

Time to tackle e-waste

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Civil Society

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EVERY single gadget we use will sooner or later end up in a trash can. Computers, mobile phones, DVD players, TV sets, will all be junk. From a computer penetration density of less than 10 per 1000 population in 2005, India will exceed 60 per 1000 in 2010. Mobile phones will touch 300 million and TV sets over 140 million. Even today, despite its low density in electronics, India produces over 400,000 tonnes of electronic waste each year and this is rising three times faster than the municipal waste stream.

Studies have shown that Mumbai and Delhi top the list in e-waste generation. Delhi generates over 12,000 tonnes annually while Mumbai produces around 19,000 tonnes. Kolkata and Chennai are catching up with about 9,000 and 10,000 tonnes. Waste from other cities often lands up in Delhi, the traditional hub of recycling with connections to towns nearby.

Globally, between 20 to 50 million tonnes of electronic scrap is generated annually.

This e-waste is one of the most hazardous waste streams worldwide. Electronics contain over 50 hazardous chemicals or heavy metals. A cathode ray tube (screen) could have over 1.5 kilos of lead. Inside the box there can be mercury, arsenic, cadmium, beryllium, while the plastic casing can contain brominated flame retardants (BFR).

These chemicals, when released, can cause severe health impacts, some of which can be intergenerational, passing from mother to child. When recycled or dumped, these compounds are let off into the air or water or landfills. In the US more than 40 per cent of the lead in landfills comes from e-waste.

On the other hand, the reasons for recycling such waste are simple – dumped electronics contain gold, palladium, copper, all precious metals which can be recovered for use. However, the process of proper recovery is hi-tech, complicated and requires vast amounts of investment.

Globally, e-waste is illegally traded. Waste from the US finds its way to Nigeria and South Africa. Waste is 're-routed' through the Middle East and dumped in India. Waste from Japan finds its way into China through Hong Kong. Everywhere, poor communities rummage through it and are exposed to its hazards. Recognising this danger, over 70 countries including China, Malaysia and Indonesia have banned the import of e-waste. However, India has not taken any action and, in fact, recently allowed such imports.

The logic of such waste trade is simple. Waste follows the path of least economic

resistance. Cheap labour and lax environment regulations encourage dumping since it is lucrative for the exporter and importer at the cost of worker health and the environment. This was the rationale behind the United Nation's Basel Convention, which is a legally binding international treaty to regulate the transboundary movement of hazardous wastes globally. India ratified the treaty in 1995, but it has a poor record of implementation.

NGOs tracking such imports found that e-waste comes into India mislabeled as 'mixed metal scrap.' The shipping papers make it look as if the waste is coming from the Middle East and not Europe or the US. In 2005, the UK government acknowledged the illegal movement of over 23,000 tonnes of e-waste from its shores. Subsequently, this year, it acknowledged illegal shipments to Ghana. Much of the waste is from the US since it is not a party to the Basel Convention. In 2003, huge quantities of ewaste were found dumped in coastal villages in China, where it wreaked havoc. Another route taken is through the trade of 'second hand goods.'

The e-waste trade also brings in issues of data privacy. UK consumers who junked their old computers were shocked to find personal details like their bank accounts and e-mails appearing from recycling shops in Nigeria through their hard disks. Proper disposal is in the interests of the consumer.

Unfortunately, the Indian Government has been slow to react. It did publish voluntary guidelines on e-waste in 2007. But, being voluntary in nature, the guidelines did not lead to much implementation. One of the key challenges in e-waste is its collection. Proper collection can help divert waste to those facilities which are geared to deal with it. Since such waste is generated from households and businesses, across cities and towns, it needs an extensive collection mechanism.

One feasible way is through the implementation of a two-step system. First, collected waste can be taken to a dismantling centre where it is disassembled manually. This is essentially a labour intensive operation which is followed even in countries like Switzerland. It helps create segregated waste streams like plastics, metals, tubes etc which are diverted to specialised processors. Such a regulated 'channel' however needs regulation and the help of industry through an extended producer responsibility (EPR) regime. It can protect existing livelihoods, shifting them to less hazardous operations, and also create jobs.

Currently, a jointly prepared draft legislation which contains the elements of EPR and livelihood protection has been drawn up by NGOs and Industry Associations like MAIT, ELCINA, etc. The draft has been presented for consideration to the Indian Government. It is pertinent to mention that most developed countries and some developing countries including China have legislated ewaste. It is the need of the hour in India.

Several recyclers have set up operations in India. These are mostly in the early stages of investments, though many have started trading in e-waste, often collecting and exporting to their counterparts overseas. Others have tried to organise recovery operations, though they do not meet the required standards as yet. Through these interests there is a growing demand to allow imports of e-waste, rather than set up collection systems here. In fact, in July, one recycler was granted permission to import 8000 tonnes of e-waste annually from the US

and UK, even though it is illegal for India, as a signatory to the Basel Convention, to trade with the US in hazardous waste.

Ultimately, however, electronic products have to be made less hazardous. Many of the toxic materials being used in electronics are replaceable with safer alternatives. In the European Union, since 2006, a law called the RoHS (Removal of Hazardous Substances Act) mandates this for six substances and the list is set to grow. China and Japan too have similar laws. With most component level electronics being mass manufactured in China, and southeast Asia and mainly assembled elsewhere in the world, such a law is also slowly making materials in global markets less toxic. Large brands like Dell and HP are already shifting to cleaner materials. Likewise, some companies like Nokia have started intensive consumer level collection systems in India. However, most of this waste is exported overseas and till now there is little industry investment towards creating acceptable recycling infrastructure in India. There has been more talk than action!

Alongside, consumer awareness in India is low. Consumer pressure for green products is driving manufacturers and green product design worldwide. No longer are people satisfied to see only the 'recycle' symbol on their devices. They are also getting concerned about how and where these are recycled.

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