

Marine Plastic pollution and tackling it

KID: 20220316

***Dr Shiva Ji, **Mr Zeeshan (L-R)**



Different types of plastic pollution are found in all areas of the oceans. For example - Shoreline plastics, sea surface plastics, plastics in marine organisms, sea floor /sediment plastics, water column plastics. [1]

In the context of India, tackling marine plastic pollution is going to increase in the near future. Some of the data are:-

According to a 2017 study, the Odisha coast has the lowest quantity, and Goa coast has the highest quantity of beach debris. The Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs) have issued the notification asking manufacturers, suppliers and consumers of single-use plastic items to scrap and phase them out and switch to greener and sustainable alternatives. [2]

The following plastic items have been banned from July 1, 2022: Balloon sticks; cigarette cling film packs; cutlery items including plates, cups, glasses, forks, spoons, knives, trays, earbuds, sweet boxes, candy and ice cream sticks, invitation cards, polystyrene for decoration and PVC banners measuring under 100 microns. [2] The ban includes not just the use of plastic items but also their production. Plastic bags of thickness less than 120 microns will also be phased out from December 31, 2022. Thousands of other plastic products - such as plastic bottles - are however not covered by this ban.[2]

Like roads and streets, our coasts and beaches too are littered with various types of plastic. Experts believe that approximately 80 percent of the debris found in the oceans originates onshore. [2] According to a 2017 study titled Prevalence of marine litter along the Indian beaches, Odisha coast has the lowest (0.31 g /m2)

quantity, and Goa coast (205.75 g / m2) the highest quantity of beach debris. [2] Quite surprisingly, the archipelagic coasts of Andaman's, as well as Lakshadweep had more trash than Kerala, Tamil Nadu, Andhra Pradesh, Odisha and West Bengal. Litter on Goa's beaches can be primarily due to tourism and entertainment-related activities.

hard wares, mobile phone handsets or parts, chargers, battery operated toys, CDs etc.) and has the lowest (10g / m2) among all the types of debris. [2]. Group-F items include thermocol, PUF insulators of AC / Fridge, Styrofoam, etc, with a concentration of 93.2 g / m2.



This is the ocean clean up latest invention which collects approx 50000 kg of trash from rivers each day

2

However, fishing-related activities also contribute to beach litter. According to government data, there are 16 fishing villages in North Goa and 23 in South Goa. [2].

Nearly 12,000 people (according to 2010 data) are actively engaged in fishing. By analyzing beach debris, the research group found that nylon nets / fishing lines (group A-Nylon / HD ropes/fishes pieces / long lines) registered the highest mean (75.67 g / m2) in Goa and the lowest mean (0.01 g / m2) in West Bengal.[2]

A maximum of 543 g / m2debris from the Group-A items have been found in Goa beaches. For Group-B items, which include Plastics (covers, carry bags, sachets, PET bottles like beverages, drinking water, medicine etc., containers of milk, creams, oil, ointments, toothpaste etc.) it was 110 g / m2. [2]

It is apparent that fishing and tourism-related activities are equally responsible for litter generation on the beaches of Goa. Many of the items listed in these groups have now been banned in India. [2] The most effective way to minimize plastic pollution is to stop it from entering the oceans. Beach cleanup campaigns can make a positive difference if done continuously.

Conclusion

It is important to reduce marine plastic pollution. Plastic pollution is a widespread problem affecting the marine environment. It endangers the health of the ocean, the wellbeing of marine life, the safety and quality of food, human health, coastal tourism, and it fuels climate change. It is not necessary that all the time we take action after the scenarios get worse, we need to take action before the plastic enters into the marine environment. It should be in our daily life routine to take care of this case and should limit us from polluting the oceans and beaches,etc. Various techniques are there in the market to clean up the oceans but what if these techniques are not even needed in future if we are making continuous effort to take care of our marine environment.



1

Group-C items containing synthetic slippers/footwear (other than leather items) were 110g / m2.[2]. Group D items that included glass bottles, electric bulbs, and CFL bulbs had 500g / m2. Group-E contains e-waste (TV / computer

It shows the Ganga river pollution in Varanasi.

*Assistant Professor, Department of Design
 ** MTech, Department of Climate Change