



Single-use plastics and Extended Producer Responsibility (EPR)

REVIEW OF DRAFT EPR POLICY OF INDIA

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LEADING EDGE

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Contribution:

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The noun project

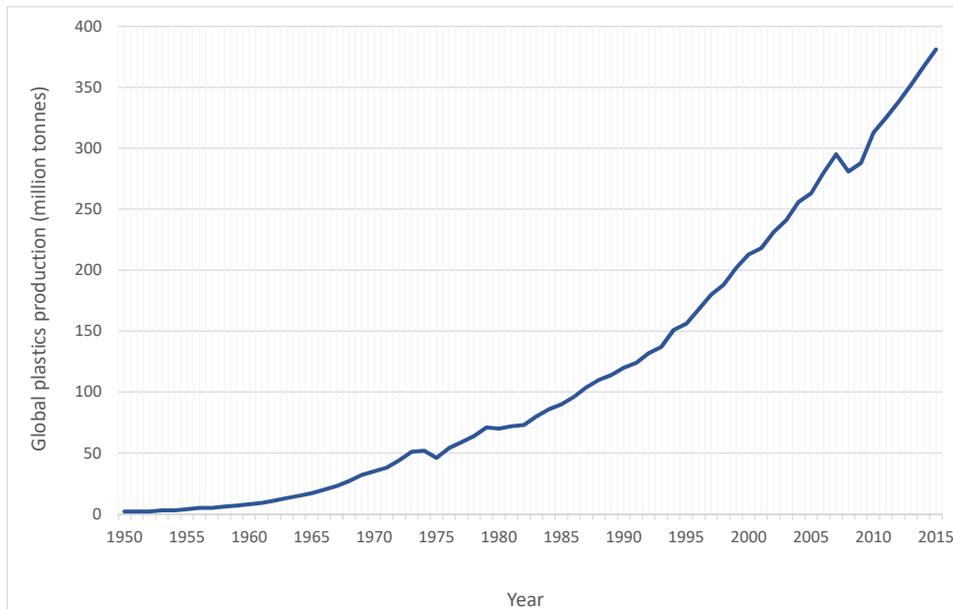
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Introduction

Plastics dominate our lives in the modern times and has allowed public access to electronic/electrical appliances, building construction and packaging materials. As per National Geographic, half of all plastics ever manufactured have been made in last 15 years (Parker, 2019). But due to mismanagement, lack of restrictions and policy interventions, plastic waste has made its presence all-pervasive, it can be found everywhere, be it mountains, forests, oceans, ocean floors or uninhabited islands. These single-use plastics amounted for more than 130 million metric tons in 2019, and depending on their composition can take between 400 to 1000 years for complete decomposition. Under ideal conditions, it breaks down further into smaller particles, micro plastics, aggravating water and land pollution, and endangering animals. Furthermore, if the production of single-use plastic is not curbed, it can account for 5-10% of world's greenhouse gas emissions by 2050 (Minderoo Foundation, 2021).

Global Plastic production from 1905-2015

(Annual global polymer resin and fiber production (plastic production), measured in metric tonnes per year.) Source: Geyer et al. (2017)





With so many problems relating to plastics, why do we still manufacture and consume it so much? This is because plastic is one of the most versatile innovations of our time, it is odourless, durable, lightweight and its manufacturing is inexpensive. They have revolutionized technology and made it economical and associable to a large portion of population. Paper bags are seen as an environmentally friendly alternative to plastic bags, they consume more than 4 times (Bell & Cave, 2011) as much energy to manufacture paper bags as it does to manufacture a plastic bag. Even cloth bags will have to be used more than 100 times to make it more environmentally friendly than a single-use plastic bag (Edgington, 2019). Furthermore, single-use plastics can be remanufactured into new products, including fibre for clothing and carpets, lumber for making furniture, and foam packaging. Even now, almost 15% of global plastic waste generated is incorporated in the textile industry. Realizing this, many countries have held manufacturing companies responsible for recycling/ disposal of plastic waste.

Mismanagement of single-use plastics leads to not only environmental and health impacts, but also economic impacts with high cost of transportation, future cost of removal/remediation and output of industries such as tourism and fishing. Recycling of plastics presents an opportunity for better management as less than 20% of plastic waste is recycled annually and more than 50% is discarded globally, although it can be recycled at least twice prior to their final disposal (Plastic Waste Partnership working group, 2020). Recycling depends not only on the waste collection schemes and infrastructure but also a viable market for recycled plastic products. In recent years, governments have fast-tracked initiatives focusing on regulating the process of plastic manufacturing and promoting recycling. These interventions – included plastic waste recycling targets, ban on single-use plastics and levying of taxes on suppliers, retailers, and consumers – to minimize the production and consumption of plastics.

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Extended Producer Responsibility (EPR)

Around 109 countries have adopted policies for plastic waste management. European Union and Canada have also set goals for achieving 100% reusable, recyclable, or recoverable plastics by 2030 in their respective markets (UN environment, 2018). International organization such as World Wildlife Fund (WWF) and United Nations have identified EPR as a critical policy tool for making the manufacturers accountable for their plastic products. EPR not only instigates manufacturers to share physical and financial responsibility but also promotes them to research and innovate the plastic product or its recycling. The implementation of EPR in Japan stands as a success story, wherein consumers and corporations collected 92.2% of PET (Polyethylene terephthalate) bottles used in the country and have recycled 84.8% of the recovered material, in fiscal year 2017. As a direct result of EPR, Producer Responsibility Organizations (PROs) – have cropped in multiple countries like Germany, Belgium etc. – third party organizations that collaborate with producers for managing the waste. In Germany, PROs have not only managed to attract producers for their services but have also increased the market for resale of packaging for recycling as recycling rates of sales packaging have surged from 37.7% in 1991 to 76.2% in 2016 (Der Grüne Punkt, 2017).

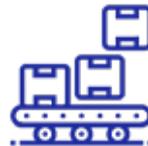
India already has Plastic Waste Management Rules (2016), in place for management of plastic waste and provided guidelines for waste minimization, source segregation, recycling, collection, material recovery, disposal and sustainability of the waste management system. The 2018 amendment further identified three stakeholders for the system and their responsibilities –



Administrative authority (local, state and central)



Waste generator



Producers/ Importers/ Brand owners



Amendments were then introduced in March 2021, which included minimum regulations to be followed by manufacturers (such as thickness) and prohibits manufacturing, import, stocking, distribution, and sale of single-use plastics like cutlery, banners, wrappings, sticks etc. It plans to phase out single-use plastics by the second half of 2022 (Plastic Waste Management (Amendment) Rules, 2021). Multiple states have bans placed on single-use plastic since 2018 including Maharashtra, Telangana, Himachal Pradesh and Tamil Nadu, whereas other states have banned specific plastics, like plastic carry bags, rather than placing a blanket ban.

To further address and enhance the role of producers/manufacturers, a draft of the uniform framework for EPR was published under the mentioned rule by the Ministry of Environment, Forest, and Climate Change (MoEFCC) in 2020. It offers three options to producers (Uniform Framework for Extended Producers Responsibility, 2020) –

- 1. Pay fees to central corpus for management** – The primary responsibility of collection, segregation and final disposal rest with local body, funded through central corpus fund. The fund is to be used for three purposes, infrastructure enhancement for plastic waste management by local body, formalization of informal workers and Information, Education & Communication (IEC) activity.
- 2. Buy credits to offset plastic waste they generate** – Similar to the carbon credits concept. The companies are required to be plastic neutral. If they are unable to reduce their plastic usage, they can buy credits and, the money is then used for recycling of plastic waste.
- 3. Establish PROs as third party for collection and management of post-consumer waste** – The companies do not need to complete responsibility and can involve PROs to perform EPR liabilities on behalf of their registered companies to ensure that equivalent amount of plastic is collected and processed.

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Plastic management practices in India

International collaboration such as Plastic Waste Management Programme (2018-2024) that is a collaboration of United Nations Development Programme (UNDP) India, in partnership with Hindustan Coca-Cola Beverages Private Limited (HCCBPL), Hindustan Unilever Limited (HUL), HDFC Bank & Coca Cola India Foundation (CCIF) (UNDP India, 2020). The program has also complemented the existing system of management through addition of 22 Material recovery plants, institutionalized workers from informal sector and provided social security, and partnered with MoHUA for Swachh Survekshan 2020.

Indian start-ups such as Banyan Nation have been acting as provider of recycled plastic instead of virgin plastic to global brands. Their technology focuses on plastic cleaning and converting post-consumer plastic waste into high quality recycled granules. They have also integrated informal waste collectors within their recycling process to manage the waste effectively. Even hospitality industry has taken initiatives, wherein Hyatt Regency Delhi has announced launch of in-house bottling plant, replacing plastic bottles by glass bottles, and is expected to save 28 tonne of plastic waste every year (Sharma, 2021).

Social initiatives engaged in addressing plastic waste problem in India have been acting as PROs for some time now. Odisha's Garbage café, rolled out under the state's Aahar scheme in Kotpad Notified area council and provided a Rs. 5 per meal in exchange for a kilogram of plastic waste such as plastic bottle, polythene bags and cups. Similar initiative was also observed in Gujarat's Unique Café that offer a cup of tea in exchange of 500g of plastics (Reddy, 2020). A barter system Max Xchange collects waste in exchange of points which can be redeemed for an upcycled product such as bamboo toothbrush, plastic tiles, incense cones etc. It has recycled over 15 tonnes of plastic with a customer base of over 3000 (Ahuja & Bhaskar, 2020).

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Suggestions and way forward

While studying the document, three key concerns were observed in reference to the supply chain of the plastic waste management.

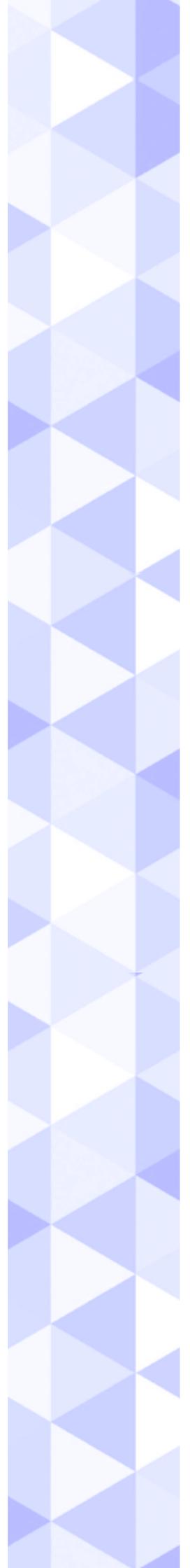
Unintended competition – Keeping in mind that 85-90% of the plastic manufacturing units vary in production and fall under small and medium-sized industries (SMSEs), multiple options will allow producers to opt for the criteria fit for their establishment. On the other hand, none of the options take into consideration the informal sector, and the process of its formalization is not addressed in the EPR yet. The options provided will create competition between the local bodies and PROs, as much it holds promise for better competition, it also hinders the objective of reuse or recycle packaging rates.

Need to define roles, responsibilities and targets. – Although, the draft identifies collection, segregation and final disposal of plastic as a responsibility of local body, but it has not identified the activities that can be undertaken by PROs. Hence, there is also a need to clarify the responsibilities of the local body, PROs and the producers. Defined roles of consumers, producers and PROs will help facilitate the process in an organized manner.

Plastic waste management rules, 2016 provides guidelines for local bodies and draft EPR policy attempts to hold the manufacturers accountable in some manner. Although bulk waste generators are identified but no policy or document has actively addressed the need to identify the responsibilities or roles of consumer in the waste management process.

Furthermore, there is a need to promote innovation, research, and development for exploring alternatives that are environment friendly and make them affordable for mass production.

Detailing of plastic credits – No criteria for deciding the credits allotted to a producer or fees that needs to be paid to local bodies. The companies should be further held accountable for the plastic production by setting minimum targets that needs to be met such as the amount of recycled material used, introducing compostable plastic etc.





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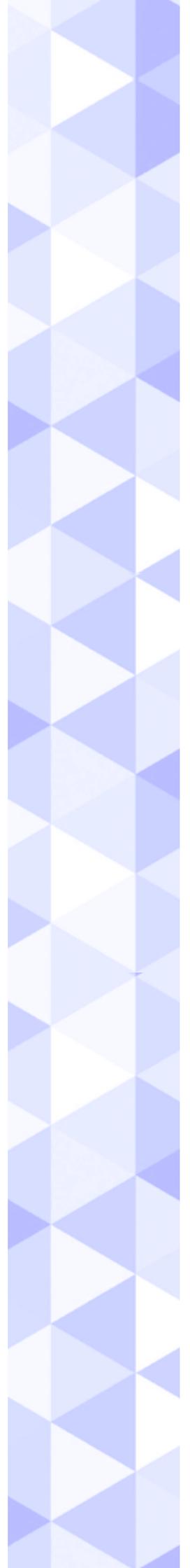
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