



*The Quest to Restore Earth's
Most Polluted Sanctuary*



PRESS KIT

Henderson Expedition 2024



The uninhabited island, Henderson (Pitcairn Islands, South Pacific)

A UNESCO World Heritage Site

KNOWN AS THE MOST POLLUTED PLACE ON EARTH

A 2015 analysis (published in 2017) revealed that in South Polynesia, on one of the four islands of the Pitcairn archipelago, Henderson Island, more than 8 tons of plastic washed up on its beaches: *"the highest density of plastic debris ever recorded in the world"*.

The 38 km² island has **over 38 million pieces of plastic** on its shores. Conservative estimates suggest that 3,500 to 13,500 new plastic items wash up on Henderson every day.

The beach on the eastern side of the island, 2 km long, is polluted by 30 million pieces of plastic waste.





The island's eastern beach, polluted by plastic waste

An aerial photograph of a tropical beach. The top half of the image shows a sandy beach with some coral and rocks. The water is a vibrant turquoise color, transitioning to a deeper blue further out. The overall texture is grainy, suggesting a high-quality but slightly aged photograph.

An Impossible Cleanup

THE FIRST ATTEMPT - 2019

In 2019, an expedition attempted to clean up this isolated sanctuary. **6 tons of garbage were collected** on the eastern beach of the island. Unfortunately, blocked by waves breaking on the coral reef that protects the island, the team was unable to remove the big bags filled with waste and was forced to leave them on the island.

The major challenge in removing the waste from Henderson Island is therefore to **cross the coral reef without damaging it**. A difficult step because of the rocks and waves blocking access to the beach. Therefore, extracting the waste using conventional means is impossible and requires inventing new solutions that can be replicated in other polluted areas that are difficult to access.

5 years after this unsuccessful attempt, Plastic Odyssey decided to tackle this impossible mission.



Henderson Island is one of the world's last raised coral atolls

Making the Impossible Possible

A CHALLENGE TAKEN UP BY PLASTIC ODYSSEY

After months of preparation, the Plastic Odyssey teams arrived on Henderson Island on February 12, 2024 and succeeded, thanks to innovative low-tech solutions, in cleaning up the beach designated as the most polluted in the world.

The plastic waste was recycled and transformed into street furniture for the neighboring island of Pitcairn.





Plastic Odyssey team cleans up Henderson Island's east beach

Credits: Olivier Löser / Plastic Odyssey

Low-tech Solutions

To solve the problem of waste extraction without damaging the coral reef, **several innovative systems** have been used:

THE RAFT

When the weather is favorable, a raft is used to transport the big-bags to the ship.

THE PARASAIL

When the waves are too strong, an ascending parasail system evacuates the waste above the water.





First tests of using parasailing to extract waste from the island

Credits: Olivier Löser / Plastic Odyssey

Results in Figures

7 DAYS AND 25 PEOPLE MOBILIZED TO CLEAN UP, EVACUATE AND RECYCLE WASTE

6 tons of plastic waste from 2019, confined in big bags above the high tide line, were successfully evacuated.

The beach was cleaned of new garbage that accumulated since 2019. **An additional 3 tons were collected** and disposed of bringing the total mass of waste disposed of to over 9 tons.

The **recycling of plastics** into useful objects was carried out with Pitcairn residents, using on-board machinery aboard the Plastic Odyssey floating laboratory.

Scientific **data** have been collected to better understand the impact of plastic pollution.





28

day mission in the
Pacific Ocean to reach
this isolated island



56

Big Bags filled with 100 to 140 Kg of waste removed from the island



1500

buoys removed from the
island in a garland over 750
meters long



1

scientific study
made on site



25

explorers, scientists,
ornithologists, sailors and
recycling specialists



9,3

tons of plastic collected
and sorted on site to facilitate
recycling



2,3

tons of plastic recycled on site thanks
to the Plastic Odyssey ship
and its onboard workshop



100

building boards made from plastic
waste collected on the island



CRAFTED FROM PLASTIC
RECLAIMED ON HENDERSON
ISLAND, FEBRUARY 2024



PLASTIC
ODYSSEY

#THEIMPOSSIBLECLEANUP

8

public furniture made from
Henderson Island waste
installed on Pitcairn



THE IMPOSSIBLE
CLEANUP

Henderson Epedition 2024 Pictures



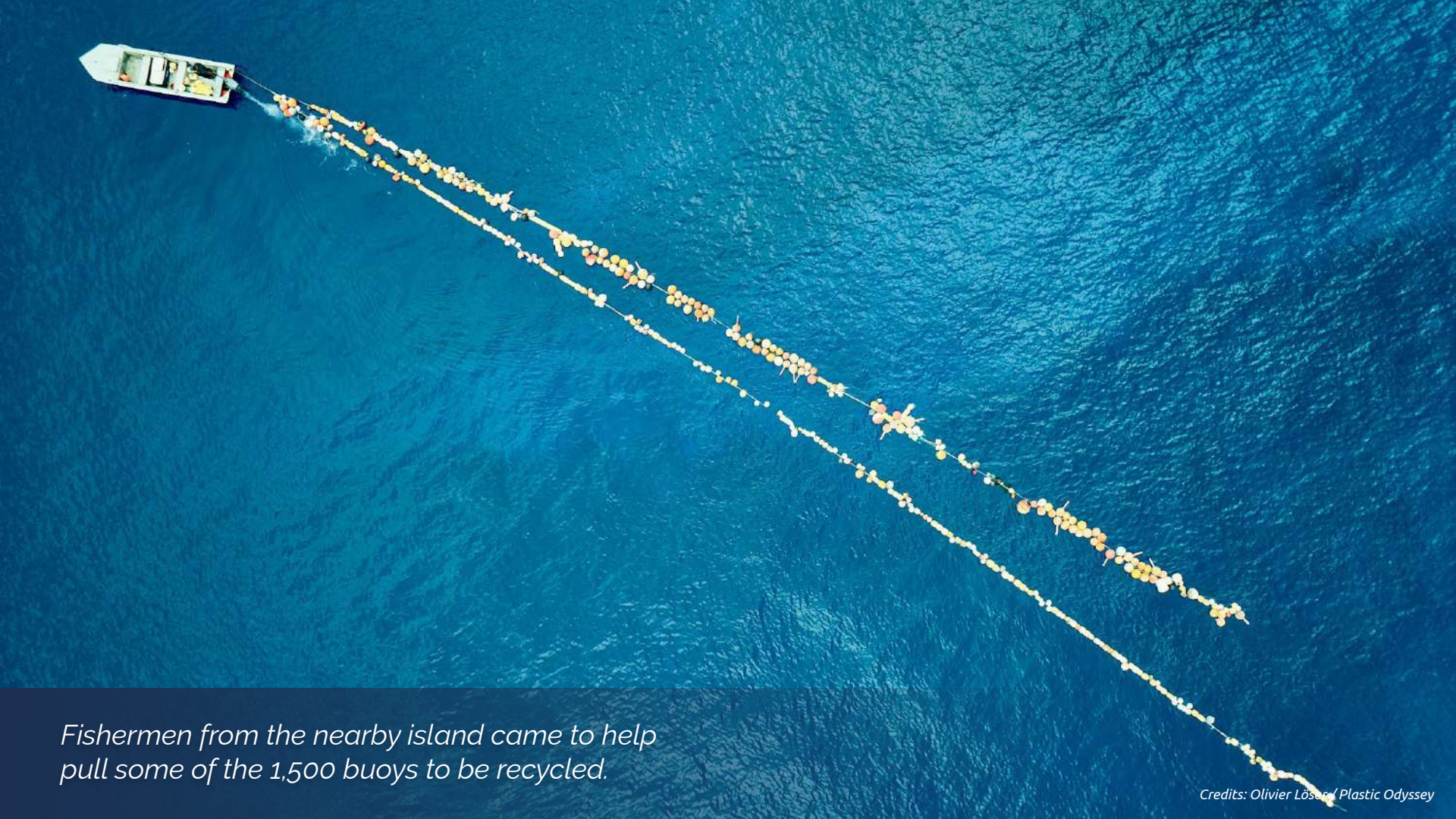
*Waste is sorted to be
collected in big bags*

Credits: Olivier Löser / Plastic Odyssey



*The waste is prepared for extraction
by raft to the Plastic Odyssey ship.*

Credits: Olivier Löser / Plastic Odyssey



Fishermen from the nearby island came to help pull some of the 1,500 buoys to be recycled.

Credits: Olivier Löser / Plastic Odyssey



*For each waste convoy, the passage through
the reef was narrow and tiring*

Credits: Olivier Löser / Plastic Odyssey



*The scientific team collects data
on waste washed up on the island*

Credits: Olivier Löser / Plastic Odyssey



*Big bags weighing more than 100 kg are pulled
by hand to the raft*

Credits: Olivier Löser / Plastic Odyssey



*Once we got waste off the island
it was recycled on board*

Credits: Olivier Löser / Plastic Odyssey



The machines in the recycling workshop on board Plastic Odyssey run for 12 hours a day, shredding, washing, drying and transforming waste.

Credits: Olivier Löser / Plastic Odyssey



Plastic Odyssey team and Pitcairn residents produce public furniture using waste from neighboring Henderson Island

A Successful, Replicable Expedition

NEW HOPE FOR HARD-TO-REACH POLLUTED AREAS

There are hundreds of isolated, hard-to-reach islands impacted by plastic pollution. Plastic Odyssey's expedition to Henderson proved that low-tech solutions can not only clean up but also recycle the waste that is invading our sanctuaries. A powerful symbol of a global pollution that urgently needs to be stopped at its source: the earth.

HELP US PROTECT THESE ISLANDS AND DEVELOP CONCRETE SOLUTIONS TO PREVENT PLASTIC POLLUTION FROM CONTINUING TO DESTROY OUR ECOSYSTEM.

SHARE OUR ADVENTURE.



PLASTIC ODYSSEY

Plastic Odyssey is an international project that aims to combat plastic pollution. Thanks to its worldwide network of partners, researchers, scientists, entrepreneurs, teachers and engineers, Plastic Odyssey is developing concrete solutions for recycling plastic waste and raising awareness of alternatives to plastics.

plasticodyssey.org



Henderson 2024 Expedition Partners



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