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Closing the Implementation Gap: A Roadmap for Extended Producer Responsibility for Plastics in Sri Lanka through Lessons from the European Union

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***Abstract*— Extended Producer Responsibility (EPR) has emerged as an important regulatory approach for shifting responsibility for products and their post-consumer impacts towards producers. However, the rapid expansion of cross-border direct-to-consumer (D2C) e-commerce creates regulatory challenges for EPR systems that have traditionally relied on domestic manufacturers, importers and distributors as identifiable responsible actors. The article discusses whether Sri Lanka's EPR framework is sufficient to rule out the gaps in plastic products and packaging supplied directly to Sri Lankan consumers by foreign producers through distant online selling platforms. Particular attention is given to section 23QQ of the National Environmental Act, introduced by the National Environmental (Amendment) Act, No 15 of 2026, and to the potential regulatory difficulties arising where a foreign producer has no importer, distributor or authorised representative in Sri Lanka. The article adopts a comparative legal research methodology, examining relevant Sri Lankan legislation and policy against selected European Union (EU) approaches to producer responsibility, distance selling, packaging and online commerce. There is a regulatory gap concerning the attribution, registration, monitoring and enforcement of EPR obligations in cross-border D2C transactions. EU law provides a useful comparative reference because its regulatory framework expressly addresses distance selling and, under the Packaging and Packaging Waste Regulation (EU) 2025/40, extends regulatory attention to producers supplying packaging and packaged products through distance contracts and to online platforms facilitating such transactions. The article proposes a Sri Lankan framework based on recognition of foreign distance-selling producers, authorised local representation, digital EPR registration, online marketplace due diligence, traceability and coordination between environmental authorities and Customs. Consumer responsibility should operate as a complementary component of EPR rather than as a substitute for producer responsibility. The article argues that a legally defined and digitally traceable framework could strengthen accountability for plastics entering Sri Lanka through cross-border e-commerce and contribute to more effective post-consumer plastic management and circular-economy objectives.**

Keywords: Extended Producer Responsibility; Plastic Waste; E-commerce; Direct-to-Consumer Trade; Distance Selling; Circular Economy; Sri Lanka; European Union

I. INTRODUCTION

Plastic production and consumption have expanded substantially over recent decades, creating significant challenges for waste management and environmental governance. Global plastic production reached approximately 430 million tonnes in 2024, while Asian countries accounted for approximately 57.2 per cent of global production, with China alone contributing approximately 34.5 per cent[1]. The scale of production and consumption demonstrates the need for regulatory systems capable not only of controlling production and placing products on markets but also of addressing the environmental consequences arising after products are used.

Single-use plastics (SUPs), in particular, remain embedded in contemporary consumption patterns. Effective management therefore requires a combination of source separation, collection, recycling, consumer awareness, economic incentives and producer responsibility. Recent literature similarly emphasises the importance of integrating consumer behaviour into plastic-waste management and the transition towards a circular economy (Liu et al., 2025[2]).

Within this context, Extended Producer Responsibility (EPR**)** has become an important regulatory mechanism. EPR extends responsibility beyond the point of production or sale by requiring producers to assume financial, organisational or operational responsibility for products during their post-consumer stage. The underlying principle is that the economic actor responsible for placing a product on the market should contribute to managing the environmental consequences associated with that product.

However, conventional EPR systems have generally been developed around relatively identifiable supply chains. Domestic manufacturers, importers and distributors can ordinarily be identified, registered and subjected to regulatory requirements. The expansion of digital commerce complicates this model. A consumer in Sri Lanka may purchase a plastic product or a packaged product directly from a foreign producer through an online platform, with the product subsequently entering Sri Lanka without a conventional importer or distributor assuming responsibility for its post-consumer management.

This creates a specific legal and regulatory problem. The product is commercially supplied to a Sri Lankan consumer and ultimately becomes waste within Sri Lanka, but the foreign producer may have no physical establishment, registered representative or other clearly identifiable EPR actor within the jurisdiction. Consequently, a regulatory framework based primarily on domestic manufacturers and importers may fail to identify the actor responsible for financing, organising or reporting the relevant post-consumer obligations.

This issue has become particularly significant in light of Sri Lanka's emerging statutory framework for EPR. Section 23QQ of the National Environmental Act[3], introduced by the National Environmental (Amendment) Act, No 15 of 2026, provides a statutory foundation for producer responsibility[4]. Nevertheless, the provision, as considered in this article, does not expressly establish a comprehensive framework specifically addressing foreign producers supplying products directly to Sri Lankan consumers through distance-selling arrangements.

The central research question is therefore:

To what extent can Sri Lanka's emerging EPR framework address plastic products and packaging supplied directly to Sri Lankan consumers by foreign producers through cross-border e-commerce, and what regulatory mechanisms can be developed by drawing on relevant EU approaches?

The article adopts a comparative legal methodology. It examines Sri Lanka's emerging EPR framework and relevant national policy instruments and compares them with selected EU legal approaches concerning producer responsibility, distance selling, packaging and online commerce. The objective is not to reproduce the EU framework in Sri Lanka but to identify legal mechanisms that may be adapted to the Sri Lankan institutional and regulatory context.

The article proposes a regulatory roadmap based on five interconnected mechanisms: foreign distance-selling producer recognition, authorised local representation, digital EPR registration and traceability, online marketplace due diligence, and coordination between EPR regulation and Customs and market-access mechanisms.

II. SRI LANKA'S EMERGING EPR FRAMEWORK

Sri Lanka has progressively recognised the need to strengthen plastic-waste management through legislative and policy measures. The National Action Plan on Plastic Waste Management 2021–2030 provides a policy foundation for improving plastic-waste monitoring, collection, recycling and stakeholder participation [5].

The introduction of section 23QQ through the National Environmental (Amendment) Act, No 15 of 2026 represents an important development in the statutory recognition of EPR[4]. The provision establishes a legal foundation for assigning responsibility to producers in relation to products regulated under the environmental framework. The statutory concept of producer principally encompasses persons dealing with goods or products as manufacturers, importers, brand owners or otherwise in accordance with written law.[4]

This framework is significant because EPR requires responsibility to be connected with the placing of products on the market rather than exclusively with the physical generation of waste. In principle, the actor benefiting from placing a product on the market should contribute to managing the environmental consequences associated with that product. Nevertheless, the effectiveness of an EPR framework depends upon the ability to identify the relevant producer, determine the quantity of products placed on the market, collect the appropriate financial or organisational contribution, and monitor compliance.

These requirements become more difficult where the producer is established outside Sri Lanka.

The challenge is therefore not necessarily the absence of an EPR concept in Sri Lankan law. Rather, the emerging issue is whether the existing statutory framework provides sufficiently precise mechanisms for applying producer responsibility to new commercial arrangements created by digital commerce.

III. Cross-Border Direct-to-Consumer E-Commerce and the Regulatory Gap

Traditional supply chains generally provide a relatively clear chain of responsibility:

foreign manufacturer → Sri Lankan importer → distributor/retailer → consumer

In such a structure, the importer or another domestic economic operator can potentially be identified as the actor responsible for complying with national environmental requirements.

Cross-border D2C commerce can operate differently:

foreign producer → online platform → Sri Lankan consumer

In this model, the foreign producer may sell directly to the consumer without establishing a physical presence in Sri Lanka. The online platform may merely facilitate the transaction, while the consumer becomes the recipient of the product through an international delivery arrangement. The regulatory difficulty arises when the product eventually becomes plastic waste in Sri Lanka. If EPR obligations are imposed only on domestic manufacturers or importers, the regulatory framework may not clearly capture the foreign producer that deliberately supplied the product to the Sri Lankan market.

This creates at least four related problems;

First, there is an **identification problem**. The competent authority may have difficulty identifying the foreign producer responsible for the relevant product.

Second, there is a **registration problem**. A producer established outside Sri Lanka may not be required to register under the domestic EPR system unless legislation expressly extends that obligation to foreign distance sellers.

Third, there is an **enforcement problem**. Even where an obligation can theoretically be imposed on a foreign producer, enforcement may be difficult where the producer has no physical establishment or representative in Sri Lanka.

Fourth, there is a **free-riding problem**. Producers complying with EPR requirements may bear financial and organisational costs while foreign sellers supplying products outside the regulatory system may avoid equivalent obligations.

The geographical character of digital commerce therefore challenges a territorial model of producer responsibility. The relevant regulatory connection cannot necessarily depend exclusively on the physical location of the producer. Instead, a regulatory framework may need to consider whether a producer is commercially directing or deliberately supplying products to consumers within Sri Lanka. This approach would establish a more appropriate connection between the commercial activity and the environmental consequences arising within the destination jurisdiction.

IV. European Union Approaches to Producer Responsibility and Distance Selling

The EU provides a useful comparative reference because its environmental regulatory framework increasingly addresses the relationship between producer responsibility, cross-border trade and digital commerce.

Directive (EU) 2019/904 on the reduction of the impact of certain plastic products on the environment incorporates distance selling into the definition of producer[6]. Article 3(11) includes persons professionally manufacturing, filling, selling or importing specified products, irrespective of the selling technique used, including distance contracts. The provision also addresses persons established in a Member State or in a third country who professionally sell specified products directly to private households or other users in another Member State through distance contracts[6].

The importance of this approach lies in the regulatory connection between the producer's commercial activity and the market into which the product is supplied. Physical establishment in the destination jurisdiction is not necessarily the sole basis for identifying producer responsibility. This is particularly relevant to digital commerce. An online producer may be physically established outside the jurisdiction while intentionally supplying products to consumers located within that jurisdiction. For Sri Lanka, this suggests that a future EPR framework could define a foreign distance-selling

producer by reference to the deliberate supply of regulated products to consumers within Sri Lanka.

V. Packaging and Packaging Waste Regulation (EU) 2025/40

A further development is provided by Regulation (EU) 2025/40 on packaging and packaging waste (PPWR)[7]. The PPWR expressly recognises that the method of sale, including distance contracts, is relevant to identifying producers. Its definition of producer encompasses certain manufacturers, importers and distributors and addresses circumstances in which products or packaging are supplied directly to end users in another Member State, including from a third country. The PPWR is particularly significant for the present analysis because it does not treat digital commerce as merely a commercial issue separate from environmental regulation. Instead, it connects online and distance selling with producer responsibility and traceability.

The Regulation also addresses online platforms. Article 45 and related provisions require online platforms facilitating distance contracts involving producers to obtain information concerning producers' compliance with EPR requirements, including information relating to producer registration. The Regulation's recitals similarly recognise the risk of free-riding by producers selling through online marketplaces. The EU framework therefore illustrates a broader regulatory model in which responsibility can be distributed across the digital supply chain without transferring the fundamental responsibility for product-related environmental obligations entirely to consumers.

VI. Proposed Legal Roadmap for Sri Lanka

1. **Recognition of Foreign Distance-Selling Producers**
   Sri Lankan law should expressly recognise foreign producers who supply regulated plastic products, packaging, or packaged products directly to Sri Lankan consumers through e-commerce or distance contracts. The definition should establish a clear legal connection with the Sri Lankan market. However, mere accessibility of a foreign website in Sri Lanka should not be sufficient. Relevant indicators could include accepting Sri Lankan orders, offering delivery to Sri Lanka, targeted marketing, Sri Lankan pricing, or other evidence of an intention to supply the Sri Lankan market.
2. **Authorised Local Representative**
   Foreign distance-selling producers should be required to appoint a locally established authorised representative to undertake registration, reporting and other administrative EPR obligations. The representative's role should be distinguished from the foreign producer's ultimate EPR responsibility.
3. **National Digital EPR Registry**
   Establish a digital registry containing producer identity, country of establishment, authorised representative, product categories, quantities, EPR contributions, PRO membership, collection/recovery data and compliance status. This would improve traceability, monitoring and identification of free riders.
4. **Online Marketplace Due Diligence**
   Online marketplaces should verify whether relevant foreign producers are EPR-registered and properly represented in Sri Lanka. Obligations could be proportionate to the platform's size and transaction volume.
5. **Integration with Customs**
   EPR enforcement should be linked with Customs data and market-access controls. Customs information could assist in identifying regulated products and producers, verifying registration and detecting non-compliance, supported by digital information-sharing.
6. **Consumer Responsibility as a Complementary Obligation**
   Consumers should have responsibilities concerning proper use, source separation, storage and return of plastic products, while producer responsibility remains central because producers influence product design, packaging and market placement.
7. **Economic Instruments and Take-Back Systems**
   Deposit-refund and take-back mechanisms could encourage consumers to return plastic products. Collection could be organised through PROs, retailers, local authorities and collection operators rather than requiring physical return to foreign producers.
8. **Phased Implementation**
   A phased implementation strategy may therefore be appropriate for strengthening Sri Lanka's extended producer responsibility framework in relation to cross-border e-commerce. Phase I could focus on establishing the necessary statutory foundation by introducing clear legal definitions of *foreign distance-selling producers* and *authorised representatives*, thereby identifying the actors responsible for placing regulated plastic products on the Sri Lankan market. Phase II could establish a national digital EPR registry and introduce mandatory registration requirements for relevant producers, including foreign

producers supplying directly to Sri Lankan consumers. This would provide the authorities with a structured mechanism for identifying producers, monitoring their obligations and improving regulatory traceability. Phase III could progressively introduce due-diligence obligations for larger online marketplaces and establish appropriate data-sharing mechanisms between the relevant environmental authorities, marketplaces and Customs. Such arrangements could facilitate the identification of regulated products entering the Sri Lankan market and assist in detecting unregistered or non-compliant producers. Phase IV could further strengthen the system through digital traceability, compliance auditing, reporting requirements and enforcement mechanisms. This staged approach would enable the regulatory framework to develop progressively in accordance with Sri Lanka's institutional, technological and administrative capacity, while avoiding the creation of an immediate regulatory and administrative burden that may be disproportionate to available resources. It would also provide an opportunity to evaluate each stage, identify implementation difficulties and make necessary adjustments before proceeding to more complex enforcement mechanisms.

VII. CONCLUSION

The growth of cross-border D2C e-commerce challenges EPR systems that were primarily designed around domestic manufacturers, importers and distributors. In Sri Lanka, the emergence of a statutory EPR framework under section 23QQ of the National Environmental Act provides an important foundation for strengthening producer responsibility, but the framework requires further development to address the particular characteristics of cross-border digital commerce.

The central issue is the identification and enforcement of responsibility where a foreign producer supplies regulated plastic products or packaging directly to Sri Lankan consumers without establishing a conventional domestic supply-chain presence. The EU provides relevant comparative lessons. Its legal framework demonstrates that distance selling can be incorporated into producer-responsibility rules and that online platforms can play a role in improving producer traceability and reducing EPR free-riding. The Packaging and Packaging Waste Regulation (EU) 2025/40 is particularly significant because it expressly addresses distance contracts, third-country producers and online-platform responsibilities within the packaging regulatory framework. For Sri Lanka, the appropriate response would not be to replicate EU law in its entirety. Instead, a context-specific framework should be developed around five principal mechanisms: recognition of foreign distance-selling producers, mandatory authorised local representation where appropriate, digital EPR registration, online marketplace due diligence, and coordination between environmental authorities and Customs.

These mechanisms should be complemented by effective collection, take-back, recycling and consumer-information systems. Consumer responsibility should remain an important component of the overall system, but it should complement rather than displace producer responsibility. Ultimately, the effectiveness of EPR in the digital economy depends on whether legal responsibility can follow the product across changing commercial channels. A Sri Lankan framework capable of identifying foreign producers, connecting them with domestic regulatory mechanisms, tracing products through digital supply chains and assigning differentiated responsibilities to relevant actors would provide a stronger basis for addressing post-consumer plastic waste arising from cross-border e-commerce. Such an approach could strengthen regulatory accountability while supporting Sri Lanka's broader transition towards more effective plastic-waste management and a circular economy.

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