

1 Marine Plastic Pollution

Marine plastic pollution is a widely documented issue. The exact amount of plastic is not known. The world *economic forum* *top 2022 estimates* *there to be between 75 and 199 million metric tons of plastic*

There are two major paths for health effects from plastic pollution, larger pieces being broken down into microplastics which then get taken up into the food chain, and material leeching into the surrounding seawater. Once microplastics have entered into the food chain, leeching becomes a concern within creatures as well.

Leeching refers to the chemical breakdown of materials going into solution, or compounds moving from one carrier to another. For example, bisphenol A (also known as BPA) is a material commonly used in polycarbonate production. *rochester, isphenol 2013 shows in a meta-review that Bisphenol A can affect the endocrine system of humans, especially*

Microplastics on the other hand, refer to small particles of plastics, less than 5mm in size along their longest axis. Microplastics might be broken up from larger pieces, for instance by wave motion grinding waste against the seafloor or against each other. Microplastics might also be released from products that include them intentionally, for instance certain exfoliating soaps or polishing compounds use small plastic beads to do the polishing/exfoliating work. The negative health impacts of microplastics both on human and animal life have been shown, for example by *segovia-mendoza how 2020 and zolotova harmful 2022. Filtering out microplastics is very difficult*

The above demonstrates the health effects of marine plastic pollution, but additionally there is the concern that the physical presence of plastics might harm or inhabit marine life. Ghost fishing for instance, is a large concern from an ecological perspective. Ghost fishing refers to when tools such as fishing nets or pots are lost at sea but continue to drift, allowing them to catch animals that end up harmed or dying without human control. *matsuoka, review 2005 goes into the issues of ghost fishing in greater detail*

2 Previous work

When it comes to

3 Remaining work

4 This report