



At a Glance

E-WASTE

Waste electrical and electronic equipment (WEEE or e-waste) consists of end-of-life electrical and electronic equipment and parts, such as microwaves, toasters, television sets, mobile phones, air-conditioners, computers and printers discarded as waste without the intent of reuse.

THE CRISIS

- E-waste is **one of the fastest growing waste streams** in both developed and developing countries.
- **Almost 90% of global e-waste is illegally traded or unscientifically dumped**, resulting in environmental pollution and health hazards.
- **E-waste contains toxins** that can impact the heart, lungs, brain, skin and kidneys, **leading to infections, chronic disease, cancer, coma or death.**
- **Health risks arise from direct contact, inhaling toxic fumes and through chemical accumulation** in soil, water and food from components and by-products.

EEK WASTE: GLOBAL STATISTICS

- E-waste generated globally (2017): 44.7 million MT
- E-waste by 2021: 52.2 million MT
- Highest e-waste globally (2016): China (7.2 million MT)
- Value of potential reusable e-waste (2017): 62 billion euro
- E-waste per person (2016): 6.1 kg
- E-waste per person (2014): 5.8 kg
- **In India** E-waste generated (2016): 2 million MT
- Recycled e-waste per year: 20%
- E-waste imported into India annually: 50,000 MT
- **Hall of shame** top e-waste generating states (% of total)
 - Maharashtra: 19.8%
 - Tamil Nadu: 13%
 - Uttar Pradesh: 10.1%
 - West Bengal: 9.8%
 - Delhi: 9.5%
 - Karnataka: 8.9%
 - Gujarat: 8.8%
 - Madhya Pradesh: 7.6%

- Children living near e-waste recycling facilities have **significantly lower physical growth indicators**.
- Despite the e-waste rules of 2011, **most producers have not set up a take-back system**.

HIDDEN TOXINS

- Arsenic in light emitting diodes is linked to lung cancer
- Barium in cathode ray tube getters can cause brain damage
- Beryllium in x-ray lenses can cause lung cancer
- Cadmium in printer inks and toners can cause bone disease
- Chromium VI in data tapes can permanently damage eyes
- Lead in batteries can cause brain disorders in young children
- Mercury in fluorescent lamps in LCDs can cause brain damage
- PCB in transformers affects the reproductive system
- PVC on cable insulation can cause respiratory problems

THE LAWS

- **The Hazardous Wastes (Management and Handling) Amendment Rules, 2003**, mention e-waste without specifications about its management and handling.
- The '**Guidelines for Environmentally Sound Management of E-waste**', 2008, introduced the concept of Extended Producer Responsibility (EPR).

EPR is the responsibility of any producer of electrical or electronic equipment to manage e-waste in an environmentally sound manner through a back system, collection centres or both, and through agreements with authorised dismantlers or recyclers through a Producer Responsibility Organisation recognised by the producer in their Extended Producer Responsibility Authorisation.

- **The E-waste (Management) Rules, 2016:**
 - specify the responsibilities of all parties involved.
 - define Extended Producer Responsibility (EPR).
 - make legal provisions for local *kabaris* / junk dealers to handle e-waste.
 - specify the maximum level of certain toxic chemicals that may be used.
 - propose a scheme whereby the consumer pays the producer a deposit refundable upon the return the product.

GOING FORWARD

- **Informal and formal e-waste recycling sectors must come** together to handle the growing e-waste burden.
- **EPR must be enforced strictly** and non-compliance fined.
- The **e-waste collection system must be rooted in the local context** and culture.
- External **dumping of e-waste in India must be banned**.

India's informal waste recycling system handles 90-95% of the country's e-waste.


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