



EXECUTIVE POLICY BRIEF

**ASSESSMENT OF
EXTENDED PRODUCER
RESPONSIBILITY (EPR)
FOR PLASTIC PACKAGING
WASTE IN VIET NAM**

FEBRUARY, 2021

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INTRODUCTION

Plastic pollution has reached gigantic dimensions worldwide and has caused serious consequences to marine life and wellbeing of society. Approximately 4.8 to 12.7 million tonnes of plastics are entering the oceans yearly, of which the vast majority leaks into the Indian Ocean and Pacific where many coastal-lands and countries are located. These leakages are caused by a lack of a sound waste collection and treatment system. Especially low- and middle-income countries often face budget shortfalls for waste management.

Due to a dynamic economy, rising living standards and changing consumption patterns, **Viet Nam’s plastic consumption is growing by double-digit numbers annually, from 2010 to 2015 at a rate of 16% to 18% per year.** Plastic’s share in Viet Nam’s municipal waste is estimated at around 13%, with a growing tendency. Despite tangible improvements, significant volumes of plastic remain uncollected and are burned openly or littered into the environment, damaging the terrestrial and marine environment. **An amount of plastic products, up to 730,000 metric tons/ year, is not correctly collected by the waste collection system and – by a large portion – ends up in the ocean (marine litter)** [Jambeck et al., 2015]

The amended Law on Environmental Protection 2020 outlines, among others, a mandatory EPR for packaging materials. WWF’s report ‘Assessment of Extended Producer Responsibility (EPR) for plastic packaging waste in Viet Nam’ provides findings meant to inform policy makers and relevant stakeholders engaging in Viet Nam’s transition towards a more sustainable waste management. This Executive Policy Brief provides summary of recommendations concluded by the report.

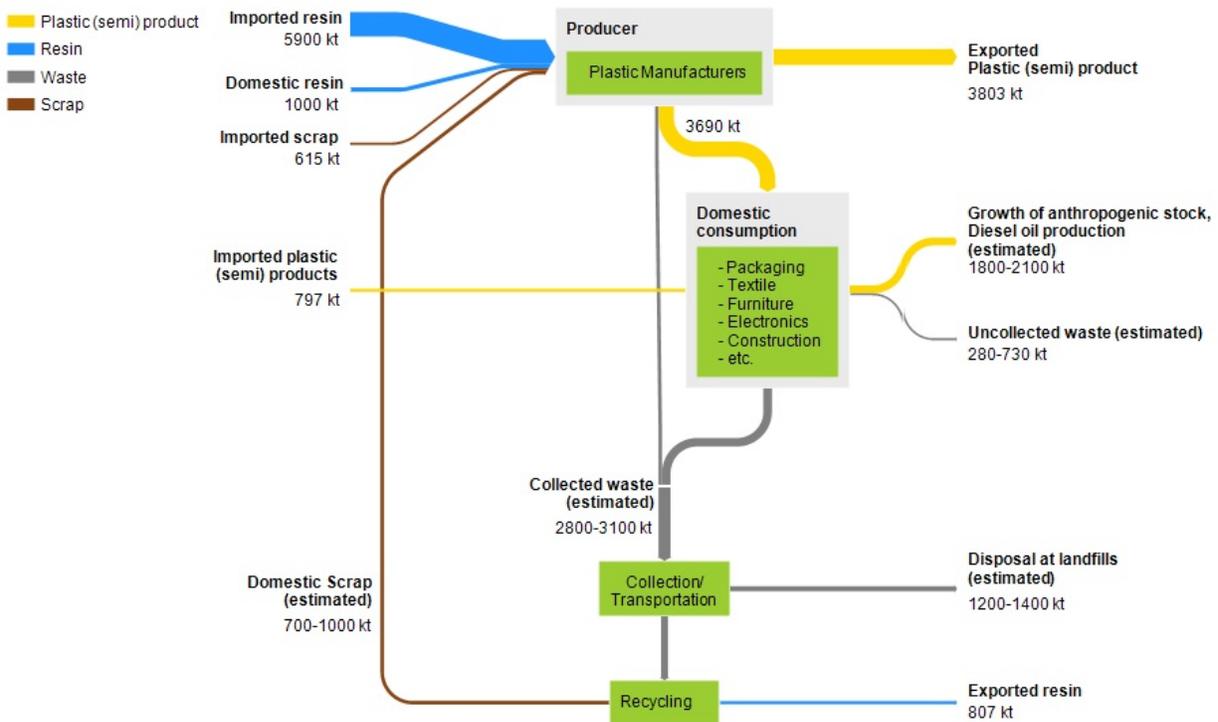


Figure 1: Annual material flow in Viet Nam’s plastic sector [P4G (2019), own research]

LEGISLATIVE FRAMEWORK IN VIET NAM

Policy makers, brand owners and consumers worldwide – and increasingly so in Viet Nam – show an interest in transitioning from linear consumption patterns towards more circular economic practices in order to address plastic pollution. Extended producer responsibility (EPR) schemes have proven to be an effective measure on this pathway. The need to transition towards more sustainable packaging and a better plastic waste management has also widely been recognised across Viet Nam stakeholders.

Legislation in Viet Nam, including that of the waste management sector, is responsibility of the National Assembly. The environmental laws often contain only vague and superficial provisions on waste management. They deal with specific aspects such as responsibility for recycling in a more general way, while administrative structures and those involved in procedural matters are dealt with in greater detail. Still, there are some requirements (e.g. on waste segregation) which lack any detailing on practical implementation and supervision.

The amended Law on Environmental Protection, passed by the National Assembly in November 2020, contains specifications for separate collection and approaches for EPR.

Specifically, for the requirements in solid waste management **in Article 72** (replacing Article 85, the Law on Environmental Protection 2014), the law has supplemented a number of regulations, notably the principle of "Polluter pays" (Item 1) as well as responsibilities of organizations and individuals that generate waste (Clause b).

Article 73 (replacing Article 86, Law on Environment Protection 2014) supplements regulations on plastic waste, prevention of marine plastic waste pollution. In particular, there are two very important points in the Amended Law on solid waste management (**Articles 79**). They specify:

- › Neither reusable, recyclable waste, nor hazardous waste generated from the household is subjected to fee of collection, transportation and treatment, if they are segregated properly as regulated, to encourage household solid waste classification
- › Municipal waste fractions must be classified at source to improve management efficiency, along with the change of the fee collection mechanism for households by volume, contributing to strengthening the classification and minimizing municipal waste at source.

The new regulations in the law **related to solid waste** are quite significant. First of all because these regulations meet practical needs. They are in line with sustainable development trends and international experience and create an effective legal corridor. The law generally calls for fees for collection and transport of municipal waste that cover the associated costs, according to "polluter pays" principle.

Currently, in Viet Nam, most municipal waste has not been classified/ separated at source, but is collected and transported to landfills or treatment areas. The separation of municipal waste as specified in **Article 75** of the amended Law (including 3 basic types: solid waste reusables and recyclables; food waste; other municipal waste) is essential to gradually solve the shortcomings in the collection, transportation and treatment, especially in big cities with high population density. Separating waste at its source (households or similar waste generators like restaurants) would help increase recycling and reusing; reduce costs for waste treatment and improve efficiency of environmental management. Assigning to the local People's Committee to decide a specific

classification of municipal waste depending on the socio-economic condition of each locality is appropriate.

At the same time, the amended Law also introduces a new approach (**Article 54 and 55**) on EPR.

STATUS QUO: WASTE MANAGEMENT SYSTEM AND RECYCLING MARKET FOR PLASTIC PACKAGING WASTE IN VIET NAM

Four significant characteristics specify the Vietnamese context:

1. **High-value recyclable packaging is already separated from household waste** to a limited extent and transferred to recycling systems. Extraction is often informal and the subsequent value chain is based on a functioning market.
2. The **recycling capacities of Viet Nam are insufficient** for the mentioned, locally generated, and high-value recyclables, especially in light of the growing middle class and the expected increase in per capita packaging consumption. Some recyclers and aggregators import and process imported recyclables, occupying large capacities.
3. **Low-value packaging and non-recyclables** (e.g. all kind of flexibles like films, sachets and composites) **are mostly disposed of and collected together with other municipal waste**. So far, there is no systematic separation and recycling of the low-value recyclables. Depending on the locally prevailing collection and disposal system, all of these end up in landfills, or are littered in the environment with potential and apparent leakage into marine ecosystems. The capacity of suitable disposal options via sanitary landfills is not sufficiently available across the country.
4. **Packaging waste management realities vary significantly across Viet Nam**, most notably between urban and rural areas: while in some urban areas highly efficient waste segregation and waste collection is practiced, some rural areas do not even have any form of waste collection leading to practices of illegal dumping and open burning. A transition to a sustainable waste management requires an approach that is flexible enough to account for all differences and directs investments and actions tailored to the need of each region.

EXTENDED PRODUCER RESPONSIBILITY AS MEANS TO IMPROVE WASTE MANAGEMENT

The need for improving the current waste management of packaging in general, and plastic packaging in particular has been widely recognised across Viet Nam. First important steps have been taken, such as the amended LEP, which outlines a mandatory EPR system.

EPR is an environmental policy approach based on **obliging producers to assume full responsibility for the products** – not just during the in-use phase (e.g. through complying to certain health and safety standards) but also **during the end-of-life phase** once their products and packaging have become waste. Extended Producer Responsibility (EPR) schemes are increasingly recognised as effective policy approach to curb insufficient waste management and littering around the globe (see Figure 2).

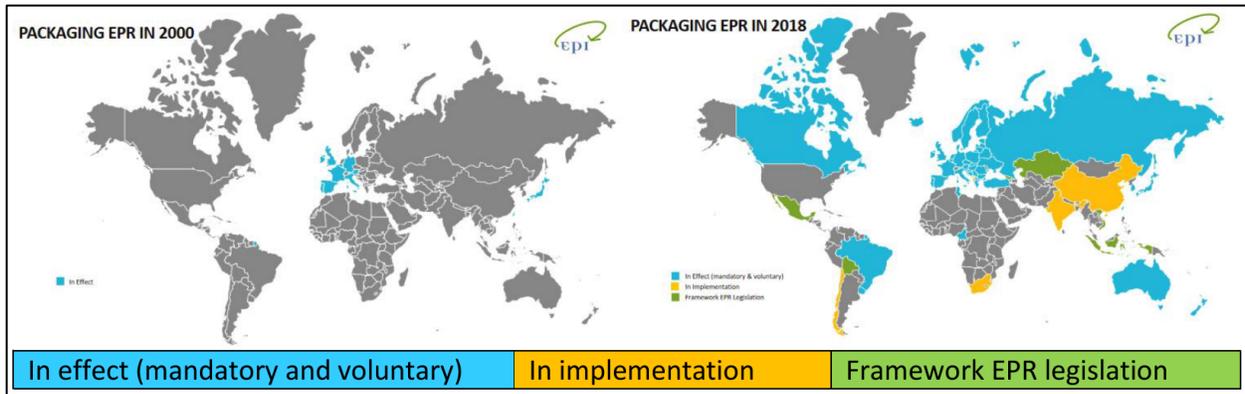


Figure 2: Data Sort: Worldwide expansion of packaging EPR [EPI (2018) in WATKINS & GIONFRA (2019)]

Extensive experience with EPR schemes for different waste types, including packaging waste, has first been introduced in European and other OECD countries. By now, a wide range of countries all over the world has already introduced or is in the process of introducing waste management systems that incorporate elements of EPR. Furthermore, several companies and business associations have launched voluntary commitments and initiatives to accelerate the transition to sustainable waste management and circular economy by pushing for EPR schemes, including Viet Nam. As there is no ‘one size fits all’-scheme, operationalised systems show relevant differences: some cover only certain fractions or items (e.g. PET bottles); some are voluntary, others (particularly in Europe) mandatory. Figure 2 therefore cannot indicate the effectiveness of the EPR system respectively implemented but showcases how EPR concepts have – as a policy to effectively curb the negative consequences of deficient waste management – gained track over the last years.

As EPR systems are rather complex and involve a plethora of public and private sector stakeholders at all stages of the value chain, their institutional and regulatory settings – their architecture – are crucial for the day to day operationalisation and the long-term success. Within the boundaries of the system architecture, the operationalisation is outlined. To ensure the participation of all stakeholders and their compliance, a sound monitoring and enforcement is complementing the system. Thus, the following three topics determine further action on implementing a functional EPR system:

1. The **system architecture** to determine the overall institutional and regulatory settings
2. The **system operationalisation** outlining the actual management of the waste subject to EPR to achieve the desired objectives of, for instance, increased waste collection, recycling and reduced littering
3. The **system enforcement, supervision and monitoring** mechanisms to ensure the long-term viability of the system.

DEVELOPING A CUSTOMIZED EPR SCHEME FOR VIET NAM

Based on the analysis undertaken, the following EPR scheme architecture is proposed:

➔ **Mandatory EPR scheme**

Provide a reliable financial basis for large-scale collection, sorting and recycling of packaging which is crucial for creating sufficient business cases along the value chains

→ **EPR scheme for all consumer packaging materials and specified non-packaging plastic items**

Include all such materials (e.g. plastics, paper, metals, composites) from households and equivalent places of origination (e.g. service packaging commonly used at restaurants), to create a financial and organisational basis for treating critical products and to avoid undesired substitution effects in packaging design

→ **Joint management of VEPF and PRO**

A joint management under both state management and industry-led Producer Responsibility Organisation (PRO) is proposed. This system architecture prevents negative effects of competition options for companies to assume their extended responsibility and thereby advocates for a different setup compared to the current amended Law

→ **Modulated fees**

This enables steered recycling market through application of reduced EPR fees for high-value recyclable packaging (bonus) and an increased EPR fee (malus) for low-value and non-recyclable packaging, to be paid by the obliged companies

Within the boundaries of this architecture, the waste management under the EPR system should be operationalised as follows:

→ **Mandatory separate waste collection**

collecting all system-relevant packaging and plastic items regardless of their commercial value through a system separate from municipal waste. This separate collection can be realised through a separate bin, container or bag and is a crucial prerequisite for high-quality recycling – as it enables economies of scale. Separation from contaminants (e.g. organic waste) at source is crucial for the subsequent processes like sorting and recycling

→ **Focus on setting up infrastructure**

through constructing new sorting facilities and optimising existing ones. Sorting facility operators need to be officially registered. In addition, recycling capacities will have to be expanded significantly, particularly in light of Viet Nam's currently growing middle class combined with the apparent deficiencies in waste management infrastructure

→ **Ownership of collected packaging material**

In the initial phase, the PRO has the full material ownership and markets the sorted material. It is also possible that a third entity/consortium would be founded by interested parties, acting as a “guarantor”, contracts with the PRO on taking over certain material types can be agreed upon; even if the actual price is low or at zero

→ **Recycling standards and fund for waste management operators**

EPR packaging waste is only allowed to be recycled in plants that meet these standards to increase high-quality recycling. Existing recyclers – who do not meet these standards yet – can apply for financial support from a fund for waste management operators for upgrading their equipment and processes. An operational EPR system will result in better availability of recyclable plastic waste – both in terms of quality and quantity

→ **Green public procurement**

To increase the demand of recyclates and enable economies of scale for recycled low-value packaging, the **public procurement consistently uses recycled products and thus**

motivates other stakeholders to jointly realise economies of scale, progressively establishing a functional market for recyclates

→ **Informal sector inclusion**

through anchoring a respective paragraph in a legal framework as well as through setting economic incentives for the concerned people to attract informal parts of the waste management sector to become integrated into the formal system.

As third, complementing element, it is advocated to put a **strict monitoring and enforcement system** into place: controls and penalties are indispensable and shall be carried out by governmental institutions like the Ministry for Natural Resources and Environment (MoNRE) to ensure compliance of all actors.

In detail, the following recommendations are proposed to ensure monitoring and enforcement:

→ **Register for producers and importers**

to collect, store and process data of companies that put packaging on the market. The data enables the entity in charge of the register to identify the producers and importers, conduct data reporting, and monitor and supervise operations of the EPR scheme and the obliged companies. All producers and importers that are obliged by regulation, have to register

→ **Register waste management actors**

to create transparency and build a more reliable basis for the selection and finance of recognized measures and the monitoring of PRO spending. A registration is obligatory for actors performing waste management tasks (collection, sorting, recovery)

→ **Regular and enforced monitoring and inspections**

primarily through on-site audits and mass flow verifications of the system-relevant packaging and plastic items in order to validate the cashflow of the EPR fees from the obliged companies to, eventually, the waste management operators. Due to Viet Nam's significant waste imports from other countries, it is particularly important to ensure that payments are only made for processing domestic waste

→ **Simple reporting scheme**

in which reports can be submitted online to enable all waste management operators to participate in the system including the integration of the informal sector

→ **Standards anchored in a legal framework**

to provide legitimacy to the technical, environmental and social welfare standards used within the EPR system for its operations

COST BENEFIT ANALYSIS

The objective of the cost-benefit analysis (CBA) of Viet Nam's current waste management practices versus a potential EPR implementation is to highlight potential economic and environmental benefits. CBA has been commonly applied in the waste management to assess a particular treatment system before a final decision has been made by an authority. In this study, the CBA analysis distinguishes in between the status quo and the introduction of a functional EPR system. The description is chronological according to the packaging's route ordered according to the packaging's route from generation to segregation, collection, aggregation to recycling and disposal, conversion. It ends with accompanying processes, like education. The focus is on the

achievements brought by an enhanced recycling, possible through a separated household collection of any recyclables. This analysis concentrates on operational changes/ results from an operational EPR system.

Table 1: Impacts of a change from the status quo to a functional EPR system

	Status Quo	Extended Producer Responsibility (EPR) system
Generation	Very limited separation at source: Mixed disposal of high value-, low value- and non-recyclables	Separation of system relevant packaging and plastic items from other municipal waste mandatory at household level (or equivalent sources) (+) Enhanced recyclability (e.g. less contamination) through a respectively tailored sorting system (-) More complex waste management at source, e.g. through more space requirements for separate bins
Collection, segregation and sorting	Collection of municipal waste administered by (local) government with significant regional differences (urban vs. rural, state owned vs. private contractors, among others)	Collection services for system relevant packaging and plastic items awarded to the most capable operator adhering to technical, environmental and social welfare standards (private or public, e.g. through tendering process) (+) adequate, increasingly ambitious collection rates of obliged items and materials throughout the whole country (-) establishing collection infrastructure for system relevant packaging and plastic items in the whole country requires significant investments (on the short term, concentration on more urbanised regions may require less funds covering the same waste amounts)
	Separation of only high-valuable fractions from other municipal waste, accelerated in rural areas.	More formalised sorting, aggregating and transport with more ambitious targets over time. (+) recycling sector less dependent on external factors that are out of its sphere of influence (e.g. fluctuating resource prices) (+) more predictable market conditions (e.g. mid- and long term contracts) allowing for CAPEX investments (+) more regulated working conditions (e.g. better health care coverage, work safety) (+) higher domestic value creation results in bigger employment (-) risk of market concentration with bigger, organizationally more capable firms pushing vulnerable population out of the value chain. Risk depending on how inclusive the informal sector integration is designed (-) Lowers valuable content in official system until transition complete (-) Extra cost for running effective sorting plants
Recycling	Recycling of high value recyclables into middle-low quality recycled granules.	Recycling of high value recyclables into good quality recycled granules. (+) Increased recycling revenue from local converters and export (+) Viet Nam's recycling sector becomes internationally more competitive and creates more value for the domestic economy

	Status Quo	Extended Producer Responsibility (EPR) system
	Little- to no recycling of low-value recyclables.	<p>Recycling and alternative high-quality processing of low-value recyclables.</p> <p>(+) economies of scale enable formerly unviable recycling processes for low-valuable recyclables</p> <p>(+) EPR system enforces higher recycling quota, therefore reducing the burden for the environment</p> <p>(+) value and job creation in recycling business</p> <p>(-) conversion of materials that, from an economic point of view, are unviable to be used, will be subsidised distorting free market mechanisms</p>
Conversion	High portion of recyclate export with high dependency from imported virgin plastics	<p>More plastic circulation and value creation domestically.</p> <p>(+) domestic value addition enable additional CAPEX and professionalization of the recycling industry, also in the international context.</p> <p>(+) more balanced trade balance/ less resource imports</p> <p>(-) utilizing recycled, potentially lower-quality recyclates substitutes virgin material and may lead to inferior product quality</p>
	Missing incentives to increase recycling fractions	<p>Increased conversion of locally recycled granulates due to better available qualities and incentives.</p> <p>(+) Lower cost sourcing of local recyclate granules</p> <p>(+) less dependency on prevalent plastics imports, better trade balance</p> <p>(+) Strengthening of Viet Nam’s recycling and plastic sector</p> <p>(-) utilizing recycled, potentially lower-quality recyclates substitutes virgin material and leads to inferior product quality</p>
Disposal	Illegal littering and bulk disposal into the (marine) environment prevalent; open burning practices in a few places	<p>Littering into (marine) environment discouraged through setup of a system that incentivises better waste treatment, also for low-valuable recyclables</p> <p>(+) lower external costs (damage to urban and natural ecosystems)</p> <p>(+) integrating informal workers into the system based on cleanliness as a service instead of “cherry picking”</p> <p>(-) EPR costs internalised, i.e. higher for consumer at point of sale</p>

IMPLEMENTATION PLAN FOR PROPOSED EPR SCHEME

Implementation requires three main steps:

- 1. Establishing a legal framework of a mandatory EPR system and strengthening an institutional framework** to make the law practicable and effective, agreements and discussions between competent authorities and the private industry are required. Within the course of the implementation, roles of involved institutions need to be defined and basic principles of financing need to be agreed upon.
- 2. Establishing a voluntary, pre-PRO basis preparing the development of a mandatory EPR.** It is recommended to interim set up a voluntary PRO. Through such, companies and organisations voluntarily cooperate and negotiate with the policy makers about the setup of the mandatory system regarding organisational and regulatory foundation

as well as control mechanisms. Moreover, it allows all actors to gain first-hand experience on operating EPR system which will facilitate the subsequent mandatory EPR.

3. **Defining mechanisms for continuous improvement and optimisation**, starting after the mandatory EPR system is launched. After the mandatory EPR is in place, steps must be taken that ensure the EPR system is continuously being optimised and evolved.

The areas are described in detail and broken down into steps with respective time frame¹ in following proposed implementation plan tables, which is also visualised in Table 2:

Table 2: Proposed steps to establish the legal framework of a mandatory EPR system

Step	Objective	Activities	Target	Actor	Time frame
1	Capacity building on EPR in order to prepare for legal framework	Present and discuss outcomes of proposed EPR scheme for Viet Nam with relevant private sector stakeholders (e.g. PRO Viet Nam, waste management operators, obliged companies (SMEs and MNCs)) Share information	Align understanding and architecture of the proposed EPR scheme and its mechanisms and entities across all relevant parties involved (focus on private sector and waste management operators)	NGOs (e.g. WWF) in collaboration with other partners	Within 1 year until 12/2021 (immediate start)
2	Capacity building on EPR in order to prepare for legal framework	Present and discuss outcomes of proposed EPR scheme with national and local authorities	Align understanding of the proposed EPR scheme and its mechanisms and entities across all relevant parties involved (MoNRE, others), highlight common goals and interest with other national plans & policies	NGOs (e.g. WWF) in collaboration with other partners	Within 1 year 12/2021 (immediate start)

¹ **Short term measures (within 1 year)** describe actions that can be taken immediately, given a political consensus. They entail, with respect to the legislative framework, enacting bans and other orders. They also include measures put into place by the private sector, possible within the current framework of policies and laws, e.g. changing behaviours and business practices. Starting projects, discussions and initiatives that enable medium and long term measures are also part of this category.

Medium term measures (within 3 years) describe actions that need preparatory time in order to fulfil their functions. The set-up of a new institution with its tasks, its organizational structure and its role in the given regulatory framework is included here. It also refers to processes of coordination that determine how to share tasks and responsibilities in between different organizations and institutions.

Long term measures (within 5 years) build on discussions started as short term measures and on institutional and organizational set-ups initiated as medium term measures. In addition to the aforementioned, experiences have to be built in order to achieve incremental change and improve structures and processes.

Step	Objective	Activities	Target	Actor	Time frame
3	Prepare for legal framework	Anchor EPR system in LEP	First step and legitimation to implement EPR in legal framework	MoNRE/ other public agencies in coordination with initiating private sector	Within 1 year 12/2021 (after capacity building)
4	Prepare adaptation of legal framework	Set up binding timeframe for establishing legal framework, for example mandatory EPR system by 2025	Fixed horizon as appropriate	DLA, other national authority in coordination with initiating private sector	Within 3 years 12/2023
5	Build executing and guiding body of legal framework	Establish knowledge, human and structural resources within MoNRE and other agencies	Prepare for EPR being put into force by a government body	MoNRE authority in coordination with initiating private sector	Within 3 years 12/2023 (following 4)
6	Tailor EPR framework to Vietnamese conditions	Define <ul style="list-style-type: none"> - Responsibilities and obliged companies - Plastics & packaging to be covered - Targets - Control mechanisms by competent body - Exemptions - Scope, design, disclosure of registers 	Create a mandatory EPR scheme that is practical, clearly defined, substantial and measurable	MoNRE in cooperation with private industry	Within 3 years 12/2023 (following 5)
7	Tailor EPR framework to Vietnamese conditions	Coordinate with parallel legislation to for example avoid double payment of obliged companies And also harmonize existing law that impairs the EPR legislation Use existing laws for licensing/ registration Align/ create regulations to support recycling and waste reduction (e.g. landfill tax, exemptions)	Create mandatory EPR system that does not conflict with but is ideally supported by laws	MoNRE and other affected ministries	Within 3 years 12/2023 (parallel to 6)
8	Tailor EPR framework to Vietnamese conditions	Evaluate drafted legal framework and its impact on the private sector	Insights on benefits, upcoming issues and potential future consequences for the private sector in order to observe these after	MoNRE also drawing from private sector conclusions about measures	Within 3 years 12/2023

Step	Objective	Activities	Target	Actor	Time frame
			implementation and act accordingly		
9	Roll out legal EPR framework	Put developed framework into force Develop register	Mandatory EPR system	National government/ law makers	Within 5 years until 12/2025

RESPONSIBILITIES AND SETUP OF THE PRO

In a collective EPR scheme, the obliged companies fulfil their responsibilities by paying a fee (the so-called EPR fee) to the PRO – which in turn collectively organises and finances all take-back and treatment of the waste on their behalf. Hence, **the PRO is the most important element for establishing and operating any EPR system**. Due to its central role for operating the system, the PRO is also regarded as the system operator. See annex 9.6 in the full report for details on possible PRO set ups.

In particular, the PRO is responsible for the following tasks in the EPR scheme:

- › **Registration of all obliged companies** (*in cooperation with the supervisory authorities*): These are the companies introducing system relevant packaging and plastic items onto the market
- › **Collection and administration of all funds** from all obliged companies while ensuring fair costs and therefore not harming the competitiveness of a participating company
- › **Tendering and contracting** for collection and recycling of packaging waste
- › **Documentation** of collection, sorting and recycling of packaging waste
- › **Informing and educating** all waste producers and consumers about the importance of an environmentally sound waste management, including aspects like separate collection
- › **Monitoring all services** that have been awarded to service providers, specifically services relating to the fulfilment of collection and recycling by waste management companies
- › **Financing all of the system's tasks** with funds provided by the obliged companies
- › **Documentation and verification** to the supervisory authorities: The PRO has to prove that it has completely fulfilled all its tasks and aims and used the paid fees of the obliged companies accordingly

Just as the exact EPR system setup varies across countries, so does the PRO setup. Fulfilling the tasks of a PRO can be achieved through different options. As shown from the experiences made in European countries, there is **no one single most successful setup**. The success is determined through an effective and efficient organisation, financing, administration and monitoring of the system complemented through constant learning and optimisation based regular evaluations of the system's success.

Following the basic principles of the EPR, the PRO is usually an organisation established by the private industry. Nevertheless, it is also possible that the PRO is part of a public authority.

Table 3: Proposed steps to establish voluntary, pre-PRO and facilitate development of mandatory EPR

Step	Objective	Activities	Target	Actor	Time frame
1	Present and discuss idea of voluntary pre-PRO	Present and discuss outcomes of proposed EPR scheme with relevant stakeholders of plastic supply chain (resin importer, packaging producer, packaging user, etc.)	Align understanding of proposed EPR, PRO, responsibilities across all relevant parties involved (private industry)	NGOs (e.g. WWF) in collaboration with other partners	Within 1 year 12/2021 (immediate start)
2	Present and discuss idea of voluntary pre-PRO	Present and discuss outcomes of proposed EPR scheme with already established similar organisations (e.g. formation PRO Viet Nam) Discuss their potential role	Align understanding of proposed EPR, PRO, responsibilities	NGOs (e.g. WWF) in collaboration with other partners	Within 1 year 12/2021 (immediate start)
3	Identify participants for voluntary pre-PRO	Identify, connect and combine relevant stakeholders and obliged companies that are willing to participate (applies for both SMEs and MNCs) Establish parameters for a pre-PRO	Create an organisation that participates actively in the development of a legal framework (see Table 2)	WWF/ IUCN and PRO Viet Nam together with brand owners and affected associations	Within 1 year 12/2021 (parallel to 4)
4	Define setup of pre-PRO on voluntary basis	Allocate and define <ul style="list-style-type: none"> - Responsibilities - Targets and aims - Membership - Membership fees - Advisory board - Reporting 	Prepare a pre-organisation that is meant to become the mandatory PROS	WWF (moderating) together with brand owners and affected associations	Within 1 year 12/2021 (parallel to 3)
5	Build expertise and competence of pre-PRO	Establish knowledge, human and structural resources of the competent body	Prepare a pre-organisation that eventually becomes the mandatory PRO	Initiating private industry stakeholders (First movers in voluntary PRO)	Within 3 years 12/2023 (after 4)
6	Advertise and strengthen member base of pre-PRO	Public relations work and acquisition of members	All companies and organisations along the plastic supply chain can become member in the voluntary PRO, not just the future obliged companies.	Initiating private industry stakeholders (First movers in voluntary PRO)	Within 3 years 06/2023 (after 5)

Step	Objective	Activities	Target	Actor	Time frame
			Developing a tailored system should be done by all companies and organisations along the plastic supply chain.		
7	Kick off pre-PRO operations and engagement as driving force for mandatory EPR	Roll out pre-PRO activities and organisation	Implement an organisation that participates actively in the development of a legal framework (see Table 2).	Initiating private industry stakeholders (First movers in voluntary PRO)	Within 3 years 12/2023
8	Run pre-organisation	Run measures and pilot projects in order to develop an entire and proper plastic collection and recycling and waste data gathering, evaluation of insights	Create a waste management structure in accordance to outlined operationalisation of proposed EPR scheme (see 4) that can be scaled up and form the basis for a national implementation	Pre-PRO together with partners of supply chain (local authorities and municipalities as well as waste management operators and further stakeholders)	Within 3 years 12/2023
9	Run pre-organisation	Run measures and pilot projects in order to develop a sound mandatory EPR. This would include: <ul style="list-style-type: none"> - registering obliged companies - calculating their fees and establishing a controlling system to avoid free riders or false reporting - measures for mass flow validation - raising awareness - integrating informal sector - reporting to measure goal progress 	Create necessary mechanisms to prepare for transition to a mandatory PRO. Interacting with and informing national authorities.	Pre-PRO together with partners of supply chain	Within 3 years 12/2023

Step	Objective	Activities	Target	Actor	Time frame
10	Start mandatory PRO	Transition from a voluntary pre-organization to a mandatory PRO	Create a proper, well-prepared mandatory PRO to achieve aims of the EPR framework	Pre-PRO	Within 5 years until 12/2025

Table 4: Proposed steps for improving/ optimising mechanism once mandatory EPR system comes into force

Step	Objective	Activities	Target	Actor	Time frame
1	Run mandatory PRO	<ul style="list-style-type: none"> - Run registration system - Run and tender waste management by using fees - Run controls - Report regularly - Raise awareness 	Fulfil requirements of legal framework	Mandatory PRO	Within 5 years until 12/2025 (after EPR framework is in place)
2	Control and enforce mandatory EPR scheme	<ul style="list-style-type: none"> - Check and confirm PRO's reporting and control - Test and check register reporting 	Monitor the fulfilling of the legal framework	Competent body on base of (annual) reporting of the PRO, might use third parties	Within 5 years until 12/2025 (after EPR framework is in place)
3	Optimise mandatory PRO	Use and amend modulated fees to give financial incentives to strengthen recycling	Fulfil requirements of legal framework, optimising recycling amounts	Mandatory PRO	Within 5 years until 12/2025 (after EPR framework is in place)
4	Optimise mandatory PRO	Raise the demand for recycled materials by giving incentives (financial and/or quota/amount)	Fulfil requirements of legal framework, optimising recycling amounts	Mandatory PRO	Within 5 years until 12/2025 (after EPR framework is in place)
5	Optimise mandatory PRO	Harmonise and formalise collection schemes for Viet Nam	Fulfil requirements of legal framework, optimising collection amounts	Mandatory PRO	Within 5 years until 12/2025 (after EPR framework is in place)
6	Optimise mandatory PRO	<ul style="list-style-type: none"> Optimise internal control mechanism Optimise external control mechanism Permanent check-up in terms of necessary amendments from conclusions of the running system, incl. registers 	Close financial and organisational gaps	Mandatory PRO	Within 5 years until 12/2025 (after EPR framework is in place)



WWF is an independent conservation organisation, with over 30 million followers and a global network active in nearly 100 countries.

Our mission is to stop the degradation of the planet's natural environment and to build a future in which people live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

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