

SUSTAINABLE E-WASTE MANAGEMENT

PRINCIPLES AND PRACTICES



Editors

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Sustainable E-Waste Management: Principles and Practices

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PREFACE

In an era defined by rapid technological advancement, e-waste has emerged as one of the most pressing environmental and socio-economic challenges of our time. The relentless pace of innovation brings with it a growing mountain of discarded electronics, posing significant threats to ecosystems, human health, and sustainable development, particularly in developing nations where informal recycling practices exacerbate the crisis.

This book, “***Sustainable E-Waste Management: Principles and Practices***”, seeks to explore the multifaceted dimensions of e-waste, offering a comprehensive examination of its environmental repercussions, socio-economic implications, and the evolving legal and policy responses aimed at mitigating its impact.

The chapters within this volume delve into critical aspects of e-waste management, beginning with foundational strategies for Successful E-Waste Management and Best Practices for Sustainable E-Waste Management, which highlight innovative and efficient approaches to recycling and disposal. The discussion then shifts to the Socio-Economic Impact of E-Waste in Third World Countries, where informal sectors often bear the brunt of hazardous waste handling, perpetuating cycles of poverty and environmental degradation.

An Environmental Impact Analysis further underscores the urgent need for systemic change, examining how toxic components from improperly processed e-waste contaminate soil, water, and air, with far-reaching consequences for biodiversity and public health.

A significant portion of this book is dedicated to the Role of the Indian Judiciary and Pollution Control Boards in Waste Management, analyzing landmark judgments and regulatory mechanisms that have shaped India’s approach to e-waste. The chapter on the Indian Judiciary as a Catalyst for Sustainable E-Waste Solutions explores how judicial interventions have spurred

policy reforms, corporate accountability, and public awareness, setting precedents for other nations grappling with similar challenges.

This book is intended for policymakers, environmentalists, legal scholars, waste management professionals, and concerned citizens who seek a deeper understanding of e-waste dynamics and the collaborative efforts required to forge a sustainable future. By combining research, case studies, and legal insights, we aim to contribute to the global dialogue on responsible e-waste management and inspire actionable solutions.

We extend our gratitude to the academicians, experts, researchers, and institutions whose work has informed this compilation. It is our hope that this book will serve as both a resource and a call to action, promoting awareness, innovation, and justice in the pursuit of a cleaner, greener planet.

Dr. Aijaz Husain
Dr. Seema Siddique

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Mr. Ashraf Azmi* & Dr. Yashfeen Ali**

ABSTRACT

The rapid expansion of electronic consumption has led to a corresponding rise in electronic waste (e-waste), posing serious environmental and health risks. In the Indian context, the judiciary has emerged as a proactive institution in addressing these challenges by interpreting constitutional provisions and enforcing environmental laws. This chapter critically examines the role of the Indian judiciary as a catalyst for sustainable e-waste management. It explores key judicial interventions that have emphasized the right to a clean environment under Article 21 of the Constitution and enforced accountability among regulatory authorities. By analyzing landmark cases and evolving legal frameworks, the chapter highlights how judicial activism has not only bridged legislative gaps but also fostered public awareness and institutional responsibility. The study concludes that the judiciary's dynamic role is integral to promoting sustainable and legally sound solutions to the growing e-waste crisis in India.

Keywords: Indian judiciary, e-waste management, sustainable development, environmental protection, Article 21, constitutional environmental rights, electronic waste, public health, legal intervention.

INTRODUCTION

“The judiciary is not merely an interpreter of laws but a sentinel of environmental justice. In the context of e-waste, where regulatory inertia collides with ecological urgency, the courts emerge as the architects of sustainable futures.”

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