

REDUCING PLASTIC PACKAGING IN VIETNAM: FROM POLICIES TO BUSINESS AND LOCAL ACTIONS¹

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Abstract

In recent years, plastic waste pollution - particularly from single-use packaging - has emerged as a major environmental challenge in Vietnam. Rapid growth in consumption has led to increasing volumes of packaging waste, while collection and recycling systems remain insufficient. In response, stakeholders, including businesses and government agencies, are implementing measures to reduce plastic packaging and promote a circular economy. Within this context, the National Forum on Promoting Solutions to Reduce Plastic Packaging, held in Hue City, highlighted practical approaches to translating policies into action through national initiatives, local pilot programs, and private sector engagement. The forum underscored that tackling plastic pollution - particularly from packaging - cannot rely on isolated measures, but instead requires a holistic, value chain approach spanning design, production, consumption, collection, and recycling. Central to this transition are the proactive engagement of businesses, the guiding role of policy frameworks, and strong, coordinated action among all stakeholders.

Keywords: *Plastic waste, extended producer responsibility (EPR), circular economy.*

1. Growing pressure from plastic packaging waste in Viet Nam

Plastic waste, particularly packaging plastics, is becoming one of the most pressing environmental challenges in Viet Nam. The volume of solid waste and plastic waste generated continues to rise rapidly, while the capacity for waste segregation, collection, and recycling remains limited. In this context, the Extended Producer Responsibility (EPR) mechanism has emerged as an important policy instrument aimed at reducing environmental pollution and promoting the transition toward a circular economy model.

According to various reports, Viet Nam generated more than 23 million tons of solid waste in 2019, and this figure increased to approximately 25 million tons by 2021. Urban areas alone generated around 35,624 tons of waste per day in 2019, equivalent to nearly 13 million tons annually, accounting for approximately 55% of the country's total solid waste generation. Among all localities, Ha Noi and Ho Chi Minh City produced the largest volumes of waste, with a combined generation of approximately 12,000 tons per day, representing about 33.6% of total urban solid waste nationwide [1].

¹ [Giảm nhựa bao bì tại Việt Nam: Từ chính sách đến hành động của doanh nghiệp và địa phương](#)

Plastic waste released into the environment mainly originates from solid waste, in which plastics account for an average composition rate of approximately 12%. It is estimated that Viet Nam generated around 8,021 tons of plastic waste per day, equivalent to approximately 2.93 million tons annually during the 2021-2022 period. This amount shows an increasing trend compared to previous years, when plastic waste generation was estimated at approximately 2.7 million tons in 2018 and 2.83 million tons in 2019 [2]. Single-use plastics and packaging plastics constitute the major components of the plastic waste stream, including plastic bags, food containers, disposable plastic products, and takeaway food packaging. The 2022 Viet Nam plastic pollution diagnostic report conducted by the World Bank revealed that plastic waste was the most common type of waste collected in riverine and coastal areas, accounting for 94% by quantity and 71% by weight [2]. The ten most common plastic items accounted for more than 80% of total plastic leakage into rivers and oceans, most of which were single-use plastics [3]. Most municipal solid waste in Viet Nam has not yet been segregated at source. Even major cities such as Ho Chi Minh City have only implemented pilot waste separation programs in selected wards and districts. At present, landfilling remains the dominant treatment method, accounting for approximately 70% of total solid waste. Many dumpsites are unsanitary, causing groundwater and surface water contamination, air pollution from odors, and direct impacts on nearby communities. Regarding plastic waste, only around 10-15% is collected for recycling, highlighting a substantial gap between the amount of waste generated and the country's actual recovery and recycling capacity.

2. Policy framework for plastic waste management

Viet Nam has established a legal and policy framework to reduce single-use plastic products. The 2020 Law on Environmental Protection includes a separate article governing the reduction, reuse, recycling, and treatment of plastic waste, as well as the prevention and control of marine plastic pollution (Article 73). The Law also contains a dedicated article on the circular economy (Article 142), stipulating criteria, implementation roadmaps, incentive mechanisms for circular economy practices, and regulations on EPR (Articles 54 and 55). In addition, Government Decree No. 08/2022/ND-CP dated January 10, 2022, detailing a number of articles of the Law on Environmental Protection, clearly specifies subjects, implementation roadmaps for recycling responsibilities, mandatory recycling rates, and recycling specifications, as well as forms of compliance with recycling obligations. Decree No. 05/2025/ND-CP dated January 6, 2025 amending and supplementing several articles of Decree No. 08/2022/ND-CP, further provides regulations on mandatory recycling rates and recycling specifications, and methods of fulfilling recycling responsibilities. Furthermore, Decree No. 110/2026/ND-CP dated April 1, 2026 stipulates detailed provisions for the implementation of several articles of the Law on Environmental Protection concerning the recycling responsibilities of producers and importers for products and packaging, as well as their waste treatment responsibilities. Alongside these legal instruments, the Prime Minister issued Decision No. 1316/QĐ-TTg dated July 22, 2021 approving the Scheme on strengthening plastic waste management in Viet Nam, and Decision No. 1746/QĐ-

TTg dated December 4, 2019 promulgating the National Action Plan on marine plastic waste management through 2030.

3. From policy to practice: advancing EPR and reducing plastic waste in Viet Nam

Extended Producer Responsibility (EPR) plays an important role in enhancing corporate accountability, thereby encouraging reductions in plastic packaging use, improving waste management efficiency, and supporting the development of circular value chains from product design and consumption to collection and recycling. EPR clearly defines the recycling and waste treatment responsibilities of producers and importers, while also creating a stable financial mechanism for recycling and waste treatment activities. In turn, this encourages businesses to adopt environmentally friendly packaging designs, contributing to pollution reduction, minimizing plastic leakage into the environment, and supporting the implementation of circular economy objectives in Viet Nam. In recent years, numerous initiatives aimed at reducing plastic waste have been implemented in practice, notably those led by WWF-Viet Nam in promoting the implementation of EPR. In this process, WWF-Viet Nam has acted as a bridge between government agencies, businesses, and communities by supporting policy development, piloting practical models, and fostering multi-stakeholder collaboration. The 2018-2020 period witnessed several pioneering initiatives, including efforts to develop Phu Quoc into a “plastic waste-free island”; the implementation of plastic reduction urban models in Thanh Khe, Tuy Hoa, and Rach Gia; and communication campaigns promoting behavioral change to reduce plastic waste in schools and communities. From 2020 to 2025, activities were expanded nationwide through the project “Reducing marine plastic waste in Viet Nam.” More than 100 schools participated in the initiative, numerous training programs were introduced into universities, and a wide range of communication campaigns, research activities, and technical workshops were conducted. Notably, more than 1,000 fishing vessels participated in the “bringing waste back to shore” initiative, helping to reduce marine plastic waste. In Hue, the project “Hue - A Plastic Smart City in Central Viet Nam” has demonstrated encouraging initial outcomes. The city has implemented large-scale waste segregation at source, applied digital technologies in waste management, supported informal waste collectors, and piloted models such as deposit-return schemes (DRS). Within just 12 months in 2025, more than 17.5 tons of plastic waste were recovered through the mGreen recyclable waste collection application with support from the project. WWF-Viet Nam has also actively contributed to policy development through numerous studies and publications used in the formulation of regulations on plastic waste management, EPR, and the circular economy.

The circular economy is increasingly regarded as a strategic solution for reducing plastic waste and promoting sustainable development. As Viet Nam continues to experience rapid economic growth while facing mounting environmental pressures, the transition from a linear economic model to a circular one is considered an inevitable trend. Several practical circular economy models aimed at reducing plastic waste have been implemented in Viet Nam with support from the United Nations Development Program (UNDP), including the “bringing waste back to shore” initiative, the establishment of Material Recovery Facilities (MRFs), river waste collection

systems, and pilot deposit-return schemes for packaging. Remarkably, a material flow analysis conducted in Hue City identified key “hotspots” for circular interventions and proposed 14 specific solutions across six sectors. The study’s findings contributed to the development of the City’s circular economy action plan, which aims to reduce greenhouse gas emissions by up to 41% in the long term.

Several major retailers, including Central Retail, AEON, and LOTTE Mart, have also introduced initiatives to reduce plastic use, particularly single-use plastic bags. These initiatives combine behavior-change communication campaigns with incentives encouraging customers to use personal or reusable bags. Specifically, Central Retail has launched campaigns such as “Bring your own bag,” “No plastic bag day,” and “No plastic bag month.” AEON offers customers a VND 1,000 incentive for transactions completed without plastic bags and has also introduced a “Bag rental” service. Meanwhile, LOTTE Mart has focused on communication campaigns such as “Eco-green - I take action, so can you” combined with environmentally friendly bag giveaways to encourage more sustainable consumer behavior.

4. A “green” story beginning with a local brand

As a company whose business is closely tied to Hue’s renowned natural mineral springs, Thanh Tan Joint Stock Company (Alba Natural Mineral Water) chose to move beyond conventional business practices by embracing a more ambitious sustainability journey - gradually reducing its reliance on plastic packaging and transitioning to glass bottles in support of its long-term sustainable development goals. In 2019, the company began implementing its transition to glass bottles, initially targeting market segments with high requirements for customer experience and brand image, such as hotels, resorts, and accommodation services. For a manufacturing enterprise, changing packaging means transforming the entire operational chain behind it, particularly in terms of technology and production processes. The shift from plastic bottles to glass bottles created new requirements for the production line. The company had to redesign bottlenecks, change cap designs, and reinvest in technology to meet the technical characteristics of the new packaging. In addition, Alba faced significant supply chain challenges. Technical-standard glass bottles suitable for the company’s packaging specifications were not widely available on the market. This created difficulties in identifying suppliers and limited the company’s ability to optimize both product quality and production costs. With a limited supply market, the company was forced to accept higher costs in exchange for production stability. The most significant challenge, however, was the cost of raw materials. Glass bottles were approximately five to six times more expensive than PET plastic bottles and had to be entirely imported. As a result, production costs increased sharply from the outset, while the market was not yet ready to accept the higher product prices. Logistic costs also became a major burden, as glass bottles and their protective packaging weighed nearly twice as much as their plastic counterparts, making transportation more complex and expensive.



Plastic waste, especially plastic packaging is the most pressing environmental issue in Vietnam

Faced with these realities, Alba adopted a gradual yet persistent approach. The company focused on key markets such as Da Nang and Hoi An to shorten transportation distances, reduce logistics costs, and improve distribution efficiency. At the same time, it expanded warehouse capacity to handle larger shipment volumes, maintained continuous production to minimize machine downtime, and signed large-volume raw material supply contracts to lower input costs. After six years of implementation, the transition has produced clear results. The production cost of glass-bottled products has gradually decreased from approximately VND 11,000 per bottle in the initial phase to VND 9,000, then VND 6,000, VND 5,000, and currently around VND 4,500 per bottle. Notably, Alba has established a strong presence in the premium hospitality segment through long-term supply agreements with hotel operations under the Marriott International group in Da Nang, while also supplying products to the Vinpearl, Vinpearl Nam Hoi An, Hoiana, and many other high-end hotels and resorts. In Da Nang alone, peak-season consumption has reached approximately 10,000 cases per month, within an estimated market size of 20,000-40,000 cases monthly. These figures indicate that glass packaging is no longer merely a symbolic sustainability initiative; it is gradually becoming commercially viable solutions with a genuine market position.

Despite achieving encouraging results in other markets, Alba continues to face challenges in expanding its glass-bottle product line in Hue. The primary barriers include partners' reluctance to change, consumers' familiarity with international brands, the relatively small market size, and limited purchasing power. As a result, sales volumes remain modest, making it difficult to achieve economies of scale, reduce costs, and further expand its glass packaging portfolio.

5. Sustainable packaging: not merely a trend, but a challenge requiring practical solutions

5.1. Packaging value chains: major impediments that need to be addressed

Although Vietnam's legal framework on plastic waste management and EPR has gradually been strengthened, the implementation process in practice continues to face numerous challenges. The greatest obstacle at present is that the ecosystem required for EPR to operate effectively has not yet been fully established. From packaging design, collection, sorting, and transportation to recycling, many links in the value chain remain weakly connected and have yet to create a stable material flow for recycling activities.

One of the core issues highlighted by experts and businesses is the lack of coordination across the entire packaging value chain, spanning design, production, consumption, collection, and recycling. Although recycling is considered a key solution for reducing environmental pressures and maintaining material value, the recycling sector in reality continues to face multiple barriers. A particularly significant challenge is the shortage of suitable input materials, especially low-value or difficult-to-recycle plastics. In addition, collection costs, processing technologies, and limited economic efficiency have created difficulties for many enterprises seeking to expand their recycling operations. Among these challenges, waste collection is widely regarded as the largest impediment, particularly in localities outside major urban centers. Insufficient infrastructure, high logistics costs, and heavy dependence on the informal sector have prevented the flow of recyclable materials from becoming truly stable and efficient.

At the downstream end of the value chain, collection and recycling support enterprises such as Botol Company and mGreen illustrate a reality that, although demand for recycling is increasing, the supply of input materials remains unstable. The causes lie not only in the collection stage, but also in the initial packaging design itself. Many packaging types still use composite or difficult-to-sort materials, resulting in high recycling costs and low recovery efficiency. In contrast, products designed with simpler and more easily sortable materials can return to the recycling chain more quickly and at lower cost.

5.2. Pioneering businesses: from pressure to opportunity

From the business perspective, EPR creates not only new pressures but also opportunities to innovate production and distribution models. Instead of viewing EPR solely as a legal obligation or compliance cost, many businesses have begun to see it as a driver for transformation. Through measures such as adopting mono-material packaging, reducing difficult-to-recycle plastics, piloting collection, reuse, and refill models, or limiting the free distribution of plastic bags,

businesses can proactively build competitive advantages in a market where green consumption is receiving growing attention.

In the manufacturing sector, Hanesbrands Vietnam Hue Co., Ltd. has implemented initiatives to reduce plastic use in export product packaging. These changes not only help the company meet requirements from international partners, but also optimize costs and strengthen its brand image within global supply chains.

For local businesses, SBC Hoang Gia Co., Ltd. has gradually transitioned toward more environmentally friendly packaging materials. However, this process remains challenging due to the high costs of green packaging and unstable supply sources.

In the service sector, Villa Hue Hotel represents a notable example of efforts to reduce single-use plastics in hotel operations. From replacing plastic bottles with reusable containers to reducing disposable in-room amenities, the company has not only reduced waste generation but also received positive feedback from tourists.

From a retail perspective, the GO! Hue supermarket system is piloting multiple initiatives to reduce plastic bag consumption, including encouraging customers to use reusable bags, providing cardboard boxes for packing purchases, and strengthening communication campaigns at points of sale. As direct points of contact with consumers, supermarkets play an important role in shaping more sustainable consumption behaviors.

These developments demonstrate that EPR is not merely a legal obligation, but also an opportunity for businesses to innovate, strengthen competitiveness, and respond to evolving market trends.

5.3. The role of local authorities: from pilot models to wider replication

In Hue, several pilot models have begun to demonstrate their potential to accelerate the transition toward improved post-consumer packaging management. Solutions such as deposit-return systems (DRS), source segregation of solid waste, and strengthened collaboration with the informal waste collection sector are considered meaningful interventions in restructuring packaging recovery chains. These models not only contribute to improving collection rates and reducing the risk of plastic leakage into the environment, but also provide practical foundations for a gradual improvement of Extended Producer Responsibility (EPR) mechanisms at the local level, with a view toward broader future application.

With its relatively manageable urban scale and increasingly clear orientation toward sustainable development, Hue possesses favorable conditions for pioneering initiatives such as waste segregation at source, optimization of collection systems, and plastic reduction in the tourism and retail sectors. In this context, local authorities play not only a regulatory role through policy development but also serve as central coordinators in mobilizing stakeholder participation, supporting businesses, and creating enabling conditions for innovative models to be tested, improved, and replicated.

5.4. Toward a sustainable packaging ecosystem

Across the packaging value chain, it is evident that many packaging products remain difficult to recycle due to multi-layer structures, inseparable components, or combinations of different materials within a single product. This significantly increases collection and processing costs, while the economic value of recycled materials often remains insufficiently attractive to stimulate market growth. In many localities, waste segregation at source has yet to be implemented consistently, while collection networks remain fragmented, waste collection points are limited, and transfer systems are inappropriate. As a result, although large volumes of post-consumer packaging waste are generated, transforming this waste stream into high-quality input materials for the recycling industry remains a major challenge.

Viewed from multiple perspectives, including value chains, businesses, and policy frameworks, it is clear that reducing plastic pollution, particularly pollution arising from packaging waste, clearly requires a comprehensive value chain approach rather than isolated solutions. Strong linkages and coordinated, consistent implementation are needed across all stages, from design and production to consumption, collection, and recycling. In this process, proactive business participation, effective policy direction, and close coordination among stakeholders are critical factors in supporting the transition toward a circular economy and sustainable development model. Once these elements are effectively connected, Viet Nam can move toward a more sustainable packaging ecosystem in which material value is retained within the economy while environmental impacts are minimized to the greatest extent possible.

5.5. A more consistent approach is needed for EPR to deliver real impacts

It is increasingly evident that EPR can only achieve meaningful results when it is designed as a mechanism that supports the entire recovery and recycling system instead of merely requiring businesses to fulfill compliance obligations. First and foremost, EPR resources should be prioritized to support localities in strengthening foundational stages such as collection, sorting, and preliminary processing of recyclable waste. These are currently the weakest links in the system, yet they are essential for creating sufficiently clean and stable material streams for recycling. At the same time, policies should provide stronger incentives for recyclable-friendly packaging design, expand post-consumer take-back systems, and better integrate EPR into broader circular economy and greenhouse gas emission reduction objectives. In parallel, EPR financing mechanisms need to operate in a more flexible and effective manner. One approach proposed by many experts is to promote co-financing models between businesses and local authorities to invest in collection, sorting, and recycling infrastructure. The development of waste collection points, centralized collection warehouses, transfer facilities, and recovery logistics support systems can significantly reduce transportation costs and improve the efficiency of post-consumer material value chains.

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