INTER⇄ACT

Plastic pollution

What is the problem?

Plastic pollution and climate change share the same fossil origin, i.e. oil and gas.

Most plastic types do not decompose, but will break down over time into smaller and smaller particles: Macro (>5 mm) -> Micro (<5 mm) -> Nano (<1 µm).

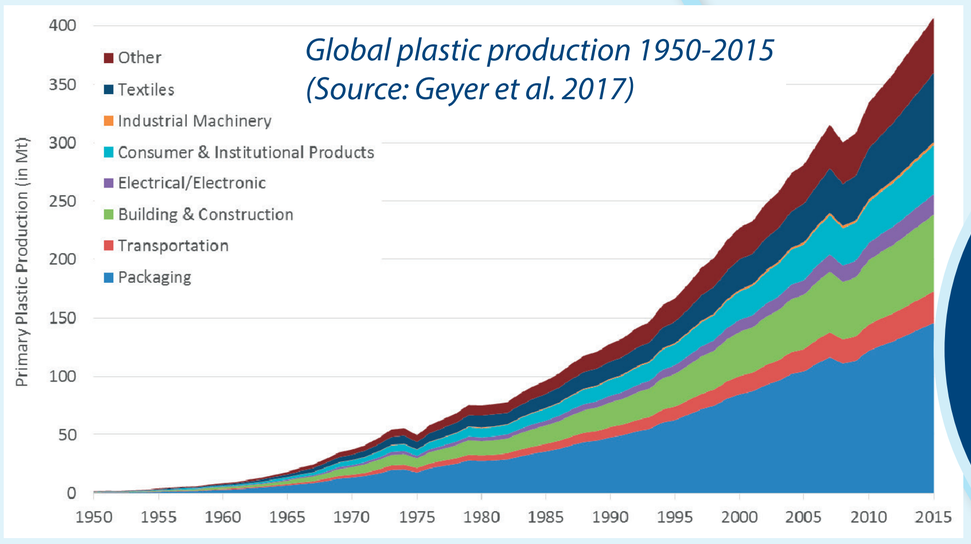
Once it degrades into micro or nano particles, it is virtually impossible to remove from the natural environment and could stay there for decades to millennia.

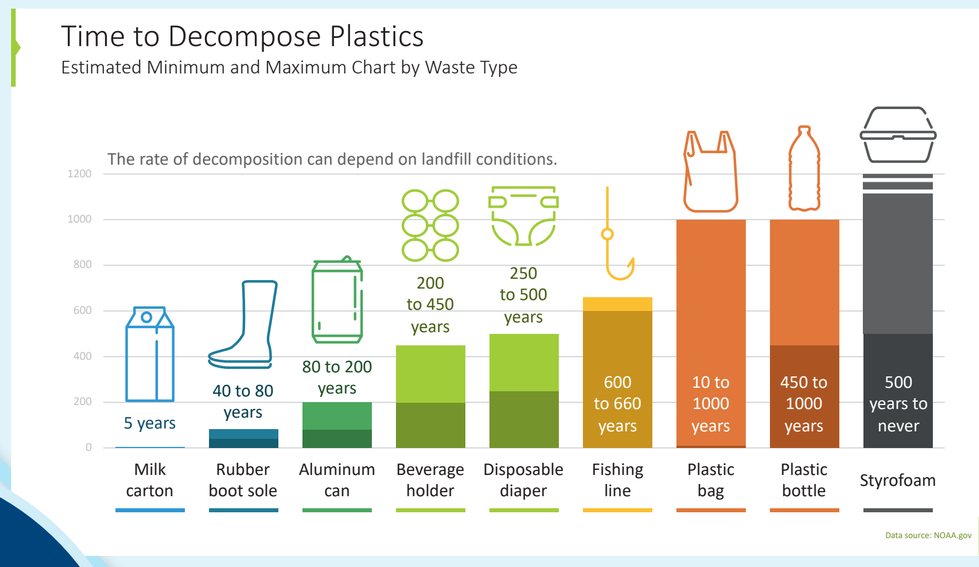
Plastic has a number of beneficial properties making it widely used for many different purposes across the World, e.g. light-weight, durable, easily cleaned/ sterilised and cheap

There has been a steady increase in plastic production since the 1950'ies and global plastic waste generation more than doubled between 2000-2020

Worldwide we produce more than 350 million tons of plastic waste per year (>40 kg per person/year). Around 40% of plastic products are garbage after less than a month (i.e. single use plastics).

- Globally less than 10% is recycled, 50% ends up in landfills, 19% is incinerated and 22%does not reach public waste handling systems.





Textile fibres, personal care products and particles from car tires and road markings are the four main sources of primary micro-plastics in the ocean

Plastic pollution is now found all over the world in all environments, e.g. in air, on land, in water, in the seabed, in glaciers and in the marine and terrestrial food chains

Environmental impacts:

- Plastic impacts Climate Change through the extraction of oil and gas for plastic and energy used in the transport, production and waste handling phases (recycling and disposal).
- Plastics affect ecosystems and human health by spreading hazardous chemical additives with implications for, e.g. reproduction and early development in children.
- Plastics physically affect species by entanglement or ingestion, e.g. blocking airways and digestive tracts or filling stomachs.

What can you do?

We all have a share in the increasing plastic pollution problem affecting ecosystems and humans across the Globe.

You can help by:

1. **Refrain** from using unnecessary, harmful, low-quality and un-recyclable plastics.
2. **Replace** plastics with sustainable alternatives (bio-based and biodegradable plastics).
3. **Reduce** and minimize the use of plastics, whenever possible.
4. **Reuse** plastic products for the same or different purposes.
5. **Repair** and extend the lifespan of plastic items.
6. **Recycle** through proper sorting and disposal to recycling facilities.
7. **Remember** to keep environment clean and engage in clean-ups.
8. React by speaking up and advocate for change among friends, family, colleagues, institutions and politicians.
    a. Promote above principles and argue for a move towards a more circular plastic economy with limited production, no harmful additives, long durability and significant increase in recycling.

BEAT THE MICRO BEAD

You can use apps to scan ingredient lists for plastic contents

References: Geyer et al. 2017, DOI: 10.1126/sciadv.1700782. Institute for Bioplastics and Biocomposites: https://www.ifbb-hannover.de/en/, and European Bioplastics: https://www.european-bioplastics.org/, NOAA: https://marinedebris.noaa.gov/, OECD, 2023: https://www.oecd.org/newsroom/plastic-pollution-is-growing-relentlessly-as-waste-management-and-recycling-fall-short.htm