



# A DIALOGUE ON E-waste management & recycling

"Awareness about disposal of electronic waste in India"



RESPONSE CONNECT INITIATIVE

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## Decoding the e-scrap conundrum

The discussions at the e-waste seminar revolved around the need to create awareness among all actors – policy makers, producers, consumers and recyclers – about the environmental impact and the innovation potential that could lead to sustainable consumption

SHAILJA KATYAL VERMA

Although the issue of e-waste isn't new, it continues to be a somewhat dormant environmental concern in India. An average citizen has virtually no idea about e-waste and the harm it is causing to our environment. For instance, how many of us know that televisions, computers and other electronic items contain hazardous material like lead, mercury and cadmium and the serious threat they pose to the environment if buried in a landfill?

Agarwal, Director, Toxics Link, stressed on stricter implementation of the existing laws. "There are various figures going around as to how much e-waste is being generated. But they are no real estimates. Ninety seven to 98 per cent of e-waste is being processed in the informal sector. Multiple transactions happen in the informal sector. The attempt of the e-waste legislation, which came out in 2011 and came to force in 2012, is to shift the bulk of this business to the formal sector. So what co-operative model are we going to employ? What are the financial mechanisms and

Director, Karma Recyclers, shared his first-hand experiences of some of the recycling practices in the informal sector. "When I started researching the business three years ago, I visited the slums of Dharavi, Seelampur and Muzaffarnagar to understand what the scenario was like. I saw electronics being burned in the open air by small kids without gloves, masks or shoes. They have no idea of the harm that is being caused to their health."

According to an ASSOCHAM study, about 35000-45000 children between the ages of 10 and 14 years are currently engaged in activities

Facility Centre in each zone in NDMC for disposing of their e-waste and giving back the revenue generated through recycling to the RWAs."

Delving into the psyche of the Indian consumer, Satish Sinha, Associate Director, Toxics Link, said: "The profile of proliferation of e-waste is changing with time – we have moved away from desktops to laptops. It is a challenge to collect e-waste from individual homes or households. You have to find incentives for people to come forward and hand over their obsolete equipment. The law does not withhold the producers from creating incentives for collection from individual homes. This business of incentivisation has to be put in place if you want to turn it around faster. Regulators also have to create targets for take-back. These issues have to be addressed by the law. You have to create systems and processes that are practical."

Focussing on the constraints faced by regulators, Dr. Chandra Prakash, Senior Environmental Engineer, Delhi Pollution Control Committee (DPCC), said: "While the stakeholders include producers, collection centres, dismantlers, recyclers and bulk consumers, the maximum responsibility has been cast on the producers – right from setting up of collection centres, to creating mass awareness, financing, ensuring that waste comes to the recycler, EPR, practically everything. So we, at the E-waste Cell, decided to have a meeting with the producers, and out of the 60 that



L to R: Urmi Goswami, Special Correspondent, The Economic Times; Ravi Agarwal, Director, Toxics Link; Sanjiv Kumar, IAS, Secretary, Dept of Environment, Government of Delhi; Raman Sharma, Director, Exigo Recycling; and Akhshat Ghiya, Co-founder and Director, Karma Recyclers

on the environmental and health hazards caused by improper handling of e-waste, The Times of India, in association with Exigo Recycling, and with the support of NDMC, M3M, UPES and HSCC, organised a dialogue on 'E-Waste Management and Recycling' on January 30. All these organisations are aligned to the idea of recycling e-waste in an eco-friendly and sustainable manner and sensitizing people about the reuse and recycling of electronic devices.

E-waste, e-scrap or waste electrical and electronic equipment (WEEE) refers to discarded, outdated, obsolete or broken electrical or electronic devices. However, unlike the developed countries, there are no set norms for handling of electronic waste in India.

Touching upon the statutory and regulatory issues related to e-waste in Delhi, Sanjiv Kumar, IAS, Secretary, Department of Environment, Government of Delhi, in his keynote address, said: "According to a study conducted by ASSOCHAM, the total amount of e-waste generation in Delhi is about 50,000 metric tonnes annually. The electronics industry has been growing by leaps and bounds and e-waste is likely to emerge as one of the major challenges in future. E-Waste Management and Handling Rules 2011 have come into effect from May 1, 2012. It is a path-breaking legislation." This law mandates producers of electronic equipment to ensure that e-waste is collected, transported to specific collection, dismantling and processing units, and safely disposed under the principle of EPR (Extended Producer Responsibility).

He further added: "The Delhi government has started a pilot project for collection of e-waste centres. We have set up 65 e-waste collection bins in various schools and state and central government offices. However, we have seen that there is a gap between e-waste generation and recycling and we have to improve the system."



L to R: Urmi Goswami; Satish Sinha, Associate Director, Toxics Link; Damandev Sood, COO, City Innovates Pvt. Ltd.; Dr. Chandra Prakash, Senior Environmental Engineer, DPCC; Raman Sharma; Akhshat Ghiya; and O.P. Mishra, Director (IT), NDMC

transactions involved? These are things which need to be worked out. I just hope there is some seriousness regarding problem-solving and it has to be a combined effort," Agarwal said.

Raman Sharma, Director, Exigo Recycling, gave a detailed presentation on the current e-waste scenario in the country and emphasized the importance of formalisation of the e-waste market and processes. "Formal recyclers are continuously being outbid by the informal sector due to its low cost operations. The informal sector players like *kabadiwalas* use crude, outdated and hazardous methods that incur very low cost and require minimum investment. Private and public sector prefer auctioning their e-waste to informal recyclers and getting a good price for it," he pointed out.

Akhshat Ghiya, Co-founder and

associated with collection, dismantling and processing of toxic e-waste.

O.P. Mishra, Director (IT), New Delhi Municipal Council, mooted the idea of roping in RWAs to take part in the recycling of e-waste generated in households. "We are one of the first municipalities to ensure that all our e-waste is recycled in a manner as prescribed in Ministry of Environment and Forest notification dated 24.09.2008. We had handed over approximately 6940 kg of e-scrap to Attero Re-cycling Pvt. Ltd., an agency appointed by M/o Environment & Forest, Govt. of India, for handling and recycling e-waste generated from the condemned items in our office and schools.

We are taking steps to involve communities in disposal of e-waste by providing solutions to RWAs to dispose of the same. We propose to incentivize the RWAs by providing a

were invited, only 15 turned up. The subject of e-waste was obviously not important for them."

Damandev Sood, COO, City Innovates Pvt. Ltd., shifted the focus back on the consumers and pointed out the merits of minimal use of electronics. "Out of the three 'R's of Reuse, Reduce and Recycle, Reduce is the most important component. We all need to keep a check on our requirements otherwise the manufacturers will keep on feeding us. We need to create awareness about e-waste and its potential hazards."

Clearly then, we all have a role to play and by recycling we can avoid serious toxins, chemicals and heavy metals from going to the landfill and polluting our environment. The most urgent intervention is to raise awareness among all actors and to create a dedicated policy and legislative mechanism through stakeholder engagement.

## DIGITAL BYTES



The electronics industry has been growing by leaps and bounds and e-waste is likely to emerge as one of the major challenges in future.

**SANJIV KUMAR**  
IAS, Secretary, Department of Environment, Government of Delhi



Currently the e-waste policy in India is not clearly defined. Most of the challenges being faced can be attributed to the gaps and overlaps in the implementation system.

**RAMAN SHARMA**  
Director, Exigo Recycling



NDMC has taken many steps for implementation on Climate Change Agenda for Delhi 2012, such as promotion of non-motorized transport and electric vehicle, waste to energy, waste to gas, etc.

**O.P. MISHRA**  
Director (IT),  
New Delhi Municipal Council (NDMC)



While the stakeholders include producers, collection centres, dismantlers, recyclers and bulk consumers, the maximum responsibility has been cast on the producers.

**DR. CHANDRA PRAKASH**  
Senior Environmental Engineer,  
Delhi Pollution Control Committee (DPCC)



I visited the slums of Dharavi, Seelampur and Muzaffarnagar and saw electronics being burned in the open air by small kids without gloves, masks or shoes.

**AKHSHAT GHIYA**  
Co-founder and Director,  
Karma Recyclers



Out of the three 'R's of Reuse, Reduce and Recycle, Reduce is the most important component. We all need to keep a check on our requirements.

**DAMANDEV SOOD**  
COO,  
City Innovates Pvt. Ltd.



What co-operative model are we going to employ in recycling? What are the financial mechanisms and transactions involved? These are things which need to be worked out.

**RAVI AGARWAL**  
Director,  
Toxics Link



A responsible company must ensure that all e-waste is disposed of in a pre-prescribed manner. We at M3M have constituted a development process through which we ensure a non-contaminating, environment-friendly disposal system.

**PANKAJ BANSAL**  
Director, M3M

## FAST FACTS

- According to CPCB estimates, the total e-waste generated in India in 2012 was 800,000 tonnes.
- E-waste is the one of the fastest growing waste streams in the world, growing at three times the pace of Municipal Solid Waste.
- Total installed capacity of e-waste recyclers in India = 200,000 tonnes (CPCB).
- Ten states generate 70% of the total e-waste in India. Among them are Maharashtra, Tamil Nadu, Andhra Pradesh, Uttar Pradesh, West Bengal, Delhi, Karnataka, Gujarat, Madhya Pradesh and Punjab.
- An average middle class family generates 19 kg of e-waste annually.

## DID YOU KNOW?

- India has become a major destination for e-waste exports from developed nations (OECD countries).
- Huge quantities of monitors, printers, keyboards, typewriters, CPUs, projectors, mobile phones, PVC wires, etc., are being imported into India as charitable reuse items.
- According to a study by ASSOCHAM, 50,000 tonnes of e-waste is illegally imported annually into India.