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Extended Producer Responsibility (EPR) for packaging waste in Vietnam

Policy Brief

In cooperation with
the Department of Legal Affairs of MONRE



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WHY EPR FOR PACKAGING ? - 15 REASONS

ENVIRONMENTAL

1. Leads to higher separate **collection and recycling rates** of packaging waste (plastics, paper and cardboard, glass, metals).
2. Contributes to **more environmentally friendly packaging design** and reduces overpackaging.
3. Decreases **environmental pollution** such as plastic leakage into canals, rivers and oceans as well as air pollution from open burning of packaging waste.
4. Increases **resource efficiency** to preserve virgin materials (e.g. oil, wood, metals, minerals) and natural ecosystems (e.g. forests) for our children.
5. Reduces greenhouse gas emissions to **mitigate climate change** for limiting droughts, floods, and rising sea levels.

ECONOMIC

6. Provides a **participatory framework** for companies along packaging value chains.
7. Improves business cases and attracts investments to further **develop the recycling and waste management industries**.
8. Contributes to **job creation and high-quality employment** in terms of income, qualification and working conditions.
9. Reduces the **dependency on imports** of virgin materials and enhances competitiveness of secondary raw materials.
10. Fosters **tourism** through a cleaner environment.

SOCIAL

11. Contributes to **information and awareness raising for consumers** about how to segregate and handle their packaging waste at home.
12. Leads to a **healthier environment** for families, including reduced risks in food chains.
13. Increases **social recognition** for people working in recycling and waste management.
14. **Integrates semi-formal and informal waste workers** by improving their working conditions and livelihoods.
15. Enhances **interaction amongst experts** of material suppliers, packaging designers and manufacturers, consumer goods companies, retailers and waste management operators.

WHAT IS EPR FOR PACKAGING ? - 10 QUICK FACTS

- 1) EPR is **defined** as an “environmental policy approach in which a producer’s responsibility for a product is extended to the waste stage of that product’s life-cycle” (United Nations Basel Convention guideline, 2019).
- 2) EPR policies for packaging have **emerged since the late 1980s/1990s**. They exist in different Asian countries (e.g. Japan, South Korea, Taiwan), in almost all member states of the European Union as well as in other parts of the world.
- 3) EPR systems for packaging are **different in each country** but have **common basic principles**. Obligated companies pay financial contributions for the types and amounts of packaging they put on the market in a specific country. These financial contributions serve to cover all or parts of the costs for collecting, sorting, transporting and recycling packaging waste and informing consumers.
- 4) EPR for packaging requires the creation of a **Producer Responsibility Organisation (PRO)** as a system operator. The PRO manages the financial contributions of obliged companies and makes contracts with municipalities and/ or waste management operators. There are different forms of PROs around the world and the specific set-up in Vietnam requires multi-stakeholder consultations.
- 5) EPR for packaging gives **additional responsibilities to companies along packaging value chains**. The legal framework needs to clearly define which types of packaging are covered and which types of companies are obliged to pay financial contributions. Clarifying these roles and responsibilities for financial flows in Vietnam requires multi-stakeholder consultations.
- 6) EPR for packaging includes a **register and data management system**. Different registers can be set up for obliged companies, approved waste management operators (collectors, sorters, recyclers) as well as auditors and experts.
- 7) EPR for packaging **shifts the perspective away from the sole responsibility of municipalities** for managing packaging waste. The legal framework needs to define the interaction between municipalities and the PRO. Different options are available and need to be discussed in multi-stakeholder consultations. EPR for packaging does not concern other parts of municipal solid waste management (e.g. organic waste, residual waste).
- 8) EPR for packaging relies on an **active role of the government**. Public authorities need to create and review the regulatory framework. They also need to supervise the PRO and whether collection and recycling targets are met. Setting-up a successful EPR system for packaging requires government to initiate a multi-stakeholder dialogue.
- 9) EPR for packaging is **different than a tax or public fee**, which are collected by public fiscal authorities and flow into the public budget. In contrast, financial contributions in EPR for packaging are collected and managed by a PRO and not by public fiscal authorities.
- 10) EPR for packaging contributes to **informing citizens**. Parts of the additional financial flows are used for awareness raising about how to segregate packaging waste at home. Obligated companies incorporate parts of their financial contributions into product prices. Per product, these additional costs are however so low that consumers do not feel them.

WHY EPR FOR PACKAGING ?

The current **review of the Law on Environmental Protection** offers the opportunity to create a **legal basis for Extended Producer Responsibility (EPR) for packaging waste**. EPR is an “environmental policy approach in which a producer’s responsibility for a product is extended to the waste stage of that product’s life-cycle” (UN Basel Convention, 2019)¹. It means that companies which put products on the market are also responsible for the collection, sorting and recycling or environmentally sound treatment of waste associated with these products. They thereby **contribute financially and organisationally** to the further development of waste management systems and circular economy in order to enhance recycling and resource efficiency, mitigate climate change and reduce environmental pollution.

The policy brief **focuses on EPR for packaging waste** as an example for EPR in general. Packaging waste is particularly relevant for reducing **plastic pollution and marine litter**. Worldwide, about 25-40% of plastic consumption serve for single-use packaging and about 60-90% of marine litter consists of plastics². EPR for packaging can contribute to **increase the collection and recycling rates** of packaging waste (plastics, paper and cardboard, glass, metals). It thereby reduces the pollution of air, soils, canals, rivers and oceans by unmanaged packaging waste. EPR for packaging leads to a more **environmentally**

[1] United Nations / Basel Convention (2019) Revised draft practical manual on Extended Producer Responsibility. Section II. UNEP/CHW.14/5/Add.1. Adopted by the 14th Meeting of the Conference of the Parties of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 29 April-10 May 2019. <http://www.basel.int/TheConvention/ConferenceoftheParties/Meetings/COP14/tabid/7520/Default.aspx>

[2] GIZ (2018) Marine Litter Prevention. P. 11. Reference to: A 40% share of packaging is indicated in UNEP, GRID (2016) Marine Litter Vital Graphics. P. 11. A 26% share of packaging in the plastic volume is indicated by World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company (2016) New Plastics Economy – Rethinking the Future of Plastics. www.ellenmacarthurfoundation.org/publications/the-new-plastics-economy-rethinking-the-future-of-plastics Plastics Europe estimates the share of packaging for post-consumer plastic waste at 60% according to European Commission (2018a) A European Strategy for Plastics in a Circular Economy. COM(2018) 28 final. P. 7. https://ec.europa.eu/commission/publications/legal-documents-plastics-strategy-circular-economy_en

sound design of packaging and increases **resource efficiency** (recycled materials partly substitute the demand for virgin materials, preserving natural resources). Increased recycling also contributes to **climate change mitigation** as recycling requires fewer fossil fuels than the extraction and transport of virgin materials. Depending on the respective conditions, recycling 1 ton of plastics can avoid 0.4 tCO₂-equivalent in greenhouse gas emissions – for glass it can avoid 0.5 tCO₂-equ and for aluminium 11.1 tCO₂-equ³.

Economically and socially, EPR for packaging contributes to the development of the recycling and waste management industry and the **creation of decent jobs**, integrating the existing waste workers. It reduces the dependency on imported virgin materials and supports tourism development through a cleaner environment. Consumer goods companies, packaging manufacturers, material suppliers and retailers benefit from a reliable and participatory framework, in which they can contribute to achieving environmental targets in a collective manner.

HOW DOES EPR FOR PACKING WORK ?

In EPR systems for packaging, the **responsibility of obliged companies** is not only limited to health and safety aspects after they sell their products. Rather, they also need to ensure that their packaging is reused or recycled instead of polluting the air, soils, waterways, and oceans. Such responsibility can be fulfilled individually by each company or collectively by several or all companies together.

Usually, EPR for packaging is fulfilled collectively through a **Producer Responsibility Organisation (PRO)**. In practice, obliged companies pay financial contributions to a PRO, which manages the funds.

[3] GIZ (2017) Sectoral implementation of nationally determined contributions (NDCs) – Circular economy and solid waste management. P. 4. <https://www.giz.de/download/giz2017-en-ndc-waste-management.pdf>

Depending on the respective system, the PRO concludes contracts with municipalities and/or waste management operators for the collection, sorting, recycling and transport of packaging waste. The PRO is mostly managed by the private sector as a means to achieve its collection and recycling targets indicated in the legal framework. Public authorities prepare the legal framework and supervise the PRO (e.g. through accreditation, participation in governance councils, regular audits).

EPR for packaging therefore means that packaging waste management is not any more the sole responsibility of public authorities in an end-of-pipe logic. EPR for packaging rather **increases the interaction between public authorities and stakeholders along packaging value chains** – from product designers, manufacturers and consumer goods companies to retailers, consumers and waste management operators. It follows the “**polluter-pays principle**”. Companies that put packaging on the market can be identified as “polluters” if they do not provide adequate systems for collection, sorting and recycling of the packaging waste they cause. They therefore **pay financial contributions to a PRO** to achieve collection and recycling targets.

In a competitive market in which all similar companies are obliged to pay, these financial contributions are usually incorporated into product prices. The additional costs are therefore partially covered **by consumers** who buy these products. As these additional costs are very low per product unit, consumers rarely perceive them. Partial cost coverage of packaging waste management by consumers also follow the “polluter-pays principle” as consumers have the choice of which products and packaging they buy. Furthermore, consumers have the obligation to participate in these systems by segregating packaging waste at home and by following indications on how to handle them.

EPR for packaging is a different environmental policy approach than fees and taxes raised by the government. Taxes are usually paid by companies or citizens to the government, flowing into the overall public budget. Fees are also raised and managed by public institutions but might be spent for specific purposes defined by a legal framework. In contrast,

financial contributions to an industry-led PRO are raised and managed by the private sector itself. They are however supervised and audited by public authorities. Such EPR for packaging contributions are complimentary to waste management fees, which are required to cover the costs of the overall management of municipal solid waste, e.g. organic and residual waste. EPR for packaging contributions can also be complimentary to taxes on specific raw materials (e.g. oil, fossil fuels, plastics) but are completely independent from them.

WHICH INTERNATIONAL EXPERIENCES EXIST ?

EPR for packaging is a **proven policy instrument**, which has continuously evolved since the late 1980s/1990s in Asia (e.g. Japan, South Korea, Taiwan) and the European Union (e.g. France, Germany)⁴. It is also in early development stages in several middle-income countries (e.g. India, Indonesia, Jordan, South Africa) and high-income countries (e.g. Chile, Singapore). It can be applied to **all packaging waste** (plastics, cardboard, glass, metals). While some voluntary schemes exist, EPR systems are **usually mandatory and based on a legal framework**.

The specific combination of different elements of EPR systems **vary between countries and waste types**. There is **no one-size-fits-all solution**. EPR systems usually evolve through the interaction between public and private stakeholders based on the existing formal and informal waste management system and the respective legal and socio-economic context. Developing EPR systems requires decision-making between different options based on evidence and **multi-stakeholder consultation**. **Key indicators for their success** include the separate collection rate for packaging, recycling rates and other indicators such as the development of the waste management and recycling industry, job creation and good working conditions, and the adherence to environmental standards.

[4] See Organisation for Economic Cooperation and Development (OECD) (2016) Extended Producer Responsibility – Updated Guidance for Efficient Waste Management. <http://www.oecd.org/environment/waste/extended-producer-responsibility-9789264256385-en.htm>

SUMMARY

Extended Producer Responsibility is also part of the **ASEAN Framework of Action on Marine Debris of 2019**. Amongst others, it suggests to “develop and implement EPR policies and schemes including design for environment, deposit refund, and take-back for reusing and recycling”⁵. The United Nations Environment Assembly’s resolutions 4/7 on Environmentally sound management of waste and 4/1 on Innovative pathways to achieve sustainable consumption and production of 2019 also mention EPR⁶. In 2019, the 14th Meeting of the Conference of Parties of the United Nations’ Basel Convention has adopted a revised Practical Manual on Extended Producer Responsibility⁷.

In 2016, the Organisation for Economic Cooperation and Development (OECD) has presented a comprehensive review of existing EPR systems in different countries⁸.

The maps below demonstrate how extended producer responsibility (EPR) programs for packaging have spread around the globe over the last decade, with programs requiring packaging makers to fund recovery systems taking root in a variety of countries.⁹ This momentum has accelerated considerably since the UNEP decision on plastics waste in March 2019 that underlined the key role of the EPR scheme on packaging to avoid littering and increase the recycling performances of plastics packaging.



Map: Development of Packaging EPR schemes worldwide, 2000-2018

[5] ASEAN (2019) ASEAN Framework of Action on Marine Debris. Action I, B.2. <https://asean.org/asean-framework-action-marine-debris/>

[6] United Nations Environment Assembly (UNEA) (2019) Resolution 4/7 Environmentally sound management of waste, <http://wedocs.unep.org/bitstream/handle/20.500.11822/28472/English.pdf?sequence=3&isAllowed=y> Resolution 4/1 Innovative pathways to achieve sustainable consumption and production. <http://wedocs.unep.org/bitstream/handle/20.500.11822/28517/English.pdf?sequence=3&isAllowed=y>

[7] United Nations / Basel Convention (2019) Revised draft practical manual on Extended Producer Responsibility. Section II. UNEP/CHW.14/5/Add.1. Adopted by the 14th Meeting of the Conference of the Parties of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 29 April-10 May 2019. <http://www.basel.int/TheConvention/ConferenceoftheParties/Meetings/COP14/tabid/7520/Default.aspx>

[8] OECD (2016) Extended Producer Responsibility – Updated Guidance for Efficient Waste Management. <http://www.oecd.org/environment/waste/extended-producer-responsibility-9789264256385-en.htm>

[9] Environmental Packaging International (EPI) (2018) [Environmental Packaging International (EPI), is a consultancy specializing in environmental compliance, product stewardship and sustainability related to packaging and products.]

WHAT IS THE PURPOSE OF THIS POLICY BRIEF ?

This **policy brief provides a first overview on the various elements of EPR for packaging waste**. It serves to provide input to the current amendment of the Law on Environmental Protection. The creation of a legal framework for an effective EPR system for packaging requires further legal work as it is not yet covered by existing decrees, Prime Minister Decisions or circulars. It can build upon international experiences¹⁰ as well as the existing Prime Minister Decisions No. 50/2013/QĐ-TTg on “Prescribing Retrieval and Disposal of Discarded Products” and No. 16/2015/QĐ-TTg on “Providing Regulations on the Recall and Treatment of Discarded Products”, which do however not include packaging waste¹¹.

The creation of the **National EPR Platform** by the Ministry of Natural Resources and Environment (MONRE) in March 2020 represents a milestone.¹² It serves as a working group to facilitate EPR schemes in Vietnam, amongst others for packaging waste. The working group currently consists of different administrative units of MONRE, private sector associations, civil society organisations and international organisations. Amongst others, it followed the signing of Memorandum of Understandings between MONRE and the **Packaging Recycling Organisation Vietnam (PRO Vietnam)** in September 2019 as well as between MONRE and the companies Unilever, Dow and SCG in February

2020.¹³ The National EPR Platform can pave the way for a **multi-stakeholder process** towards a functioning EPR system for packaging waste in Vietnam.

The **policy brief** starts from the current situation in Vietnam. It outlines how EPR could contribute to further develop the waste management system with a focus on packaging waste as an example. The policy brief describes key principles of how EPR for packaging works and what elements the elaboration of a legal framework would need to consider.

[10] As international experience see e.g. definitions of EPR in Art. 3.21 and Art. 8 of the EU Waste Framework Directive 2008/98/EC. The EU Directive 2018/852 amending Directive 94/62/EC on packaging and packaging waste prescribes that by the end of 2024 all EU member states need to have established EPR schemes for all packaging. See e.g. Packaging Law of Germany, which entered into force in 2019. See e.g. Singapore’s Resource Sustainability Act 2019 (No. 29 of 2019).

[11] Prime Minister Decision No. 50/2013/QĐ-TTg covers batteries and battery cells; electronic, civil and industrial electric equipment; chemicals used in industry, agriculture, fishery and medicine for humans; lubricants, grease; inner tubes, tyres; motorcycles and automobiles. Prime Minister Decision 16/2015/QĐ-TTg covers accumulators and batteries; electric and electronic equipment; different kinds of lubricants; inner tubes, tyres; motorcycles, motorbikes and automobiles.

[12] MONRE Decision No. 641/QĐ-BTNMT, 16th of March 2020

[13] Viet Nam News (2019) ‘Enterprises to handle plastic waste’. Website, 16 September 2019. <https://vietnamnews.vn/environment/535470/enterprises-to-handle-plastic-waste.html> Viet Nam News (2020) ‘MONRE teams up with firms on plastic waste management’. Website, 20 February 2020. <https://vietnamnews.vn/economy/602461/monre-teams-up-with-firms-on-plastic-waste-management.html>

WHICH TRENDS EXIST IN VIETNAM REGARDING PACKAGING WASTE ?



Vietnam has known **rapid economic growth and urbanisation** over the past decades. These trends have contributed to **changing consumption and production patterns** as well as **increasing waste generation**. A World Bank report of 2018 projected domestic waste generation in Vietnam to further increase between 2018 and 2030 from 1.31 to 1.72 kg per person and day in urban areas and from 0.86 to 1.13 kg per person and day in rural areas.^[14] The estimated composition of domestic solid waste varies between locations. In total, the annual waste generation has doubled during the last 15 years and is forecast to increase from 27 million tons in 2018 to 54 million tons in 2030.^[15] Plastics and nylon represent about 3.4 to 10.6%, paper and carton 3.3 to 6.6%, metal 1.4 to 4.9% and glass 0.5 to 2.0%. The biggest shares still consist of organic waste (50.2 to

68.9%) and inert waste (14.9 to 28.2%).^[16] According to a study by the World Wildlife Fund (WWF), Vietnamese households consumed about **1.2 million tons of plastic packaging** in 2016 (0.436 million t PET bottles and 0.04 million t other plastic bottles, 0.332 million t plastic film and bags, 0.202 million t plastic cups, cans and other containers, 0.214 million t other plastic packaging).^[17] Comprehensive assessments on the amounts and composition of packaging waste would need to be elaborated.

The current **COVID-19 crisis** has far-reaching socio-economic impacts, whose full scope still needs to be seen. Physical distancing measures rather contributes to **increasing amounts of packaging waste** (e.g. through supplies from supermarkets, e-commerce, food delivery and takeaway), while temporarily reduced tourism might counterbalance this effect to some extent.

[14] World Bank (2018) *Solid and Industrial Hazardous Waste Management Assessment – Options and Action Area to Implement the National Strategy*.P.45 <http://documents.worldbank.org/curated/en/352371563196189492/Solid-and-industrial-hazardous-waste-management-assessment-options-and-actions-areas>

[15] World Bank (2018) *Solid and Industrial Hazardous Waste Management Assessment – Options and Action Area to Implement the National Strategy*.P.14

[16] World Bank (2018) *Solid and Industrial Hazardous Waste Management Assessment – Options and Action Area to Implement the National Strategy*.P.46

[17] WWF (2020) *Plastic Packaging in Southeast Asia and China*. P. 7. https://d2ouwy59p0dg6k.cloudfront.net/downloads/wwf_plastic_packaging_in_se_asia_2020_v8_0214_final_.pdf

At the same time, **the existing semi-formal and informal networks for collecting, sorting and recycling recyclable materials** are hampered. It is estimated that in Hanoi about 10,000 itinerant collectors (“đồng nát”) normally collect recyclable waste (e.g. certain types of paper, plastics and metals) every day or buy it from households. They then sell it to about 800 waste depots (“bãi”), which further sell it to recyclers and craft villages.^[18] Due to COVID-19, many đồng nát have temporarily left Hanoi to their home villages. Furthermore, low oil prices currently decrease the competitiveness of recycled plastic materials compared to virgin plastics made of oil.

HOW CAN EPR FOR PACKAGING CONTRIBUTE TO DEALING WITH THESE TRENDS IN VIETNAM ?

[18] See e.g. NGUYEN Thai Huyen, Hanoi Architectural University (2019) *Power Point Presentation: Waste – a multilevel and multisectoral challenge calling for institutional and individual responsibilities*.

An EPR system for packaging waste might **counterbalance such high volatility of market prices in the future** as recycling does not depend only on market prices but also on financial contributions from companies that put packaging on the market. It would provide a framework for more **reliable business cases for recycling companies or other forms of treatment** (e.g. co-processing in cement kilns) that adhere to high **standards** in terms of technology, environmental aspects (e.g. wastewater treatment), health and safety and working conditions. The existing semi-formal and informal recycling value chains are associated with precarious social conditions, limited health and safety standards as well as environmentally hazards. Semi-formal and informal sector stakeholders usually only collect certain types of waste, which depends on fluctuating material market-values, transport distances, access to markets and recycling chains and other factors. Recycling rates thereby remain unknown and limited. An EPR system for packaging could increase separate collection and recycling rates and improve the quality of recycled materials.

1. WHY EPR FOR PACKAGING IN VIETNAM ?

In the medium term, an **EPR system for packaging should envisage to provide all households in Vietnam with access to collection points for packaging waste** for recycling or other forms of environmentally sound treatment. **EPR for packaging can however not solve all current challenges of domestic solid waste management in Vietnam.** For instance, about 15% of the urban population and 60% of the rural population do not have access to waste collection services.¹⁹ Functioning domestic solid waste management services by Cities' Urban Environment Companies (URENCOs), other companies and cooperatives with sufficient and reliable financing through public budgets and/or specific waste management fees from households and businesses are also required. EPR systems for packaging concentrate on packaging waste only. The general domestic solid waste (e.g. organic waste, residual waste) also requires functioning collection systems by municipalities.

WHAT LEGAL FRAMEWORK EXISTS IN VIETNAM REGARDING EPR FOR PACKAGING ?

A first legal framework for **Extended Producer Responsibility** for certain waste types exists in Vietnam in the Law on Environmental Protection of 2005 as well as the Prime Minister Decisions No. 50/2013/QĐ-TTg on "Prescribing Retrieval and Disposal of Discarded Products" and No. 16/2015/QĐ-TTg on the "Recall and Treatment of Discarded Products". Decision 16/2015/QĐ-TTg assigns certain responsibilities to "manufacturers" defined as production establishments located in Vietnam and official importers. In principle, they need to take back their own discarded products or cooperate with each other to ensure a system of taking back discarded products together at certain collection points. **These Decisions** are however not sufficiently implemented and they **do not include packaging waste.**

[19] World Bank (2018) *Solid and Industrial Hazardous Waste Management Assessment – Options and Action Area to Implement the National Strategy*. P. 37 ("waste collection coverage is reported at around 85% of urban population in urban areas and 40% in rural areas")

Further developing the legal framework on EPR for packaging in Vietnam could include the revision of the Law on Environmental Protection as well as the elaboration of a new Decree or an amendment of the Prime Minister Decisions e.g. with regards to clearer definitions and assignments of responsibilities and the intended EPR system for packaging. Such a new decree would need to involve close exchange with the private sector in order to enable the establishment of a functioning EPR system for packaging waste. The new Decree would also need to include an assessment of the interaction with the Law on Environmental Protection and other relevant waste management regulation, e.g. the Decree No. 38/2015/NĐ-CP of Government on the management of waste and scrap, the Decision No. 73/2014/QĐ-TTg of the Prime Minister on the list of scraps allowed to be imported for production materials, the Circular No. 36/2015/TT-BTNMT of MONRE on Management of hazardous wastes, and the Circular No. 41/2015/TT-BTNMT of MONRE on Environmental protection in import of discarded products for use as raw production materials.



2. HOW CAN EPR CONTRIBUTE TO PACKAGING WASTE MANAGEMENT ?

WHICH POLICY INSTRUMENTS CAN BE USED ?



There are different **policy instruments** and combinations that can be applied to set up an Extended Producer Responsibility (EPR) system for packaging. Most commonly, the following policy instruments are used in different countries:²⁰

1. A frequently used policy instrument consists in giving consumer goods companies and/or retailers the **responsibility to take back** their products' packaging after the packaging turns into waste. In this case, they need to take care to provide adequate collection systems and information to consumers to return packaging. Once returned, the obliged industry owns the packaging waste. Such take-back responsibilities should be accompanied by **quantified targets for separate collection and recycling** of waste types. The legal framework can leave it optional to companies if they fulfil this responsibility *individually*, i.e. that they put in place own collection, sorting and recycling channels, or, if they delegate this responsibility to a joint **Producer Responsibility Organisation**

(**PRO**), which *collectively* manages waste on behalf of obliged companies. For packaging, EPR systems with PROs are usually more efficient. Obligated companies usually need to report the amount and types of packaging put on the market to the PRO. The PRO needs to report to public authorities about the collective achievement of collection and recycling targets. The legal framework can include fines to companies, which do not participate in a PRO or set up own systems.

2. Another frequently used policy instrument therefore consists in **advanced disposal or recycling contributions** (or often called "fees" – not in the sense that it is paid to public budgets but to an industry-led or state-led PRO). It means that obliged companies pay a certain financial contribution for each packaging unit they put on the market, which serves to finance its collection, sorting and recycling once the packaging turns into waste. These contributions are usually collected and managed by a Producer Responsibility Organisation. To avoid confusion, the legal framework needs to clearly define which companies along the packaging waste chain need to pay such financial contributions.

3. A specific form of EPR consists of **deposit-refund systems**.²¹ When consumers buy e.g. a bottle, they pay a deposit on it at the point of sale. The deposit consists in a small amount of money in addition to the normal product price. Once consumers bring the empty bottle back to the shop, they receive the deposit money back. Consumers therefore have a financial incentive to turn discarded packaging back. Large-scale deposit-refund systems for reusable and single-use beverage containers of plastics and glass exist e.g. in Germany and Denmark. The operational and investment costs for the infrastructure of deposit-refund systems need to be covered by obliged companies, which put bottles on the market. Small-scale deposit-refund systems can also be used by individual companies (e.g. 19-liter drinking water containers in Vietnam) or at food markets, festivals, etc.
4. A further important policy instrument consists of **information and public awareness raising**. Citizens need to know how they should separate their waste and where they can put it, so that it gets collected and

recycled or at least treated in an environmentally sound manner. A legal framework therefore needs to clarify who takes care of information and awareness raising and who pays for it. Often it is a combination of the Producer Responsibility Organisation, municipalities and other stakeholders such as retailers.

Other environmental policy instruments can interact with EPR systems but are not directly part of it. They include **recycling standards** in terms of quality, health and safety and environmental aspects. They can also consist of **green public procurement** or regulations on **minimum recycled content** in products in order to **increase the demand for recycled materials**. **Taxes on certain materials** (e.g. oil or plastics) could also contribute to the price competitiveness of recycled materials but would need to be handled very carefully (e.g. what tax base and how to allocate the revenues). **Landfill bans** are also implemented in several countries in order to switch towards recycling and treatment value chains. EPR systems with the payment of fees for specific discarded products are usually also **complementary for pay-as-you-throw waste management fees** of municipalities for residual waste and organic waste.²²

[20] See also OECD (2016) *Extended Producer Responsibility – Updated Guidance for Efficient Waste Management*. P. 21-24. See Point 5 of *United Nations / Basel Convention (2019) Revised draft practical manual on Extended Producer Responsibility. Section II. UNEP/CHW.14/5/Add.1.*

[21] See e.g. GIZ (2018) *Deposit-Refund Systems (DRS) for Packaging*. https://www.giz.de/de/downloads/giz2018_Deposit-Refund-Packaging_web.pdf

[22] See also OECD (2016) *Extended Producer Responsibility – Updated Guidance for Efficient Waste Management*. P. 40 and p. 24.

WHY DO OBLIGED COMPANIES PAY FINANCIAL CONTRIBUTIONS TO A PRO AND HOW IS IT DIFFERENT FROM A TAX ?

For an EPR system to work, **assigning clear roles and responsibilities** in the legal framework is crucial. For instance, the responsibility to take back discarded products can also be assigned to retailers, which sell products in their shops. The obligation to pay financial contributions should however be assigned to those companies that put products on the market (manufacturers / importers). Otherwise it becomes unclear who is obliged to pay and there is a risk that nobody pays in the end.

These **financial contributions paid to a PRO are also different from a tax or public fee** as they are usually collected and spent by a PRO as a "private entity". These financial contributions do not pass through public budgets. The PRO needs to show to public authorities that it achieves collection and recycling targets on behalf of the obliged companies, which pay contributions to the PRO. The PRO also needs to have a certain level of transparency of financial flows and adequate accounting and audit procedures in place. Independent audits, supervision by government and/or membership of state representatives in the governing council of the PRO can be put in place for such accountability.

EPR systems for packaging cover parts or all the costs for the separate collection, sorting, transport and recycling of packaging waste as well as information to consumers. Its management usually takes place through financial payments by obliged companies to a Producer Responsibility Organisation, which makes contracts with waste management operators and/ or municipalities. The costs for the collection and treatment of **other domestic solid waste such as organic waste and residual waste** continue to be covered by public budgets and waste management

fees from households and businesses to municipalities or other public authorities. Its management continues to be handled by municipalities. The interaction between EPR for packaging and municipalities varies between countries.

HOW DOES EPR FOR PACKAGING CONTRIBUTE TO INCREASED COLLECTION AND RECYCLING RATES ?

Additional financial flows enable more stable prices for recyclable materials. They improve business cases for recycling companies and enhance the viability of investments in infrastructure and technologies that allow higher quality recycling under environmentally sound conditions. Additional financial flows also contribute to creating jobs and improving health and safety standards and incomes in the waste collection, sorting and recycling chain. Integrating currently informal waste workers is crucial in this regard. EPR systems can contribute to make the waste management sector more attractive to qualified personnel, which requires in turn appropriate professional and academic training and education. Additional financial flows can also improve information and awareness raising to citizens.

EPR systems **increase the interaction along value chains.** Manufacturers, consumer companies and retailers also need to think about waste management of their products and packaging. They therefore have **incentives to consider the reusability and recyclability** during the design of their products. Specific elements of EPR systems such as the modulation of fees to be paid by obliged companies can strengthen these incentives for eco-design.

The development of recycling in **Asian countries** such as Japan, South Korea and Taiwan as well as the **European Union** is closely linked to the establishment of EPR systems in these countries. In **Germany** for instance, EPR for packaging was first introduced in 1990/1991 with the establishment of

a Producer Responsibility Organisation ("The Green Dot") and the enactment of a Packaging Ordinance. Before, packaging waste was mainly disposed of at landfills, paper and glass were collected separately in some municipalities. Between 1991 and 2000, the material recycling rates of packaging increased from 11.7% to 52.7% for plastics, from 56% to 89.6% for paper, from 56.1% to 83.7% for glass, from 17.7% to 75.7% for aluminium and from 37.1% to 75.1% for tinplate.²³ The Packaging Ordinance was modified several times over the following decades to solve arising problems. In January 2019, a new Packaging Act entered into force in Germany to replace the Packaging Ordinance. Today, there are 10 different for-profit PROs in competition with each other due to anti-trust regulation. A new register ("Foundation Central Agency Packaging Register") is in charge of registering all obliged companies. For 2022, the German Packaging Act foresees the following recycling targets for PROs to achieve: 90% respectively for glass, paper and cardboard, ferrous metals, aluminium; 80% for beverage cartons; 90% of plastics should be treated with a mechanical recycling rate of at least 70%. For beverage packaging, Germany has put in place a deposit-refund system since 2003, which has achieved a return rate of 98.4% of empty bottles and other covered beverage containers in 2015.²⁴

[23] GIZ (2018) *Extended Producer Responsibility for Managing Packaging Waste*. P. 9. https://www.giz.de/de/downloads/giz2018_EPR-Packaging_web.pdf

[24] GIZ (2018) *Deposit-Refund Systems (DRS) for Packaging*. P. 4. https://www.giz.de/de/downloads/giz2018_Deposit-Refund-Packaging_web.pdf

3. HOW DOES EPR FOR PACKAGING WORK ?

WHICH BASIC PRINCIPLES EXIST ?



Existing EPR systems diverge from country to country and between waste types. There are however some common principles. To a certain extent, the **development of EPR systems means redistributing responsibilities of different stakeholders** along value chains. A legal framework needs to clearly define the type of responsibility of different categories of stakeholders.

Most importantly, the legal framework needs to identify the type of companies (domestic “producers” and importers) that is **obliged to ensure sustainable collection, sorting and recycling of packaging waste**. International experiences show that the companies that put packaged products on the market should have this responsibility. They usually consist of multinational consumer goods companies such as Nestlé, Danone, Unilever, Coca-Cola etc. as well as small and big national consumer goods companies. For Vietnam, technical discussions on defining obliged companies should take place through a multi-stakeholder dialogue.

In theory, they could fulfil their responsibility individually for their own packaging. As this would however be very complicated in practice, they **usually join forces and delegate the responsibility to a joint Producer Responsibility Organisation (PRO)**. In practice, the obliged companies therefore fulfil their responsibility through the payment of financial contributions to the PRO. If they do not fulfil this obligation, they might face monetary fines as determined in the legal framework and supervised by public authorities. The amount of payments depends on the amounts and types of packaging obliged companies use for their products, which they need to report to the PRO or a separate register. The amount of payments also depends on the financial and organisational set-up of the EPR system for packaging.

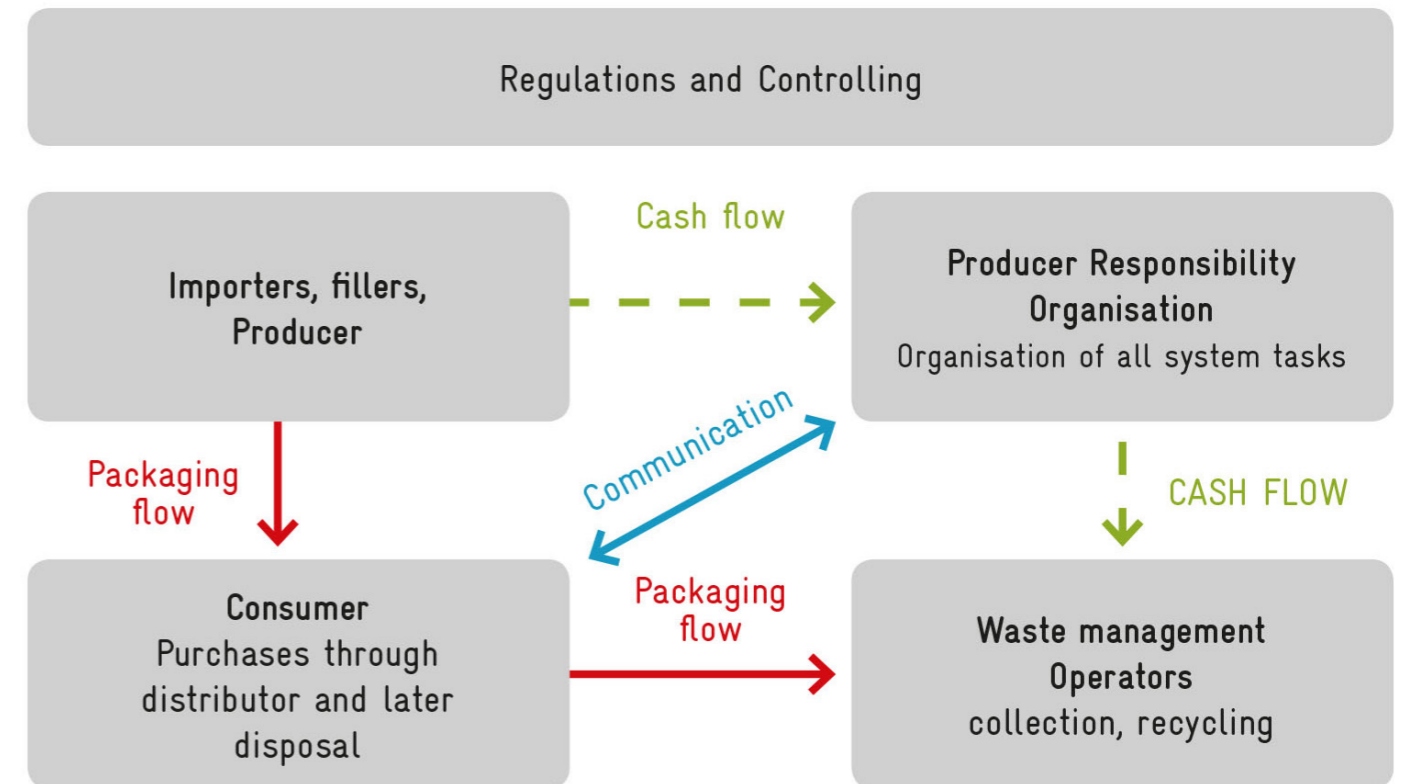


Figure: Simplified presentation of how an EPR system for packaging works²⁵

[25] See GIZ (2018) *Extended Producer Responsibility for Managing Packaging Waste*. https://www.giz.de/de/downloads/giz2018_EPR-Packaging_web.pdf

WHICH ROLES AND RESPONSIBILITIES DO DIFFERENT STAKEHOLDERS HAVE ?

Multi-stakeholder dialogues are necessary to define the types of packaging to include into the EPR scheme as well as the roles and responsibilities of different stakeholders along packaging value chains. They serve to prepare the legal framework and to ensure its implementation afterwards as the private sector plays a crucial role in EPR for packaging.

The legal framework needs to clearly define **which types of packaging** are covered by the EPR system. Usually they include sales, shipment and waste packaging that households consume. Other forms of packaging (e.g. transport, industrial, harmful substances, returnable) are often not included. **Sales packaging** is normally filled with products by consumer goods companies and then sold to retailers and shops. It is therefore convenient to assign the obligation to **consumer goods companies** to pay financial contributions to a PRO. It avoids double payments along the value chain. **Service packaging** consists e.g. of plastic bags and food containers that are filled in shops and take-aways. For this specific type of packaging, the **manufacturers of such packaging** are usually more convenient to identify as obliged companies.

Several **other responsibilities** are possible for stakeholders along packaging value chains:

- **Material suppliers / packaging manufacturers** should use recycled materials and design packaging that is easy to reuse and recycle.
- **Retailers** need to contribute to informing citizens about how they can separate different types of waste. In many cases, bigger retailers also have take-back obligations, which means that they need to provide separate bins e.g. for plastics, glass, metals, cardboard, light bulbs, batteries and take back electrical and electronic equipment up to a certain size. Specific measures for the e-commerce sector need to be considered.
- **Consumers** have the obligation to separate

their waste and appropriately use the respective infrastructure for separate collection provided by the PRO, retailers and municipalities.

- **Waste management operators** receive funds from the PRO for the collection, sorting and recycling operations. They should strive for high quality, sound environmental, health and safety standards and include the informal sector.
- **Local authorities** need to coordinate the interaction between the separate collection of specific waste types such as packaging waste or waste electrical and electronic equipment and the general domestic solid waste (e.g. organics and residual waste).

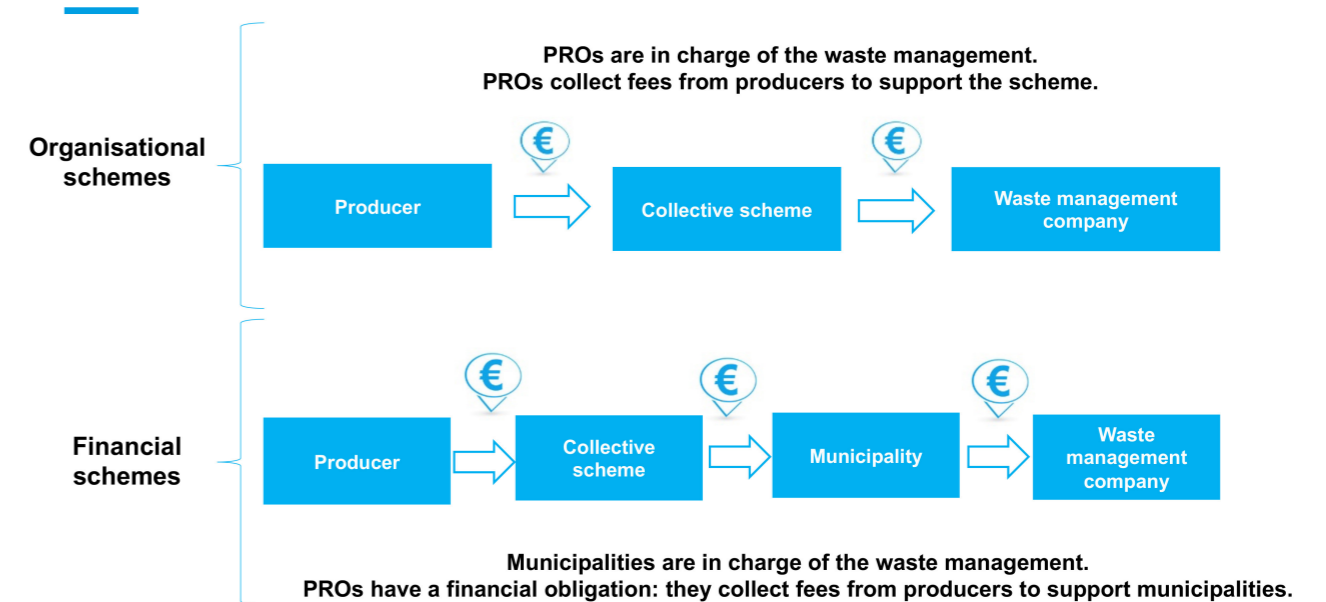
WHAT ROLE DOES THE PRODUCER RESPONSIBILITY ORGANISATION (PRO) PLAY ?

The **PRO** is a central organism in an EPR system and acts as a **system operator**. It is usually created by the obliged companies and sometimes by other stakeholders along value chains (state-led PROs also exist but are rare). The PRO needs to register all obliged companies and determine confidential reporting systems on the amount and type of packaging these companies put on the market. It needs to manage payments by the obliged companies to the PRO in an accountable manner. Furthermore, it needs to handle relations with municipalities and potential tendering processes for waste management operators, manage payments to them and control their service delivery. The PRO has to document its activities and the achievement of targets and report them to public authorities. Furthermore, the PRO also needs to contribute to informing and educating citizens about waste separation. A PRO requires authorization by public authorities (e.g. accreditation) and is supervised by them.

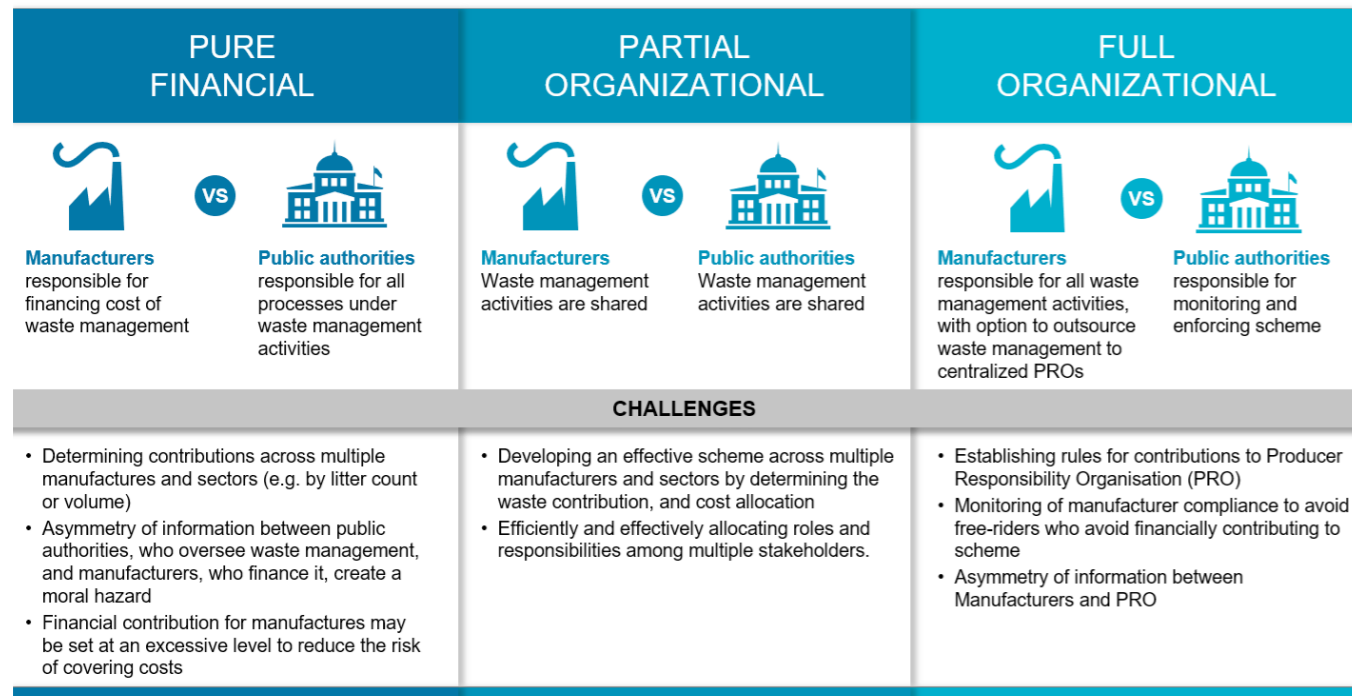
There are different options of how PROs can be set up. They can be *industry-led* (most common) or *state-led* (seldom). They can be *non-profit* (easier to start with) or *for-profit* (rather in further evolved schemes), also depending on whether there is a single PRO or several PROs in competition for packaging (see also section 4, p.26).

A major distinction consists in whether obliged companies and the **PRO only have a financial responsibility or also an organisational responsibility**. In the first case, obliged companies pay financial contributions to the PRO and the PRO transfers payments to municipalities, e.g. depending on the amount of packaging waste they collect and recycle. The municipalities conclude contracts with waste management operators (collectors, sorters, recyclers). If the obliged companies and the PRO also have operational responsibilities, the PRO concludes directly contracts with waste management operators. There are also several variations concerning the interaction between the PRO, public authorities in municipalities and waste management operators. For Vietnam, a study is in preparation to identify options for the relation between the existing formal, semi-formal and informal waste management operators and a potential EPR system for packaging.

Differences between organisational & financial schemes



3. HOW DOES EPR FOR PACKAGING WORK ?



<https://www.mmc.com/content/oliver-wyman/global-risk-center/insights/insights/publications/2018/dec/regulatory-regimes-to-reduce-plastic-pollution.html>

WHICH INTERNATIONAL EXAMPLES EXIST ?

An example of an existing single, non-profit, industry-led PRO within the EU is the French Citeo. It was founded in 2017 as the merging of Eco-Emballages, which had existed since 1992 for packaging waste, and Eco-folio that had existed since 2007 for graphic papers. Citeo is accredited as PRO by the French government for 5 years and conducts an audit every year. It counts about 250 staff members. About 28,000 companies are part of Citeo, whose governance council consists of representatives of the private sector (industry, retail and distance selling, the paper and publishing sector, services and material industries) as well as a state representative.

Obligated companies pay contributions to Citeo, which manages the financial flows and concludes contracts with municipalities. For packaging, Citeo managed funds of 710 million € from 20,559 companies, had contracts with 706 municipalities, collected 3.549 million tons of packaging waste, provided collection possibilities to 100% of the population and achieved a recycling rate of 70% in

2018 (based on its definition of "recycling").²⁶ Of each Euro contributed by obliged companies, 0.50€ supported the collection and 0.29 € the sorting of packaging waste. The remaining funds are used as follows: 0.03 € for material recovery and recycling, 0.04 € for energy recovery, 0.03 € for research and development and eco-design programmes, 0.07 € for awareness raising, 0.04 € for support and operation.²⁷ Besides packaging, France has step by step created several other EPR systems for different types of waste (e.g. packaging since 1993, batteries since 2001, tires since 2004, cars and waste electrical and electronic equipment since 2006, textiles since 2007, furniture since 2012, yachts and sports boats since 2016).²⁸

For packaging, **many different Producer Responsibility Organisations exist in Europe**, which are part of the associations EXPRA, PROSPA and PRO Europe. These associations at European

[26] Citeo (2019) *Rapport d'activité- Citeo et Adelphe 2018*. P. 7. https://bo.Citeo.com/sites/default/files/2019-07/Citeo-Rapport-activite-2018_0.pdf; Citeo website: <https://www.Citeo.com/notre-organisation>

[27] Citeo: *Citeo, accelerating the circular economy*. P. 14.

[28] Agence de l'Environnement et de la Maitrise de l'Énergie (ADEME) (2020) *Les filières à responsabilité élargie des producteurs (REP) – EPR systems*. Website. <https://www.ademe.fr/expertises/dechets/elements-contexte/filieres-a-responsabilite-elargie-producteurs-rep>

level serve to exchange experiences about EPR for packaging and represent common interests of PROs towards the EU.²⁹

In South Korea, the **Korea Resource Circulation Agency (KORA)** is the system operator within the EPR system.³⁰ It counts about 600 member companies and has about 90 employees. It manages the financial flows to support collection, sorting and recycling. KORA covers four types of packaging materials (metal cans, glass bottles, carton packaging and certain plastics) as well as other products (tires, lubricants, batteries, fluorescent lamps and buoys for fisheries). It receives its budget from the Korea Packaging Recycling Cooperatives (KPRC), which collects fees from obliged companies. KPRC was founded in 2013 as a merging of different cooperatives, which had existed since 2003 and originally covered different packaging waste types. KPRC has about 4,700 member companies and 40 employees. The Ministry of Environment provides the policy and legal framework. The supervision of KPRC and KORA are covered by the Korea Environment Corporation (KECO).³¹

In **South Africa**, PETCO is a voluntary PRO as there is currently no mandatory EPR system for packaging waste but several legislative developments and suggestions by the South African packaging association on-going.³² PETCO exists since 2004 and focuses on the collection and recycling of PET bottles. It connects resin suppliers, converters, bottlers, brand

[29] EXPRA. <http://www.exptra.eu/en/members>; PROSPA, <https://prospalliance.org/>; PRO Europe, www.pro-e.org

[30] KORA Website: www.kora.or.kr/eng

[31] See for the system the presentation "Overview and Performance of Korean EPR System" by Dr Kim In Hwan, EPR Workshop, 22 November 2019, Hanoi, Viet Nam.

[32] Department of Environmental Affairs (2016) *National Pricing Strategy for Waste Management*. <https://cer.org.za/wp-content/uploads/2010/03/National-Pricing-Strategy-for-Waste-Management.pdf>; Department of Environmental Affairs (2017) *Call on the paper and packaging industry, electrical and electronic industry and lighting industry to prepare and submit Industry Waste Management Plans to the Minister for approval*. Government Gazette, No. 41303, www.environment.gov.za/sites/default/files/gazetted_notices/nemwa59of2008_paperandpackagingindustry_electricalandelectronicindustry_gn41303_0.pdf; PackagingSA (2018). *Packaging SA Extended Producer Responsibility Plan – Volume 1*. <https://www.packagingsa.co.za/wp-content/uploads/2019/11/Packaging-SA-EPR-Plan-Volume-1-1.pdf>; Republic of South Africa (2009) No. 59 of 2008 – *National Environmental Management: Waste Act, 2008*. Government Gazette, No. 32000, 10 March 2009.

owners, retailers, collectors and recyclers. PETCO manages funds paid by packaging converters in the form of voluntary recycling levies per PET resin purchased. It also receives voluntary grants from brand owners, retailers and resin producers.³³ With the received funds, PETCO subsidizes recycling companies, develops markets for recycled PET, trains collectors and promotes awareness raising.³⁴ PETCO managed to increase PET recycling from 9,840 tons (16%) in 2005 to 98,649 tons (63%) in 2018.³⁵

In **Taiwan**, the system is based on the Waste Disposal Act and the Resource Recycling Act as legal framework. In the 1990s, it started with obliged companies having the physical and financial responsibility for managing certain waste types. Since 1998 however, obliged companies pay fees into a Recycling Management Fund, which is managed by the Taiwanese Environmental Protection Administration. Obligated companies report the quantities of products put on the market and pay the according amount of fees into the Recycling Management Fund. The Recycling Fund subsidizes collection and recycling. It covers packaging containers, motor vehicles, waste electrical and electronic equipment, tires, batteries and lighting sources. Audits and certification are provided by external companies. The system is run by a government-led PRO. Obligated companies and other stakeholders participate in a Fee Rate Review Committee.³⁶

[33] See PETCO, Website, <https://petco.co.za/who-we-are/>

[34] See Presentation "A case study of EPR in South Africa" by Dr Casper Durandt, EPR Workshop, 22 November 2019, Hanoi, Viet Nam

[35] See PETCO, Website, <https://petco.co.za/how-is-pet-recycled/>

[36] See Taiwanese Environmental Protection Administration, Website, https://recycle.epa.gov.tw/en/aboutus_02.html; Presentation "30 Years of EPR in Taiwan and beyond" by Dr Chun-hsu Lin, EPR Workshop, 22 November 2019, Hanoi, Viet Nam

3. HOW DOES EPR FOR PACKAGING WORK ?

WHY DOES EPR FOR PACKAGING DEPEND ON CLOSE INTERACTION BETWEEN THE PUBLIC AND PRIVATE SECTOR ?

EPR systems are different from taxation. In the case of taxes, payments go to the public budget and are managed by public authorities. It means that the obliged companies do not have any influence on the use of the funds and cannot influence the achievement of collection and recycling targets. If taxation is used as a policy instrument, the responsibility of obliged companies is therefore limited to financial payments to public authorities. In this case, obliged companies cannot be made responsible for achieving collection or recycling targets.

Setting up **EPR systems with a Producer Responsibility Organisation managed by private sector stakeholders** is therefore often a recommended approach for countries where EPR systems do not exist.

It requires multi-stakeholder dialogues to find the suitable legal status for a PRO within the respective legal context, which allows the PRO e.g. to have a non-profit status and the possibility to manage economic and financial transactions for receiving payments and concluding contracts with waste management operators and municipalities. In Vietnam, the legal status of social enterprise might be an option but would require further analysis, amongst others in terms of its tax status. The PRO also needs to have clear accountability and transparency prescriptions and requires supervision by public authorities. For this purpose, public authorities also need to develop capacities in terms of organization and sufficient qualified personnel.



4. WHICH OPTIONS EXIST FOR ESTABLISHING EPR FOR PACKAGING ?

WHAT ELEMENTS TO CONSIDER FOR THE LEGAL FRAMEWORK ?



Developing EPR systems for packaging or other waste types **requires the elaboration of a clear legal framework as well as frequent consultations with the concerned private sector**. If the interaction with the private sector is not ensured, the legal framework risks not being implemented and not achieving its targets.

The **legal framework** should contain the following elements:

- Objectives of EPR for packaging (why to use this environmental policy approach) and quantitative targets (e.g. for separate collection and recycling rates of packaging waste, packaging waste reduction and increase of reusable packaging e.g. for bottles).
- Terms and definitions (e.g. of EPR, producers and importers, types of packaging).
- Clear assignment of responsibility to obliged companies and roles of other stakeholders along packaging value chains (packaging manufacturers, consumer goods companies, retailers (including e-commerce), consumers, waste management operators).

- Tasks of the PRO as system operator.
- Which types of packaging waste are concerned and from which sectors.
- Parameters for management of financial flows and determining financial contributions by obliged companies to a PRO, including the “eco-modulation” of these contributions with regards to material types and use of recycled materials.
- How local authorities/ municipalities are involved.
- How to integrate the informal and semi-formal waste management sector.
- Responsibilities for communication, information and education.
- Potentially standards for collection, sorting and recycling.
- Roles and responsibilities of public authorities for the supervision and control of the system.
- Fines for obliged companies and/or PROs that do not fulfil their responsibilities.

WHICH OPTIONS FOR POLICY DECISIONS EXIST ?

Multi-stakeholder dialogues between public and private stakeholders, academia and civil society are crucial to build up trust and participation from all sides for an effective EPR system for packaging. Amongst others, the following **questions should be clarified**:

- **Voluntary vs. mandatory EPR system:** Voluntary initiatives (e.g. PETCO in South Africa) are more flexible but usually limited in scope. Such initiatives depend on Corporate Social Responsibility budgets of individual companies or focus on certain waste items with sufficient market value. Mandatory systems (e.g. Citeo in France, KORA/KPRC in South Korea, Germany) enable the participation of all or at least a significant share of companies. They serve to push all companies to fulfil their responsibility and avoid “free-riding” of companies that do not pay financial contributions but benefit from packaging waste management paid by others. In a

functioning mandatory EPR system, the additional costs for companies are usually incorporated into product prices and thereby covered by consumers when they purchase the products. These costs per product are usually very low and hardly felt by consumers. Such systems are in line with the “polluter pays principle”. Functioning mandatory systems generate much bigger financial flows than voluntary systems. In Vietnam, voluntary initiatives such as PRO Vietnam can be crucial in a preparation phase towards a mandatory EPR system for packaging.

- **Industry-led vs. state-led PRO:** PROs are usually industry-led as obliged companies delegate their assigned responsibility to the PRO. Some countries have a single non-profit PRO for all packaging waste (e.g. France, Belgium, Japan, South Korea). Due to anti-trust legislation, other countries have an EPR system for packaging with several competing for-profit PROs (e.g. Austria, Germany). Developing a new EPR system is usually more feasible with a single non-profit PRO as the level of transparency is higher, it is easier to control and it is easier to avoid free-riding. It is

4. WHICH OPTIONS EXIST FOR ESTABLISHING EPR FOR PACKAGING ?

clear for obliged companies where they have to register, report their amounts of packaging and pay financial contributions to and easier to verify whether they do it or not. It is also more feasible for a single non-profit PRO to publish general information about costs and revenues than for competing for-profit PROs. In Vietnam, PRO Vietnam and/ or similar initiatives can represent the starting point for creating a single non-profit PRO for packaging leading to a much broader scope of companies involved. Besides industry-led PROs, there are some exceptions of state-led PROs (e.g. Taiwan). Such state-led PROs would need to be set-up in a manner to clearly distinguish their financial flows from taxation and public fees as the role of obliged companies is limited to financial payments. In Vietnam, options for using the Environment Protection Fund for EPR for different types of waste are currently explored. State-led PROs can be directly set up by public authorities. They have however the disadvantage that the private sector cannot or only to a limited extent influence its decision-making. It is a less participatory approach than an industry-led PRO, which requires active engagement by the private sector to found a PRO, make it operational and achieve targets.

- **All packaging vs. individual materials:** The legal framework should clearly define which types of packaging and sectors are concerned. In terms of sectors, EPR for packaging often covers sales and service packaging used by households (e.g. not industrial as well as transport and commercial packaging). Certain types of packaging waste consumed by households have a higher material market value than others – a reason why existing semi-formal and informal systems focus only on parts of the packaging waste. In order to increase separate collection, sorting and recycling rates and to contribute to overall policy objectives such as pollution prevention and climate change mitigation, all packaging should be included by an EPR system for packaging. It also facilitates communication about effective packaging waste segregation by consumers and avoids switching from materials with EPR obligations to materials without EPR obligations. In terms

of communication to consumers, covering all packaging right from the beginning is easier to understand than including different packaging types bit by bit. The amount of payments per packaging unit to the PRO can however vary according to the material type and its recyclability. Separate collection systems can also differ, e.g. separate containers for glass and metals in the public space, door-to-door collection of mixed packaging in specific bags or containers, take-back bins in supermarkets, integration of existing formal, semi-formal and informal collection and sorting systems. In the case of one PRO for all packaging types, obliged companies can register all packaging materials there. Otherwise, they need to pay fees to different PROs for different packaging materials.

- **Same level of financial contributions vs. modulation of financial contributions:** Some areas of a country are more remote than others, which means that the separate collection and transport to recycling facilities is more expensive. Usually, the level of financial contributions paid by obliged companies (or indirectly by consumers through slightly higher prices of packaged products) does however not distinguish between geographic locations within a country. The level of financial contributions usually depends on the quantity / weight of packaging and the type of material. Furthermore, an eco-modulation of financial contributions takes into account the recyclability of materials. A coherent definition of “recyclability” (in terms of technological feasibility and availability of recycling infrastructure in a country) is a pre-requisite for improving eco-design and implementing an effective eco-modulation of financial contributions. Obligated companies need to pay higher financial contributions for materials, which are difficult to recycle (e.g. multilayer packaging) and lower amounts for easy-to recycle materials. This eco-modulation therefore provides incentives to design packaging for reusability and recyclability. In order to ensure a level playing field between companies, every obliged company needs to follow the same criteria for calculating the financial contributions by the PRO.

- **Full vs. partial cost coverage through the EPR system:** EPR systems for packaging or specific other discarded products need to be coordinated with the waste management systems of municipalities for the overall municipal solid waste. It therefore needs to be clarified if a PRO needs to cover all arising costs for the collection, sorting and recycling of packaging waste or if parts of the costs are covered by municipalities. Full cost coverage by the PRO has the advantage that it allows for a complete overview of all actual costs and according revenues by the PRO. If municipalities co-finance, there needs to be a mutual transparency of the arising costs and ways to determine how covering the costs are split. In any case, municipalities continue to be responsible for waste types that are not covered by EPR systems, usually e.g. organic waste and residual waste, and need to cover these costs through waste management fees or the general public budget. Municipalities are also co-responsible for public information and awareness raising about separate waste collection.
- **Relation between municipalities, waste management operators and informal sector with the EPR system:** The actual collection systems for packaging waste or other discarded products need to be established in close relation between the PRO and municipalities. They need to take into account the existing formal waste management system, in Vietnam e.g. the URENCOs and other companies in charge of collection. They also need to integrate as far as possible the existing semi-formal and informal systems for the collection, sorting and recycling of waste. Such integration requires consultations with informal sector stakeholders and the identification of suitable forms of integration in terms of accounting, infrastructure as well as environmental, social and health and safety standards. In Vietnam, the existing system of “đồng nát” and “bãi” in Hanoi and equivalent systems in other cities and areas are currently analysed for options of integration with an EPR system for packaging.
- **Introduction in whole country at once vs. stepwise rollout in Provinces / municipalities:** The biggest need for adequate collection might

exist in rather remote areas. At the same time, the costs are however highest there. Starting with an EPR system at once in the whole country might however overburden the development of a system. It would require setting up the appropriate organizational mechanisms and making the infrastructure investments at once. Another option consists in phasing in the collection, sorting and recycling step by step either by Province / municipality or by percentage of packaging waste of the whole country. The PRO should be set up for the whole country right from the beginning. The geographical coverage can however be phased in. The ultimate objective should however be to cover the whole country within a specific time frame (e.g. 5 or 10 years).

- **Deposit-refund systems** for specific types of packaging such as bottles would be a specific system and follows a different logic than financial contributions to a PRO. Deposit-refund systems can be implemented by individual consumer goods companies and retailers as well as e.g. markets and festivals based on a direct relation to consumers. It provides economic incentives to consumers to return empty bottles or other items such as cups or plates, which can be reused or recycled. Large-scale deposit-refund systems with several retailers and brands involved (e.g. in Germany) require a clearing house for financial flows. They are effective in achieving high return rates of reusable and recyclable bottles but require high investments in the system set-up and infrastructure.

Considering suitable options for EPR for packaging in the revision of the Law on Environmental Protection is a major step for developing a legal framework for EPR for packaging. Vietnam requires continued development of its waste management system and a circular economy to keep up with its rapid economic growth, urbanization and changing consumption and production patterns. Developing an EPR system for packaging provides environmental, social and economic opportunities in this regard as one of several building blocks in a broader integrated waste management and circular economy perspective. Multi-stakeholder dialogues are key to establish an effective EPR system for packaging. The creation of the National EPR Platform by MONRE represents a milestone for it. It can coordinate regular exchange, studies and pilot activities.

IMPRINT

This Policy Brief was prepared in the framework of the cooperation between the Department of Legal Affairs of the Ministry of Natural Resources and Environment (MONRE) and the project “Rethinking Plastics – Circular Economy Solutions to Marine Litter”.

The “Rethinking Plastics” project is funded by the European Union and the German government through the German Federal Ministry for Economic Cooperation and Development (BMZ) and is implemented by Expertise France and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The policy brief was developed with the kind technical support of Citeo. Parts of the policy brief’s content draw on the “EPR for Packaging Toolbox” of the PREVENT Waste Alliance currently in preparation by GIZ and cyclos.

The contents of this publication are the sole responsibility of Expertise France and GIZ and do not necessarily reflect the views of the European Union or the German Federal Ministry for Economic Cooperation and Development.



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<https://beatplasticpollution.eu/rethinking-plastics/>

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Design/ layout:
Laurent Onguéné

Photo credits/ sources:
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As of June 2020

