

## CHINTAN Fact Sheet



## Green Your Electronic Footprint

### What is e-waste?

**E-waste** is a term used to cover almost all types of discarded electrical and electronic equipment. This includes:

**Information technology and telecommunications equipment:** centralized data processing (mainframes, minicomputers), personal computers (central processing unit with input and output devices), laptop computers (central processing unit with input and output devices), notebook computers, notepad computers, printers including cartridges, copying equipment, electrical and electronic typewriters, user terminals and systems, facsimile, telex, telephones, pay telephones, cordless telephones, cellular telephones, answering systems.

**Consumer electrical and electronics:** television sets (including sets based on liquid crystal display and light emitting diode technology), refrigerators, washing machines, air-conditioners, excluding centralized air conditioning plants.<sup>1</sup>

### Why is e-waste currently a problem?

**It's a problem because:**

- It's toxic, pollutes the environment and causes harm to workers
- It's expensive to recycle. Only few companies in India have set up authorized plants. Hence, most waste goes for polluting recycling, which is lucrative because of valuable metals like gold in e-waste.
- There is more and more of it. According to the latest annual report of the Union Ministry of Environment and Forest (MOEF), by end of 2012, India would have generated eight lakh tones of e-waste which is an increase by eight times in the past seven years throughout the country.<sup>2</sup>

### Why is E-Waste Toxic?

Electrical and electronic equipment is composed of various hazardous substances, which are harmful to human health and environment if not handled carefully. Breakage of computer monitors causes exposure to lead dust. When e-waste and its plastic

components are burned, they produce dioxins, some of the most toxic chemicals known to mankind. The processes to extract metals like gold and copper involve using cyanide and acids. Many of these chemicals cause a problem during recycling. Ideally, they should not have been used during manufacturing at all.

Some of the most common toxic materials used in electronic items are PCBs (condensers & transformers), CFC (cooling unit & Insulation foam), PVC (cable insulation), Arsenic (Light emitting diode), Beryllium (power supply boxes), Barium (getters in CRT), Cadmium (batteries, CRT, printer, photocopy machine), Lithium (batteries), Mercury (fluorescent lamps and mercury batteries, some switches, thermostats etc), Nickel (batteries, electronic gun in CRT), Selenium (photo drums in photocopy machine), Zinc Sulphide (interior of CRT screen), Rare Earth metals (fluorescent layers-CRT screen), Chromium (data tapes, floppy disks, circuit boards, photo copying machines) toner dust (laser printers, copiers), Americium (medical equipment, smoke detectors, fire detectors), Lead (solder, lead-acid batteries, electronic components, cable sheathing, in the glass of CRT etc).<sup>3</sup>

### What do the Rules say?

The Ministry of Environment and Forest (MOEF) has issued the E-waste (Management and Handling) Rules, 2011, effective from May 1st, 2012.

The E-waste (Management and Handling) Rules 2011 are the set of mandatory instructions defining responsibilities, norms and procedures for various groups. Key features include:

**Extended Producer Responsibility (EPR):** It is the responsibility of the producers (manufacturers of electronic goods) to ensure safe disposal of products manufactured or imported by them, once they are discarded. They are required to set collection centers or take back systems.

**Orphan Waste:** Urban local bodies must collect and channelize orphaned e-waste (non branded, assembled) to the authorized collection centres.

**Discouraging Hazardous Chemicals:** The rule has instructed all the electronic and electrical equipment producers to phase out the hazardous chemicals as per a list in the Rules within a given time frame.

**Collection Centers:** The collection centers are authorized entities which will collect e-waste and forward it to the formal recycling units.

**Informal Sector Inclusion:** There are provisions for the informal sector to participate in the e-waste collection and dismantling chain as associations or companies.

**Refurbishers:** People who repair electronic and electric items, are not covered by these rules.



### Who is Now Responsible for What?

The E-waste (Management and Handling) Rule 2011 has identified specific responsibilities:

**Producers:** As per Extended Producers Responsibility (EPR) clause, producers must take the responsibility of their products from cradle to grave. The producers have to establish collection centers or take back systems either individually or collectively for fulfilling their responsibilities. Producers includes brands, actual manufacturers and importers.

**Bulk Consumers:** Bulk consumers (i.e. offices, complexes etc) must give their e-waste to the authorised collection centres or to the producers.

**Collection Centre:** A collection centre can be established by an individual or a group, for collection and storage of e-waste. From here, it should be transported to a registered dismantler or recycler.

**Dismantler and Recycler:** Dismantlers and recyclers are responsible for dismantling e-waste and reclaiming metals, plastics etc. They need permissions from State and Central Pollution Control Boards.

**Formalized Informal Sector:** The informal sector, comprising kabadiwalas, wastepickers etc, can legally collect e-waste if they formalize as an association or a company. Such associations must be given authorizations if they meet the requirements. The reason to specially include associations is because many informal sector actors organize themselves as associations, which are often not entertained by various government agencies granting authorization.

### Is There a Role in The New Legal System for Your Local Kabari?

The new legal system has provided a provision for the local kabaris to handle e-waste. The rules clearly define collection centre as a "Centre established, individually or jointly or a registered society or a designated agency or a company or a association to collect e-waste".<sup>4</sup>



### What You Must Do

- Try not to store e-waste in your home for long as it may result in the release of hazardous substances
- Never break or open any electronic item
- Do not throw your e-waste in REGULAR trash
- Never burn any e-waste component
- Always give your e-waste to the authorized e-waste collectors or in drop boxes

Chintan is an authorized e-waste collector; give us your e-waste. We will ensure it has a green end. Plus, Chintan will use your waste to create livelihoods for the poor.

### References

- <sup>1</sup> E-waste (Management and Handling) Rules 2011
- <sup>2</sup> [http://articles.timesofindia.indiatimes.com/2012-04-04/pollution/31286986\\_1\\_total-e-waste-automatic-dispensers-electronic-tools](http://articles.timesofindia.indiatimes.com/2012-04-04/pollution/31286986_1_total-e-waste-automatic-dispensers-electronic-tools), Times of India- April 4, 2012, Article: India's e-waste output jumps 8 times in 7 years
- <sup>3</sup> <http://www.epa.state.oh.us/Default.aspx?tabid=2644>, Environment Protection Agency
- <sup>4</sup> E-waste (Management and Handling) Rules 2011



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