



# Green Schools Network

## ACTIVITY SHEET

September 2008

Why talk about  
**Electronic waste or  
"e waste"**



These days, it's often cheaper and more convenient to buy a new PC than to upgrade an old one. But what happens to those old computers once they've been abandoned for newer models?

The refuse from discarded electronics products, also known as e-waste, often ends up in landfills or incinerators instead of being recycled. And that means toxic substances like lead, cadmium and mercury that are commonly used in these products can contaminate the land, water and air.

Name .....

School Name .....

Class ..... Date .....

**Gobar Gyan:** Electronic waste or e-waste is the term used to describe old, end-of-life or discarded appliances using electricity. It includes computers, consumer electronics, fridges etc which have been disposed of by their original users.

While there is no generally accepted definition of e-waste, often it is associated with relatively expensive and essentially durable products used for data processing, telecommunications or entertainment in private households and businesses. But the ever increasing digitization of products blurs such a distinction from former electrical appliance such as a kettle, a boiler or an oven; all electrical appliances do or will soon contain electronic circuits and ultimately become e-waste.

"e-waste" is used as a generic term embracing all types of waste containing electrically powered components. E-waste contains both valuable as well as harmful materials which require special handling and recycling methods.

**Activity:** Make a list of all the appliances you use that could end up as electronic waste:

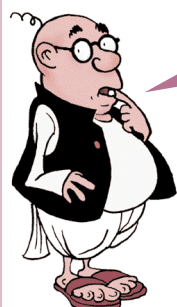
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Examples of e waste which contain problematic, scarce and valuable or otherwise interesting materials include: Computers, LCD / CRT Screens, Cooling Appliances, Mobile Phones, etc. containing precious metals, flame retarded plastics CFC foams and many other substances.



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### What should I do with my electronic discards?

The mantra of "Reduce, **Reuse, Recycle**" applies here. **Reduce** your generation of e-waste through smart procurement and good maintenance. **Reuse** still functioning electronic equipment by donating or selling it to someone who can still use it. **Recycle** those components that cannot be repaired.

**Find out:** what happens to those items after you and your family are done using them. Are they disposed of in the trash? Do you take them to a recycling plant? Do you resell them? Do you give them to a kabadi wala?

**Gobar Gyan:** In India, e-waste is mostly generated in large cities like Delhi, Mumbai and Bangalore. In these cities a complex e-waste handling infrastructure has developed mainly based on a long tradition of waste recycling. This is mainly operated by an entrepreneurial informal sector. Rag pickers and waste dealers found it easy to adapt to the new waste stream, resulting in a large number of new businesses focusing on the re-use of components or extraction of secondary raw materials. So far, the e-waste recycling system is purely market driven.



Harmful techniques like burning wires are common practice in the informal recycling sectors in big cities in India.

Some of the recycling processes are extremely harmful and have negative impacts on the workers' health and the environment. A study on the burning of printed wiring boards that was conducted in 2004 showed an alarming concentration of dioxins in the surrounding areas in which open burning was practiced. These toxins cause an increased risk of cancer if inhaled by workers and local residents or by entering the food chain via crops from the surrounding fields.

#### **Did you know?**

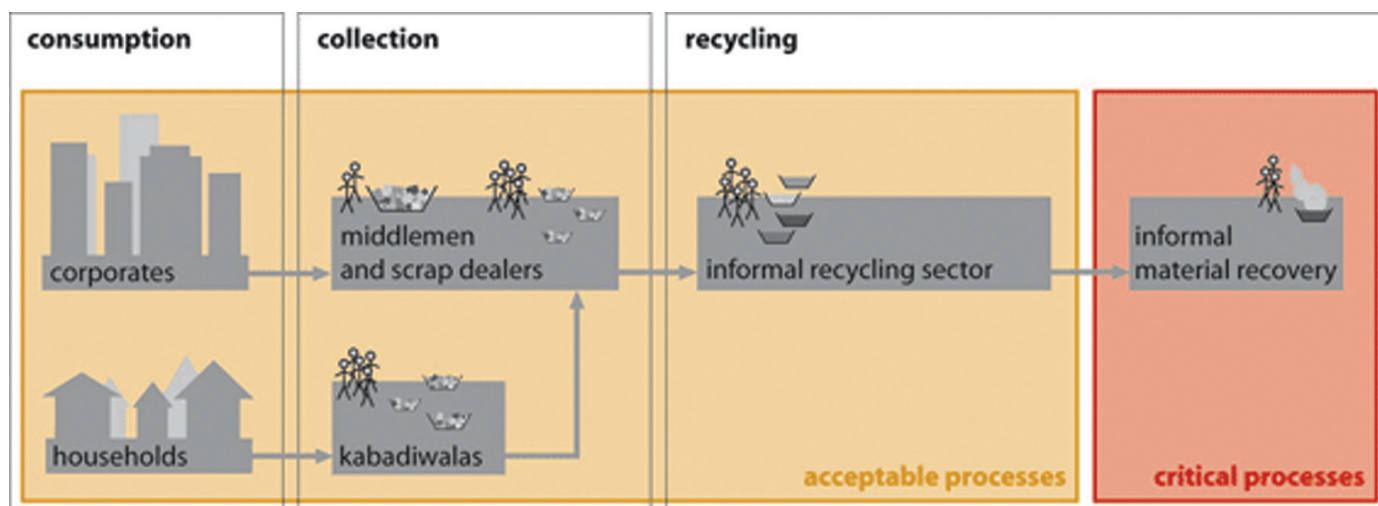
*India generated 3.3 lakh tones e-waste in 2007 and is expected to touch 4.7 lakh tones by 2011*

India has already initiated a plan to control e-waste, and some well known companies in the country have begun to take action on this front as well.

#### **For example:**

*ELCIA (Electronics City Association) in Bangalore now operates a collection center for all e-waste generated in Electronics City. Companies are encouraged to give all their e-waste including tube lights and CFLs to the collection point. In the last two months, 16 companies collectively handed over 21 tones of e-waste to the collection point. These companies include Infosys, WIPRO, Timken and others. The waste collected is then handled over to E-Parisaraa, an authorized e-waste recycler.*

The Bangalore-based E-WaRDD now has its first corporate client: Titan Industries, a leading name in watches in India. E-WaRDD is an association of e-waste recyclers who are in the process of being upgraded from the informal sector. Every year Titan has an exchange programme whereby old watches are exchanged for new purchases under a special discount scheme. Last year between 600,000 and 700,000 old watches were collected under this scheme most of which finally ended up in a landfill. Titan is aware that digital watches are also classified as e-waste and therefore need to be recycled safely. They have thus partnered with Saahas, a development organization working to facilitate safe e-waste recycling. The watches collected under this programme will be finally given to E-WaRDD for dismantling and retrieval of components. The toxic content will be stored for disposal in a hazardous waste landfill.



**Initial e-waste situation in India:** The e-waste from corporate consumers and households enters a city specific informal e-waste recycling system. The collection and allocation of e-waste is done by middlemen, scrap dealers and rag pickers, also known as «kabadiwalas». The informal recycling system includes acceptable processes such as dismantling and sorting but also very harmful processes such as burning and leaching in order to extract metals from electronic equipment.



If you found the activity sheet interesting, E-mail us at [eeu@cseindia.org](mailto:eeu@cseindia.org) or write to:  
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