

WMW WASTE MANAGEMENT WORLD

Wednesday, 2018-05-16, 10:29 | [Subscribe to our newsletter](#) [f](#) [in](#) [t](#) [v](#) [G+](#)

[Recycling](#) [Waste to energy](#) [Collection and handling](#) [Biowaste](#) [Landfill](#) [Opinion](#) [Markets and policy](#) [IFAT 2018](#)

[Home](#) > [Collection & Transport](#) > IN DEPTH: Microplastics, the Volvo Ocean Race and the CleanSeas Campaign

UN ENVIRONMENT PUBLISHES VIDEOS AND NEW ZEALAND JOINS

Friday, 14:08

IN DEPTH: Microplastics, the Volvo Ocean Race and the CleanSeas Campaign

The Volvo Ocean Race Science Programme has found the highest levels of microplastics in the South China, UN Environment has published videos on its CleanSeas Campaign and New Zealand has joined.

By [BEN MESSENGER](#)

[f](#) [t](#) [G+](#) [x](#) [in](#) [UN](#) [unep](#) [Marine Debris](#) [plastics](#) [Oceans](#) [New Zealand](#)
[Collection & Transport](#) [Markets & Policy](#)



Image © Brian Carlin/Volvo Ocean Race

The Volvo Ocean Race Science Programme has found the highest levels of microplastics in the South China Sea during Leg 6 of the race from Hong Kong to Auckland.

The preliminary results found 360 particles of microplastics per cubic metre in the sample from the South China Sea, an area that feeds into the Great Pacific Ocean Gyre.

The Great Pacific Ocean Gyre is one of five major gyres, driven by trade and westerly winds, which collect large concentrations of plastic debris. In total, this gyre is thought to weigh around seven million tons and is twice the size of Texas.

There were also 75 particles of microplastics per cubic metre found in waters close to Hong Kong and 60 particles of microplastics per cubic metre near Auckland.

The previous highest levels of 307 particles per cubic metre were discovered in the area where the Mediterranean Sea and Atlantic Ocean meet.

Sailor Liz Wardley took the samples on the Turn the Tide on Plastic race boat as it travelled from Hong Kong east into the north Philippine Sea. The high readings coincided with the boat entering the Kuroshio current which feeds the ocean gyre.

Dr. Toste Tanhua of GEOMAR Institute for Ocean Research Kiel, funded by the Cluster of Excellence Future Ocean, analysed the preliminary microplastics data at the laboratory in Kiel, Germany.

He said: "Microplastic particles are mostly coming from land and are passively distributed by currents that can be very local in extent. Since the race yachts are not continuously sampling for microplastic it can easily be that concentrations are very different for locations close to each other in areas of strong currents."

“The leg 6 data indicate high concentrations of microplastics close to the Asian continent, not unexpected considering the use of single-use plastics in this region.”

The route of this leg partially overlapped the track that the boat sampled during the northbound passage to Hong Kong during Leg four, providing a second sampling opportunity in some areas.

But there was a notable difference between levels of microplastics recorded during this leg compared to Leg 4 on the approach to Hong Kong from Melbourne.

The level recorded for a similar general area during Leg 4 was ~75 particles per cubic metre. The latest sample is possibly more representative of actual levels as it was taken closer to land and further northeast than the earlier sample.

Along the route south through the Pacific and crossing the equator average levels in the areas sampled were ~100 particles per cubic metre. These recorded levels also differed considerably from those recorded during the northbound passage of Leg 4 when 7 particles per cubic metre were measured. Again, prevailing currents in this offshore area will be a major factor affecting microplastic density.

Progressing south towards New Zealand the concentration increased from 45, 50, 56 to 60 particles per cubic metre in the sample closest to Auckland.

The information comes from the Volvo Ocean Race Science Programme, which has brought together an elite scientific consortium to capture data that will contribute to a better understanding of the world’s ocean and climate.

Microplastics are often invisible to the naked eye and can take thousands of years to degrade. By collecting information on their levels, the mission is helping scientists gain insight into the scale of plastic pollution and its impact upon marine life.

The Volvo Ocean Race Science Programme is funded by Volvo Cars, who are donating €100 from the first 3,000 sales of the new Volvo V90 Cross Country Volvo Ocean Race edition to support the initiative.

New Zealand Joins CleanSeas

New Zealand's Associate Environment Minister, has signed a pledge showing New Zealand's commitment to the global CleanSeas campaign at the Volvo Ocean Race Village in Auckland.

More than 40 other countries have already signed up as scientists estimate that there are over 150 million tonnes of plastics in the ocean today.

"Turtles and other wildlife are being killed by litter in our oceans. Also the issue of microplastic in our oceans and its effect on the food chain is a concern for all species and is a potential risk to human health. New Zealand is proud to be joining this campaign to stop this from happening," said Sage said.

Johan Salén, Volvo Ocean Race Co-President, welcomed the commitment and added: "By signing up to the CleanSeas campaign, we are making it clear that New Zealand wants to be part of the solution to this problem."

"By individuals, businesses, NGOs and governments, such as New Zealand's, working together we can find innovative solutions to educate, innovate and leave a lasting legacy that will help address this plastic problem," he continued.

Erik Solheim, head of UN Environment commented: "We are excited to have New Zealand join us in the fight against ocean pollution. By joining the CleanSeas campaign, they are affirming their pledges to reduce waste and we hope that other nations can also follow suit and join the campaign."

Sage added that the Government was taking steps to prevent litter entering oceans by hitting it at its source on land. Measures included:

Banning products containing plastic microbeads - this will come into effect in June.

Developing options to get rid of single use plastic bags.

Supporting data gathering on marine debris along our coastlines and oceans.

Funding initiatives through the Waste Minimisation Fund (WMF) including Keep New Zealand Beautiful, Sustainable Coastlines and the Packaging Forum.

Reviewing implementation of the Waste Minimisation Act to use its powers better and promote waste minimisation.

“This Government has pledged to significantly reduce waste to landfill by 2020. It’s an ambitious goal and will take a concerted effort,” she said.

“We need to move to a circular economy where we make, use and return products and materials instead of the current model where we take resources, use them, then dispose of them. That is the focus of the latest round of the Waste Minimisation Fund which I also announced today,” the minister added.

At the launch Minister Sage will meet New Zealander Bianca Cook, who is a crew member aboard the Turn the Tide on Plastic boat. Cook is the first Kiwi woman to sail in the Volvo Ocean Race since 2001/02.

During the race, the Turn the Tide on Plastic crew members hope to raise awareness of plastic pollution in the world’s oceans and are testing salinity, dissolved CO₂, algae and microplastics levels in the ocean.

“It’s great to see the Volvo Ocean Race supporting the CleanSeas campaign. We all need to work together to stop plastic going into our oceans. We can all play a part by kicking the plastic bag habit and not buying drinks in plastic bottles,” concluded Sage.

A UN Environment video highlighting the scheme’s achievements so far can be viewed below.



A short film highlighting the fight against plastic wastes on the Galapagos Islands can also be seen below.

