



Draft Notification for E-Waste Management

For Prelims: E-waste, Single-Use Plastic, EPR

For Mains: Draft Notification for E-Waste Management, Plastic Waste Management Amendment Rules, 2021

Why in News?

The Ministry of Environment, Forest and Climate Change has released the **draft notification for Electronic Waste Management** for public feedback.

- India has a formal set of rules for electronic waste management, first announced **these rules in 2016 and amended it in 2018**. The latest rules are expected to come into effect by August 2022.
- Earlier, the Ministry had notified the **Plastic Waste Management Amendment Rules, 2021**. These rules prohibit specific **single-use plastic** items which have “low utility and high littering potential” by 2022.

What is the Draft Notification for Electronic Waste Management?

- **Electronic Goods Covered:** A wide range of electronic goods, including laptops, landline and mobile phones, cameras, recorders, music systems, microwaves, refrigerators and medical equipment have been specified in the notification.
- **E-Waste Collection Target:** Consumer goods companies and makers of electronics goods have to ensure at least 60% of their electronic waste is collected and recycled by 2023 with targets to increase them to 70% and 80% in 2024 and 2025, respectively.
 - Companies will have to **register on an online portal** and specify their annual production and e-waste collection targets.
- **EPR Certificates:** The rules bring into effect a **system of trading in certificates, akin to carbon credits, that will allow companies to temporarily bridge shortfalls**.
 - The rules lay out a system of companies securing **Extended Producer Responsibility (EPR) certificates**.
 - These certificates **certify the quantity of e-waste collected and recycled in a particular year by a company and an organisation** may sell surplus quantities to another company to help it meet its obligations.
- **Focus on Circular Economy:** New Rules emphasizes on the EPR, recycling and trading.
 - This follows from the government’s objective to promote a **Circular Economy**.
- **Penalty:** Companies that **don’t meet their annual targets will have to pay a fine or an ‘environmental compensation’** but the draft **doesn’t specify the quantum of these fines**.
- **Implementing Authority:** The **CPCB (Central Pollution Control Board)** will oversee the overall implementation of these regulations.
- **Responsibility of the State Governments:** The State governments have been entrusted with the responsibility of earmarking industrial space for e-waste dismantling and recycling facilities, undertaking industrial skill development and establishing measures for protecting the health and safety of workers engaged in the dismantling and recycling facilities for e-waste.

What is E-Waste?

▪ About:

- E-Waste is **short for Electronic-Waste** and the term is used to describe old, end-of-life or discarded electronic appliances. It includes their components, consumables, parts and spares.
- Laws to manage e-waste have been **in place in India since 2011, mandating that only authorised dismantlers and recyclers collect e-waste.** E-waste (Management) Rules, 2016 was enacted in 2017.
- India's first **e-waste clinic** for segregating, processing and disposal of waste from household and commercial units has been set-up in Bhopal, Madhya Pradesh.
- Originally, the **Basel Convention (1992)** did not mention e-waste but later it addressed the issues of e-waste in 2006 (COP8).
 - The Nairobi Declaration was adopted at COP9 of the Basel Convention on the Control of the Trans-boundary Movement of Hazardous Waste. It aimed at creating innovative solutions for the environmentally sound management of electronic wastes.

▪ Challenges Related to Management of E-Waste in India:

- **Less Involvement of People:**
 - A key factor in used electronic devices not being given for recycling was because consumers themselves did not do so.
 - However, in recent years, countries around the world have been attempting to pass effective **'right to repair' laws.**
- **Involvement of Child Labor:**
 - In India, about **4.5 lakh child laborers in the age group of 10-14 are observed to be engaged in various E-waste activities** and that too without adequate protection and safeguards in various yards and recycling workshops.
- **Ineffective Legislation:**
 - There is absence of any public information on most State Pollution Control Boards (SPCBs)/PCC websites.
- **Health hazards:**
 - E-waste contains over 1,000 toxic materials, which contaminate soil and groundwater.
- **Lack of incentive schemes:**
 - No clear guidelines are there for the unorganized sector to handle E-waste.
 - Also, no incentives are mentioned to lure people engaged to adopt a formal path for handling E-waste.
- **E-waste Imports:**
 - Cross-border flow of waste equipment into India- 80% of E-waste in developed countries meant for recycling is sent to developing countries such as India, China, Ghana and Nigeria.
- **Reluctance of Authorities' involved:**
 - Lack of coordination between various authorities responsible for E-waste management and disposal including the non-involvement of municipalities.
- **Security Implications:**
 - End of life computers often contain sensitive personal information and bank account details which, if not deleted leave opportunity for fraud.

Way Forward

- There are various startups and companies in India that have now started to collect and recycle electronic waste. We need better implementation methodologies and inclusion policies that provide accommodation and validation for the informal sector to step up and help us meet our recycling targets in an environmentally sound manner.
- Also, successfully raising collection rates required every actor to be involved, including consumers.

UPSC Civil Services Examination, Previous Year Questions

Q. Due to improper/indiscriminate disposal of old and used computers or their parts, which of the following are released into the environment as e-waste? (2013)

1. Beryllium
2. Cadmium
3. Chromium
4. Heptachlor
5. Mercury
6. Lead
7. Plutonium

Select the correct answer using the codes given below:

- (a) 1, 3, 4, 6 and 7 only
(b) 1, 2, 3, 5 and 6 only
(c) 2, 4, 5 and 7 only
(d) 1, 2, 3, 4, 5, 6 and 7

Ans: (b)

Exp:

- Toxic chemicals in a computer system are Lead, Cadmium, Mercury, Beryllium, Brominated Flame Retardants (BFRs), Polyvinyl Chloride and Phosphorus compounds. Their improper handling and burning releases hydrocarbons and pollutes water bodies.
- Metals contained in circuit boards are Cadmium, Antimony, Lead and Chromium. Mercury is present in switches and lamps of many photocopiers, scanners, and fax machines. Lead can also be found in monitors. **Hence, 2, 3, 5 and 6 are correct.**
- Copper Beryllium alloy is used to provide “spring memory” that ensures continuous, fatigue-free electrical connections, meaning higher processing speeds and better performance for personal computers, routers, and the internet as well as radars, avionics, and defence system. **Hence, 1 is correct.**
- Plutonium is a highly reactive synthetic element of the actinide family which occurs in Uranium ores and is used as a fuel in nuclear power plants because of its ability to undergo nuclear fission.
- About 15 isotopes of Plutonium are known to exist and all of these isotopes are radioactive. It is not used in computers or their parts. **Hence, 7 is not correct.**
- Heptachlor is an organochlorine (Cyclodiene) insecticide which was first isolated from technical chlordane in 1946 and was used primarily by farmers to kill insects in seed grains and on crops, as well as by exterminators and home owners to kill termites. **Hence, 4 is not correct.**
- **Therefore, option (b) is the correct answer.**

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