

Ecotoxicological effects of Microplastics in Marine Ecosystems



Microplastics are pieces of plastic smaller than 5 mm in size.

There are two kinds: primary microplastics and secondary microplastics.



Primary microplastics are purposefully added to consumer products. E.g. microbeads in facewash, polyester fibres in clothes Secondary microplastics result from the breakdown of larger plastic items in the aquatic environment due to wave/solar action.

They enter the oceans through rivers and streams, because of people littering, and using products that contain microplastics that then go into drainage systems.

Studies have shown that microplastics are to be found everywhere in our oceans.

Animals accidently eat plastics for a number of reasons. Marine animals normally eat tiny organisms, like plankton, similar in size and shape to microplastics.

Smaller organisms are then eaten by larger marine species, entering the food chain.



There is evidence to suggest that plastics can carry toxic chemical compounds like chemicals and additives. When eaten, these can accumulate in the bodies of marine species that humans subsequently eat.

This is worrying because as yet, we do not entirely know the composition of the additives put into plastic products and how these interact with organisms. We therefore do not fully understand how they may impact on human health.

Scientists are learning more about the impact of microplastics in the marine environment by examining animals ingesting microplastics, and through extensive fieldwork in multiple marine and coastal environments measuring the quantity and type of microplastics to be found and the species they are found in.







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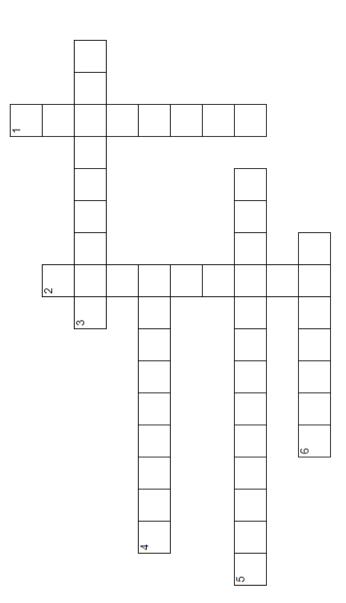








Microplastics in the Marine Environment



- When marine species ingest microplastics, they can enter the: (4,5) Microplastics resulting from the breakdown of larger pieces of plastic (9) Pieces of plastic smaller than 5mm (13) ACROSS
 3 When 14 Microp 5 Pieces 6 Microp

- Microplastics that are purposefully added to consumer products (7)

- Tiny marine organisms that many marine animals feed on (8) A common plastic that clothes are made from (9) DOWN 1 Tiny 2 A co