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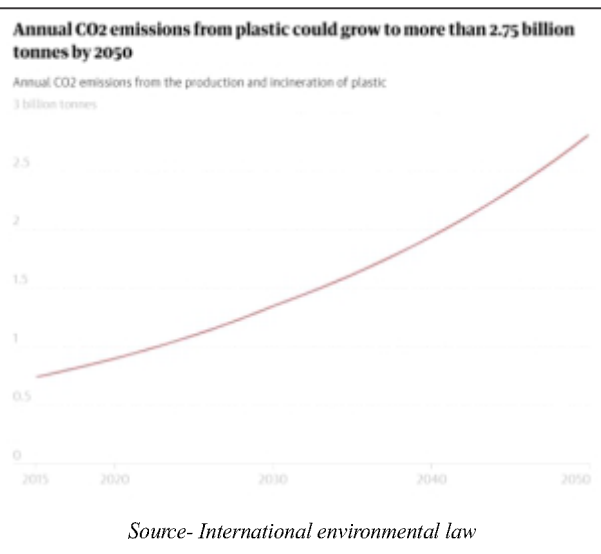
Dr. Arvind Kumar
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Cudgelling Plastics: Actuality or Illusion

At current levels, greenhouse gas emissions from the plastic lifecycle threaten the ability of the global community to keep global temperature rise below 1.5C. In 2019 the lifecycle of global plastic production – from extraction to disposal – was equivalent to the impact on the climate of 189 500MW coal-fired power stations. By 2050, the report predicts, the global plastic footprint will be equivalent to 615 coal plants running at full capacity.

“Yes, UNEA 5.2 and UNEP@50 have delivered on plastic pollution. But history ultimately will not judge us on resolutions agreed or plans made. It will judge us on actions delivered. It will judge us on whether we create a world without plastic pollution.” Said Inger Anderson at the closing of UNEA 5.2 which became a historic moment as delegates agreed to establish an Intergovernmental Negotiating Committee with the mandate to forge an international legally binding agreement to end plastic pollution by the end of 2024. India took precedence and in June 2018, Prime Minister Narendra Modi had announced that India will eliminate all single-use plastic items in the country by 2022. Single-use plastic items such as earbuds, balloons, ice-creams and candies with plastic sticks, plastic flags and thermocol used in decoration will be banned from the specified period. The use of plastic items that have a thickness of less than 100 microns such as plates, cups, glasses and wrapping or packing films around sweet boxes, invitation cards and cigarette packets, as well as cutlery products like forks, spoons, knives, straw and trays, will also be prohibited.

We do not realize that plastics originate from fossil fuels. In fact, the plastic industry accounts for about 6 percent of global oil consumption and is expected to reach 20 percent by 2050. As a result, due to the energy-intensive processes required to extract and distil oil, the production of plastics generates enormous amounts of greenhouse gas (GHG) emissions. When plastic is discarded in recycling bins, it goes away. But there is no “away” – only 9 percent is recycled globally and the rest is dumped in the natural environment. In fact, South Asia is one of the largest generators of plastic waste, discarding more than 26 million tons of plastics every day. South Asia also has among the world's highest portion of waste that is openly



dumped. When not recycled or disposed of in a controlled manner, discarded plastic waste generates GHG emissions when exposed to solar radiation both in air and water. At current levels, greenhouse gas emissions from the plastic lifecycle threaten the ability of the global community to keep global temperature rise below 1.5C. In 2019 the lifecycle of global plastic production – from extraction to disposal – was equivalent to the impact on the climate of 189 500MW coal-fired power stations. By 2050, the report predicts, the global plastic footprint will be equivalent to 615 coal plants running at full capacity. Around 18 million tons of plastics originating from South Asia are mismanaged and, consequently, are washed into the ocean, where they emit methane and ethylene due to exposure to sunlight. Polyethylene is the highest emitter of both gasses and is the most produced and discarded synthetic polymer globally.

New business opportunities in the plastic waste management domain, new innovations and technologies which will help to overcome the challenges related to plastic waste collection segregation and recycling should be explored. Grass-root entrepreneurs should be motivated and incentivized to take up plastic recycling as a new business venture.

Commitments and Promises

India generates around 9.46 million tonnes of plastic waste annually, according to a recent study by Un-Plastic Collective (UPC), of which – 40 per cent remains uncollected and 43 per cent is used for packaging, mostly single-use plastic. Some experts and environmentalists generally agree that the ban is not sufficient on its own and needs to be



supported by other initiatives, government regulations and alternatives to plastics. Currently, a complete ban on plastic bags has been stayed by high court on a plea from the plastic industry. Almost all plastics eventually weather into micro versions of themselves. They flow from open dumps into nullahs and the Yamuna, eventually reaching Bay of Bengal. In fact, over 80% of the ocean's plastics come from land.

It is clear that we cannot lose the momentum. What then should be the focus now? To begin with, the government should invest money in encouraging the setting up of ventures that provide sustainable products as an alternative to current non-recyclable products. With a vibrant MSME ecosystem in the country and thousands of start-ups being incubated should come up with alternatives to single use plastics. According to industry data, from the tonnes of plastic that are wasted

annually, most of it is single-use. Now is the time when we should start adapting to a newer lifestyle by completely eliminating the use of single-use plastics. Offering various types of products for our daily needs, helping individuals to become more environmentally-conscious in pursuit of a cleaner and healthier planet. Single-use plastic has the most deteriorating effects on the environment and the species in it. In India itself, various states have banned the use of plastic carry bags, and have suggested opting for alternatives. A lot of individuals are fast-changing and are now switching to sustainable practices.

Can MSMEs deliver alternatives

We have to leverage India's rich start-up repertoire whilst also providing support to the country's start-up ecosystem. New business opportunities in the plastic waste management domain, new innovations and technologies which will help to overcome the challenges related to plastic waste collection segregation and recycling should be explored. Grass-root entrepreneurs should be motivated and incentivized to take up plastic recycling as a new business venture. Spider silk film and seaweed can replace plastic in various applications such as single-use sachets, which make up as much as 50 percent of all household plastic waste.

In Maldives, an innovative collaboration between Parley for the Oceans and Adidas is bringing upcycled marine plastics into the global athletic wear supply chain. These sorts of innovations and partnerships show us that groundbreaking solutions for marine plastics and climate change exist and can be scaled up. Creating a circular economy has been recognized as one of the biggest changes that people

want nowadays in our society. The benefits represented by a more circular and inclusive economy are numerous; from reducing plastic waste to saving our natural resources and money, a circular economy seems to be the way forward in the next decades. We need to seize the moment and harness the interest and enthusiasm to act.

Opportunity for change

We have to eliminate all problematic and unnecessary plastic items. Innovate to ensure that the plastics we do need are reusable, recyclable, or compostable. Plastic is among the most significant and rapidly growing sources of industrial greenhouse gas emissions. Emissions from plastic emerge not only from the production and manufacture of plastic itself, but from every stage in the plastic lifecycle – from the extraction and transport of the fossil fuels that are the primary feed stocks for plastic, to refining and manufacturing, to waste management, to the plastic that enters the environment. Circulate all the plastic items we use to keep them in the economy and out of the environment. Cotton and non-woven polypropylene shopping bags are increasingly common, as are reusable and portable plastic and stainless-steel bottles, cups, and tableware. Reusability is also increasingly viable for personal hygiene products, through products like silicone menstrual cups and cloth nappies, bamboo-based products and glass ware. We need to innovate to create new materials and reuse business models and we need improved infrastructure to ensure all plastics we use are circulated in the economy and never become waste or pollution. The question is not whether a circular economy for plastic is possible, but what we will do together to make it happen. Ultimately, eliminating SUPPs is only one way to reduce environmental damage