

Challenges in e-Waste Management

-By

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Introduction

- Wastes are generated in all human activities
- e-Waste (electrical and electronic waste) is generated by individuals, commercial, industrial and service organisations
- The quantity and nature of wastes are vastly different

Introduction

- All wastes have adverse impact on environment and health if not managed properly
- Their constituents may be toxic, flammable, corrosive or disease carrying

Introduction

- Regulations enacted by the Government for environmentally sound management of all types of waste
- For e-wastes, rules were notified in 2011 and are now under revision

Definition of e-Waste

(As per rules)

Electrical and electronic equipment, whole or in part, discarded as waste by the consumer

Applicability of e-Waste

- EEE's listed in Schedule – 1 of Rules include :
 - i. Information technology and Telecommunication Equipment viz. all types of computers, printers and telephones, telex (16 items)
 - ii. Consumer Electricals and Electronics – TVs, refrigerators, washing machines, ACs (4 items)

e-Waste Composition

- It varies with the type of equipment.
- Major constituents include iron and steel, aluminium, copper, lead, plastic, glass
- Minor constituents are cadmium, chromium, mercury, beryllium, precious metals like silver, gold, palladium

Recycling of e-Waste

- Dismantling to take out **reusable components** and recovery of the other constituents by **physical separation** process followed by **melting, chemical separation** etc.
- PCBs processed separately

Challenges in e-Waste Management

- Reliable database on generation of e-waste
- Organised collection mechanism
- Adequate facilities with trained manpower for dismantling and recycling
- Development of economically viable and environmentally sound processes for recovery
- Association of R&D institutes for the above
- Public Awareness
- Association of informal sector

Thank You