The Reduction of Plastic Pollution in the United States

5.25 Trillion Plastic Pieces
268,940 Tons of Plastic

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Background

In 2014, 103.465 billion single-use plastic bags were used in the United States alone. Fifty billion plastic water bottles are consumed each year. Only 1% of plastic bags and 23% of plastic water bottles are recycled (Wagner, 2017). In the world's oceans, there are 268,940 tons of plastic, adding up to more than 5.25 trillion plastic pieces (Eriksenpl et al., 2014). Since 1967, when the global primary production (GPP) of plastics was 23 million tons, the GPP has increased by 384 million tons, making it 407 million tons as of 2018. In the past 14 years, the world produced as much plastic as it did in the previous half-century (Rhodes, 2018). Once plastic was discovered as a cheap, easily made and manipulated, and a durable form of packaging material, its usage skyrocketed. That being said, the production of plastic is expected to continue to have an annual growth rate of approximately 8% (Rhodes, 2018).

Global plastics production
Annual global polymer resin and fiber production (plastic production), measured in metric tonnes per year.
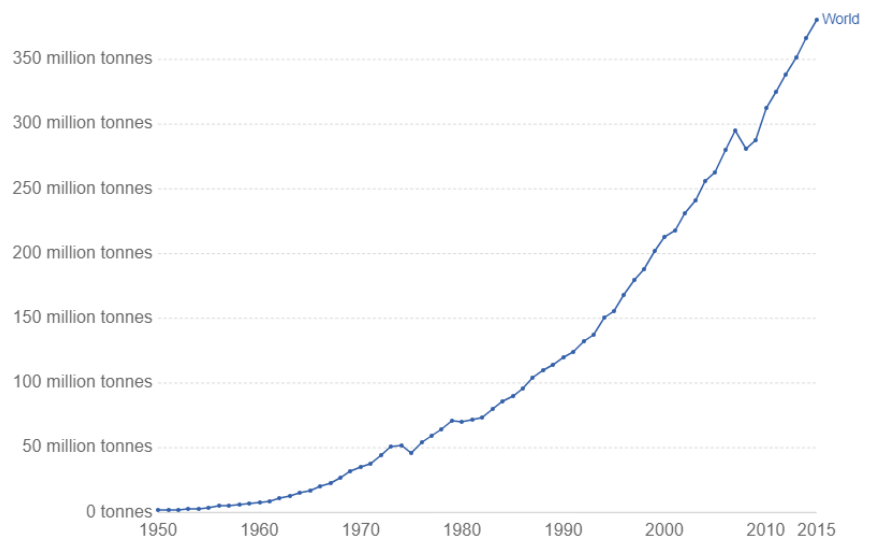
Source: Geyer et al. (2017)

PLASTIC Impact on Human Health

Risks

- Plastic is a material that is unable to be absorbed back into the environment once created.
- Plastic has been discovered in 60% of all seabirds and 100% of sea turtles (Ritschel, 2018). This consumption of plastic is life-threatening to marine life, which humans, in turn, ingest.
- A recent Belgian study has shown that those who consume fish have the potential to also consume 11,000 fragments of plastic each year (Wagner, 2017).
- Plastic contaminates groundwater, making it harmful to humans and wildlife.
- The consumption of the toxic chemicals that come from plastic are linked to birth defects, cancers, and endocrine disruption (Shaw, 2013).

Single-use Plastic Ban Policy Suggestion

Washington D.C. and New York City have placed a ban on plastic bags and instated fees on recycled paper bags and reusable plastic bags ("State plastic and paper bag legislation," 2019). While these cities have focused only on plastic bags, Malibu and Seattle have gone further to ban single-use plastic straws and other utensils as well (Calderwood, 2018). These are only a few examples of polices that have been successfully implemented in the United States. They provide potential solutions to decreasing the plastic pollution produced by the United States. All things considered, in order for the United States to reduce plastic consumption, plastic toxins consumed by humans and wild/marine life, and plastic pollution in the environment, policymakers should implement a ban on single-use plastic items.

Successes in other regions

Los Angeles, San Francisco, Chicago, New York City, and Washington D.C. are a few examples of cities that have implemented a ban on plastic bags. New York City alone has decreased their plastic bag waste by over 75% (Fimbel, 2019). Each of these states and nations have significantly reduced their plastic consumption. Ireland's implementation of a 37-cent tax on plastic bags reduced their consumption of plastic bags by 94% (Lober, 2018). Additionally, as shown in the graph below, San Jose's plastic bag ban has decreased the use of plastic bags by 67% (O'Mara, 2017)

Types of Bags Observed From Shoppers Exiting Stores
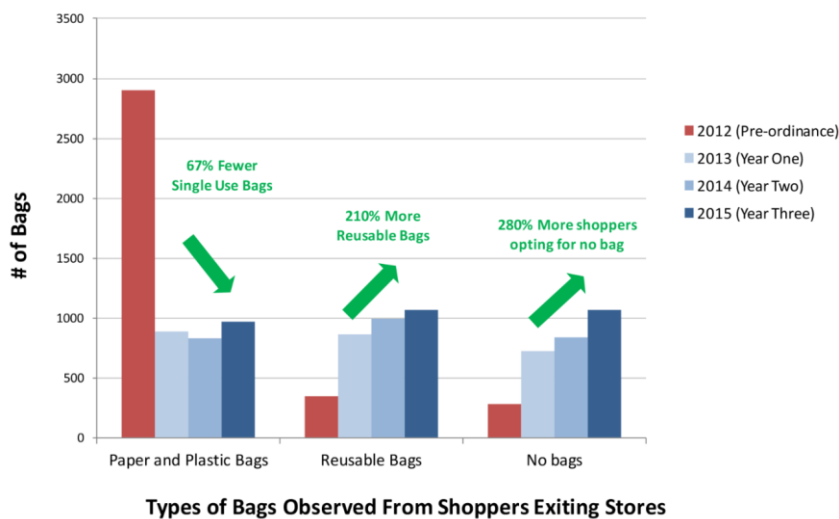
Misconceptions and Counterarguments

Both taxes and bans are proven effective; however, both have criticisms. Many believe these policies will make groceries and food more inaccessible to the poor. (Geyer, 2015). Furthermore, a common misconception that citizens have about plastic pollution is that they believe it does not affect them. Another misconception is that solutions are not attainable or will not make a true difference. Both of these are disproven by the evidence provided by health care professionals and success stories in other regions. Additionally, others oppose regulating plastic production because they believe it would eliminate jobs and hurt the economy and businesses. However, while alternative packaging is more expensive for business owners, it promotes consumers to use reusable bags, requiring business owners to purchase less product in areas like grocery bags. An increase in production of alternative packaging will also generate jobs in those companies, leading to creative destruction rather than higher unemployment (Van Eygen, 2018).

Future Actions

Ideally, the United States will implement a nation wide plastic ban, based on New York City's plastic bag ban, in order to reduce plastic pollution. The law behind the ban would ensure that the regulations are enforced, and reasonable for all parties. The law must provide an alternative, so that those of low socioeconomic statuses are accommodated to. Most notably, this ban must be put in place sooner rather than later as it is estimated that by 2050 there will be more plastic than fish in the world's oceans if we continue to produce plastic at this rate (Ritschel, 2018).

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