BEAT PLASTIC POLLUTION

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EIACP NEWSLETTER
2023-24

UTTARAKHAND
POLLUTION
CONTROL
BOARD

UKPCB

Plastic is accumulating in the environment in many ways

- Plastic is causing environment degradation by the accumulation of plastic waste and particles **(e.g., plastic bottles, bags and micro beads)** in the environment. The large and growing volume of the Single-use plastic (defined later in this newsletter) waste added hugely to the total plastic waste. Due to this, it is having very adverse effects on both the terrestrial as well as aquatic ecosystems.

- Chocking of drains, chocking nutrient movement from soil to plant.
- Accumulation in the form of marine litter, fragments or micro particles of plastics and non-biodegradable fishing nets, which continue to trap wildlife and waste
- Causing death of animals by ingestion of waste trapped in plastic bags.
- Approaching micro plastics and micro beads of plastics from cosmetic and body care products
- This plastic can affect marine wildlife in two important ways; by entangling creatures, and by being swallowed. In addition to using up fossil fuels and other resources, plastic products create litter, hurt marine life, and threaten the basis of life on earth.
  i. Plastic dumped on the soil prevents water percolation into the water table. It affects the very structure of soil.
  ii. Cattle eat plastic and die as a result thereof.
  iii. Burning of plastics results in release of toxins like dioxins and furans in the atmosphere which, in turn, causes Cancer.

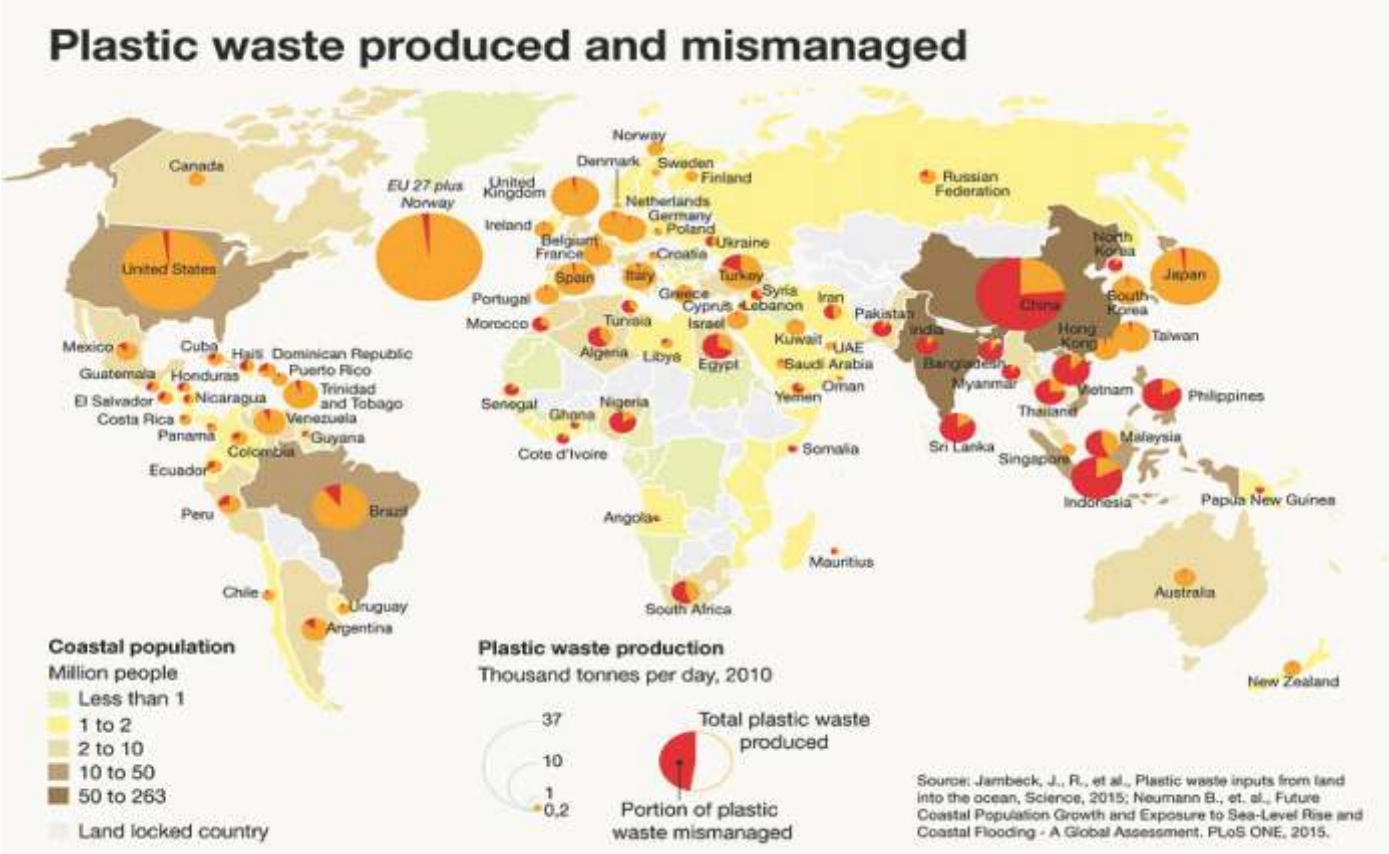


Fig showing Plastic waste input from land to ocean worldwide and proportionated the volume of plastic waste mismanaged in different countries.

Glimpse on Global Plastic Waste

According to the OECD (The Organization for Economic Cooperation and Development) Global Plastic Outlook, the world **generated 353 million tonnes of plastic waste in 2019**, a number which has more than doubled since 2000. Out of this, only **9% was recycled** while almost **50% was landfilled, 19% incinerated,** and **22% was discarded in uncontrolled sites** or in the environment.

It is expected that **another 33 billion tonnes** of plastic is expected to accumulate on the planet **by 2050.**

Basel Convention is the key international instrument to regulate transboundary movements of hazardous wastes and their disposal. **In 2019, Parties** to the Convention agreed to add plastic waste under the convention, making it the **first international agreement to directly address the issue of plastic pollution.**

At the 16th **Conference of the Parties** held in May 2023, Parties to the Basel Convention **adopted technical guidelines on the environmentally sound management of plastic waste,** POPs waste, and e-waste.

Beat Plastic Pollution

- Plastic, the wonder material that we use in our day today life pollutes our environment it is perhaps the most harmful of trash dumped by humans because it does not readily break down in nature. In-fact, the plastic that goes over the side today may still be around in hundreds of years to foul up the future generations.
- The term Plastic includes materials composed of various elements such as carbon, hydrogen, Oxygen, Nitrogen, chlorine and sulphur. Polythene, polyvinyl chloride, polystyrene is largely used in the manufacturing of plastics.

Why is plastic harmful?

- Plastic is causing environment degradation by the accumulation of plastic waste and particles **(e.g., plastic bottles, bags and micro beads)** in the environment. It can be categorized in primary plastics, such as plastic used in our daily life like Food Containers, Water Bottles, Kitchenware, Sports Equipments, Eyewear, Cleaning Supplies, Trash Bags and bottle caps; or secondary plastics, resulting from the degradation of the primary ones. It can also be defined by its size, from micro plastics - small particles (<5 mm) of plastic dispersed in the environment - to macro plastics.

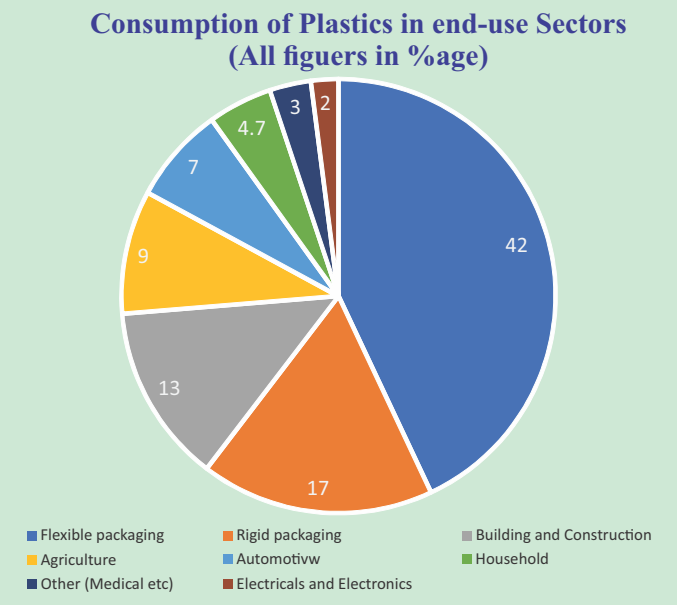
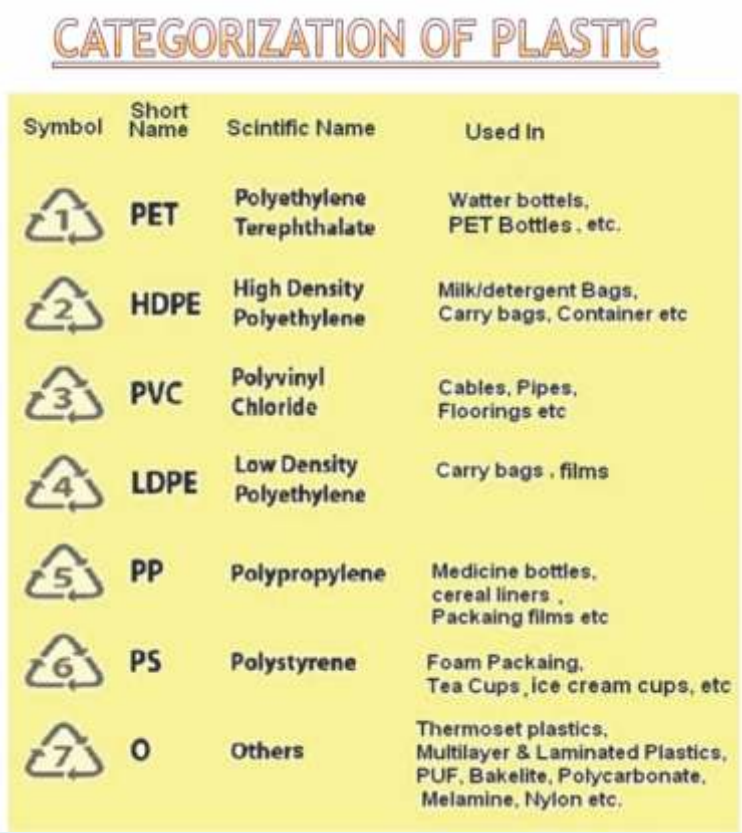


Fig: Showing Consumption of Plastics in different end use sector in 2018: maximum consumption in Flexible Packaging industry and minimum in Electrical & Electronics sector.

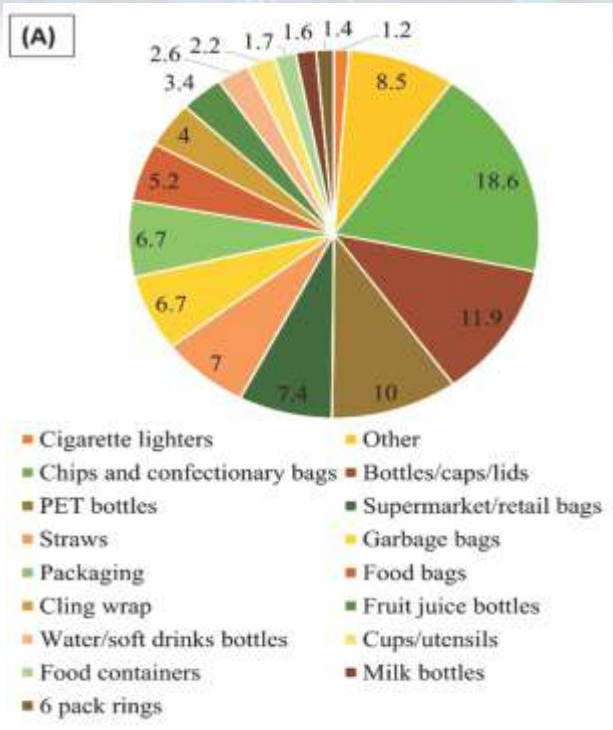
(Source: Bhattacharya, R.; Chandrasekhar, K.; Roy, P.; Khan, A. Challenges and Opportunities: Plastic Waste Management in India.)

Main Sources of Primary and Secondary Micro Plastic

Primary Micro plastics	Industrial abrasives
	Specific medical products (e.g., dental tooth polish)
	Personal care products/cleaning products
	Drilling fluids
	Raw materials (nurdles)/process sub-products
Secondary Micro plastics	General littering; plastic waste dumping
	Discarded fishing gear
	Abrasion in landfill and recycling sites and facilities
	Fibres released from synthetic textiles
	Ship generated litter
	Fibres from hygiene products
	Plastic material from organic waste
	Abrasion during paint removal; use of paint with synthetic Polymers found in compost additives

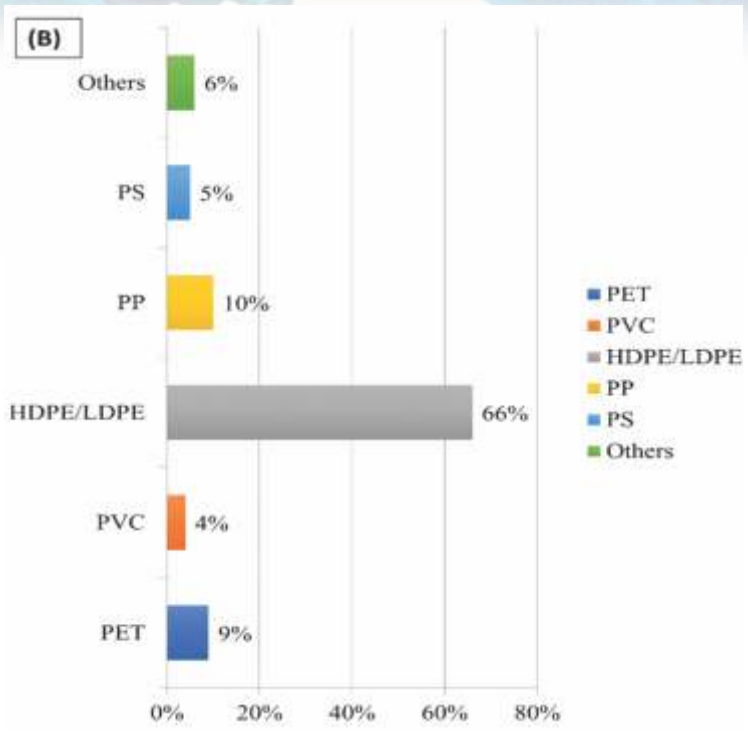


Source:- Plastic Waste Management Rules, 2016.



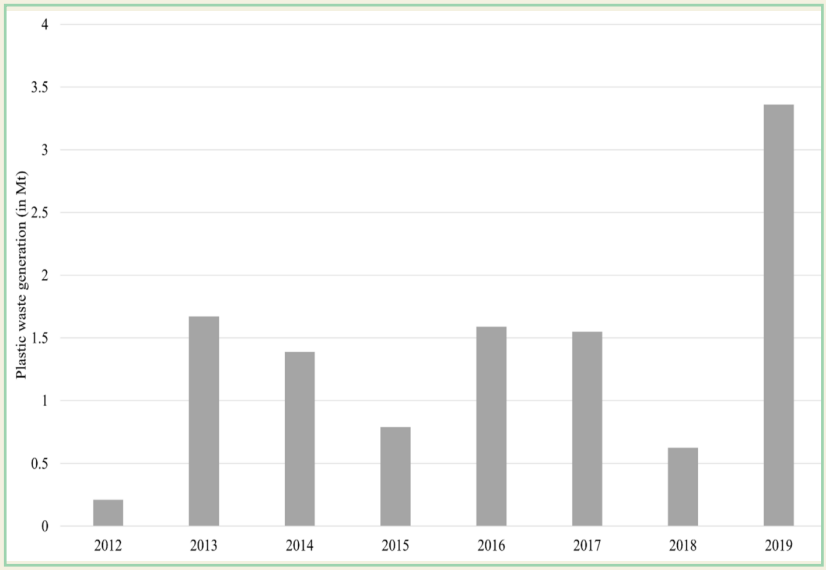
Product-specific PW sources

Siddiqui, J.; Pandey, G. A review of plastic waste management strategies. *Int. Res. J. Environ. Sci.* 2013, 2, 84–88.



Main polymer types in PW composition in India

Aryan, Y.; Yadav, P.; Samadder, S.R. Life Cycle Assessment of the existing and proposed plastic waste management options in India: A case study. *J. Clean. Prod.* 2019, *211,* 1268–1283.



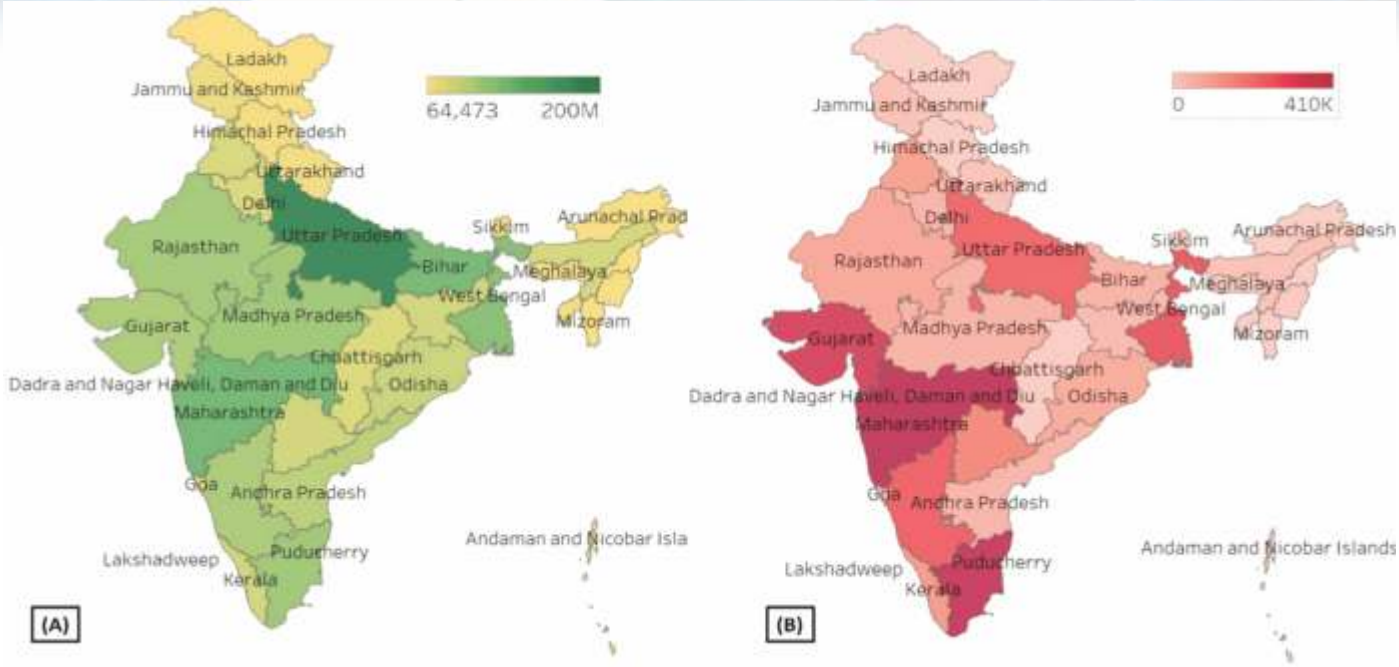
Yearly Plastic Waste Generation in India
Source: CPCB Annual Report 2011-12 to 2018-19

Glimpse on Country's Plastic Waste

1. Plastic waste is major environmental and public health problem in India, particularly in the urban areas. India has become one of the fastest growing industries for Plastic. Plastic is used in every business. As per All India Plastic Manufactures Association, India's plastic industry recorded annual revenue worth Rupees 3.5 lakh crore in 2019. This was spread across 50,000 processing units. These units, consume around 22 million metric tonnes per annum of plastic raw material, including recycled plastics (roughly about 8 million metric tonnes recycled plastic).
2. According to Central Pollution Control Board's report for the year 2018-19, CPCB has estimated that India generates approximately **3.5 million Tonnes per annum** of plastic waste. Which is **0.03 tonnes per capita** and 9206 tonnes everyday generation of plastic waste.

Plastic Waste Scenario in India

- On ground, country's roads, rivers litter with discarded plastic waste. Government has ensured regulatory frameworks in the country- the centre and various state governments have enforced multiple laws. Plastic waste from households is almost never segregated at source, and finds its way to municipal waste- dumped in landfills, burnt or picked up by rag pickers. Plastic waste recycling is mainly done in the informal sector of India. The sector provides livelihood to millions of people and keeps the waste out of landfills. But, the plastic recycling technologies used in India are often old and rudimentary, resulting in the down cycling of plastics into lower-quality products. Recycling units, which are hardly ever monitored, are often located in slums, residential areas and end up polluting the air and water through their releases.
- Plastic waste from households is almost **never segregated at source,** and finds its way to municipal waste- dumped in landfills, burnt or picked up by rag pickers. **Plastic waste recycling is mainly done in the informal sector.**
- Apart from recycling, there have been initiatives to use the plastic waste in manufacturing units through co processing wherein industries like cement, steel production and power stations substitute primary fuel with plastic waste. There have been also efforts to use plastic in Roads, though a long-term impact of this is still unknown.



Population of India as per Census 2011 | **PW generation (in tonnes) in various states in India in the financial year 2018–2019**

Both Figures shows the population distribution and PW generation in India, based on data available from the Centre for Science and Environment for the financial year 2018–2019. Uttar Pradesh, Maharashtra, and Tamil Nadu are the three major states where both population and PW generation are high. The national average was recorded as 3.36 Mt of waste for the year. In Goa, per capita per day PW generation is close to 60 g, which is much greater than the national average of 8 g. This clearly indicates that the states having more industrialization are generating more plastic waste.

Source: Centre for Science and Environment. Managing Plastic Waste in India: Challenges and Agenda. Available online: https://www.cseindia.org/content/downloadreports/10352

Important Provisions of Plastic Waste Management Rules

- Provisions related to thickness of carry bag.
- 20 Microns in 1999 Rules.
- 40 Microns in 2011 Rules.
- 50 Microns in 2016 Rules till 30th September 2021
- 75 microns with effect from 30th September 2021
- 120 microns with effect from 31st December 2021

With effect from 30th September 2021, non-woven plastic carry bags cannot be less than 60 Gram Per Square Meter

Plastic packaging film thickness will be minimum 50 Microns. However, if lower thickness packaging material is used than approval shall be taken from Central Pollution Control Board.

Provisions related to Single-use plastic

- In the amended rules 2021

a new clause (va) is inserted to rule 3(iii) of PWM rules incorporating the definition of the 'Single-use plastic commodity'. Accordingly, ***a plastic item that is intended to be used only one time for the same purpose. After that, it will either be disposed of or recycled. Plastic bags, straws, and paper cups are some of the examples of 'single-use plastic commodity'.***

A new sub-rule (2) is inserted to rule 4 which prohibits the manufacture, stocking, distribution, import, sale, and use of the following 'single-use plastic commodities (including polystyrene and expanded polystyrene)' from 1st July 2022

List of SUPs as Covered Under Notification of Government of India

- Earbuds with plastic sticks,
- Plastic flags,
- Plastic sticks for balloons,
- Ice-cream sticks,
- Candy sticks,
- Polystyrene (Thermocol) for decoration,
- Cups,
- Plates,
- Spoons,
- Forks,
- Straw,
- Knives,
- Wrapping/ packing films around sweet boxes,
- Trays,
- Cigarette packets, and
- Invitation cards and
- Cigarette packets.
- Glasses,
- Plastic or PVC banners less than 100 microns,
- Stirrers.

Government of Uttarakhand Notification regarding Restriction on Plastic Commodities.

Notification Dated 16.02.2021

1 (a) No person, by himself or through another, shall knowingly or otherwise, **sale, trade, manufacture, import, store, carry, transport, use, supply or distribute** the following plastic/ thermocol/ Styrofoam items in the entire state of Uttarakhand.

(i) Polythene carry bags of any shape (with or without handle), thickness, size & color; and non-woven poly propylene bags

Provided above restrictions shall not be applicable on bio- compostable plastic bags and polybags more than 50 micron thickness used for handling, collection, transportation of the waste such as bio medical waste, municipal solid waste and hazardous waste

(ii) Single use disposable cutleries made up of thermocol (polystyrene), polyurethane, Styrofoam and the like; or plastic such as plate, tray, bowl, cup, glass, spoon, fork, straw, knives and stirrer of any size and shape.

(iii) Single use food packaging containers made up of recyclable plastics of any size, shape, thickness and color used to cover, carry, store food/liquid items.

Notification Dated 28.02.2023

1 (a)(i) No person, by himself or through another, shall sale, trade, manufacture, import, store, carry, transport, use, supply or distribute the plastic products/other materials prohibited in the notification number 571-(E), dated 12-08-2021, of the Ministry of Environment, Forest and Climate Change, Government of India in the whole state of Uttarakhand.

1. (a)(ii) In continuation of Government of India's notification no.-571(E), dated 12.08.2021, the thickness of any carry bag made of unused or recycled plastic shall not be less than one hundred and twenty (120) microns and non-woven plastic carry bag shall not be less than 60 Gram Per Square Meter (GSM) in the state of Uttarakhand.

State scenario under Plastic Waste Management Rules (As per Annual Report 2021-22)

- Estimated Plastic Waste generation in Tons per annum (TPA):- 44924.71 (Based on the data obtained from 88 ULBs and 04 Cantonment Boards).
- No of registered plastic waste Manufacturing units:- 41 (32 recyclers and 09 manufacturing units).
- No of Registered Compostable Plastic Waste unit:- 01.
- No of Registered Multilayer Plastic Units:- 24

Responsibility of SPCB under EPR Framework

- Registration of PIBOs/PWPs
- Verification of PWPs
- Audit of PIBOs/PWPs
- Publish the list of entities not fulfilling their EPR target
- Regular dialogue between the Stakeholders.

Provision of EPR under PWM Rules

Amendment Dated 16.02.2022 incorporating Guidelines on EPR as scheduled to under PWM Rules wherein target for EPR were quantified for Producers, Importers and Brand Owners.

Based as Extended Producer Responsibility framework under Plastic Waste Management Rules, Plastic is categorized in 04 Categories

(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**	Multi-layered 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 composite plastics.

Centralized Online Portal: The government has also called for establishing a centralized online portal by Central Pollution Control Board (CPCB) for the registration as well as filing of annual returns by plastic producers. It acts as the single point data repository with respect to orders and guidelines related to implementation of EPR for plastic packaging under Plastic Waste Management Rules, 2016.

Plastic Waste Management (Amendment) Rules, 2023

- The Central Government vide notification dated 27th April, 2023 has issued the Plastic Waste Management (Amendment) Rules, 2023. The registration granted under this rule shall be changed only on the request of Producers, Importers & Brand owners, under the existing Extended Producer Responsibility registration.
- The registration granted under this rule shall be valid for a period of one year, unless revoked, suspended or cancelled and shall subsequently be granted for three years. While registering, the entities shall have to provide PAN Number, GST Number, CIN Number in case of company, and the entities may provide Aadhar Number, and shall provide PAN Number of authorized person or representative and any other necessary information as required.

Environmental Compensation:

Environmental compensation will be levied based upon polluter pays principle, with respect to non-fulfillment of EPR targets by the producers, importers and brand owners, for the purpose of preventing, controlling and abating environment pollution. The 'Polluter Pays' principle means imposing liability on a person who pollutes the environment to compensate for the damage caused and return the environment to its original state regardless of the intent. Many businesses misuse their EPR mandate of plastic waste collection in the form corporate social responsibility and present it as a voluntary service to the society by collecting plastic waste generated by them.

Penalty Enforcement by Uttarakhand Pollution Control Board on units under Plastic Waste Management Rules:-

S.No.	Details of Units	Number	Amount in Lakhs
1.	Penalty imposed against SUPs manufacturing units	07	4500000/-
2.	Penalty on illegal burning of plastic	02	400000/-

Compliance by SPCB under EPR Framework

1. Registration Status under EPR: as on 7th October 2023

S.No.	Category	India	Uttarakhand
1	Producers	3392	265
2	Importers	2115	75
3	Brand Owners	23887	59
4	PWP	-	87

EPR Targets :-

EPR Target given to Producers for 2022-23:	146577.3 MT (22.05 % completed)
EPR Target given to Brand Owners for 2022-23:	8635.2 MT (100 % completed)
EPR Target given to Importers for 2022-23:	12583 MT (0.03 % completed)
Total EPR Target for 2022-23:	167795.5 MT

2. **Verification of PWPs are being made from time to time.**
3. **Audit of PIBOs/ PWPs: Board has invited EOI for the same.**
4. **Publish the list of entities not fulfilling their EPR target**

   Last date of submitting annual return is October 31, 2023
5. **Regular dialogue between the Stakeholders**

   Various Meetings and workshops organised: Details in next slide.

Innovative Technologies/Best Practices Developed for Plastic Waste Management in Uttarakhand

Name of Technology/Best Practice:- Waste to Oil (Catalytical Thermal Decomposition of Waste Plastic)	
Unit Name and Address	**M/s Modi Oil Mill** Khasra no-325, Vill- Ibrahimpur, Near Balaji Dham Jwalapur, Haridwar, Distt- Haridwar, Uttarakhand-249403
Input material (PET, HDPE, LDPE, PP, PS, PVC, SUP, RDF, legacy waste plastic etc.)	XLPE, PP **Processing capacity (TPA):** **CAT-I** (Rigid Plastic Packaging): 600 TPA **CAT-II** (Flexible plastic packaging of single layer or multilayer (more than 1 layer with different types of plastic): 150 TPA **CAT-III** {Multi-layered plastic packaging (at least one layer of plastic and at least one layer of material other than plastic)}: 150
Products manufactured & the scale of manufacturing	**Products:** Refused oil / Bio Fuel **Production capacity (TPA):** 372 TPA
End use of products	To be used as fuel in boilers & furnaces

Name of Technology/Best Practice:- Waste to Energy (Incineration)	
Unit Name and Address	**M/s BAHL Paper Mill** 5 KM. Stone, Aliganj Road, Kashipur, Udham Singh Nagar, Uttarakhand
Input material (PET, HDPE, LDPE, PP, PS, PVC, SUP, RDF, legacy waste plastic etc.)	Non-Recyclable Solid Waste including Plastic Waste as follows: **Processing capacity (TPA):** **CAT-I** (Rigid Plastic Packaging): 1500 **CAT-II** (Flexible plastic packaging of single layer or multilayer (more than 1 layer with different types of plastic): 10000 **CAT-III** {Multi-layered plastic packaging (at least one layer of plastic and at least one layer of material other than plastic)}: 20000 **CAT-IV** (Plastic sheet or like used for packaging as well as carry bags made of compostable plastics): 1500
Products manufactured & the scale of manufacturing	**Products:** Craft/paper/tissue paper/MG Poster paper/ duplex board Unit is a paper manufacturing unit and installed waste-to-energy boiler **Power generation capacity** Power: 4000 KW
End use of products	In-situ consumption of energy

Innovative Technologies/Best Practices Developed for Plastic Waste Management in Uttarakhand

Name of Technology/Best Practice:- Hot Press and Cold Press

Unit Name and Address	**M/s Swayambhu Innovative** Plot-5A2, Sector-3, IIE, BHEL, SIDCUL, Haridwar, Uttarakhand
Input material (PET, HDPE, LDPE, PP, PS, PVC, SUP, RDF, legacy waste plastic etc.)	LDPE, SUP, RDF, Legacy waste **Processing capacity (TPA):** **CAT-II** (Flexible plastic packaging of single layer or multilayer (more than 1 layer with different types of plastic): 936
Products manufactured & the scale of manufacturing	**Products:** Recycled Plastic Sheets **Production capacity (TPA):** Co processing: 936
End use of products	Recycled plastic sheets are used invarious utilities such as hand washing stations, mobile stand, photo frames, park benches etc.

Name of Technology/Best Practice:- Recycling pellets/chips

Unit Name and Address	**M/s Polyplex corporation limited** Film unit, Lohia Head Road, Khatima, Distt- Udham Singh Nagar, Uttarakhand	**M/s Ester Industries Limited** Plot no. A 113, A114 & A128, ESIP, Sitarganj, Distt- Udham Singh Nagar, Uttarakhand
Input material (PET, HDPE, LDPE, PP, PS, PVC, SUP, RDF, legacy waste plastic etc.)	PET **Processing capacity (TPA):** **CAT-II** (Flexible plastic packaging of single layer or multilayer (more than 1 layer with different types of plastic): 18200	PET **Processing capacity (TPA):** **CAT-I** (Rigid Plastic Packaging): 7566
Products manufactured & the scale of manufacturing	**Products:** Polyester film, Holography film, metalized pet/ bopp, film & paper **Production capacity (TPA):** Coprocessing: 18200	**Products:** PCR Pet Chips **Production capacity:** 630.5 MT/month
End use of products	Used in various utilities such as flexible packaging, Industrial laminates, control panel, touch pads, etc.	Plastic Products Manufacturing

Innovative technologies/Best Practices developed for Plastic Waste Management in Uttarakhand

Name of Technology/Best Practice:- Waste to Fibres				
Unit Name and Address	**M/s Pashupati Polytex Pvt. Ltd** Kh. No-116 to 120 & 133 to 135 Min, Hariyawala, Kashipur, Distt- Udham Singh Nagar	**M/s Ganesha Ecosphere Ltd** Plot no. 6, Sector 2, IIE, SIIDCUL Pant Nagar, Udham Singh Nagar	**M/s Kashi Vishwanath Textile Mill Pvt. Ltd** 5 Km, Stone, Ramnagar Road, Kashipur, Distt- Udham Singh Nagar	**M/s Sitarganj Fibre Ltd** Sarkada, Pilibhit Road, Sitarganj, District- Udham Singh Nagar
Input material (PET, HDPE, LDPE, PP, PS, PVC, SUP, RDF, legacy waste plastic etc.)	PET	PET **Processing capacity (TPA):** **CAT-I** (Rigid Plastic Packaging): 39600	PET	PET
Products manufactured & the scale of manufacturing	**Products:** Polyester Fibre **Prod. capacity:** 4500 MT/month	**Products:** Recycled Polyester Stable **Prod. capacity:** 3300 MT/month	**Products:** Recycled Polyester Fibre **Production capacity:** 2000 MT/month	**Products:** Recycled Polyester Staple Fibre **Production capacity:** 1800 MT/ month
End use of products	**Textile Yarn Manufacturing**			

Name of Technology/Best Practice:- Digital Deposit Refund Scheme	
Unit Name and Address	District Rudraprayag
Input material (PET, HDPE, LDPE, PP, PS, PVC, SUP, RDF, legacy waste plastic etc.)	PET Water Bottles collection system
Products manufactured & the scale of manufacturing	No product Manufacturing. It is a scheme practised in District Rudrapryag especially in Kedarnath Route wherein a bar code is placed on plastic water bottles and a certain amount will be collected from consumer and this amount will be returned to consumer when the same empty plastic bottle retuned.
End use of products	Waste bottles send to recycling

Control of Plastic Pollution:

- Plastic bags and bottles, like all forms of plastic, create significant environmental and economic burden. They consume growing amount of energy and other natural resources, degrading the environment in a number of ways.
- Here are some steps that we can take to reverse the tide of toxic, non-biodegradable pollution so that it may not overtake our planet.
- Put produce in paper canvas, and other healthy-fibre bags.
- Use wax paper bags, cloth napkins, or re-useable sandwich boxes.
- Use only glass bottles or cans.
- Pre-bagged produce not only uses wasteful packaging, but also tends to come from farther away, consuming more of our dwindling oil supplies in transport
- Look for and reward earth-s friendly packaging choices.
- Support recycling schemes and promote support for one in your local area.
- Practice and promote paper disposal of plastics in your home and at the beach. Always remember that litter generates litter. Never dispose off plastics in the sewage system.

Prevention How to Solve Plastic Pollution?

Aside from cleaning up our oceans, which is a very significant first step but not a long-term solution, the best way to address plastic pollution is to change our mindsets and habits with this controversial but nonetheless very useful material:

1. Reduce

To efficiently reduce plastic pollution, there is an evident need of reducing our usage of plastic. It means changing our everyday behaviours not using plastic when there is a better alternative to it and only using plastic when strictly necessary.

2. Reuse

Plastic may cause pollution when poorly managed but it has lots of advantages too, such as being resistant. Many plastic items can therefore be reused or used for different purposes. Before throwing plastic items, it is important to consider how they can be reused.

3. Recycle

Plastic recycling consists of collecting plastic waste and reprocessing it into new products, to reduce the amount of plastic in the waste stream.

4. Educate

Another crucial solution is education in order to increase awareness and behavioural change.

Meetings/ Trainings and Workshops

S. No.	Name / Title of Awareness Campaigns Conducted
1	Workshop on Plastic Waste Management in Uttarakhand at UKPCB Head Office dated 17.02.2023. **No of Participants:- 100+**
2	One month long activity (Dated 25.05.2023 to 24.06.2023) by Char Dham Plastic Rath to generate awareness amongst tourists regarding Single Use Plastic. Total distance of 12372 Kms. was covered which included 381 awareness activities
3	Tackling Plastic Pollution in Ganga Basin- (Awareness and Exhibition Stall), at Parmarth Niketan, Rishikesh dated 29-30.04.2023. **No of Participants:- 350 (two days)**
4	Awareness, Best Out of Waste (Plastic Waste) and Pledge Activity on Mission LiFE at Govt. ITI, Survey Chowk, Dehradun dated 22.05.2023 **No of Participants:- 55**
5	Awareness, Best Out of Waste (Plastic Waste) and Pledge Activity on Mission LiFE at New Era Academy, Sai Lok Colony, Badowala, Dehradun dated 23.05.2023. **No of Participants:- 120**
6	Brainstorming Session & Mobilization of Awareness Vehicle for Char Dham to educate tourists & pilgrims not to litter waste and not to use Single Use Plastic dated 24.05.2023. **No of Participants:- 60**
7	Awareness, Best Out of Waste (Decorating Plastic and Glass Bottle) and Pledge Activity on Mission LiFE at MKP PG College, Dehradun dated 26.05.2023. **No of Participants:- 150**
8	Nukkad Natak on Single Use Plastic & Waste Segregation and Pledge Activity on Mission LiFE at Triveni Ghat, Rishikesh dated 01.06.2023 **No of Participants:- 500.**
9	Nukkad Natak on Single Use Plastic & Waste Segregation and Pledge Activity on Mission LiFE at Bus Stand Rishikesh dated 01.06.2023. **No of Participants:- 400**
10	Awareness on Single Use Plastic & Waste Segregation with Nukkad Natak, Pledge near SGRR Public School, Tilak Road, Dehradun dated 03.06.2023. **No of Participants:- 210**
11	Awareness on Single Use Plastic & Waste Segregation with Nukkad Natak, Pledge Aadarsh Colony, Govind Garh, Dehradun dated 03.06.2023. **No of Participants:- 240**
12	Plastic Waste Management Rath covering a distance of 6672 Kms. to carry out awareness activities for 07 days covering 13 districts of Uttarakhand (15.08.2023 to 21.08.2023)
13	Workshop on Deposit Refund System for Circular Economy in Uttarakhand at Uttarakhand Pollution Control Board, Head Office, Dehradun dated 04.09.2023. **No of Participants:- 100+**
14	Workshop on Plastic Se Jung at Rajbhawan dehtradun dated 27.09.2023. **No of Participants:- 200+**
15	Meeting held at Uttarakhand Pollution Control Board, Head Office and Regional Offices. Total 15 meetings **No of Participants:- 400+**
16	Offline Trainings on EPR at Uttarakhand Pollution Control Board Head Office and Regional Offices. Total Training Sessions:- 14. **No of Participants:- 400+**

EDITORIAL & TECHNICAL SUPPORT

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