An Implementation Analysis of Zambia's Extended Producer Responsibility Regulations: Insights and Recommendations

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Key messages

- In 2018, the Zambia Environmental Management Agency (ZEMA) enacted the Extended Producer Responsibility (EPR) regulations through Statutory Instrument (SI) No. 65, representing a positive step towards improved resource management.
- However, the EPR remains largely unimplemented and so the objectives of the regulations have not been achieved. This Policy Brief assesses the implementation of the EPR using an existing implementation framework to identify key challenges based on primary data collection and document review.
- The assessment identified a variety of factors that ultimately hindered the sound implementation of the regulation. In particular, the policy contains key gaps regarding definitions and critical processes, resulting in confusion and non-implementation.
- The findings lead to several interconnected recommendations. Firstly, the SI should be revised to provide clarity on a variety of points, including related to roles and responsibilities of different actors and technical definitions. Secondly, the EPR should be better aligned with the wider policy framework for policy coherence and consistency. Thirdly, the roles of non-governmental stakeholders should be carefully considered, including from the private and informal sectors, to ensure policy relevance and inclusivity. Finally, sufficient financial support is required for policy implementation.

Informal waste management site, Kitwe, Zambia

Background

Managing growing volumes of waste is a global sustainability issue that is particularly acute in Low- and Middle-Income Countries (LMICs) [1]. Zambia is facing an increasingly challenging waste management landscape [2]. For instance, waste volumes are rising due to demographic shifts and economic development, whilst waste compositions are becoming more heterogenous and complex, linked to a shift towards more imported and packaged goods [1]. Moreover, waste collection and management infrastructure is limited, and scaled-recycling activities are sparse [1, 3]. For Zambia, sound waste management is important to help improve public health and support environmental protection. Proactive management also presents an opportunity to create new industries and value addition through Circular Economy approaches that embrace *reduce, reuse,* and *recycling principles* [1, 2].

The formation of robust policies provides an important foundation to meet economic, social, and environmental goals, including sustainable waste and resource management. Nonetheless, policy formation must be followed by sound implementation to ensure that policies achieve their full objectives [4]. In Zambia, there have been positive developments in the resources policy framework. Notably, in 2018, an updated waste law (the Solid Waste Regulations and Management Act No. 20 of 2018) was enacted. That same year, the Environmental Management (Extended Producer Responsibility) Regulations (hereafter, 'EPR') were established through Statutory Instrument No 65. These EPR regulations are the focus of this policy brief.

The EPR is regulated through the Zambia Environmental Management Agency (ZEMA); its introduction represented an important shift in how waste is managed in the country. The regulation established requirements for producers to take responsibility for certain packaging materials or products, ranging from plastic bags to electronic equipment, across the product lifecycle. This essentially means producers should be involved with waste recovery and recycling activities to internalise the impacts of their business activities. There are two approaches laid out in the regulation: prohibition of the manufacture, trade, and commercial distribution of domestically produced and imported plastic carriers and flat bags for use in the country below 30 microns in thickness; and promulgation of measures that must be taken in respect of a specified product or class of products, as well as the category of target stakeholders required to take responsibility for those measures. Despite the EPR being viewed as a positive development by stakeholders, there are concerns it has so far failed to produce widespread changes due to implementation gaps [1–3].

This Policy Brief provides insights from a study that evaluated the implementation progress of the EPR through primary and secondary sources. The Brief discusses some of the challenges with the implementation of Zambia's EPR so far, and it provides recommendations to strengthen the regulation, and its implementation, for the future.

Methodology

The research presented here was conducted in 2025 and examined stakeholder views on the implementation of Zambia's EPR. It involved the following methods:

- **Document review:** A review of the EPR regulations and wider waste management literature, as well as supporting grey literature was conducted. This enabled analysis of key documents to provide insights into the developments of the regulatory framework.
- **Key informant consultations:** Nine in-depth interviews (sometimes with multiple participants) were carried out with Zambia-based stakeholders. The participants included representation from Government,

the private sector, an industry association, and development partners. An additional stakeholder organisation chose to submit a written response rather than participate in a formal interview.

The analysis was guided by existing research conducted on implementation gaps in LMICs published under the Climate Compatible Growth programme [4]. This research, through a literature review approach, had identified five overarching common causes of environmental policy implementation gaps in LMICs, namely:

- **Policy content** encompassing challenges relating to its clarity, comprehensiveness, relevance, and alignment with the wider policy framework.
- **Institutional arrangements and interactions** encompassing issues of institutional clarity, process effectiveness, and institutional coordination and collaboration.
- **Resource availability** including relating to financial, human, equipment, and data and information needs.
- **Engagement of non-governmental actors** in the policy process, including non-governmental organisations, the private sector, development partners, and informal institutions.
- **Political interests and dynamics** encompassing issues of commitment, corruption, and clientelism, and power differentials within government.

After the interviews were transcribed (or notes summarised when applicable), the data was analysed using this implementation framework as a guide to classify the challenges faced relating Zambia's EPR implementation.

Findings

Overall, the primary data insights widely acknowledged that sound resource management is an important goal for Zambia to reduce the challenges of managing growing waste burdens. Therefore, the enactment of the EPR regulations was viewed as a positive development in Zambia's waste and resource policy landscape. The interview discussions were mostly focused on the plastic packaging aspect of the policy, particularly for the food and beverage sector, although other interviewees also acknowledged that the regulations cover 14 products and packaging materials, including growing waste streams such as from electronics.

The interviews revealed that one of the key changes since the EPR's enactment was that large chain retailers, such as supermarkets (eg ShopRite), now charge customers for shopping bags, which links to a provision of the regulations that requires elimination of plastic bags that do not meet specifications. Other large-scale manufacturers have also adapted their materials approach and altered their procurement strategies to align with the EPR's goals (eg Coca Cola, Nestlé, Trade Kings). However, more transformative aspects of the policy, such as the requirement to set up or contribute to waste minimisation programmes and the establishment of a dedicated fund to support recycling activities, have not yet been executed. For example, a Government participant summarised *"it is there sitting on the paper, it is not operational"*. Participants discussed some exceptions, however, which include Zambian Breweries' Manja Pamodzi programme that was voluntarily set up in 2015 – essentially as a Producer Responsibility Organisation (PRO) – in anticipation of the regulations and is widely recognised as a leading initiative [3, 5].

Aside from some best practice examples from large retailers, the interviews revealed a general sentiment that changes have so far been modest, and that a range of implementation challenges have hindered achievement of the EPR's full potential.

Insights into the factors affecting implementation

Guided by the implementation framework [4], the findings on Zambia's EPR regulation were then examined in line with five identified implementation gaps. Notably, policy content challenges appeared especially prevalent, whilst topics relating to political interests and dynamics were discussed less during the interviews. The five themes are discussed in greater detail in the following sub-sections.

***Table 1:** Themes based on previously published framework [4] of common factors impacting implementation (first column) in LMICs applied to the Zambia EPR (second column).*

Implementation Gap Theme	Issues identified within Zambia's EPR implementation
Policy Content	▪ Details missing – including relating to definitions, targets, incentives – reducing the clarity and comprehensiveness of the policy. ▪ Few guidelines to guide key actors (eg retailers, waste managers, etc). ▪ Limited alignment of EPR with the wider policy framework (eg Solid Waste Regulation and Management Act).
Institutional Clarity and Processes	▪ Confusion over ownership of the EPR regulations as waste is a cross-cutting challenge. ▪ Processes relating to the EPR were slow and not always effective – including consultation, reviews, etc – leading to inaction and stakeholder disengagement.
Resource Availability	▪ Funds have not been made available within government, or to those impacted by the policy, to support activities required under the EPR. ▪ Limited expertise available to support implementation.
Engagement of Non-Governmental Actors	▪ Communication with key implementing stakeholders (eg manufacturers, retailers) is not always effective. ▪ Civil society, NGOs, and informal sector actors could have been more involved at different phases of the policy process.
Political Interests and Dynamics	▪ Concerns that government institutions were not fully committed to the policy.

Policy content

The existing EPR regulation (SI No.65 of 2018) was deemed to have major content gaps, especially relating to a lack of clear definitions and guidelines for its operationalisation. This meant its content was open to interpretation as there was ambiguity regarding who was impacted by the policy, and how they should respond. The role of other actors, including the informal sector, was overlooked despite their major, yet unofficial, involvement in the country's waste system. Critical parts of the EPR policy, such as setting up waste minimisation programmes and funds, were mentioned without adequate detail or guidelines.

The regulation does not outline any incentives for producers to implement requirements outlined in the law. In the same vein, the regulation stated that fines would be issued for non-compliance, but some stakeholders believed these were poorly communicated and lacked enforcement in practice. Additionally, compliance, monitoring, and evaluation activities were not defined and no timelines or targets were established. All these issues mean the regulations were not enforceable in practice.

There were contrasting views amongst interviewees about whether the EPR was well-aligned with the existing policy framework, including the Solid Waste Regulations and Management Act. The linkages between the two policies were suggested to be somewhat unclear, perhaps linked to institutional overlap as further discussed below.

Institutional clarity and processes

The findings point to concerns that there was some confusion over institutional ownership of the EPR in the context of wider waste policies. For example, there may be some institutional overlap and a lack of clarity regarding the mandates and roles of different institutions affected by the EPR. Although the regulation was formed by ZEMA – which sits in the Ministry of Green Economy and Environment ('MGEE'), other institutional buy-in is also needed during implementation (eg Lusaka Integrated Solid Waste Management Company, Zambia Development Agency, etc). Notably, there have been ongoing discussions regarding waste mandates between ZEMA and the local authorities; for instance, in the words of one private sector participant: *"there is always this push and pull between ZEMA and the local government…"*. Such issues relating to institutional clarity have been identified previously with regards to the wider waste policy framework, so it represents a reoccurring challenge that requires clarification [1, 2].

Institutional processes, including executing key tasks (eg setting up the EPR fund, issuing penalties for non-compliance), were reported to be unimplemented or delayed due to bureaucracy or other challenges (eg see resource constraints). For instance, the process for developing the regulations in the first place was overlong – a participant claimed it took nearly ten years. The length of such processes, whilst it may be necessary to ensure consultation and follow legal due process, was highlighted as a possible cause of wider stakeholder disengagement in the EPR. For example, those involved in the initial consultations may have switched positions or left the consulted organisation, whilst others have become disengaged over time.

Resource availability

Interviews indicated that there may be insufficient resources allocated to implementing institutions to execute the policy – including financial resources and human capacity. For example, a private sector interviewee explained that *"there's still quite a gap between the technical skills or expertise that are needed to effectively manage EPR"*. In addition, the implementing agency, ZEMA, only has six offices nationwide, meaning it does not have oversight capacity across the country. This constraint was believed to be why there is a focus on the compliance of larger retailers, meaning oversight of smaller players is extremely limited. Another participant expressed concerns around the financial capacity of ZEMA, and its ability to execute the policy. Thus, costs to monitor and enforce the EPR should be matched with corresponding budget allocations. There were also concerns that the companies targeted by the regulations also face resource constraints. Smaller companies may lack the financial and technical resources for outlined activities, such as waste minimisation programmes, despite being legally required to comply with the regulation. However, a development partner participant claimed that if effectively implemented then "*the EPR can pay for itself*".

Engagement of non-governmental actors

According to official documentation and some interviewees, the EPR was formed through a consultative process that encompassed a wide range of policy, commercial, and non-governmental actors. However, some interviewees expressed concerns that consultation had not been wide enough. Overall, since the regulation's enactment, it was believed that there has been insufficient communication with stakeholders, including those that the policy was targeting such as producers and retailers. As such, this has resulted in confusion, non-compliance, and limited awareness of the policy. In particular, at the small and medium-sized enterprise-level, awareness of the policy's existence may be limited. In turn, this might explain inaction on the ground. Although a review of the EPR is understood to be underway, participants suggested that communication on this has been limited, leaving stakeholders with *"question marks on this process, regarding where it has reached, where is it going"* (development partner interview).

In addition, it was highlighted that the EPR is producer-focused, but there needs to be greater public awareness. The informal sector also requires inclusion to ensure the EPR is contextually relevant given its importance to Zambia's waste regime [1]. As highlighted earlier, some large companies have already demonstrated leadership in this area (eg Zambian Breweries' Manja Pamodzi PRO initiative).

Political interests and dynamics

This factor was only discussed in a few interviews. There were contrasting opinions on the political will to implement the policy: one interviewee highlighted that the enactment of the instrument signalled top-level political will whilst others raised concerns that commitment to the policy was limited, which hindered full implementation of the EPR. An interviewee suggested that ZEMA's engagement can be *"low"* and questioned their leadership on the topic as well as that of MGEE. The lack of targets or incentives in the policy content were suggested to indicate low commitment – such omissions require rectification with the formation of clear targets to signal that the *"ministry and mandated institutions take this seriously"* (development partner interview).

Conclusion and Policy Recommendations

This policy brief points to various implementation challenges that have hindered the success of Zambia's EPR, thus limiting its transformative potential. The findings reinforce previous calls for a revision of the regulations for two purposes: to provide greater clarity for producers and actors affected by the regulations and to enable proper implementation and enforcement to ensure the EPR's goals are realised [2]. Specifically, the following recommendations are offered based on the overall findings and interviewee suggestions:

- **Well-defined roles and responsibilities:** The EPR content needs revision to provide clearer definitions and guidelines on key issues, such as the roles of different actors and their obligations. Providing mechanisms for collaboration between different governmental and non-governmental actors would also facilitate improved communication and ultimately support efficient execution of key activities (eg formation, management, and expenditure of EPR Fund).
- **Clear guidelines for products and material categories:** The current EPR covers a wide range of products, product categories, and materials. Any guidelines should be product or material specific to reflect this complexity. For example, electronic waste encompasses different challenges and management needs compared with used plastic packaging, which should be better reflected in the guidelines.
- **Clear targets, incentives, and penalties:** Clear benchmarks and targets are required, as well as penalties for non-compliance, within

defined timeframes. This is important given the principle of EPR regulation is to provide incentives for manufacturers to design resource-efficient and low-impact products, as well as to ensure effective end-of-life collection, the environmentally sound treatment of collected products, and improved rates of reuse and recycling.

- **Policy coherence and harmony:** The EPR requires harmonisation with the broader policy framework. There is a need for consistency and coherence with other interlinked strategies and legislation that feed into or promote sound waste management and resource revalorisation (eg alignment with the Zambian Government's goal to transition away from single-use plastics, with an increase in excise duty on single-use plastics from 30% to 100% in 2026).
- **Stakeholder participation and awareness:** There is need for thorough consultations with stakeholders on the goals, objectives, costs, and benefits of implementing the EPR regulation. This also includes consulting local councils on their role with regards to operations. Stakeholder awareness across product value chains, from producer to consumer (including of the general public), will also be vital in enlisting support and cooperation.
- **Integration of the informal sector into the EPR:** Given the high involvement of informal waste sector workers in the current waste management approach, it is important that these actors are considered and integrated into the EPR strategy. For example, there are opportunities to strengthen the involvement of vulnerable communities through PROs as already exemplified by Zambian Breweries through their Manja Pamodzi initiative.
- **Resource Mobilisation:** Focused funding is required to support waste reduction, promote design for recycling, and provide funds for waste collection, sorting, and recycling. Producers may require financial support to implement the policy, linking back to the need for proper incentives for implementation. Public–Private Partnerships should be explored to support investment in innovation and development of the necessary infrastructure and skills for an inclusive circular economy.

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