Sea Serpent by Oceans Inside

Business plan

Introduction

Why “Oceans Inside”? Oceans are like us. In the end, we are 40% stardust and 60% water. We are like a small walking bag with a small part of the ocean inside. And the things that affect us, affect the oceans and vice-versa.

Plastics are like cancer. And microplastics are the product of cancer that intoxicates our bodies. These products are stored inside the fat and the muscles, and in our organs. They poison us. The same happens with the oceans and the life inside it.

We eat the plastic through the lives we take from the oceans, and like cancer, the worst are the ones we don’t know we have. So, what happens with the plastics we cannot see or the plastic we cannot reach?

Our Challenge

Our challenge: Trash Cleanup

Use NASA Earth science data to 1) assist you in determining a location where your mission could have the most positive effects on the planet, and 2) help you figure out which type of debris to attempt to collect, and how to collect it.

Potential Considerations
For a more detailed and complete mission design, ensure that you consider effective ways to reach your target destination, as well as methods to ensure a sufficient mission “lifetime.” Additionally, for a huge environmental conservation effort such as this, attempt to be as environmentally friendly as possible. For example, you could strive to make your mission have little-to-no reliance on fossil fuels, or ensure that you think about procedures to limit the wastefulness associated with your mission.

Our main challenge is to find the hidden plastics before they degrade and become microplastics that go into the food chain.

“Because the integrity of plastics is based on their significant molecular weight, substantial degradation weakens the material and substantially degraded plastics can become fragile enough to break apart into tiny bits.”

The Platform

The platform we need consists of:

1. Information system to locate all the places we need to take care of (hard to reach or with no human presence).
2. The main vehicle to transport the cleaning system (for example a small truck).
3. A cleaning system (for example a drone hive that can move fast, access difficult places and retrieve small pieces of plastic).

Players

NASA
- + Datos de corrientes marinas.
- - Plataforma de estudio para robótica colaborativa y sistemas autónomos para posibles misiones espaciales.

Airbus
- + Datos de posicionamiento de los drones y de otros barcos que puedan afectar a su tarea para poder calcular las trayectorias.
- - Datos de funcionamiento de la herramienta y feedback. Datos para mejora de la herramienta. Consumo de la herramienta.

Amazon Web Services
- + Plataforma para desplegar los sistemas de AI y ML para la predicción de la posición de los residuos y la posición de los drones.
- - Utilización de la plataforma. Datos de uso.

Proctel & Gamble
- + Reutilizar y reciclar el plástico almacenado
- - Materia prima

DJI Maverick
- + Drones
- - Imagen, responsabilidad social corporativa

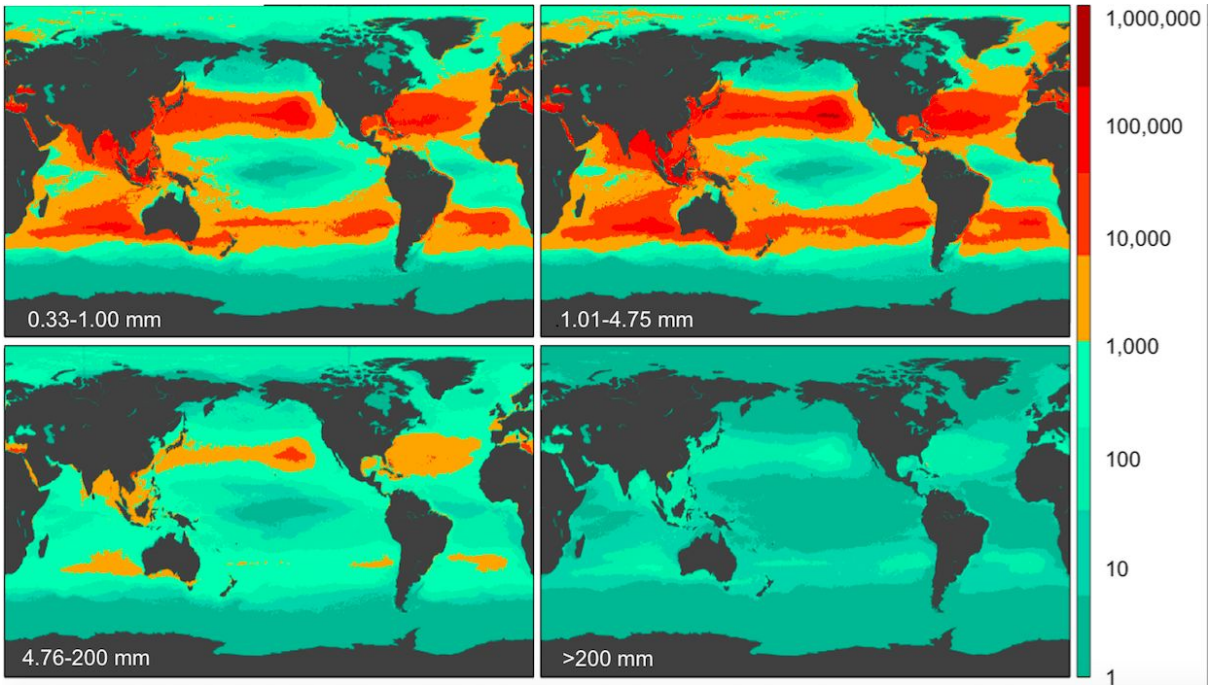
Fauna Marina
- + Información sobre los niveles de plásticos en sus tejidos.
- - Obtienen un ecosistema más limpio y eliminamos los microplásticos de la cadena alimenticia evitando que se formen más.

Humanidad
- + Ayuda para el desarrollo.
- - Sobrevivir.

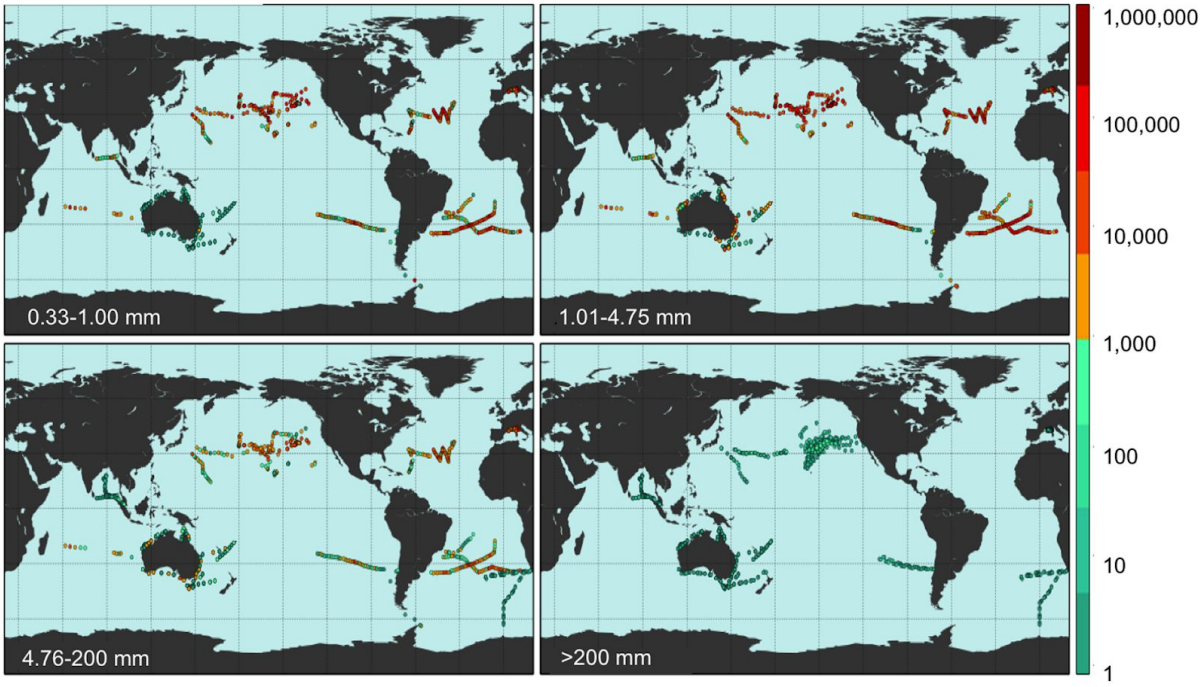
Resources

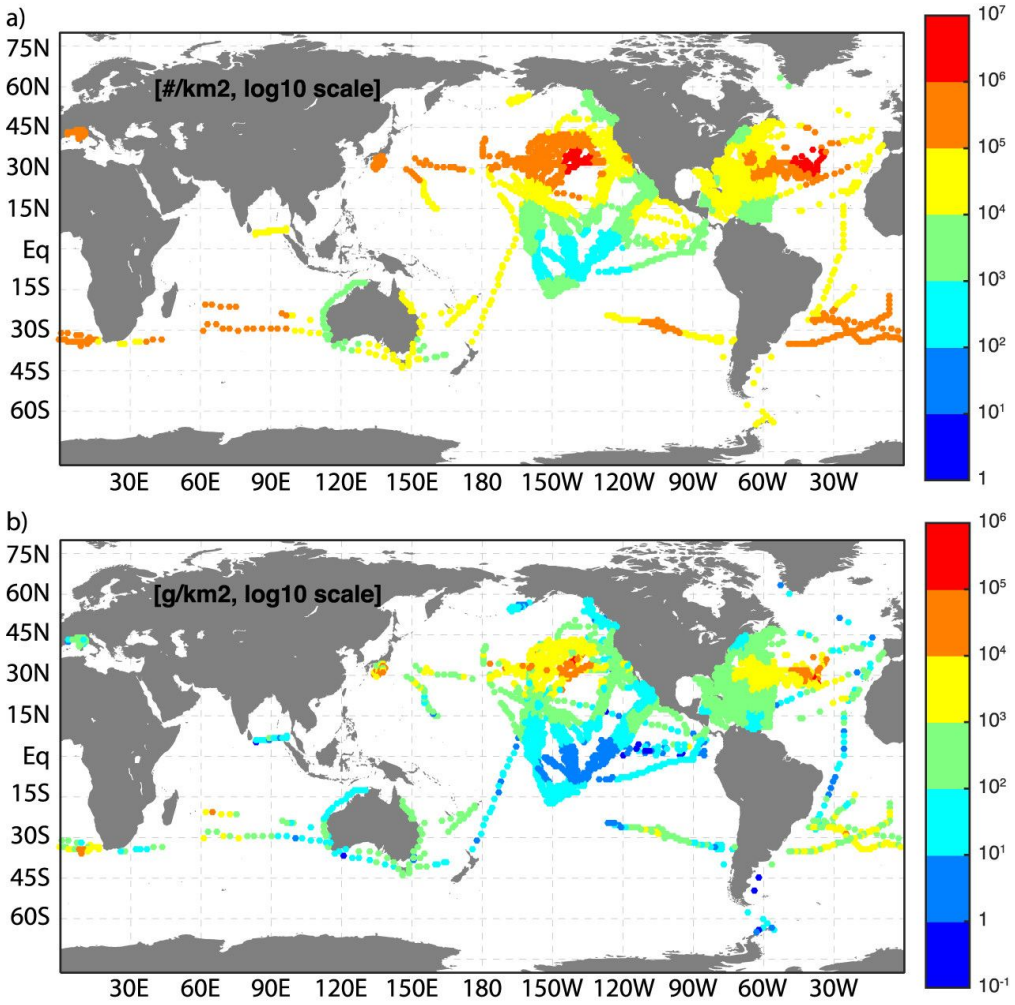
NASA's Earthdata: https://earthdata.nasa.gov/

Densidad de los plásticos a nivel mundial para cada una de las cuatro clases de tamaño (de 0,33 a 1,00 mm, de 1,01 a 4,75 mm, de 4,76 a 200 mm, y >200 mm). Fuente: Plastic Pollution in the World's Oceans.

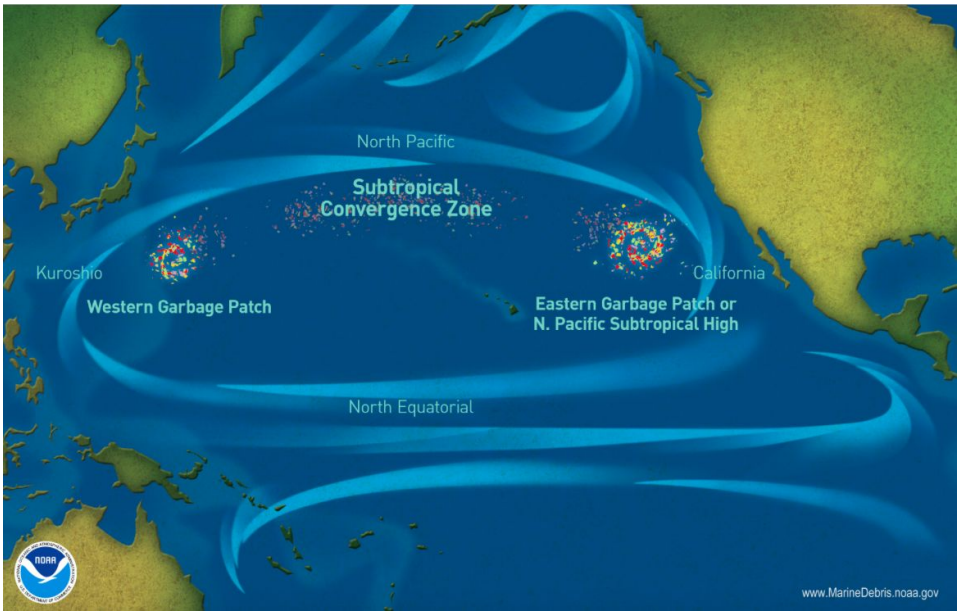


Algunos cálculos hablan de entre 7.000 y 35.000 toneladas de plástico flotante (de entre 0,20 a 100 mm de tamaño) en el Atlántico, el Pacífico y el Índico.

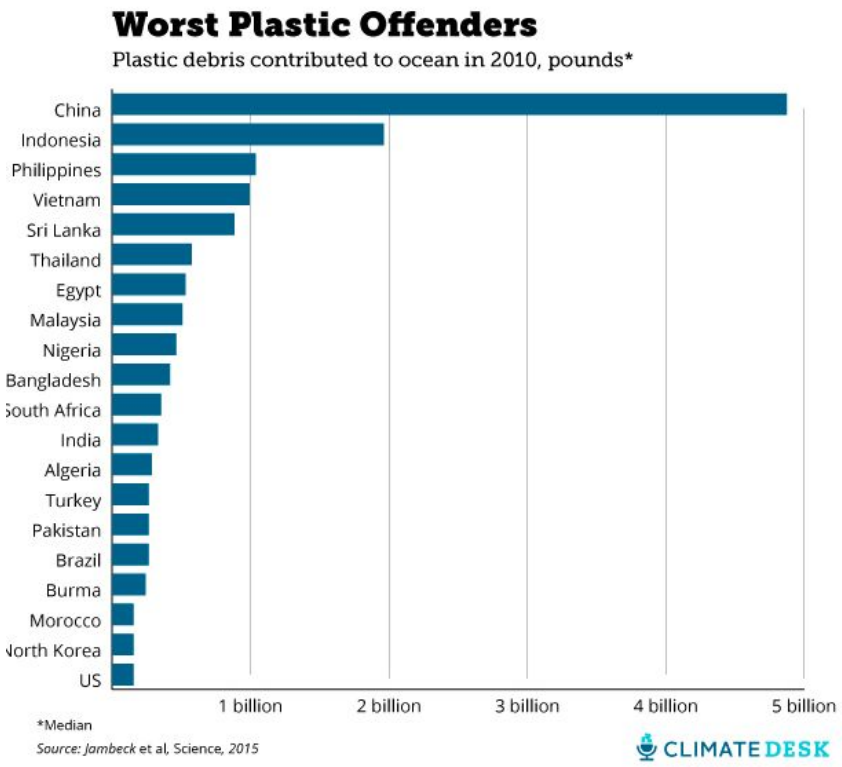




Ubicación y datos de la cantidad (a) y masa de microplásticos y (b) en superficie. Fuente: A global inventory of small floating plastic debris.



Mapa de la "Isla de Basura del Pacífico" con los giros subtropicales. Fuente: Marine Debris Program.



Países que más toneladas de plástico arrojan al mar. Fuente: [Plastic waste inputs from land into the ocean]().
FUENTE:
https://www.xataka.com/n/9-graficos-para-entender-todo-el-plastico-que-estamos-vertiendo-al-oceano-y-una-solucion-para-limpiarlo

https://www.youtube.com/watch?v=RS7IzU2VJIQ

Information about companies, campaigns and social movements regarding ocean pollution
https://www.cleanseas.org/