



Cheryl Ravelo / Reuters Pictures

RECYCLING IS NOT ENOUGH to solve the plastics crisis

The oceans face a massive and growing threat from something we encounter every day: plastics. An estimated 17.6 billion pounds of plastic enters into the marine environment from land-based sources every year¹ – roughly equivalent to dumping a garbage truck full of plastic into the oceans every minute.

Maybe you have seen the viral video of the plastic straw being painfully pulled out of a sea turtle's nose. Maybe you have read recent reports of whales washing up dead with dozens of plastic bags in their stomachs.^{2,3} Maybe you have seen the photos of dead seabirds with their bodies stuffed with plastic debris. Or maybe your recent beach visit was spoiled by a string of plastic waste at the high tide line.

Plastic debris has been found floating on the sea surface, washing up on the world's most remote coastlines,⁴ melting out of Arctic sea ice,⁵ and sitting at the deepest point of the ocean floor.⁶ It's everywhere.

As plastics continue to flood into our oceans, the list of marine species affected by plastic debris expands. Tens of thousands of individual marine organisms have been observed suffering from entanglement or ingestion of plastic permeating the marine environment⁷ – it is impacting everything from zooplankton and fish, to sea turtles, marine mammals and seabirds.

Plastics have a profound design flaw: they are made to last forever, but sometimes are only used for a few moments. Plastic never goes away. Instead, it breaks down into smaller and smaller pieces, which act like magnets for harmful pollutants.⁸

Some plastic pieces are so small that zooplankton—tiny grain-sized animals that form the base of the ocean food chain—can consume them.⁹ As those zooplankton get eaten, the potentially chemical-laden microplastics can accumulate in the bodies of ever-larger predators,^{10,11} making their way into the seafood we eat.¹² Scientists are still studying how humans might be affected by the plastics that are making their way into our food, water and air.

“When your bathtub is overflowing, you don’t run for a mop before you turn off the faucet. Recycling is the mop. We need to turn off the faucet.”

– Jacqueline Savitz,
Chief Policy Officer
at Oceana

Unfortunately, one of the most popular solutions to plastic pollution falls far short. A meager 9 percent of all the plastic waste ever generated has been recycled. Current projections show that increased plastic production will outpace recycling, resulting in more plastic in the ocean.¹³

Recycling alone is not enough to solve the plastics crisis. To stop plastic from entering our oceans, we must reduce the amount of single-use plastic being produced at the source. We must demand that companies reduce the amount of plastic they are putting into the supply chain and find alternative ways to package and deliver their products. Without immediate changes to the way we use and abuse plastics, the total amount of plastic waste generated is expected to double by 2025.¹⁴



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#BreakFreeFromPlastic

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¹ Jambeck JR, Geyer R, Wilcox C, Siegler TR, Perryman M, Andrady A, Narayan R and Law KL (2015) Plastic waste inputs from land into the ocean. *Science*. 347: 768-771. doi: 10.1126/science.1260352

² Fossi MC, Panti C, Baini M and Lavers JL (2018) Mediterranean Sea and Eastern Australian Shearwaters as Case Studies. *Frontiers in Marine Science*. 5(173): 1-10. doi: 10.3389/fmars.2018.00173

³ Notarbartolo di Sciarra G, Frantzis A and Rendell L (2012) Sperm Whales in the Mediterranean: The Difficult Art of Coexisting With Humans in a Crowded Sea. *Journal of the American Cetacean Society*. 41: 30-37.

⁴ Lavers JL and Bond JL (2017) Exceptional and rapid accumulation of anthropogenic debris on one of the world’s most remote and pristine islands. *PNAS*. 114: 6052-6055. doi: 10.1073/pnas.1619818114

⁵ Peeken I, Primpke S, Beyer B, Gutermann J, Katlein C, Krumpfen T, Bergmann M, Hehemann L and Gerdt G (2018) Arctic sea ice is an important temporal sink and means of transport for microplastic. *Nature Communications*. 9: 1505. doi: 10.1038/s41467-018-03825-5

⁶ Chiba S, Saito H, Fletcher R, Yogi T, Kay M, Miyagi S, Ogido M and Fujikura K (2018) Human footprint in the abyss: 30 year records of deep-sea plastic debris. *Marine Policy*. doi: 10.1016/j.marpol.2018.03.022

⁷ Gall SC and Thompson RC (2015) The impact of debris on marine life. *Marine Pollution Bulletin*. 92: 170-179. doi: 10.1016/j.marpolbul.2014.12.041

⁸ NOAA (2018) Plastics in the Ocean. In: NOAA Marine Debris Program. Available: <https://marinedebris.noaa.gov/images/plastics-ocean-infographic>. Accessed: October 4, 2018.

⁹ Cole M, Lindeque PK, Fileman ES, Galloway TS, et al. (2013) Microplastic ingestion by zooplankton. *Environmental Science & Technology*. 47(12): 6646-6655. doi: 10.1021/es400663f

¹⁰ Hermabessiere L, Dehaut A, Paul-Pont I, Lacroix C, Jezequel R, Soudant P and Dufflow G (2017) Occurrence and effects of plastic additives on marine environments and organisms: A review. *Chemosphere*. 182: 781-793. doi: 10.1016/j.chemosphere.2017.05.096

¹¹ Rochman CM, Hoh E, Kurobe T and Teh SJ (2013) Ingested plastic transfers hazardous chemicals to fish and induces hepatic stress. *Scientific Reports*. 3: 3263. doi: 10.1038/srep03263

¹² Rochman CM, Tahir A, Williams SL, Baxa DV, Lam R, Miller JT, Teh F, Werorilangi S and The SJ (2015) Anthropogenic debris in seafood: Plastic debris and fibers from textiles in

fish and bivalves sold for human consumption. *Scientific Reports*. 5: 14340. doi:10.1038/srep14340

¹³ Geyer R, Jambeck JR and Law KL (2017) Production, use, and fate of all plastics ever made. *Science Advances*. 3: 7. doi: 10.1126/sciadv.1700782

¹⁴ Jambeck JR, Geyer R, Wilcox C, Siegler TR, Perryman M, Andrady A, Narayan R and Law KL (2015) Plastic waste inputs from land into the ocean. *Science*. 347: 768-771. doi: 10.1126/science.1260352