EDITORIAL: THE HINDU

GENERAL STUDIES 3: ENVIRONMENT **DATE: 13.05.2025**
TOPIC: E-WASTE (environmental pollution and degradation)

India's rising e-waste, the need to recast its management

Introduction: Digital Growth and the Rise of E-Waste in India

- India is rapidly progressing toward becoming *Viksit Bharat* through digital expansion, increasing the use of electronic devices across sectors.
- This has resulted in a steep rise in electronic waste (e-waste), which poses significant **environmental, social, and economic challenges**.
- India ranks among the top global e-waste producers alongside China, the US, Japan, and Germany.
- E-waste in India increased by **151.03%** in six years — from **7.08 lakh metric tonnes in 2017-18** to **17.78 lakh metric tonnes in 2023-24**, with an average annual rise of **1.69 lakh metric tonnes**.

Extended Producer Responsibility (EPR): A Framework for Accountability

- EPR mandates that **producers, importers, and brand owners** are responsible for managing products once they reach the end of their lifecycle.
- It ensures:
    - Accountability for environmental costs.
    - Incentivization of **eco-friendly product design**.
    - Reduced pressure on local municipalities by shifting the waste burden to producers.

Consequences of Improper E-Waste Management

- **Environmental Degradation**:
    - Annual loss of **$10 billion** due to:
        - Water pollution from cyanide and sulphuric acid used in recovery.
        - Air pollution from **open burning** of plastics and **lead fumes**.
        - Soil pollution from improper landfill disposal.
- **Social Losses**:

- Annual **$20 billion** loss due to informal recycling by marginalized communities.
- Informal workers, often **women and children**, face toxic exposure, with an average life expectancy below 27 years.

- **Loss of Critical Raw Materials**:
  - Over **₹80,000 crore** worth of metals (gold, copper, etc.) lost yearly due to crude recovery methods.
- **Tax Revenue Loss**:
  - Over **$20 billion** in tax loss each year due to unrecorded and cash-based transactions in the **informal recycling sector**.

Introduction of EPR Floor Price: A Game Changer

- The **E-Waste (Management) Rules, 2022** introduced the concept of a **minimum floor price** for EPR certificates.
- Purpose:
  - To guarantee fair compensation to **registered recyclers**.
  - To curb the **informal sector**, which accounts for **95%** of e-waste processing using unsafe methods.
  - To make formal, regulated recycling **economically viable**.

Positive Impacts of the Floor Price

- **Market Stability**:
  - Prevents volatility as seen in sectors like plastic waste.
  - Ensures predictability in EPR certificate pricing, encouraging stable investments.
- **Boost to Formal Recycling**:
  - Formal recyclers gain confidence to invest in **advanced, safer technologies**.
  - Enhances recovery of precious metals like **gold, silver, copper**.
- **Infrastructure Development**:
  - Increased funds lead to growth in **scientific recycling infrastructure**.
  - Helps India transition toward a **circular economy** by treating e-waste as a resource.
- **Environmental Benefits**:
  - Reduces landfill dependency and leakage of toxic substances like **lead and mercury**.

    - Protects rivers, soil, and ecosystems from long-term contamination.

- **Global Alignment**:
    - Floor pricing aligns India's framework with international **EPR practices**, where producer contributions are typically higher and better regulated.

Addressing Market Failures and Encouraging Compliance

- Ensures **material recovery over disposal**, shifting focus toward sustainability.
- Counters the cost advantage of the **informal sector** by creating a **level playing field**.
- Producers benefit from a more reliable system for meeting **EPR targets** through certified recyclers.

Criticism of the Floor Price and Rebuttals

- **Criticism**: It increases cost for producers.
    - **Rebuttal**: Long-term environmental benefits outweigh short-term cost concerns.
- **Criticism**: Consumer prices may rise.
    - **Rebuttal**: Producers can innovate with **durable, modular, recyclable products**, minimizing cost impact.
- **Criticism**: Risk of underpricing remains.
    - **Rebuttal**: Past failures in plastic waste management show the **necessity of robust pricing** to avoid fake recyclers and data manipulation.

Innovation and Growth Opportunities

- Encourages **technological advancement** in recycling.
- Promotes R&D and domestic manufacturing of **green recycling equipment**.
- Makes the sector **attractive for formal investment**, improving jobs and compliance.

Conclusion: Towards a Sustainable and Profitable Recycling Future

- The EPR floor price is not just a pricing tool—it is a **policy instrument for environmental and social justice**.
- It can formalize the fragmented recycling sector, create jobs, and reduce public health risks.
- Given the **73% surge** in e-waste over the last few years, India must urgently adopt **floor pricing mechanisms** to ensure economic viability, environmental care, and sustainable growth.

- The move positions India to set **global benchmarks** in circular economy practices and green industrial transformation.

Source: https://www.thehindu.com/opinion/op-ed/indias-rising-e-waste-the-need-to-recast-its-management/article69568262.ece