

MARINE POLLUTION

Ocean microfibre contamination

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Large patches of plastic debris drifting in the oceans are increasingly documented. However, we know much less about the presence of microfibre pollution. Microfibres are thin particles less than 5 mm long. They are largely synthetic, and are released into the water by processes such as washing textiles. Because of their size, they are hard to capture through water treatment, and they can potentially bioaccumulate in trophic chains.

Using a citizen science approach, Abigail Barrows of Adventure Scientists, United States, and colleagues estimate the global distribution of microparticles in ocean and coastal areas. Microparticles include microfibres, microplastics and other small anthropogenic debris. Their estimate is based on almost 1,400 samples

from surface waters, and includes remote ocean areas. They find that average particle concentrations are nearly three times higher than previous estimates. The particles found were mostly microfibres. The highest average concentrations are found in open oceans and in polar areas; concentrations in the Arctic double those in other oceans. The authors recommend that, to improve monitoring and management, models of ocean pollution distribution need to better incorporate smaller-sized fibres.

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