

# Circular Economy in Plastic Packaging and SUP Ban

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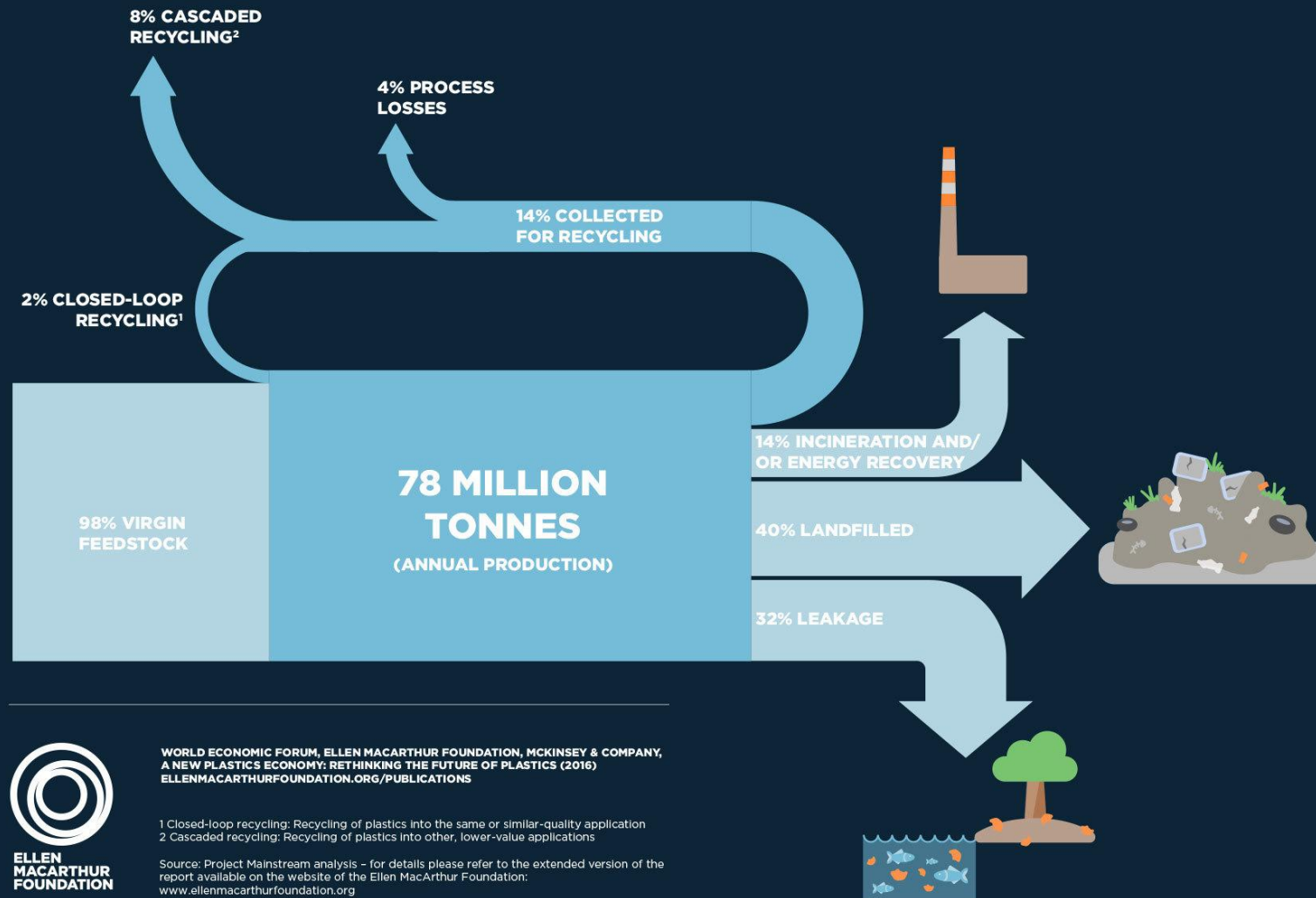


Federal Ministry  
for the Environment, Nature Conservation,  
Nuclear Safety and Consumer Protection



Deutsche Gesellschaft  
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## TODAY, PLASTIC PACKAGING MATERIAL FLOWS ARE LARGELY LINEAR

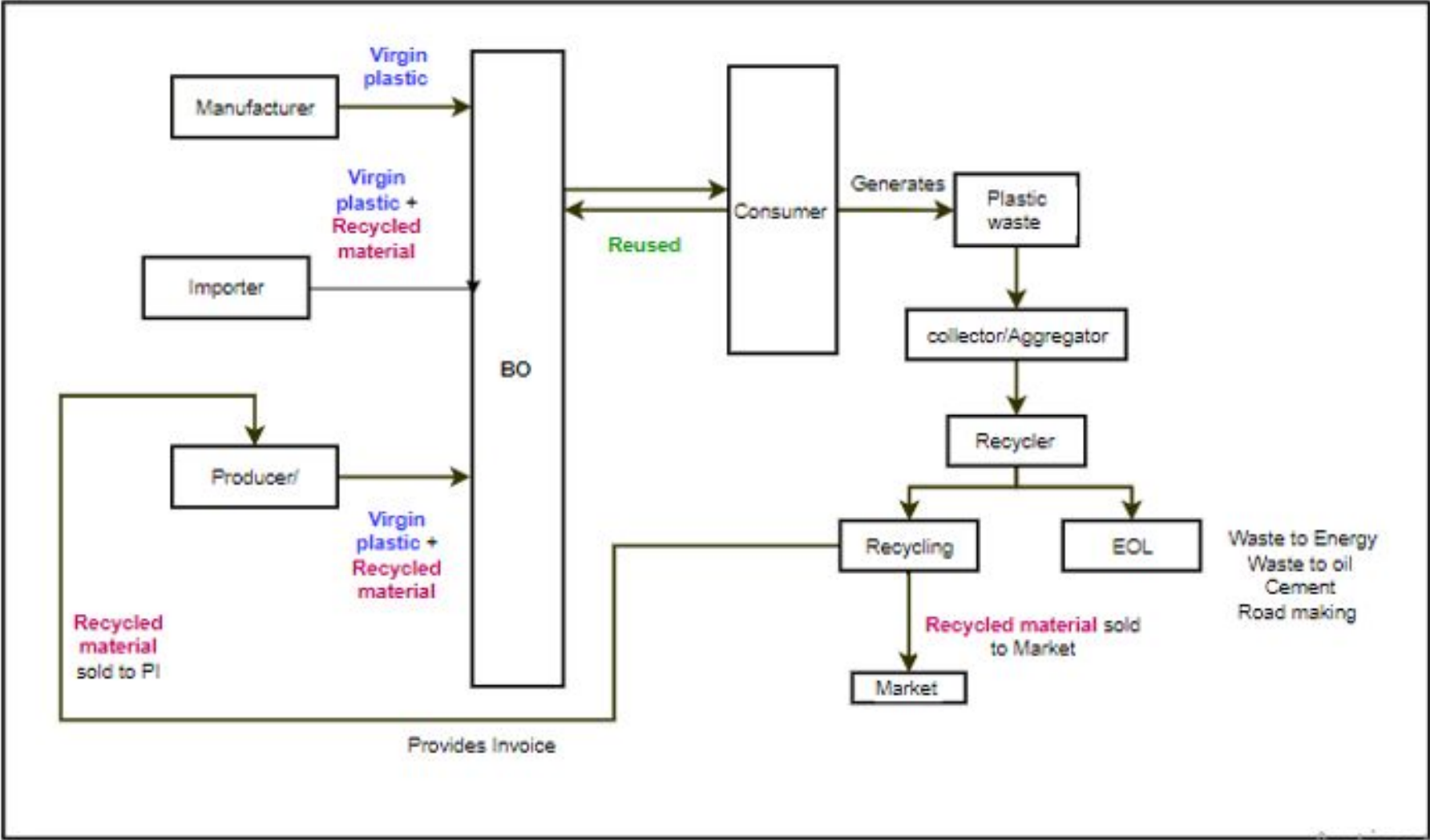


# Plastic Waste Management Status

The Plastic Waste Management Rules, 2016, provide the statutory framework for environmentally sound management of plastic waste in the country.

Particular	Tonnes per Annum
Plastic waste generated	34,69,780
Plastic waste recycled	15,80, 000
Plastic Waste co-processed	1,67,000
Other end of life uses - road construction, waste to oil etc.	small fraction

# Material Flow



# The EPR Concept

An environmental policy approach in which a **producer's responsibility** for a product is **extended** to the **post-consumer stage** of a product's life cycle.

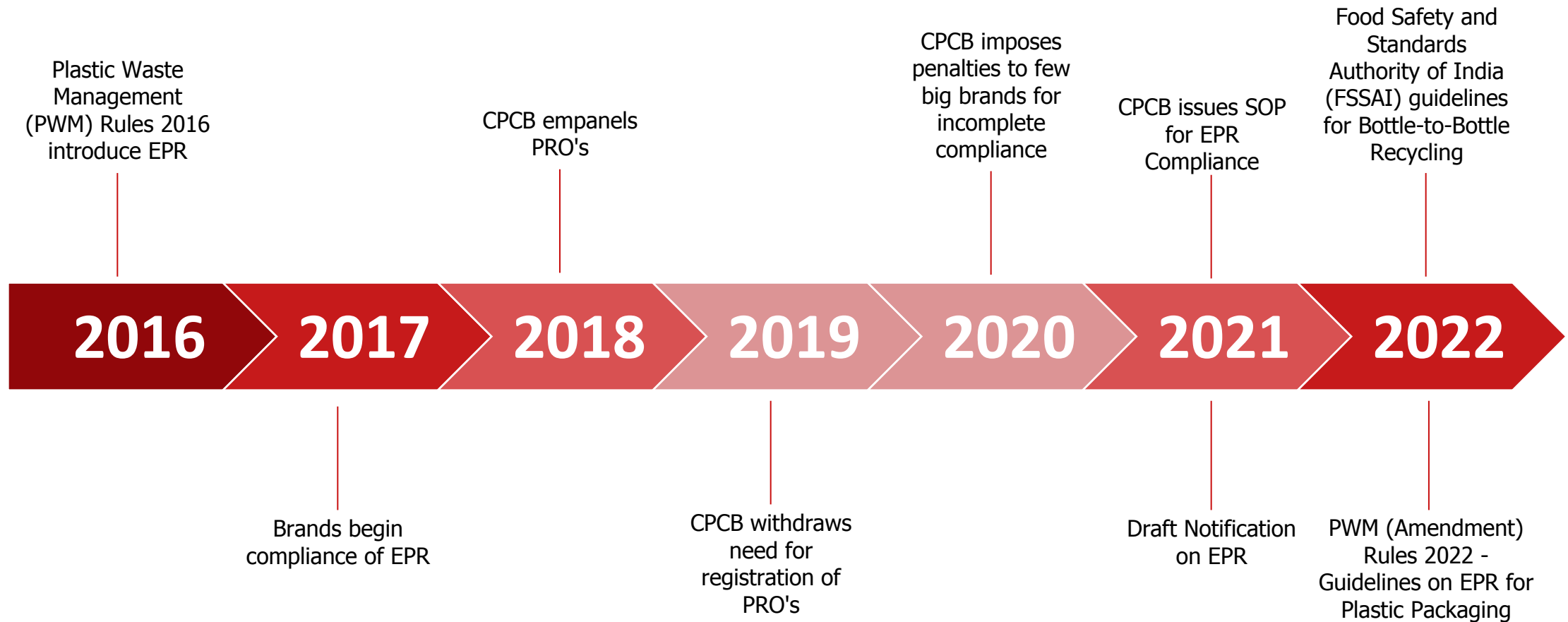
An EPR policy is characterized by:

- the **shifting of responsibility** (physically and/or economically; fully or partially) upstream **towards the producer**, away from municipalities; and
- the provision of **incentives for producers** to consider environmental consequences when designing their products.
- **reducing material consumption, using more secondary material, promoting product eco-design (DfE)**



Expansion of Polluters Pay Principle

# EPR Timeline in India



# PWM (Amendment) Rules, 2022

## Guidelines on EPR for Plastic Packaging

- Provides framework for the implementation of Extended Producers Responsibility (EPR) in India.
- Provide the roles and responsibilities of Producers, Importers, Brand Owners (**PIBOs**), Central Pollution Control Board (CPCB), State Pollution Control Board (SPCBs) or Pollution Control Committees, recyclers and waste processors.
- Provides **framework to strengthen circular economy of plastic packaging waste, promote development of new alternatives to plastics and provide further next steps** for moving towards sustainable plastic packaging by businesses.



# Examples of PIBOs

Producers	Importers	Brand Owners
<ul style="list-style-type: none"><li>• Varun Beverages Limited</li><li>• Huhtamaki India Limited</li><li>• Mold Tek Packaging Ltd</li><li>• Amcor Flexibles India Pvt Ltd</li><li>• Weener Empire Plastics Pvt Ltd</li></ul>	<ul style="list-style-type: none"><li>• Oriflame India Pvt Ltd<ul style="list-style-type: none"><li>• Samsung India Electronics Pvt Ltd</li></ul></li><li>• Johnson and Johnson Pvt Ltd</li><li>• Honda Motorcycle &amp; Scooter India Pvt Ltd</li></ul>	<ul style="list-style-type: none"><li>• Nestle India Limited</li><li>• Tata Consumer Products Ltd</li><li>• Electrolux India Pvt Ltd</li><li>• Microsoft Corp India Pvt Ltd</li><li>• Tata Starbucks Pvt Ltd<ul style="list-style-type: none"><li>• Marico Limited</li></ul></li></ul>



# Examples of PWPs

Plastic Waste Recyclers	Waste to Energy Plants	Cement Companies	Waste to Oil
<ul style="list-style-type: none"><li>• 21 Century Polymers</li><li>• Sagar Polymers</li><li>• SampurnaEarth</li><li>• Safar Polyfibre</li><li>• Banyan Nation</li></ul>	<ul style="list-style-type: none"><li>• Hyderabad MSW Energy Solutions</li><li>• Timarpur-Okhla Waste Management</li><li>• Goodwatts Jamnagar</li><li>• Shah Paper Mills</li></ul>	<ul style="list-style-type: none"><li>• Dalmia Cement</li><li>• Ultratech Cement</li><li>• JK Lakshmi Cement<ul style="list-style-type: none"><li>• Shree Cement</li><li>• JK Cement</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Krishna Enterprise</li><li>• Sunrays Compost<ul style="list-style-type: none"><li>• Plastoil</li></ul></li><li>• Rudra Environmental<ul style="list-style-type: none"><li>• Green Oil India</li></ul></li><li>• Kirloskar Oil Engines</li></ul>

# Category I: Rigid Plastic Packaging

- Rigid plastics packaging is **mostly made from Poly Ethylene (PE), Poly Propylene (PP), and Poly Ethylene Terephthalate (PET).**
- The products are **mostly plastic containers** with open tops and separate closures, lids, or covers. **They are generally considered to be food-safe containers and can be recycled 100%.**
- They are **widely used, from groceries to bakeries, and from supply shops to pharmacies, rigid plastics are used to deliver a wide array of foods, products, and medicine we rely on every day.**



## Category II: Flexible Plastics

- Flexible plastic packaging of **single layer or multilayer (more than one layer with different types of plastic)**, plastic sheets or like and covers made of plastic sheet, carry bags, plastic sachet or pouches.
- Flexible plastic packaging plays **an important role in transporting food and other consumer goods** to the user in a safe and hygienic way. It protects products from damage as well as helping to maximise shelf life and minimise food waste
- It is the fastest growing plastic packaging category, and because it is almost uniformly single-use, with **very low recycling and high leakage rates**, it is also by far one of the most challenging market segment to address on the journey towards a circular economy for plastics.



## Category III: Multi-layered Plastics

- Multilayered plastic packaging (at least one layer of plastic and at least one layer of material other than plastic);
- Multiple layers are formed by coextrusion, lamination, or various coating technologies, and most **multi-layered packaging is not easily recyclable**.
- Multilayer packaging or MLP cannot be recycled using traditional plastic recycling technologies (like mechanical recycling) owing to the chemical incompatibility of the different layers, however there are various efforts underway globally to tackle this problem with advanced and complex technologies.

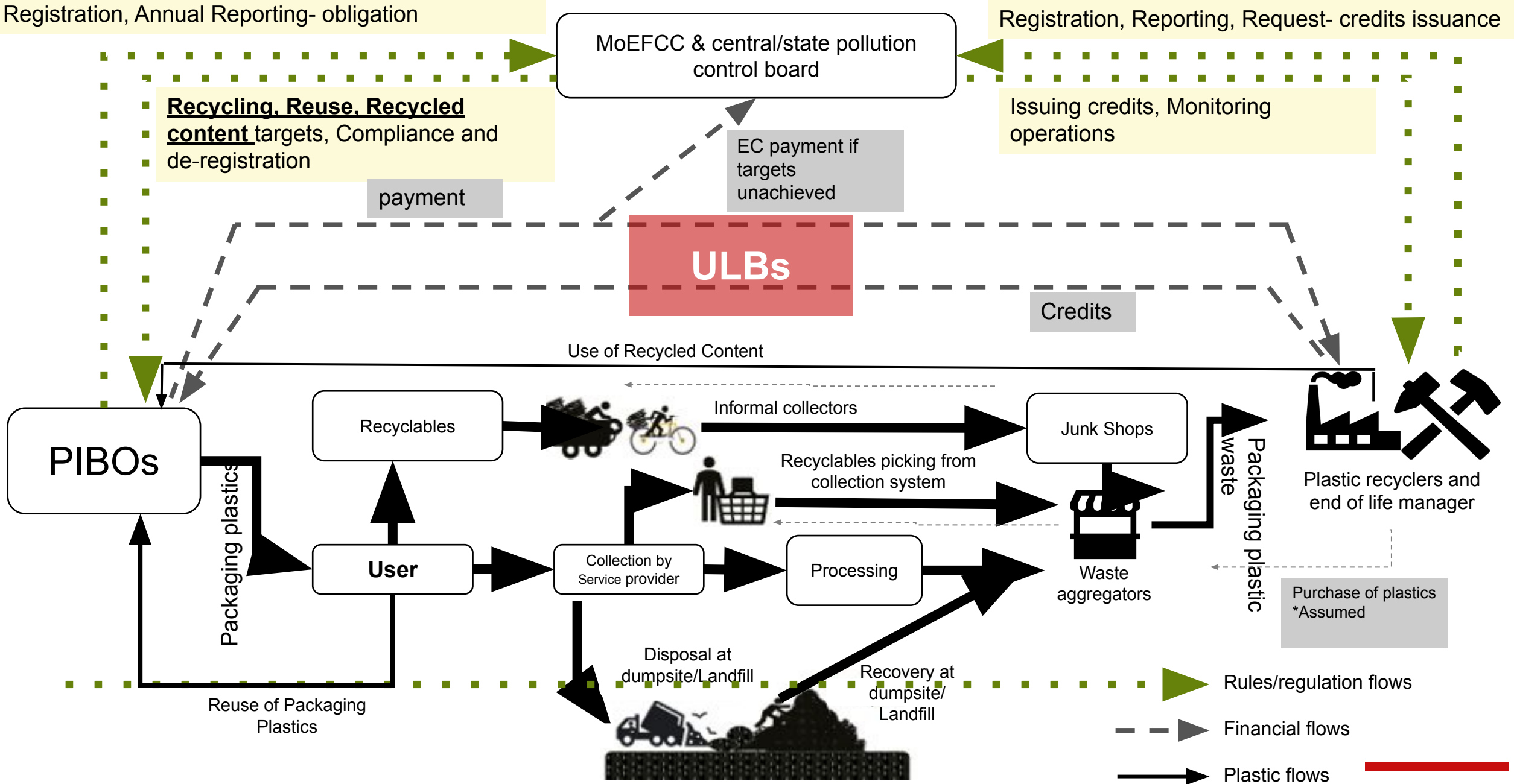




## Category IV: Compostable Plastics

- Carry bags made of **compostable plastics** as well as plastic sheet or like used for packaging.
- Instead of using plastic made from petrochemicals and fossil fuels, compostable plastics are **derived from renewable materials like corn, potato, and tapioca starches, cellulose, soy protein, and lactic acid**. Compostable plastics are non-toxic and theoretically **can decompose back into carbon dioxide, water, and biomass when composted**.
- However biodegradability of many compostable plastics is disputed, and claims are often inaccurate. Moreover, plastic that is compostable is biodegradable, but not every plastic that is biodegradable is compostable.





# Centralized Online EPR Portal – Launched on 5<sup>th</sup> April 2022

(<https://eprplastic.cpcb.gov.in/>)



Ministry of Environment, Forest and  
Climate Change Government of India

Centralized Extended Producers Responsibility Portal for Plastic Packaging



Home Plastic Waste Management Rules About EPR National Dashboard FAQ SOP



Waste to Energy at Gazipur, Delhi



Pre & Post Consumer Plastic Waste  
Segregation at Material Receiving  
Atmospheric  
End of Use Plastic Processing  
Recycling  
Use to re-process plastic  
Production of Packaging Material

EPR in Plastic Waste Management

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Responsibility of Producers, Importers & Brand Owners for management of their plastic packaging waste

## EPR Portal for Plastic Packaging

Extended Producers Responsibility (EPR) regime is under implementation in Plastic Waste Management Rules, 2016, according to which it is the responsibility of Producers, Importers and Brand-owners to ensure processing of their plastic packaging waste through recycling, re-use or end of life disposal (such as co-processing/Waste-to-energy/Plastic-to-oil/roadmaking/industrial-composting).

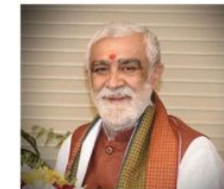
In order to streamline implementation process of EPR, the Ministry of Environment, Forest and Climate Change, Government of India, in its fourth Amendment to the Plastic Waste Management Rules, dated February 16, 2022, notified 'Guidelines on Extended Producer Responsibility for Plastic Packaging' in the Schedule II of the Rules. As per these guidelines, Producers, Importers and Brand Owners (PIBOs) shall have to register through the online centralized portal developed by the Central Pollution Control Board (CPCB).



Sh. Narendra Modi  
(Hon'ble Prime Minister)



Sh. Bhupender Yadav  
(Hon'ble Minister of EF&CC)



Sh. Ashwini Kumar Choubey  
(Hon'ble Minister of State of EF&CC)

The choices that we make today will define our collective future. The choices may not be easy. But through awareness, technology and a genuine global partnership. I am sure we can make the right choices. Let us all join together to beat plastic pollution and make this planet a better place to live.

-Hon'ble Prime Minister of India

# EPR Targets for PIBOs

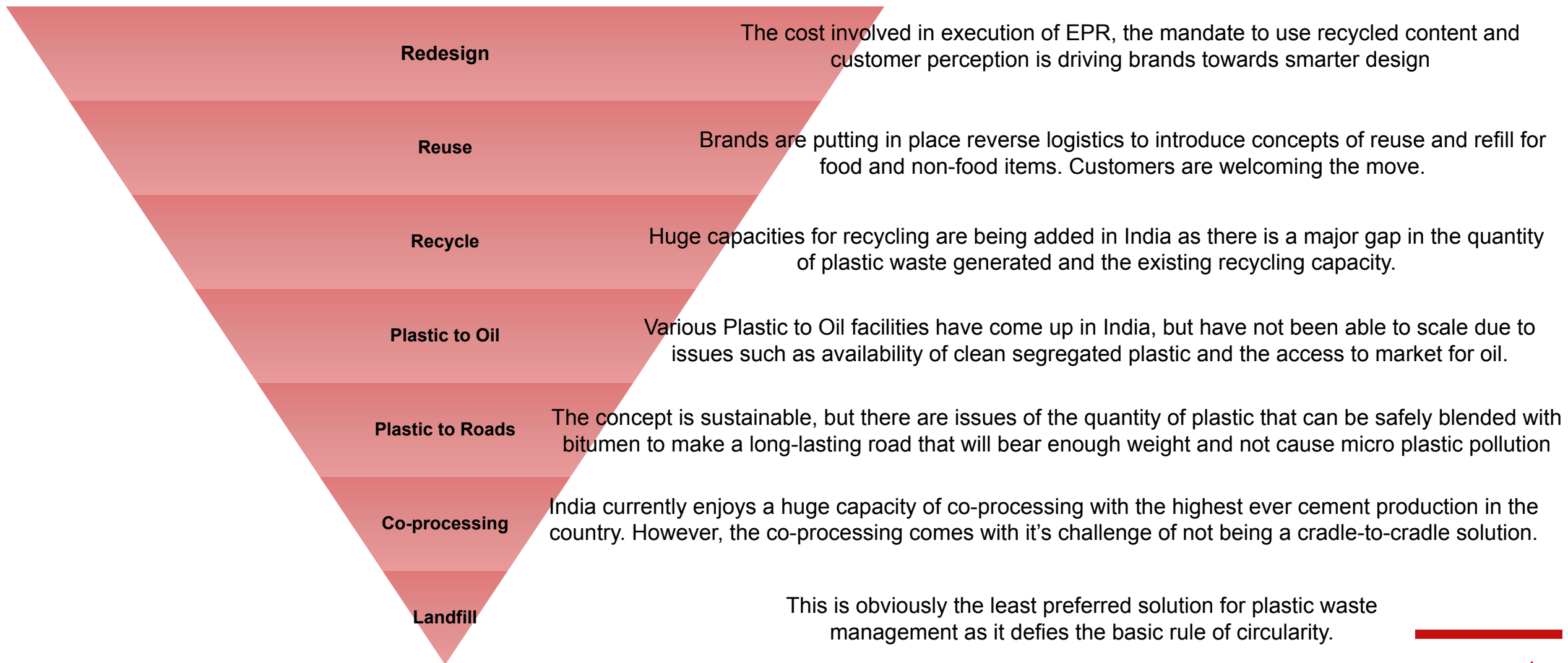
Annual targets for PIBOs based on plastic waste introduced.

Plastic packaging		Category 1					Category 2				Category 3				Category 4			
		Targets as % of Annual EPR obligation																
Stakeholder	Year/Target	24-25	25-26	26-27	27-28 onwards	28-29 onwards	24-25	25-26	26-27	27-28 onwards	24-25	25-26	26-27	27-28 onwards	24-25	25-26	26-27	27-28 onwards
PIBOs	Recycling	50	60	70	80	80	30	40	50	60	30	40	50	60	50	60	70	80
	Recycled plastic content	NA	30	40	50	60	10	10	20	20	5	5	10	10	-	-	-	-
Brand owner	Reuse (Packaging >0.9 and <4.9 kg or liter)	NA	10	15	20	25	NA											
	Reuse (Packaging equal or greater than 4.9 kg or liter)	NA	70	75	80	85	NA											

PWPs to issue certificates to PIBOs/ Local bodies for fulfilling EPR obligations.



# Plastic Waste Management Hierarchy



# Single-use plastics (SUP) Ban

## Amendment to PWM Rules – 12.8.21 Single-use plastics (SUP )

- **Definition:** “Single-use plastic commodity” means a plastic item intended to be used once for the same purpose before being disposed of or recycled (Rule 3(va) )
- **Prohibits manufacture, import, stocking, distribution, sale & use of following w.e.f 1.7.22(Rule 4(b) )**
  - ✓ **Plastic Sticks:** Ear buds. Balloons, candy, ice-cream
  - ✓ **Cutlery items:** Plates, cups , glasses, forks, spoons, knives, trays
  - ✓ **Packaging / wrapping films:** Sweet box, invitation cards, cigarette packets
  - ✓ **Other items :** Plastic flags, PVC banners < 100 µm, polystyrene for decoration

# Legal Framework

- **Minimum Specified thickness of carrybags** ( Rule 4 (C) )
  - ✓ **75 Micron w.e.f September 2021**
  - ✓ **120 micron w.e.f December 2022**

( No change in machinery required for altering thickness of the bags)
- **Provisions not applicable to Compostable plastics** ( Rule 4 ( b) (3) )
- **Compostable products to be certified by CPCB** (Rule (4(h) )
- **Plastic packaging not to be used for tobacco products** (Rule 4 (f & i)

# HOME PAGE : REGISTRATION / LOGIN FOR SPCB/PCC/ Urban / Rural Local Bodies/ CPCB



## CPCB Monitoring Module for Compliance of SUP



[Home](#) [Plastic waste management rules](#) [SUP Communications](#) [National Dashboard](#) [FAQ](#) [Instruction Sheet](#)



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Notice for Prohibition Production, Stocking, Distribution, Sale a

# Landscape of SUP Ban

- Relative recycling performance of different cities across India. Different items with different recyclability – requires interventions.
- Interest of people in setting up recycling infrastructure/industries
- There are certain items like ice-cream sticks, PVC banners below 100 microns, plastic balloon sticks, and cutleries which can be easily substituted by alternatives
- Role of informal sector - formalization
- GIZ with UP govt- RACE is the campaign and it stands for – reduction in plastic usage, awareness among masses, circular solution to disposal and engagement of one and all. Companies who are in alternatives development – promoted.
- Quantitative understanding of life cycle quantification (SUP inventorization, methodology of market survey, sampling, etc.) and application-specific plastic waste recycling

Thanks for your attention!