



# REVIEW ON UTILIZATION OF E-WASTE

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**ABSTRACT:** This paper reviews electronic waste and its disposal methods. It also explores hazardous effects that e-waste have on human health, animals and the environment; it contains, for example, toxic metals. The ever-increasing growth of e-waste is one of the biggest threats of the 21<sup>st</sup> century; it is therefore a priority worldwide. There is no single best method to eradicate e-waste and related problems. Lack of Lack of awareness caused by inadequate education leads to poor management of e-waste.

The study draws the following conclusion: The most significant factor influencing appropriate and proper management of ewaste, i.e, excellent ("green") information technology practises, is awareness and appropriate education.

**Keywords** – Electronic Waste, Recycling, Metals, Incineration, Information Technology, Mobile Handsets,

## I. INTRODUCTION

“Electronic waste” could also be outlined as discarded computers, workplace equipment, diversion device natural philosophy, mobile phones, TV sets, and refrigerators. This includes used natural philosophy that are destined for use, resale, salvage, recycling, or disposal. Others are re-usable (working and fixable electronics) and secondary scrap (copper, steel, plastic, etc.) to be “commodities”, and reserve the term “waste” for residue or material that is drop by the client instead of recycled, as well as residue from use and utilization operations. As a result of many surplus natural philosophy are oftentimes commingled (good, Many proponents of public policy use the term "ewaste" loosely to refer to any excess natural philosophy, both recyclable and non-recyclable.

CRTs, or electron beam tubes, are one of the most difficult types of electronics to recycle.

### 1.1 RELATED RESEARCH

Extensive research use Internet of Things technology to be developed in automatic irrigation systems. Research from applies the Internet of Things using Banana Pi as the sender of sensor values to the database. Research applies the Internet of Things using ESP 8266 to send sensor data to the server and use Arduino Uno as the main controller. Research applies the Internet of Things to hydroponic plants using Arduino and the Blink Android Application as interfaces.

This tool uses a soil moisture sensor FC-28 and sending sensor data to the database using the Wi Fi module ESP8266 which is also used as a humidity sensor microcontroller. The user interface for control and monitoring can use Firebase to determine soil moisture, activate the water pump and adjust the speed of the water pump. Besides the process of control and monitoring can also be done through a smartphone



application that is connected to the internet.

## II. METHOD

This descriptive type article purely based on review of literatures. The data collected for this review article consisted of secondary data through literature survey. Literatures are collected to study the hazardous effect due to the Components present in E-Waste and the treatment techniques adopted presently and tables were drawn highlighting the salient feature.

From the literature survey it is clearly noted that bioremediation can be a effective method of E-Waste treatment.

### 2.1 OBJECTIVE

1. To completely prevent the production of waste all together, if possible .
2. Minimize the Production of Waste.
3. Reduce Pollution Effects.
4. Protect Groundwater Sources.
5. Ensure Sustainability.

### 2.2 WORK DONE

In the topic utilization of ewaste, the work done is collection of ewaste and put in concrete. Cube has been distributed in 2 ways , 2 cube of 7 days to curing , 2 cube of 14 days to curing, and 2 cube of 21 days to cure . Total 6 cube are used . Ewaste has mix in concrete in each cube . 360 kg/m<sup>3</sup> Cement , 7 kg/m<sup>3</sup> E-waste, 876 kg/m<sup>3</sup> Crushed sand, 555 kg/m<sup>3</sup> 10mm Aggregate, 687 kg /m<sup>3</sup> 20mm Aggregate, 166 kg/m<sup>3</sup> water , 2.16 kg/m<sup>3</sup> Admixture ( Apple ) .

## III. CONCLUSION

The paper aims to define and analyse the main areas of research on electrical and electronic waste, while offering a broader analysis of the relevant literature in order to summarize the information available and to create common knowledge. Based on this few key points were observed. Firstly, many countries don't have any standardized method to estimate e-waste generation. Further, there is a need to implement and build policies for effective ewaste management in developing nations to address environmental problems caused by shady recycling practises. One of the issues facing policy makers in developing nations is the requirement for the creation of legal framework for the management of this waste percentage. It is important to create awareness campaigns and offer training in handling e-waste.



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