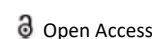




COMMENTARY



Effects of Plastic Pollution on the Environment

Van Emmerik*

Department of Life Science, Jacobs University Bremen, Bremen, Germany

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Description

Plastic pollution is the collection of plastic substances and elements in the environment that harms people, wildlife, and their habitat. Examples include plastic bottles, bags, and microbeads. Plastic waste is divided into micro, meso, and macro rubbish depending on its size. Plastics are often preferred by manufacturers over other materials because they are affordable, strong, and well-suited for a wide range of applications. However, because of their chemical makeup, most plastics are inactive to decay since they are unaffected to a variety of regular processes. These two elements work together to allow the persistence of plastic in the ecosystem and the large-scale release of plastic into the environment as improperly disposed of waste. The increased need for protective gear and packaging materials during COVID-19 resulted in an increase in the amount of plastic trash created. More plastic, particularly from masks and medical waste, ended up in the ocean. According to several news sources, the plastics industry is attempting to promote single-use plastic production by capitalising on consumer demand for disposable masks and packaging and health concerns.

Due to several elements like wind and ocean currents, shoreline geography, urban regions, and trade routes, the dispersion of plastic waste varies greatly. In some locations, the human population also contributes significantly to this. In confined areas like the Caribbean, plastics are more likely to be found. It facilitates the transfer of creatures to distant beaches that are not their natural habitats. This might boost the diversity and spread of species in particular regions with lower biological diversity. Plastics can act as carriers for chemical pollutants

such as heavy metals and persistent organic pollutants. Our environment has been severely harmed by plastic pollution. Plastic waste is exposed on even the most isolated coastal sites and in every marine environment, indicating the pollution is wide-ranging and universal. This data reveals the significant impact that plastic pollution has had on the ocean and even the shores.

A team of scientists discovered that the planetary threshold for “new things” (pollution, including plastic pollution), which they established in January 2022, had already been breached. Patricia Villarubia-Gómez, a co-author from the Stockholm Resilience Center, claims that since 1950, the output of chemicals has increased by a factor of 50. By 2050, this is anticipated to triple once again. In the world, there are at least 350,000 synthetic compounds. They mostly have adverse effects on the health of the planet. More than 10,000 compounds are found in plastic alone, which is a significant problem. The scientists are advocating for a restriction on chemical production and a shift to a circular economy, or goods that can be recycled and reused. Plastic pollution harms the marine environment by entanglement, toxicological effects from ingesting plastics, suffocation, starvation, dispersal, and rafting of organisms, creation of new habitats, and introduction of invasive species are just a few of the significant environmental effects that pose growing threats to biodiversity and trophic relationships. Loss of ecosystem services and values is correlated with degradation (changes in the ecological condition) and modification of marine systems. Because of the detrimental effects on tourism, fisheries, shipping, and human health, this developing pollutant has an impact on socioeconomic factors.