

Dutch inventor harnessing waves to clean up the seas (Update)

June 22 2016



The prototype of The Ocean Cleanup project in Scheveningen on June 22, 2016

The Dutch inventor behind a ground-breaking project to remove millions of tonnes of plastics floating in vast ocean "garbage patches" unveiled Wednesday the first prototype of his ambitious sea-cleaning device.

Boyan Slat's innovative idea—first drawn on a paper napkin when he was still in high school—seeks to use ocean currents to gather up the masses of bottles, plastic bags, flip-flops and other detritus that sully the planet's waters, eliminating the need for an army of boats to haul them in.

According to the Ocean Cleanup project, eight million tonnes of plastics enter the oceans every year, much of which has accumulated in five giant garbage patches, with the largest in the Pacific between California and Hawaii.

The plastic soup is created when the rubbish gets caught up in five main "gyres"—or rotating oceanic currents.

But 21-year-old Slat believes he can harness the power of the currents to help the great cleanup.

"Why move through the ocean if the ocean can move through you?" Slat asked at a press conference in the harbour in the port of Scheveningen, on the outskirts of The Hague.

Slat's idea is to use a 100-kilometre (60-mile) long V-shaped barrier made up of large, rubber pillow-shaped buoys which float on the ocean surface, trailing a three-metre (nine-foot) long curtain from its arms into the water.



Boyan Slat unveils his prototype of The Ocean Cleanup project in Scheveningen on June 22, 2016

A smaller 100-metre (feet) prototype unveiled Wednesday will now be taken onto the North Sea Thursday for a year-long series of tests some 23 kilometres (12 nautical miles) off the Dutch coast.

The aim is to stop the plastic as it bobs along, gathering it into one place so it can be gathered up into a container and taken for recycling.

"All those plastic objects, big things like bottles, crates... will be cut down to micro pieces over the next few decades if we don't do anything about it," he told reporters as he explained his project, The Ocean Cleanup.

"The question is: is this a future we accept will happen or do you want to create a future where the oceans become clean again?"

'Crucial to prevent permanent damage'

The micro pieces released as the plastics break down are dispersed through the seas, entering the food chain with harmful effects for all marine life. Turtles, fish, dolphins and others can also become entangled in the rubbish, or swallow pieces believing it is food which they then cannot digest.

The prototype has been built at a cost of 1.5 million euros (\$1.69 million), financed through crowd-funding as well as donations, including from the Dutch government.



Boyan Slat's believes his device can use currents to help clean up the ocean

Slat hopes is to fully roll out the system in 2020 once the tests have been evaluated and necessary modifications made.

He says his system could capture up to 3,000 cubic metres in its arms—enough to fill an Olympic-sized swimming pool.

"With a single one of those systems deployed for 10 years, we should be able to clean up about half the Great Pacific Garbage Patch or more if we would deploy more systems," he told reporters.

Dutch Environment Minister Sharon Dijksma said it was "an inspiring example of how we can tackle the growing problem of ocean pollution".

The project was "crucial to prevent permanent damage to the environment and marine life," she added.

The project's most conservative estimate says that in the first 10 years, 70 million kilos (154 million pounds) of plastic would be removed.

The youngest ever winner of the Champion of the Earth award—the UN's highest environmental honour—Slat gave up his studies in aeronautical engineering to pursue his project.

Now the Ocean Cleanup has more than 40 staff backed by dozens of volunteers.

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