



Toxics Link
for a toxics-free world



E-waste and Batteries Waste

Workshop Report

Organized by Toxics Link Date: 21-02-2019; Venue: India Habitat Centre, Delhi

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Introduction

A workshop on Electronic and Battery waste was organised by Toxics Link on February 21st, 2019 in Delhi, India. The daylong workshop aimed to discuss and debate the current situation related to e-waste and small battery waste management in the country with different stakeholders and identify challenges and way forward to improve the ground realities. The workshop was marked with the participation from across the stakeholder groups including policy makers, regulatory agencies, producer companies, recycling and producer responsibility organisations, civil society organisations and media. The findings from Toxics Link's current studies on the EPR performances of E-waste producers, informal e-waste recycling and battery waste management was also shared with the audience.

The tone of the workshop was set by **Mr. Ravi Agarwal, Director, Toxics Link** through his introductory address, emphasizing on the challenging waste streams of Electronic and Battery Waste. He underlined on the idea of EPR and how it has changed the whole concept and dynamics of waste management across the globe. He has also mentioned the importance of EPR in circular economy, especially to meet the resource demands of the countries. Mr. Agarwal concluded with the hope of being a part of the solution towards these challenges and not just highlighting them. Acknowledging the participations and hoping for an increased discussion, he opened the platform for the technical sessions on electronic waste and battery waste.



Photo 1: Mr. Ravi Agarwal delivering inaugural speech at the workshop

Session I: E-waste- Have we moved forward?

The first session of the workshop was chaired by **Mr. Satish Sinha** and focused on the progress in terms of EPR compliance.

Toxics Link has been assessing the implementation of e-waste Rules since 2012 when the first Rules were notified. Its Time to Reboot series has been assessing top brands in the country on EPR compliance and **Ms. Kopal Dixit**, the first speaker of this session, presented the findings from its third edition. Mentioning the EPR provisions of the rules, she also briefed the participants about the brand assessment criteria, scoring and rating processes. The study



Photo 2: Chairperson & Speakers in the first session

has assessed 54 major EEE brands of Indian market and only 7 have performed good as per the scoring, she mentioned. The take back system – which is the backbone of EPR – is either not existing or not operational in many cases. Ms. Dixit further added that many of these brands were found to be failing in reaching out to the consumers with sufficient information or access to information or awareness drives. She rounded off the presentation by raising the concerns and putting forth Toxics Link's recommendations towards a better implementation of EPR.

Representing the industries' perspective, **Mr. Ashish Khanna**, the next speaker from Canon India, stressed that e-waste management is a global challenge and even the developed countries, like, US and Australia are struggling. The challenge is far tougher in Indian market, given the population size and complexity of different players in the sector. He pointed out that WEEE from government or public undertaking offices in India are disposed off to the highest bidders in tendering processes instead of being returned to the producers' collection channels. He recommended a) a national registry to track producers and importers to avoid free riders, b) creation of a digital platform for information on disposal and recycling connected to producer allocated EPR targets, c) strong enforcement on bulk consumers, d) nationwide consumer awareness campaign, e) proper reporting by recyclers & PROs, f) introduction of public procurement and disposal guidelines governing PSUs & government departments.

Mr. Rishi Chawla from Signify was our next speaker and he shared the perspectives of lighting industries. He explained the challenges of lighting industries, in terms of their hazardous contents (mercury/lead), fragility being a factor, negative residual value at end-of-life and absence of any business model often leading to expensive recycling ordeals. His key recommendations included a) the need for a different framework for lighting equipment, b) multi-stakeholder consultation including the municipalities for a better collection and management, c) safe disposal facilities and provisions in the country

Mr. Manoj Gangeya, Director, HSMD, MoEF&CC, GoI gave an overview on the implementation status of e-waste management rules. The revised targets in the 2018 amendment rules, he briefed, was for the industries to prepare themselves for the management. Additionally, the cost of compliance for RoHS, that is, the testing cost was also taken up by the government so that the Producers are not burdened. Mandatory registration of PROs and engagement of producers only with registered PROs are also made compulsory in the interest of producers to track the entire collection amount for them to meet the targets. He mentioned that there are 800+ producers, 15 PROs, 275 recyclers registered as of now and these numbers have increased significantly in the last one year. Mr. Gangeya also specified that the Ministry is trying to ensure stoppage of paper trading in recycling and software is being prepared now to get all the registration under one umbrella. The aim, he said, is to implement these rules without diluting the objectives to facilitate proper collection, disposal and recycling and to account the entire recycling. He has also spoke about the growing concern of the gap in recycling capacity of the country and the e-waste collection amount. For this he said, producers have to engage only with recyclers of the recycling capacity of their estimated amount of waste to be generated.



Photo 3: Mr. Manoj Kumar Gangeya addressing the workshop

Session II: E-waste- The ground reality

The second session of the workshop aimed at discussing the reality of e-waste management on ground. The discussions revolved around the role of informal sector and PRO in management and handling of E-waste and also the resource efficiency and circular economy perspectives. The session was chaired by Dr. Neeta Mishra from IFC who spoke about the ongoing India E-waste toolkit program of IFC and introduced the speakers for the session.

In an attempt to assess changes in the informal e-waste processing post the 2016 Rules, Toxics Link recently conducted a study and the next speaker, Ms. **Manjusha Mukherjee**, shared the findings in the first presentation of the session. The study, carried out in Delhi identified major recycling hubs in and around the city and she briefed the participants of the workshop about the processes and concerns related to these operations. Among the major findings were, a) reported reduction of the e-waste inflow in informal sector, b) receiving waste from all sources including formal, c) continued practice of crude, rudimentary and exposed processes, d) profitable practice and e) unawareness of the implementation of rules, she briefed. She also highlighted the need for an inclusive e-waste management system.

Mr. Pranshu Singhal, representing Karo Sambhav, pointed out that the major bottlenecks for a comprehensive e-waste collection system are lack of knowledge on E-waste, absence of transparency across the stakeholders and high dependence on informal sector. He spoke about Karo Sambhav's (PRO) collection chain of informal players who have to give declaration to keep the waste in clean channel. According to him, one of the key challenges in the current target regime is lack of focus on the toxicity potential of the components/waste - leading to recycling of only relatively inexpensive, easy and profitable parts. The most hazardous components like CRTs, batteries, etc are often not picked as it is difficult to recycle them. He also pointed out absence of specific guidelines for awareness targets which should be according to the business size of the industry rather than a blanket prescription. Mr Singhal mentioned that bulk consumers often sell their waste to highest bidders, making it difficult for PROs or Producers to acquire. His key recommendations were a) strict enforcement for authorised recyclers to stop leakage to informal sector, b) introduction of recovery targets for collected e-waste, c) addressing the newly emerged illegitimate practices, like, multiple accounting, selling to aggregators, d) enforcement to stop malpractices at producers level of on-paper collection/recycling of e-waste.

Dr. Reva Prakash, GIZ, gave an insight to the resource efficiency and circular economy initiatives in EEE sector by EU. Assessment of India's current and future use of resources, partnerships and networking between European and Indian stakeholders on resource efficiency and awareness rising and promotion of best practices are the results this initiative is eyeing for. She briefed the participants about the actions taken up by EU in India including the Resource Efficiency Initiative (REI) consortium of GIZ, TERI, CII & Adelphi and the EU Circular Economy Package. The recommendations from the initiative were a) industry innovation towards system design, b) collection and recycling of high value plastics and composites, c) viable business models for access to recycling technology with enhanced livelihood and increased efficiency of recovery of materials, d) feasibility of use of secondary materials in manufacturing & development measures. She has also shown how these initiatives are in congruence with GoI missions and programmes like, Digital India Mission, Swatch Bharat Mission and Make in India Mission.



Photo 4: Chair and Speakers addressing the audience in Session II

Question Answer (Both sessions)

There were some clarifications sought on the Time to Reboot III, including the methodology and rating system, which Ms. Dixit and Mr. Sinha elaborated upon. Question regarding total investment required in processing and recycling of E-waste was answered by Mr. Singhal who suggested referring to the study conducted by IFC. Answering another query on the size of informal sector, which can help in planning training for this sector, he mentioned non availability of an accurate number.

Panel Discussion – Electronic waste

The moderator of the panel discussion, **Mr. Satish Sinha** introduced the panelists and outlined the discussion objectives. He has also put across the questions on the importance of informal sector roles in E-waste, the bridge money required for recycling units and technology especially for negative and low value goods which are not being recycled and the lack of technology, particularly the homegrown ones for recycling.



Photo 5: Panel discussion on E-waste

Having worked as a producer earlier and now as a PRO, **Ms. Radhika Kalia** shared her experience on paper trading and financing difficulties. She stressed on the need for product designing innovation (for resource efficiency, toxicity reduction and addressing the concerns of continuous update of technologies) by producers considering the environmental concerns and a proper infrastructure which has to be setup by them for collection & recycling. There has to be a value proposition by every stakeholder including the customers and informal sector, she mentioned. Also the principles (including circular economy) of large manufacturers have not been able to pass on the knowledge to their Indian counterparts while they are carrying out the same in other countries. The bridge money, according to her has to come from the producers, that is, the EPR, as the toxicity has been introduced into the environment by them. But if finance is the problem then why the producers are not exploiting the financial mechanisms provisioned in the rule by the Ministry was the concern raised by Mr. Sinha.

He then approached **Ms. Priti Mahesh** to talk about the role of informal sector in the changing business scenario in making collection and transportation more formalised. Ms. Mahesh spoke about the dilemma of integrating informal sector into formal collection and transport network as that changes the business nature, economics and ecosystem completely. The cost-benefit is also going to be very different in that case, resulting in reduced profits and shrinking their business. Thus the informal into formal transitions has many factors to be countered and might not be easy in recent future, she opined. Lack of enforcement, she added, also allows them to continue cherry picking and engage in the illegitimate practice. Agreeing to the fact that this sector (informal) has phenomenal strength of accessing waste and may continue to play this important role in the chain, the Chair brought up the challenge of material flow from informal to formal to track all the products.

Mr. Sinha directed the discussion towards **Mr Divye Kohli** asking for his suggestions on addition of new products into schedule I (E-waste Rules). Mr. Kohli mentioned the challenges from recyclers' point of view, as increase in product range will lead to need for expanding recycling capacity. He also brought up another concern related to considerable amount of e-waste which is unrecyclable and inadequate capacities

of TSDF facilities or absence of required technologies to recycle some of them in the country. For example, Lithium Ion battery recycling is not feasible in India as the recovered material can be reused in production of new batteries but there is no manufacturing industry for the same in the country. Yet export of this waste for recycling is not permissible. He has also stressed on the lack of a collection ecosystem in the country and the increasing burden on producers to buy waste in order to meet their targets. A mechanism has to be evolved from the regulatory and producers end for the dealers too to give back the waste collected by them to the producers, he recommended.

Taking forward the discussion, Mr. Sinha raised the concerns of absence of technologies for recycling, especially for rare earth metals. Responding to the possibility of these technologies in the country, for mercury or lamp recycling, **Mr. Rishi Chawla** expressed his concerns on the expensive ordeal of mercury recycling technology and lack of interest in the producers to bring that amount of investment. The reason he mentioned are the few companies left to produce CFL bulbs and reducing market share of these bulbs. He urged for a government support or a public-private partnership for collection, recycling infrastructures and technologies. It is important that the government schemes, such as, Swatch Bharat Abhiyan addresses E-waste collection as well, an effort which would create nation wide awareness as well, he concluded. **Ms. Priti Mahesh** pointed that though there are only a few companies selling mercury containing lamps but the market share is still substantial for them to take up the responsibilities of disposal, particularly considering the hazardous contents that these lightings have. EPR, she said, is the only way out for longterm sustainability as bridge money.

Session III: Batteries Management in India

The third session revolved around battery waste management in India which despite its toxicity and omnipresence in all electronic products remains neglected. **Dr. Suneel Panday**, TERI, chair of the session, described how batteries are an important part of even alternative energy sources, like solar PV. The lead acid batteries, he mentioned, have major market share currently but to be taken over by lithium ion batteries in the near future. With such high penetration proper management of batteries at their end of life is important considering their potential of environment contamination, he contexted and opened the floor to the speakers.

Small (household) batteries management in India was the subject of a recent study by Toxics Link, the highlights of which were shared by **Ms. Manjusha Mukherjee**. The study investigated current disposal practices and awareness at household level, the value chain and economics of spent batteries in informal ways, resource recovery potential, impacts of landfilling, etc. The study found that the informal sector, which was earlier recycling these small batteries, were no longer doing so as it ceased to be profitable. She concluded with the recommendations from the study- a) need for regulatory framework for small battery waste management, b) target based EPR, c) setting up of robust collection mechanism for consumers, d) support for battery recycling infrastructure and e) consumer awareness.



Photo 6: Chair and Speakers addressing the audience in Session III

Mr. Ajay Jain, ECOPRO, represented the case study of municipal waste management in Indore – an award winning initiative and how it was managing end of life batteries. The integrated solid waste management approach in the city has introduced mechanism for segregation & collection of waste from waste Generators, GPS based vehicle tracking for consumer convenience and performance evaluation and an additional chamber for collection of domestic hazardous (including batteries) and biomedical waste (including sanitary napkins) at source, he added. But the challenges remain in mixing of all types of domestic hazardous waste, he furthers. According to him, Indore itself generates 10 lakh such waste batteries in a year, and the number will in billions in India. Currently batteries collected in Indore are sent to secured landfill as there are no recycling facilities. Management of these batteries, he concluded, should be of utmost importance, particularly considering their health and environmental impacts.

Closing Address

Mr. Satish Sinha, Toxics Link concluded the workshop thanking all the speakers and participants. He said it is really reassuring to see that the stakeholders are keen to discuss and find way forward. Studies and viewpoints shared during the workshop will help us in working together and finding sustainability solutions which are acceptable to all. But there has to be a lot more effort made as we are heading towards environmental catastrophe and urgent action is required. He expressed hope that Toxics Link will be able to work collaboratively with government and industry to change things on ground.

Name	Designation	Role
Mr. Satish Sinha	Associate Director, Toxics Link	Chair, Moderator
Ms. Kopal Dixit	Programme Officer, Toxics Link	Speaker
Mr. Ashish Khanna	Senior Manager – Government Affairs, Canon India Pvt. Ltd	Speaker
Mr. Rishi Chawla	Head of Government Affairs, CSR and Sustainability, Signify Innovations	Speaker, Panelist
Mr. Manoj Kumar Gangeya	Director, HSMD, MoEF&CC, GoI	Speaker
Dr. Neeta Mishra	E-waste Toolkit Manager, International Finance Corporation (IFC)	Chair
Ms. Manjusha Mukherjee	Programme Coordinator, Toxics Link	Speaker
Mr. Pranshu Singhal	Founder, Karo Sambhav	Speaker
Dr. Reva Prakash	Technical Advisor, Resource Efficiency Initiative Project, GIZ	Speaker
Ms. Radhika Kalia	Managing Director, Reverse Logistics Group (RLG)	Panelist
Ms. Priti Mahesh	Chief Programme Coordinator, Toxics Link	Panelist
Mr. Divye Kohli	Vice President, Tes-Amm	Panelist
Dr. Suneel Pandey	Senior Fellow and Director, Environment and Waste Management Division, TERI	Chair
Mr. Ajay Jain	Director, Eco Pro Environmental Services	Speaker