

4. Where does plastic litter end up?



Plastic bag at the HAUSGARTEN, the deepsea observatory of the Alfred Wegener Institute in the Fram Strait (Photo: Melanie Bergmann/OFOS)

Researchers have determined that the amount of plastic litter floating on the ocean's surface is considerably smaller than the total amount of marine anthropogenic plastic. Based on litter surveys in 680 regions, a recent study estimates that roughly 269,000 tonnes of plastic litter are floating on the surface, only a fraction of the amount mentioned in Answer 3 above.

Today, we still can't explain the discrepancy with certainty; most likely, it is due to a number of factors. The authors of the study believe a major portion of the litter breaks down into microparticles, which gradually sink. It's also conceivable that animals like e.g. zooplankton (krill or fish larvae) unwittingly ingest the microparticles when they feed, removing them from the surface. Some plastics are most likely frozen in the sea ice of the Arctic and Antarctic. Working together with partners from other European marine research organisations, an AWI expert has determined that, given time, larger pieces of litter also sink to the bottom - even plastic bags.

Above all, plastics tend to accumulate in the deep-sea trenches, the deepest points on the ocean floor. Most likely, tides are responsible for transporting the plastic so far down. Plastic litter has even been found in remote regions like the Arctic. To date we still don't know just how much litter there is in the water column worldwide, as it's impossible to completely comb through such a gargantuan volume of water.

Question 1:

[Which types of plastic litter are there in the ocean? >](#)

Question 2:

[Where does the plastic waste come from? >](#)

Question 3:

[How much plastic litter is there in the ocean? >](#)

Question 5:

[What are garbage patches? >](#)

Question 6:

[How large are the garbage patches? >](#)

Question 7:

[Where do microplastics come from? >](#)

Question 8:

[What are the risks of marine plastic? >](#)

Question 9:

[What are the economic impacts of marine litter? >](#)

Question 10:

[How can we prevent the spread of marine litter? >](#)