Plastic Waste Management (Amendment) Rules, 2024

For Prelims: Biodegradable Plastic, Compostable Plastic, Plastic Waste Management Rules, Central Pollution Control Board, Microplastics

For Mains: Plastic Waste Management Rules, 2022 and its significance, Conservation Environmental Pollution & Degradation Government Policies & Interventions.

Source: TH

Why in News?

The Ministry of Environment, Forest and Climate Change of India has recently introduced amendments to the Plastic Waste Management Rules, 2016, through the **Plastic Waste Management (Amendment) Rules, 2024.**

- These changes signify a significant effort to address plastic pollution in India, particularly by **targeting microplastics and setting stricter criteria for** biodegradable plastics.

What are the Key Highlights of the Plastic Waste Management (Amendment) Rules 2024?

- **Biodegradable Plastics:**
  - Biodegradable plastics are now defined as materials **capable of degradation by biological processes** in specific environments like soil and landfill, **without leaving any microplastics.**
    - Microplastics are defined as any **solid plastic particle insoluble in water**, with dimensions between 1 micron and 1,000 microns (1 micron is one-thousandth of a millimetre).
      - In recent years, they have been reported as a major source of pollution affecting rivers and oceans.
- **Microplastics Testing:**
  - The rules **do not specify which chemical tests** can establish the absence of microplastics or the extent to which microplastics must be reduced for elimination.
- **Expanded Definition of "Importer":**
  - The definition now includes **imports of various plastic-related materials** such as packaging, carry bags, sheets, raw materials, and intermediate materials used in plastic manufacturing for commercial purposes.
    - **Earlier, "importer" referred** to someone who imported plastic packaging, products with plastic packaging, carry bags, multilayered packaging, plastic sheets, or similar items.
- **Inclusive Definition of "Manufacturer":**
  - The scope now encompasses those engaged in the **production of plastic raw materials, compostable plastics, and biodegradable plastics,** reflecting a broader range of entities covered under this term.

- **Extended Scope of "Producer":**
  - Beyond manufacturing plastic packaging, it now includes the production of intermediate materials used in plastic packaging and contract manufacturing for brand owners.
- **Certification Requirement:**
  - Manufacturers are allowed to produce carry bags and commodities from **compostable or biodegradable plastics,** and must obtain a certificate from the Central Pollution Control Board (CPCB) before marketing or selling their products.

Note:

- There are two categories of microplastics: **primary and secondary.**
  - **Primary microplastics** are tiny particles designed for commercial use and microfibers shed from clothing and textiles, such as **microbeads** found in personal care products, plastic pellets, and plastic fibres.
  - **Secondary microplastics** are formed from the **breakdown of larger plastics,** such as water bottles, caused by exposure to environmental factors like the sun's radiation and ocean waves.
- Microplastics act as carriers for **various chemicals, antibiotic-resistant bacteria, and pathogens,** posing risks to **aquatic life and human health** if they bypass the water treatment process.

What are Biodegradable Plastics and Compostable Plastics?

	Biodegradable Plastic	Compostable Plastic
Definition	▪ Defined as materials capable of **degradation by biological processes** in specific environments such as soil or landfill. ▪ Biodegradation depends on factors like temperature, presence of microorganisms, nutrients, oxygen, and moisture.	▪ Designed to **biodegrade in the conditions of an industrial composting plant** or an industrial anaerobic digestion plant with a subsequent composting step.

Environmental Benefit	▪ Can **reduce reliance on fossil fuels** if made from biobased sources.	▪ Reduces waste for specific applications such as take-out containers
Potential Harm	▪ If not managed properly, **it may not biodegrade as intended**, leading to environmental damage.	▪ If **not composted in appropriate conditions, can have the same consequences as non-biodegradable plastics**, contributing to plastic pollution.

Which plastics are recyclable?

Summary of plastic polymer groups, their common uses, properties and recyclability.
Numerical coding (from 1-7) is typically provided on plastic items and gives information of their polymer grouping below. Recyclability is based on common recycling schemes but can vary between countries as well as regionally within countries; check local recycling guidelines for further clarification.

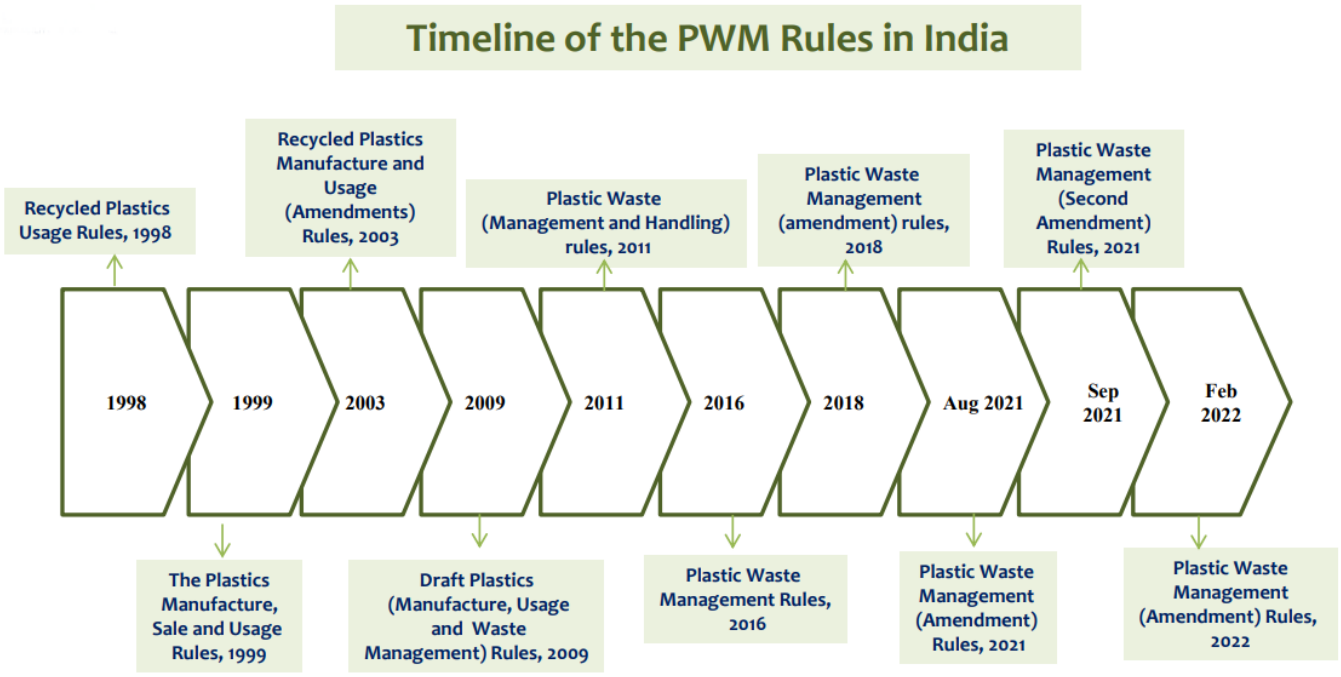
Symbol	Polymer	Common Uses	Properties	Recyclable?
1 PETE	Polyethylene terephthalate	Plastic bottles (water, soft drinks, cooking oil)	Clear, strong and lightweight	Yes; widely recycled
2 HDPE	High-density polyethylene	Milk containers, cleaning agents, shampoo bottles, bleach bottles	Stiff and hardwearing; hard to breakdown in sunlight	Yes; widely recycled
3 PVC	Polyvinyl chloride	Plastic piping, vinyl flooring, cabling insulation, roof sheeting	Can be rigid or soft via plasticizers; used in construction, healthcare, electronics	Often not recyclable due to chemical properties; check local recycling
4 LDPE	Low-density polyethylene	Plastic bags, food wrapping (e.g. bread, fruit, vegetables)	Lightweight, low-cost, versatile; fails under mechanical and thermal stress	No; failure under stress makes it hard to recycle
5 PP	Polypropylene	Bottle lids, food tubs, furniture, houseware, medical, rope, automobile parts	Tough and resistant; effective barrier against water and chemicals	Often not recyclable; available in some locations; check local recycling
6 PS	Polystyrene	Food takeway containers, plastic cutlery, egg tray	Lightweight; structurally weak; easily dispersed	No; rarely recycled but check local recycling
7 OTHER	Other plastics (e.g. acrylic, polycarbonate, polyactic fibres)	Water cooler bottles, baby cups, fiberglass	Diverse in nature with various properties	No; diversity of materials risks contamination of recycling

What are the Recent Plastic Waste Management Rules in India?

- **Plastic Waste Management Rules, 2016:**
  - The Plastic Waste Management Rules, 2016, mandate the **generators of plastic waste to take steps to minimise the generation** of plastic waste, not to litter the plastic waste, ensure segregated storage of waste at source & hand over segregated waste in accordance with rules.

- The PWM Rules, 2016 cast Extended Producer Responsibility (EPR) on Producer, Importer, and Brand Owner and EPR shall be applicable to both pre-consumer and post-consumer plastic packaging waste.
- Increased the **minimum thickness of plastic carry bags from 40 microns to 50 microns** and stipulated a minimum thickness of 50 microns for plastic sheets.
- **Expand the jurisdiction of applicability from municipal areas to rural areas.**
    - Responsibility for **implementation of the rules is given to Gram Panchayat in rural areas.**
- Introduction of waste segregation at source for individual and bulk generators

- **Plastic Waste Management (Amendment) Rules 2018:**
    - Phasing out of **multi-layered plastic (MLP)** (material used or to be used for packaging and having at least one layer of plastic) is now applicable to MLP which are "**non-recyclable, or non-energy recoverable, or with no alternate use."**
    - Prescribed a central registration system for the registration of the producer/importer/brand owner of plastics.
    - The centralised registration system will be evolved by the Central Pollution Control Board (CPCB) for the registration of the producer/importer/brand owner.
    - The rules aim to streamline the registration process for producers, importers, and brand owners, while also providing a mechanism for phasing out **non-recyclable multi-layered plastics.**
- **Plastic Waste Management Amendment Rules, 2021:**
    - Prohibits identified single-use plastic items that have **low utility and high littering potential** by 2022.
        - Prohibition of manufacture, import, stocking, distribution, sale, and use of certain single-use plastic items including polystyrene and expanded polystyrene from 1st July 2022.
    - Plastic packaging waste not covered by the phase-out of single-use plastic items will be collected and managed in an environmentally sustainable way through **Extended Producer Responsibility.**
        - This **responsibility is legally enforced through the Plastic Waste Management Amendment Rules, 2021.**
    - Increase in the thickness of plastic carry bags from 50 microns to 75 microns with effect from 30th September 2021, and to 120 microns with effect from 31st December 2022.
- **Plastic Waste Management (Amendment) Rules, 2022:**
    - Introduced guidelines on EPR for plastic packaging. These guidelines set mandatory targets for EPR, recycling of plastic packaging waste, reuse of rigid plastic packaging, and the use of recycled plastic content.
    - **Environmental compensation will be imposed on those who fail to meet EPR targets**, based on the polluter pays principle.
        - This is to protect and improve the environment, and prevent, control, and reduce pollution.
        - The principle holds polluters responsible for compensating for the damage caused to the environment, regardless of their intent.
    - The guidelines provide a framework to strengthen the circular economy of plastic packaging waste.



What are the other Initiatives taken to Curb Plastic Waste?

- Swachh Bharat Mission
- India Plastics Pact
- Project REPLAN
- Un-Plastic Collective
- GoLitter Partnerships Project

Central Pollution Control Board (CPCB)

- The CPCB was constituted in **1974 under the** Water (Prevention and Control of Pollution) Act, 1974.
- CPCB was also entrusted with powers and functions under the **Air (Prevention and Control of Pollution) Act, 1981.**
    - It serves as a field formation and provides technical services to the **Ministry of Environment and Forests.**
- Principal functions include promoting the cleanliness of streams and wells, improving air quality, and preventing, controlling, or abating water and air pollution.

Read more: India's Battle Against Single-Use Plastics, Banning Single-Use Plastic, Eliminating Plastic Pollution by 2040

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q.1 In India, 'extend producer responsibility' was introduced as an important feature in which of the following? (2019)

(a) The Bio-medical Waste (Management and Handling) Rules, 1998

(b) The Recycled Plastic (Manufacturing and Usage) Rules, 1999

(c) The e-Waste (Management and Handling) Rules, 2011

(d) The Food Safety and Standard Regulations, 2011

Ans: (c)

Q.2 How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (CPCB)? (2018)

1. The NGT has been established by an Act whereas the CPCB has been created by an executive order of the Government.
2. The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes cleanliness of streams and wells, and aims to improve the quality of air in the country.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans: (b)

Q. **Why is there a great concern about the 'microbeads' that are released into environment? (2019)**

(a) They are considered harmful to marine ecosystems.

(b) They are considered to cause skin cancer in children.

(c) They are small enough to be absorbed by crop plants in irrigated fields.

(d) They are often found to be used as food adulterants.

Ans: (a)

Mains

Q: What are the impediments in disposing the huge quantities of discarded solid waste which are continuously being generated? How do we remove safely the toxic wastes that have been accumulating in our a habitable environment? (**2018)**