

# Plastic Waste Management



**Presentation By**

**Jharkhand State Pollution Control Board**

**Date:- 05.05.2022**



# **BAN ON SINGLE USE PLASTIC**



# Background

- ❖ Hon'ble PM announced India's pledge to phase out SUPs by 2022 during World Environment Day (05.06.2018).
- ❖ Hon'ble PM pitched for freedom for India from SUP in his 2019 Independence Day speech.



**SAY NO  
TO SINGLE USE**

प्लास्टिक को अपने जीवन से हटाएं, पर्यावरण और धरती को स्वच्छ बनाएं.....

# Definition

- “Plastic” means material which contains as an essential ingredient a high polymer such as polyethylene terephthalate, high density polyethylene, Vinyl, low density polyethylene, polypropylene, polystyrene resins, multi-materials like acrylonitrile butadiene styrene, polyphenylene oxide, polycarbonate, Polybutylene terephthalate; (*Rule 3(p)* ).
- “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)* )

जीवन में प्रयोग करे वही, जो स्वास्थ्य के लिए हो सही.....

# Definition

- “Non-woven plastic bag” means plastic bag made up of plastic sheet or web structured fabric of entangled plastic fibers or filaments (and by perforating films) bonded together by mechanical or thermal or chemical means, and the “non-woven fabric” means a flat or tufted porous sheet that is made directly from plastic fibres, molten plastic or plastic films; *(inserted in rule 3 after clause ‘n’ as ‘na’ in PWM (Amendment) Rules, 2021)*

# Definition

- “carry bags” mean bags made from plastic material or compostable plastic material, used for the purpose of carrying or dispensing commodities which have a self-carrying feature but do not include bags that constitute or form an integral part of the packaging in which goods are sealed prior to use. (*Rule 3c*)

# Legal Framework ( Contd.)

❖ Amendment to PWM Rules, 2016, dated-12.08.2021 on Single-use plastics (SUP ).

✘ Prohibits manufacture, import, stocking, distribution, sale & use of following w.e.f 01.07.2022 (*Rule 4(b) PWM (Amendment) Rules, 2021*).

✘ Plastic Sticks: Ear buds, balloons, candy, ice-cream.

✘ Cutlery items: Plates, cups , glasses, forks, spoons, knives, trays .

# Legal Framework ( Contd.)

✘ Packaging/wrapping films: Sweet box, invitation cards, cigarette packets.

✘ Other items : Plastic flags, PVC banners  
< 100 $\mu$ m, polystyrene for decoration (thermocool).

✘ Non-woven plastic carry bag shall not be <60 Gram Per Square Meter (GSM) w.e.f. the 30th September, 2021. ( *Rule 4 (j)* )

क्या आपको यह एहसास हैं, प्लास्टिक प्रदूषण अभिशाप हैं.....



# Legal Framework ( Contd.)

- ❖ Minimum Specified thickness of carry bags
  - 75 Micron w.e.f. September 2021.
  - 120 micron w.e.f. December 2022( *Rule 4 (c) )* )
- ✘ In Jharkhand Polythene carry bags of any shape (with or without handle), thickness, size & colour is completely banned vide Gazette Notification No. 3900, dated-18.09.2017 of Forest, Environment & Climate Change Dept.
- ❖ Provisions not applicable to Compostable plastics (*Rule 4 ( b ) (3) ).*

# Banned Single use Plastic items



शिक्षित होने का सबूत दें, पॉलिथीन का प्रयोग न करे, ना करने दें.....

# Committees for SUP

- **Special Task Force** – Constituted under Chairmanship of the Development Commissioner, Jharkhand, vide Notification no.1784, dated-02.07.2021 of Forest, Environment & Climate Change Dept., Govt. of Jharkhand.
- **State level Monitoring Committee** – Constituted under Chairmanship of ACS/PS/Secretary, UD&HD, Jharkhand, vide Notification no.1782, dated-02.07.2021 of Forest, Environment & Climate Change Dept., Govt. of Jharkhand.
- **District Level Committee** – Constituted under Chairmanship of DCs, Jharkhand, vide Notification no.1783, dated-02.07.2021 of Forest, Environment & Climate Change Dept., Govt. of Jharkhand.

# **PENAL PROVISIONS**

## **❖ ENVIRONMENTAL COMPENSATION CHARGES**

- Guidelines prepared by CPCB.
- Uploaded on CPCB website.
- Specifies EC in financial terms/seizure of goods/Closure/cancellation of granted permission etc.
- Defaulters include industry, waste generator, street vendor, retailers. Stockists commercial establishment ( Malls, Hotel, Restaurant.)
- Higher Environmental Compensation for second / third time violation and delay in EC deposition.

# **PENAL PROVISIONS**

## **(as per CPCB guidelines)**

- Spot fine on waste generators-Rs.500/- (1<sup>st</sup> violation), Rs.1000/- (2<sup>nd</sup> violation), Rs.2000 (3<sup>rd</sup> violation and thereafter).
- Spot fine on institutional waste generators-Rs.5,000/- (1<sup>st</sup> violation), Rs.10,000/ -(2<sup>nd</sup> violation), Rs.20,000 (3<sup>rd</sup> violation and thereafter).
- Spot fine on manufacturer- Rs.5,000/- per ton of plastic manufactured, Rs.10,000/- per ton for 2<sup>nd</sup> violation and Rs.20,000/- per ton for 3<sup>rd</sup> violation.

सख्त और कड़ा क़ानून होना चाहिए, पॉलिथीन के प्रयोग पर सजा होना चाहिए।

# PENAL PROVISIONS

- Penalty as per Section 15(1) of EPA, 1986. (imprisonment for a term which may extend to five years or with fine which may extend to one lakh rupees, or with both, and in case the failure or contravention continues, with additional fine which may extend to five thousand rupees for every day during which such failure or contravention continues after the conviction for the first such failure or contravention.)

# Who shall impose the Fine?

(1) The State Pollution Control Board shall impose fine on defaulter producer/manufacturer of Single Use Plastic.

(2) Local Bodies shall impose fine on Retailer, Seller & User of Single Use Plastic.

कदम-कदम से प्लास्टिक हटाये जा, धरती को स्वर्ग बनाये जा...

# Comprehensive Action Plan

## ❖ Supply Side Interventions

1. Stopping supply of plastic raw material.
2. Stopping manufacturing of banned sup items.
3. Stopping selling of banned sup items.

## ❖ Demand Side Interventions

1. Stopping usage of banned sup items.

## ❖ Enabling Measures

1. Promotion of alternatives to sup
2. Creating awareness on phasing out of sup



## **CPCB directions to JSPCB**

1.To revoke/modify (as applicable) Consents and Registration issued to producers & take necessary action to maintain zero inventory by June 30, 2022.-*Directions issued to Regional Officers vide letter no.B-525 dated-10.03.2022.*

2.To direct plastic raw material manufacturers/ e-commerce companies / SUP Using industry in their jurisdiction for elimination of SUP -  
*Directions issued by JSPCB vide letter no.B-534 dated-10.03.2022.*

# CPCB directions to JSPCB

3.To issue a Public Notice apprising the stakeholders to comply with the provisions of the Notification, dated August 12, 2021-*Public notice has been issued by the Board.*

4.To convene a meeting with Local Authorities to apprise them of their roles & responsibilities on the matter.

# **Actions to be taken by Local Authorities along with JSPCB**

1. District level Identification of major stockists/Distributors/sellers

2. District level identification of major commercial establishments (Malls/ Market place/ shopping centres/ cinema houses/ tourist locations/ schools/ colleges/ office complexes / hospitals & other Institutions).

3. Directions to be issued by DC

✓ To sensitizing through webinars / workshops to aforementioned entities to ensure zero inventory of banned SUP by June 30, 2022.

✓ Commercial Licenses granted to be cancelled for violation

✓ Issue of Conditional Fresh commercial licenses

# **Actions to be taken by Local Authorities along with JSPCB**

4.To Frame local bye-laws for levying Environmental compensation in line with CPCB Guidelines for violation of stipulated conditions.

5.To provide information for Mapping of District in each State/ UT for SUP App (Mapping & contact details of concerned authorities (Name, designation, email id & phone nos. of Municipal corporations, Zones, Wards/ Village Panchayat, Blocks)Urban and rural areas both.

## **Actions to be taken by Local Authorities along with JSPCB**

6. JSPCB to coordinate with State Authorities to resolve grievance raised in the SUP App.
7. To take penal action/ levy EC on violators of stipulated conditions.
8. Field Inspections with Regional officers of JSPCB.
9. Identification of processors through backward integration and taking against them.
10. To prepare a detailed Awareness Program for elimination of SUP.

# **CPCB monitoring module for compliance of SUP**

- Access through <http://cpcbplastic.in/sup/>
- Registration of SPCBs/PCCs by CPCB
- Registration of Local Bodies by SPCBs/PCCs  
(Email ids and Mobile no. of nodal person in the Local bodies to be provided by the Local body).
- Registered Local bodies can login the portal by selecting Urban /Rural Local Bodies.
- District-wise Inventory of SUP Producers, Sellers & Users By Local Bodies

# CPCB monitoring module for compliance of SUP

- Registration of Field Officers by Local Bodies-to create Password & provide details ( Name, Email id , Mobile No. & Password ) of Field officers.
- Local bodies can allocate the entities for inspection to the registered field officers .
- Field inspection by Field Officers can be initiated through the Field inspection module.
- Based on the above inspections, SPCB to provide fortnightly information in the prescribed format developed by CPCB.
- Information provided by Local bodies to be checked through random inspections and other desired means by SPCB before submitting CPCB.

# QR Code to download SUP public grievance redressal App



**Public/Citizens may lodge complain against use of Single use plastic through this app.**



# **REGISTERED MANUFACTURERS OF PLASTIC ARTICLES WITH MSME**

## **❖ NATIONAL INDUSTRIAL CODES (NIC):**

1. 22201 - Manufacture of semi-finished of plastic products(plastic plates, sheets, blocks, film, foil, strip etc):

No. of total registered industries with MSME: **47**

2. 22202 - Manufacture of tableware, kitchenware and other household articles and toilet articles of plastic, including manufacture of vacuum flasks and other vacuum vessels.

No. of total registered industries with MSME: **36**

## Continue.....

3. 22203 - Manufacture of plastic articles for the packing of goods (plastic bags, sacks, containers, boxes, cases, carboys, bottles etc.).

No. of total registered industries with MSME : **94**

4. 22209 - Manufacture of other plastics products

No. of total registered industries with MSME : **227**

**Total-404.**

पर्यावरण सुरक्षा कर्तव्य है हमारा, प्लास्टिक को हटाकर कर्तव्य निभाना...

# Alternatives to Plastic Cutlery



Agriculture waste-based  
Food cutleries and Packaging

By : 



Birchwood fiber & Sugarcane fiber-  
based cutleries  
(Handmade by Delhi Artisans)

By : 



Eat it or Compost it  
Jowar Spoon

By : 

यदि पॉलिथीन को जड़ से मिटाना है, तो जूट और कपड़े की थैली को अपनाना है.

# Alternatives to Plastic Cutlery



**Bamboo utensils**



**Beeswax food wrap**



**Stainless steel straws**

आओ सभी मिलकर ये जन चेतना लाये, नहीं करेंगे प्लास्टिक प्रयोग ऐसा मन बनाये...

# Global developments – Plant materials

- Dell partly replaced EPS by Bamboo, Wheat Straw and Cardboard based packaging



- Personal care products –  
Bamboo toothbrush in cardboard box.  
Wooded brush with natural fibers.



- Plates and bowls made from leaves by Leaf Republic, Munich (works with subsidiary in India).
- Leaves stitched using natural thread, pressed with a layer of paper.



- Piñatex™ 'leather', London  
Innovative new material made from waste pineapple leaf fibre.



- Bamboo straws by Bali-boo, Indonesia.



## Molded fiber – High potential

- One of the plant based solutions that is gaining importance is the molded fiber.
- Globally developments are towards **materials** (use of agricultural waste) as well as **process** (Wet, Dry, Extrusion etc.)



# Global developments – Paper based

## ❑ Paper Bottle (Pulpex Unilever, Diageo, Pilot Lite):

- Bottles sprayed inside with a proprietary coating that repels water



• Other majors -  
BillerudKorsnäs,  
Ecobottle.

## ❑ Plastic-free paper cup (Lecta, Spain) :

- **Lecta** - Coated with sealable aqueous dispersion providing liquid-tight paper cups.
- **ITC** - Biodegradable coating with enhanced barrier properties for paper based packaging



## ❑ Paper Tubes :

- **L'Oreal** – Cardboard tube reduces plastic usage by 45%.
- **Stora Enso** - Barrier-coated, grease-resistant paperboard tube, uses 70% less plastic.



## ❑ Paperboard Toppers :

- Completely replaces the shrink or stretch film used for holding cans together.



Smurfit Kappa, TopClip



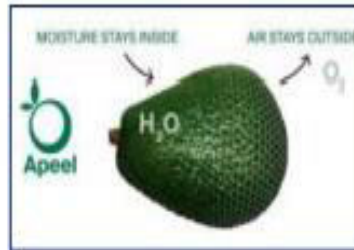
Coca Cola, KeelClip®

Source: M/s ITC, Bengaluru

# Global developments – Nature derived

## Apeel, USA : Coatings that mimic fruit skins

- Patented plant-based coating - Sprayed on fruits, vegetables, slows down the rate of spoilage.
- Uses materials existing in peels, seeds, and pulp of fruits and vegetables - create a protective extra peel that seals moisture in and keeps oxygen out.



## Bolt Threads, USA : Bioengineering - Synthetic silk

- Silk protein, fibroin using a genetically modified yeast strain.
- Fibres by wet spinning allowing the manufacture of silk textiles



## Lactips, France : Casein based packaging

- Casein is a protein found in milk.
- Water soluble, edible and biodegradable thermoplastic pellets based on milk protein.
- Can be used as an edible wrapping product similar to a plastic wrap.



## QMilk fabric, Germany : Waste milk to fibers

- Casein fibres extracted from raw sour-milk from cows
- Milk proteins from non-food milk
- QMilk biopolymers & cosmetics



# Global developments – Edible materials

## ❑ Edible Wrapping paper (KFC) :

- Wafer paper / Glutinous rice paper, made of glutinous rice to wrap burgers.
- KFC uses edible ink to print colourful patterns.



## ❑ Cutlery (Bakeys, India) :



- Edible spoons made by baking a dough consisting sorghum with some additional wheat and rice flour.
- It comes in three flavours — savoury (salt and cumin), sweet (sugar) and plain.
- Shelf life of 2 years and decomposes within 4-5 days if not consumed.

## ❑ Edible Coffee Cup (Cupffee, Bulgaria) :

- Cereal-based crisp waffle cup, holds coffee for up to 40 minutes.
- Can hold hot beverages at 85 C.



Source: M/s ITC, Bengaluru



# Extended Producer Responsibility

## Definition

- **Extended Producer Responsibility** – responsibility of a producer for the environmentally sound management of the product until the end of its life
- **Producer** – person engaged in manufacture or import of carry bags or multilayered packaging or plastic sheets or like, and includes industries or individuals using plastic sheets or like or covers made of plastic sheets or multilayered packaging for packaging or wrapping the commodity;

# Definition

- **Brand Owner** – person or company who sells any commodity under a registered brand label or trade mark;
- **Importer** – person who imports plastic packaging product or products with plastic packaging or carry bags or multilayered packaging or plastic sheets or like;
- **Plastic Waste Processors** – recyclers and entities engaged in using plastic waste for energy (waste to energy), and converting it to oil (waste to oil), industrial composting.

# Applicability of Registration

- (i) Producer (P);
  - (ii) Importer (I);
  - (iii) Brand owner (BO) including online platforms/market places and supermarkets/ retail chains other than those, which are micro and small enterprises as per the criteria of Ministry of Micro, Small and Medium Enterprises, Government of India;
  - (iv) Plastic Waste Processor engaged in:
    - (a) recycling, (b) waste to energy, (c) waste to oil, and (d) industrial composting
- Login to [www.cpcbeprrplastic.in](http://www.cpcbeprrplastic.in) to file application form.

# Coverage of EPR

- (i) Category I: Rigid plastic packaging;
- (ii) Category II : 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;
- (iii) Category III: Multilayered plastic packaging (at least one layer of plastic and at least one layer of material other than plastic);
- (iv) Category IV: Plastic sheet or like used for packaging as well as carry bags made of compostable plastics.

# Documents Required for PIBOS

- i. PAN, GST, Corporate Identification Number, Importer Exporter Code( for importer) of the Company
- ii. Aadhar/ PAN of Authorized person
- iii. District Industries Centres Registration (if unit registered with DIC)
- iv. Process flow diagram (for producers only)
- v. Consents issued by SPCB/ PCC (if unit has a production facility)
- vi. Scanned copy of signatures of authorised persons.
- vii. Covering letter
- viii. Document regarding any other information which the unit wishes to provide.

# Annual Processing Fees for PIBOS

SI.	Plastic Waste Generation ( TPA)	Application fees (Rs.)
1	<1000	10,000
2.	1000-10000	20,000
3.	>10000	50,000

# Fee Details

- (i) Fees for renewal of Registration shall be same as Registration fee.
- (ii) 25% of Application fees is to be paid as Annual Processing Fees at the time of filing annual returns.
- (iii) Application fee & processing fees to be shared between CPCB & SPCB /PCC in the ratio of 80: 20 when Registration of PIBO is with CPCB and vice-versa.
- (iv) The fees shall be paid online through the payment gateway integrated on the portal.

# **Documents Required for Plastic waste processor**

- i. PAN, GST, CIN of the Company
- ii. Aadhar / PAN of Authorized person
- iii. Process flow diagram
- iv. Consents under Air / Water Act & Authorization under HWM Rules issued by SPCB / PCC
- v. Geo - tagged pictures of raw material storage area, production area and product dispatch area
- vi. Geo-tagged pictures of plant machinery
- vii. Copy of Electricity Bill
- viii. Copy of Analysis report of characterization of waste generated



# **Documents Required for Plastic waste processor**

- ix. Copy of documents giving Occupational safety and health aspects
- x. Copy of document giving details of pollution control measures
- xi. Copy of onsite / offsite Disaster Management Plan.
- xii. Covering letter.
- xiii. Document regarding any other information which the unit wishes to provide.

# Annual Processing Fees for PWP

SI.	Processing capacity Slab (TPA)	Application Fees (Rs.)
1	< 200	5,000
2.	200 and < 2000	20,000
3.	>2000	50,000

# Fee Details

- (i) Fees for renewal of Registration shall be same as Registration fee.
- (ii) 25% of Application fees is to be paid as Annual Processing Fees at the time of filing annual returns.
- (iii) The fees shall be paid online through the payment gateway integrated on the portal.

# EPR targets for PIBOs

Category	Year	Extended Producer Responsibility target
<b>I</b>	<b>2021 - 22</b>	<b>25 %</b>
<b>II</b>	<b>2022 - 23</b>	<b>70 %</b>
<b>III</b>	<b>2023 - 24</b>	<b>100 %</b>

# **Imposition of Environmental Compensation**

- Levied based upon Polluter Pays Principle, with respect to non fulfilment of EPR targets by PIBOS, recyclers and end of life processors.
- Guidelines laid down by CPCB.
- CPCB shall levy compensation on PIBOS operating in more than two states.
- SPCB shall levy compensation on PIBOS operating in their jurisdiction.

# Imposition of Environmental Compensation

- Payment of EC shall not absolve the PIBOS of the obligations set out in the guidelines.
- The unfulfilled EPR obligations for a particular year will be carried forward to the next year for a period of three years.
- In case, the shortfall of EPR obligation is addressed within three years, the EC levied shall be returned to the PIBOS as given below, namely:
  - (i) Within one year of levying of EC: 75% return;
  - (ii) Within two years 60% return;
  - (iii) Within three years 40% return,

# Imposition of Environmental Compensation

- After completion of three years on EC getting due the entire EC amount shall be forfeited.
- The funds collected under EC shall be kept in a separate Escrow account by CPCB/SPCB.
- The funds collected shall be utilized in collection, recycling and end of life disposal of uncollected and non-recycled or non- end of life disposal of plastic packaging waste, on which the EC is levied.
- Modalities for utilization of the funds for plastic waste management on an annual basis would be recommended by the Committee EPR implementation and approved by the Competent Authority in the Ministry.

# Role of PIBOS

- Register through the online centralized portal developed by CPCB.
- Provide action plan containing information on the EPR target, category-wise along with application for registration, action plan shall cover tenure of the Registration.
- Brand owner shall provide details of plastic packaging purchased from Producers and/or Importers separately, and shall maintain the record.



# Role of PIBOS

- The Producers and Importers shall maintain the record of the quantity of plastic packaging material made available to Brand Owner and shall maintain the record.
- To develop a separate waste stream for collection of plastic packaging waste, may operate schemes such as deposit refund system or buy back or any other model.
- Shall file annual returns on the plastic packaging waste collected and processed towards fulfilling obligations with the CPCB or concerned SPCB as per pro-forma prescribed by CPCB by the 30th June of the next financial year.
- Plastic waste processors shall submit annual returns after end of every financial year by 30th April of the next financial year

# Monitoring

- SPCB shall submit annual report on EPR portal with respect to fulfilment of EPR by PIBOS to CPCB and to SLMC.
- SPCB shall also submit annual report with respect to recyclers or end of life disposal in the State or Union Territory to CPCB by 31st July of the next year

# Committee for EPR under PWM Rules

- Constituted by the CPCB under chairpersonship of Chairman, CPCB to recommend measures for effective implementation of EPR.
  - Comprise of representative from –
    - Ministry of Housing & Urban Affairs;
    - Ministry of Micro, Small and Medium Enterprises;
    - Department of Drinking Water and Sanitation;
    - Department of Chemical and Petrochemicals;
    - Bureau of Indian Standards;
    - Three State Pollution Control Board or Pollution Control Committee;
    - Central Institute of Plastic Engineering and Technology (CIPET);
    - National Environmental Engineering Research Institute (NEERI);
    - Three industry associations
- and any other invitee as decided by the chairperson of the committee.



**THANK  
YOU**