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ONE STEP TOWARDS E- WASTE MANAGEMENT THE GLOBAL PERSPECTIVE

Asst. Prof. Yogesh Mhaske, Asst. Prof. Sunita Awandkar,
Motiwala college of Educational Sciences, Nashik.

Abstract:

The aim of present paper is the analysis of the process of e-waste management at global level. It also focuses on the importance and need of e-waste management in present scenario. How educational institutes can contribute to solve e-waste problem. This paper will help to bring awareness among the people about e-waste. It will provide the guidelines about the hazardous elements and how they are harmful for human being and environment as well.

Key Words –Hazardous, WEEE

Introduction

The accumulation of waste is a serious problem i.e. treating the environment of the entire planet and will continue its exponential growth due to increase population. Although we are becoming aware about cleanliness and management of wet and dry waste, still we are not aware about e- waste management means Electronic and Electrical waste management. In India, there is lack of strong policies for the e -waste management. The present era is of a Technology Era and we are using latest technologies. Every day the technological and electronic devices and tools are getting modified. So we should not neglect the e waste management issue. It is the global issue. Everyday 50 billion ton e waste produced at a global level.

Waste Management-

"Activities that deal with waste before and after it is produced, including its minimization, transfer, storage, and separation, recovery, recycling and final."

E- Waste Management

Waste Electrical and Electronic Equipment (WEEE) - is the term used to describe old, end of

life or discarded appliances using electricity. It includes computers, consumer electronics, fridges etc which have been disposed of by their original users.

List of the waste Electrical and Electronic Equipment (WEEE)

1. Answering Machines
2. Laptops
3. Automotive Electronics Lead Acid Batteries
4. Cables/Wiring Mice
5. Calculators
6. Microwaves
7. Cathode Ray Tube Monitors (CRTs)
8. Pagers
9. CD/DVD Players
10. Cell Phones
11. PC's
12. Chargers
13. Printers
14. Copiers
15. Radios
16. Cordless Phones
17. Receivers
18. Digital Cameras
19. Record Players
20. Digital Thermostats
21. Routers
22. Dry Cell Batteries (non-alkaline)
23. Scanners
24. Electric Typewriters
25. Servers
26. Electronic Scrap (parts)

27. Speakers
28. Electronic Toys
29. External Hard Drives
30. Tape Players (Audio/Video)
31. Fax Machines
32. Telephone Sets
33. Flat Screen Monitors/LCD,
34. Plasma Televisions
35. GPS Units
36. Timers
37. Hubs
38. Transformers
39. IPODs & other MP3 Players
40. Keyboards
41. Video Game Systems
42. Kitchen Appliances (small digital)
43. Walkie Talkies

This WEEE has some hazardous elements and that are harmful for human being and environment as well.

To use these WEEE are the needs of the present era but when it is out of use, it is very harmful if properly not disposed.

Why e-waste management is necessary ?

Accumulation of waste leads to several health hazards for the people and the environment therefore it must be disposed off in a safe manner to preserve the quality of the environment. Disposal of e-waste is a major task which needs proper management and efficient organization.

The garbage that we put down in our dust bin may contain the following harmful elements so proper precaution should be taken while throwing it out.

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Element	Present in	Harmful Personal	Harmful Environment	Solution to the problem
Mercury	Fluorescent tubes Thermometer	1.Sensory Impairment 2. Dermatitis 3. Memory loss. 4.Muslce Weakness 5. Deficits in Motor functions. 7. Affect verbal domain.	1.Animal deaths 2. Reduce Fertility 3.Slower Growth and development	1.Establish collection centre 2. Start recycling project. 3. NGO or local government bodies can take initiative
Sulpher	Lead Acid-Batteries	1.Liver damage 2.Heart damage 3.Heart damage 4. Eyes throat irritation.	It can create sulphuric acid in environment.	1. Establish collection centre.
Cadmium	1.light-sensitive resistors 2. Corrosion-resistant alloys for marine and aviation environments. 3. Nickel-cadmium batteries 4. Rechargeable batteries 5. Printer inks and toners, 6. Photocopying-machines (printer drums)	1. Harming microorganisms and disrupting the soil ecosystem. 2. Damage to the lungs and is also known to cause kidney damage 3. Deficits in cognition 4. Deficits in learning, behavior, and neuro motor skills in children.	It's Affect on earthworm's life cycle	1.Battery Solution Helpline number-800-852-8127 accepts cadmium batteries for recycles.

Lead	1.Solder , 2.CRT monitor glass, lead acid batteries 3. PVC	1. Impaired cognitive functions 2. Behavioral disturbances 3. Attention Deficits 4. Hyper active	1. Soil Pollution 2. Water Pollution 3. Affect of growth of plants and animals	1.Food and drug department of the country will do surveillance

World scenario of e-waste management:

Continent	Countries	Programme Name	Run By	Features
Asia	**India**	Namma Swachh e-nagar, Banglore.	Local NGO	1. Scrapping of e-waste. 2. Tie-up with government. 3. Help the government for making policies.
		WEEE Recycle, Kolkata.	Manufacturers Association of Information Technology (MAIT)	1.To institutionalize a collection system 2. Channelization of e-waste for recycling using environmentally sound technologies 3. Involving SMEs in the informal sector.
	Taiwan	International E-Waste Management Network (IEMN)	International E-Waste Management Network (IEMN).	1.Cleaning up e-waste is a global priority 2. An aim to reduce harm from US exports of e-waste.

	Shri Lanka	National Implementation Plan (NIP)	By the government of Shri Lanka	1.Awareness raising workshop 2. Stakeholder consultation
Africa	**Ghanna**	Recycling project- a model for e-Waste management	United Nations	1.Installed small recycling plants, 2. Containing automated wire stripping units. 3. For a token fee local recyclers bring cables and other e-waste to the centre. 4. The plastic is then stripped and wires bailed. 5. The end result is cleaner recycled materials.
	Ethiopia	E-waste Management Project in Ethiopia-	United Nation	1.To promote the prevention of e-waste 2.Mobilize political and institutional support for e-waste management
Russia	**Ukraine**	Ukraine's E-waste Pile-up	Non Government Organization MAMA-86	No proper policies exist.
Europe	**Germany**	step-initiative (Solving e-waste management)	Step E-Waste Academy (EWA), Germany	1.Redesign, 2.Reuse, 3.Recycle 4.Capacity building

Role of education for e-waste management –

1. Awareness should be created about e-waste through curriculum at school level.
2. E-waste awareness day can be organized in the educational institutions.
3. Educational, research institutes and Municipal Corporation can collaborate for e-waste management.
4. Government and non-government organizations should take initiative to bring awareness regarding e- waste management.
5. Experts in this field can conduct awareness programme for the society.
6. Skill development programme can be organized at higher educational institute for Reuse, Reduce, Redesign and Recycle of e-waste.
7. Workshop can be arranged for industrialist on capacity building for better e-waste management.

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