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REPORT ON WORKSHOP ON SAFE HANDLING OF E-WASTE

Background

With the advance of technology, use of electric and electronic equipments is increasing by leaps and bounds in every country and in every society. Obsolescence rates of some of these equipments are very high. As a result a huge amount of waste is being generated all over the world posing threat to environment. None of these wastes is bio-degradable. Reusing, refurbishing and recycling of these materials are always advisable. But in most cases the affluent countries do not take the responsibility of recycling and dump such waste to the underdeveloped and developing world. On the other hand, use of e-equipments in the developing countries is also increasing in geometric progress in recent years. Thus the cities in countries like India and China have become e-waste recycling hubs. Management of e-waste has become a major challenge in waste management policies in these countries.

E-equipments contain many valuable materials as well as hazardous and toxic substances. Substances like copper, different kinds of plastics, glass and more valuables like gold, silver, platinum etc. are available in such equipments. Again toxic components like lead, cadmium, mercury, BFR etc. are also present. Most of the recycling is done in informal sector by the small and medium entrepreneurs (SMEs) in these countries in small and informal units. These units have little or no control of their activities and use highly hazardous and polluting techniques for processing e-waste. Irregular handling of toxic materials and process involved in extraction of materials pose great threat to environment and human health. Inefficient recycling also results in substantial loss of wealth. Organized, scientific and efficient recycling is needed to save environment, health and wealth. But that usually requires some capital intensive, high-tech project initiative which can only be taken up by big entrepreneurs.



Now, in countries like India, the issue of livelihood of large number of SMEs, their workers, traders and petty collectors engaged in the informal sector cannot be ignored. This is also to be noted that in the given situation, where major portion of e-waste is handled in informal sectors, big enterprises will have to dry up until and unless the small initiatives are tied up with them. National Environment Policy (NEP), 2006 of the Govt. of India also emphasized the need for legal recognition of the informal sector and their access to institutional finance and relevant technologies. Thus it becomes a challenge to develop some initiatives so that people, earlier engaged in informal sectors, come forward and start a process of formalization. Models developed through such process, if become economically viable and sustainable, will have their replications automatically.

The city of Kolkata is becoming a major hub of e-waste generation. Several studies have indicated the exorbitant increase in the quantity of e-waste in the city. A study in 2011 had quantified the total e-waste generated in the city at 26000 tons. Where as a negligible amount goes to dump site, most of the waste goes in informal sector for recycling.

In informal sector, there are several e-waste hubs in Kolkata. A considerable number of e-waste collectors come to the city from suburban areas and collect e-waste from these hubs, from kabariwalas and also directly from households. Collected e-wastes are taken to their homes in the villages. There they dismantle, sort and process those waste which are taken back to the city for further trading.

During processing of these e-wastes in their homes, hardly any precaution is taken. All the family members including children are engaged to such work. Dismantling and processing takes place even in presence of new born babies. Food is prepared and eaten in such environment. Of course their poverty and ignorance compel them to such practices. They do not have enough space in their homes / huts. They cannot invest



enough for developing their working condition or getting access to appropriate tools for work. Their profit margin is very low as they remain always indebted to money lenders.

Society for Direct Initiative for Social and Health Action (DISHA) is an NGO working in West Bengal and neighboring states since 1995 on various issues of environment, social health and human rights. The issues addressed by the organization include municipal

waste management, bio-medical waste management, e-waste management, toxic contaminations, coastal environment, traditional communities depending on natural resources etc. The organization had taken up the issue of safe management of E-Waste since 2006. Initially it was engaged in campaign, awareness generation, assessment of generation and study on price variation of different waste components tracing their route from generation to disposal. Later DISHA has developed a large network with collectors, dismantlers and recyclers in informal sector and pursuing them to channelize towards responsible, scientific and authorized recycling.

Objective of the Workshop

DISHA's involvement with the network of informal sector engaged in e-waste recycling and processing generated experience and learning that if these people form small groups and work together, they would be more conscious about the health hazards and would feel the necessity of managing E-Waste in proper manner. Their capacity would be enhanced, condition would be improved and at the same time their livelihood would be ensured.

DISHA specially advocates for safe refurbishing as the informal people in Kolkata are mostly engaged in dismantling rather than direct recycling. Also the refurbishers were involved in such network. They repair electronic items which are apparently non-functioning but become reusable after repair. Reuse is of course supported as a mstep towards management of waste. But the refurbishers also do not handle the items in safe manner. Moreover they also produce a lot of e-waste which are of no value. So strategy had to be adopted so that these items are do not go to municipal dumps.

DISHA held a two-day workshop in Kolkata to sensitize the waste handlers and refurbishers on 28th November 2015 in Seva Kendra in Tangra and on 30th November in the factory shed of P U Steel and Electroprocess in Patulia GP, North 24 Parganas. Application for authorization has been applied for P U Steel and Electronics, which is going to be one of the first E-Waste processing centres in east and north-east India. .

Participants - Around 50 persons engaged in collection, dismantling, processing and repairing took part in the workshop on 28th Nov. 12 workers took part in training workshop on 30th Nov.

Tentative Agenda -

- a) What is e-waste and what are its hazards
- b) How these wastes are handled in different sectors
- c) What impact is created to the health of the workers
- d) What impact is created to the environment
- e) How these should be handled and what precautions are required
- f) How their livelihood can be sustained through responsible practices

Proceedings

28.11.15

Mr. Santanu Chacraverti introduced the issue of E-waste and described in detail what e-waste is and why it is a growing concern for environment. He mentioned that waste recycling is welcome and it helps to reduce carbon emission. At the same time he emphasized how such recycling is taking place in the developing countries. He showed



his concern regarding hazards to environment and workers' health caused by such recycling in informal sector.

Prof. Indrani Nag explained why different toxic materials like lead, cadmium, BFR are present in e-waste and how they are both useful and dangerous. She mentioned that so long these substances are in the products, there is not much harm but whenever they are released in the environment,

they contaminate air, water and ground. Even dismantling and recycling of naïve substances like zinc, copper become hazardous due to wrong procedures practiced by the informal sector. She explained long term effect of toxic substances generated by such recycling.

Sasanka Dev spoke on how the livelihood of the people in informal sector can be saved through channelizing e-waste towards responsible authorized sector. He mentioned that the capital intensive authorized e-waste processing units are starving in absence of adequate e-waste materials.



The informal sector has a large and strong network, which blocks the waste to go towards formal channel. However, if the middle ranking collectors in informal sector is slightly supported through extended producers' responsibility as provided in the E-Waste (Management and Handling) Rules, 2011, they would be happy to channelize their e-waste to authorized channel. A business model was discussed in detail.

30.11.15

A few participants, who are directly involved in handling of e-waste attended the training workshop. Mr. Prosenjit Singh and Mr. Jiban Tiwary explained the appropriate tools for dismantling of different electronic products. They trained how the e-waste is to be stored and arranged, what precautions are to be taken, how the personal protective equipments are used. Though small in number, the participants took part very enthusiastically. They were eager to know how the pollution control equipments are operated, what is the gas collection technique, how waste generated in the unit itself should be disposed of etc. Some of the workers will be engaged in this unit when the same will receive authorization and continue to function.

