

ABOUT THE GARBAGE, FISHING GEAR & PLASTIC IN OUR OCEANS

-Each year, **26 billion pounds of garbage enters the ocean** through rivers and fishing boats around the world.

-**17 billion pounds of the garbage is PLASTIC**, equal to the weight of 90 aircraft carriers.

-**A garbage truck's worth of plastic ends up in the ocean every minute.**

-**Over 5 trillion pieces of plastic currently litter the ocean** which accumulate in **5 gyres or patches**, the largest one being the **Great Pacific Garbage Patch (GPGP)** located halfway between Hawaii and California in the North Pacific Ocean.

-**Plastic doesn't decompose/bio-degrade and wreaks havoc on marine ecosystems.** Plastic that floats once it enters the ocean gets broken down by friction & UV light into small (3mm-5mm) confetti-like pieces called **microplastics** which are more difficult to get rid of and easier for marine life to consume.

-**Ocean plastic kills as many as 1 million sea creatures annually** when marine life eats and becomes entangled in it.

-**Americans generate 10.5 million tons of plastic waste a year but recycle only 1 or 2 % of it.**

-**Nearly 50% of ocean garbage is ABANDONED FISHING GEAR (called Ghost Gear).** More than **1.4 million pounds of nets, lines, pots and traps** are discarded by commercial fishing boats every year, **the same weight as 55,000 double-decker busses.**

ABOUT THE GREAT PACIFIC GARBAGE PATCH (GPGP)

The Great Pacific Garbage Patch (GPGP) is the **largest of 5 plastic accumulation zones**, covering **994,193 square miles (twice the size of Texas)**. It's estimated to weigh 176,369,810 pounds, equal to the weight of 500 jumbo jets.

Since the GPGP is 1000 miles offshore, few have seen it in person, but it has been studied by several notable groups, in particular a non-profit organization called **The Ocean Cleanup** founded by Boyan Slat. A comprehensive study by Slat's team of scientists was published in *Scientific Reports* in 2020 and revealed:

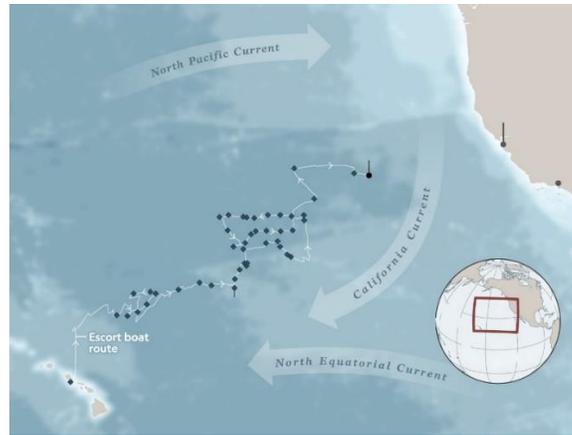
Approximately **1.8 trillion plastic pieces are floating in the GPGP**, equal to 250 pieces of plastic debris for every human in the world.

-**94% of these pieces are microplastics** or small pieces that have broken down and easily digestible by marine life, not plastic bottles or packaging as originally reported, making them even more harmful.

-**Nearly half (46%) of the GPGP is fishing industry gear:** ropes, nets, traps, crates, and baskets, which is particularly hazardous for marine life.

-**20% of the debris is from the 2011 Japanese tsunami.**

-The GPGP was discovered in 1997 by Charles Moore, who had sailed through floating plastic bottles and other debris on his way home to Los Angeles. It was named by Curtis Ebbesmeyer, a Seattle oceanographer known for his expertise in tracking ocean currents and the movement of cargo lost overboard, including rubber duck bath toys and Nike tennis shoes.



ABOUT OCEANOGRAPHER KEVIN KELTZERMAN

An oceanographer explores the world oceans to understand its processes and mysteries.

Kevin Keltzman is based on Boyan Slat, a Dutch inventor, entrepreneur and one-time aerospace engineering student. When Boyan was 16-years old, he saw more plastic than fish while scuba diving in Greece. In 2012, he founded The Ocean Cleanup non-profit organization to develop advanced technologies and pursue cleanup options with the goal of “a full-scale deployment of our systems estimated to clean up 50% of the Great Pacific Garbage Patch every 5 years.”

In June 2019, The Ocean cleanup launched a floating boom in Vancouver Canada called System 001/B that uses the natural forces of the ocean to ‘passively catch and concentrate’ plastics and other floating debris. The boom collected not only larger visible pieces of plastic and huge ghost nets used in commercial fishing but also microplastics down to 1mm in size – something the cleanup team described as ‘a feat we were pleasantly surprised to achieve.’ The Ocean Cleanup is also having success with devices collecting plastics in rivers before reaching the ocean. Despite their early success, the project team remains cautious about the future and very aware of the scale of the mission ahead, explaining that there’s still much work to do. For more information www.TheOceanCleanup.com

ABOUT WALTER AND HIS SWIMMING FRIENDS

Blue whales aren’t just the biggest animals alive in the ocean. They’re not just the biggest animals alive in the *world*. They are the biggest animals that have *ever lived*. These magnificent marine mammals rule the oceans at up to 100 feet long and upwards of 346,000 pounds. Even the largest dinosaur can’t compare—the Argentinosaurus clocked in at about 220,000 pounds. A blue whale tongue can weigh as much as an elephant, and their hearts as much as an automobile. They reach these mind-boggling dimensions on a diet composed nearly exclusively of tiny shrimplike animals called krill.

Seahorses (Sigmund) are the slowest swimming of all fishes & the only fish that swim in an upright position. Seahorses need to eat almost constantly. They don’t have stomachs and food quickly passes through their digestive systems. An adult seahorse eats 30 to 50 times per day.

Sea turtles (Hazel) are estimated to live about 80 years. They have many predators, and all species of sea turtles (except for flatbacks in Australia) are listed as endangered. The most severe problem

to the survival of the sea turtle is the risk of drowning in large commercial fishing nets. Sea turtles cannot live under water for a long time without surfacing to breathe, so getting entangled in the nets can be deadly.

Octopi (Allen) regenerate lost arms. As soon as the arm is injured, it immediately begins its regeneration process.

WHAT YOU CAN DO TO SUPPORT A HEALTHY OCEAN

The sea belongs to no country, it's an international rule. Every country and every person in each country is responsible to care for the ocean. If left to circulate, the plastic will impact our ecosystems, health and economies. Solving it requires a combination of closing the source and cleaning up what has already accumulated in the ocean.

Get educated. Learn and understand how our choices on land affect the water sources, the ocean and the marine life for whom the ocean is their home

Reduce, reuse, recycle. Make decisions in your daily life that have the least impact on the ocean. Choose reusable items and use fewer disposable ones (e.g., bring your own reusable bags). Keep all pieces of litter for proper disposal in trash and recycle containers.

Pick it up. Keep streets, sidewalks, parking lots, and storm drains free of garbage —our land and ocean are connected. Get involved in cleanups through organizations in your area and encourage others to help get involved.

Support organizations focused on ocean remedies. For example:

The Ocean Cleanup: www.TheOceanCleanup.com

4ocean: www.4ocean.com

Plastic Odyssey Exploration: www.PlasticOdyssey.org

Oceana: www.Oceana.org

Ocean Wise: www.Ocean.org

