

Impact of Disposable Plastic on Environment & Society

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Impact of Manufacture of Plastics (from Oil to Finished Product)

The first stage of the manufacturing process is the production of oil. Oil extraction has had great effects on the environment and humans. For example:

- Oil companies drilled in the rainforests where they have created numerous environmental problems. They had cut down thousands of acres of trees leading to almost complete deforestation, and eventually reduced the amount of rainfall. They also destroyed habitats. Oil drilling has had a massive effect on some plant species, some even going close to extinction. A vast amount of oil is spilled, polluting rivers and seas, affecting their ecosystems.
- Oil production has had extensive impacts on indigenous people who inhabit areas surrounding oil extraction sites.
- Oil extraction in some parts of the world has affected wildlife and destroyed biodiversity. It has also led to the displacement of people from their habitats. Additionally, it has caused air pollution, contamination of drinking water, soil erosion. All of these have brought about serious health problems for the inhabitants of areas surrounding oil production.
- Oil production has caused many countries to go to war with each other in the past in order to establish themselves as the controlling power of Oil reserves i.e. Kuwait war and the Falk Island war. This has caused the death of thousands of people and left millions displaced. (Environment-ecology.com, 2019)

The second and the last stages of the process are in the refinery, where crude oil is separated into various products and in the factories, where plastic products are produced. In the refineries, dangerous gases such as sulphur dioxide and excess carbon dioxide are produced in the atmosphere leading to climate change and global warming. Global warming has caused glaciers and ice caps to melt. Climate change has also resulted in more extreme weather. There are more floods, droughts and storms as a result.

In factories, natural resources such as energy and water are consumed. These natural resources are used in huge amounts in those factories. Thus, it is not sustainable and in the long run, it will lead to the reduction of these resources.

An Overview of the Usage of Disposable Plastic

In today's modern world, plastics (synthetic organic polymers) and plastic based products essentially permeate all aspects of our lives. From electronic devices, such as computers and phones, to virtually all forms of packaging, it is almost impossible to avoid plastics in our day-to-day hustle. large-scale production and use of plastics only date back to around the 1950s. (Science Advances, 2019). It has been in contiguous production ever since, increasing exponentially as more and more individuals, businesses, and products become progressively contingent on the use of plastics.

Plastic bottles and other disposable plastic liquor vessels and packaging are Single Use Plastics. This means that these products are usable once for a specific purpose and then discarded. Half of the plastic produced today are Single Use Plastics *"In 2016, world plastics production totalled around 335 million metric tons. Roughly half of annual plastic production is destined for a single-use product."*(Earth Day Network, 2019).

It is estimated that around 1,000,000 plastic bottles are purchased by consumers per minute globally. (Earth Day Network, 2019) Although these products are fully reusable and recyclable, sadly only a small percentage is disposed of properly - *"Single-use-plastics frequently do not make it to a landfill or are recycled. A full 32% of the 78 million tons of plastic packaging produced annually is left to flow into our oceans. This is expected to increase. By 2050, this could mean there will be more plastic than fish in the world's oceans."* (Earth Day Network, 2019)

Plastic bottles are used in essentially every workplace and commercial business in the world. Water bottles and energy drinks such as carbonated soda and other soft drinks are among the most prevailing usage of plastic bottles globally.

Against other types of containers, such as glass bottles and aluminium cans, plastic bottles are considered the least eco-friendly option as they produce the largest carbon footprint and are the least recycled of the three. Also, most plastic containers can only be recycled once or twice before becoming unusable whereas aluminium and glass are 100% recyclable and can be recycled again and again. (Sinai, 2019)

The Impact of the Usage of Disposable Plastic on the Environment

The modern consumer use of plastic bottles and cups has an immensely large impact on our environment.

According to National Geographic, the oceans are filled with roughly “*between 5.3 million and 14 million tons each year just from coastal regions.*” (Nationalgeographic.com, 2019)

As one could imagine this has a detrimental effect on marine animal life that dwells in our oceans and seas. “*Ocean plastic is estimated to kill millions of marine animals every year. Nearly 700 species, including endangered ones, are known to have been affected by it.*” (Nationalgeographic.com, 2019)

Ocean pollution also effects land dwelling seabirds. In September 2012, a research group “*performed necropsies on 67 beached northern fulmars (a type of seabird found in the North Pacific) and found that 92.5 percent had plastics in their stomachs. An average of 36.8 pieces per bird were found. One bird was found with 454 pieces of plastic in its stomach.*” (EcoWatch, 2019)

It is estimated about 210,000 tons of plastic is used in Ireland every year, only 40% of which is recycled (Irish times) and if we can imagine the logistics and transportation required to import and export this disastrous single-use plastic which won't be required if our government and society think about the sustainability of the planet and our ecosystem. (The Irish Times, 2019)

It is estimated that plastic products can take anywhere from 500 – 1000 years to fully biodegrade, and as they do toxic by-products are leaked into their surrounding environment, produced by the chemical decomposition of the plastic, polluting the soil and waterways. This will have a detrimental effect to any animal or plant life exposed to these environments. Unless rapid and effective changes in how we manage our plastic waste are made, we will inevitably suffer the consequences for generations to come.

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