Page 2930 - 2943 **DOI:** *https://doij.org/10.10000/IJLMH.116257*

INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Volume 6 | Issue 6

2023

© 2023 International Journal of Law Management & Humanities

Follow this and additional works at: https://www.ijlmh.com/
Under the aegis of VidhiAagaz – Inking Your Brain (https://www.vidhiaagaz.com/)

This article is brought to you for "free" and "open access" by the International Journal of Law Management & Humanities at VidhiAagaz. It has been accepted for inclusion in the International Journal of Law Management & Humanities after due review.

In case of **any suggestions or complaints**, kindly contact **Gyan@vidhiaagaz.com**.

To submit your Manuscript for Publication in the **International Journal of Law Management & Humanities**, kindly email your Manuscript to **submission@ijlmh.com.**

Extended Producer Responsibility and E-Waste Evaluating Effectiveness within Environmental Legal Systems

ABHISHEK DUBEY[1] AND PIYUSH GAUTAM[2]

ABSTRACT

With the advancement in the technology and the purchasing power of the consumer, the electronic products are also increasing exponentially day by day. The increase in the consumption impacts the environment negatively in both ways first the Raw Materials extraction and second the most important one is the waste (E-Waste or Waste of Electronic and Electrical Equipment). Waste is anything that is useless or can't be used. Everyone is responsible for making sure that hazardous garbage is disposed of in a way that is safe and good for the earth and follows all rules about how to get rid of trash. At a rate of 20–25% per year, the amount of e-waste is growing very quickly . There are several definitions of e-waste; E-waste is a discarded electronic item which is nearing or at the end of their 'useful life' . E-waste is the trash stream that is growing the fastest due to its high rate of obsolescence, market spread, and new market. In India, Section 3 (l) of the E-Waste Management Rules 2016 defines e-waste as "'e-waste' means electrical and electronic equipment, including solar photo-voltaic modules or panels or cells, whole or in part discarded as waste, as well as rejects from manufacturing, refurbishment and repair processes" .

Since 2002, when the Basel Convention and the "European Union Waste of Electronic and Electrical Equipment Directive" were passed, people have become more aware of e-waste. The problem with e-waste is that its amount grows every year because more people use electronics and they don't last as long. E-waste is thought to be the type of trash that has grown the most over the past 10 years (3–4% per year), but only 15% of it is recovered . E-waste is getting more and more of a problem as more and more of it is made. This is because it includes dangerous chemicals that could affect health and the environment.

The effective handling and disposal of electronic waste (e-waste) in India is a significant environmental concern, mirroring the global scenario. This study undertakes an examination of Extended Producer Responsibility (EPR) as a policy strategy within the environmental legislative framework of India in order to tackle this problem. The importance of Extended Producer Responsibility (EPR) in ensuring producer accountability

[1] Author is a student at National Law University, Delhi, India.
[2] Author is a student at ICFAI University Dehradun, India.

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

for the whole lifespan of their goods is of great relevance, particularly in light of the increasing proliferation of electronic trash (e-waste) . The objective of this research is to provide insights on the efficacy of Extended Producer Responsibility (EPR) in addressing the issue of electronic trash (e-waste) within the regulatory framework of India. This study analyses the progression of e-waste rules, explores the difficulties faced during their implementation, assesses their environmental impact, and provides suggestions to improve their effectiveness.

Keywords: *e-waste, EPR, Recycling.*

I. INTRODUCTION

With the advancement in the technology and the purchasing power of the consumer, the electronic products are also increasing exponentially day by day. The increase in the consumption impacts the environment negatively in both ways first the Raw Materials extraction and second the most important one is the waste (E-Waste or Waste of Electronic and Electrical Equipment). Waste is anything that is useless or can't be used. Everyone is responsible for making sure that hazardous garbage is disposed of in a way that is safe and good for the earth and follows all rules about how to get rid of trash. *At a rate of 20–25% per year, the amount of e-waste is growing very quickly*[3]. There are several definitions of e-waste; E-waste is a discarded electronic item which is nearing or at the end of their 'useful life'[4]. E-waste is the trash stream that is growing the fastest due to its high rate of obsolescence, market spread, and new market. In India, Section 3 (l) of the E-Waste Management Rules 2016 defines e-waste as *"'e-waste' means electrical and electronic equipment, including solar photo-voltaic modules or panels or cells, whole or in part discarded as waste, as well as rejects from manufacturing, refurbishment and repair processes"*[5].

Since 2002, when the Basel Convention and the **"European Union Waste of Electronic and Electrical Equipment Directive**" were passed, people have become more aware of e-waste. The problem with e-waste is that its amount grows every year because more people use electronics and they don't last as long. *E-waste is thought to be the type of trash that has grown the most over the past 10 years (3–4% per year), but only 15% of it is recovered* [6]. E-waste is

[3] Jaatindra, P., & Sudhiir, K. (2009). "E-waste management: a case study of Bangalore, India. Research Journal Environmental and Earth Sciences", 1, 111-115.
[4] Sinhha, S., Maheesh, P., & Dondfers, E. (2015). "Waste electrical and electronic equipment: the EU and India: sharing best practices". *Delhi: Toxic Link*, 1-104.
[5] Section 3(l) E-Waste Management Rules 2016
[6] Sahahjwalla, V. and Gaiikwad, V. (2018). "The present and future of e-waste plastics recycling. Current Opinion in Green and Sustainable Chemistry", 13, 102-107

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

getting more and more of a problem as more and more of it is made. This is because it includes dangerous chemicals that could affect health and the environment.

The effective handling and disposal of electronic waste (e-waste) in India is a significant environmental concern, mirroring the global scenario. This study undertakes an examination of Extended Producer Responsibility (EPR) as a policy strategy within the environmental legislative framework of India in order to tackle this problem. The importance of Extended Producer Responsibility (EPR) in ensuring producer accountability for the whole lifespan of their goods is of great relevance, particularly in light of the increasing proliferation of electronic trash (e-waste)[7]. The objective of this research is to provide insights on the efficacy of Extended Producer Responsibility (EPR) in addressing the issue of electronic trash (e-waste) within the regulatory framework of India. This study analyses the progression of e-waste rules, explores the difficulties faced during their implementation, assesses their environmental impact, and provides suggestions to improve their effectiveness.

II. HISTORICAL BACKGROUND

Thomas Lindhqvist was the first one to propose the extended producer responsibility policy in a 1990 study to MoE Sweden. The paper was the outcome of a review of many recycling and waste management programmes, both domestically and internationally, as well as the strategies used by these businesses to encourage cleaner manufacturing. It was first implemented in a number of European nations, including Austria, Germany, the Netherlands, Switzerland, and the Scandinavian nations, during the development and implementation stages of different policy instruments aimed at enhancing the systematic end of the products. It quickly extended to the majority of OECD nations and, in recent years, a number of developing nations.

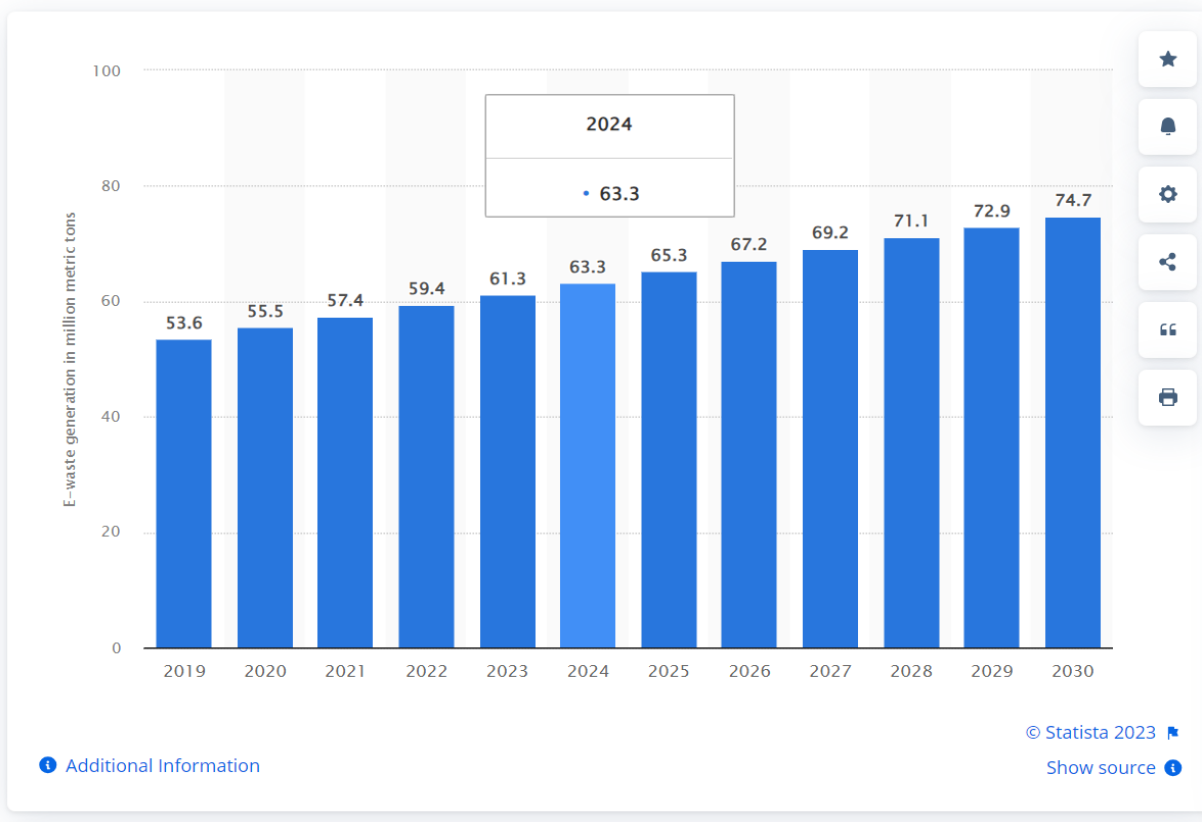
"Hazardous Waste Management Rule 1989", The Environmental Protection Act, 1986 served as the foundation for a set of regulations that were initially adopted in India in 1989 and subsequently revised in 2000 and 2003. The 1989 and 2000 versions of these regulations made no mention of e-waste and were primarily concerned with industrial trash. Nonetheless, a mention of "electrical and electronic assembles or scraps" was made in the 2003 edition. The "Biomedical Waste (Management & Handling) Rules, 1998"; the "Recycled Plastics (Manufacture and Usage) Rules", 1999; the "Municipal Solid Waste (Handling and Management) Rules", 2000; the "Batteries (Handling and Management) Rules", 2001; and the "Plastic Waste (Management and Handling) Rules", 2011 are just a few of the additional

[7] AGARWAAL, RAAVI. "E-Waste Law: New Paradigm or Business as Usual?" '*Economic and Political Weekly'*, vol. 47, no. 25, 2012, pp. 14–16.

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

regulations that have been introduced since then.

"The Electronic Waste (Handling and Disposal) Bill, 2005" was an effort to impose the EPR policy on India in 2005[8]. Honourable Member of Maharashtra, Shri Vijay J. Darda, introduced it in the Rajya Sabha. The Bill acknowledged that every household had a variety of electronic items, even though there was no appropriate method for processing or disposing of e-waste. When these products are abandoned or become outdated, they are either tossed in the trash or purchased by scrap merchants, who disassemble the items and retain the usable portions while disposing of the remaining material in landfills. It called for regulations on the disposal of electronic trash and blasted the incorrect management of the situation. The purpose of the Bill was to assure the proper processing and deposition of tonnes of e-garbage by creating standards, laws, and responsibilities on "manufacturers, recyclers, and consumers" for the disposal of electronic waste and other connected matters. However, the Bill had a sunset date of July 2010. The notion of Extended Producer Responsibility (EPR) was first established in India by the "E-Waste (Management and Handling) Rules", 2011. There are now more stringent deadlines for the collection of obsolete products according to the "E-Waste (Management) Rules", 2016, which also simplified the application process for EPR permission.



[8]Vijay J. Daarda, "The Electronic Waste (Handling and Disposal) Bill, 2005, 375-376, Parliament of India, OfficialDebatesofRajyaSabha"

(Projected electronic waste generated from 2019-2030)[9]

III. E-WASTE SCENARIO IN INDIA

An authoritative estimate of the amount of e-waste generated in India is still lacking. As per the information available with CPCB, "e-waste generated in the country from twenty-one (21) types of EEE notified under the E-Waste (Management) Rules, 2016 in the financial year (FY) 2020-21 and 2021-22 was estimated as 13,46,496.31 Tonnes and 16,01,155.36 tonnes respectively". The amount of e-waste is only anticipated to increase at a quick pace since this is one of the areas with the greatest growth rates for certain electronic devices, such mobile phones. The fact that over 90% of e-waste processing in India and many other developing nations occurs in the unofficial sector is a significant aspect of e-waste management. India's first set of legislation to address the e-waste issue was the 2011 e-waste Rules. Producers must establish collection facilities, either individually or collectively, in order to route trash for recycling and safe disposal under the take-back system of the 2011 Regulations. It is mandatory for manufacturers, dismantlers, and recyclers to get authorizations to operate and register with the state pollution control boards (SPCBs), who are the state's environmental regulators. Although the number of registered e-waste processing facilities has increased dramatically since the implementation of the Rules, the preliminary assessment of their effect indicates that manufacturers have not responded adequately. In an effort to improve its efficacy, the Indian government made revisions to the 2011 Rules, which went into effect in October 2016. The new regulations include obligatory take-back requirements along with collection objectives expressed as a proportion of electronic equipment sales, with progressively more stringent goals. The Rules mandate that the manufacturers set up a deposit-refund mechanism for electronic equipment in addition to the objectives.

(A) EPR Overview:

EPR entails the three liabilities and the quantum of these liabilities is being set up by the legislation[10]. Here is a description of these three liabilities:

a. Economic Responsibility

[9] Ian Tiseo and 6, F. (2023) *Global e-waste Generation Outlook 2030*, *Statista*. Available at: https://www.statista.com/statistics/1067081/generation-electronic-waste-globally-forecast/ (Accessed: 20 December 2023).

[10] Singh, Siddharth Ghanshyam. "Extended Producer Responsibility." "*E-WASTE MANAGEMENT IN INDIA: CHALLENGES AND AGENDA"*, edited by "Arif Ayaz Parrey, Centre for Science and Environment", 2020, pp. 29–33. *JSTOR*, http://www.jstor.org/stable/resrep38091.9. Accessed 30 Oct. 2023.

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

In order to be considered economically responsible, a producer must pay all or some of the costs associated with, say, gathering, recycling, or disposing of the final goods he produces.

The producer may choose to cover these costs directly or via a separate charge (Special fees).

b. Physical Responsibility

Systems in which the maker is actively engaged in the physical management of the goods and/or their impacts are referred to as physical responsible systems. The maker may also maintain ownership of his product for the duration of its existence, making him accountable for any harm the product does to the environment.

c. Information Responsibility

By mandating the producers to provide information about the environmental attributes of the items they are creating, informative responsibility denotes a number of options to increase product responsibility.

The intricate EPR initiative in India has a shorthand, and the EPR policy is outlined in the Plastic Waste Management Rules, 2016 and the E-Waste (Management) Rules 2016[11].However, none of these Acts specifically addresses obligations; rather, they hold manufacturers accountable for the waste that is produced by their products. For the policy transfer standpoint, such shorthand is unhealthy for two reasons. *First of all, it deviates significantly from the real EPR plan and does not accomplish the two sets of EPR goals in an equally effective manner. Second, since only the perceived main characteristics of the current EPR programme are emphasised, such a brief method is particularly sensitive to incomplete transfer and seldom provides a comprehensive view of programme configurations*.

(B) Objectives of EPR

Thomas Lindhqvist allocated product responsibility in the two classes of policy objectives:

(1) "High utilisation of product and material quality through effective collection, treatment, reuse or recycling in an environmentally friendly and socially desirable manner.

(2) design improvements of products and their systems.[12]"

The design/upstream objectives are one characteristic that sets EPR apart. It basically pushes producers to build their goods in a manner that minimises use of raw materials, modifies the

[11] E-Waste Management Rules, 2016

[12] Kiibert, Nicoole C. "EXTENDED PRODUCER RESPONSIBILITY: A TOOL FOR ACHIEVING SUSTAINABLE DEVELOPMENT." '*Journal of Land Use & Environmental Law*, vol. 19, no. 2, 2004, pp. 503–23'.

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

product's design, produces less waste, and guarantees closure of 'material loops' in order to improve 'resource efficiency and sustainable development'[13].

There is need for further division between the two areas of product design improvement and product system design enhancement

Enhanced product design includes, among other things:

- 'design for disassembly (DfD),
- design for the environment (DfE),
- and design for recycling (DfR)'

Product system upgrades deal with any aspect of a product's lifetime functioning that extends beyond the product itself[14].

Collecting trash, processing it, putting it to good use, and recycling it are all downstream and waste management goals. Even though EPR is one of the most common waste management methods, it offers certain benefits over other strategies. To begin, if a single actor had clearly defined tasks, the circumstance where everyone's job becomes no one's responsibility would never arise. Second, it's a helpful strategy for encouraging on-the-spot product financing among buyers. Therefore, EPR provides the government with a financially attractive option for dealing with the waste issue.

What sets EPR apart from standard take-back systems is its emphasis on establishing feedback loops from the product development stage to the waste management stage.

India has made strides in accomplishing both sets of goals. Eco-labeling and eco-design initiatives for electronic equipment, such as those used in homes and businesses, encourage responsible resource management and lessen the burden on finite supplies. GATT has been implemented in India, which has led to the spread of eco-labelling and other environmentally friendly company policies.India has done a fantastic job upholding the upstream targets thus far, but owing to the absence of recycling facilities and limited infrastructure, the downstream objectives cannot be totally realised. In addition, recyclers are unable to follow even the most strict rules because of a lack of resources and an inadequate regulatory framework.

---

[13] Tyson, Greg. "Resource Efficiency, Integrated Product Policy and Extended Producer Responsibility: European Experiences." '*Extended Producer Responsibility Policy in East Asia: - In Consideration of International Resource Circulation* -, edited by Yasuhiko Hotta et al., Institute for Global Environmental Strategies, 2009, pp. 37–60'. *JSTOR*, http://www.jstor.org/stable/resrep00834.9. Accessed 1 Nov. 2023.

[14] Singh, Siddharth Ghanshyam. "Extended Producer Responsibility." "*E-WASTE MANAGEMENT IN INDIA: CHALLENGES AND AGENDA*, edited by Arif Ayaz Parrey, Centre for Science and Environment", 2020, pp. 29–33. *JSTOR*, http://www.jstor.org/stable/resrep38091.9. Accessed 1 Nov. 2023.

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

(C) Analysis of EPR:

Extended producer responsibility is a technique for environmental protection that tries to reduce the total environmental effect of a product by making the maker liable for the product's complete life cycle, including its return, recycling, and final disposal. It is evident from the wording above in that EPR extends the producer's responsibility throughout the whole product chain[15]. However, end-of-life goods are now the focus of most EPR programmes, and government-sponsored take-back initiatives originated in Europe as a result of concerns about a shortage of landfill space. Japanese Automobile and electronics manufacturers in are responsible for recycling them, while certain Canadian provinces have lately enacted laws mandating the return of old electronics, paint, batteries, tyres, and packaging. India authorised the take-back plan for makers of plastic and "e-waste in The E-Waste (Management) Rules", 2016 mandate that producers help collect their end-of-life products as part of the take-back programme and return them to authorised recyclers and dismantlers. However, since there aren't enough regulations or resources, it hasn't been implemented effectively. During a suo motu hearing, the Supreme Court penalised many States and Union Territories thousands of dollars for violating these regulations.

There are three primary causes for the failure of India's take-back programme:

First, the laws require the companies to progressively fulfil the collection objective, which is "30% of the expected waste production in the first two years of the regulations' implementation, 40% in the third and fourth years, and 50% in the fifth year of the regulations". *However, there is no system in place under the legislation to verify the assertions made by these companies.*

Second, *The provision emphasises legal recycling, even if the informal sector handles most recycling. It also does not encourage unauthorised recyclers to formalise or sell to licenced recyclers.*

Thirdly *To create an electronic waste recycling plant alone or collectively may not be economically or logistically feasible due to the restricted operational and locational considerations affecting manufacturers and consumers. Individual or group collecting centres may not be practical for these companies.*

Not to mention, the lack of sufficient recycling infrastructure across the country makes the take-back program's execution much more difficult.

[15] Lindhqvist, T. (2000). *Extended Producer Responsibility in Cleaner Production: Policy Principles to Promote Evironmental Improvements of Product Systems*. [Doctoral Thesis (moograph), The Internatinal Institute for Industrial Environmental Economics]. IIEE, Lund University.

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

The incorrect implementation of India's take-back system is caused by a variety of issues, but manufacturers still need to put in a lot of work. We may take an epitome of **Nokia**, which started its campaign way back in 2008[16] when it was not a major problem. It has managed to collect 160 tonnes of e-wastes since it began advertising the take-back campaign in 2009. These are then sent to authorised recyclers. In September 2009, after the success of the first pilot campaign, Nokia rolled out its "Planet Ke Rakhwale" take-back and recycling initiative in 28 cities throughout India[17].

IV. FROM CONSTITUTIONAL LENS

Preserving and enhancing the natural world is an obligation. It is a pledge made by a nation devoted to the principles of a welfare state. It is well acknowledged that living in a healthy, pollution-free environment is guaranteed under Article 21 of the right to life.

It must be understood in light of Articles 48-A and 51-A(g), which require the State to protect and enhance the environment.[18]

It assigns responsibility for protecting the natural environment to both the State and the people. Under India's EPR policy, state governments are tasked with keeping an eye on "*manufacturers, producers, and recyclers" (*Key Players*)* to make sure that the adherence to the rules are met.[19]

In addition, the act also assigns users of e-devices the duty to safeguard the environment from the damage that the gadgets may do when their useful lives are coming to an end via the take-back programme. It thereby upholds the obligations that are enshrined in the constitution to save the environment.

Although the polluter pays concept has a long history in legal systems, the OECD first addressed it specifically in terms of environmental impacts in the 1970s and 1980s.

Later, this served as the foundation for the EPR policy. Judicial activism is the means by which this idea is promoted in India. In "*Enviro-Legal Action v. Union of India",* established the polluter pays principle, which states that the expenses of mitigating or avoiding pollution-related harm must be covered by the parties involved. According to the notion, the government should not bear the financial burden of preventing or rectifying harm since this would transfer the financial responsibility for the pollution incident to the taxpayer. Electronics manufacturers are now required to pay for the recycling of e-waste, which is in line with the "polluter pays"

[16] *E-waste management: Nokia sets example* (no date) *Down To Earth*. Available at: https://www.downtoearth.org.in/news/ewaste-management-nokia-sets-example--41799 (Accessed: 20 December 2023).
[17] *Id.*
[18] Article 48-A & 51-A(g) of the Constitution of India, MC Mehta V. UoI
[19] E-Waste (Management) Amendment Rules, 2018

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

theory, which holds manufacturers accountable for any negative environmental consequences that result from their goods.[20]

In order to maintain the sustainability of the waste management system, "The Plastic Waste (Management) Rules, 2018",[21] as a means to effectively mitigate plastic waste by incentivizing responsible waste management practises.

V. RECOMMENDATIONS

India has always benefitted from selling its garbage to scrap merchants or kabadi walas. The majority of customers, particularly individual consumers, still would rather sell their electronic trash to the unofficial market than deposit it in the producer-instituted take-back programme.

Most people choose to sell their electronic garbage to kabadi walas or unlicensed contractors as a convenient way to dispose of it because they are unaware of the consequences of incorrect disposal.[22]

(i) Because of this, there is an increasing need to educate customers, since without waste, even the greatest technology and infrastructure would be ineffective. Furthermore, because of the lack of public awareness, manufacturers of electronics also do not invest in recycling.

(ii) Since most e-waste ends up in the trash in nations like India due to a lack of understanding about safe disposal, there should be a thorough model for collecting waste from consumers until it is recycled. The business plan for collecting consumer e-waste is also not specified in the Rules "Plastic Waste Management Rules, 2016 and the E-Waste (Management) Rules, 2016". The Rules address waste creation, storage, transportation, and disposal; nevertheless, they do not provide a more efficient method of gathering garbage.

(iii) The towns need to take the lead in handling e-waste. Additionally, the Constitution designates municipalities as having main duty for solid waste management. The State Legislatures are authorised under Article 243-W to design waste management-related laws.[23]

The municipalities were given the responsibility of making sure that the garbage is appropriately collected, separated, and sent to approved recyclers and dismantlers under the E-garbage (Management) Rules of 2016. In the case of Almitra H. Patel v. Union of India[24], the Delhi

[20] https://www.cidm.in/pdf/Day2_2/4.pdf
[21] Plastic Waste Management Rules, 2018
[22] Aggarwal, M. (2016) *E-waste rules catch most Metro residents unaware, survey finds*, *mint*. Available at: https://www.livemint.com/Politics/0gAfIqE1Uo8VyFYwHeEU6O/Ewaste-rules-catch-most-metro-residents-unaware-survey-fin.html (Accessed: 20 December 2023).
[23] Article 243-W Constitution of India
[24] 2000 8 SCC 19

Municipal Corporation was chastised by the Supreme Court for failing to provide a hygienic environment for its people, citing the terrible state of the city. Furthermore, it exemplified the prevalent mishandling of local governments in several states. India has the potential to gain valuable insights from Spain's waste management practises pertaining to electrical and electronic equipment (WEEE). In Spain, the local authorities in towns with a population over 5000 undertake the responsibility of collecting and storing WEEE from households. Subsequently, the collected trash is sorted, processed, and managed by the manufacturer or their collective organisation.[25]

(iv) The E-Waste Regulations discuss financial incentives for meeting the requirements of the official recycling and dismantling industries. However, the informal sector—which manages about a bulk of all recycling and dismantling (approx. 90 %)—is not included in the Rules. Thus, more focus should be placed on this industry in order to provide them financial incentives, reduce formalisation costs, transfer skills and information, and provide training for efficiency and safety. The extensive network of the unorganised sector may be helpful in completing last-mile collection.

(v) Since cheaper recycling technologies would allow for easier recycling and the expansion of the formal sector, research and development in this area should be encouraged. Since several nations have already started constructing e-waste recycling infrastructure utilising EPR and are benefiting from higher quantities of recyclable commodities entering their economies, it is possible to learn from the experiences of other nations. For example, a state-of-the-art recycling plant in Belgium recycles 95% of the products brought to it using cutting-edge methods for e-waste recycling[26].

In addition, the establishment of "collection and distribution logistics and incentives" may be informed by the insights gained from successful collaborations between public entities.

In The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 [27]prohibit the importation of e-waste into India for the purpose of disposal. However, India also receives a significant portion of the electronic garbage generated by other nations. Despite a purported restriction on the import of electronic garbage, certain studies reveal that about 70% of the electronic waste handled in India is generated outside the country.

[25] https://environxchange.com/images/article/139/best%20prac.pdf
[26] Office, U.S.G.A. (no date) *Electronic waste: EPA needs to better control harmful U.S. exports through stronger enforcement and more comprehensive regulation, Electronic Waste: EPA Needs to Better Control Harmful U.S. Exports through Stronger Enforcement and More Comprehensive Regulation | U.S. GAO*. Available at: https://www.gao.gov/products/gao-08-1044 (Accessed: 20 December 2023).
[27] https://cpcb.nic.in/displaypdf.php?id=aHdtZC9IV01fUnVsZXNfMjAxNi5wZGY=

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

To stop the smuggling of technological trash from rich nations, border controls should be more strictly enforced.

VI. CONCLUSION

There are still many who contest the seriousness of environmental dangers. On the whole, nevertheless, agreement has been reached today about the need of taking stronger action to address environmental issues. For a number of decades, preventive methods of resolving environmental issues have been shown to be advantageous both economically and ecologically. EPR has developed as a proactive strategy to deal with hazardous e-waste. The liability of a producer is extended beyond the production and it is rather the whole product's life cycle, including its ultimate disposal, under this approach to environmental policy. EPR has been successfully implemented in a number of countries, reducing waste generation and a reliance on virgin resources. For example, in Europe, (WEEE Directive) has exceeded collection targets, despite the lack of a comprehensive infrastructure for waste collection and treatment prior to the directive.[28]

India has adopted EPR for plastic and e-waste, following in the footsteps of these other nations. Although the policy's rules are generally favourable, manufacturers now have the responsibility to take the necessary steps to solve the rising issue of e-waste. Only with collaboration between manufacturers and government organisations such as the Central Pollution Control Board (CPCB) and State Pollution Control Board (SPCB), the current policy be effectively implemented in India. This involves managing the items from the point of manufacturing to the end of their useful life.

*****

[28] Kibert, Nicole C. "EXTENDED PRODUCER RESPONSIBILITY: A TOOL FOR ACHIEVING SUSTAINABLE DEVELOPMENT." *Journal of Land Use & Environmental Law*, vol. 19, no. 2, 2004, pp. 503–23. *JSTOR*, http://www.jstor.org/stable/42842852. Accessed 2 Nov. 2023.

© 2023. International Journal of Law Management & Humanities [ISSN 2581-5369]

VII. REFERENCES

(A) Conventions/ Directives:

- Convention on the Control of Transboundary Movements of Hazardous Wastes
- Waste from Electrical and Electronic Equipment (WEEE) Directives. (For European Union Members)

(B) Legislation:

- E- Waste (Management) Rules, 2022

(C) Articles/ Books:

- Smith, Christopher "Smitty." "The Economics of E-Waste and the Cost to the Environment." *Natural Resources & Environment*, vol. 30, no. 2, 2015, pp. 38–41. *JSTOR*, http://www.jstor.org/stable/44134066.
- Kibert, Nicole C. "EXTENDED PRODUCER RESPONSIBILITY: A TOOL FOR ACHIEVING SUSTAINABLE DEVELOPMENT." *Journal of Land Use & Environmental Law*, vol. 19, no. 2, 2004, pp. 503–23. *JSTOR*, http://www.jstor.org/stable/42842852.
- Borthakur, Anwesha. "INTERNATIONAL PERSPECTIVES / SPECIAL REPORT: Health and Environmental Hazards of Electronic Waste in India." *Journal of Environmental Health*, vol. 78, no. 8, 2016, pp. 18–23. *JSTOR*, https://www.jstor.org/stable/26330439
- AGARWAL, RAVI. "E-Waste Law: New Paradigm or Business as Usual?" *Economic and Political Weekly*, vol. 47, no. 25, 2012, pp. 14–16. *JSTOR*, http://www.jstor.org/stable/23215024
- Sahajwalla, V. and Gaikwad, V. (2018). The present and future of e-waste plastics recycling. Current Opinion in Green and Sustainable Chemistry, 13, 102-107
- Jatindra, P., & Sudhir, K. (2009). E-waste management: a case study of Bangalore, India. Research Journal, Environmental and Earth Sciences, 1, 111-115.
- Sinha, S., Mahesh, P., & Donders, E. (2015). Waste electrical and electronic equipment: the EU and India: sharing best practices. *Delhi: Toxic Link*, 1-104.
- Kibert, Nicole C. "EXTENDED PRODUCER RESPONSIBILITY: A TOOL FOR ACHIEVING SUSTAINABLE DEVELOPMENT." *Journal of Land Use &*

Environmental Law, vol. 19, no. 2, 2004, pp. 503–23. *JSTOR*, http://www.jstor.org/stable/42842852

- Tyson, Greg. "Resource Efficiency, Integrated Product Policy and Extended Producer Responsibility: European Experiences." '*Extended Producer Responsibility Policy in East Asia: - In Consideration of International Resource Circulation* -, edited by Yasuhiko Hotta et al., Institute for Global Environmental Strategies, 2009, pp. 37–60'. *JSTOR*, http://www.jstor.org/stable/resrep0083

*****