

Microplastic pollution much worse than feared

New Zealand Herald, 13 Mar, 2018 6:57pm

Scientists have discovered that microplastic pollution in oceans is much worse than previously feared and the number of tiny pieces of plastic pollution the world's water is a lot higher than initially thought.

The research also revealed that the River Tame, near Manchester, in the UK, has the highest microplastic pollution discovered so far anywhere in the world, with levels even greater than hugely built-up areas such as in South Korea and Hong Kong.

Geographers at The University of Manchester are calling for tighter regulations to prevent plastic entering waterways.

The experts found that the floods in the Manchester area in 2015-16 flushed more than 40 billion pieces of microplastic into the sea.

This discovery of the amount of tiny plastic pieces that one small river catchment can send into the ocean has led scientists to conclude what we thought was the current number of microplastic particles in the ocean currently is a gross underestimation.

A recent global estimate put the input of plastic into the oceans at approximately 6.4 million tons per annum.

Much of the plastic floats rather than sinks, so it is swallowed by marine animals who cannot digest it. Chemicals also leach into the water, and it has been shown that even humans who eat seafood ingest 11,000 pieces of microplastic each year.

Microplastics harm marine life and also present a grave danger to the human population, as the tiny plastic pieces end up being consumed by humans via seafood, other food, and tap water.

Jamie Woodward, Professor of Physical Geography at the Department of Geography, said the results were likely to be the tip of the iceberg.

"We're shining a light on a huge problem that, until now, has been under the radar. We found microplastics everywhere, even in streams high in the hills. Wherever you find people you find plastic," he said.

"We found we had the worst levels in the world, some of which were extraordinarily high. The River Tame is a global hotspot for microplastics.

"Ultimately we need to get better at managing wastewater, and the Environment Agency urgently needs to look at Britain's rivers and see what the extent of microplastics is in the UK."

It has been shown that a single polyester fleece jacket can release more than 1900 plastic fibres per wash while, until they were banned in January, plastic microbeads were common in toothpastes, shampoos and shower gels.

"Microplastics in the ocean have recently attracted a lot of attention, but until now science knew little about the major sources of this pollution and the transport processes involved," Professor Woodward added.

"We are only beginning to understand the extent of the microplastic contamination problem in the world's rivers. To tackle the problem in the oceans, we have to prevent microplastics entering river channels."

The research was published in [Nature Geoscience](#).