

Plastics in Our Oceans

Eco 360 Jr
Backgrounder
Grade Level: 3-8



Plastics in Our Oceans

Plastic pollution in oceans is a global crisis today. Poor waste management around the world have led to gigantic amounts of plastic waste ending up in our oceans. Land sources include plastic dumped on land that is carried through water and snow into sewers, streams, rivers, eventually making its way to oceans. Marine sources include plastic that is dumped directly into water bodies, such as fishing nets, which stays in oceans over time. Plastics can stay in water as macro plastics (large pieces of plastic) or microplastics – microplastics are plastics less than five millimeters in diameter (approximately the size of a sesame seed) (National Geographic, 2019).



Microplastics - source (National Geographic, 2019)

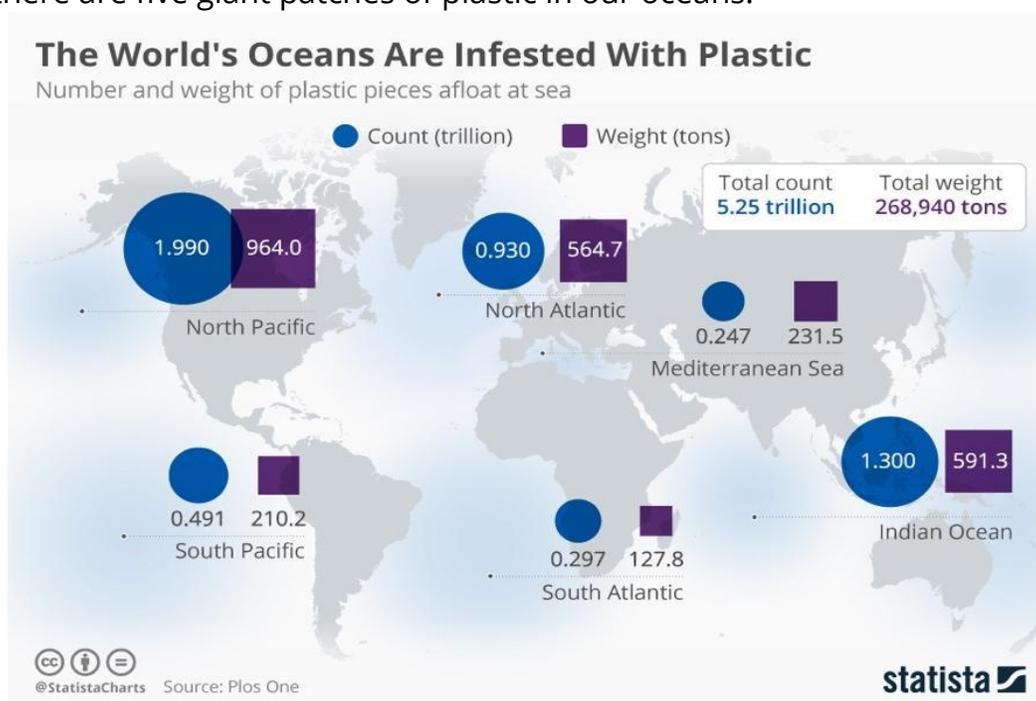
Marine Plastics

- Over 300 million tons of plastic are produced every year
- At least 8 million tons of plastic end up in our Oceans every year
- Marine species eat or are tangled-up in plastic debris, which causes severe injuries and deaths
- Plastic pollution threatens food safety and human health

Source: (IUCN, 2018)

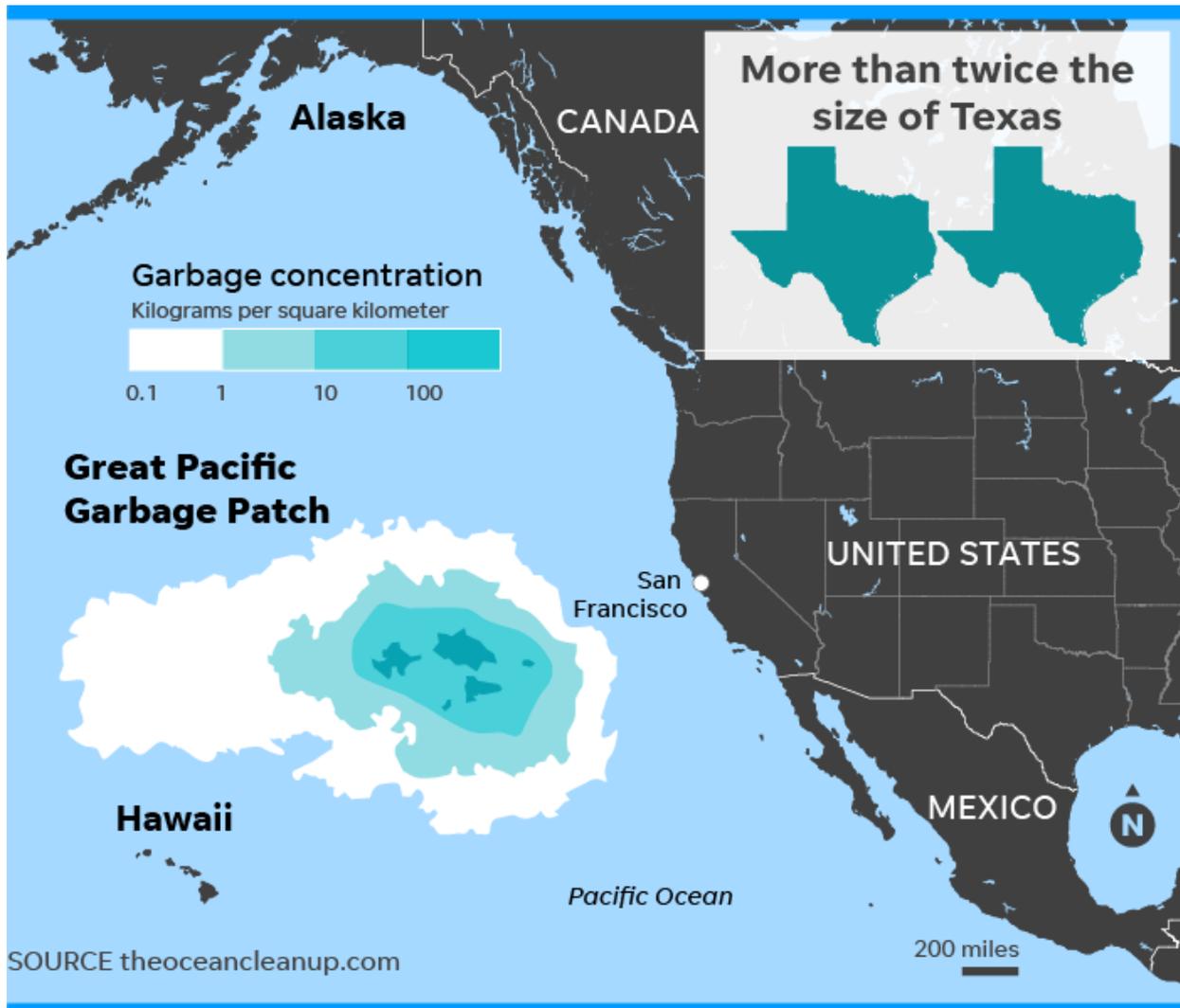
With time macro plastic in the environment also breaks down into small pieces and becomes microplastic. In addition to this, microplastics are also found in many products as microbeads, which are small pieces of plastic added to health and beauty products—such as cleansers and toothpaste (National Oceanic and Atmospheric Administration U.S. Department of Commerce, 2021).

Right now, there are five giant patches of plastic in our oceans.



Source: <https://www.statista.com/chart/8616/the-worlds-oceans-are-infested-with-plastic/>

“These huge concentrations of plastic debris cover large areas of the ocean; the one between California and Hawaii is the size of the state of Texas. Sea creatures eat or get trapped in plastic can be killed or injured. Plastic that is eaten by marine animals, as well as the poisons they absorb from the water, build up the food chain making seafood potentially dangerous for humans as well. Scientists predict that if nothing changes in our plastic consumption habits, by 2050 there will be more plastic in the oceans than there are fish (by weight)” (Earth Day Network, 2018).



Source: (USA Today, 2018)

Impact of Plastic Waste on Our Oceans

The reason why there is a need to study and fight against plastic pollution is that it affects the health of ocean life in many ways. “Many marine organisms can’t distinguish common plastic items from food. Sea turtles specifically are highly susceptible. They mistake plastic bags for jellyfish, and frequently are trapped in plastic debris, restricting their growth and movement. Plastic never fully degrades; over time it breaks into smaller and smaller pieces. Eventually, it

becomes small enough to enter the bloodstream of marine animals. Since the animals cannot ever digest or process the plastic, it remains present until the organism is eaten. This passes all the plastic on to its predator, which is usually fish. If that fish is caught, then the plastics will be passed on to whichever human consumes it" (Earth Day Network, 2018).

Additional resources to learn about marine plastic pollution:

- Plastic Ocean, United Nations: https://www.youtube.com/watch?v=ju_2NuK5O-E&feature=youtu.be
- Oceans Plastic Pollution, Center for Biological Diversity: https://www.biologicaldiversity.org/campaigns/ocean_plastics/
- Plastic Pollution in the Ocean: <https://www.youtube.com/watch?v=aFUHLtaTazQ&feature=youtu.be>
- What really happens to the plastic you throw away, Ted Talk by Emma Bryce: https://www.youtube.com/watch?v=_6xINyWPpB8&feature=youtu.be
- Tough truths about plastic pollution, Ted Talk by Dianna Cohen: <https://www.youtube.com/watch?v=fddYApFEWfY&feature=youtu.be>
- Plastics Breakdown infographic, One World One Ocean: <https://oneworldocean.com/blog/the-plastics-breakdown-an-infographic/>

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