



## Research partnerships and collaborations helping to address the

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Below is an example demonstrating our response to Target 14.1:

*By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.*

Microplastics form from the breakdown of larger plastic pieces, leaking into the environment as part of production, and are added as microbeads to products such as face scrubs and toothpaste. Many millions' of microplastics are released down drains and into the marine environment where they stay for hundreds of years. Exeter-led research showed for the first time the vast extent to which microscopic waste is ingested by marine animals, and these findings are now actively informing policy change around the world. They have resulted in a UN resolution, a legal ban on plastic microbeads in cosmetics in the UK in 2018, which removed 4,000 tonnes of microplastic per year from the supply chain; and a proposal by the EU to remove microplastics from all commercial products. This alone will prevent a further 500,000 tonnes (or 9.76 trillion microplastic particles a year) from entering the oceans.

Prolific media coverage of our work has also reached hundreds of millions of people, improving understanding and supporting voluntary and regulatory initiatives around the world to reduce microplastic waste, protecting the environment and human health. To study the fate and behaviour of microplastics in the oceans, the Exeter teams have been developing a number of methods to identify microplastics and highlighted UK shorelines were widely contaminated. The study then grew to encompass 18 sites across six continents, from the poles to the Equator.

Building on persuasive evidence of widespread contamination, the teams then began to study the toxic effects of microplastics on marine animals, exploring the harmful effects to animals on the seafloor and the wider implications for the entire marine

