

Microplastics Factsheet

What are microplastics?

- small pieces of plastic measuring 1–5mm
- present everywhere in the seas and oceans
- 5 trillion pieces, weighing 250,000 tons, floating in seas and oceans
- lots more are on beaches, deep in the oceans and inside marine organisms

Amazing fact: 1.5 million tons of microplastics are released into the ocean every year. *That's equivalent to every person on the planet throwing an empty plastic bag into the ocean every week.*

Where do microplastics come from?

- larger pieces broken down over time
- synthetic materials in clothing
- spillage of tiny pellets used in plastics manufacture
- pellets used as scrubbers for cleaning processes in personal care products

Fearsome fact: Microplastics are durable and can remain in the environment for hundreds of years.



Amazing facts: a fleece can shed around 2000 microplastic fibres in a single wash.

Every second, laundry water releases approximately 2 billion microplastic fibres into Europe's waters.

Should we be worrying?

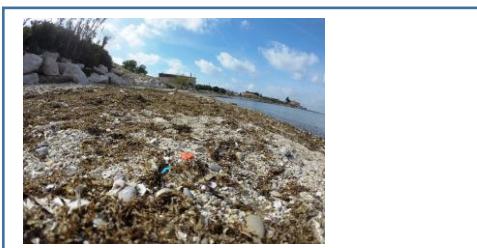
- marine animals can mistake plastic for food
- marine animals (from shellfish to whales) have eaten microplastics

Fact: Mussels, oysters and other species used as food for humans, have ingested microplastic particles.

*Are we eating plastic?
What are the harmful, long-term effects?*

- the guts and stomachs of marine animals can be blocked
- small organisms can get entangled
- microplastics are attracted to algae, blocking light the algae needs, and can then be eaten by marine animals

POISON!! Many plastics contain toxins and also attract other pollutants.



Rafting: Microplastics can travel long distances around the world in ocean currents. They can carry species that cause illness in humans and marine animals (eg *Vibrio spp.* bacteria) and introduce these into ecosystems where they could have harmful, negative effects.

The "missing" microplastics

Plastics have been produced on a large scale for about 60 years. They breakdown over 100s to 1000s of years.

So scientists are surprised that they have observed smaller amounts of microplastics in the environment than they expected.

Where are these "missing" microplastics? Some possible explanations...

- the breakdown rate of plastics could accelerate over time or as the pieces get smaller
- colonisation of plastic particles by living organisms could make the particles denser so they sink to the ocean floor (where they may still be harmful)
- some organisms consume microplastics – deliberately or accidentally – but it's not known to what extent.

What can we all do?

- avoid products containing microplastics See www.beatthemicrobead.org for lists of personal care products to avoid.
- check the labels on clothing for their plastic content
- fit a filter to our washing machines to trap microplastic fibres.
- Reduce our plastic waste: avoid single-use plastic products, and products with excessive packaging.
- Encourage governments and businesses to take action against plastic: use your vote, your voice and your purchasing choices.
- *Most importantly, spread the word. The more people aware of the problem and taking action, the stronger the push for change.*

How is A Rocha involved?

A Rocha's Marine Project has microplastic pollution as one of its focal areas. It is involved with...

- International Beach Cleanup
- monitoring in several national programmes
- partnerships with other research institutions and NGOs

This research will generate a better picture of the sources of microplastic pollution on beaches.



How you can help?

A Rocha's Microplastic Toolbox has lots of ideas and resources you can use to act against microplastics on several levels: see the pages on [science](#), [theology](#), [education](#), [media](#) and [lifestyle](#).

Decide what you can do and encourage your family, friends and colleagues to join in.

Further information
www.beatthemicrobead.org
www.plasticsoupfoundation.org
www.5gyres.org
www.arocha.org/marine