

The Great Pacific Garbage Patch

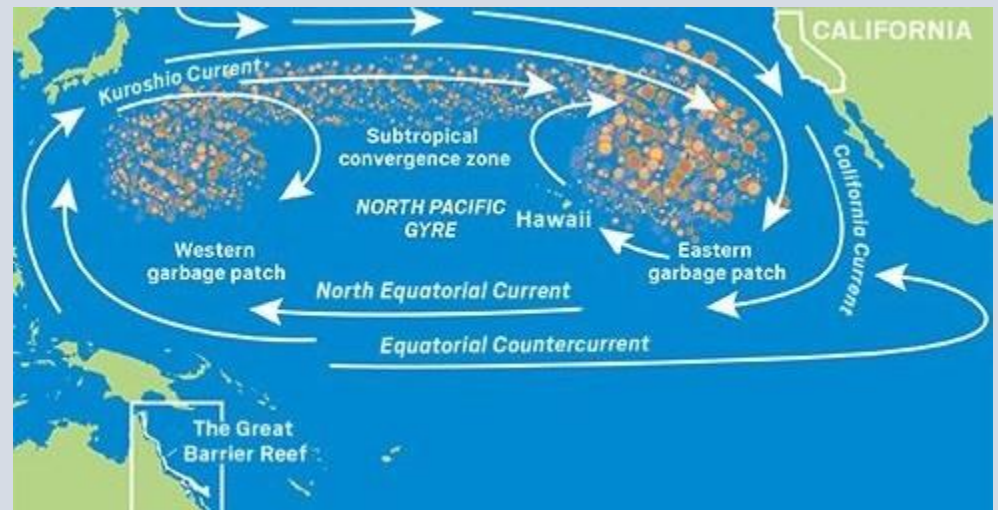
A Floating Problem for Marine Life



By: Veronica Green

What is an Ocean Garbage Patch?

A garbage patch is a cluster of garbage that has accumulated in the ocean, creating a floating island of litter. These “islands” are created by gyres. A Gyre is a current that rotates, pulling objects in. With all of the litter in the sea, the gyres are creating floating islands of trash.



<https://oceancruisingclub.org/home/News/394>

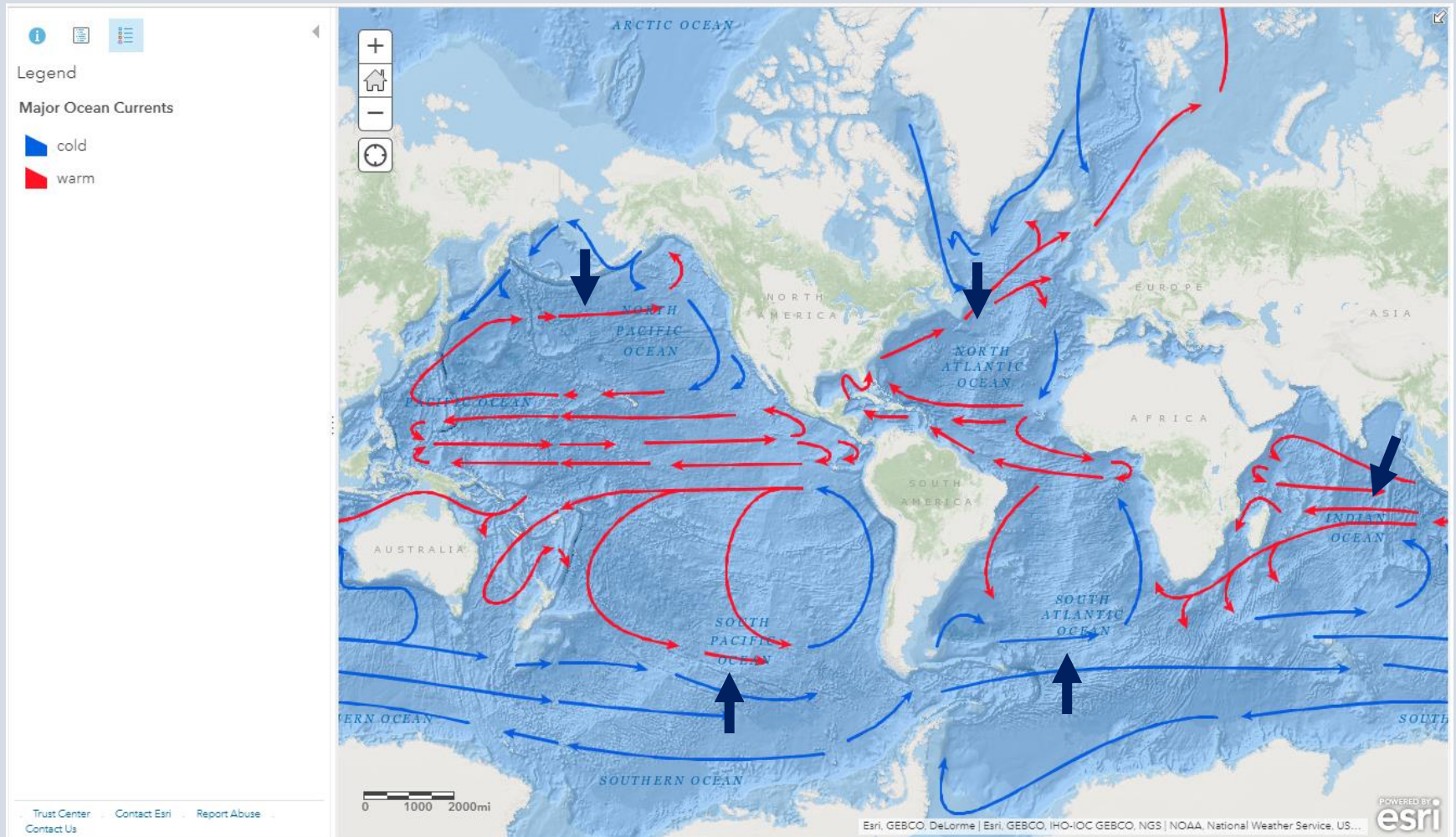


http://b.parsons.edu/~pany468/parsons/political_website/source2/index.html

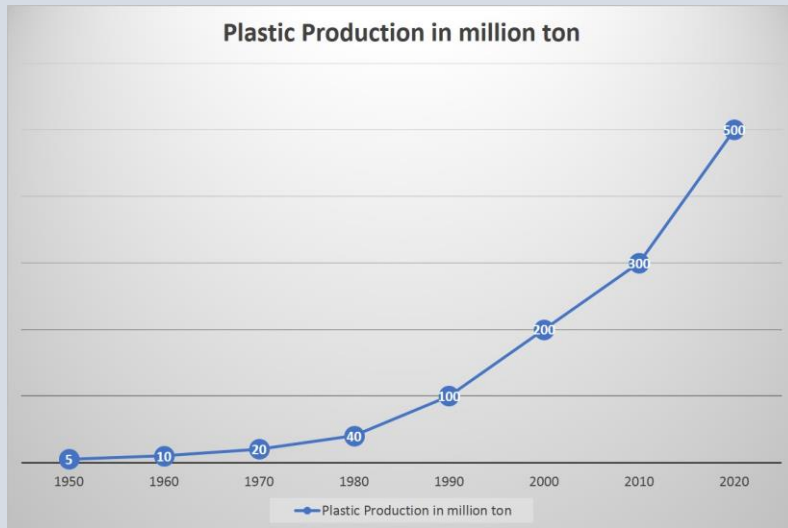
The largest and most widely known garbage patch is the Great Pacific Garbage Patch located in the Pacific ocean. Since garbage patches are constantly moving, they are hard to measure. According to The Ocean Cleanup website, the size is estimated to be about twice the size of Texas (roughly 617,700 square miles). With a mass of in the region of around 80,000 tons, there is estimated to be around 1.1 to 3.6 trillion plastic pieces floating within the Great Pacific Garbage Patch alone.

What Areas Are Affected?

There are 5 main gyres in our oceans. The North Pacific Subtropical Gyre and South Pacific Subtropical Gyre (located in the Pacific Ocean), the North Atlantic Subtropical Gyre and South Atlantic Subtropical Gyre (located in the Atlantic Ocean), and the Indian Ocean Subtropical Gyre (located in the Indian Ocean). Each of these contain a garbage patch.



The Source:

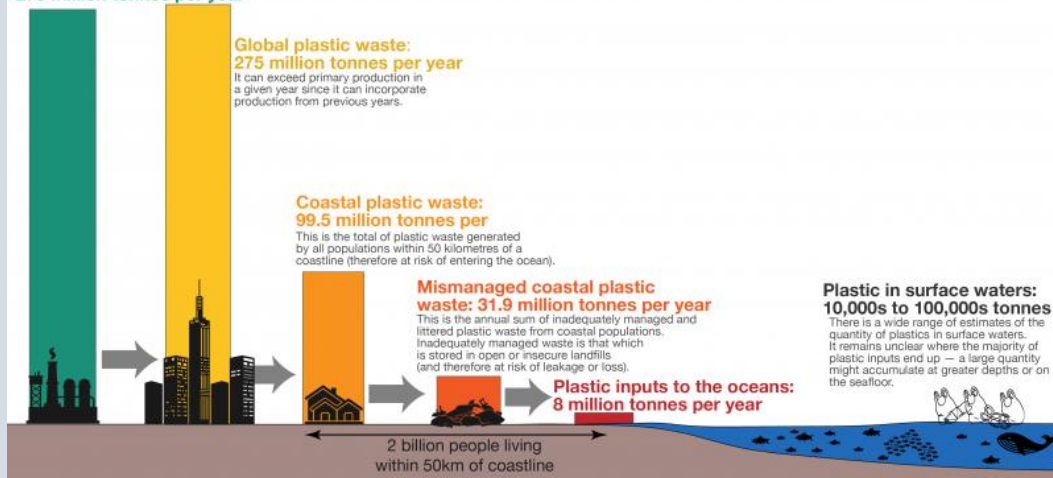


The obvious source of these garbage patches is humans. According to a research done by Duncan A Rouch in January of 2021, the plastic production has continued to increase since the production of plastic started in 1950. 40 years later, plastic production jumped from 5 million tons to 100 million tons, a 1,900% increase, and has continued to increase. Where does this plastic end up? A very small portion gets recycled, while a good portion ends up in our oceans and landfills.

The pathway by which plastic enters the world's oceans

Estimates of global plastics entering the oceans from land-based sources in 2010 based on the pathway from primary production through to marine plastic inputs.

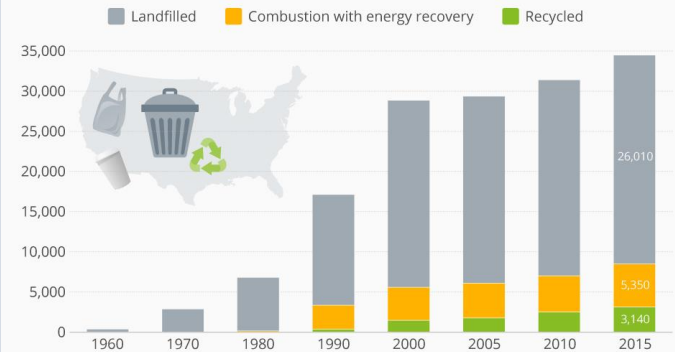
Global primary plastic production:
270 million tonnes per year



Source: based on Jambeck et al. (2015) and Eriksen et al. (2014). Icon graphics from Noun Project. Data is based on global estimates from Jambeck et al. (2015) based on plastic waste generation rates, coastal population sizes, and waste management practices by country. This is a visualization from OurWorldInData.org, where you will find data and research on how the world is changing. Licensed under CC-BY-SA by the authors.

Plastic Recycling Still Has A Long Way To Go

Level of plastic waste in U.S. municipal solid waste disposal (thousand tons)



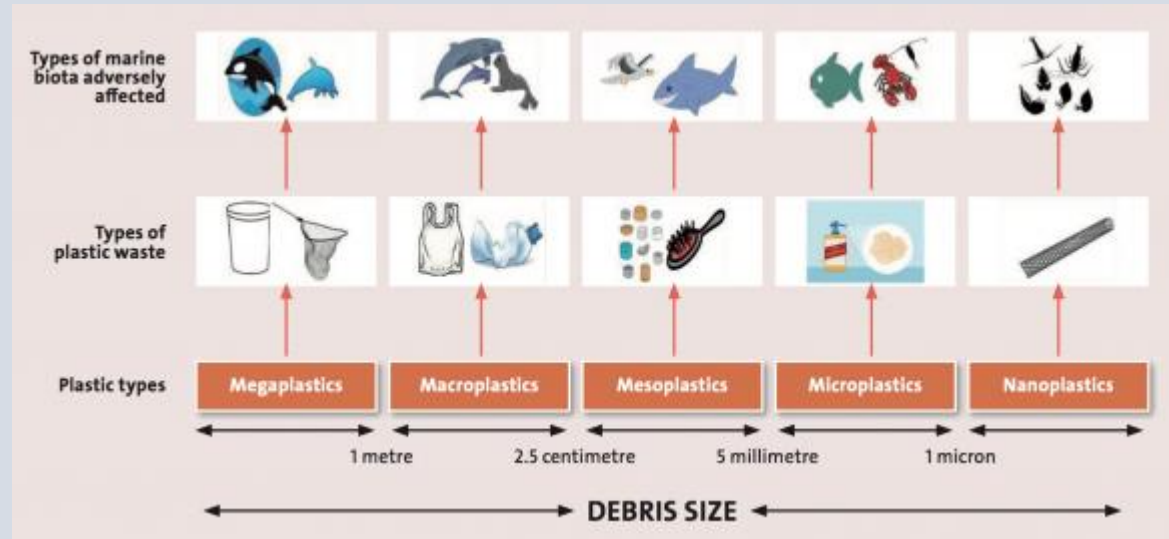
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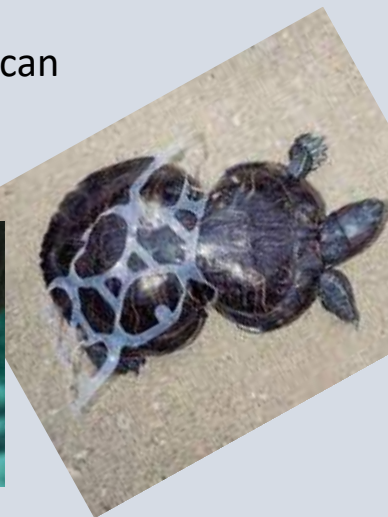
Who Is Affected?

MARINE LIFE:

The affect of plastic pollution on marine life is clear. A quarter of all fish have tested to contain plastic in them. However, fish are not the only one's affected by this mass plastic problem in the oceans. Sea animals are also affected. Animals from sea lions to sea turtles and dolphins to whales feel the effects. Since plastic is not bio-degradable, it has done a number to our oceans and sea life. Animals can get entangled or mistake harmful garbage for food.



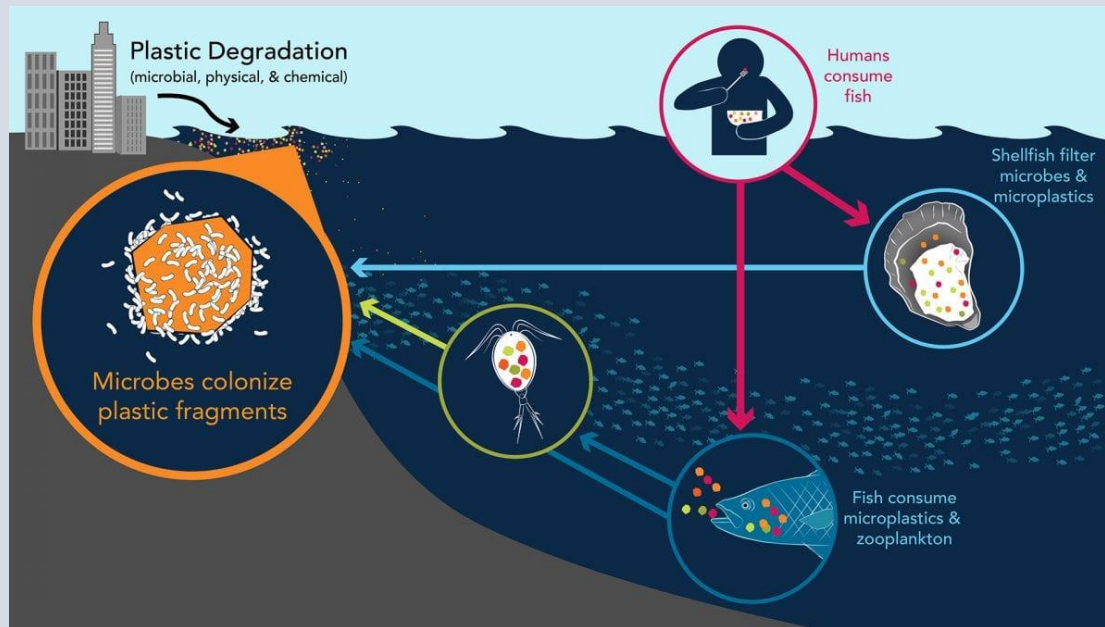
<https://journals.openedition.org/factsreports/5257>



Who Is Affected?

HUMANS:

Although the affect that plastic pollution has on marine life is apparent, the affects that plastic pollution has on humans is not as clear. Although studies have found that about a quarter of all fish contain plastic, it is uncertain what the effects of consuming plastic contaminated fish would have on humans. Plastics are known to absorb chemicals that can cause problems for humans, such as BPA andPCB, assuming they have the same effect on marine life, would consuming contaminated seafood result in the same problem?



What Can We Do????

Our earth is covered in more than 70% water, that makes this a global problem!

What can be done to help the garbage problem in our oceans?

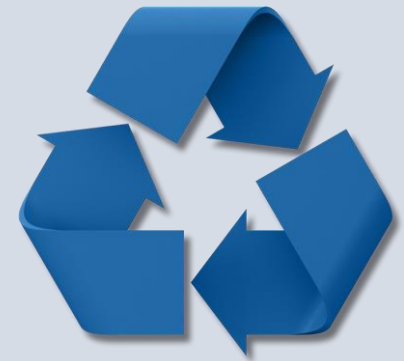


1. Recycle

Take part in recycling! If everyone made sure to recycle what they could, it would greatly cut down on plastic pollutions

2. Reduce single-use plastics

Single-use plastics are items that contain plastics for single use purposes. Such as plastic grocery bags, straws, water bottles, silverware, cups, etc. Even bringing your own reusable canvas bags to carry groceries can make a small difference.



3. Take part in clean up activities

There are so many programs out there that host clean up activities for beaches and other water sources. You can also hold your own clean up activity or take the initiative to do it on your own.

4. Be aware and share!

Educate yourself and others of the plastic pollution problem.



Works Cited

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