

STUDY OF E-WASTE MANAGEMENT FOR NAGPUR CITY

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ABSTRACT

Electronic waste or e-waste is one of the most prominent and growing problems around the world as more and more humans are getting engaged in utilizing electronic gadgets. Irregularities in the handling of this e-waste is a dangerous act in harming the environment. This waste when not treated properly have a hazardous impact on our life as the burning and decomposition of this e-waste increase the amount of pollution in our atmosphere. Burning of this e-waste into a large amount of toxic materials which are harmful for the environmental and living things. More or less often the techniques applied in the handling of this e-waste are not that much efficient and generally this issue is not been taken seriously but recent data shows the higher magnitude at which this e-waste is been increasing posing a greater challenge for the humanity. Millions of tones of e-waste is produced each year out of which a large amount of waste remain untreated . Almost entire world is responsible for this causing of a new danger to human life which oftenly gets overlooked by the world in the name of development. Hence, the proper management and treatment is necessary to overcome this new threat.

Keywords: E-Waste Management, Recycle, Reused.

I. INTRODUCTION

A Nagpur city is one of the rapidly growing city in country, where as inhabitants 28millions. In this city evaluate the estimation that by 2041 the city will grow to 4.3 million. When an electronic product reaches the end of its useful life, it generates e-waste, or electronic garbage. The rapid expansion of technology means that very large amount of e-waste is created every minute. Millions of tones of e-waste are produced each year out of which a large amount of waste remains untreated. The e-waste is very harmful to the human health and also environment.

The main purpose of this paper is how to manage e-waste in Nagpur city. People in Nagpur are not conscious about isolation of household waste which is main step involved in waste management. E-waste classified as electronic waste, biomedical waste and household waste. The household waste includes food, paper, plastic, glass waste, etc. The biomedical waste includes injections, saline etc. All over India approximate 43% of e-waste is biodegradable.



Fig 1: Electronic waste

Recognition of electronic waste material:

Under potential electronic waste the electronic items which can be classified by organization are as follows

- Mobile, wireless and wire-line devices, chargers and batteries
- Pockets and desk calculators
- SIM cards

- Laptop
- LCD Screens CPUs
- Mouse, keyboards, webcam, Printers, Scanners etc.
- Electronic scrap components, such as Monitors, Mobile phones, Non-workable electric appliances etc.

Table 1: E-waste generation in top 10 cities

Sr. No.	City	Electronic waste (Tones)
1	Nagpur	1768.9
2	Pune	2584.2
3	Mumbai	11017.1
4	Bangalore	4648.4
5	Ahmedabad	3287.5
6	Surat	1836.5
7	Kolkata	4025.3
8	Hydrabad	2833.5
9	Chennai	4132.2
10	Delhi	9730.3

II. METHODOLOGY

This paper follows a Methodology based on a collection, segregation, disposed and social aspects in the area of e-waste sector. In E-waste there are three stages of recycling. 1. Primary E-waste generators, 2. secondary E-waste generators, 3. tertiary E-waste generation. In first stage stakeholders are piece dealers who purchase e-waste at the first level in volume. It is informal between second and third stage and partly formal between first and second stages in the market. The large number of stakeholder between the second and third stages is electronic devices extractor, plastic extractor.

A. Strategic objective :

To study the e-waste and how to manage reused, recycle, and proper treatment on e-waste .

B. Specific objectives :

- To study the current scenario of E-Waste management in Nagpur city.
- To Study the suggestions dealing with the challenges and problems of E-Waste.
- To study technique of recycle and reuse, analysis its effect on human health and environment, create awareness among stakeholders etc.
- To minimize the use of landfills for solid waste disposal by recycling.
- To ensure the protection of the environment through an effective waste management system.
- To stabilize the quantity of waste disposed to landfill and then reduce this volume.

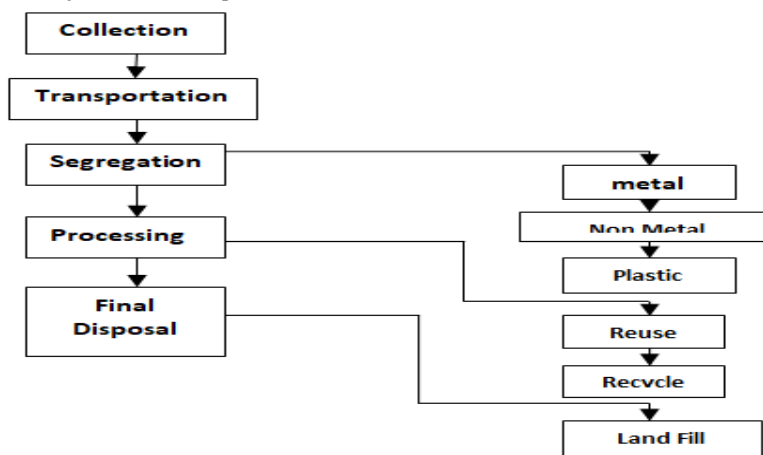


Fig 2: Process of E-waste Management

III. METHODOLOGY TO SOLVE E-WASTE PROBLEMS

1) Recycling

Recycling is a crucial detail of e-waste management. Properly carried out, it needs to substantially lessen the leakage of poisonous substances into the surroundings and mitigate in opposition to the exhaustion of herbal resources. However, it does want to be recommended through neighborhood government and thru network education. One of the foremost demanding situations is recycling the published circuit forums from the digital wastes. The circuit forums include such valuable metals as gold, silver, platinum, etc. One manner E-waste is processed is through melting circuit forums, burning cable sheathing to get better copper cord and open-pit acid leaching for keeping apart metals of value. India has emerged as 5th biggest digital waste manufacturer with inside the world. Computer gadgets account for almost 70% of E-waste, with the contribution of telecom area being 12%, clinical system being 8%, and electric powered system's being 7% of the yearly e-waste production.

2) Repair

One of the elements which compound the e-waste hassle is the diminishing life of many electric and digital goods. There are drivers (in particular) for this trend. On the one hand, client call for for low value merchandise mitigates in opposition to product first-rate and consequences in brief product lifetimes. On the different, producers in a few sectors inspire a everyday improve cycle, and might even put in force it alven though limited availability of spare elements, carrier manuals and software program updates, or thru deliberate obsolescence. Consumer dissatisfaction with this scenario has brought about a developing restore motion. Often, that is at a network stage including thru restore cafes or the "restart parties" promoted through the Restart Project The "Right to Repair" is spearheaded with inside the US through farmers disappointed with non-availability of carrier information, specialized equipment and spare elements for his or her high-tech farm equipment. But the motion extends a long way past farm equipment with, for example, the limited restore alternatives presented through Apple coming in for criticism. Manufacturers frequently counter with protection issues because of unauthorized upkeep and modifications.

3) Reuse

The purpose of the Reuse challenge pressure is to outline globally regular reuse practices, standards, and requirements for EEE merchandise from enterprise-to-enterprise (B2B) and enterprise-to-client (B2C) customers which are economically, socially, and environmentally suitable for:

- Changing client behavior to get attractiveness for reuse and early product take back. The concept is to keep away from lengthy garage through the client.
- Extending using EEE merchandise and components.
- Reducing the go with the drift of irresponsible reuse among donor and growing countries.
- Developing a not unusual place nomenclature for definitions of reuse, refurbishment, EEE merchandise, and different associated topics.
- Determining how system enters the "reuse" category.
- Developing globally regular environmental and enterprise standards and Guidelines for system recovery.
- Designing a international popular and application for preserving first-rate in Environmentally sound practices, information privacy, and utilization extension.
- Identifying the not unusual place limitations to product existence extension and recommending practices to conquer those limitations.
- Developing cross-border recommendations and growing recommendations to decide When Reuse is economically, environmentally, and socially.

Following table shows the data of E-waste recycling centre in Nagpur city which collect the E-waste and process it.

Table 2: E-waste recycling centre in Nagpur

Sr. No.	Name of the recycling centre	Address
1	Suritex Pvt Ltd- Electronic Waste Recyclers	Adnm office 5&6, Zal Complex Opp SFS school, Residency Rd, above Roast café, Sadar, Nagpur, Maharashtra 440001
2	Jagdish E-waste recycler	Nai Basti Rd, Mangalwari Bazar, Sadar, Nagpur, Maharashtra 440001
3	Nageaj E-waste Recycling	Flat No.004, Om Maa Bamleshwari App, near Patidar Bhavan, Queta Colony, Nagpur, Maharastra 440008

IV. CONCLUSION

As the people consuming more and more electronic gadgets thus lead to increases and growing problems around the world with irregular handling of the electronic waste is a dangerous act in harming the environment. As the millions of tones of e-waste is produced each year out of which a large amount of waste remain untreated. As we studied all the above method for e-waste management are not harmful to environment and human health. Also the E-waste can be ruse and recycled by above processes.

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