



E-WASTE AWARENESS

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E-WASTE RECYCLERS INDIA

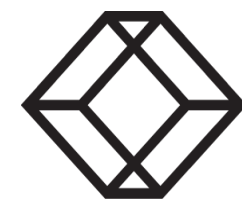
(Government Authorized)



WHAT IS E-WASTE?



- ☐ **E-Waste** or waste Electrical and Electronic Equipment comprises of all equipment using electrical or electronic parts.
- ☐ As per E-Waste (Management) Rules, 2016, the E-Waste defined as 'electrical and electronic equipment, whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes.
- ☐ Such end of life may happen due to many reasons such as technology obsolescence, functional damage, higher repair costs or unneeded.



E-WASTE IS NOW THE FASTEST GROWING WASTE IN THE WORLD





TYPES OF E-WASTE



Personal Computers



Centralized Data Processing



Laptops



Notebook Computers (PDA's)



Printers (Including Cartridges)



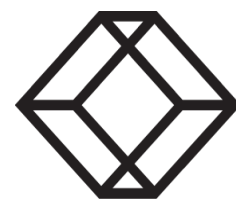
Copying Equipment



**Electrical and Electronic
Typewriters**



User Terminals & Systems





TYPES OF E-WASTE



Telex



Telephones



Cell Phones



Television Sets (LCD and LED)



Refrigerator



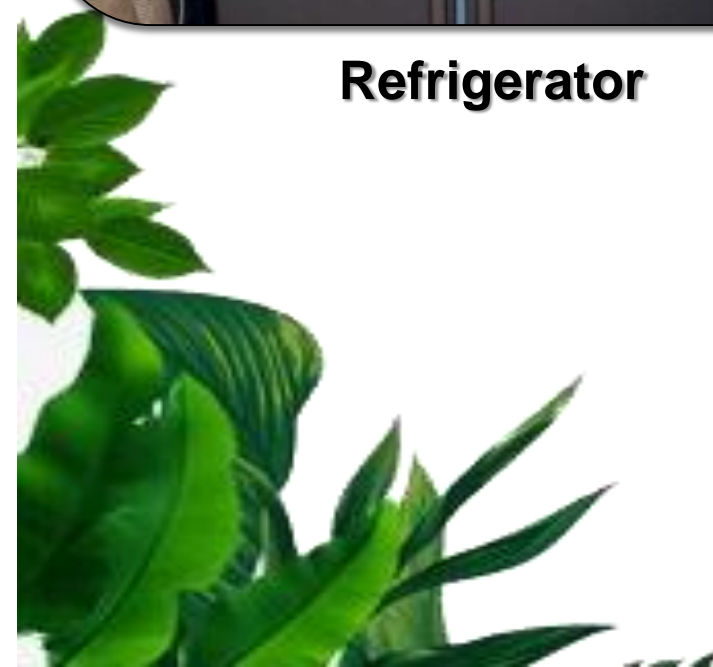
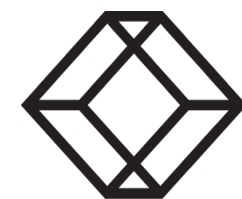
Washing Machine



Air-Conditioners (Window, Split, Compressor)



Fluorescent and Mercury containing Lamps



• IS E-WASTE HAZARDOUS?

- If E-Waste is dumped and exposed to soil and moisture, a slow process of degeneration starts.
- In this process, ionic cells are formed between the metal and soil molecules leading to a slow leaching.
- This gradually poisons the soil and makes it completely infertile and hazardous to health.
- Also, many unorganized sector recyclers use crude methods for recovering precious metals.
- Due to such methods, there is a significant amount of land, air and water pollution that can lead to several health problems.

WHY SHOULD YOU RECYCLE E-WASTE?

Here are some reasons to recycle E-Waste -

1. It helps to preserve our natural resources.
2. It keeps toxins out of landfills, including toxins like mercury and lead.
3. Recycling E-waste is the socially responsible thing to do!
4. It frees up space in your office and home.

E-Waste also contains valuable materials such as gold, silver, copper, steel, and other valuable metals it makes good sense to recover these materials instead of throwing these away.



E-WASTE GENERATION IN INDIA



- ❑ India generates about **2 million tones** of E-Waste annually now. (1)
- ❑ India ranks **fourth** now in the world among top e-waste producing countries. (2)
- ❑ It has been found that **80-90 percent** of India's E-Waste comes from the unorganized sector.

✓ OUT OF TOTAL E-WASTE VOLUME IN INDIA –

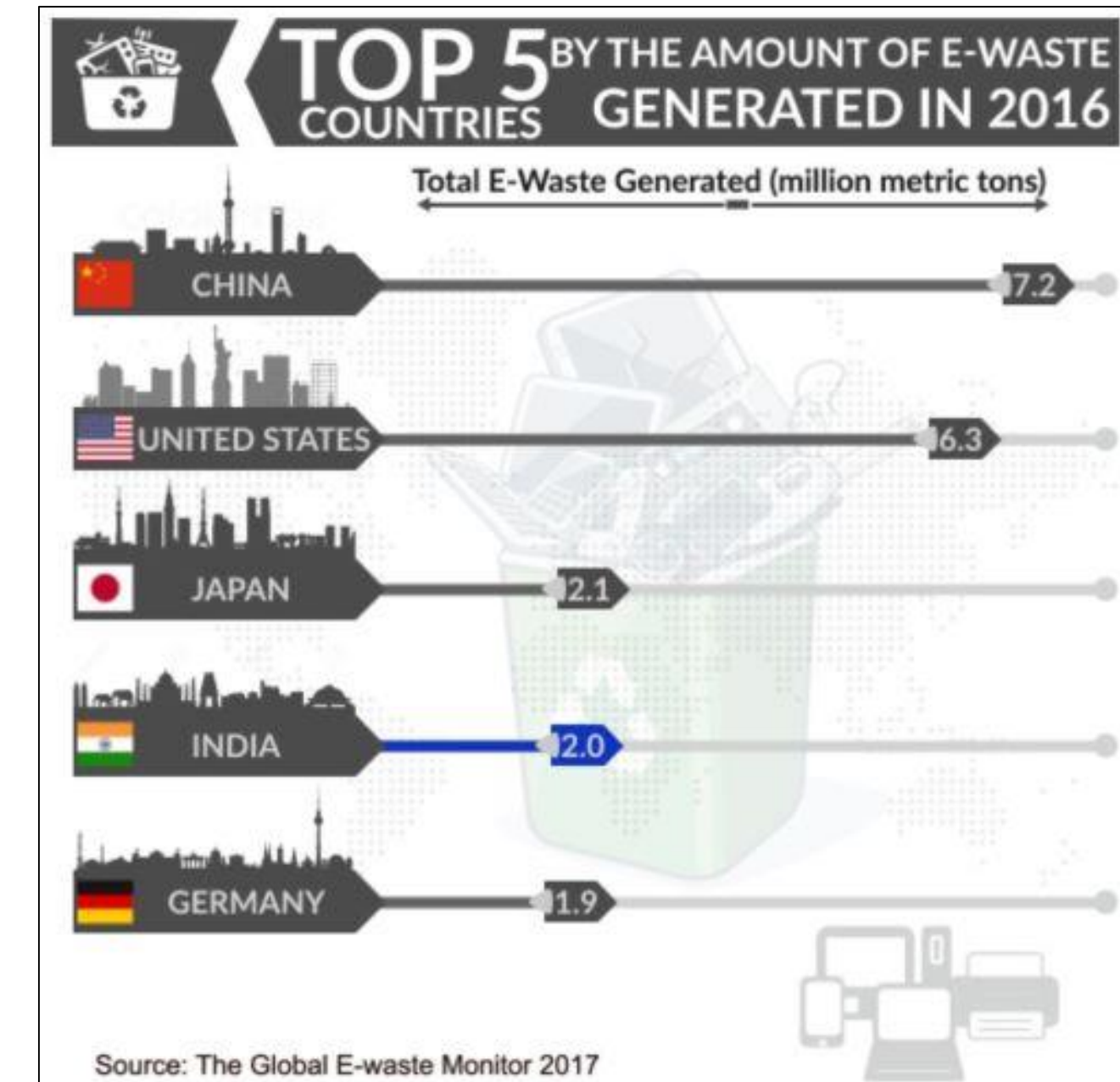
- Washing Machine, A/C's, Televisions, Monitors - **68%**
- Personal Computers, Laptops, IT Equipment's - **20%**
- Imports of E-Waste - **10%**
- Cell Phones - **2%**

Despite many units currently registered with Govt. of India, Ministry of Environment and Forest / Central Pollution Control Board, as E-Waste recyclers / preprocessors the entire recycling process more or less still exists in the unorganized sector.

Sources

(1) - <https://twitter.com/Ewirecyclers/status/1213033036360515584/photo/1>

(2) - <https://www.livemint.com/Politics/DKDWemxZwRmWddDpfcfo1H/India-among-top-5-nations-in-ewaste-generation-Report.html>



PROCESS OF RECYCLING & RECOVERY



1 - Sourcing & Collection

Procuring e-waste from different sources such as business , households etc.

2 - Sorting & Grading

Weighing & segregation of various e-waste for easy retrieval.

3 - Dismantling

Dismantling end-of-life equipment into various fractions like plastic, glass, metals, cables, PCBs etc and segregating them for the convenience of recycling.

4 - Shredding

- Shredding into smaller pieces.
- Separating metals from plastic.
- Recovery of metals such as aluminum, copper, precious metals.

5 - Disposal

Disposing of the hazardous elements for final disposal.



SAVINGS BY RECYCLING

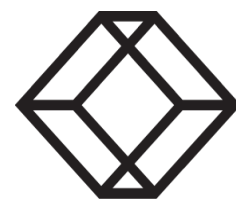


❖ Every ton of Aluminum recycled make the following savings:-

- **6 Tonnes of Bauxite**
- **4 Tonnes of Chemical Products**
- **14 MWH of Electricity**
 - It saves 70% of energy to recycle plastic.
 - It saves 40% less energy to recycle glass.
 - Every ton of paper recycle saves 17 trees.

❖ Every ton of Steel recycled makes the following savings:-

- **1.28 Tonnes of Solid Waste.**
 - 40% of water required in production.
 - 75% of the energy needed to make steel from virgin material.
 - Reduction of air emissions by 86%.
 - Reduction of water pollution by 76%.





ADVANTAGES OF RECYCLING



Advantages of Recycling

Reduces Energy Consumption

Prevents Pollution

Reduces Global Warming – Decreases Emissions of Greenhouse Gases

Reduces Amount of Waste to Landfills

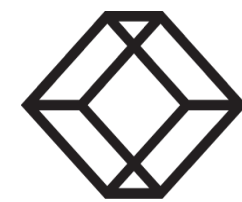
Protects Environment from Toxicants

Judicial & Sustainable Use of Resources

Create Green Jobs

Conserves Natural Resources for Future Generation

ISSUES & CHALLENGES



ISSUES FACED IN PROPER DISPOSAL OF THE E-WASTE

Legal Framework

Leaching of Heavy Metals from Landfills & Incinerators

Less Reuse of the Assets

Un-Awareness

Less Exposure





Thank you

