

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION NO.1123  
TO BE ANSWERED ON WEDNESDAY, 8<sup>TH</sup> FEBRUARY, 2023**

**CONTAMINATION OF COASTAL REGIONS BY PLASTIC WASTE**

**1123. SHRI RAMALINGAM S.:**

**Will the Minister of EARTH SCIENCES be pleased to state:**

- (a) whether the Union Government has conducted any studies on contamination of Bay of Bengal by plastic waste, if so, the details in this regard;
- (b) whether the Government has taken any action taken in controlling the contamination of plastic waste in coastal regions specifically in Mayiladuthurai and Nagapattinam districts of Tamil Nadu; and;
- (c) the details of the action/ initiatives taken by the Union Government in fulfilling the objectives under national marine litter policy?

**ANSWER**

**THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR  
MINISTRY OF SCIENCE AND TECHNOLOGY  
AND EARTH SCIENCES  
(DR. JITENDRA SINGH)**

- (a) Yes Sir. Ministry of Earth Sciences through National Centre for Coastal Research (NCCR), Chennai, carried out several scientific cruises along the east coast of India to find out the spatio-temporal variation of microplastics concentrations in the water column covering 1-10 km distance from river mouth and coastal sediment. In general, microplastics concentration in the water found higher during northeast monsoon than the southwest monsoon season. Month-wise higher abundance of microplastics in coastal sediment was found in the Chennai to Puducherry region during January ( $19 \pm 12.9$  particles/50g dry weight) followed by July ( $10 \pm 4.5$  particles/50g dry weight). The majority of microplastics were <1mm in size and mostly in fibrous and fragment forms primarily from fishing nets and disposed waste. In addition, six different sandy beaches between Chennai and Puducherry along the Bay of Bengal coast were quantified and characterized for the macro litter (size- from 2.5 cm to 1m), meso litter (size- from 5 mm to 2.5 cm), and micro litter (size- less than 5 mm) in the intertidal and backshore areas. The backshore region of the beach had a higher concentration of litter than the intertidal region. National Centre for Sustainable Coastal Management (NCSCM), Chennai, Ministry of Environment, Forest and Climate Change (MoEF&CC), studied the plastics contamination in beaches along the eco-sensitive regions such as Palk Bay and Gulf of Mannar coast using model simulations in tracking the fate and transboundary landfall of spilled micro plastics across the Indian Ocean coastline. A study on contamination of the Bay of Bengal by plastic waste has been conducted by the Indian Council of Agricultural Research (ICAR) in collaboration with National Institute of Oceanography (NIO) and the results showed that the Bay of Bengal was contaminated with plastic waste, particularly from the adjoining rivers like Ganges and Brahmaputra.

- (b) As part of coastal marine pollution monitoring, Swachh Sagar, Surakshit Sagar and Azadi Ka Amrit Mahotsav, beach cleaning activities has been performed by NCCR since 2018 along the east coast of India. A 75-day citizen-led campaign “Swachh Sagar -Surakshit Sagar”, were conducted for improving ocean health through collective action. The campaign ended with the largest beach cleaning event on Sept 17, 2022 (International Coastal Cleanup Day) covering 75 beaches across India’s 7500+ km coastline. At Mayiladuthurai and Nagapattinam, Government of Tamil Nadu has conducted mass awareness program regarding the plastic waste disposal and management among the public and all other stake holders via circulation of pamphlets, brochures and advertisements. The government of India has also conducted the anti-plastic drive in Nagapattinam, an awareness programme as part of Swachaata Hi Seva.
- (c) The National Marine Litter Policy is not yet formulated. However, several studies have been undertaken to map the marine litter which is an important component for the Policy paper. Ministry of Earth Sciences through National Centre for Coastal Research (NCCR) is monitoring the temporal and spatial distribution of marine litter along the Indian coasts and adjacent seas. In addition, several National level workshops have been conducted involving scientists from different research institutes, stakeholders, policymakers, industry and academic experts to prepare a roadmap for formulating the National Marine Litter Policy. Moreover, the Ministry of Environment, Forest & Climate Change (MoEF&CC) has notified Plastic Waste Management Rules, 2016, and its amendments, which provide the statutory framework for plastic waste management in the country.

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