Plastic pollution in the environment in India.

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Introduction

The majority of marine plastic debris comes from land-based sources, and the movement of plastics through the world's rivers is a major concern. Quantifying country-specific (and per capita) riverine outflows is a crucial step toward the creation of a globally integrated framework to reduce marine plastic pollution, even though considerable effort has been put into estimating the land-based contributions of plastic to the world's seas. We developed a River-to-Ocean model framework to calculate the country-specific riverine contributions to global marine plastic pollution. For 161 nations, the median annual riverine plastic discharges per country in 2016 ranged from 0.76 to 103,000 metric tons (MT) and 0.83-248 g, respectively. The top three countries responsible for riverine plastic outflows were India, China, and Indonesia, whereas Guatemala, the Philippines [1].

The presence of micro-plastic particles in the marine environment nowadays is becoming more common and persistent. The current contribution, which addresses microplastic contamination, focuses on the examination of microplastic particles (MPs) along Marina, a popular urban sandy beach and the longest beach in India. A total of 72 marine samples, including those filtered in the marine water column (WAT; 24 samples), those discovered in wet sediment (WET; 24 samples), and those found in dry sand, were quantified for micro-plastic particles using an optical microscope along a sea coast of roughly 5 kilometers (DSS; 24 samples). The filamentous-typed polymers dominated the other materials in WET, WAT, and DSS, accounting for 79%, 57%, and 52%, respectively [2].

Microplastic particles (MPs) are a new class of contaminants that are particularly harmful to freshwater and marine environments. There is currently a dearth of knowledge on the laws governing the use of plastic, recycling, and environmental degradation in various nations. The current evaluation is concentrated on academic works that have been written about MPs that have been gathered, distinguished, and identified by research facilities spread across several Indian regions. This review only covers publications that deal with samples taken from India; generic reviews written by Indian writers on concerns related to microplastic pollution around the world are not included. The environmental samples that were looked at included fresh or processed seafood such fish, oysters, and prawns that were collected and evaluated from the Indian environment, as well as sea, river, groundwater, sediments, and commercial salt [3].

The global problem of marine plastic pollution has disastrous effects on the environment, human health, and the economy. Some of the research were undertaken on the Gopalpur shore, and the current baseline survey was carried out before and after the Covid-19 pandemic lockdown (April to August 2021). (August–September 2021). In order to collect the plastic waste based on color, density, and weight, the survey was spread out across a distance of roughly 1500 m along the coast and divided into 10 equal zones of each (20 150 m2). During lockdown, plastic debris was divided into 33 types with an average density of 1.276 g/m2, and after lockdown, it was divided into 34 types with an average density of 3.34 g/m2.[4]

Recycling by the unorganised sector offers a quick and affordable solution to plastic pollution while sustaining livelihoods via inclusion and empowerment of these groups. If supportive efforts are focused on plastic pollution kinds that are the most harmful from an ecological and wider risk perspective, this strategy will benefit the environment the most. Actions should focus on three components of pollution: lowering collection barriers, boosting material revenue and widening informal recycler compensation, and raising material quality. If these measures are successful, they will boost collection rates, lessen plastic-related pollution, and aid millions of people in escaping poverty [5].

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