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How the Ocean Cleanup Tackles the Flow of Plastic Garbage at its Source



The Ocean Cleanup, the Dutch non-profit organization developing advanced technologies to rid the world's oceans of plastic, unveiled its invention to prevent the unrelenting flow of plastic pollution into the world's oceans. The Interceptor™, under development by the Ocean Cleanup since 2015, complements the organization's founding mission by attacking the flow of plastic garbage at its source, the world's vast network of rivers. The Ocean Cleanup aims to tackle the 1,000 most polluting rivers, responsible for about 80% of ocean plastic pollution, before the end of 2025.

"To truly rid the oceans of plastic, we need to both clean up the legacy and close the tap, preventing more plastic from reaching the oceans in the first place. Combining our ocean cleanup technology with the Interceptor™, the

solutions now exist to address both sides of the equation," said Boyan Slat, founder and CEO of the Ocean Cleanup.

Scalable Solution to Intercept River Plastic Pollution

The Interceptor™ is the first scalable solution to intercept river plastic pollution and can be deployed around the world. It is capable of extracting 50,000kg of trash per day – even reaching 100,000kg per day under optimized conditions.

Four Interceptors™ have been built to date; two systems are already operational in Jakarta (Indonesia) and Klang (Malaysia). A third system is in Vietnam to be installed in Can Tho in the Mekong Delta (Vietnam), while the fourth is destined to be deployed in Santo Domingo (Dominican Republic). In addition to these locations, Thailand has signed up to deploy an Interceptor™ near Bangkok, and further agreements are nearing completion, including one in LA County (USA), kick-starting the scale-up.

A Solution to Address a Global Problem

As part of the Ocean Cleanup's research to map the problem, it was established that 1,000 of the world's 100,000 rivers (1%) are responsible for roughly 80% of the garbage entering the oceans. The product of their global scientific measurement and modelling efforts has been visualized in an interactive map that is accessible [here](#).

The Ocean Cleanup Interceptor™ is environmentally friendly and 100% solar-powered, with onboard lithium-ion batteries that enable it to operate day and night without any noise or exhaust fumes. The system is anchored to the riverbed to utilize the natural flow of the river to catch the plastic and is designed for 24/7 autonomous operation, removing the need for dangerous manual work. Its floating barrier that is used to direct the garbage into the system only spans part of the river; it will not interfere with other vessels and does not harm the safety, nor impede the movement of wildlife – critical requirements when operating in major rivers. An internet-connected onboard computer monitors the system's performance, energy usage, and component health.

For more information about the technology, see the [Interceptor™ page](#).

About the Ocean Cleanup

The Ocean Cleanup develops advanced technologies to rid the world's oceans of plastic. Founded in 2013 by Boyan Slat, the Ocean Cleanup now employs approximately 90 engineers and researchers. The foundation is headquartered in Rotterdam, the Netherlands.

Instead of going after plastic debris with vessels and nets – which would take many thousands of years and billions of dollars to complete – the Ocean Cleanup plans to deploy a fleet of long, floating barriers that act as an artificial coastline, enabling the winds, waves, and currents to passively catch and concentrate the plastic. Once fully operational, the full fleet of passive collection systems is expected to remove 50% of the Great Pacific Garbage Patch every five years.

Great Pacific Garbage Patch

After years of conducting reconnaissance expeditions, scale model tests and the deployment of prototypes on the North Sea, the first ocean cleanup systems were deployed in the Great Pacific Garbage Patch in 2018 and 2019. Once proof of technology has been achieved, the Ocean Cleanup can commence full-scale cleanup and begin removing vast amounts of ocean plastic that have been accumulating in the ocean for decades. The Ocean Cleanup is working with partners to design processes to convert recovered ocean plastic into valuable raw materials and durable products.

Complementary to its approach for solving the legacy problem of plastic in the ocean garbage patches, the organization developed the Interceptor™ technology to help prevent plastic garbage from entering the ocean in the first place.

<https://www.hydro-international.com/content/news/how-the-ocean-cleanup-tackles-the-flow-of-plastic-garbage-at-its-source>
