

E-WASTE MANAGEMENT -A SOCIAL RESPONSIBILITY

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Abstract - Electronic-waste (e-waste) was rising as a new environmental challenge for the future generations. Electronic waste is the discarded electrical or electronic devices whose disposal is a growing problem because of hazardous substances like lead, mercury, cadmium, metallic element and alternative substances contained in them. There is a need for creating awareness in public about the implications of informal e-waste disposal and toxicity of e-waste substances which contain agents that are harmful to humans, animals, birds and also plants. Awareness is an important tool for sensitizing public on environmental issues and challenges. The informal disposal of e-waste is a social and environmental challenging issue. E-waste that comes from the landfill usually contains substances which contaminate the environment particularly surface water and groundwater. If disposed on the ground, acids and sludge from melting computer chips causes acidification and contaminates soil and subsequently groundwater is contaminated. People enhancing their mobile phones, computers, domestic electronic appliances and audio equipment's most often is the primary cause for the increasing e-waste globally. The disposal of e-waste is bringing a significant threat to human health and the environment. Governments must bring new policies towards global e-waste management from local level to global level. The producer and consumer must be made responsible in minimizing the generation of e-waste. Educational Institutions must also consider this issue as social responsibility in creating awareness among common public on the hazardous effect of e-waste on environment and living beings.

Key Words: E-Waste, Hazardous effects on Environment, Awareness among public, Government Policies, Institutional Social Responsibility.

1. INTRODUCTION

Electronics waste, commonly known as e-waste, is generally generated from obsolete electronic devices. Recycling is the process of recovering material from old electronic devices to new electronic devices. The rising consumption of electronic domestic goods and up gradation of ICT tools has led to an increase in e-waste levels, which could be hazardous posing a possible threat towards sustainable environment for future generations.

When e-waste gets heated, toxic chemicals are released into the air polluting the atmosphere. The one of the biggest environmental impacts from e-waste is damage to the atmosphere. Extracting valuable minerals from e-waste is very complicated. The metals can be removed from e-waste by burning, leaching, and other processes that produce toxic

by-products in air, water, and soil. Burning of e-waste releases fine particles which travel hundreds of miles and bring about negative consequences to respiratory health issues increasing the risk for a wide range of chronic diseases and cancers. Soil gets contaminated from e-waste through irrigation process. When e-waste is improperly disposed in regular landfills the contaminants seep directly from the e-waste into the soil, causing contamination of underlying groundwater or contaminating crops that may be planted in that soil. Soil is also indirectly impacted by electronic waste recycling process through contact with contaminated water. Water gets contaminated by e-waste through landfills and improper recycling of e-waste. Surface water is affected by the chemical processes used to extract precious metals like gold from electronic devices. These processes typically filter precious materials away from less valuable materials like plastic using acids and other toxic chemicals that, when improperly regulated are released into local water sources such as streams, ponds, and rivers.

Through these ways, acidification and toxification of water can extend to communities miles away from a recycling site, impacting public and ecosystem health in many, many ways. Ground water gets impacted by improper disposal or dumping of e-waste as heavy metals (like lead, arsenic, and cadmium) and other persistent chemicals leach from landfills and illegal dump sites into ground water tables, affecting people and life of both land and sea animals.

2. METHODOLOGY

STAGE 1: We taken initiative in preparing pamphlets which contained the list of e-waste goods and the causes on environment if they are disposed in informal way. These pamphlets were given to people and asked to distribute in neighboring colonies, schools, in their neighboring households.

STAGE 2: Containers to collect e-waste materials are placed at different locations in our areas. The containers were marked as to which recyclable material should be placed in them. People were asked to collect from neighborhood and their households.

STAGE 3: 726 Kgs of e waste was collected. people have segregated e-waste based on three categories i.e. Domestic appliances, Computer Peripherals, Mobiles and its accessories.

STAGE 4: The collected e-waste was handed over to recycle limited for recycling e-waste in a eco-friendly way.

Fig-2: Pie Chart

3. CHALLENGES FACED

It was a challenge to create awareness among public about hazards of e-waste disposal. Collection of e-waste and separating them under different categories was time taking and students had spent lot of time for this activity. Transportation of e-waste to recycling unit was also a challenging task.

4. CONCLUSION

726 Kgs of e-waste was collected and disposed it in a ecofriendly way which has contributed to clean environment.

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Fig-1: Pie chart



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