

General Studies-3; Topic – Conservation, environmental pollution and degradation

E-waste Management in India

1) Introduction

- E-waste is technically all waste electrical and electronic equipment (WEEE) discarded without the intent of reuse.
- It is one of the fastest growing waste streams in both developed and developing countries.
- According to a 2011 Rajya Sabha secretariat study, e-waste accounts for 70% of Indian landfills.

2) E-waste Crisis

- E-waste is growing at a compound annual growth rate (CAGR) of about 30% in the country.
- ASSOCHAM estimated that e-waste generation was 1.8 million metric tonnes (MT) per annum in 2016 and would reach 5.2 million metric tonnes per annum by 2020.
- Experts predict that it gets buried under the ground in landfills for centuries as it is not biodegradable.
- E-waste contains substances that are hazardous to human health, including, mercury, cadmium and lead.
- E-waste can pollute water sources and food-supply chains.
- A big majority of the e-waste is recycled by the informal sector, where very crude methods are used.
- Women and children are particularly affected as they burn the plastic from electronic goods, in the process getting to metals and other toxins that are also carcinogenic and enter their blood stream.
- Findings from many studies show increases in spontaneous miscarriages, still and premature births, as well as reduced birth weights and birth lengths associated with exposure to e-waste.

3) E-Waste Problem in India

- In India, e waste accounts for 4% of global e-waste and 2.5% of global GDP (2014 figures) – so it has a higher share of e-waste than its share of gross domestic product (GDP).
- In India most consumers are still unaware of how to dispose of their e-waste.
- Most Indians end up selling their e-waste to the informal sector, which poses severe threats to human (including children's) lives.
- Use of improper and highly hazardous methods of extracting the trace amounts of precious metal from it for profit.
- Due to informal processing hubs in Moradabad and Seelampur, soil, water and air are polluted to a beyond-repairable level.
- E-waste will also contribute to carbon emissions.
- India figures as one of the regions that receives most of the e-waste export.
- India notified the E-waste (Management) Rules, 2016, on October 1, 2016, which made 'extended producer responsibility' (EPR) mandatory.
- The implementation of EPR remains extremely poor.
- The informal sector recycles 95 per cent of the e-waste in India and there is no tangible method to link the formal sector with the informal one.
- There is lack of awareness among people as they don't know that there exist collection centres that collect items for recycling.
- The producers/manufacturers do not have adequate information on their website regarding e waste management.

- India being a vast country, setting up collection mechanism is a big challenge.
- Improper enforcement of the existing laws is another hurdle.

4) **'A new circular vision for electronics' Report**

- A new report by the United Nations has warned that the world is soon going to be hit by a tsunami of electronic and electrical waste (e-waste).
- This is due to the sheer amount of e-waste being generated currently and the lack of its recycling.
- By 2040, the e-carbon emissions from the production and use of electronics will reach 14 per cent of total emissions.
- E-waste export is regulated under the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal, which has been ratified by 188 nations.
- Even with the convention in place, large amounts of e-waste continues to be shipped illegally.

5) **Government Initiatives**

- The Ministry of Electronics and Information Technology, MeitY, has initiated an E-waste Awareness programme under Digital India initiatives, along with industry associations from 2015.
- This is to create awareness among the public about the hazards of e-waste recycling by the unorganised sector, and to educate them about alternate methods of disposing of their e-waste.
- The general public is also encouraged to participate in 'Swachh Digital Bharat', by giving their e-waste to authorised recyclers only.
- The programme has adopted the best practices for e-waste recycling available globally.
- The Ministry of Electronics and Information Technology (MeitY) has developed affordable technologies to recycle valuable materials and plastics in an environmentally sound manner.

6) **Way Forward**

- Effective awareness would be the right step for all stakeholders.
- Need for adopting environmentally friendly e-waste recycling practices.
- Unless we have effective implementation of the rule, the country would end up creating many informal processing hubs.
- Strict implementation of the rule, creating adequate awareness and training for requisite skill sets to the informal sector could be a game-changer.
- This sector needs technological support, from land to capacity building to IT.
- This sector could generate jobs as well as viable business prospects for locals.
- Waste pickers should be trained to collect e-waste.
- More emphasis should be on to reuse the e-waste, for which industries need to design a framework.
- India has lot to learn from Norway model of e-waste management.