AN ASSESSMENT OF HOW EXTENDED PRODUCER RESPONSIBILITY CAN BE INTEGRATED TO HELP TACKLE PLASTIC POLLUTION IN KENYA

Submitted in partial fulfilment of the requirements of the Bachelor of Laws Degree, Strathmore University Law School

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March 2024

18,319 words (excluding footnotes and bibliography)

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Acknowledgements

I would like to acknowledge the Almighty God for His grace and protection as I undertook this dissertation, my supervisor Macharia Kaguru for his patience and guidance during the writing of this project, my friends and classmates for their encouragement and assistance, and my family for their continuous love and support, particularly my mother Dr Janerose Kaithi for her help in proofreading and editing the final drafts of this work.

Declaration

I, CHRISTIAN MUTIGA KIBAARA, do hereby declare that this research is my original work and that to the best of my knowledge and belief, it has not been previously, in its entirety or in part, been submitted to any other university for a degree or diploma. Other works cited or referred to are accordingly acknowledged.

Signed: .....

Date: 3/4/2024

This dissertation has been submitted for examination with my approval as University Supervisor.

Signed:.....

Macharia Kaguru

Abstract

Plastic pollution is rapidly becoming one of the world's most pertinent concerns. The longevity of plastics, which is one of its most valued characteristics, makes management of plastic waste an incredibly difficult task. Extended Producer Responsibility (EPR) is a concept that has arisen as one of the most promising policy approaches for tackling this menace. It has been introduced by many jurisdictions globally. The Kenyan government has also begun attempts to integrate this concept into the Kenya waste management legal framework. In 2022 it released the Draft Extended Producer Responsibility Regulations under the Sustainable Waste Management Act. Many aspects of these draft regulations are commendable. They employ a broad definition of producer that defines producers of goods as any entity that introduces a product to the market, encompassing manufacturers, importers, distributors, and vendors. It also sets out obligations for these producers such as recycling and eco-design of products. It provides for creation of individual and collective compliance schemes so that producers can band together to fund raise for fulfilment of their new obligations. However, these regulations have many shortfalls that may limit the effectiveness of EPR in mitigating the plastic pollution crisis.

This study seeks to assess how Extended Producer Responsibility can be integrated into Kenya's waste management legal framework for management of plastic waste. The study will be guided by the following objectives; to examine the salient features and inadequacies of the 2022 Draft Extended Producer Responsibility regulations, to examine the current and prospective international legal framework around management of plastics pollution and extended producer responsibility, to carry out a comparative analysis of the European Union legal framework around Extended Producer Responsibility and plastic waste management, and finally to give recommendations for the amendment of the Draft EPR Regulations to effectively integrate EPR into the Kenyan environmental legal framework and for the introduction of EPR guidelines for plastic waste management. The research methodology used in this study is desk-based research. The study utilizes doctrinal analysis of legal instruments, analysis of written sources such as journal articles and books, and a comparative analysis with the European Union to assess how EPR can be integrated into Kenya's waste management system.

Shortfalls of the draft regulations include lack of provisions on regulation of imported goods, lack of provisions addressing support for Small and Medium Enterprises to comply with the new obligations, and an insufficient framework for monitoring and assessing compliance with the scheme. Introduction of guidelines for products under different product classes such as glass products and plastic products should also be implemented. This will be in consideration of the different nature of these product classes, from the processes of disposal and the different environmental risks they pose if improperly disposed of. These guidelines should introduce mandatory product requirements, which are very effective measures to reduce the environmental impact of plastic pollution.

List of legal instruments

1. Stockholm Convention on Persistent Organic Pollutants, 22 May 2001, 2256 UNTS 119.
2. Sustainable Waste Management Act (Act No 31 of 2022).
3. Environmental Management and Coordination Act (Act No 25 of 2015).
4. Draft Sustainable Waste Management (Extended Producer Responsibility) Regulations.
5. Directive 2008/98/EC of the European Parliament and of the Council Of 19 November 2008 On waste and repealing certain directives, 2018.
6. Directive (EU) 2019/904 of the European Parliament and of the Council on the reduction of the impact of certain plastic products on the environment, 2019.
7. UNEP, UNEA Resolution 5/14 entitled "End plastic pollution: Towards an international legally binding instrument", UNEP/PP/OEWG/1/INF/1, 5.
8. UNGA, Transforming our world: the 2030 Agenda for Sustainable Development, UN A/Res/70/1.
9. UNEP, Zero draft text of the international legally binding instrument on plastic pollution, including in the marine environment, UNEP/PP/INC.3/4.

List of abbreviations

DfE – Design for Environment.

EMCA- Environmental Management and Coordination Act.

EPR – Extended Producer Responsibility.

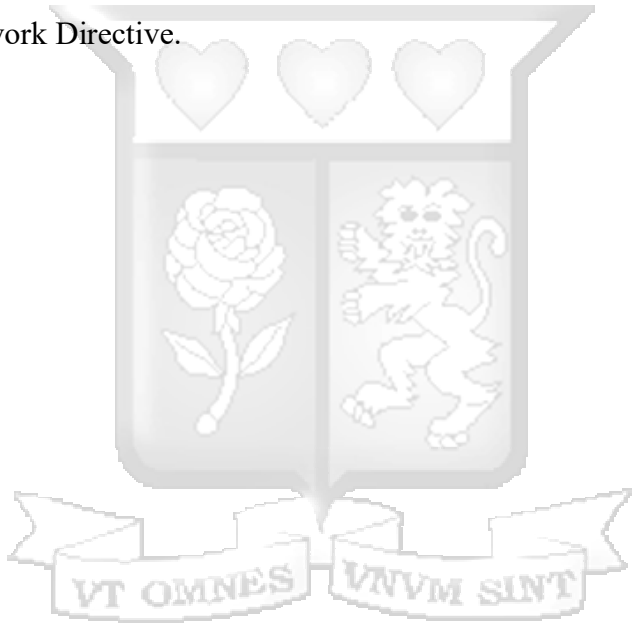
PRO – Producer Responsibility Organisation.

SWMA – Sustainable Waste Management Authority.

UN- United Nations.

WEEE – Waste Electronic and Electronic Equipment.

WFD – Waste Framework Directive.



Chapter 1

1.1 Background

In the last two centuries humanity has made great advances in scientific research, manufacturing and commerce that have changed our way of life. These include the invention of new industrial processes and technologies, and the discovery of new chemical compounds. One of the highlights of these discoveries are the discovery of plastics.

Plastic is a general term for a range of both semi-synthetic and synthetically produced polymers. In the last century, since the discovery of industrial polymers, they have become the number one material used to make human tools. From electronics to industrial machines, work tools, household goods, furniture, office stationery and clothing among others, plastics have gained prominence and replaced traditional materials such as wood, metal, sisal, and glass. They are also used in packaging for many commercial goods. They are durable, inexpensive, and lightweight.

However, the widespread use of plastics has come with unintended consequences. Coupled with poor urban planning, poor waste management policies and inefficiencies by public authorities, plastics pollution has become a global issue. Locally, according to UN-Habitat, Taita Taveta County alone produces 190 tonnes of solid waste daily. Only 30% of this waste is collected, resulting in 2400 tonnes of plastic waste left in the environment annually.[1]

Our cities are congested with trash, with plastic waste in urban areas posing a massive challenge to a clean environment. Improper disposal of plastic, such as mass incineration has affected air quality in urban areas to the detriment of human health.[2] Plastic waste has even caused animal deaths as some ingest this waste or get injured inadvertently. Aquatic life has suffered considerably because of ingestion of plastic waste causing the death of many aquatic animals.[3] A more recent, yet more concerning issue is the recent discovery that the characteristic of durability that plastics are valued for becomes a major health concern. When they break down, instead of degrading into natural elements, they break up into microplastics, which are

[1] UN-Habitat project to improve municipal solid Waste management in Kenya's coastal area | UN-Habitat (unhabitat.org) on 14 June 2022.
[2] UNEP, ***P****reparation of an international legally binding instrument on plastic pollution, including in the marine environment*: *Plastics Pollution Science*, UNEP/PP/INC.1/7, para 48.
[3] Plastic in our oceans is killing marine mammals – WWF-Australia - WWF-Australia on 27 June 2023.

microscopic plastic particles.[4] These have now become a natural biological feature of our times, and can be found everywhere in the natural environment, in our organs, and even on a cellular level.[5] Some of these microplastics have been suspected to be harmful to human health, with some being declared carcinogenic, and tied to high rates of cancer and other diseases.[6]

The sustainability and efficiency of industrial manufacturing and production has also come into question. Massive energy consumption by industries has contributed to increased carbon emissions and subsequently, global warming.[7] Poor product design and inefficient manufacturing processes have also contributed to unnecessary wastage and subsequent disposal of valuable material that could have been utilised in the production process.[8]

As a response to this, in the first two decades of the 21st century, significant strides have been taken in generating awareness to the issues caused by improper waste management, and the plight of the environment in general. On an international stage, the UN and other international and regional bodies have come to consensus and formulated conventions, declarations, and treaties about environmental protection. Among these is the resolution to forge an internationally legally binding agreement by 2024 on the global regulation of plastics, which was passed on the 2nd of March 2022, in the UN Environment Assembly.[9]

National government initiatives have produced many laws and regulations in many states globally, including here in Kenya. Public awareness campaigns have been conducted to spread environmental awareness in educational curriculums and popular media.

As we continue to mull over this problem collectively, the question of the role manufacturers, importers, and distributors of goods in markets play has come up. Players in industry, trade and commerce introduce millions of tonnes of products into the market annually, which subsequently turn to millions of tonnes of waste. Coca-Cola as just one entity produces 3 million tonnes of plastic packaging globally annually.[10]

Among the solutions to waste management proposed globally, a concept called Extended Producer Responsibility began to be discussed internationally in the close of the 20th Century.

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[4] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, para 49.
[5] Microplastics are in our bodies. How much do they harm us? (nationalgeographic.com) on 8 May 2023.
[6] Microplastics are in our bodies. How much do they harm us? (nationalgeographic.com) on 8 May 2023.
[7] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, para 59.
[8] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, para 28.
[9] UNEP, *UNEA Resolution 5/14 entitled "End plastic pollution: Towards an international legally binding instrument"*, UNEP/PP/OEWG/1/INF/1, 5.
[10] Schmidt B, Coca-Cola Takes on a Plastic Crisis It Helped Create - Bloomberg on 23 July 2021.

This concept centred around extending responsibility for waste from a product to the producer of this product to the post-consumption stage, and assessing what responsibility the producer must act to mitigate the potential harmful effects of their product to the environment.

This has resulted in the formulation and enactment of extended producer responsibility (EPR) laws and regulations globally to hold producers of goods accountable for the environmental impact of disposal of these goods and assign new legal duties that extends responsibility of producers to the post-consumption stage of the product life cycle. The European Union for example introduced EPR into its bloc's waste management framework through Directive 2008/98/EC, otherwise known as the Waste Framework Directive.

Kenya has additionally begun to investigate implementing Extended Producer Responsibility Regulations, with draft regulations initially being formulated under the Environmental Management and Coordination Act. The draft regulations are currently being formulated under the Sustainable Waste Management Act by the National Environmental Management Agency (NEMA). These regulations are yet to be conclusively released as a Bill of Parliament and handed to the legislature for deliberation. The draft regulations intend to create a framework through which producers of waste actively work towards reducing the negative environmental impact of the production of their products.[11] This is through recycling programs, take-back schemes, and other similar initiatives. It also facilitates the creation of producer responsibility organisations, where producers of a particular product can come together and collectively set up funds and programs to carry out EPR activities. The EPR activities listed in the schedules of the draft regulation have also included research and making of regulations concerning eco-efficient manufacturing operations, such as utilising materials more efficiently and reducing waste, making them easier to recycle, reuse, and more durable to reduce disposal of goods.

Section 2 of the Draft Extended Producer Responsibility regulations defines producers as manufacturers, importers, and distributors of goods in Kenya, expanding the scope of responsibility beyond manufacturers.[12] A large proportion of products in the Kenyan market containing plastics are imported. The value of Kenya's imported plastics and articles made with plastics totalled 982.26 million US dollars in the year 2021 according to statistics on international trade available on the United Nations COMTRADE database.[13] Aside from the

[11] Section 5(2), *Draft Sustainable Waste Management (Extended Producer Responsibility) Regulations,* 2022.
[12] Section 2, *Draft Sustainable Waste Management (Extended Producer Responsibility) Regulation,* 2022.
[13] UN Comtrade: International Trade Statistics, United Nations Statistics.

manufacturers, in the supply chain of plastic products there are many other parties such as distributors and retail traders who profit from the sale of plastic products.

1.2 Statement of Problem

The 2023 Draft EPR Regulations are not sufficient in tackling plastic pollution in Kenya. These Draft Regulations attempt to introduce Extended Producer Responsibility obligations to the national waste management system. allow for creation of Collective Compliance schemes for producers to combine resources and meet EPR obligations and give a list of EPR activities for producers to undertake. However, they do not sufficiently set out mandatory requirements for how these EPR activities will be conducted, do not set targets for the compliance schemes to reach, and do not set out a sufficient oversight and monitoring system for these activities. They also fail to provide sufficient facilitation for the set-up of compliance schemes. They leave the 'how' of compliance largely to the producers to decide. For the manufacturers, traders and retail outlets expected to meet these obligations, they will have to change and adapt their businesses and operations to undertake waste management, a service many of them have no expertise in. The Regulations will need to set out a framework that can guide and facilitate these entities in compliance with these duties, or else the introduction of EPR as set out in the draft regulations will fail to have the impact on waste management that EPR has potential to have, and that is vitally needed. Additionally, for individual product classes, such as plastics, electronic waste, and paper, respective EPR Guidelines need to be introduced. This approach will help tackle these individual product classes, which each have their own unique impact on human health and the environment, and require unique, tailored approaches to implementing EPR for producers and consumers. This study, therefore, seeks to assess how extended producer responsibility can be implemented to help tackle plastic pollution in Kenya.

1.3 Research objectives

a) To examine the current and prospective Kenyan and international legal frameworks around management of plastics pollution and extended producer responsibility.
b) To examine the salient features of the 2022 Draft Extended Producer Responsibility regulations and identify inadequacies in the draft regulations.
c) To carry out a comparative analysis of the European Union legal framework around Extended Producer Responsibility requirements and plastics production and management.

d) To give recommendations for the amendment of the Draft EPR Regulations to effectively integrate EPR into the Kenyan environmental legal framework and for the introduction of EPR guidelines for plastic waste management.

1.4 Research questions

a) What are the current and prospective Kenyan and international legal frameworks around plastics pollution and Extended Producer Responsibility?

b) What are the salient features and inadequacies of the 2022 Draft Extended Producer Responsibility regulations?

c) What is the European Union legal framework around Extended Producer Responsibility requirements and plastics production and management?

d) How can the Draft EPR Regulations be amended to effectively integrate EPR into the Kenyan environmental legal framework and introduce EPR Guidelines for plastic waste management?

1.5 Hypothesis

The Extended Producer Responsibility Draft Regulations can be amended to better integrate EPR into the national waste management legal and regulatory framework. We can also introduce EPR Guidelines for plastics as supplementary legislation to the Regulations, that give a tailored approach to enforcing EPR on producers of goods that contain plastics or use plastics for their packaging.

1.6 Justification

This study will shed light on a policy approach that will help us tackle plastics pollution. Kenya is currently producing tonnes of plastic waste daily as a nation, and as populations continue to grow, this issue may spiral out of control. For the sake of our current wellbeing and future generations, measures that will phase out harmful plastics, reduce the amount of plastics used in manufacturing processes, and make it easier to handle plastic waste post-consumption are vital. Making plastic goods in a way that considers their environmental impact from the point of design, prior to manufacturing, is vital. There is no literature within the Kenyan jurisdiction discussing this. This study will contribute to the discussion on mitigating the current environmental crisis through the law here in Kenya by speaking on a novel policy approach. This study will also contribute to the larger global academic discussion on environmental law by writing on how mandatory Extended Producer Responsibility requirements can and should

be included in a nation's Environmental Protection legal framework. This will especially give insight to legal researchers contemplating the employment of this framework where it is not in place. It will be of aid to legal researchers from other Global South or developing countries, where there may be a similar context.

This work will also help policy makers by giving them practical insights and proposals on implementation of Extended Producer Responsibility requirements.

This study will help individuals in other disciplines such as commerce and environmental studies on an issue that is relevant to their work. In economics and business studies, Extended Producer Responsibility initiatives may not only change the regulatory requirements for businesses, but present ways to make businesses more efficient and environmentally sustainable. Environmentalists may see new ways to tackle the ongoing environmental crisis.

This work will also help legal researchers, policy makers and other individuals who are looking into Extended Producer Responsibility for products made with other materials, such as glass, paper products or classes of goods such as fabrics, machinery, electronics et cetera.

1.7 Conceptual framework

This study will use the concepts of Extended Producer Responsibility and Design for Environment (DfE) as key concepts.

1.7.1 Extended Producer Responsibility

Extended Producer Responsibility as a concept is premised on the idea that producers of goods essentially share a responsibility in mitigating the negative environmental impact of their products. This is together with other players such as the government, which has a responsibility to secure the wellbeing of their citizens and the consumers of the products. It was first formulated by Swedish scholar Thomas Lindqvhist. In his dissertation *Extended Producer Responsibility in Cleaner Production*, he defined Extended Producer Responsibility as a policy principle that places responsibility on producers to reduce the overall negative impact of their products on the environment. [14]

A core part of Extended Producer Responsibility is the introduction of a life cycle approach to waste management. There are three stages in the life cycle of a product, upstream, midstream,

[14] Lindqvhist, T, 'Extended Producer Responsibility in Cleaner Production', Published Doctoral Thesis, Lund University, Lund, 2000.

and downstream. These phases each have activities that producers can undertake to address the environmental impact of their products. Upstream activities comprise of sourcing of materials used to produce their products Measures that can be employed in this phase is turning away from raw materials, or methods of procuring raw materials that are detrimental to the environment. In the case of plastics this can be through turning to bioplastics, bio-degradable alternatives to fossil fuel feedstocks. Midstream activities comprise of design and production, distribution, and consumption. Measures to employ here are DfE and encouragement of reuse of products through take-back schemes. Downstream activities involve waste collection for purposes of recycling and responsible final disposal.[15]

The polluter-pays principle is another principle central to EPR. The polluter-pays principle was first established as a principle in international environmental law in the Rio Declaration, a product of the 1992 United Nations Conference on Environment and Development. Here, producers are expected to pay the costs of the management of waste management from waste generated by their products. Compliance schemes for EPR thus demand that producers either carry out the activities of waste collection, sorting, and recycling by themselves, or pay fees to private service providers or public authorities designated to carry out these activities.

It has also been acknowledged as a key environmental principle in Kenyan legislation in section 2 of the Environmental Management and Coordination Act and section 2 of the Sustainable Waste Management Act. The Sustainable Waste Management Act defines it as a principle that places responsibility on producers for the disposal of their goods post-consumption.

There are many benefits of EPR. They include reduced financial burdens on public authorities and sustainable extraction and use of raw materials through creation of markets for secondary materials. Secondary materials are the materials reutilised in production, and in the case of plastics, reused or recycled that would have otherwise ended up in landfills or illicit dumping sites. In the case of plastics, because many plastic polymers are produced from fossil fuel feedstocks, the use of secondary materials leads to a direct reduction of demand for fossil fuels.

EPR also promotes responsible waste management. It promotes safe handling of hazardous wastes such as heavy metals in electronic waste.

[15] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 12.

1.7.2 Design for Environment

Design for Environment otherwise referred to as ecological design or eco-design is a concept centred around ensuring that products are made in an environmentally sustainable manner. It was mentioned by Braden R. Allenby in 1994 in a chapter in the book **The Greening of Industrial Ecosystems**, titled *Integrating Environment and Technology: Design for Environment.*[16]

Another seminal work that is tied to this concept is the 2002 book From *Cradle to Cradle* by William McDonough and Michael Braughart.[17] The book discussed a remodelling of industrial processes so that materials and products that can be reutilised are repurposed as opposed to the linear economy, where products are consumed and disposed of. 'Cradle to Cradle' is now widely understood as the concept of circular economy, and has been adopted by governments, manufacturers, and industrialists worldwide.

DfE initiatives have now grown to finding solutions to inefficient and wasteful product design, waste of raw materials and resources during production processes, impact on consumer and environmental health, and ease of recyclability and reusability of a product.

This paper intends to discuss the nexus of these two ideas, as once we acknowledge that producers share responsibility for helping create solutions to environmental degradation. DfE initiatives are one of the first that come to mind. The role of the state here is to spearhead the setting of standards that take the life cycle, health effects and similar considerations into account, and ensure compliance with these standards on goods placed in the marketplace.

The two concepts are closely intertwined but distinct. EPR focuses on placing responsibility on the producer for the environmental impact of the product, and on that basis encouraging them to additionally conduct post-consumption handling and processing of their products. DfE can be described as one aspect of EPR but has independent theoretical foundations. Both concepts were initially introduced and championed in environmental academia by different proponents.

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[16] R. Allenby, B, 'Integrating Environment and Technology: Design for Environment' in J. Richards D, Frosch, R, and R. Allenby, B (eds), *The Greening of Industrial Ecosystems,* National Academy Press, Washington, 1994, 137.

[17] W McDonough, W, Braughart, M, 'From Cradle to Cradle', North Point Press, 2002.

1.8 Literature Review

There have been no studies on the introduction of legal guidelines for plastic products to the Extended Producer Responsibility Framework in the Kenyan jurisdiction. However, multiple other studies and works of research have discussed elements of this study in Kenya, and there have been a variety of intellectual contributions to the topics of EPR and DfE in the international space.

1.8.1 Extended Producer Responsibility

In Kenya

The WWF conducted a study and published a Report on the potential of using Extended Producer Responsibility to handle plastic waste from Single Use Plastics and packaging waste in Kenya.[18] It discusses current data on the effectiveness of the handling of plastic waste by relevant authorities and points out the high amount of waste disposed through landfilling extremely low recycling rate in Kenya. The report expresses a lot of support for producer responsibility organisations, and EPR activities such as take-back programmes.

Betterman Simidi has written an article critiquing the EPR Regulations.[19] His critique focuses two issues. He argues that there should more emphasis on Deposit Return Schemes for glass and bottle packaging and the lack of protection of vulnerable groups. He decries what he views as potential for monopolization of PROs by large industry players, as the Regulations lack provisions making accommodations for small producers. He also posits that Deposit Return Schemes are an Effective solution to single use plastics and should have featured more prominently in the regulations, recommending mandatory requirements for producers to increase the use of Deposit Return Schemes.

Kariuki Muigua also mentions Extended Producer Responsibility schemes under effective waste management measures that can be employed to remedy environmental pollution.[20]

In other jurisdictions

[18] WWF, *Extended Producer Responsibility for Single-Use Plastics and Packaging Waste Streams: An Assessment for Kenya,* 29th April 2022, 11.
[19] Simidi B, 'Here is why the proposed Kenya Extended Producer Responsibility law is likely to fail', CleanUp Kenya, Here is why the proposed Kenya Extended Producer Responsibility law is likely to fail - Clean Up Kenya on 24 September, 2021.
[20] Muigua, K, 'Safeguarding the Environment through Effective Pollution Control in Kenya', Kariuki Muigua and Co Advocates, 2019.

Thomas Lindqvhist in his dissertation *Extended Producer Responsibility in Cleaner Production* defined Extended Producer Responsibility as a policy principle that places responsibility on producers to reduce the overall negative impact of their products on the environment.[21] His dissertation also proposed different EPR frameworks and discussed how to implement EPR initiatives for different goods and materials.

Noah Sachs in 2006 in his paper titled 'Planning a Funeral at Birth: Extended Producer Responsibility in the European Union and the United States' undertook an analysis of extended producer responsibility. In this paper, the first section was devoted to defining the concept of EPR. In the next section he undertook an analysis of the implementation EPR in Europe, as the European Union had already begun instituting EPR Directives for EU states to follow by 2006. Some of these Directives included those on End-of-Life Vehicles and Waste Electronic and Electronic Equipment (WEEE). This study is related to mine as it is a review of the implementation of EPR in a different jurisdiction.

In the first section outlining EPR as a concept he focuses on product externalities. Product externalities are the cost of management of waste generated in society, and the cost of dealing with the negative effects of disposal or improper waste management. He stated that in pre-EPR economies, the product externalities are borne by government and consumers, as consumers must dispose of waste from products and may pay for waste management services.[22] He defined EPR as a proposed solution intended to shift these externalities to producers.

Sachs stated that on closer scrutiny only municipalities feel the weight of these externalities as they are tasked with both waste management and environmental regulation.[23] Consumers may pay taxes that fund waste management programmes, but do not feel the direct weight of product externalities as there is no per-bag or per-product waste management charge for products, regardless of the amount of consumption. [24]

Sachs also discusses the question of who the polluter is.[25] He finds this important and assesses various arguments to determine the question, as producers can argue that they create useful

[21] Lindqvhist, T, 'Extended Producer Responsibility in Cleaner Production', Published Doctoral Thesis, Lund University, Lund, 2000.
[22] Sachs N, 'Planning the Funeral at the Birth: Extended Producer Responsibility in the European Union and the United States' (hereafter 'Planning the Funeral'), *Harvard Environmental Law Review*, vol. 30, No. 1, 2006, 56.
[23] Sachs N, 'Planning the Funeral', 56.
[24] Sachs N, 'Planning the Funeral', 56.
[25] Sachs N, 'Planning the Funeral', 65.

products not waste. Thus, consumers are the ones who pollute. He looks at a variety of approaches such as traditional liability principles and Coase theorem to determine this question. He advocates for determination of this question by determining the cheapest evader of social cost. These are producers, who evade a lot of the social costs of poor product disposal or release of hazardous substances.[26] He also points out that placing liability on consumers and municipalities does not change product composition. He acknowledges that producers have greatest ability to achieve environmental benefits such as environmentally friendly raw material sourcing, DfE and elimination of hazardous materials from manufacturing. He claims that low value products do not need EPR, as they have a small environmental impact, and transaction costs of waste management such as transportation of products outweighs environmental benefits of EPR. He says that municipalities should bear liability for handling of these products that have little or no negative environmental impact. His selection of examples of these products however is very inaccurate as he lists clothing, toys, and furniture.[27] These examples are inaccurate considering the negative environmental impact of fast fashion caused by the sheer volumes of waste produced and the fact that furniture and toys are frequently made from plastics.

In the next section where Sachs reviews the implementation of EPR in Europe, he acknowledges that it has worked efficiently for waste management by increasing recycling rates and reducing volumes of waste disposed in landfills. However, he points out that EPR as a policy approach has underperformed in encouraging eco-design of products.[28] He pinpoints the cause of this to be insufficient financial incentives for eco-design. He points out that producers turn to collective compliance schemes that offer mainly take back schemes. Take back schemes are schemes where producers organise for collection of packaging or waste from the product after consumption for purposes of waste management.

This enables them to internalise costs and save money, as they can organise collective collection and recycling of products. However, in these schemes, there is a flat rate for fees for all products regardless of the extent of DfE considerations a particular producer has implemented. He uses data from WEEE producers to illustrate this.

Fourteen years later, Kleoniki Pouikli, in her analysis of EPR implementation in Europe, also discusses this consistent issue of lack of sufficient incentives for DfE in European EPR schemes

[26] Sachs N, 'Planning the Funeral', 67.
[27] Sachs N, 'Planning the Funeral', 67.
[28] Sachs N, 'Planning the Funeral', 75.

and utilises a similar explanation of how collective EPR schemes have failed to provide sufficient DfE incentives.[29] She goes further than Sachs to propose eco-modulation of fees in compliance schemes to provide financial incentives for DfE.

Sachs also points out that substantial government intervention was key to the successes of EPR in Europe by 2006. He points to mandatory recycling requirements, product design mandates and collection of waste from targeted products by municipalities. He illustrates that EPR in Europe and its successes can be widely attributed to a less market-based voluntary approach.

Sachs critiques the high cost of EPR and advocates for utilisation of other policy approaches. He also discusses how it is difficult to assess the environmental costs and benefits of EPR to do a comprehensive cost-benefit analysis.

Pouikli in her work **'Concretising the role of extended producer responsibility in European Union waste law and policy through the lens of the circular economy'** while outlining the key elements of EPR states that there can be partial or full financial responsibilities for waste management for producers in relation to EPR.[30] This reflects a change in mindset in scholars examining EPR to acknowledge that EPR can be implemented with varied financial responsibilities, taking into consideration a producer's capacity to contribute. This is a potential aremedy to Sachs' critique of the cost of EPR on producers.

1.8.2 Design for Environment

Braden R. Allenby, an environmental scientist and lawyer, wrote a chapter in the book **The Greening of Industrial Ecosystems**, titled *Integrating Environment and Technology: Design for Environment,* that discusses DfE initiatives, and the need for DfE policies.[31] He identifies design of products as a major cause of industrial pollution, and sets DfE initiatives as priorities for policy makers in environmental law. He sets technological innovation as something DfE regulations, if enacted, should prioritize. Another seminal work that advanced this conversation is the 2002 book From *Cradle to Cradle* by William McDonough and Michael Braughart. The

[29] Pouikli K, 'Concretising the role of extended producer responsibility in European Union waste law and policy through the lens of the circular economy, *ERA Forum*, 2020 Concretising the role of extended producer responsibility in European Union waste law and policy through the lens of the circular economy | ERA Forum (springer.com) on 10 February 2020.
(hereafter 'Pouikli K, 'Concretising the role of extended producer responsibility'.)
[30] Pouikli K, 'Concretising the role of extended producer responsibility', 501.
[31] R. Allenby, B, 'Integrating Environment and Technology: Design for Environment' in J. Richards D, Frosch, R, and R. Allenby, B. *The Greening of Industrial Ecosystems,* National Academy Press, Washington, 1994, 137.

book discussed what is now widely understood as the concept of circular economy, and has been adopted by governments, manufacturers, and industrialists worldwide.

1.8.3 Designing Environmental Regulation

Neil Cunningham and Darren Sinclair discussed approaches to environmental regulation.[32] They acknowledged that governments should prioritise efficient environmental regulations but should always look at the least interventionist measure. They advocate for measures such as self-regulation, economic incentives, and voluntary measures. They also propose policies that utilise 'instrument mixtures', where different measures are utilized to address a specific problem. The criterion they set for selecting a measure are dependability and cost-effectiveness.[33]

They also mention that when considering the extent of an interventionist measure, the political climate and attitude towards state regulation in a particular jurisdiction should be considered.

1.8.4 Contribution

This study will contribute to the body of knowledge in environmental law by assessing the implementation of EPR for plastic goods in Kenya.

[32] Gunningham N, Sinclair D, 'Designing Smart Regulation' in Gunningham N, Grabosky P, Sinclair D (eds), *'Smart Regulation: Designing Environmental Policy'*, Oxford University Press, 1998 (hereby Gunningham N, Sinclair D, 'Designing Smart Regulation'), 3.
[33] Gunningham N, Sinclair D, 'Designing Smart Regulation', 3.

1.9 Methodology

This study will primarily employ qualitative research. The study will examine legislation, reports from both governmental and non-governmental organisations and scholarly articles. It will use desk review research methodology.

The study will use both primary and secondary sources. Its primary sources will include legal instruments such as statutes and regulations, and reports related to the study. The study's secondary sources will include scholarly articles.

The study will generally use a deductive method to attempt to answer the overarching research question. It will set a research objective for each chapter, look at information and data on that research objective and finally examine all the information presented, and generate a response to the study's overarching research questions. It will assess the current plastics management legal system internationally and globally by looking at statutes and legal principles. The study will then assess proposed national legislation and an international treaty on EPR and plastics waste management respectively. It will then examine the EU legal framework. Drawing on the information presented from the research, it will then prescribe amendments and additions to the EPR laws for consumer goods with plastics.

The study will employ doctrinal and policy analysis to examine the Kenyan legal framework around EPR and plastics management.

The study will examine reports and articles on DfE mandatory requirements, and the various practical considerations and potential impact of such method. This includes economic impact on producers and consumers, the process of determining and setting standards for products, the measures that will be required to enforce mandatory requirements, and other similar considerations.

The study will employ a comparative analysis to examine the framework employed in the European Union for plastic waste management. It will examine the formulation of these measures, the implementation of these measures, the effect of these measures on both producers and consumers, the relevant institutions involved among other considerations. It will also examine data on plastics pollution before and after implementation of these measures. It will highlight both the similarities and differences between both jurisdictions, from socio-economic context to differences in legal systems, to examine where we may need to employ a different approach from the one taken in that jurisdiction.

1.10 Chapter Breakdown

Chapter One is the introduction to the study. It presents the background of the study, the overarching research question formulated, the under arching objectives of the study, prevailing literature relevant to the study, and the approach taken to conduct the study.

Chapter Two is a review of the current and prospective Kenyan and international legal frameworks around plastics pollution and Extended Producer Responsibility. It will discuss the Sustainable Waste Management Act. It will then discuss deliberations in international law regarding plastic pollution and corporate responsibility, and treaties and draft treaties that discuss plastic pollution and corporate responsibility.

Chapter Three is a review of the Draft Extended Producer Responsibility Regulations. It will discuss its salient features and then give a comprehensive review of the regulations, including critiques on its shortfalls.

Chapter Four is a comparative analysis of the EU regulatory framework, which will examine implementation of EPR among European Union member states. It will examine the legal framework, and the impact of these measures in the jurisdiction. It will also examine the differences and draw lessons that can be applied in the Kenyan context.

Chapter Five will conclude the study. It will give recommendations on how EPR can be integrated into our EPR Regulations in the most effective way, and into our environmental management legal framework.

Chapter 2: Domestic and international legal frameworks regarding plastic pollution and extended producer responsibility

2.1 Introduction

In this chapter, the study will examine the current and prospective legal frameworks in Kenya and internationally regarding EPR and plastic pollution. The first section will discuss the Kenyan legal framework around waste management with a focus on the Sustainable Waste Management Act of 2022, which introduced key changes to the Kenyan waste management system. The second section will discuss the history and development of the international discourse around plastic pollution and EPR. This shall be by discussing reports from UN environmental conferences, treaties assented to regarding plastic pollutants, and the Plastic Treaty, a potential new treaty that may soon have a massive impact on plastic pollution and EPR.

2.2 The Kenyan Legal Framework

The Sustainable Waste Management Act of 2022(the Act) was introduced with the intent to create a new legal and institutional framework governing the management of waste in Kenya with a focus towards sustainability. Previously, the Environmental Management and Coordination Act of 1999, that established The National Environmental Management Authority, had provisions that guided waste management. However, there were many reasons that necessitated the introduction of a separate waste management legal regime. The Environmental Management and Coordination Act was intended to set up a legal regime to govern environmental management in Kenya, and thus has provisions that govern many different aspects of environmental management such as conservation and natural resource management. Legislation that spoke specifically to waste management was needed.

The 2010 Constitution additionally introduced county governments and devolution of government functions. The Fourth Schedule of the Constitution outlined the roles of the National and County governments. Waste management, which was formerly the task of municipalities and other local authorities was allocated to the County Governments. The legal regime governing waste management had to be amended to meet this new reality.

Additionally, the crisis caused by careless waste disposal has escalated, with increased volumes of waste being generated due to our rapid population growth. New scientific information is

being discovered daily speaking to the negative effects of irresponsible waste management on the whole environment, mankind, animals, and vegetation.

The rise of environmental advocacy on a global stage and focus on Sustainable Development Goals, among other international commitments, also prompted the creation of this new legal framework. This includes SDG 6 on clean water and sanitation, SDG 11 on sustainable cities and communities, SDG 12 on responsible consumption and production, SDG 14 on life below water and SDG 15 on life below land. They all speak to sustainable waste management.

The objects of the Act are set out in section 3. They include promoting sustainable waste management in Kenya and improving the health of all Kenyans by ensuring a clean and healthy environment.[34]

The General Principles of the Act are intended to set out the values and principles to be employed in interpretation of the Act, and execution of the mandates it gives through the process of implementation.[35] Among them are the zero-waste principle and the polluter-pays principle. These two principles are in congruence with the concept of Extended Responsibility. According to the polluter pays doctrine, polluters have a fiduciary duty to contribute financially to the disposal of products, considering that they create the products and generate profits from the products. The zero waste principle advocates for maximum resource utilisation by minimizing the amount of disposable material during production of the product, minimizing toxicity, and lengthening the product's life span by encouraging reuse and recycling of the product.

Under the institutional framework created by the Act, the Cabinet Secretary for Environment is given the primary responsibility to implement policy that advances sustainable waste management, to ensure that Kenya meets all its international obligations in relation to sustainable waste management, coordinate implementation of the Act and develop regulations to that end.[36]

It also creates the Waste Management Council, with the mandate of assisting the Cabinet Secretary with coordinating the implementation of the Act. The Council shall facilitate inter-governmental coordination on the implementation of the Act and track the progress of the national sustainable waste management plan. As of March 2024, the Council is yet to be

[34] Section 3, The Sustainable Waste Management Act 2022(Act No 31 of 2022).
[35] Section 4, The Sustainable Waste Management Act 2022(Act No 31 of 2022).
[36] Section 5, The Sustainable Waste Management Act 2022 (Act No 31 of 2022).

composed. This is in ignorance of the one-year deadline after the implementation of the Act, set for appointment and operationalisation of this Council.

The Act then gives the National Environmental Management Authority a variety of obligations as the relevant national body in charge of implementing the Act. The Authority is mandated to establish standards and guidelines for waste management and to monitor citizens and private actors to ensure compliance with sustainable waste management practices. Sections 8 (1)(f) and 8 (2) instruct the Authority to create a national sustainable waste management information system, and present the Ministry, County Governments, and other relevant state agencies with reports from this information system. The authority is also mandated to conduct civic education and sensitization on matters sustainable waste management in Kenya.

The Act acknowledges the devolved function of waste management passed on to county governments. It mandates them to set up waste management infrastructure in their counties through set-up of landfills, dumping sites, and most importantly collection centres for recyclable materials.[37] They are also mandated to ensure their waste management by-laws are consistent with the Act, regulate local waste services providers, share local waste management data with NEMA and to budget for waste management and collection activities[38]. County governments are also mandated to create waste management plans every five years and present them in front of the County Assemblies.[39] They bear the responsibility of oversight of waste collection, sorting and disposal. Additionally, they are mandated to ensure waste management plans are included in urban expansion plans for towns, settlements, and cities[40].

Extended producer responsibility is introduced into the Kenyan environmental law framework in section 13 of the Act, which casts EPR obligations on all producers of goods. The definition of producer is the same strategic broad definition, encompassing manufacturers, vendors, importers, and distributors.

Private sector entities are also given duties under the Act. The duties imposed on private sector entities in section 19 of the Act are congruent with EPR and Design for Environment philosophy. These entities are mandated to submit three-year waste management plans to NEMA which outline measures the entity shall take to sustainably manage waste produced because of their business operations. The entity shall then submit annual monitoring reports

[37] Section 9, The Sustainable Waste Management Act 2022 (Act No 31 of 2022).
[38] Section 9, The Sustainable Waste Management Act 2022 (Act No 31 of 2022).
[39] Section 9, The Sustainable Waste Management Act 2022 (Act No 31 of 2022).
[40] Section 17, The Sustainable Waste Management Act 2022 ((Act No 31 of 2022).

containing the quantity of waste generated by the entity, methods used to process this waste and any other necessary information NEMA would require.

The entities are also obligated to ensure their businesses are environmentally friendly through a variety of activities. These include improving production processes to be more efficient to minimise waste generated, ensure responsible disposal of hazardous materials generated during production, incorporating environmental concerns into their design and production processes, reclaiming and recycling products they have sold, responsible disposal of waste generated among many others.

Segregation of waste is also a key concept introduced by the Act. It is defined as the sorting of waste in a manner that facilitates safe disposal of hazardous materials, recycling, reuse, and overall easier waste management, and referenced severally. A duty to segregate waste before disposal is imposed on all persons who generate waste.[41] Waste service providers are also mandated to facilitate segregation of waste by disposers. County governments are mandated to facilitate processing of segregated waste by establishing materials recovery facilities.

2.3 The international legal framework

2.3.1 The Stockholm Declaration

The Stockholm Declaration was the product of the 1972 United Nations Conference on Human Development, the first major international conference convened to address rising concerns on the consequences of human development and activity on the environment.

In the 7th paragraph of its preamble, it stated that,

"To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by institutions and enterprises and institutions at every level, all sharing equitably in common efforts."[42]

In her work, **From Stockholm to Johannesburg: From Corporate Responsibility to Corporate Accountability for the Global Protection of the Environment,** Elisa Morgera highlights that this is the only mention of corporate responsibility in environmental issues in this declaration, as they were viewed as constituents of society who did not bear an

[41] Section 20, The Sustainable Waste Management Act 2022 (Act No 31 of 2022).
[42] Preamble, UN *Declaration on the Human Environment,* 16 June 1972.

extraordinary responsibility to contribute to environmental protection, and states were not willing to initiate any oversight of private sector activities at the time.[43] [44]

In reference to management of pollution, Principle 21 of the Declaration puts in place an obligation of state parties to prevent and remedy environmental damage domestically. This was intended to encourage more environmental regulation by governments.[45]

2.3.2 The Rio Declaration

The United Nations Conference on Environment and Development of 1992 dubbed the Earth Summit continued from the deliberations of the Stockholm Conference in 1972. The outcome document of the Earth Summit was the Rio Declaration of 1992. This was an instrument outlining key environmental law principles that would form the foundation of international environmental law. The Rio Declaration affirmed the place of the polluter pays principle among the principles of international environmental law. This is a foundational principle in EPR listed as one of the General Principles in the Kenyan environmental law legal framework, highlighted in both the Environmental Management and Coordination Act and the Sustainable Waste Management Act.[46] [47]This is the basis of the financial obligation that companies have to assist in disposal of products they manufacture as introducers of these products in the market. Agenda 21 was an implementation plan of the discussions in the summit. The document outlined global goals for Sustainable Development in relation to the environment and dedicated an entire chapter to discussing the role of business and industry. Paragraph 30.1 acknowledged the role private business needed to play for the successful implementation of Agenda 21.[48] Paragraph 30.2 stated that "through more efficient production processes, cleaner production technologies and procedures throughout the production lifecycle, hence minimizing or avoiding wastes, corporations can play a major role in reducing the impacts on resource use and on the

[43]Morgera E, 'From Stockholm to Johannesburg: From Corporate Responsibility to Corporate Accountability for the Global Protection of the Environment'*, Review of European, Comparative & International Environmental Law,* 13, 2, 2004, 216.

[44] Her mainly paper discusses Multi-National Corporations and the broader concept of holding these companies accountable in respect of their business practices, decision making and how they source, create, and deliver services and products. EPR in contrast is viewed as mainly a waste management concept and does not apply to decision making and investment practices.

[45]United Nations*, Report of the United Nations Conference on the Human Environment*, 1972, UN A/CONF.48/Rev.1, 5.

[46] Section 4, *Sustainable Waste Management Act* (Act No 31 of 2022).

[47] Section 2, *Environmental Management and Coordination Act* (Act No 25 of 2015).

[48] United Nations, *Report of the United Nations conference on environment and development*, 1992, UN A/CONF.151/26 (Vol. I), 398.

environment."[49] These are foundational ideas found that constitute the concept of Design For Environment. This paragraph noted that one of the best ways that the private sector can contribute to environmental management is DfE, by modelling their production processes with environmental considerations. Paragraph 30.3 referred to the utility of product stewardship programmes, and companies undertaking environmental audits and monitoring environmental compliance.

Chapter 30 enthusiastically advocated self-regulation and free-market mechanisms for promoting private business accountability.[50] It shied away from advocating for compulsory approaches to compliance to environmental obligations enforced by governments, and advocated for a policy framework that was more facilitative.[51]

2.3.3 The World Summit in Sustainable Development (WSSSD) Political Declaration

Morgera noted that in the World Summit on Sustainable Development, held in Johannesburg in the year 2002, the concept of corporate accountability began to be used widely in negotiations, and civil society and the EU expressed support for more direct pronouncements on the role of private business in the end-product of the Summit.[52] Morgera draws a distinction between corporate responsibility and corporate accountability. She states that corporate responsibility is a moral obligation to go above society. Corporate accountability on the other hand involves expanding the categorisation of stakeholders of corporate organizations to spread beyond the shareholders.[53] The surrounding society, government and consumers guide the conduct of corporates. It is considered a more coercive concept than corporate responsibility, by letting the rest of society hold the company to task as it should justify its actions and measures to ensure its activities are environmentally friendly. The WSSD Political Declaration, an outcome of the Johannesburg Conference, in paragraph 29 stated that there was a need for the private sector to adopt corporate accountability in fulfilling its duty to contribute to sustainable development and protecting the environment.[54]

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[49] United Nations, *Report of the United Nations conference on environment and development,* 398.
[50] United Nations, *Report of the United Nations conference on environment and development,* 399.
[51] United Nations, *Report of the United Nations conference on environment and development,* 399.
[52] Morgera E, '*From Stockholm to Johannesburg'*, 218.
[53] Morgera E, '*From Stockholm to Johannesburg'*, 220.
[54] United Nations, Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002, A/CONF.199/20, 4.

2.3.4 The Report on the United Nations Conference on Sustainable Development 2012

This conference was a follow-up of the Johannesburg Conference. "The future we want", the outcome document of the UNCSD was placed as an annex of the Conference Report.

The tone of the Report, while still calling for corporate accountability in managing the environment, shied away from explicitly declaring that nations had agreed to adopt mandatory environmental accountability measures for the private sector and more specifically in respect to waste management. [55]

Under the Section of the Report addressing Chemicals and Waste, Extended Producer Responsibility was first mentioned. Paragraph 218 stated that the Member States recognised the importance of a life-cycle approach to waste management and committed to promoting the 3R approach to reduce resource wastage, and to make national policy and regulation to this end.[56] This paragraph singled out plastics as one of the materials of concern in this paragraph. In paragraph 220 it went on to mention EPR as one of the scientific approaches that Member States were to encourage.

Paragraph 135 of the Report under the section addressing Sustainable Cities and Human Settlements also stated support for the 3R Approach to waste management in urban areas, Reduce, Reuse and Recycle in improving quality of life in urban environments.[57]

The outcome of this Conference illustrated that EPR had gained popularity and support in important environmental forums, but the community of countries was slow to lay out elaborate regulatory measures to be adopted by member states to introduce EPR as part of national waste management frameworks, or to elaborate on duties of corporate bodies and private business in terms of waste management.

2.3.5 The Agenda 2030 for Sustainable Development (2015)

Agenda 2030 is an ambitious plan passed a UN Resolution passed by the Seventieth Session of the General Assembly. It contains various milestones for sustainable development worldwide that the General Assembly set to be achieved globally by the year 2030. Under actions in pursuit of SDG 12, 'Ensure sustainable consumption and production patterns', the

[55] United Nations, *Report on the United Nations Conference on Sustainable Development,* 2012, *A*/CONF.216/16, 43.
[56] United Nations, *Report on the United Nations Conference on Sustainable Development,* 43.
[57] United Nations, *Report on the United Nations Conference on Sustainable Development,* 26-27.

agenda committed to promoting the 3R to reduce global waste quantities.[58] While a commitment to slash food waste by half by the year 2030 was set, there was no commitment set regarding plastic waste.

2.3.6 Stockholm Convention on Persistent Organic Pollutants (POPs)

This treaty was put in place to address persistent organic pollutants that pose a risk to the long-term health of humans, animal, and plant life due to their prolonged life cycle and slow degradation which give them the potential to contaminate water, land, or air for long periods of time. Many of the pollutants listed in the Annexes are either plastic polymers or used in plastic production.[59]

The treaty identifies reduction of stockpiles and wastes, research into alternatives, source elimination, reduction of wastes and prohibitions on trade in the POPs as key activities to their eventual full elimination. In article 3 under measures for the reduction of these materials, the Convention provides that nations must form national regulatory frameworks for these substances.

The Convention mentions the private sector as having the potential to assist in handling these substances in its preamble. It does not acknowledge the private sector as the fundamental producers of these substances or according to them any responsibilities or duties to address their role in manufacturing, distributing, and trading in products made from these substances.[60]

2.3.7 The Zero Draft Plastics Treaty

The United Nations Environmental Assembly passed Resolution 5/14 and mandated the Director General of UNEP to convene an intergovernmental negotiating committee for an international legal instrument to tackle plastic pollution with a mandate expiring at the end of the year 2024.[61] As of the completion of this dissertation, the Treaty was still at the negotiating stage.

A key preparatory document released by the negotiating committee before the release of the zero draft was Plastics Pollution Science, UNEP/PP/INC.1/7. The document is fundamentally

[58] UNGA, Transforming our world: the 2030 Agenda for Sustainable Development, UN A/Res/70/1, 22.
[59] Annexes A, B and C, *Stockholm Convention on Persistent Organic Pollutants,* 22 May 2001, 2256 UNTS 119.
[60] Preamble, *Stockholm Convention on Persistent Organic Pollutants,* 22 May 2001, 2256 UNTS 119.
[61] UNEP, *UNEA Resolution 5/14 entitled "End plastic pollution: Towards an international legally binding instrument"*, UNEP/PP/OEWG/1/INF/1, 5.

a report summarizing the most pressing information from scientific research on the plastics pollution crisis. Many major issues are discussed in this document.

Firstly, the document discusses the risks posed by plastics waste. Evidence is presented on the danger posed by polymers, dyes and additive chemicals used in plastic products that pose risks to human health. Of the 10,000 unique chemicals used in plastics production, 25% pose a risk to human health.[62] The production of plastics made from fossil fuel feedstock is also a major contributor to carbon emissions, contributing to 3.4% of global emissions.[63] There is also scientific information presented on the leakages of macro plastics and microplastics.[64]

The document calls attention to global trends in plastics production and consumption. Globally there are rapid estimated increases in amount of plastic waste being produced if current trends persist. Plastics production may triple by the year 2060.[65]

The document points out that products packaging is the largest generator of plastic waste globally.[66] Consumer products made of plastics only account for less than 12% of the waste produced.[67] This increases greatly the scope of companies and producers that require to be supervised, contrary to a narrow focus on producers of consumer products that contain plastic, based on assumptions that they generate the most plastic waste.

The document advocates for a life-cycle approach to plastic waste management.[68] Upstream activities comprise of sourcing of materials used to produce plastics. Measures that can be employed in this phase is elimination of use of hazardous materials and transition away from fossil fuel feedstocks. Midstream activities comprise of design and production, distribution, and consumption. Measures to employ here are DfE and encouragement of reuse of products through take-back schemes. Downstream activities involve waste collection for purposes of recycling or responsible final disposal.

The document gives four strategic goals for tackling plastic pollution, all firmly centred in creating a circular economy for plastics. The first goal is the elimination and substitution of problematic and unnecessary plastic wastes. This is to be achieved by mandating efficient production measures that reduce the generation of plastic wastes, removal of use of problematic

[62] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 5.
[63] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 9.
[64] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 7.
[65] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 4.
[66] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 6.
[67] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 6.
[68] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 12.

wastes in production processes, and behavioural measures to motivate a change in consumer preferences.[69]

The second goal is ensuring that plastic products are designed to be circular. This is heavily emphasised, with EPR compliance programs and take-back schemes additionally mentioned under the strategic goals, and proposed measures in Appendix III of the document.[70] Under this goal, creation of substitutes and alternatives, removal of chemicals that may contaminate new products if recycled, creation of compostable plastics and creation of bioplastics are strongly emphasized. The need for international standards is acknowledged, as the negotiating committee notes that most products are not designed where they are produced. Thus, international production standards will assist countries that import these products to comply.[71] Production of products that can be reused and have a long-life span is also raised, as short-lived plastics make up of 66% of plastics produced, fuelling more consumption and poor disposal.[72]

The third goal is closing the loop of plastics in the economy by ensuring that plastic products are circulated in practice- this is by monitoring midstream activities in the plastics life cycle such as maintenance for reuse and recycling.

The fourth and final goal is managing plastic waste that cannot be reused or recycled in an environmentally sound manner- this is by monitoring disposal of plastic wastes that cannot be reused and recycled and need final disposal in responsible ways.

The wellbeing of labourers in informal waste management is raised as a pertinent issue. The figure of informal waste workers is estimated at millions globally. There wellbeing is raised as being extremely important.[73] Authorities worldwide should take action to enable these workers to receive adequate compensation and address their occupational safety as they work in landfills and other polluted environments.

Furthermore, the document underscores the need for creative and scientifically informed policy and legislative tools are recommended with a variety of recommendations including eco-modulated fees for EPR schemes. This means that fees paid by a producer in EPR scheme must be consistent with their environmental impact and waste disposal contribution and practices. Under Appendix IV, where recommended actions in implementing the four goals are, it is

[69] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 14.
[70] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 21.
[71] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 4.
[72] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 5.
[73] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 3.

elaborated that from 395 studies on EPR schemes, policies that target specific product characteristics such as weight and recyclability provide the most incentive for DfE changes. This is an illustration that, regulation on product design must be direct and elaborate to encourage DfE compliance.

Article 1 of the Zero Draft of the Treaty sets an obligation on member states to reduce the environmental impact of production of plastics.[74] In the options presented to the member states by the Intergovernmental Negotiating committee, there are also proposals for reduction of the amount of primary polymers and feedstocks produced globally. The setting of national targets for reduction of production of these polymers is also proposed. This Article poses potential future obligations on the Kenyan government to enforce stricter regulation on plastics production. Producers of plastics, particularly manufacturers, will have a massive role to play in compliance with these international obligations. The national targets for reduction of production will probably be reflected in targets set for EPR compliance schemes to meet.

Article 2 of the Zero Draft discusses polymers and chemicals used in production of plastics of concern to human and environmental wellbeing. It proposes the prohibition and elimination of polymers and chemicals of concern as guided by annex A of the zero draft. One of the less stringent options proposes regulation of these substances. Once the Treaty is assented to, the Kenyan government will have to introduce regulations for regulations of these substances of concern. This can be reflected in the EPR Product Guidelines for plastics.

Article 3 addresses problematic and avoidable plastic products which include short-lived and single-use plastic products. Article 5 of the Treaty states that each party shall take measures to regulate the design and performance of plastic products to increase their lifespan, recyclability, and environmental safety. Fulfilment of both obligations will require the State to facilitate the setting of environmentally friendly production and design standards.

Article 7 places an obligation on each state party to establish EPR systems. This Article upon assent will establish EPR in international environmental law as a global policy approach.

Part IV of the zero draft places obligations on states to develop and implement national plans in compliance with the obligations in the treaty. The 3rd article under Part IV places reporting obligations on member states. The 7th Article under this Part places obligations on member

[74] UNEP, *Zero draft text of the international legally binding instrument on plastic pollution, including in the marine environment,* UNEP/PP/INC.3/4.

states to promote awareness, education, and research into safe production of plastics and plastic pollution.

In summary, a review of the treaty shows that first, the State will have to implement many regulations on product design and production that place direct obligations on member states. The Kenyan regulations will have to conform to these obligations. Formation of plastic guidelines, a recommendation of this study, will be an inevitable obligation upon assent of this Treaty. Kenya should pre-empt this obligation.

Secondly, the State will have many new international law obligations that will require funding. Producers, through EPR compliance schemes can help the State in meeting these obligations, by facilitating public education and research either through contributing to funding of these obligations or conducting these programmes as individuals or through their PROs.

2.4 Conclusion

This chapter's review of environmental law declarations and prospective international legislation around plastic pollution and EPR has shown that in the last decade, consensus for political action by the Member States of the UN has built to a critical point, and the next decade might see the introduction of new far-reaching international on waste management, EPR and plastics pollution. However, a review of the options presented in the Zero Draft of the Plastics Treaty shows that negotiators have been presented with both far reaching impactful options and compromise options and options for Members who want less impactful regulations. It is unfortunate that the latter situation is a possible outcome in the face of the risk posed to the health of billions and the wellbeing of our environment by plastics pollution. Political will, especially in some developed and industrialising countries, and choices they make during the final determination process, will have a massive impact on the strength of action we can adopt globally against plastics pollution. As Kenya drafts its national EPR Regulations and Guidelines, relevant authorities should utilise up-to-date information and research available globally to make sure our new laws are as informed and impactful as possible, even if the final agreed version of the treaties may be underwhelming in comparison to the options available.

From this chapter's analysis the most promising global approaches that are currently being advocated for adoption first include prioritising circular economy solutions. The second promising approach is paying attention to POPs and chemicals and polymers that risk human and environmental health. A lot of scientific evidence speaking to the danger that plastics pose has come to the light, and there is evident concern from experts and many members of the

global community. The final approach is the rise in corporate accountability as an idea globally has advanced albeit at a snail's pace. The regulatory recommendations in the Plastics Treaty present the most far-reaching and impactful obligations on private businesses, particularly producers, in relation to waste management in the history of international environmental law.

Kenya's introduction of the SWMA was step in the right direction to conform our waste management framework with new approaches to waste management. However, it is evident that in the face of new scientific information provided by environmental experts, and prospective new obligations and developments in international law as regards plastic pollution and EPR, the country has a lot to improve on. Fortunately, deliberations such as those of the intergovernmental negotiating committee of the Plastic Treaty provide very good resources and guidance to Kenyan authorities on changes the authorities can adopt.

Chapter 3: A Review of The Sustainable Waste Management (Extended Producer Responsibility) Draft Regulations

3.1 Introduction

This chapter will be divided into two sections. The first section will outline the salient features of the Draft Regulations. The second section will elaborate on five inadequacies of the regulations identified by this study; lack of provisions on regulation of imported goods, lack of mandatory requirements for production and design, lack of provision on Micro Small and Medium Enterprises, monitoring and evaluation of compliance schemes, and the welfare of waste management workers.

3.2 The salient features of the Draft Regulations

This review shall discuss the draft regulations as of March 2024. It shall focus on three salient features of these Regulations.

The first feature is the new EPR obligations to be borne by producers, which are outlined in section 6 of the Regulations. The second feature is the rules guiding formation and running of Producer Responsibility Organisations as collective compliance schemes to EPR. The third feature to discuss are the roles and responsibilities assigned to the Ministry, NEMA and County Governments in facilitating and monitoring compliance with EPR obligations.

Section 3 of the Act sets out the purposes of the Regulations. Two of these purposes are the establishment of an overarching framework for establishment and operation of mandatory EPR schemes, and the operationalisation of the polluter pays principle. Section 5 sets the scope of products covered in the regulations. It states that they shall apply to; products listed in the First Schedule of the Regulations, products that have a negative effect on the health and environment, products that have a high management cost for post consumption management due to the quantities involved, their hazardous nature or the risk involved, and products that pose a challenge to reuse, recycle or recoverability post-consumption.

Products listed in the First Schedule include electrical and electronic equipment, products and product packaging made from material such as plastics, paper, and aluminium, end of life motor vehicles, automotives and planes and packaging for hazardous products such as fertilisers, pesticides, chemicals, oils, and lubricants.

Section 6 outlines the new EPR obligations assigned to all producers.[75] The first one is designing their products and packaging material in an environmentally friendly manner that minimises waste of materials used, using secondary or recycled materials if available, and facilitates recycling or reuse of the products. They are obligated to provide deposit refund schemes and take back schemes to incentive reuse of materials, like many of the schemes currently operated by beverage producers.

They are also obligated to take financial, organisational, and physical responsibility for the management, treatment and disposal of waste generated from their products. This is followed by the obligation for producers to self-report their quantities of recycled or handled waste using a reporting mechanism to be established by NEMA.[76]

The self-reporting mechanism however is not contained in the schedules of the Regulations, or outlined further in section 20, which speaks to government obligations in implementing EPR. The Regulations additionally do not outline how NEMA will verify the self-reported quantities of recycled or handled waste.

The second salient feature is the presence of Producer Responsibility Organisations as Collective Compliance schemes. Producers are given the options of setting up individual compliance schemes or collective compliance schemes through formation of producer responsibility organisations (PROs) with other producers in the same product category.[77] Multiple PROs are authorised for each product category.

To be registered, compliance schemes must submit a four-year EPR plan to NEMA indicating their plans for safe handling, processing, and disposal of 100% of the equivalent volume of the products produced, their plan to meet national targets, an annual reporting mechanism, a model for financing the scheme, among other requirements outlined in section 16.

These producer responsibility organisations are given the mandate of being the management and administrative overheads of the Extended Producer Responsibility system created within the PRO[78]. The Regulations state that these PROs shall be funded by fees paid out by members, and shall form their own structures for dispute resolution, enforcement of breach of obligations agreed upon in the articles of association of the individual PRO, among many others.

[75] Section 6, Draft Sustainable Waste Management (Extended Producer Responsibility) Regulations 2022.
[76] Section 20, Draft Sustainable Waste Management (Extended Producer Responsibility) Regulations 2022.
[77] Section 16, Draft Sustainable Waste Management (Extended Producer Responsibility) Regulations 2022.
[78] Section 20, Draft Sustainable Waste Management (Extended Producer Responsibility) Regulations 2022.

One of the obligations given to PROs is that they will provide guidance on eco-design standards of their products and recycler friendly packaging. This allows for industry cooperation within the PROs.

Finally, the last salient feature to be reviewed in this section is the role assigned to the Ministry of Environment, County Government and NEMA in the draft regulations.
Section 20 (6) gives the Ministry obligations such as licencing compliance schemes, monitoring these schemes and setting national targets and procedures for waste management in accordance with EPR in different product categories, and public sensitization, among others. It is also mandated to create additional frameworks for EPR. Section 20 (7) outlines NEMA's obligations. It is intended to provide direct oversight of the EPR compliance schemes, and support implementation of EPR through public through public sensitization and public consultations. It is also mandated to give periodic reports on EPR targets, update products under list of products covered by EPR, and overall evaluation of EPR schemes by producers.

Section 20(8) of the Regulations reflect the roles assigned to county governments in the Sustainable Waste Management Act. Counties have the primary responsibility of physical management of waste. The obligations given in this subsection are to facilitate compliance schemes to fulfil their EPR obligations and setting up waste processing facilities among other responsibilities.

This provision acknowledges that if producers intend to institute recycling or takeback programs, they will need to collaborate with the county government and waste service providers. These players already collect physical waste and in the case of the county government, are mandated in the Sustainable Waste Management Act to construct facilities for sorting of waste such as collection centres. Without their assistance, these producers will have to allocate resources and hire professionals in waste management to gain expertise, skill sets and resources. The cost of these initiatives will potentially be passed down onto the customer, increasing the cost of products. Producers should collaborate with these two groups on the further end of the chain in waste management and focus their expertise on the other phases of waste management. Initiatives such as agreeing on financial contributions to the county government and waste service providers to facilitate physical management of waste can be employed in implementation of the regulations.

3.3 Inadequacies of the draft regulations

The final section of this chapter shall discuss inadequacies identified in this study's review of the draft regulations. These inadequacies cover that may limit the capability of application of EPR in our regulatory regime to efficiently introduce EPR as an approach to tackle plastic pollution.

3.3.1 Lack of provisions on regulation of imported goods

Kenya is a developing nation with a market of fifty million consumers but a limited manufacturing capacity. To cover this deficit of locally produced goods, Kenya imports substantial amounts of goods. For plastics, according to the UN COMTRADE database on international trade, Kenya's imports of Plastics and Articles as of 2022 were valued at US$971.88 Million[79]. Very many consumer goods in Kenya are imported, including plastic products, composite products made from plastics and various other materials such as office chairs. A significant percentage of this is also plastic packaging for foods and many other goods. According to data from 2021, top exporters of these goods into our countries are China, Saudi Arabia, India, and the UAE[80].

This complicates enforcement of EPR obligations. Section 6 of the Draft regulations includes DfE obligations for product design and manufacturing requirements. The regulations do not provide for how producers who introduce imported goods with plastics into the Kenyan market, be it distributors, traders, or multinational corporations, will comply with these DfE requirements. Assessment of the upstream activities in the product life cycle such as sourcing of raw materials will also be more complex compared to their counterparts who are local manufacturers. Instituting take-back schemes and recycling schemes will also be more complex. A more elaborate set of rules for importers will need to be crafted to ensure that the products they introduce to the market are as environmentally friendly as possible. Standards relating to raw material sourcing, design, and production for imported plastic goods will have to be created. This also leads to the next shortfall identified in the Act.

3.3.2 Lack of mandatory requirements for production and design

The regulations lack any provisions that discuss the establishment of additional Product Guidelines for the various materials listed in the First Schedule. Electronic waste, hazardous

[79] Kenya Imports of Plastics and articles - 2024 Data 2025 Forecast 1992-2022 Historical (tradingeconomics.com)
[80] Kenya Plastic or Rubber Imports by country 2021 | WITS Data (worldbank.org)

materials, paper, and plastics are just a few of the materials that comprise of the waste produced by the Kenyan populations. The effects of their production on the environment and human health, the effects of their disposal on the environment and human health, measures that can be taken by their producers in compliance with EPR and waste management procedures are unique. Thus, additional guidelines are required as supplements to the EPR regulations. An illustration of this is a comparison of plastic waste and paper waste. Improper disposal of plastic waste poses a larger health hazard than the disposal of paper waste, as paper is biodegradable.

In the European Union, this approach is evident as the Waste Framework Directive was introduced in 2008 to formally introduce EPR into the EU waste management legal and regulatory framework, and was followed by directives on End-use vehicles, electronic waste and most recently single-use plastics which contained mandatory EPR requirements for each of these product classes in the EU. These directives shall be discussed more in the subsequent chapter.

We possess scientific data on the risk posed by plastics on the environment, and animal and human health. Kenya is also a signatory to the Stockholm Convention on POPs, many of which are plastic polymers and chemicals used in plastics production.[81] With scientific research, the annex to the Stockholm Convention continues to expand. In pursuit of EPR, our plastic products guidelines should contain a list of prohibited plastic polymers and chemicals used in production. These guidelines should also include reference to plastic polymers and chemicals used in production of plastics that are of concern to human and environmental well-being. Elimination of the substances of the most concern, and strict regulation on the production and disposal of some of these substances must also be included in the EPR plastics guidelines. Scientific information and legal categorisation of these substances, similar to annex A of the Zero Draft Plastic Treaty, must be introduced in the EPR plastics guidelines.[82]

Additionally, to motivate recycling of plastic products, mandatory requirements for plastic products are needed as plastics made with a mixture of materials or certain chemicals cannot be recycled.[83] There are many mandatory product requirements that if implemented will have

[81] Annexes A, B and C, *Stockholm Convention on Persistent Organic Pollutants,* 22 May 2001, 2256 UNTS 119.
[82] UNEP, *Zero draft text of the international legally binding instrument on plastic pollution, including in the marine environment,* UNEP/PP/INC.3/4, 29.
[83] Sarah Deweerdt, 'Why It's so Hard to Recycle' Why It's So Hard to Recycle Plastic | Scientific American, on 13 December, 2022.

a great impact on the environmental safety of plastic products and our plastic waste management by facilitating recycling and other safe waste management techniques.

The draft regulations seem to indicate that the government in implementation of EPR initially intends to adopt a voluntary regulatory approach, by letting producers and manufacturers deliberate and decide industry production standards. The Kenyan government should instead adopt a more command-based approach particularly in implementation of industry DfE design and production standards. Regardless, enforcing compliance with EPR through mandatory requirements, specifically where the government has all the evidence and prerogative to do so such as in the scenarios mentioned above, is best. Waiting for voluntary compliance from private businesses will stall the nation's pace of implementation of EPR in plastic waste management. This was illustrated in the difficulty faced by the EU to reduce plastic packaging waste, and the measures implemented in its 2019 Plastics Directive to address this.[84]

3.3.3 Lack of consideration of Micro Small and Medium Enterprises (MSMEs)

According to USAID, Kenya has an estimated 1.5 million formally registered MSMEs and over five million unregistered MSMEs[85]. Many are local vendors in shops and in their local communities. They are a significant percentage of producers according to the regulation's definition, such as vendors, distributors and manufacturers of goods that use plastic packaging. They account for the bulk of producers and private businesses in rural areas. Additionally, many of these MSMEs, particularly vendors and distributors, do not make the bulk of the profits in the product supply chains. With the recent economic instability experienced in the nation, MSMEs struggle to sustain their businesses. Many owners and employees of MSMEs have varying amounts of literacy. Compared to large producers such as transnational corporations and multi-million-shilling profit-making manufacturers, MSMEs will find it difficult to get legal advice on compliance, change their production and manufacturing methods, or procure the expertise in waste management to open compliance schemes. Many MSMEs will struggle to meet EPR obligations.

The regulations should be amended to provide for sensitisation, capacity building and facilitation of MSMEs by NEMA, the Ministry of. Environment, county governments and other authorities. Each producer's financial contribution for fees for collective and individual

[84] Pouikli K, *'Concretising the role of extended producer responsibility,'* 501.
[85] USAID, Small Business Development Centers | Kenya | U.S. Agency for International Development (usaid.gov), on April 3 2023.

compliance schemes should be determined by considering the socio-economic status of a producer. The financial obligations for compliance schemes set out in section 6 of the draft regulations must be looked at do determine how MSMEs will meet this obligation, and how national government and county governments through their budgetary allocations for environment and waste management will assist MSMEs.

Local authorities such as county governments will also have to step up and meet their obligations of proper waste collection and disposal, and ensuring these services are available throughout their jurisdictions. This includes in rural areas, informal urban settlements, and many urban areas where waste management by local authorities has been very problematic. The assistance of local authorities to reach small vendors and manufacturers will be vital to the progress of EPR compliance.

Protections to also prevent anti-competitive behaviour in PROs should be introduced. This way, MSMEs will not be left behind or neglected in achievement of compliance with EPR. This will broaden the impact of EPR to the smallest parts of the economy.

3.3.4 Monitoring and evaluation of compliance schemes

The provisions on monitoring and evaluation mechanisms by the Ministry and NEMA such as Section 20(7) of the regulations merely state that these mechanisms shall be created by the relevant authorities. They state that compliance schemes shall undergo annual audits without setting out the format or specific metrics to be audited. They set no date or requirement as to when these monitoring and evaluation systems shall be created or published. These monitoring and evaluation systems should be released in a reasonable time after the Regulation comes into action. This before their annual or periodical assessments by the relevant authorities. This would better facilitate compliance by producers.

3.3.5 The welfare of waste management workers

The UN Intergovernmental Negotiation Committee on the Plastics Treaty in its report titled Plastics Pollution Science noted that one million people globally worldwide work in waste management.[86] The report notes that it is important to acknowledge the role they play in plastic waste management, and that their occupational safety and welfare should be addressed. The EPR Regulations should contain provisions discussing the welfare of the workers who

[86] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 9.

currently collect plastic waste, dispose of it, among other duties and tasks. Ensuring the occupational safety, remuneration and welfare of workers in the waste management industry should also be acknowledged as an EPR activity that producers should address and support financially in tandem with other their new obligations in waste management.

Currently, the waste management sector in Kenya is largely composed of informal workers, with no regulatory standards for their remuneration, occupational safety, working terms and conditions, and numerous other labour entitlements. Introduction of EPR poses an opportunity for the formalisation of this sector, with the additional financial support of producers.

3.4 Conclusion

The Draft EPR Regulations have a lot of potential in changing both industrial policy, environmental management, and overall quality of life of Kenyan citizens, particularly those in informal urban settlements who live in areas affected by the worst levels of pollution in Kenya. However, to be implemented in an effective manner in Kenya that combats the negative environmental effects of human consumption and onboards the country's diverse groupings of producers, the regulations must be amended. There are many measures that are necessary to remedy the inadequacies of the Regulations mentioned prior and solve for new problems that may arise in the future with EPR implementation and a rapidly changing economy and society. A command-based approach particularly in relation to mandatory product requirements should be adopted to address the pertinent plastic pollution crises in Kenya and prevent further harm to the environment.

Engagement of producers in implementation of EPR is still a necessity. The new obligations introduced upon implementation of the regulations will require massive changes to industrial production with the potential of disruption of commercial activities, heavy expenditure and potential to incur heavy fines for breach of the new obligations. The government will have to engage and guide producers, particularly MSMEs, in their transition to more environmentally conscious operation, and fulfilment of many new roles such as waste management. Failure to engage producers will resort in partial integration of EPR into our national waste management legal framework. Producers should also be sensitized and incentivised to recognise EPR and the circular economy as the future of human industrial activity and commerce.

Chapter 4: A comparative analysis of the Integration and Implementation of EPR in the European Union Plastics Waste Management Regulatory Framework

4.1 Introduction

In this chapter we shall review the integration of EPR into the European Union waste management legal and regulatory framework and assess information and literature from experts and scholars on the efficacy of the implemented regulations. We shall finally draw recommendations for what measures we can undertake to successfully integrate and implement EPR into our waste management legal and regulatory framework and what shortfalls to avoid.

4.2 Review of the EPR Legal and regulatory framework in the European Union

EPR was primarily integrated into the European waste management framework through the Waste Framework Directive introduced in 2008. Directive 96/62/EC on packaging and packaging waste is said to be the first implemented EPR program in the union, which did not expressly mention EPR as a guiding concept. It however mandated producers to institute take back programs for packaging in a bid to reduce the amount of waste produced. It was put in place to prompt EU nations to transition to the Circular Economy. The Circular Economy is one of the key EU economic principles and illustrates how EU policy prioritises both human and environmental wellbeing and economic efficiency and competitiveness of European markets.

Other Directives that integrate EPR include Directive 2000/53/EC on end-of-life vehicles, Directive 2006/66 on batteries and accumulators, and Directive 2012/19/EC on Waste Electric and Electronic Equipment. In this subsequent section we shall look at EU Directives and regulations discussing EPR and plastics waste management.

4.2.1 The Waste Framework Directive 2008

The Waste Framework Directive sets out principles and measures for waste management to be applied by all EU member states. These principles and measures are mandated to establish national waste management frameworks that prioritise the protection of human and environmental health from the negative effects of improper waste disposal, promote sustainable use of resources and champion the Circular Economy. This directive also introduced Extended Producer Responsibility into the EU legal framework.

Its 3rd Article gives definitions of many key terms in waste management, including the definition of producer responsibility schemes. [87]

In its 4th Article it sets out a waste hierarchy that sets out the legal and policy priorities for waste management for EU states.[88]

The hierarchy is prevention, preparing for re-use, recycling, other recovery (e.g. recovery of energy expended in production) and finally, disposal.

The 8th Article of the Directive introduces EPR into the European waste management framework. The wording of the article and its provisions uses the word 'may' which communicates that states are not forcefully mandated to apply the measures listed but given a margin of appreciation to determine how and when they shall integrate EPR into their national regulatory frameworks. Paragraph 2 of article 8 starts by defining a producer as anyone who is involved in the design, manufacturing, or trade of a product, and outlining EPR activities that states can introduce through legislative or non-legislative means.[89]

Paragraph to of Article 8 also allows states to institute measures that prompt producers to design, manufacture and market products in a manner that reduces their environmental impact, and that makes these goods, reusable, recyclable or repairable, contributing to the transition to a circular economy.

Article 8a and sub-article 8(5) were introduced in an amendment of the Directive by the Directive 2018/851.

Article 8a introduces new enhanced measures Member States can introduce into their EPR schemes, including minimum general requirements for EPR schemes established by member states.[90]

8a (1) introduces the general minimum requirements to be put into place in EPR schemes.[91] They include instructing that member States shall define the roles and responsibilities of all actors in an EPR scheme. Additionally, there must be targets for waste reduction, sorting processing, and recycling among other activities in the waste management process for each

[87] Article 3, *Directive 2008/98/EC of the European Parliament and of the Council Of 19 November 2008 On waste and repealing certain directives, 2018.*
[88] Article 4, *Directive 2008/98/EC.*
[89] Article 8, *Directive 2008/98/EC.*
[90] Article 8a, *Directive 2008/98/EC.*
[91] Article 8a, *Directive 2008/98/EC.*

product class. There is a subsequent requirement that the schemes must not discriminate against origin and size of products at the risk of negatively affecting smaller producers. There is another requirement that there must be a national reporting system for all data collected from products introduced into the market and the EPR done in member states.

8a (2) states that Member States shall facilitate producers in EPR compliance by providing and maintaining waste management facilities and putting in place incentives to encourage EPR compliance. 8a (3) sets a different tone as it uses the word 'shall' to give mandatory requirements for Member States to employ against producers engaging in EPR, such as financial requirements e.g. monitoring the financial sustainability, and organisation of the EPR schemes.

8a (4) elaborates on the duty of the Member states to ensure that the financial contributions are adequate for processing of waste and paid in accordance with a producer's total goods introduced into the market, DfE standards applied on products and deposits unclaimed under deposit take-back schemes.

Sub article 8(5) and article 8a (5) state that the European Union Commission shall provide for exchange and aggregation of data between nations on general minimum requirements for EPR schemes set in 8a to track and assess the implementation of EPR across EU states.[92] 8a (5) furthermore provides for producers to appoint legal representatives and agents to undertake EPR obligations for EPR activities such as giving contributions to a scheme or initiating take back schemes if the producer does not operate in that territory or state.

Article 14 on Costs for fulfilment of the Directive reiterates the polluter-pays principle and states that producers may bear costs for infrastructure and services provided for waste management. Article 15 also reiterates that responsibility for waste management may be borne by the producers of the products.

4.2.2 The EU Plastics Directive 2019/904

This Directive was introduced to address single-use plastic products, which account for 77% of global plastics production. [93] The Preamble of this Directive, making a case for the Directive, addressed the ubiquity of single-use plastics in modern human life, while acknowledging the

[92]Article 8, *Directive 2008/98/EC.*
[93] UNEP, *Plastics Pollution Science*, UNEP/PP/INC.1/7, 6.

considerable harm it has caused, particularly in terms of marine pollution.[94] The substantive provisions of this Directive go on to put in place a variety of compulsory measures addressing single-use plastics.

Article 4 of the Directive mandates States to take necessary measures including setting reduction targets for producers, and marketing restrictions to reduce the consumption of a class of products that have been placed in the Directive's Part A o the Annex.[95] The recommendation of marketing restrictions is a big change in tone by the European Union, contrasted to that used in the Waste Directive. The word 'shall' is used, in contrast to 'may'. Article 6 puts in place product requirements for a class of products that includes beverage bottles, which mandates changes in design to ensure plastic caps and lids are designed to stay on during the use stage of the products.[96] The Commission is then mandated to request European standardisation organisations to develop harmonised standard relating to the prior named product requirement. These are mandatory DfE requirements, intended to be standardised.[97]

Article 7 then goes on to mandate marking requirements for single use plastic products listed in Part D of the Annex.[98] These markings shall inform consumers of the appropriate means of disposing of these products, or procedures to avoid while disposing of the product. This is both a marketing and behavioural measure. They shall also inform consumers of the negative impacts of littering these products. In the second paragraph of the article, the Commission is once again mandated to establish harmonised specifications for these markings.

Article 8 addresses EPR for single-use plastics.[99] Member states are mandated to ensure Extended Producer Responsibility schemes are established for single-use plastics, in accordance with Articles 8 and 8a of the Waste Framework Directive.[100] The second paragraph states that Member states shall ensure that producers cover the cost for measures relating to raising awareness of the harmful effects of littering, and for measures intended to clean up litter, collect data on the litter produced, and for the operation and infrastructure of public waste collection systems used to collect waste from producers.

[94] Preamble*, Directive (EU) 2019/904 of the European Parliament and of the Council on the reduction of the impact of certain plastic products on the environment*, 2019.
[95] Article 4*, EU Directive 2019/904*.
[96] Article 6*, EU Directive 2019/904*.
[97] Article 6*, EU Directive 2019/904*.
[98] Article 7*, EU Directive 2019/904*.
[99] Article 8*, EU Directive 2019/904*.
[100] Article 8*, EU Directive 2008/98/EC*.

Paragraphs 5 and 6 mirror Article 8a of the WFD. Paragraph 5 mandates states to define the roles and responsibilities of actors in the schemes and paragraph 6 allows producers to elect representatives to meet their obligations in a territory they do not have operations in.

These mandatory requirements introduced in this Directive indicate that European states have decided that they cannot wait for producers of single-use plastics to voluntarily design their products for the environment or adopt DfE in their design and manufacturing. This illustrates the urgency with which European states have begun to treat plastic pollution. The Directive also contains substantive targets for percentages of recycled materials in single-use plastic products in Article 6 (5).[101]

4.3 Assessment of the efficiency of EPR regulations and schemes in the European Union

Under this section we shall look at reports on the progress of implementation of EPR into the European Union waste management framework, and listing out the successes of EPR implementation, shortfalls of the European efforts and the recommendations for improvement since the Waste Framework Directive was introduced in 2008.

4.3.1 Progress of implementation

Kleoniki Pouikli in her paper, **'Concretising the role of extended producer responsibility in European Union waste law and policy through the lens of the circular economy'**, undertook a review of EPR schemes in Europe. [102]

She additionally pointed out certain key features in EPR schemes established in Europe.

1. The prevalence of Collective Compliance Schemes

She noted that many producers opted for Collective Compliance schemes. While this enabled them to combine resources and made compliance with EPR obligations easier, it brought about some challenges. 'Averaging out of costs', where the collective contributions make the financial implication of poor product design bearable, as a producer could simply pay to have it collected, disincentivised eco-design, particularly for packaging of goods. Some PROs also began to engage in anti-competitive conduct by colluding, unjustly pricing contributions for membership, and other activities.[103]

[101] Article 6*, EU Directive 2019/904*.
[102] Pouikli K, *'Concretising the role of extended producer responsibility',*
[103] Pouikli K, *'Concretising the role of extended producer responsibility',*

2. Types of responsibility

In some schemes producers bore full financial or operational responsibility for waste management, or full responsibility for both aspects of responsibility. In others, producers are given partial responsibilities to support public efforts in waste management. This depends on a variety of circumstances such as the incomes of the producer, etc.[104]

4.3.2 Positive impacts of EPR implementation in the EU

Under the advantages of implementing EPR schemes in Europe, she highlighted first the easing of public budgetary strain through contributions by producers to meet the costs of waste management. She also noted that EPR motivated eco-design for very many product categories.

It created a market for secondary materials, saving on the amount of virgin materials consumed. This reduced the environmental burden of European consumption on a regional and global level, and salvaged value from waste that would otherwise be disposed of carelessly. It additionally created collection schemes for many waste streams that would have previously ended in disposal, by prompting producers to undertake take back schemes and participate in collecting and processing waste. This vastly enhances the local and national systems for waste management. The landfill rate reduced from 23% to 16% between 2010 and 2020.[105]

Finally, it promoted technological and organisational progress across the board in Europe, from the private sector to the public waste management bodies.

4.3.3 Shortfalls of EPR implementation in the EU

However, there are some shortfalls identified in the EU implementation of EPR by Pouikli.

The first shortfall she identified is the flexibility allowed to Member States in the use of 'may' in article 8 of the WFD resulted in states applying EPR in a very heterogeneous manner. Obligations and requirements for EPR schemes vary across different European jurisdictions. Fortunately, the 2018 Directive introduced general minimum requirements for all EPR schemes, initiating a process of standardisation, with additional product requirements introduced for single-use plastics in the EU Plastics Directive 2019/04.

The second shortfall she identified is the inadequacy of control and monitoring mechanisms for compliance schemes. Many EU member states implemented flexible EPR regulations, leading to abuse of this leniency by producers in EPR schemes. These producers are accused

[104] Pouikli K, *'Concretising the role of extended producer responsibility'*, 499.
[105] European Environmental Agency, Diversion of waste from landfill in Europe (europa.eu). on 22 Jan 2024.

of repeatedly underreporting the amount of products produced, waste collected, sorted, and recycled, among other useful metrics. The Balearic Island's government conducted an independent study verifying figures of waste generated from packaging and found that the Spanish PRO Ecoembes had underreported on volumes of waste placed on the market by producers.[106] The Plastics Directive sought to remedy this by putting in place a requirement in Article 8a mandating states to implement control and monitoring schemes as a general minimum requirement for EPR schemes.

The third shortfall is the absence or fragmentation of data regarding cost coverage. There is an absence of data on cost coverage and other related data such as division of cost among producers in collective schemes, shares paid by individual producers, formulae used to determine contributions, and amount contributed to specific activities. This makes it difficult for governments and producers to assess the true costs of conducting EPR activities and consequently, negotiating partial financial responsibility agreements for the financial aspect of waste management.

Another key shortfall she identified is the limited impact of EPR schemes on DfE or eco-design for specific products. The EU is currently struggling with minimal impact of EPR on volumes of packaging waste. Pouikli attributes this to averaging of costs for waste collection, where producers feel content in meeting EPR obligations by just contributing to the collective schemes to facilitate collection of waste, ignoring Design for Environment for products, leading to slow progress in innovation and reduction of volumes of waste produced.

Additionally, compliance schemes find it difficult to accurately determine which costs should be paid by producers to meet recycling targets. This is because costs for waste-collecting, sorting, and recycling are paid as one total contribution in compliance schemes. This complicates subsequent allocations for these respective activities and achievement of recycling targets.[107]

Furthermore, there is lack of compliance and poor enforcement in collective schemes. Product-led EPRs have difficulties in enforcing obligations amongst producers for failing to contribute, free-riding, and breach of other obligations without government intervention. The Plastics Directive addresses this by introducing mandatory product requirements and calling for product

[106] Maggiore M, Rico M, Peigne, Investigate Europe, Producers wield power over plastic pollution | Investigate Europe (investigate-europe.eu) on 28 April 2023.
[107] Pouikli K, *'Concretising the role of extended producer responsibility',* 501.

standardisation without waiting for producers to choose to act or introduce these obligations. In Articles 5 and 6.

Pouikli also refers to complaints about anti-competitive conduct by producers. Article 8a remedies this by introducing provisions mandating member states to monitor discrimination against producers within collective schemes by virtue of their economic contribution or volume of products produced.

Finally, there was misuse of PROs as lobbying organisations by producers to slow regulatory measures they consider disadvantageous to them- in the EU three PROs are reported to spend up to 900,000 euros annually, equivalent to 140,697,000 Ksh annually on lobbying efforts. Two of them also published a position paper attempting to advocate for weaker enforcement of the Plastics Directive.

4.3.4 Recommendations for improvement of EPR schemes in Europe

The WFD amendment in 2018 and the Plastics Directive in 2019 introduced many changes to the EPR framework in the EU, with the Plastics Directive on single-use plastics heralding a more command-based approach to EPR regulations in the EU. These include;

Poukili recommended the following measures to continue improving EPR regulation in the EU. Her first recommendation was the introduction of eco-modulated fees. The fees charged in EPR schemes could be adjusted by taking into consideration certain factors such as the amount of recycled materials in a product, and DfE or eco-design specifications, to incentivize producers to undertake more of these activities.[108]

Her second recommendation is the separate collection and recycling fees. This is in reference to the issue outlined earlier, to make operations of EPR scheme activities more efficient.[109]

Her final recommendation was increased oversight and monitoring of these EPR schemes with a particular emphasis on preventing and introducing sanctions for collusion, provision of false data, breach of obligations and discrimination of smaller producers.

4.4 Recommendations Kenya can adopt from the European Union

First, Kenya can introduce elaborate general minimum requirements for EPR schemes. Secondly, she can introduce provisions for eco-modulation of fees paid in compliance schemes, to give an economic incentive for eco-design. As seen in Europe, particularly in relation to

[108] Pouikli K, *'Concretising the role of extended producer responsibility',*505.
[109] Pouikli K, *'Concretising the role of extended producer responsibility',* 505.

packaging waste, ordinary compliance schemes did not motivate a change in compliance schemes.

Thirdly, she can introduce mandatory product requirements and formulate standardised manufacturing procedures, to fast-track elimination of single use plastic waste. This will be a welcome follow-up to our ban on single-use carrier bags. Additionally, she introduces provisions in her regulation to combat anti-competitive behaviour, particularly in PROs, and to facilitate small traders, manufacturers and other small entities that might be sidelined. This is particularly in product classes where the market is dominated large corporate players.

4. 5 Conclusion

EPR regulations in the EU have been in place for more than two decades, and EPR has been integrated as a core part of their waste management legal and regulatory framework. The core objectives at the heart of their commitment to EPR is pursuit of improved human and environmental health and promoting resourcefulness, innovation, and competitiveness in the EU market.

While a sense of unwillingness to introduce firm regulations and a voluntary approach was taken, the EU seems to sense the continued harmful effects of increased pollution and is now introducing more mandatory and firm regulations.

Chapter 5: Conclusion of this study

This final chapter shall give final recommendations drawn from this study on the five issues outlined in my third chapter. The recommendations comprise of policy recommendations for NEMA, the Ministry of Environment and the county governments to undertake in implementation of EPR, and recommendations for the amendment of the Draft EPR Regulations, and additional Guidelines under these draft Regulations. These recommendations are drawn from the literature review in the first chapter, and the review of the potential new international obligations Kenya shall have upon adoption of the Plastics Treaty. They were also drawn from the comparative analysis of the EU's approach to implementation of EPR and how the Union has amended and adapted their EPR directives, particularly in relation to Plastics, with the 2019 Plastics Directive. They were also drawn from the challenges identified in their implementation of EPR.

5.1 Introduction of mandatory requirements for production and design of goods.

As noted in Chapter 4, the EU first introduced a Directive introducing EPR into the community's waste management legal and regulatory framework, and then issued subsequent directives for specific product classes. This is a very effective approach of implementing EPR; introducing regulations setting out the principles of EPR and the overarching framework, and then moving to specific product classes.

A voluntary approach to EPR, particularly in relation to plastics, ignores the urgency of the plastic problem Kenya is currently faced with. In relation to problematic plastics with short-life spans, and chemicals and polymers used in plastic production that are of concern to environmental and human health and well-being, it is apparent that plastic products that fit in these two classes need regulation, and their current negative impact on the environment is apparent. Mandatory requirements to ensure plastic products are made more durable and requirements to regulate chemicals and polymers of concern should be introduced.

The EU 2019 Plastics Directive is a benchmark for introduction of mandatory product requirements. Introduction of EPR Plastics Guidelines as a supplement to the EPR Regulations are a key recommendation arising from this study.

5.2 Introduction of eco-modulation of fees to give producers a financial incentive to be EPR-compliant by lowering the fees they will be required to provide in their compliance schemes.

A circular economy approach to EPR is key, as it is not only focused on waste management, but how financial savings can be generated from sustainable resource use and recycling them, therefore preventing the loss of their value. This will involve emphasis on recycling and reduction of use of plastics in production processes. This will also tap into EPR's ability to motivate economic change and innovation, and perhaps motivate authorities and industry to prioritize EPR even more.

The life cycle approach to production and waste management is also a more comprehensive approach to dividing and monitoring the environmental impact of products, looking at possible interventions and measures producers can adopt and organising EPR activities. The current draft regulations place and policy approach places an emphasis on waste collection and disposal in the midstream and downstream phases of a product's lifecycle, which narrows the possibilities of how EPR can be implemented. Incentivising DfE, research and development of biodegradable plastics, and producing products that are more durable and reusable are also very important and effective EPR activities with a positive impact on the environment and human health.

Eco-modulation of costs and fees for compliance schemes to incentivise DfE will be a very efficient economic incentive to motivate DfE. This is a recommendation presented by Pouikli, as a solution to the problem of slow progress in DfE activities by producers in minimising plastic packaging waste in the EU.[110]

5.3 Solutions to encouraging EPR-compliance among producers of imported goods.

First, Kenya can lobby for international production standards for imported goods to be placed. Institutions such as the International Standards Organisation can be engaged on the international level to assist in creation of universal industry and production standards relating to EPR and plastics.

Prior to that, the more immediate solution is to ensure producers of imported plastic goods are EPR-compliant. This could be through two approaches. The first is by increasing imports of plastic goods from jurisdictions that have some form of EPR regulation such as European

[110] Pouikli K, *'Concretising the role of extended producer responsibility',*505.

nations. It can also begin bilateral discussions with these jurisdictions to incentivise trade with these regions. This may however cause an increase in prices for these plastic goods from such jurisdictions.

The second approach would be to engage in bilateral discussions with our current major trade partners in imported plastic such as China and the UAE to incentivise their producers to undertake EPR obligations by introducing these obligations into their domestic laws. This way, products from these partners will begin to become EPR-compliant.

This will also ensure the transition to EPR-compliant production and design guidelines will not lead to major disruptions in the production and supply of plastic goods in the Kenyan market and will financially cushion Kenyan consumers in contrast to the first solution.

The implementation of EPR in today's globalised economy has potential to become an issue in the realm of international trade law. It might provoke international litigation for discrimination of goods from certain markets, which is beyond the scope of this paper, but still a very important issue that can be covered by a different study.

The Plastic Treaty may assist in the cause of international standardisation upon its adoption globally, by introducing specific product guidelines that shall apply globally.

5.4 Facilitation of Micro Small and Medium Enterprises (MSMEs).

In implementation of EPR, the Ministry of Environment and NEMA should introduce measures to assist MSMEs in compliance with the new EPR obligations. This includes introduction of provisions in the Regulations obligating NEMA, the Ministry of Environment and County governments to assist MSMEs in implementation of EPR. This could be by introduction of differentiated obligations based on the socio-economic classification of a producer, education and facilitation programmes for MSMEs on what EPR is, among other measures. Considering that Kenya has an estimated 1.5 million formally registered MSMEs and over five million unregistered MSMEs, their inclusion of implementation of EPR in Kenya is vital to its success and impact.[111]

5.4 Monitoring and evaluation of compliance schemes.

[111] USAID, Small Business Development Centers | Kenya | U.S. Agency for International Development (usaid.gov), on April 3 2023.

The Ministry of Environment and NEMA should develop comprehensive systems to monitor compliance with EPR. The audit, monitoring, and evaluation mechanisms for EPR should be modelled to include measures to tackle false self-reporting by producers and enable the government to realistically assess the impact of EPR nationally. These assessments will guide the approach the government will take in subsequent years in implementation of EPR, and any subsequent amendments and additions to the EPR regulations.

5.5 Addressing the welfare of waste management workers.

Currently, the waste management sector in Kenya is largely composed of informal workers, with no regulatory standards for their remuneration, occupational safety, working terms and conditions, and numerous other labour entitlements. Introduction of EPR poses an opportunity for the formalisation of this sector, with the additional financial support of producers.

The EPR Regulations should contain provisions discussing the welfare of the workers who currently collect plastic waste, dispose of it, among other duties and tasks. Ensuring the occupational safety, remuneration and welfare of workers in the waste management industry should also be acknowledged as an EPR activity that producers should address and support financially in tandem with other their new obligations in waste management.

Conclusion

EPR has massive potential in helping Kenya tackle land, air and water pollution if implemented effectively. It must also be noted that merely crafting good regulations fails to tackle the pollution problem. Proper implementation of policy and administrative action is required.

The intersection of EPR and other areas of the law, such as devolution law, will also be necessary to create by-laws and efficiently implement EPR into our waste management framework. The intersection of environmental law and industrial policy in EPR is also a new field with a lot of potential to formulate solutions to combat the Triple Planetary Crisis.

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