

# SUSTAINABLE E-WASTE MANAGEMENT

PRINCIPLES AND PRACTICES



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SUSTAINABLE E-WASTE MANAGEMENT: PRINCIPLES AND PRACTICES

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# TABLE OF CONTENT

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<i>Preface</i>	<i>iii</i>
<b>CHAPTER 1</b>	<b>1</b>
Successful E-Waste Management Projects in India: Case Studies <i>Dr. S. Fatima Zahara Jafri &amp; Dr. Syed Irfan Haider Jafri</i>	
<b>CHAPTER 2</b>	<b>27</b>
Best Practices for Sustainable E-waste Management in a Globalized World <i>Dr. Syed Mohsin Raza</i>	
<b>CHAPTER 3</b>	<b>36</b>
E-waste Recycling Processes; Impact on Human Health and the Environment: Challenges and Solutions <i>Dr. Syed Nuzhat Husain &amp; Dr Waheed Alam</i>	
<b>CHAPTER 4</b>	<b>49</b>
An Overview of E-Waste Recycling Technologies: Difficulties and Prospects <i>Dr. Prabodh Kumar Garg</i>	
<b>CHAPTER 5</b>	<b>59</b>
Can AI and IoT Rescue India from its Own E-Waste Crisis or Will We Just Have Smarter Trash? <i>Dr. Tulika Singh</i>	
<b>CHAPTER 6</b>	<b>75</b>
Socio - Economic Impact of the E-Waste In Third World Countries <i>Dr. Chhatra Pal &amp; Dr. Pulkit</i>	
<b>CHAPTER 7</b>	<b>86</b>
Indian Laws and Judicial Perspectives on the Management of E-Waste <i>Mr. Kamaljeet Mani Mishra &amp; Dr. Vinay Kumar Tiwari</i>	
<b>CHAPTER 8</b>	<b>98</b>
E-Waste Management Strategies: Mitigating Health Hazards Posed by E-Waste Chemicals <i>Mr. Abdussalam &amp; Dr. Nazia Iqbal</i>	

<b>CHAPTER 9</b>	<b>113</b>
Empowerment: The Bright Outlook on E-Waste Management	
	<i>Dr. Nooreen Zaidi</i>
<b>CHAPTER 10</b>	<b>123</b>
Management of E-Waste In Developed And Developing Countries	
	<i>Dr. Dharmendra Kumar</i>
<b>CHAPTER 11</b>	<b>132</b>
The Hidden Danger and e-waste impact of health and environment	
	<i>Dr. Manzoor Khan &amp; Ms. Huma Ausaf</i>
<b>CHAPTER 12</b>	<b>145</b>
Environmental Impact Analysis and Ecological Benefits of Sustainable E waste Management	
	<i>Dr. Ajai Veer</i>
<b>CHAPTER 13</b>	<b>157</b>
Towards a Circular Economy: Regulatory Challenges in E-Waste Governance in India	
	<i>Dr. Wasim Ahmad, Dr. Gaurav Gupta &amp; Mr. Mohd. Tahir Husain</i>
<b>CHAPTER 14</b>	<b>178</b>
The Indian Judiciary as a Catalyst for Sustainable E-Waste Solutions	
	<i>Mr. Ashraf Azmi &amp; Dr. Yashfeen Ali</i>
<b>CHAPTER 15</b>	<b>189</b>
Role of Indian Judiciary and Pollution Control Boards in Waste Management	
	<i>Mr. Qaseem Haider Naqvi</i>
<b>CHAPTER 16</b>	<b>200</b>
Insights of Green Electronics and Sustainable Design – Legal Framework to promote Green Electronics	
	<i>Mr. Mohd Ubais Ansari</i>
<b>CHAPTER 17</b>	<b>214</b>
Right to Repair and E-Waste: A Legal Analysis	
	<i>Mr. Faiz Osmani</i>
<b>CHAPTER 18</b>	<b>229</b>
E-Waste Management System: An Approach and Assessment	
	<i>Mr. Aqeel Ahmad Khan &amp; Dr. Uzma</i>

## CHAPTER 16

# Insights of Green Electronics and Sustainable Design – Legal Framework to promote Green Electronics

*Mr. Mohd Ubais Ansari\**

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### INTRODUCTION

Every year, millions of electrical and electronic products are discarded as they break or become obsolete. These discarded devices are classified as e-waste and may pose a threat to both human health and the environment if not properly disposed of and repurposed. Computers, mobile phones, big household appliances, and medical equipment are common things found in e-waste streams. Millions of tonnes of e-waste are improperly recycled, stored in homes and warehouses, discarded, and illegally exported. When e-waste is recycled using unsound practices, it can release up to 1000 distinct chemical substances into the environment, including known neurotoxins like lead.

Electronic waste is becoming a major concern around the world. Automation in industries has led to growing use of electrical and electronic equipment as technology has advanced. Electrical and electronic goods have become widespread in the typical consumer's daily life, and are widely employed in manufacturing and other industries. Advancements in computing and processing technologies have resulted in shorter product life cycles, prompting consumers to replace older items with newer and more reliable options. These innovations have resulted in a significant increase in e-waste output.

The emphasis on environmentally friendly electronics is growing, with a focus on energy-efficient gadget design, renewable energy integration, electronic waste reduction, and the use of sustainable

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