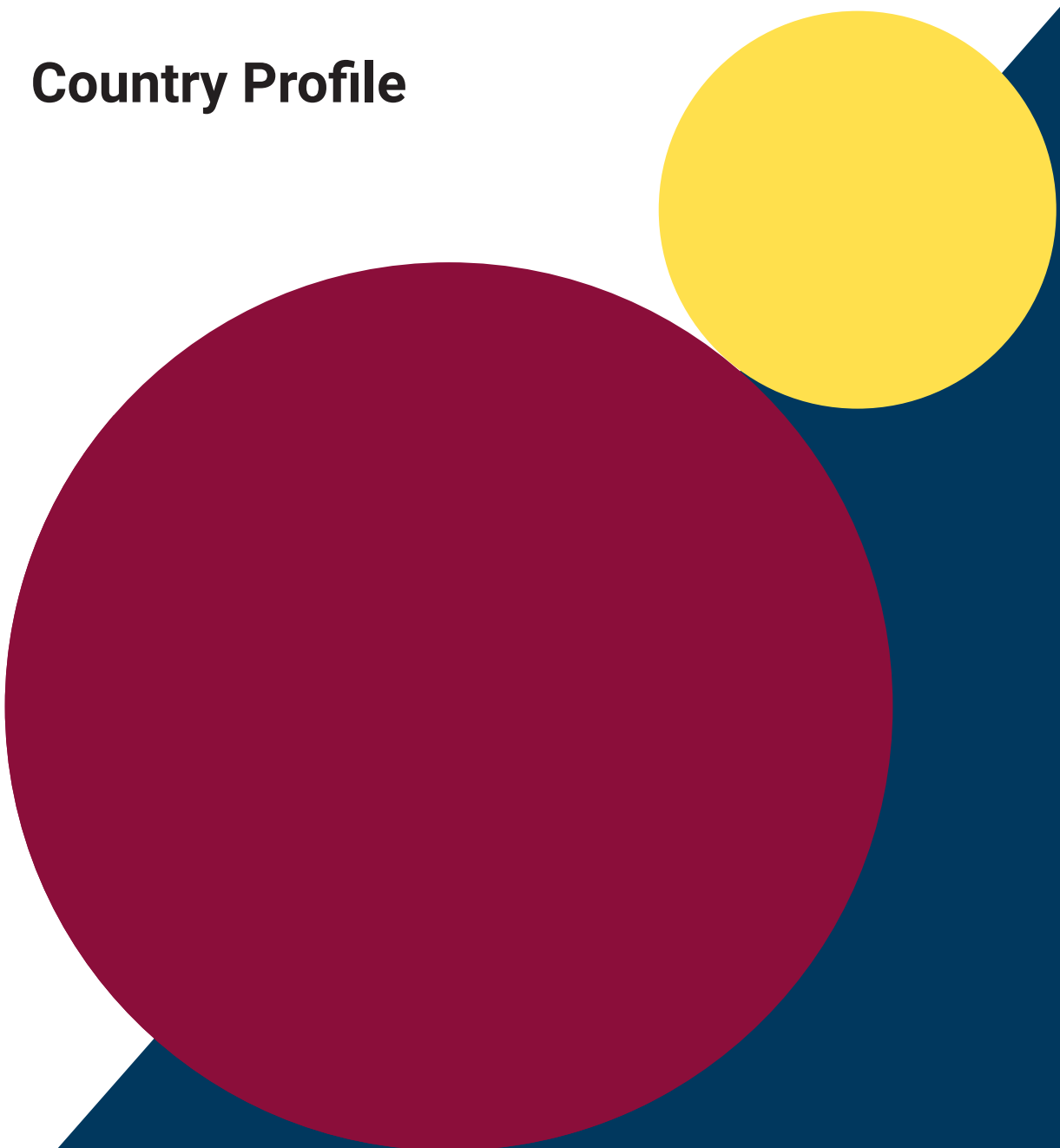




# PLASTIC POLICIES IN VIETNAM

## Country Profile



## **Acknowledgements**

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## Abbreviations

<b>AEPW</b>	Alliance to End Plastic Waste
<b>DRS</b>	Deposit return system
<b>EA</b>	Envilience Asia
<b>EMR</b>	Expert market research
<b>EPR</b>	Extended producer responsibility
<b>FDI</b>	Foreign direct investment
<b>MONRE</b>	Ministry of Natural Resources and Environment
<b>MWR</b>	Market-wide research
<b>NPAP</b>	National Plastic Action Partnership
<b>SUP</b>	Single-use plastic
<b>T</b>	tonne (metric tonne)
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>USD</b>	United States Dollar (\$)
<b>VEPF</b>	Vietnam Environmental Protection Fund
<b>VND</b>	Vietnamese Dong (₫)

# 1. Context

Vietnam generated 3,800,000 tonnes (T) of plastic waste in 2023, the equivalent of approximately 38.7 kg per capita (EA 2024), more than the global average of approximately 32 kg per capita per year, and almost twice as much as the average in SWITCH-Asia Countries of roughly 20 kg per capita per year (EA 2024) (see Figure 1).

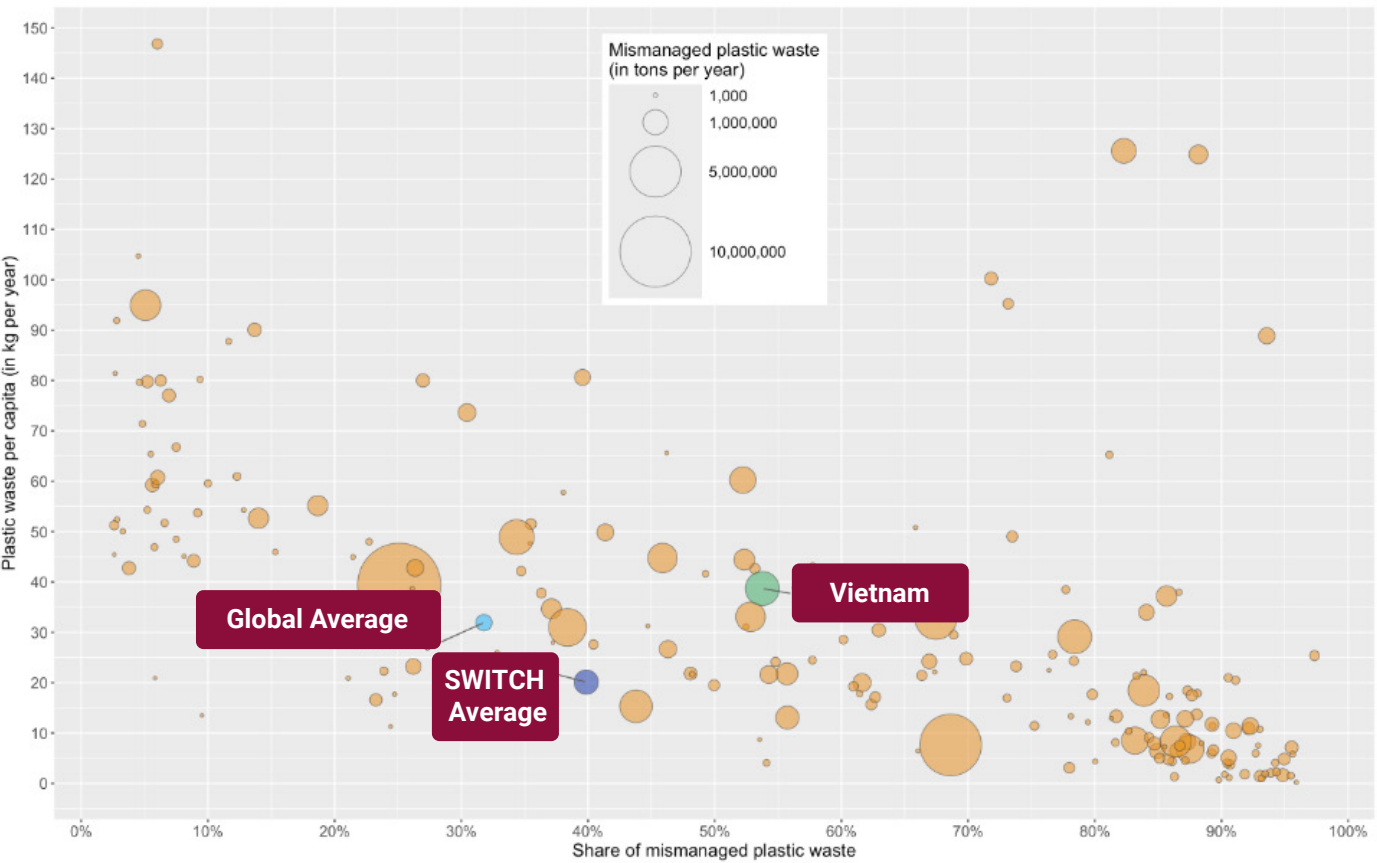


Figure 1. Plastic waste in Vietnam in 2023

Source: Earth Action 2024 data

Vietnam is also the country with the fifth-highest total amount of mismanaged plastic waste in the world, weighing more than 2,042,000 T annually (EA 2024). The share of mismanaged plastic waste stands at 54%, which is 22 percentage points higher than the global average, and 14 percentage points higher than the average amount in countries covered by the SWITCH-Asia programme. Other studies have found that Vietnam ranks fourth among the ten countries leaking the highest levels of plastic into the marine environment (EMR 2024, Jambeck 2015). In addition, Vietnam was also the sixth-largest importer of plastic waste in 2022, with 304,000 T (UNCTAD data).

Rank of Vietnam in global comparison (out of 192*)	
Plastic waste in metric tonnes	181
Plastic waste per capita (kg/year)	128
Mismanaged plastic waste in metric tonnes	187
Mismanaged plastic waste per capita (kg/year)	168
Share of mismanaged plastic waste	83

\* 192 being highest in pollution / mismanagement

The plastics sector in Vietnam is very important economically, and some consider Vietnam's plastic industry to be a key player in the global plastics market (MWR 2024). In 2019, the sector, valued at USD 17.5 billion, contributed almost 7% to Vietnam's gross domestic product (GDP) (World Bank 2021); in 2022 this value rose to USD 25 billion (Global News Wire 2024). In 2023, 10.3 million T of plastic were produced by the Vietnamese plastics industry. Estimates predict a compound annual growth rate of more than 8% until 2029, and production of 16.4 million T of plastic in 2029 (Mordor Intelligence 2024) and 21.4 million T in 2032 (EMR 2024). This increase will be driven mainly by demand from the packaging, electronics and construction sectors (Mordor Intelligence 2024).

These high production levels and growth rates are driven by three factors (Globe News Wire 2024): to begin with, Vietnam's rapid economic and industrial development has increased domestic demand for plastic products across various sectors, including the packaging, consumer goods, electronics, and automotive industries. At the same time, Vietnam is an important exporter of plastic products (see Figure 2). Lastly, Vietnam's plastic industry has become an attractive destination for foreign direct investment, which has increasingly shifted from China to Vietnam as a result of low labour costs, fewer regulations targeting plastics, and lower enforcement levels, among other reasons.

The plastics industry in Vietnam, highly fragmented and competitive, comprises nearly 4,000 mostly small and medium-sized enterprises (SMEs), including domestic and international companies (MWR 2024). The top five market players are Binh Minh Plastic JSC, Rang Dong Plastic JSC, An Phat Holdings JSC, Tien Phong Plastic JSC, and Saigon Plastic Packaging JSC. Plastic is consumed in a wide range of sectors (MWR 2024), the largest of which is the packaging sector (EMR 2024; Mordor Intelligence 2024), followed by the construction sector (Mordor Intelligence 2024), which accounts for 25% of total plastic demand in Vietnam. Other important sectors are automotive, electronics, healthcare and construction (MWR 2024).

Plastic-related trade data corroborate the important role of the plastic industry for Vietnam's economy. Overall, in 2022, Vietnam's trade volume of plastic-related products and goods amounted to USD 64.2 billion, which accounted for almost 9% of Vietnam's overall trade volume in products, and 2.3% of the global plastics trade volume, according to UNCTAD data. Vietnam is a net exporter of final manufactured plastic goods, with a positive trade balance of almost USD 10.5 billion in 2022 (Figure 2), and key export markets include the US, Japan and South Korea. With regard to all other types of plastic-related goods and products, Vietnam is a net importer. Above all, Vietnam imports plastics in primary forms, intermediate forms of plastic and intermediate manufactured plastic goods that together have created a negative trade balance of USD 19.2 billion, and which account for 76% of the country's plastic-related imports.

UNCTAD data related to the weight of the plastic waste trade show that Vietnam is a net importer of plastic waste, and with 267,000 T of net imports in 2022, the country ranks fourth in the world, behind only Türkiye, Malaysia and The Netherlands, and ahead of Indonesia and the US. Of the 383,000 T of plastic waste imported into the country in 2022, 153,000 T were from Japan, the highest amount from any country. Another nine countries combined added 187,000 T of plastic waste to Vietnam, including the Republic of Korea (40,000 T), the Netherlands (34,000 T), Belgium (21,000 T), Germany (20,000 T), Taiwan (18,000 T), China (16,000 T), UK (16,000 T), US (15,000 T) and Singapore (7,000 T). The remaining 43,000 T of plastic waste imported into Vietnam come from 17 other countries worldwide. The main and only export destinations of plastic waste from Vietnam are Taiwan (6,000 T), US (4,000 T), the Republic of Korea (2,000 T), Spain (2,000 T), Thailand (2,000 T), China (1,000 T), Indonesia (1,000 T) and Japan (1,000 T).

Two important plastic-related industries are also relatively important for Vietnam's economy; according to World Bank data, the chemical sector contributed 1.1% to GDP, whereas Vietnam's oil and gas industry contributed 1%.



**Figure 2. Plastic-related trade in Vietnam in 2022**

Source: UNCTAD data

## 2. Policy landscape

A variety of laws, regulations and policies to address plastic pollution already exist in Vietnam. Table 1 gives an overview of the relevant action plans and policies that aim to prevent plastic pollution, including command-and-control measures, provisions for market-based mechanisms, and information requirements, as well as a direction-setting action plan.

Overall, Vietnam has a comprehensive plastic policy landscape covering a broad range of different policy instruments and stakeholders with a clear focus on plastic waste management and litter prevention. Vietnam has also introduced important measures in earlier stages of the plastic life cycle, like bans on certain problematic plastic products, the promotion of eco-friendly (plastic) alternatives, and requirements for designing more environmentally friendly plastic products, e.g. with fewer or no heavy metals. However, these measures barely affect either the supply of and demand for primary plastics or the use of harmful chemicals in plastics and plastic products. At these earliest stages in the plastic life cycle, there is still potential to move away from business as usual and towards the more sustainable and circular production and manufacturing of plastics and plastic products. Vietnam could in fact build upon and expand the general objective for resource use already present in the **National Action Plan on Sustainable Consumption and Production (2021–2030)**, and decrease the use of resources and materials in many sectors by 5%–8%, including plastic production (Government of Vietnam 2020b).

The broadest and most far-reaching policy is the **National Action Plan for Management of Marine Plastic Litter by 2030**, which outlines Vietnam's strategy to combat marine plastic pollution. The plan, approved by the Prime Minister on December 4, 2019, aims to significantly reduce marine plastic waste through a series of coordinated efforts involving various ministries, local governments, and international cooperation.

Key objectives include:

1. Reducing marine plastic litter by 50% by 2025 and 75% by 2030
2. Collecting 50% of abandoned fishing gear by 2025 and 100% by 2030
3. Eliminating single-use plastics (SUPs) and non-biodegradable bags in coastal tourism areas by 2025 and achieving 100% compliance by 2030
4. Ensuring that 80% of marine protected areas are free of plastic litter by 2025 and 100% by 2030

The plan emphasises education and behavioural change, promoting awareness of the impact of plastic waste on marine ecosystems and human health. The plan also directly instructs central and local press authorities, such as The Voice of Vietnam, Vietnam Television, among others, to collaborate with the Ministry of Natural Resources and Environment and People's Committees to create programmes and media content. These initiatives aim to raise public awareness about the harmful effects of SUP on oceans, marine ecosystems, the environment, and human health. Additionally, they promote programmes for the collection and processing of marine plastic litter and encourage enterprises, organisations, communities, and citizens to take responsibility for preventing, mitigating, and managing plastic waste (Government of Vietnam 2019). Moreover, the plan foresees initiatives for waste collection, classification, and processing, with a focus on involving local communities and leveraging international cooperation. In addition, it encourages scientific research and technological innovation in waste management, aiming to transition towards a circular economy and green growth. Finally, the Plan seeks to attract international technical assistance and investment, and to develop a national database on marine plastic litter.

**Table 1. Overview of plastic-related policies in Vietnam**

Source: Authors' own representation

	Production (primary polymers)	Manufacturing (plastic products)	Consumption	Waste management/ End-of-life	Trade
COMMAND AND CONTROL					
Mandatory performance/outcome standards (incl. targets)		Circular No. 07/2012/TT-BTNMT (2012) (bags)	National Strategy on the Integrated Management of Solid Waste (2009) (bags)		
Mandatory process standards (incl. targets)				<ul style="list-style-type: none"> <li>• National Strategy on the Integrated Management of Solid Waste (2009)</li> <li>• Law on Environmental Protection of Vietnam (2020)</li> <li>• Elaboration of Several Articles of the Law on Environmental Protection (2022)</li> </ul>	
Technological standards (incl. targets)					
Prohibitions/bans (incl. phaseout)			<ul style="list-style-type: none"> <li>• National Strategy on the Integrated Management of Solid Waste (2009) (bags, SUPs in certain designated areas)</li> <li>• Elaboration of Several Articles of the Law on Environmental Protection (2022)</li> </ul>	Law on Environmental Protection of Vietnam (2020)	
MARKET-BASED					
Taxes/levies		Law on Environmental Protection Tax (2010) (bags)			<ul style="list-style-type: none"> <li>• Law on Environmental Protection of Vietnam (2020)</li> <li>• Elaboration of Several Articles of the Law on Environmental Protection (2022)</li> </ul>



	Production (primary polymers)	Manufacturing (plastic products)	Consumption	Waste management/ End-of-life	Trade
Subsidies/grants/tax reductions		<ul style="list-style-type: none"> <li>• Law on Environmental Protection of Vietnam (2020)</li> <li>• Elaboration of Several Articles of the Law on Environmental Protection (2022)</li> <li>• 2014 Law on Environmental Protection ('environmentally friendly' products)</li> </ul>			
Public procurement					
EPR/deposit refund schemes		<ul style="list-style-type: none"> <li>• Law on Environmental Protection of Vietnam (2020)</li> <li>• Elaboration of Several Articles of the Law on Environmental Protection (2022)</li> </ul>			
Liability schemes					
INFORMATION					
Taxonomies					
Data collection, reporting and disclosure					
Labels			Decree No. 19/2015/ND-CP (2015) (Green Label)		
Awareness raising/ capacity development				<ul style="list-style-type: none"> <li>• National Strategy on the Integrated Management of Solid Waste (2009)</li> <li>• Law on Environmental Protection of Vietnam (2020)</li> <li>• Elaboration of Several Articles of the Law on Environmental Protection (2022)</li> </ul>	

	Production (primary polymers)	Manufacturing (plastic products)	Consumption	Waste management/ End-of-life	Trade
GOVERNANCE/COORDINATION					
Roadmaps, plans and strategies	National Action Plan on Sustainable Consumption and Production (2021-2030)	Planned: Roadmap to reduce the production and importation of single-use plastics (SUPs) and microplastic-containing products	National Action Plan for Management of Marine Plastic Litter by 2030 (2018)	National Action Plan for Management of Marine Plastic Litter by 2030 (2018)	National Action Plan for Management of Marine Plastic Litter by 2030 (2018)
Inter-ministerial coordination	Under the ‘National Action Plan for Management of Marine Plastic Litter by 2030’, responsibilities are distributed among various ministries, with the Ministry of Natural Resources and Environment playing a central role in coordination and monitoring. The Ministry of Foreign Affairs is tasked with facilitating international agreements, while the Ministry of National Defence will help enforce regulations. For all planned actions, inter-ministerial cooperation and coordination is foreseen, including across different levels of government.				
Public-Private partnerships	Public Private Collaboration towards Circular Economy in Plastic Waste Management Vietnam Vietnam National Plastic Action Partnership (NPAP)				
SPECIAL FOCUS SECTOR: CONSTRUCTION					
	Vietnam’s construction sector is the second largest consumer of plastics after packaging (Mordor Intelligence). There are some small businesses dedicated to using recycled materials in construction, but there are no nation- or industry-wide initiatives to promote the use of recycled materials in the building and construction sector.				

Overall, the measures laid out in the National Action Plan are of a directive, voluntary and mostly informational nature. This means that they need to be implemented through binding regulations as well as enforced. Some measures that aim at implementing the plan are presented below.

One legislative instrument implementing some of the provisions from the National Action Plan is Article 73 of the **2020 Law on Environmental Protection of Vietnam**, which mandates the reduction, classification, and proper disposal of SUP products and non-biodegradable plastic packaging. This instrument also prohibits the direct discharge of plastic waste into water systems and prescribes that plastic waste from marine activities must be collected, stored, and transferred to licensed recycling and treatment facilities. Certified environmentally friendly alternatives are eligible for incentives (see further information under market-based mechanisms, below).

According to the **Elaboration of Several Articles of the Law on Environmental Protection**, Provincial People's Committees must ensure that by 2025, SUP items and non-biodegradable plastic packaging (such as plastic bags and Styrofoam food containers) are no longer sold or used in shopping malls, supermarkets, hotels, and tourist areas. This represents the tightening of a related goal in Vietnam's **National Action Plan on Sustainable Consumption and Production (2021–2030)**, in which the goal stipulates that by 2025, 85% of supermarkets and commercial centres will distribute and use only eco-friendly packaging by 2025 and will replace SUPs and non-degradable plastic items (Government of Vietnam 2020b). However, this ban does not apply to the products packaged in non-biodegradable plastic packaging. Additionally, local committees must conduct inspections of facilities that produce SUP products and non-biodegradable packaging within their regions (Government of Vietnam 2022).

In terms of waste management provisions, the **2020 Law on Environmental Protection of Vietnam** also encourages the reuse and recycling of plastic waste for production and infrastructure projects, and it supports the development of systems to manage ocean plastic waste. Provincial People's Committees are responsible for organising plastic waste collection and treatment, including the creation and enforcement of rules to manage plastic waste, promoting the reduction of non-biodegradable plastics, and raising awareness about the environmental degradation caused by plastic waste. The law also states that the government will introduce a roadmap to reduce the production and importation of SUPs and products containing microplastic (Government of Vietnam 2020a; Government of Vietnam 2022).

Earlier plastics-related regulations targeted standards along with waste management and market-based mechanisms, which were later supplemented by additional specifications and regulations. In terms of mandatory standards, **Circular No. 07/2012/TT-BTNMT** outlines criteria to be met by 'environmentally friendly' plastic bags: they must have either a film thickness over 30 micrometres and be larger than 20 centimetres with a recycling plan, or be at least 60% biodegradable within two years. Additionally, they must adhere to strict heavy metal content limits and be produced in compliance with environmental protection laws (Government of Vietnam 2012; Vu et al 2021). Furthermore, the **National Action Plan on Sustainable Consumption and Production (2021–2030)** included the specific objective to develop policies by 2025 to replace SUPs and non-degradable plastic items by promoting the production, distribution and consumption of ecofriendly packaging (Government of Vietnam 2020b).

The **National Strategy on the Integrated Management of Solid Waste**, adopted in 2009, envisions comprehensive waste management by 2050, emphasising collection, reuse, recycling, and advanced treatment technologies to minimise landfill use. By 2025, the Strategy aims for major cities to have recycling facilities for domestic waste sorting, and for 90% of urban solid waste to be treated according to environmental standards. For plastics, the Strategy targets 100% use of environmentally friendly plastic bags in supermarkets and commercial centres (Government of Vietnam 2009).

With regards to **market-based mechanisms**, in the **2014 Law on Environmental Protection** the Government incentivises the production and trade of 'environmentally friendly' products. **Decree No. 19/2015/ND-CP** outlines these incentives, including land concessions, capital grants, tax exemptions, and price supports. Investors in environmental protection projects can access favourable loans from the Vietnam Environmental Protection Fund and the Bank of Investment and Development, and receive reductions in corporate, import-

export, and value-added taxes. These incentives are potentially also applicable to plastic-substituting products and services as well as to projects focusing on the prevention or removal of plastic pollution.

The **Elaboration of Several Articles of the Law on Environmental Protection (Decree No. 08/2022/ND-CP)** further develops Vietnam's approach to implementing extended producer responsibility (EPR). The Decree contains an elaborate EPR scheme under which producers and importers of certain products and packaging must fulfil recycling responsibilities according to mandatory rates and specifications. Plastic products covered by the scheme include consumer packaging for food, cosmetics, medicine, fertilisers, feeds, veterinary drugs, detergents, and cement. These packaging types, together with batteries, lubricating oil and tires, are covered by the EPR since 2024. The scheme is planned to be extended to electric and electronic products in January 2025 and to vehicles in January 2027. Exemptions are provided for small-scale producers and importers, as well as those dealing with exports or products for research.

The Decree details mandatory recycling rates, which are based on the product's life cycle, disposal rate, collection rate, national recycling targets, and socio-economic conditions, and which will be adjusted every three years. Methods for fulfilling recycling responsibilities include self-recycling, hiring a service provider, or authorising an intermediary organisation. These entities must meet environmental protection requirements and be listed by the Ministry of Natural Resources and Environment (MONRE). Alternatively, producers and importers can opt to make financial contributions to the Vietnam Environment Protection Fund (VEPF). Furthermore, annual recycling plans and results must be reported to MONRE. Financial contributions to the VEPF will support recycling activities, including classification, transport, and treatment of products and packaging. Agencies and organisations can apply for financial support, which is managed and distributed by MONRE and the National EPR Council. In addition, producers and importers are required to publicly provide information about their products and packaging, including ingredients, recycling guidelines, and risk warnings. Relevant authorities must share information with MONRE upon request. A National EPR web portal is connected to various databases to facilitate registration, reporting, and declaration by producers and importers; MONRE is responsible for management and operation. Lastly, a National EPR Council has been established, which advises MONRE on managing and supervising the fulfilment of responsibilities by producers and importers. The council includes representatives from various ministries, producers, importers, and relevant organisations, and operates on a collective decision-making basis (Government of Vietnam 2022).

Another market-based mechanism is outlined in the **Law on Environmental Protection Tax**. The law imposes a tax on products that are harmful to the environment. Producers and importers of such products, including polyethylene bags and packaging, are subject to this tax, with exceptions for certified 'environmentally friendly' items. The tax rate for plastic bags and packaging is VND 50,000/kg (approximately USD 2; Government of Vietnam 2010).

The issue of increasing quantities of imported plastic waste, coming predominantly from the global North, has been addressed by levying a fee on importers, as outlined in the **Elaboration of Several Articles of the Law on Environmental Protection**. The issue of imported scrap plastic became particularly problematic when, in 2018, China closed its borders to plastic waste imports, and exporters needed to find alternatives, in particular in Southeast Asia (Parker 2018). In Vietnam, importers of scrap plastic (and paper) must, since 2022, pay an environmental protection fee to the VEPF when importing this scrap as a raw material. The fees are as follows:

- For quantities weighing less than 100 T, a fee of 15% of the total shipment value is required.
- For quantities between 100 and 499 T, a fee of 18% of the total shipment value is required.
- For quantities weighing 500 T or more, a fee of 20% of the total shipment value is required.

In relation to this, a **labelling requirement** under **Decree No. 19/2015/ND-CP** prescribes that products deemed 'environmentally friendly' must carry a 'Green label', awarded by the Ministry of Natural Resources and Environment. The Ministry has established criteria for 17 products, including biodegradable plastic shopping bags, which must biodegrade by at least 90% within three years (60% within two years) and contain

no harmful additives like lead, mercury, cadmium, or chromium. It does not, however, specify under which conditions the products must biodegrade, or whether in a specific composting facility or in the environment. Plastic packaging for these products must be made from recycled plastic and free of PVC or chlorinated compounds. Additionally, plastic components over 25 g grams or with more than 20 mm<sup>2</sup> of plastic coating must have stickers for recycling guidance and must contain no harmful additives. Environmentally friendly certified plastic bags under the above-mentioned **Circular No. 07/2012/TT-BTNMT** can also apply for the Green label (Vu et al 2021).

Overall, the fact that many of the above-mentioned plans and regulations were issued by the Prime Minister shows that the commitment to tackle plastic pollution is being dealt with at the highest political level. Similarly, Vietnam has proven itself to be a progressive actor on the global stage. For instance, together with the governments of Ecuador, Germany, and Ghana, Vietnam jointly organised a Ministerial Conference in September 2021, in order to promote a global strategy to tackle plastic pollution and to build momentum ahead of the landmark decision taken at the United Nations Environment Assembly (UNEA) held in February 2022 to develop an intergovernmental, legally binding agreement on plastic pollution (UNEP 2021). The fact that Vietnam's EPR policy was the first to be formulated in the Southeast Asian region further underscores the government's commitment with respect to plastic pollution. Overall, Vietnam's approach sends a signal to foreign companies that the country is shifting from a low-cost manufacturing hub with lenient environmental standards and lack of enforcement, to a manufacturing nation with stricter standards and strengthened enforcement. This policy stance will make it more difficult for foreign companies to violate environmental regulations as has been common practice in the past. In fact, 68% of the foreign direct investment (FDI) companies in Vietnam have violated environmental regulations (Fulcrum 2021).

There is potential to further advance the policy landscape. As regards the EPR scheme, its high ambitions and shortened timeframe for implementation will require sustained efforts and close scrutiny of progress in order for the goals to be achieved (Fulcrum 2021). Furthermore, according to industry experts, the EPR policy must involve more businesses, and to a broader extent, in order to be able to set reasonably high but nonetheless feasible recycling fees. With its **Public Private Collaboration towards Circular Economy in Plastic Waste Management Vietnam** (see below), the Government of Vietnam is taking steps to include businesses in the further development and implementation of the EPR policy (Dow Vietnam 2022). Finally, and to successfully implement the EPR, Vietnam's current recycling infrastructure will require substantial expansion in order for it to be able to process more than one-third of its plastic waste as it is currently doing (Fulcrum 2021).

In addition, there are several laws focusing on plastic bags and some that also include SUPs. While the regulated plastic bags have already been clearly defined, SUPs are still in need of a clear description. In order to properly implement and enforce the regulations, Vietnam would benefit from clearer definitions for SUPs, potentially including a list of specific or exemplary SUPs.

### 3. Private-sector innovations

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The **Viet Nam National Plastic Action Partnership (NPAP)** is a nationally led platform launched in 2020 to foster collaboration between the government and key partners aimed at transforming plastic waste and pollution commitments into actions. Chaired by the Vice Minister of Natural Resources and Environment, the NPAP Leadership Board includes leaders from over 30 government ministries, embassies, international partners, and enterprises. Hosted by the United Nations Development Programme (UNDP) Viet Nam, the NPAP Secretariat supports initiatives to meet national targets for reducing plastic waste and pollution, and promoting a sustainable circular economy. In 2023, NPAP will focus on innovation, financing, policy development, and social inclusivity to find solutions and investment opportunities for plastics issues (UNDP 2023).

In a recent move to promote innovation and financing for plastic waste reduction, NPAP launched a task force in collaboration with the Ministry of Natural Science and Environment (MONRE) and the Alliance to End Plastic Waste (AEPW). Together with commercial experts from the Royal Norwegian Embassy, the task force discussed how a deposit return system (DRS)<sup>1</sup> could be established in Vietnam in order to complement the existing EPR system and to enable comprehensive collection systems for plastic bottles and aluminium cans in particular (Hanoi Times 2023).

It should be noted that the AEPW has faced significant criticism from civil society organisations and other actors, primarily in the form of accusations of greenwashing and failing to meet objectives. Greenpeace has been a vocal critic, labelling the Alliance as a marketing ploy by big oil companies to generate positive headlines while continuing to expand global plastic production. This criticism intensified after a Reuters investigation revealed the collapse of AEPW's flagship project, Renew Oceans, which aimed to clean the Ganges River but fell drastically short of its targets, collecting only a fraction of the promised plastic waste (Wheeler 2021).

The **Public Private Collaboration towards Circular Economy in Plastic Waste Management Vietnam** is a collaborative effort started between the Ministry of Natural Resources and Environment, Dow Vietnam, SCG Group, and Unilever Vietnam in managing plastic waste through a circular economy approach. Lately, the initiative was extended to an additional 24 members including local governments, companies that recycle plastic, schools, non-governmental organisations, and enterprises committed to sustainability. Established in 2020, the Public Private Collaboration focuses on four key missions: segregation and recycling of plastic waste, raising public awareness, applying innovative recycling technologies, and developing supportive policies. Significant achievements include the collection of over 9,000 T of recyclable waste, and educational programmes reaching millions of people. The collaboration aims to expand these efforts nationwide, promoting sustainable plastic waste management in Vietnam (Dow Vietnam 2022).

With regards to technology and innovation, the Collaboration has applied advanced technologies from developed countries to support the packaging and plastic pellet manufacturing industry. Examples include transforming plastic waste into materials for building roads, producing recyclable packaging, and creating eco-bricks and tiles from low-value plastic waste. These efforts aim to close the loop in the “plastic circular economy” by making plastic packaging reusable or recyclable while promoting the use of recycled plastic products. The long-term vision includes supporting the development of a legal framework to facilitate the introduction of plastics into the circular economy and promoting policies that encourage technology adoption and innovation (Dow Vietnam 2022).

There are certainly benefits to using recycled (or ‘downcycled’) materials in construction, in particular in road construction. Nevertheless, when following this approach, possible adverse effects regarding the environment and health, in addition to potentially limited performance (in particular where larger quantities

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<sup>1</sup> Also known as a ‘deposit-refund scheme’.



of plastic waste are used) and social effects, may require substantial attention and possibly regulatory action. The processing of plastic waste creates microplastic particles and may still contain numerous – and potentially hazardous – chemical additives, both of which may leak into the environment with detrimental effects (Cirino et al. 2023). Similarly, the potential leakage of micro- and nanoplastics and of hazardous chemical additives would cause significant health issues. Further studies have found that plastic waste in materials is predominantly applied in construction sectors in the Global South. This means that risks of flammability or potential performance- and strength issues are being unequally distributed. At the same time, the heat-insulating characteristic of plastics in construction materials is an asset, in particular in low-cost and/or temporary housing applications (Cirino et al 2023). In conclusion, the focus of interventions should be placed on avoiding and recycling, instead of in further proliferation and downcycling of plastic products; this principle should apply to public-private partnerships and platforms as well.

A circular plastics economy requires more than reuse and recycling, which remain costly, degrade material quality, and cover only 9% of global plastic waste. A more effective circular economy must prioritize reduction, eliminate harmful plastics, and design products for durability, reuse, and recyclability. Strengthening waste management, making recycled materials competitive, and preventing plastic leakage are also key. Beyond recycling, a well-coordinated strategy integrating regulatory, market-based, and design-driven measures is essential for a sustainable and resilient plastics economy. This SWITCH-Asia paper is based on this understanding.

## 4. Challenges

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Vietnam's combat against plastic pollution is influenced by a complex interplay of geographical and climatic conditions, socio-economic factors, and governance capacities.

Vietnam's extensive coastline, stretching over 3,260 kilometres, makes it particularly vulnerable to marine plastic pollution, including from other countries in the region. The country is situated in a tropical monsoon climate zone characterised by heavy rainfall and seasonal flooding, which exacerbates the transportation of plastic waste from inland areas to the ocean. Major river systems, such as the [Mekong](#) and Red Rivers, act as conduits for plastic waste, carrying debris from urban and rural areas into the sea (Jambeck et al. 2015). The Mekong River, in particular, is one of the world's most significant contributors to ocean plastic pollution because of its vast drainage basin and high population density along the banks (Lebreton et al. 2017).

Furthermore, Vietnam's rapid industrialisation and urbanisation have led to a significant increase in domestic plastic consumption and waste generation. The proliferation of SUPs, driven by the convenience and low cost of these products, has resulted in a substantial accumulation of plastic waste. Additionally, inadequate waste management infrastructure and practices, such as open dumping and burning, contribute to the leakage of plastic waste into the environment. Informal waste collection and recycling systems, which are prevalent in Vietnam, often lack the capacity to handle the volume of plastic waste generated, leading to further environmental contamination (World Bank 2021).

Regarding policy and enforcement capabilities, Vietnam has made strides in developing policies to address plastic pollution, but enforcement remains a significant challenge (Pham 2023). The effective implementation and enforcement of these policies depends on several factors: financial and human resources need to be expanded, coordination among governmental agencies needs to be further strengthened, and public awareness and participation need to be raised. Furthermore, Vietnam's government must find a way to integrate the informal waste management sector, monitor its actions and make it comply with national regulations (Veetil et al. 2023).



## 5. Way forward

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Overall, from a public policy perspective, Vietnam seems to be on an ambitious and promising track to tackle plastic pollution. In order to strengthen the country's current policies and their implementation, Vietnam should consider several strategic readjustments and sustainable, workable improvements.

Vietnam should more strongly consider the issue of plastic pollution in more general policies. On the one hand, the government ought to consider including plastic pollution in its circular economy agenda. In particular, it might want to consider specific targets and measures for reducing the use of resources, and materials that apply the general objective of a 5%–8% reduction in its **National Action Plan on Sustainable Consumption and Production (2021–2030)** for the plastics industry. The decree setting up a regulatory sandbox for the development of a circular economy that is currently being drafted (Vietnam Law & Legal Forum 2023) should be able to provide an opportunity to allow small-scale testing of innovations in the plastics industry, namely by private firms with objectives such as: reducing resource and material use, improving product designs, expanding re-use business models and/or introducing new recycling technologies. On the other hand, Vietnam should progress in the public procurement policies currently under formulation (SWITCH-Asia 2024) by aiming, for example, for a specified minimum recycled content in construction materials for public infrastructure projects, given that the construction sector is the second largest market for plastic products in Vietnam after packaging. Indeed, the construction sector already features very prominently in related policy developments (SWITCH-Asia 2024).

The current EPR scheme should be enhanced with policies and investments to boost the domestic recycling industry and create a robust secondary market for recyclables, including for example mandatory recycled content standards for key products, minimum collection and recycling targets, complementing or even surpassing the voluntary commitments being made by global brands (World Bank 2021). Such standards would then also affect the first stages in life cycle of plastic which has thus far been largely neglected, and potentially reduce the supply of and demand for primary plastics.

When planning further improvement of the national waste management infrastructures, including additional adjustments to the country's EPR policy, it would be indispensable to include in the debate not only industry representatives, but also Vietnam's large group of informal waste workers, who largely rely on poorly regulated waste-management structures for their income. Any regulation regarding improvements and formalisation of the current structures would ensure better conditions for these workers.

At the same time, as with many other developing countries, Vietnam would benefit from strengthening its policy enforcement mechanisms in order to move towards the more sustainable production and consumption of plastics and plastic products. Improved enforcement should include the collection of data on plastic waste generation, recycling rates, and policy compliance. Such data would also be indispensable for compliance with the respective provisions of the Global Plastic Treaty. Furthermore, continuous monitoring and evaluation of policy effectiveness can help adjust strategies in real time to ensure that the goals of reducing plastic pollution are met.

Similarly, Vietnam's plastic waste import regulations and controls should be strictly enforced to prevent an influx of international waste imports that cannot be properly handled. This policy ought to be complemented by measures to encourage the use of domestically generated recycled materials, which would support local recycling industries. Such measures would best be included in a renewed/updated National Action Plan, as will likely be prescribed by the Global Plastic Treaty.

Additionally, the government might want to prioritise purchasing environmentally friendly goods through a green public procurement programme, similar to successful initiatives in Europe and Japan which are increasing the market share of sustainable products (World Bank 2021).

In the interests of industry, the promotion of innovation and technology should be further supported. Investing in new technologies capable of recycling plastics more efficiently and at a lower environmental cost is crucial. Two examples: recycling technologies using artificial intelligence to pre-sort by polymer type, colour and other properties, such as Advanced Mechanical Recycling; and assistant robots that increase accuracy in sorting plastic waste, such as Robot-Assisted Conveyor Belts. Vietnam could establish innovation hubs to develop and test new recycling technologies and sustainable materials, and at the same time the country would profit from increased sharing of innovation and technology from around the world, as is currently foreseen in the Global Plastic Treaty.

### **How would the Global Plastics Treaty help? Through its provisions the treaty could:**

- Develop clear definitions and standards for materials and what constitutes 'environmentally friendly' materials
- Stimulate awareness-raising, education and research into care for the environment
- Set up a level playing field by introducing EPR in other countries through EPR provisions and guidance
- Foster international collaboration via international cooperation, information exchange and technology transfer
- Facilitate data collection via transparency, tracking, monitoring and labelling provisions
- Providing funds for investments into waste management by raising financial resources with financial mechanisms
- Enhance capacities and strengthen regulatory frameworks with support for capacity-building initiatives and technical assistance

Vietnam would also benefit from continuing efforts regarding international cooperation while at the same time increasing engagement with local communities and stakeholders. In order to drive meaningful change and reduce the environmental impact of plastic pollution in Vietnam, raising public awareness about the environmental degradation caused by plastic pollution and teaching people about the importance of recycling are essential for driving behavioural change. Educational campaigns should focus on reducing the use of plastic, showing how to re-use plastic, sorting waste properly, and presenting the benefits of recycling. To support such a goal, Vietnam would need to more strongly publicise its policies to the public, and then follow through with the policies and plans that have been proposed.

Lastly, a reduction of plastic production as several groups of countries have demanded in the negotiations for the Global Plastic Treaty, would likely also affect Vietnam's plastics industry. While there is a claim that a shrinking plastics industry would negatively affect employment rates and be detrimental to the domestic economy in general, a report by the Nordic Council of Ministers and Systemiq (2023) found that in a scenario with stringent global rules that included the overall reduction of plastic production, employment would shift from virgin plastic production towards other materials and new business models. Therefore, the net effect on the economy could be positive. The costs of environmentally harmful subsidies that contribute to plastic pollution could be saved and financial flows could be re-directed towards sustainable solutions, while plastic pollution costs would rise for industry, leading to higher recycling rates, for example through the implementing of very strict EPR rules.

And in this way, if implemented, the national policies and plans to curb plastic pollution would instead lead to significant gains both for society and for the environment (ibid.) in Vietnam.

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