

## Moving towards Cleaner Oceans

Marine pollution is a global issue and global action is needed to address the problem.

In 2005-06, plastics were not a global issue. But the matter has gained significance now, as nearly 8 million tonnes of plastic waste get dumped on ocean floors every minute which causes acidification of oceans, froth in lakes, and evidences of micro plastics.

50 MT of microplastics enter the oceans per minute. In total, about 80% of marine pollution comes from land-based sources. Plastic pollution started 30 years ago but we are facing repercussions now as plastic is a synthetic material that stays for millions of years.

Mr. Chandrasekhar pointed out that nearly 30% of solid waste generated in Mumbai is disposed into Nullahs (drains) which ends up into rivers, and finally reach oceans. About 30% of pollutants reaching the oceans come from sewage. The problem of marine pollution also has to be looked at in respect of the Sustainable Development Goal 14.

The challenges to addressing marine pollution include multiple stakeholders with no common ground and without ownership of the oceans. Knowledge on marine pollution and its quantification is incomplete; we know about the socio-economic impact of marine pollution but do not have enough data on plastic reaching the oceans. This data gap is very high. Though about 60-70% collection of plastic waste occurs, the real concern is that 40% of that leaks out of collection systems. Dr. Pandey mentioned that only 9% of waste is recycled globally and majority goes into landfills and oceans. TERI did a study on land based coastal pollution a few years back, covering literature on how improper solid waste management leads to marine litter.

Though microplastics are dangerous for the environment, Prof. Lampitt pointed out that not much is known about what harm they do. Instead, we are jumping to solutions without comprehending the real problem. At present, the marine ecosystem is under a variety of pressures and sincere thought needs to be given to the risks posed by such pressures. Risks should be looked at in two ways – 'Risk to Exposure' and 'Risk of Harm'. There is a lack of understanding of risk regarding environmental issues. Effort should be focused on understanding what the problem is. This is because other sorts of solutions (such as controlling waste once it is littered) are extremely difficult.

Dr. Vijay Habbu mentioned that there is a lack of knowledge regarding plastics. People don't know the differences between flexible and rigid plastics, and the various types of packaging materials - single polymer, multiple polymer, and multicomponent packaging. Problems occur on 3 different outlooks we carry. The first outlook leads to a situation where sometimes remedies are missed for a problem.

There is a need to have absolute clarity on whether the problem lies in the products or behaviour.

The second outlook, is to have a need of an integrated approach at each level. The outlook of states and UTs needs to be uniform in order to prevent ease of waste transfer between states and national boundaries.

The third outlook, is to know the basics of plastics, components and polymers. Government of India has come up with 6 rules on waste management and environment agenda.

However, the policy gaps are that wastewater, E-waste and C&D policies are not seen in a

consolidated manner, despite the fact that all of these wastes have plastics. ULBs in Germany provide space for industry to provide waste collection services. The challenge is, adaptation in the Indian context for mainstreaming the informal sector. The role of informal sector was highlighted to easily foster waste mitigation, citing a pilot project in Gurgaon, involving 45,000 households.

Solutions to addressing marine pollution include acting collectively at the global, national and regional levels to facilitate transfer of technologies, capacity building, through environmental assembly/sustainability; and to use innovations and best practices from other parts of world, in India.

A complete ban on plastics is not necessary - imagine certain essential facilities like hospitals without plastics at this point in time. We need better waste management systems, better approaches to address leakages and improving collection, starting from coastal cities. Improvements of waste management on land should be seriously considered. Need to force industries involved in MLP production, to move from multiple component to multiple polymer and single polymer packaging. Since the different types of plastics are used by manufacturer to provide consumers with the best product, packaging stakeholders should be represented at important fora on plastics. The right approach would be to set a price on printed bags.

We need to bring the concept of centralised waste mitigation in the waste management rules and regulations, focussing on different waste streams under one roof. The Shared Producer Responsibility/ Extended Producer Responsibility should be discussed. There is also a need to approach policy making and implementation in an integrated fashion. Thereby, Ministries working together towards successful policy making, and agencies such as GIZ/ other donor agencies partnering with ULBs/cities to ensure successful implementation.

Integrated management of oceans including food, energy and transport is needed. Oceans can be used for green transport of ships using renewable fuels, and for energy production from untapped reserves in the ocean beds. ULB should not force industry into collection EPR. Instead, we should recognize strength of industry and use it accordingly.

Current steps towards cleaner oceans include an MoU signed by the governments of India and Norway to contribute to sustainable blue economy. A joint agreement signed on February 11<sup>th</sup> 2019, included support to local governments, collecting and analysing information on the source of marine pollution, cleaning efforts and awareness campaign, and a pilot project in the cement industry replacing coal.

The Ministry of Earth Sciences (MoES) is quantifying the marine litter including, plastics, and has established about 25 years of data. The next step is to formulate policies and a strategy. Ministries support different government bodies and NGOs for mitigation activities relating to marine pollution. There are various regulations dealing with marine pollution, including Coastal Regulation Zone (CRZ) notification issued by MoEFCC. Considering the needs and magnitude of the situation, a comprehensive notification from an environmental viewpoint has recently been issued. The Ministry, particularly for plastics, has come up with a detailed specific regulation, which banned plastics of less than 50-micron thickness, including polybags. Integrated Coastal Zone Management (CZM) project was undertaken in parts of Gujarat, Odisha and Bengaluru, and the coastline was mapped to see how far areas are intertidal zones. The data for the entire coastline is now digitally available and maps have

been developed. This also looks at sustainable livelihoods of people in these areas. 1-2 km per beach were cleaned under this project and one beach project was piloted under “BEMS” program which will be a comprehensive environment tourism project to get piloted beaches certified from FEE –blue flag certification.