

What to Do about Plastic Pollution

Bans on bags will not solve a global recycling failure

By the Editors

From the bags that find their way to the ocean and into the stomachs of whales to the straws that hurt turtles to the microscopic shards and synthetic fibers that have been found in the remote Arctic, plastic permeates the planet.

The problem of plastic pollution has gotten dramatically worse as production has ramped up from two million metric tons a year in 1950 to more than 300 million metric tons a year today without much thought to what happens once it is discarded. The thousands of polymers that fall under the catchall label “plastics” never disappear. They merely degrade into smaller pieces called microplastic. A 2017 study in *Science Advances* estimated that of all the plastic ever produced, 90 percent is still around, mainly in landfills or out in the environment (the rest has been incinerated). Bans on single-use plastic such as bags and straws have become a popular policy around the world to rein in plastic use. But although some of these rules have reduced waste in places, including Ireland and California, they do not directly address production and can send users to alternatives that are not much friendlier to the environment.

Researchers have learned enough about the flow of plastic waste to know it poses a widespread environmental problem. Plastic causes physical harm to animals and could combine with other threats to endanger vulnerable species. There is also concern about humans inhaling and ingesting microplastic. We must do a better job of stanching the flood. Doing that means tackling two broad goals: considerably reducing the amount of plastic we produce and improving the recycling and reuse of what we make.

The U.S. must be a bigger part of these solutions. Blame is too often laid solely at the feet of rapidly developing Asian countries that lack robust waste-management systems, and we forget the role that the U.S. plays not only in producing plastic but by exporting millions of tons of the waste to Asia. With China no longer accepting imports of much recyclable waste, it has forced a reckoning in the U.S., with the local authorities responsible for an overwhelmed recycling system turning to landfills and incinerators. Those options can have other environmental impacts and perpetuate the creation of virgin plastic from fossil fuels, instead of reusing and recycling existing plastic. Only 9 percent of plastic in the U.S. is now recycled, according to the Environmental Protection Agency.

Federal and state governments should step up to help streamline and shore up the nation's disjointed recycling system. This could be done, for example, by standardizing what can be recycled



and putting limits on additives such as coloring, which is expensive to remove and can make plastic less valuable to a recycler. Governments could also fund recycling and composting infrastructure in communities that otherwise might not be able to afford it. Such investments could spur American innovation in the area, for example, setting the stage for wider use of compostable plastic, which can currently only be properly broken down in industrial facilities.

Many researchers also say plastic product manufacturers need to be pushed beyond their present voluntary commitments to reduce plastic waste with incentives that will make them bear more of the cost of that waste. Countries from the U.K. to India are looking at such “extended producer responsibility” programs, which can include taxes on new products that do not have a certain percentage of recycled plastic, along with having producers pay toward the costs of collecting and recycling their products.

Each policy has its proponents and detractors, and it is ultimately up to lawmakers to decide which ones make the most scientific, economic and political sense. In the U.S., Congress has already shown it is willing to step in, with the 2015 Microbead-Free Waters Act that banned these infinitesimally small materials in personal care products. A planned update to the bipartisan 2018 Save Our Seas Act, aimed at dealing with marine debris, could call for neutral arbiters such as the Congressional Research Service and the National Academy of Sciences to evaluate the costs and efficacy of various policies to make sure that the solutions we pursue do not create unintended consequences.

We need comprehensive solutions, not just Band-Aids that cover up the symptoms but ignore the roots of the plastic problem. **SA**

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