

EPR and Circular Economy Paper Series

Development of Waste Collection Channels in Extended Producer Responsibility (EPR)

Author: Pranshu Singhal, Expert for the SWITCH-Asia Policy Support Component; Contributor: Vindhya Kaushal

Introduction

Extended Producer Responsibility (EPR) has emerged as a transformative policy tool adopted by numerous countries to address the escalating challenges of waste management. At its core, EPR shifts the responsibility of managing a product's end-of-life from municipalities and taxpayers back to the producers and consumers. While EPR has shown promise in increasing waste collection and promoting recycling, its success largely depends on the development of efficient and scalable waste collection channels. Without these channels, the vision of a circular economy—where waste is reintegrated into the production cycle—remains unattainable.

The Current State of Waste Management

Traditionally, waste management has been approached as a means of mitigating the visible problem of littering and improper disposal. The primary goal has been to remove waste from urban and rural landscapes by transporting it to landfills, incinerators, or recycling facilities (or worse improper dumpsites and open burning). However, this approach fails to address the systemic issue of waste generation and its long-term environmental impact.

Unlike product distribution networks, which are designed to maximise convenience, efficiency, and profitability, waste collection systems remain underdeveloped or non-existent in many regions. Modern product distribution networks, both online and offline, are highly sophisticated, leveraging extensive marketing campaigns, branding efforts, and consumer engagement strategies. In contrast, the reverse logistics required for collecting and processing end-of-life products lack similar infrastructure and incentives. Without formalised channels to encourage the return of discarded products, waste management remains an afterthought, leaving municipal systems or informal scrap collectors to shoulder the burden.

The Disconnect Between Product Distribution and Waste Collection

The disparity between product distribution and waste collection is stark. Producers invest heavily in ensuring their products reach every corner of the market, including remote areas, yet little effort is made to retrieve these products once they reach the end of their life cycle. In many emerging markets, the informal sector—comprising scrap merchants and waste pickers—plays a critical role in waste collection. However, these systems remain fragmented, unregulated, and often exploitative. Consumers either dispose of waste through municipal systems, sell it to scrap dealers, or, in rare cases, return it to retailers in exchange for discounts on new purchases. The lack of standardised collection infrastructure is the first thing that the EPR systems have to address in creating a circular economy.

Challenges in Establishing Waste Collection Channels

Several factors contribute to the absence of robust waste collection channels:

1. **Lack of Producer Commitment:** Even in regions with EPR regulations, many producers treat compliance as a checkbox exercise. Rather than investing in sustainable waste management solutions, they opt for minimal compliance by outsourcing responsibilities to Producer Responsibility Organisations (PROs) or recyclers, often resulting in ineffective systems.
2. **Limited Economic Incentives:** The financial value of waste materials is often negligible compared to the cost of new products. As a result, businesses have little motivation to invest in collection infrastructure. Without viable economic incentives, formal collection channels remain stagnant.
3. **Unrealistic Price Expectations:** Many governments, enterprises, and households correlate the value of waste materials with new product pricing, sometimes mandating that waste cannot be sold below a specific percentage of the new product's price. This unrealistic expectation discourages the development of efficient collection systems.

Potential Waste Collection Channels

To bridge the gap between product distribution and waste collection, a multi-channel approach is essential. Potential waste collection channels include:

- **Formalising the Informal Sector:** Governments and producers can integrate waste pickers and scrap merchants into formal EPR frameworks, providing them with financial incentives, safety measures, and legal recognition.
- **Retailer Take-Back Programs:** Encouraging retailers to implement buy-back schemes or drop-off points where consumers can return end-of-life products in exchange for discounts or other benefits such as in trade-in sales.
- **NGO and Community Engagement:** Partnering with nonprofit organisations to raise awareness and facilitate community-based waste collection initiatives.
- **Bulk Collection from Institutions:** Establishing waste collection systems for offices, schools, and industries that generate significant volumes of waste.
- **Direct-to-Consumer Models:** Developing doorstep collection services or subscription-based waste collection programs that mirror the efficiency of modern product delivery systems.

Financing Waste Collection Systems

Just as product distribution networks require significant investment, waste collection channels demand dedicated financial resources. The cost of building and maintaining these systems varies based on product type and geographic location. Sustainable financing models could include:

- **EPR Fees and Levies:** Governments can mandate that producers contribute a fixed percentage of sales revenue to waste collection initiatives.
- **Public-Private Partnerships:** Collaborations between governments, businesses, and environmental organisations can fund waste management infrastructure.
- **Consumer Incentives:** Reward-based collection programs can encourage consumers to return used products by offering discounts, cashback, or loyalty points.
- **Extended Distribution Network Investment:** Similar to financing product distribution, businesses can allocate part of their logistics and supply chain budget to reverse logistics, ensuring that waste collection is integrated into existing transportation networks.

- **Corporate Sponsorships and Branding:** Just as companies invest in brand visibility through retail presence, they can sponsor collection initiatives that align with their sustainability commitments, creating consumer goodwill and brand recognition.
- **Digital Platform Integration:** Leveraging e-commerce and digital payment systems to introduce waste collection as a service, allowing consumers to schedule pickups with minimal friction and ensuring traceability of collected waste.
- **Reinvestment from Recycling Profits:** Profits generated from the sale of recyclable materials can be reinvested into the collection infrastructure, creating a self-sustaining model.
- **Micro-Financing for Local Collectors:** Providing financial support to small-scale waste collectors, cooperatives, and recycling start-ups through low-interest loans or grants to enhance collection capacity.

Conclusion

EPR represents a powerful policy tool for addressing waste management challenges and advancing sustainability goals. However, its effectiveness hinges on the establishment of efficient and scalable waste collection channels. Without these channels, the vision of a circular economy remains elusive. To overcome existing barriers, producers must move beyond token compliance, greenwashing, and invest in meaningful solutions. Governments, too, play a critical role in creating an enabling environment through supportive policies, infrastructure development, and public awareness campaigns.

By prioritising sectors with the highest environmental impact, fostering collaboration among stakeholders, and addressing the economic and social dimensions of waste management, EPR can drive meaningful change. The journey toward a circular economy is complex, but with strategic planning, innovation, and collective effort, it is achievable. As countries worldwide continue to refine their EPR frameworks, the development of robust waste collection systems will be key to unlocking the full potential of this transformative policy tool. Only then can we ensure a sustainable future where waste is not an endpoint but a new beginning.

Series Overview

This paper is part of a short-paper series developed under the [Technical Advisory on Strengthening EPR in Asia](#), with the objective of advancing the circular economy. Each paper focuses on a specific issue related to EPR and the circular economy—such as product design, cross-regional learnings, high-quality recycling, cost of EPR compliance, prioritization of sectors, collection channels, and the inclusion of the informal sector in EPR systems. The purpose of these papers is to provide policymakers and advocates with concise, actionable guidance that can serve as a starting point for more detailed analysis and in-depth exploration.



www.switch-asia.eu



EU SWITCH-Asia Programme
@EUSWITCHAsia



SWITCH-Asia
@SWITCHAsia



SWITCH-Asia Official
@switch-asia-official