

## SHORT COMMUNICATION

# PLASTIC AND HEALTH ISSUES IN BANGLADESH: CURRENT SCENARIO

GOUTAM SAHA

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The plastic industry in Bangladesh has a multifaceted and significant impact on the country's economy. A report by the Asian Development Bank (ADB) highlights that the growing plastic industry in Bangladesh plays a major role in both domestic demand and export trade. The plastic industry already holds a prominent position within the chemical industry sector. Currently, this sector employs around 2 million people directly and indirectly across around 3,000 manufacturing units. The annual sales of plastic products in the local market alone reach approximately 150 billion BDT. The Bangladesh Plastic Products Production and Export Association reports that 300 domestic manufacturing companies export around 30 billion plastic products annually, valued at approximately 30 billion BDT. Furthermore, the domestic market value of plastic products is estimated to be around 200 billion Bangladeshi taka.

According to a study by the National Oceanic and Atmospheric Administration of the United States, it takes 20 years for grocery store bags to decompose in nature. Plastic cups used for beverages can last up to 50 years, while diapers and plastic bottles take 450 years to decompose. A research study conducted by the non-governmental organization Environment and Social Development Organization in Bangladesh revealed that 35 percent of single-use plastic is used by the 15-25-year-old, and 33 percent is used by the 26-35-year-old. Bangladesh generates 87,000 tons of single-use plastic waste annually, primarily from restaurants, residential hotels, airlines, and super shops. The study also showed an increase in the amount of single-use plastic in the garbage from three percent in 2014 to around 21 percent in 2019.

The recycling capacity of Bangladesh for plastic waste is not prepared to handle the increasing amount of plastic waste generated. PET plastic recycling is the most developed sector of the plastic recycling industry in the country, while other types of plastic recycling are not as well established. Estimates vary regarding the percentage of plastic waste recycled in Bangladesh, ranging from 38 percent to 83 percent for recyclable plastic waste. The per capita plastic consumption in Bangladesh has been increasing over the years. In Dhaka, the annual per capita plastic consumption was reported to be 24 kg in 2017, significantly higher than the national average. The annual per capita plastic consumption in urban areas outside Dhaka was 3 kg in 2005, which tripled to 9 kg in 2020. Experts predict that by 2030, it may reach 34 kg.

Plastic pollution has had a detrimental impact on the Sundarbans and coastal areas, with single-use plastics posing a threat to public health and the environment. According to Transparency International Bangladesh (TIB), Bangladesh, polythene shopping bags are still widely used, although Bangladesh is the first country that enforced a complete ban on their usage. Regrettably, Bangladesh also faces the challenge of being responsible for 2.47 percent of the world's plastic pollution. Research has shown that 20 species of fish in the Sundarbans area are contaminated with microplastics. Plastic production contributes to greenhouse gas emissions, and the manufacturing process involves the use of harmful chemicals. Polyethylene, a commonly used plastic, is a non-recyclable one-time-use product that breaks down into particles, posing a serious risk to public

**Address of Correspondence:** Dr. Goutam Saha. Department of Mathematics, University of Dhaka, Dhaka-1000, Bangladesh. Email: [gsahamath@du.ac.bd](mailto:gsahamath@du.ac.bd)

health when it enters the food chain. The persistence of plastic, being a specific type of chemical polymer, poses a long-lasting threat to the environment, leading to chronic damage. Non-biodegradable plastic waste endangers the existence of flora, fauna, and aquatic life. Microplastic particles, present in soil, hinder land fertility and reduce fruit production. Similarly, airborne microplastics, inhaled by animals and humans, particularly, contribute to respiratory function decline and an increase in asthma cases. Furthermore, plastic particles in water are associated

with cancer, hormonal issues, and even infertility. This harmful waste also enters the human body through the food chain, with pregnant women, young children, and respiratory patients being particularly vulnerable. Notably, a 2015 World Bank report highlighted that approximately 28 percent of annual deaths in Bangladesh are attributed to plastic pollution. To sustain development while addressing these challenges, it is imperative to prioritize effective waste management practices alongside plastic production.

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**Source:** The information presented in this article has been compiled from various media sources in Bangladesh.