

E-Waste Management: A Study of Residential and Commercial Practices

Shubhada Deshmukh¹, Pawan Gaikwad², Deepak Shendage³, Vivek Sutar⁴,
Ajay Padvi⁵, Chinmay Tulaskar⁶

Lecturer, Department of Civil Engineering¹

Students, Department of Civil Engineering²⁻⁶

Bharati Vidyapeeth Institute of Technology, Navi Mumbai, India

shubhadakd95@gmail.com, pavangaikwad737@gmail.com, deepakshendage78@gmail.com

sutarcamping@gmail.com, apadvi801@gmail.com, chinmaytulaskar@gmail.com

Abstract: *The increasing use of electronic devices has led to a significant rise in electronic waste (e-waste), posing environmental and health challenges worldwide. Improper disposal and inadequate recycling methods result in the release of toxic substances, contaminating soil, water, and air. This paper examines the current trends in e-waste generation, the environmental and human health impacts, and the effectiveness of existing management strategies. It explores sustainable solutions such as improved recycling technologies, circular economy approaches, and extended producer responsibility (EPR) policies. Furthermore, the study emphasizes the role of legislation, industry participation, and public awareness in mitigating e-waste issues. By analyzing global best practices, this research aims to highlight practical and innovative strategies for efficient e-waste management, promoting sustainability and resource conservation.*

Keywords: Commercial E-waste, Electronic Waste, Environmental Awareness, E-waste Management, Recycling Behavior, Residential E-waste, Survey-Based Study, Sustainable Waste Solutions, Urban Waste Management, Waste Disposal Practices

