

## Minutes of the Meeting

### Workshop on "Microplastics- A Global Pollution"

Venue: India International Centre (IIC)

Date: July 14, 2022 (10:00-5:00)

Toxics Link organised a day-long workshop entitled '*Microplastics-A Global Pollution*', on July 14, 2022, at India International Centre (IIC).

**Dr Aakansha Mehrotra**, Toxics Link, welcomed all the participants and speakers and briefed the participants on the need for the workshop and the detailed program for the day. Dr Mehrotra then invited Mr Ravi Agrawal to give the welcome address.

**Mr Ravi Agrawal**, the Founder-Director of Toxics Link, spoke about the organisation's work on environment issues. Toxics Link has worked in depth on various aspects of plastic and microplastics—from single-use plastics to plastics in non-woven bags, from microplastics in packaged drinking water to in cosmetics, to in tap water, to in textiles. Microplastics have become one of the markers of the Anthropocene and its omnipresence has made it challenging to deal with it. Highlighting challenges in the microplastic study and research Mr Agrawal expressed a feeling of surprise at very little communication on the units of mapping, the size and shape-wise distribution of microplastics, their source of origin, etc. He raised concern about the lack of information on the presence of Microplastic in the air and also of chemicals in microplastics. He emphasised the need for setting up standards and benchmarks to map the long-term impacts and hoped to see some engagement in this line.

#### Session 1

After the welcome address, the first session on '**Current issues, pathways into the environment, and impacts of microplastics**' commenced. The session was chaired by Mr Ravi Agrawal, and four speakers gave talks on different aspects of microplastics

**Dr Sumit Sharma**, Program Officer, UNEP, presented on Global Information and Data on Microplastics. Dr Sharma focused on the severity of the challenges of microplastic pollution in the marine, soil, air, food chain, and bio-forms. He reported that there would be more plastics than fish in the marine environment by 2050. The severity of the situation was emphasised as people ingest about 5 grams of microplastics every week. He also discussed the various global initiatives on controlling marine plastic litter. He added that there is need to do further research on the issues, especially related to health impacts.

**Dr Amit**, Program Coordinator, Toxics Link, discussed Microplastics research in India. Dr Amit discussed Toxics link research findings on microplastics in the Ganga River, Tap waters, cosmetics, and agriculture fields. Microplastics used in personal care products ultimately enter the environment as sewage treatment plants are not designed to treat them. He also discussed the studies on microplastics in bottled water and salt.

**Dr Vijai Dharmamony**, Associate Director, Marine Conservation from WWF-India, discussed 'Impact of microplastics on marine ecosystems'. Dr Dharmamony emphasised the need for regularly assessing the levels of microplastics in seafood. Dr Dharmamony also talked about the

classification of plastics based on their size— mega, macro, meso, micro and nano He highlighted the need for research on the assimilation of a range of microplastic sizes and compositions into human tissues.

**Dr Paromita Chakraborty**, Associate Professor from SRM university talked about the polymers and chemicals in microplastics and their impact on the environment and health. She underlined the open burning as one of the potential sources of chemicals and microplastics in the environment. She said that bioaccumulation is very high for hydrophobic chemicals due to their adsorption to microplastics. She claimed that plastic additives and flame retardants are retained in microplastics, and the Persistent Organic Pollutants (POP) and open burning and leaching from plastic litter are the major factors for POPs release.

The session witnessed an enthusiastic involvement of the audience in the question-and-answer session. The queries and discussion revolved around the omnipresence of microplastics and their impact on the ecosystem and bio-forms. Some queries were raised about microbeads in cosmetics. In response to one such query on the presence of microbeads in foreign cosmetic brands, Dr Amit explained that in their research, they found microbeads in the products of all the brands. Ms Priti Mahesh of Toxics Link further added that the studied brands were not reported to have plastic beads in their products to be sold in western countries, while the same brands had it in India. Summarising the session, Mr Ravi Agrawal emphasised that there is a need to think more about the survival of multispecies, as other species are not guinea pigs for the human being.

## Session II

The second session on ‘**The role of product design and manufacturing in preventing microplastic leakage**’ was chaired by Mr Satish Sinha, Associate Director of Toxics Link.

**Dr Rachna Arora**, technical advisor from GIZ India discussed plastics and circularity, Dr. Arora spoke about bringing circularity in plastic waste management and commented that in India, our approach towards handling waste is focused on end of pipe solutions. Dr Arora next explained the circular economy aspect present in the PWM rules, 2022 (EPR notification). She emphasised the importance of circularity of plastic packaging as reuse of it , recycling it, and use of recycled material in packaging.. She further explained the bottleneck in the rules and there is a need to understand issues which arises in low value plastic packaging and the infrastructure present on ground. She gave an example of MLPs (which are low value plastic packaging) having 17 different polymer layers which are difficult to recycle identifying the polymers. Thus, extensive research and evidence-based research is required, which needs to be made available to the public for better policy and decision making.

**Dr Girija bharat**, founder and Director, at Mu Gamma discussed microplastics in wastewater. Dr. Bharat also emphasized the importance of how microplastics can act as a vector and absorb harmful endocrine disrupting chemicals. She pointed out how population plays a role in data generation pointing out that European countries have higher per capita plastic waste generation as compared to India. However, India releases more amounts of plastic waste as compared to European nations due to its higher population. Dr Girija further explained the presence of microplastic in wastewater and how extensive research is required but also its dissemination to the

public is equally crucial. Dr Girija concluded the session by briefly going over the National Policy Framework on Safe Reuse of Treated Water (SRTW).

The discussion was followed by a question-answer session which mainly emphasized the shapes of microplastics and their capacity to absorb chemicals and how it affects human health. The responses were focused on gaps in research and knowledge sharing. A question regarding the contamination of tap water in third world countries was raised. Dr. Girija explained that water treatment plants in India are not capable of removing the harmful chemicals and microplastics and thus making direct consumption of tap water harmful in third world countries.

### **Panel Discussion 1: Gaps of research and upstream issues**

Due to some technical issues, Panel discussion 1 was cancelled.

### **Session III**

The third Session on ‘Addressing plastic issues through Circular Economy’ commenced. The session was chaired by Mr Manjeet Saluja, National Professional Officer (Environment & Public Health), WHO. Mr Saluja began the session by harping on the effects of microplastic on human health and emphasized that a total environmental impact should be studied to understand the reality and analyse the loopholes to come up with a better solution. Furthermore, he magnified the significance of the circular economy and concluded by capturing the idea of treating plastic not as a waste but as a source of renewable energy that can be taken into consideration with further research and development.

**Ms Swati Singh Sambyal**, Waste management expert, UN-Habitat, discussed ‘Best Practices for Plastic Waste Management’. She spoke about the link between plastic waste management and SDGs, addressing 14 out of 17 SDGs and explained the cross-cutting nature of the work along with issues. Next, Ms Sambyal explained the historical timeline for regulatory and policy frameworks for plastic waste in India and also the waste composition in MSW. She shared with the audience her experience amplifying her work in the two cities, Thiruvannthapuram and Mangalore, where she pointed out various concerns in the system like data discrepancies, knowledge gaps and lack of awareness among relevant stakeholders. She further harped on the importance of sharing data and results among all the stakeholders involved in the subject to increase knowledge sharing, the effective utilisation of resources and creating an authentic database that can be easily accessed by all. She also highlighted the multi-use nature of materials like plastics and the need to study their lifecycle and present alternatives. This will help to strategize their usage in a better way.

**Ms Saloni Goel**, Climate change and Substantivity expert from UNDP, discussed Sustainable Plastic Waste Management by highlighting various perspectives like streamlining the leakage of plastic in the environment, plastic waste value chain and optimising resource recovery. Ms Goel mentioned that though the PET value chain is established in India, there is hardly any concern for low value plastics, and thus innovation and investment are required to deal with the issues holistically. She harped on the importance of comprehensive research and explained the sustainability approach through three facets: financial, social and regulatory. She further magnified the importance of upcycling to generate better products and source segregation models sans the

focus on only waste to energy or recycling. There needs to be a change in our approach towards understanding waste and its proposed solutions.

**Ms Nandini Kumar**, Consultant from CII discussed the perspective from industry and their initiatives in addressing reduction of plastic pollution. Ms Kumar explained the work CII has done to tackle plastics pollution through main drivers– Policy, Data and the work done under India Plastics Pact. Ms Nandini further explained how the Plastic Pact is a great step in working together with other nations, and its resourcefulness for India as it is a global network. For instance, EU has Plastic Pact and ANZPAC, while other nations have their own pacts. To conclude, Ms Kumar gave a brief progress of the IPP till date. Currently developing design guidelines for recyclability, Collaborative Action Group 3 (CAG 3) has initiated work to enable the recycling of 50% of plastic packaging of the India Plastics Pact members.

The discussion was followed by a question-answer session which mainly highlighted the issues of best practices, workers in segregation, plastic recycling and its sustainability. A question was raised regarding the safety of plastic containers and recycled plastic containers. Ms Nandini pointed out that there are regulations regarding plastic packaging but hardly any regarding recycled PET however, in the EU there are regulations but not without gaps. She added that in India if a standardised regulation is introduced, it will help to administer the safety of recycled plastic quality better.

### **Special talk “Government policy on plastics waste management in Delhi”**

**Dr K S Jayachandran**, Special Secretary (Environment & Forests), Govt. of NCT of Delhi as well as Member Secretary, Wetland Authority of Delhi as well as Delhi Pollution Control Committee, discussed the work done by Delhi government on plastic waste and emphasised on the action taken under ban on Single-Use Plastic. He added the major actions taken by the government, mainly highlighting a comprehensive action plan and By-laws for effective enforcement along with an assigned task force at state, city and district level. Dr Jayachandran magnified the utility of material recovery centres and how the Delhi “dhalaus” are switching to material recovery centre. Finally, Dr. Jayachandran focused on the best practices implemented by DPCC to target awareness and also claimed that if everything goes according to the plan by September (2022) 100% of the waste will be disposed.

There are questions that were raised which mainly addressed incentive schemes, recognition of ragpickers, how plastic pilferage is taking place in India and the lifespan of microplastic which were responded by **Dr Jayachandran** backed by his experience in DPCC.

### **Panel discussion 2: Global plastic policy and how can India contribute**

The discussion was moderated by Satish Sinha. The panel consisted of Ms Beate Langset (Norwegian Embassy), Ms Swati Sambyal, Ms Nandini Kumar. The main question posed by the moderator was how does microplastic find significance in the treaty along with the perils and lifecycle of microplastic? The panellist shared their perspectives, Beate stated that western countries generally generate more plastic waste and have more research data which can be used for knowledge sharing globally and thus will help in country-specific negotiations and planning of



plastic waste management. Next, Ms Sambyal discussed the problematic issue of plastic waste linking it to health and environment along with discussing its transboundary nature thus, the approach should be multi-sectoral, involving all key stakeholders. Ms Nandini also pointed out the aspect of transboundary movement of plastic pollution along with other underlying aspects pertaining to the success of the Montreal protocol and how it can serve as a model and plastic being a driving force of raising the standards of living posing as a lifestyle.

Mr Satish Sinha concluded the session by highlighting the importance of the discussion in the current scenario and thanked all the panellists for sharing their knowledge and pointing out the gaps in various research along with sharing the best practices. He emphasized on the importance of more research and deliberations on the subject, especially in the context of upcoming Plastic Treaty.