways you may be able to help restore our ecosystems in some small way.

The Plastic Problem



- We're surrounded by plastic. Its in the single-use packaging we discard, the consumer goods that fill our shops, and in our clothing, which sheds microscopic fibres in the wash.
- In the first decade of this century, we made more plastic than all the plastic in history up to the year 2000. And every year, billions of pounds more plastic end up in the world's oceans.

The Plastic Problem

- Studies estimate there are now 15-51 trillion pieces of plastic in the world's oceans – from the equator to the poles, from Arctic ice sheets to the sea floor.
- Not one square mile of surface ocean anywhere on earth is free of plastic pollution.
- The problem is growing into a crisis.
- Unfortunately, plastic is so durable that the EPA reports “every bit of plastic ever made still exists.”



Plastic useful but deadly



- Over 300 million tonnes of plastic are produced every year for use in a wide variety of applications.
- At least 12 million tonnes of plastic end up in our oceans every year, and make up 80% of all marine debris from surface waters to deep-sea sediment.
- Scientists have recently discovered microplastics embedded deep in the Arctic Ice.

Ocean plastics originate from the UK as well

- 100,000 marine mammals and turtles and 1 million sea birds are killed by marine plastics pollution annually.
- Approx. 5,000 items of marine plastic pollution have been found per mile of beach in the UK.
- Producing one tonne of plastic generates up to 2.5 tonnes of carbon dioxide.
- Less than a third of all plastic in the UK is recycled.
- Plastic production has been forecasted to grow by 60% by 2030 and to treble by 2050.



Impacts on the marine environment

- The most visible and disturbing impacts of marine plastics are the ingestion, suffocation and entanglement of hundreds of marine species.
- Marine wildlife such as seabirds, whales, fishes and turtles mistake plastic waste for prey, most die of starvation as their stomachs are filled with plastic debris.
- They also suffer from lacerations, infections, and internal injuries reducing their ability to swim.
- Floating plastics also contribute to the spread of invasive organisms and bacteria, which disrupt ecosystems.



Impacts on food and health



- Invisible plastics has been identified in tap water, beer, salt and are present in samples collected in the world's oceans, including the Arctic. Several chemicals used in the production of plastic materials are known to be carcinogenic and to interfere with the body's endocrine system, causing developmental, reproductive, neurological, and immune disorders, in both humans and wildlife.

How safe is your food?

- Toxic contaminants also accumulate on the surface of plastic materials as a result of prolonged exposure to sea water.
- When marine organisms ingest plastic debris, these contaminants enter their digestive system, and overtime accumulate in the food web.
- The transfer of contaminants between marine species and humans through consumption of seafood has been identified as a health hazard, but has not yet been adequately researched.



Impact on Climate change

- Plastic, which is a petroleum product also contributes to global warming.
- If plastic waste is incinerated, it releases carbon dioxide into the atmosphere, thereby increasing carbon emissions.



Impacts on tourism



- Plastic waste damages the aesthetic value of tourist destinations, leading to decreased tourism-related incomes and major economic costs related to the cleaning and maintenance of sites.
- Take your rubbish home or dispose of it responsibly.

How can we help to stop plastic pollution.

- Wean yourself off disposable plastics:
 - Plastic bags.
 - Disposable coffee cups take your travel mug to your favourite coffee shop.
- Stop buying bottled water.
- Boycott microbeads found in facial and body washes also found in tooth paste.
 - Try using for oatmeal or salt instead.
- Cook more
 - Not only healthier but making your own meals doesn't involve take out containers. Saves you money as well.
- Reuse plastic containers that you have
 - Take out containers make great storage boxes for left over food in the fridge.
- Buy your fruit, vegetables loose rather than packed in plastic.
 - Some supermarkets offer a reusable bag for fruit and veg.
- Recycle
 - Unsure what can be recycled check the internet, also look back at yesterdays presentation for ideas.
- Use bags for life for all your shopping and carrying needs.
- Spread the word.
- Get involved in community conservation projects.
- Take your rubbish home and dispose of it responsibly.