

STUDY ON PACKAGING WASTE MANAGEMENT

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Spanish National Markets and Competition Commission
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Study on Packaging Waste Management

E/CNMC/004/21

SUMMARY

Packaging waste management must be efficient and competitive to speed up the transition to a more sustainable economy, which better preserves the environment and public health. The study therefore analyses this historically monopolised sector. To boost competition in this area, it is crucial that regulation and authorities actively promote it. To this end, the study recommends the following. The first is to reduce entry barriers by streamlining authorizations and increasing flexibility for companies to switch PROs. Second, establish a pro-competitive coordination framework between public and private agents, including detailed regulation, a supervisory and conflict resolution body, a standard agreement, a single agreement system and provide Public Administrations with sufficient resources. Third, promote transparency and enhance traceability and fraud detection. Fourth, prevent and address conflicts of interest related to the involvement of associations or waste managers in PROs. And fifth, to encourage competition in waste allocation.

KEY WORDS: packaging waste; regulation; competition; recycling; sustainability.

JEL CODES: D4; H7; K2; L5; Q5.

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ACRONYM INDEX

PA Public Administrations.

ADEME Agence de l'Environnement et de la Maîtrise de l'Energie (French Environment and Energy Management Agency).

ARA Altstoff Recycling Austria.

CAC Environmental Contribution to CONAI, Italian entity.

CIFREP Intersectoral Commission for EPR.

CONAI Consorzio Nazionale Imballaggi (Italian National Packaging Consortium).

DSD Duales System Deutschland.

LE Local Entities.

EPSU European Federation of Public Service Unions.

ISPRA Istituto Superiore per la Protezione e la Ricerca Ambientale (Italian Institute for Environmental Protection and Research).

MITERD Spanish Ministry for the Ecological Transition and the Demographic Challenge.

OECD Organisation for Economic Co-operation and Development.

HDPE High-density polyethylene.

PET Polyethylene terephthalate.

GDP Gross Domestic Product.

WEEE Waste from Electrical and Electronic Equipment.

EPR Extended Producer Responsibility.

PRO Collective Producer Responsibility Organisation (SCRAP in Spanish).

DRS Deposit-Refund System.

IMS Integrated Management System.

IPR Individual Producer Responsibility.

TUA Testo Unico Ambientale (Italian Consolidated Environmental Text).

GVA Gross Value Added.

ZSVR Zentrale Stelle Verpackungsregister (German Central Agency Packaging Registry).

GLOSSARY

Ecomodulation: A strategy that involves adjusting the rates paid by producers according to the recyclability and environmental impact of their products, thus encouraging the design of more sustainable products.

Packers: economic agents who package products for marketing. This includes traders supplying service packaging or packaging for remote selling to the final consumer.

Packaging: a product made of all types of materials used to contain, protect, handle, distribute and present goods, from raw materials to finished goods, at any stage of the value chain.

Commercial packaging: packaging which, without being considered as household, is intended for use and consumption in the course of commercial activity, wholesale and retail, catering, offices, etc.

Household packaging: packaging of products intended for use or consumption by private individuals, provided that such packaging is likely to be purchased by the consumer in shops, irrespective of the place of sale or consumption.

Industrial packaging: packaging intended for use and consumption specific to industrial, agricultural, livestock, forestry or aquaculture activities, excluding commercial and household packaging.

Recyclable packaging: packaging that can undergo a transformation process to obtain new materials or products.

Reusable packaging: any packaging that has been designed and marketed for multiple circuits or rotations throughout its life cycle.

Packaging manufacturers: entities that manufacture packaging or import already manufactured empty packaging from other EU Member States.

Remaining fraction: household waste of that which is not subject to separate collection.

Waste management: process including collection, transport, recovery, disposal, sorting, landfill management and waste monitoring.

Waste manager: person or entity, public or private, authorised to carry out waste management operations.

Product producer: any natural or legal person who professionally develops, manufactures, processes, treats, fills, sells or imports products. This includes private label holders or third party marketers, and e-commerce platforms that place packaged products on the Spanish market without an authorised representative.

Green Dot: logo symbolising that the packer complies with its EPR obligations. In addition, the fee covering the cost of packaging waste management, calculated on the basis of the number of packages, their weight and characteristics, is also often referred to as the green dot.

Recycling: the process of transforming waste materials into new products, materials or substances, excluding energy recovery and transformation into fuels or landfill materials.

Separate collection: collection where a waste stream is kept separate by type and nature to facilitate specific treatment.

Extended Producer Responsibility (EPR): the principle that a producer is responsible for the products they place on the market as far as their waste management is concerned, assuming the responsibility for management and costs.

Packaging waste: packaging or material discarded or intended to be discarded by the holder, except production residues from the manufacture of packaging.

Municipal waste: mixed and separated waste from households and other waste similar in nature and composition, excluding waste from production, agriculture, forestry, fisheries, septic tanks, sewage, sewage treatment plants, end-of-life vehicles and construction and demolition waste.

Collective Producer Responsibility Organisation (PRO): an entity set up to assist obligated parties in fulfilling their duties under EPR, often charging a fee to cover the costs of waste collection, sorting and treatment.

Individual Producer Responsibility (IPR): a system whereby a producer fulfils EPR obligations on an individual basis.

Integrated Management System (IMS): collective management system, predecessor of the PROs, which allowed producers to comply with the EPR.

Treatment: waste recovery or disposal operations, including preparation prior to these operations.

Recovery: an operation where the relevant waste is put to a beneficial use, replacing other materials that would otherwise have been used to fulfil a particular function. This includes energy recovery and solid waste recovery.

EXECUTIVE SUMMARY

The transition to a more sustainable, efficient, environmentally and health friendly economy is a priority in Spain and internationally. This means moving towards a circular economy that reincorporates waste into the production cycle, exploiting its potential and limiting its environmental impact. To this end, numerous measures have been taken at EU and national level, including recycling goals. An efficient, innovative and effective waste management system that promotes recycling is essential for its compliance and the success of this transition. The study therefore examines packaging waste management from the perspective of competition and efficient regulation in order to identify problems and make recommendations that seek to improve how the sector operates.

The study analyses the regulations and economic characteristics of this activity in Spain. It also reviews the experience of opening up to competition in neighbouring countries. The following can be highlighted from the above. Waste management in the EU is based on the "polluter pays" principle. This principle is embodied in 'Extended Producer Responsibility' (EPR), which places the onus for managing packaging waste on the companies that produce the goods contained in the packaging. Therefore, the company that markets packaged goods is responsible for the packaging and must bear the costs it incurs throughout its life cycle, including the stage after consumption of the product and disposal of the packaging, which includes its collection, transport, recycling, etc.

Companies subject to EPR participate in and pay for waste management organisations, called 'Collective Producer Responsibility Organisations' (PROs), to comply with this obligation. In Spain, two packaging PROs have monopolised the activity for decades, without competing with each other as one specialises in glass (Ecovidrio) and the other in other packaging (Ecoembes). This is not imposed by regulation and is not the case in other EU countries or for other types of waste, where several PROs compete. On the other hand, the PROs must sign agreements with the different Local Entities and Autonomous Communities, since waste collection is also their responsibility. Among other things, each agreement determines how the collection of packaging waste in the municipality concerned is organised and the costs involved. The amount to be paid by PRO to Local Entities to cover the corresponding expenditure is then estimated.

The reforms adopted in 2022 and the evolution of the sector itself have led to the entry of new packaging PROs in Spain in 2024. This incipient competition faces major challenges to its consolidation. Among them is the challenge of managing the difficult multilateral relations between competing PROs and PA, which entails a complex allocation of costs and responsibilities between PROs as well as the organisation of collection and transport activities, which are natural local monopolies.

The above analysis identifies a number of barriers that hinder competition and efficiency in the sector. These include the following:

- Barriers to authorisation and entry of new PROs: the process for entry of new competitors is arduous and uncertain. Substantial and complex information is required to apply for authorisation, which must be processed within 12 months by the PA, which often suffer from a lack of resources. Furthermore, new applications for authorisation are subject to a negative administrative silence, so that any deadline delay results in new entrants being delayed from entering the market.
- Constraints on producers' switching between PROs and on their participation in several PROs that may reduce the dynamism of competition by hindering customer mobility.
- Difficulties in the relationship between PROs and PA: agreements between PROs and PA must be negotiated within a maximum period of 12 months. In addition, there is uncertainty about the relationship model between several competing PROs and PA and about the coexistence of agreements.
- Challenges in articulating coordination between competing PROs to allocate costs and responsibilities. The absence of regulation could result in a proliferation of conflicts or over-collaboration, in both cases harming efficiency and competition.
- Restrictions on competition in the allocation of packaging waste from PROs, the main suppliers, to recyclers.
- Limitations on traceability and fraud detection in order to promote compliance with EPR obligations and data quality.
- Challenges in the new extension of the EPR to commercial and industrial packaging, linked to a possible concentration of the activity in the hands of a reduced set of PROs, the need to organise coordination between competing PROs efficiently, as well as the possible emergence of conflicts of interest within the PROs in case waste managers join.

The above analysis leads to a number of conclusions and recommendations. The most relevant conclusion is that, **in order to achieve competition in this sector, regulation and the authorities must actively promote it**. This is due to the complexity of the activity, which starts with the atomised creation of packaging waste throughout the territory, continues with a collection and transfer with a natural local monopoly character, and ends with the treatment, allocation to managers and recovery of the material. This complexity hinders the entry of competitors, both because of the existence of barriers to entry and because of the difficult and necessary coordination between the different public and private

stakeholders involved in the process, which may lack the capacity or interest to facilitate the entry of new competitors. Thus, without a framework that clearly encourages competition, and even if regulations do not explicitly prohibit it, entry barriers, lack of coordination and conflicts can hinder or even *de facto* prevent it, as has been the case so far.

In view of the above, the **following recommendations are made:**

ONE: REDUCE ENTRY BARRIERS

I. Remove barriers to PROs' authorisation.

First, a consultation and assistance system should be set up to help prepare applications for authorisations and to limit the amount of information requested to what is necessary. Second, consider changing the interpretation of administrative silence in the processing of applications for PROs' authorisation from negative to positive. Third, ensure that the territorial specifications included in the authorisation by the Waste Coordination Commission are justified and proportionate and do not lead to a breach of the national effectiveness of the authorisations. Fourth, specify a deadline for the issuing of a report by the Waste Coordination Commission in the Royal Decree on Packaging as part of the application process for the authorisation of PROs, and that the Autonomous Communities should make their best efforts to reduce the deadline for granting the authorisation to a maximum of 12 months, given its potential impact on competition. Fifth, establish an indefinite validity of authorisations, together with reinforced monitoring and control.

II. Eliminate the 12-month deadline for signing agreements.

This timeframe may be insufficient for a new PRO to be able to sign agreements with the many relevant PA and may thus become a significant entry barrier.

III. Make the possibility of changing PRO more flexible.

Firstly, the limitation on switching producers between PROs before the last quarter of the year is recommended to be replaced by a notice period. Secondly, assess whether it would be possible to allow participation in more than one PRO. Thirdly, facilitate access on fair, reasonable and non-discriminatory terms for all packaging PROs to the symbols associated with packaging waste management, in particular the Green Dot.

TWO: ESTABLISH AN EFFICIENT AND PRO-COMPETITIVE FRAMEWORK FOR COORDINATION BETWEEN PUBLIC AND PRIVATE AGENTS

IV. Thoroughly regulate the coexistence of competing EPR systems.

To this end, the first proposal is to use market share as the basic criterion for allocating responsibilities between competing PROs. The second is to make it compulsory to publish the resolution on PROs' minimum collection targets and to fix the date for the publication of this resolution. The third is to develop the regulation regarding how a PRO takes over the management of household packaging waste and its relationship with the other PROs. The fourth is to use the competition authority as a benchmark for assessing coordination mechanisms in order to promote a competitive sector.

V. Establish a coordinating and monitoring body.

This body could facilitate the coordination of PROs with each other and with the PA, resolve conflicts and act as a supervisor. Competition challenges mean that close cooperation between this body and the competition authority is desirable.

VI. Introduce a single agreement system with each PA with financial compensation between PROs based on market shares.

The obligation for all PROs to sign bilateral agreements with PA should be eliminated and replaced by one agreement with each administration, either signed by all PROs (as in Germany) or by a single one (as in France), establishing a financial compensation system based on market share.

VII. Draft a standard agreement at state level.

This document could serve as a reference and accelerate negotiations.

VIII. Develop a mandate for consensus on minimum quality requirements among all agents concerned.

Furthermore, a greater role for PA and regulation is envisaged.

IX. Provide PA, particularly Autonomous Communities and LE, with the necessary material and human resources.

The new regulation increases the workload of PA. They must have sufficient means to be able to fulfil their tasks.

THREE: PROMOTE TRANSPARENCY

X. Improve traceability and fraud detection.

To this end, the introduction of a specific regulation on the traceability of packaging waste by all the Autonomous Communities is recommended. The

second is to develop a state-wide programme for regular characterisation of packaging waste. The third is to give the competent Ministry the ability to request audits of specific producers.

FOUR: PREVENT AND REMEDY CONFLICTS OF INTEREST

XI. *Restrict the participation of associations and federations in PROs.*

Their involvement may influence their partners in the choice of PROs and also increases the risk of anti-competitive behaviour.

XII. *Prevent and remedy conflicts of interest arising from the adherence of final waste managers to PROs for commercial and/or industrial packaging.*

As waste managers can sell their products in packages, they may have to join a PRO which, as PROs are their main suppliers, could cause conflicts of interest.

FIVE: PROMOTE COMPETITION IN WASTE DISPOSAL

XIII. *Develop the regulation on the system of electronic allocation of packaging waste.*

Further regulatory development is recommended to address details on the functioning of the award system and to adopt best practices from neighbouring countries.

1. INTRODUCTION

The transition to a more sustainable, efficient, environmentally and health friendly economy is a priority in Spain and internationally. This implies overcoming the linear economy model, where products are discarded after a single use, and moving towards a circular economy that reincorporates waste into the production cycle, making the most of its potential and limiting its environmental impact. To this end, numerous measures have been taken at EU and national level, including the setting of recycling targets. An efficient and effective waste management system, which encourages recycling and minimises what ends up in landfill, must be put in place to meet the targets and ensure a successful transition.

The relevance of packaging waste can be gauged from the sheer volume of waste produced. According to [Eurostat](#), the EU generates around 84 million tonnes of packaging waste per year, equating to around 189 kg per inhabitant. In Spain, this amounts to 8.6 million tonnes, 183 kg per person per year. The management of packaging waste is also complex, as it is generated in a continuous and dispersed manner, and its characteristics and materials vary widely.

Companies that produce the goods contained in packaging are responsible for the management of packaging waste, in accordance with the "polluter pays" principle enshrined in EU legislation. This allocation of responsibility to producers is called Extended Producer Responsibility (EPR). This is achieved by producers participating in collective management systems, which are organisations that are responsible for waste management. In Spain, two packaging waste management systems have operated for decades under a monopoly regime, neither of them competing with the other, as one specialises in glass and the other in other packaging. This is not imposed by regulation, nor is it the case in other EU countries or for other types of waste, where several systems compete. The absence of competition prevents companies from choosing a system and discourages management efficiency. It also affects waste collectors as it limits the number of suppliers of waste, which is their raw material.

Moreover, the sector is facing structural changes. Recent reforms, such as the extension of the EPR to commercial and industrial packaging waste (previously only household packaging waste), are encouraging the entry of new collective packaging waste management systems. This will require regulatory adjustments.

Given its historical monopoly status and its relevance for the environment, public health and the economy, the aim of this study is to examine the management of packaging waste in Spain. The analysis will focus on identifying challenges to competition and making recommendations to improve how this activity operates with a view to facilitating a more efficient and sustainable economy that will benefit the population.

The study includes an analysis of the regulations and economic characteristics of the sector in Spain. It also reviews the experience of opening up to competition in neighbouring countries. The most relevant conclusion is that, **in order to achieve competition in this sector, regulation and the authorities must actively promote it**. This is due to the complexity of the activity, which starts with the atomised creation of packaging waste throughout the territory, continues with a collection and transfer with a natural local monopoly character, and ends with the treatment, allocation to managers and recovery of the material. Multiple Public Administrations, including local authorities, are involved in the process, while the costs are borne by the companies subject to the EPR through waste management systems. This complexity hinders the entry of competitors, both because of the existence of barriers to entry and because of the difficult and necessary coordination between the different public and private stakeholders involved in the process, which may lack the capacity or interest to facilitate the entry of new competitors. Thus, without a framework that clearly encourages competition, and even if regulations do not explicitly prohibit it, entry barriers, lack of coordination and conflicts can hinder or even *de facto* prevent it, as has been the case so far.

The analysis has identified a number of barriers that limit competition. To address them, recommendations are put forward to promote effective competition in the sector. In particular, removing entry barriers and establishing an efficient and competitive co-ordination framework between public and private agents is recommended. In addition, we propose to promote transparency, combat conflicts of interest and promote competitive procurement of materials.

The study consists of seven sections, including this introduction. The second section reviews the legal framework, and the third presents the relevant national and international competition background. The fourth section then looks at the economic characteristics of the sector. The fifth section presents the experience of opening up to competition in a number of countries in Spain's geographical vicinity. The sixth section, based on the previous information, identifies and analyses competition barriers in this sector in Spain. Finally, the seventh and last section presents the main conclusions of the study and puts forward recommendations aimed at boosting competition and improving the sector's operation.

2. REGULATORY FRAMEWORK

The national framework legislation on waste is *Act 7/2022 of 8 April on waste and contaminated land for a circular economy* (hereinafter the **Waste Act**), transposing *Directive (EU) 2018/851* (amending the Waste Framework Directive) and *Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment* (Single Use Plastics Directive). This Act lays down the common basis for all waste streams, but the details for each waste stream are laid down in implementing legislation. For packaging, *Royal Decree 1055/2022 of 27 December 2022 on packaging and packaging waste* (hereinafter, **Packaging Royal Decree**) was published in December 2022¹. These two regulations (Waste Act and Packaging Royal Decree) introduced relevant changes in the regulation, which had not been updated since 1997.

A transitional period of adaptation to these standards is in force until the end of 2024. Accordingly, for some issues the previous regulations still apply: *Act 11/1997 of 24 April 1997 on Packaging and Packaging Waste* (hereinafter the **1997 Packaging Act**) and *Royal Decree 782/1998 of 30 April 1998 approving the Regulations for the development and implementation of Act 11/1997 of 24 April 1997 on Packaging and Packaging Waste* (hereinafter the **1998 Packaging Regulations**), both of which have had regulatory status since 2011².

The following subsections detail the new legal framework for packaging waste management in Spain, as well as the transitional legal framework.

2.1. Definitions and basic principles

2.1.1. Types of packaging

The Packaging Royal Decree defines packaging as "*any product made of materials of any nature and used to contain, protect, handle, distribute and present goods, from raw materials to finished articles, at any stage of the manufacturing, distribution and consumption chain*".

¹ This Royal Decree transposes *Directive (EU) 2018/852 of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62/EC of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste. Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment* is also transposed as regards extended producer responsibility requirements additional to those contained in Directive 2008/98/EC for packaging falling within its scope.

² Act 22/2011 of 28 July 2011 on waste and contaminated soils partially repealed the 1997 Packaging Act and declared the rest to be in force on a regulatory basis.

Packaging can be classified according to various criteria. Firstly, according to their **function** and within the Spanish legal framework, they are categorised into three types:

- 1) Primary or sales packaging: in direct contact with the product, its function is to protect and preserve it (e.g. a plastic bottle).
- 2) Secondary or grouped packaging: contains one or more primary packaging and facilitates grouping, handling and transport (e.g. a cardboard box containing several plastic bottles).
- 3) Tertiary or transport packaging: to group primary and secondary packaging, providing additional protection and facilitating transport and logistics (e.g. a pallet with crates containing bottles).

In addition, packaging is classified according to its **material** (plastic, wood, ferrous metals, aluminium, glass, paper and cardboard, etc.), each with specific characteristics that influence its use, recyclability and environmental impact.

A distinction is also made between **municipal and non-municipal waste**, which is relevant for the purpose of determining the division of responsibilities for the collection and treatment of waste, including packaging.

- 1) According to the Waste Act, municipal waste is mixed waste and separately collected waste from households, and also from other sources when this waste is similar in nature and composition to waste from households.
- 2) Non-municipal waste is waste from production, agriculture, forestry, fisheries, septic tanks and sewage network and waste water treatment plants, end-of-life vehicles and construction and demolition waste.

A distinction is made based on **hazardousness** between non-hazardous and hazardous waste³.

Depending on the **context of use**, the Packaging Royal Decree distinguishes between:

- 1) Household packaging: packaging of products intended for consumption by private individuals, irrespective of its primary, secondary or tertiary character, provided that such packaging is likely to be purchased in shops, regardless of the place of sale or consumption.
- 2) Commercial packaging: packaging which, without being considered as household, is intended for consumption in the exercise of commercial

³ This study excludes waste packaging classified as hazardous waste according to Act 7/2022, which requires special handling and treatment due to its characteristics and potential risks to health and the environment. They cover a wide range: explosive, oxidising, flammable, carcinogenic waste, etc.

activity, wholesale and retail, catering services and bars, offices and markets, as well as the rest of the service sector.

- 3) Industrial packaging: packaging intended for consumption as part of industrial, agricultural, livestock, forestry or aquaculture activities, excluding commercial and household packaging.

Finally, a distinction can be made according to **fractions**, a term that refers to the segmentation of waste into groups in order to organise separate collection. These fractions include, among others⁴:

- Lightweight packaging: has a low weight/volume ratio, and includes plastic bottles and jars, plastic film, cans, Tetra Briks, etc.
- Glass: mainly bottles.
- Paper and cardboard.
- Remaining fraction: contains all waste that is not subject to separate collection.

2.1.2. Waste hierarchy and extended producer responsibility

The legislation is based on the **principle of waste hierarchy** (art. 8 of the Waste Act), which establishes the order of priority in waste prevention and management actions and guides the objectives to be achieved. Thus, it establishes the following order, starting with the highest priority:

- 1) Prevention: the first and most effective action is to prevent the generation of waste. Thus, a target is set to reduce the weight of waste generated by 13% in 2025 and 15% in 2030 compared to 2010⁵. In the specific case of packaging, the legislation also provides for indicative targets for the reduction of single-use plastic bottles⁶.
- 2) Preparing for reuse: by 2030 all packaging put on the market should be recyclable and, where possible, reusable⁷. In addition, reuse targets are set for household, commercial and industrial packaging between 2025 and

⁴ For a more detailed description of the fractions, see: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/temas/prevencion-y-gestion-residuos/flujos/domesticos/fracciones.html>

⁵ Art. 17.1 of the Waste Act and 6.1 of the Packaging Royal Decree.

⁶ The Packaging Royal Decree (art. 6.2.) states that a 20% reduction in the number of single-use plastic beverage bottles on the market by 2030 shall be aimed for compared to the quantity in 2022. Similarly, the marketing of single-use plastic packaging covered by Part A of Annex IV to Act 7/2022 of 8 April will be progressively phased out.

⁷ Art. 6.1.b) of the Packaging Royal Decree.

2035 and for the percentage of municipal waste to be prepared for reuse and recycling⁸.

- 3) Recycling: the third is to promote recycling. By 2025, a minimum of 65% by weight of all packaging waste will be recycled, rising to 70% by 2030, with specific targets per material⁹. To this end, separate collection targets for packaging¹⁰ and single-use plastic bottles¹¹, as well as minimum recycled plastic contents for non-compostable plastic packaging to be met between 2025 and 2030, are also foreseen.
- 4) Other recovery of waste to enable its recovery, including energy recovery.
- 5) Disposal: the latter option means that the waste is not used at all.

A basic pillar of the regulation is that waste always has a person responsible for the fulfilment of the obligations arising from its production and management. As a consequence, and in accordance with “the polluter pays” principle, the waste manager has to bear the costs associated with waste management, including the costs of the necessary infrastructure and its operation, environmental impacts and greenhouse gas emissions (art. 11.1 of the Waste Act). Thus, the legislation

⁸ Art. 8 of the Packaging Royal Decree and art. 26.1 of the Waste Act, respectively.

⁹ Art. 10 of the Packaging Royal Decree. In 2025: 50% plastic; 25% wood; 70% ferrous metals; 50% aluminium; 70% glass; 75% paper and cardboard. In 2030: 55% plastic; 30% wood; 80% ferrous metals; 60% aluminium; 75% glass; 85% paper and cardboard. In addition, the 1st Transitional Provision includes transitional targets for recycling and recovery until 2025.

¹⁰ Arts. 29.2, 36.2 and 42.2 of the Packaging Royal Decree. The Packaging Royal Decree sets minimum separate collection targets for household (overall and by material), commercial (overall) and industrial (overall) packaging waste to be achieved in phases until 2035.

¹¹ The Waste Act (art. 59.1) sets separate collection targets for plastic beverage bottles up to 3 litres:

- a) By 2023 at the latest, 70% by weight of the amount introduced to the market.
- b) By 2025 at the latest, 77% by weight of the amount introduced to the market.
- c) By 2027 at the latest, 85% by weight of the amount introduced to the market.
- d) By 2029 at the latest, 90% by weight of the amount introduced to the market.

imposes a number of obligations on product producers¹² covering what is known as "extended producer responsibility" (EPR).¹³

In the words of the OECD (2016), EPR can be defined as an “*environmental policy approach in which the producer's responsibility for a product extends to the post-consumer stage of its life cycle*”. This concept was first incorporated into Spanish law in 2011. It involves the transfer of responsibility for waste from consumers and public authorities, who were traditionally responsible for waste management, to those operators who place the product causing the waste on the market. As such, the EPR creates incentives for producers to reduce waste and facilitate efficient waste management.

In Spain, producers of all types of household, commercial and industrial packaging are subject to the EPR regime, with commercial and industrial packaging being included for the first time in the new Waste Act.

Producers' obligations under the regulation include¹⁴:

- Preventive measures, such as the promotion of bulk sales.
- Re-use measures and targets, such as the obligation to make reusable packaging available to the consumer or to allow its use.
- Encouraging the use of recycled material in new packaging.
- Environmentally-friendly design obligations.
- Labelling and informative obligations.
- Recycling targets.

¹² Art. 2.ac) of the Waste Act defines them as any natural or legal person who develops, manufactures, processes, treats, fills, sells or imports products on a professional basis. It includes e-commerce platforms with respect to producers acting through it who are not registered in the existing EPR registers.

In the case of packaging, art. 2.t) of the Packaging Royal Decree defines them as "packers or economic agents engaged in the importation or acquisition in other European Union Member States of packaged products for placing on the market", including the holders of distribution brands based in Spain when the products do not identify the producer of the product, and e-commerce platforms in respect of packaged products from outside Spain whose producers have not appointed an authorised representative in Spain.

¹³ The EPR concept finds its origins in the early 1990s, when it was formalised by Thomas Lindhqvist in a 1990 report to the Swedish Ministry of the Environment (Lindhqvist & Lidgren, 1990). Since then, it has been introduced in numerous national regulations as a fundamental principle in order to minimise the environmental impact of waste generated by different human activities.

¹⁴ The complete list of obligations is contained in art. 17 of the Packaging Royal Decree.

- The establishment of Deposit-Refund Systems (DRS) for reusable containers and for plastic beverage bottles up to 3 litres (in the latter case, if the separate collection targets set out in the Act are not achieved).
- The obligation to finance and organise, in whole or in part, the collection and treatment of packaging waste.

The last three obligations must be fulfilled through EPR systems.

2.2. Extended producer responsibility systems

In order to fulfil their EPR obligations, producers can choose to set up Individual EPR Systems (**IPRs**) or Collective EPR Systems (**PROs**).

IPRs consist of a producer individually fulfilling its obligations under the EPR.

PROs are not-for-profit entities created to assist regulated entities in fulfilling their regulatory duties under the EPR¹⁵. Companies that choose to meet their obligations through them must help finance the system's operation. In practice, the vast majority of companies use this system. Until 2024, two systems were in operation in Spain for household packaging without special characteristics: Ecoembes, for light packaging and paper/cardboard, and Ecovidrio for glass packaging¹⁶. At least one new packaging PRO has been authorised in 2024.

The Packaging Royal Decree introduces conditions for the participation of producers in more than one system, so that in some cases producers must choose in which system they wish to participate.

Producers may participate in several EPR systems for reusable packaging management for the same product placed on the market in reusable packaging of the same category (household, commercial and industrial) and material, provided that the traceability and ownership of this packaging is guaranteed for

¹⁵ The Packaging Act 11/1997 obliged traders of packaged products or those responsible for the first placing on the market of packaged products to set up a Deposit-Refund System (DRS) for packaged products. Alternatively, entities were envisaged for the collective management of EPR, referred to as an "integrated management system" (hereinafter IMS) for packaging waste and used packaging, which was taken up by a very large majority of obliged producers. The purpose of the IMS was the regular collection of used packaging and packaging waste from the consumer's home. These obligations concerned only household packaging. Therefore, IMSs are the predecessor of today's PROs. Act 11/1997 substantially changed how the collection of household waste by the LE was carried out in practice, introducing separate collection of packaging and the obligation to separate at household level.

¹⁶ There are others for packaging with special characteristics, the analysis of which is outside the scope of this study: SIGFITO for agricultural product packaging; AEVAE for phytosanitary and fertiliser packaging; and SIGRE for medicine packaging.

each of the deposit, return and refund systems through which it has been placed on the market.

In the case of single-use household packaging, producers may not participate in several systems when placing the same product on the market in primary and secondary packaging of the same material.

In the case of commercial and industrial packaging, the limitation applies when the same product is placed on the market in packaging made of the same material, unless the product is packaged in primary packaging and intended for different economic activities (art. 17.3 of the Packaging Royal Decree).

2.2.1. System constitution

Individual extended responsibility systems (IPRs) must submit a notification prior to the start of their activities to the competent body of the Autonomous Community where their head office is located in order to become operational¹⁷. As a minimum, the notification must include a description of the system for organising the management of packaging waste (including the collection points and their location, types of containers used, minimum collection frequencies for maximum effectiveness and the intended destination of the waste collected); identification of the managers to whom the operations for the collection and treatment of packaging waste are assigned, as well as the plants or facilities that will take charge of the waste for its treatment; a copy of the contracts signed and agreements concluded for the collection and treatment of packaging waste; identification of the agreements established with other EPR systems and the relevant contents of these agreements; or the identification of the agreements established with the final holders of commercial and industrial waste, when they assume responsibility for the organisation of waste management on behalf of the producers (Annex V of the Packaging Royal Decree).

On the other hand, producers opting for collective EPR systems, or PROs, must set up an association or other entity with its own non-profit legal personality or join an existing PRO. The operating rules of the PRO will be those specific to the legal form chosen, guaranteeing in all cases the absence of conflicts of interest between the producers or executive bodies of the system and other operators, especially the waste managers with whom they have to contract¹⁸. A PRO may discharge its obligations itself, or it may establish or contract an administrative entity with its own legal personality distinct from that of the collective scheme and acting under the direction of the collective scheme.

¹⁷ Art. 49 of the Waste Act and 19.1 of the Packaging Royal Decree. Together with the notification, they must submit a financial guarantee.

¹⁸ Art. 50.1 of the Waste Act.

Prior to the start of their activity, PROs must apply for authorisation in the Autonomous Community where the system intends to establish its head office. As a minimum, the application must include, inter alia, a description of the waste management organisation system, including details of the collection carried out by the LE, specific collection networks and their location, as well as the organisation of the planned management; the minimum collection frequencies; the planned destinations of the collected waste; the identification of the operators to whom the collection and treatment of packaging waste will be assigned, and of the plants or installations that will take charge of the waste for treatment, including a description of the planned procurement or awarding processes; the costs arising from the agreements signed with the PA for the collection, separation and sorting of packaging waste; and the costs arising from contracts with waste managers and distribution agreements¹⁹.

The Administration has a period of 6 months to process the authorisation, which can be extended for a further 6 months if the case is complex. During the process, the application is referred to the Waste Coordination Commission for a report²⁰. The report may include specifications proposed by the Autonomous Communities following the assessment of the application, relating to the performance of the collective system in their respective territories. Once this period has elapsed, there will be a negative silence, except for applications for renewal of authorisation, in which case the authorisation previously granted will be considered to have been extended until notification is given of an express decision on the application for renewal (art. 20.4 of the Packaging Royal Decree). Once the PRO has been notified of the approval of the authorisation, it has one month to prove the validity of the corresponding financial guarantee²¹. If proof is

¹⁹ Annex VI of the Packaging Royal Decree.

²⁰ The Waste Coordination Commission is a body charged with technical cooperation and collaboration between the competent waste administrations, attached to the Ministry of Ecological Transition. The aspects analysed by the Commission are specified in art. 20.2 of the Packaging Royal Decree.

²¹ Pursuant to article 24 of the Packaging Royal Decree, the (individual and collective) EPR systems must subscribe to a financial guarantee to ensure the financing of the management of packaging waste, so that the minimum objectives of the extended responsibility system are met, in the cases of:

- Insolvency of one or more producers in the case of collective systems.
- Insolvency of the extended producer responsibility system itself.
- Failure to comply with the conditions of the authorisation or communication.
- Dissolution of the extended responsibility system without guaranteeing the financing of the management of the waste for which it was responsible.

The amount of the guarantee is determined on the basis of the quantities of material-differentiated packaging placed on the market through the system and the average costs of packaging waste management.

not provided within this period, the authorisation becomes null and void (art. 20.5 of the Packaging Royal Decree). The permit is valid for 8 years, cannot be transferred to third parties and is renewed following the same procedure (art. 50.2 of the Waste Act).

The communications and authorisations are registered by the Autonomous Communities in their registries, and incorporated, within 15 days, in the Waste Production and Management Registry, which is shared and unique throughout the national territory²².

2.2.2. System funding

According to art. 43 of the Waste Act and 23.2 of the Packaging Royal Decree, the EPR systems are financed through a contribution paid by their members that must cover:

- The costs of separate collection of packaging waste and its subsequent transport and treatment, including, inter alia, the costs associated with the recovery of packaging waste from other waste fractions or the cleaning of public roads, green areas, etc., taking into account revenues from the preparation for re-use of sales of secondary raw materials and, where appropriate, unclaimed deposit amounts.
- The costs of information and awareness-raising campaigns.
- The costs associated with legal obligations to collect and report data.
- The costs of cleaning up the spillage of dispersed litter caused by certain single-use plastics.
- The costs related to the provision of financial guarantees required by the regulations.

In any case, they should not exceed the costs necessary for the provision of waste management services to be cost-effective in economic, social and environmental terms.

The legislation indicates that the costs will be established by agreement between the agents concerned, taking into account those incurred by the public and private

²² The Waste Production and Management Registry is a register attached to the Directorate General for Environmental Quality and Assessment of the Ministry for Ecological Transition and the Demographic Challenge, regulated in art. 63 of the Waste Act, which incorporates the information from the registries of the Autonomous Communities relating to waste producers and managers.

entities carrying out the waste management. In the absence of agreement, costs shall be determined by independent studies²³.

Within PROs, the financial contribution should be modulated for each typology of similar packaging, taking into account, among other factors, the nature and quantity of material used in its manufacture, its durability, or that it can be repaired, reused and recycled. In addition, they must have mechanisms for compensating producers in cases where the revenues received by the system are 10% higher than the amounts actually paid to meet their obligations, or justify the need to use these resources in the year following the compliance period on the basis of revenue and expenditure forecasts for that year.

Finally, PROs must communicate their intention to modify the financial contributions 3 months in advance to all members of the system and to the Autonomous Community granting the authorisation, which will forward it to the Waste Coordination Commission (art. 47.3 of the Waste Act and art. 22.4 of the Packaging Royal Decree).

2.2.3. Changes between systems

The regulation gives producers the possibility to change the way they comply with their EPR by switching to another collective system or to an individual system on an annual basis (art. 50.1 of the Waste Act). In particular, producers wishing to leave a PRO must inform the new PRO into which they are integrated or constituted and the Product Producers Registry of their intention before the beginning of the last quarter of the year. The changeover will take place at the beginning of the following year and can only take place if the producer can prove that it is up to date with its financial obligations towards the original PRO (art. 17.4 of the Packaging Royal Decree).

2.2.4. Relationship between EPR systems and the PA: the agreements

Traditionally, it has been the LE who have been responsible for the organisation of municipal waste management. In fact, according to local and packaging waste regulations, the LE are responsible for the management of household packaging waste, as well as commercial waste when so provided for in their municipal by-laws (art. 32 of the Packaging Royal Decree). If municipal management is not foreseen in the by-laws, the management of commercial packaging waste is the responsibility of the product producers.

Relations between the EPR systems and the PA involved in the organisation of waste management are regulated through agreements negotiated between them.

²³ Art. 43.1. c) of the Waste Act and art. 23.4 of the Packaging Royal Decree.

From the date of the authorisation or communication allowing them to operate, waste management systems (individual or collective) have a maximum period of 12 months to sign these agreements, which establish the financing and organisation of waste management²⁴. The agreements are preferably signed with the corresponding Autonomous Community, which will guarantee the participation of the LE in the negotiation and monitoring, or, alternatively, directly with the local authority, with the prior knowledge and agreement of the Autonomous Community (art. 44.2 of the Waste Act and art. 33.2 of the Packaging Royal Decree).

According to art. 33.1 of the Packaging Royal Decree, the agreements delimit whether the local authority carries out the total or partial organisation of waste management or whether it is carried out by the system itself, including a forecast of the use of public spaces and their conditions of use. The agreements provide for the financing by the EPR systems to the PA involved in the management of packaging waste. The regulations regulate in detail the costs that the EPR systems must finance to the LE or Autonomous Communities. The agreements must be published in the official gazettes (*boletines oficiales*) of the Autonomous Communities and/or, where appropriate, in the corresponding official municipal gazette (art. 33.6 of the Packaging Royal Decree). In the case of discrepancies between the Administration and the EPR systems on the contents of the agreement, particularly those of an economic nature, the regulations provide for them to be resolved by arbitration²⁵.

2.2.5. Monitoring compliance with EPR obligations

According to art. 54.1 of the Waste Act, the supervision of compliance with the obligations is carried out by the competent regional authorities, which follow the criteria set by the Waste Coordination Commission, with special attention when there are several collective EPR systems for the same type of product.

2.2.6. Adaptation of existing systems to the new legal framework

The new waste legislation established 30 June 2023 as the deadline for existing waste management systems to adapt to the new legislation and also for them to submit their individual system notification or application for authorisation as a PRO to the competent authority, including the necessary adaptations to the changes foreseen in the Packaging Royal Decree. On the other hand, since the entry into force of this regulation, they must comply with the objectives set out in

²⁴ Art. 44.1 of the Waste Act and arts. 33 and 36.4 of the Packaging Royal Decree.

²⁵ Art. 44.3 of the Waste Act and art. 33.3 of the Packaging Royal Decree.

the Packaging Royal Decree, regardless of whether they have adapted to the new EPR regime or not. The financial responsibilities of the EPR apply from 1 January 2024, and must be provided for retroactively in the new agreements signed between the EPR systems and the PA.

The obligation to adapt is relevant, since the new regulation introduces many important new features compared to its predecessors:

- EPR schemes apply to all packaging, including, as a new feature, commercial and industrial packaging from 2025.
- The authorisation to operate becomes a single authorisation (it is presented only to the Autonomous Community where the system has its head office) and is valid for the entire national territory. Previously, management systems had to apply for authorisation in each of the Autonomous Communities in which they were implemented, and these authorisations were communicated to the Ministry of the Environment. The authorisation was subject to the provision of a bond, bank guarantee or other type of guarantee, in an amount sufficient, in the opinion of the authorising administration, to cover the fulfilment of its financial obligations towards the PA. (art. 10.3 of Act 11/1997 on Packaging).
- They increase the financial obligations of the EPR systems, including the costs of separate collection of waste and its subsequent transport and treatment, taking into account revenues from reuse, sales of secondary raw materials from their products and the amounts of unclaimed deposits, if any. Until now, they were only obliged to compensate the LE for the difference between the cost of the ordinary system of collection, transport and treatment of waste in a controlled landfill and the cost of the system of separate collection, transport and treatment of packaging waste, in accordance with the terms set out in the agreement.
- The costs to be financed include those associated with the management of packaging waste in the remaining fraction or other mixed waste fractions.
- Producers' financial contributions should be modulated, as far as possible, for each product or group of similar products. Consideration should be given to durability, repairability, reusability, recyclability and the presence of hazardous substances, and a product life-cycle approach should be adopted. Although the previous regulation already provided for the possibility of modulating the amount to be financed for each container placed on the market according to the type of material and depending on certain characteristics, the criterion followed in practice has basically been the weight of the container and the material.
- New recycling targets are set.

- A packaging section is created in the Product Producers Registry, and all producers are obliged to register and submit information on the placing on the market of packaging on an annual basis.
- New aspects of packaging design and marking are included, such as the obligation to indicate the reusable condition, the fraction or container in which the packaging must be deposited once it has become waste, or, where appropriate, the symbol associated with the Deposit-Refund System (DRS).
- The obligation to identify the packaging included in its system with accreditation symbols, which are identical throughout the territorial scope of the system, is eliminated. This labelling becomes optional²⁶.

2.3. Deposit-Refund System (DRS)

The regulation provides for the creation of DRS in two cases:

- For reusable packaging.
- For single-use plastic beverage bottles up to 3 litres, if the separate collection targets foreseen firstly by 2023 or secondly by 2027 are not met. In the event that DRSs are created, and in order to ensure the technical, environmental and economic feasibility of the system, in addition to plastic bottles, cans and beverage cartons of these products will be included²⁷.

The obligations of the DRS will be fulfilled through individual or collective EPR systems²⁸. The DRS works as follows:

- When the final consumer buys the product, they pay a deposit for each package.
- The deposit is refunded to the consumer when they return the packaging. Retailers and distributors are obliged to accept the return of the packaging of products they place on the market, although they may condition their acceptance on compliance with the conditions of conservation and

²⁶ Only packaging subject to a DRS is required to be marked (art. 13.2. of the Packaging Royal Decree). The symbol that Ecoembes and Ecovidrio have used so far is the [Green Dot](#).

²⁷ Art. 47.1 of the Packaging Royal Decree and art. 59.2 of the Waste Act. The 17th Additional Provision describes how the DRS would work and enables its implementation for other packaging materials and product categories to be determined by regulation.

²⁸ Arts. 46.7 and 47.1 of the Packaging Royal Decree. This can be done through the PRO to which the affected parties belong or through the creation of a specific PRO (art. 47.2 of the Packaging Royal Decree). In the case of the DRS for single-use plastic bottles, additional reporting, logistical, economic, control and monitoring and communication obligations are imposed on them.

cleanliness established by the producers, which in any case must be proportionate.

- At the end of the packaging's useful life, product producers must hand it over to a waste manager, separated by material.

2.4. Reporting obligations

The Waste Act contains a number of reporting obligations:

- Product producers must provide annually to the Product Producers Registry the number of units and the quantities per type of material of the packaging they place on the market, specifying how they comply with the obligations of the EPR scheme and, where applicable, the collective system to which they belong²⁹. The Product Producers Registry is fed by information provided by the product producers, who annually report on the quantities in terms of weight by type of material of the packaging placed on the market, also indicating the number of units, specifying the method of compliance with the obligations of the EPR scheme and, where appropriate, the collective system to which they belong (section 2 of Annex IV of the Packaging Royal Decree). This information is not public (art. 16.4 Packaging Royal Decree).
- The individual and collective systems are obliged to provide information to all the Autonomous Communities where they operate and to the Coordination Commission on an annual basis regarding, among other matters, the products marketed; the packaging waste managed; the separate collection of packaging waste; compliance with the objectives of reuse, recycling and recovery; the list of entities, companies or, where appropriate, the LE that carry out the management of packaging waste, as well as a report on the payments or, where appropriate, income, made to them in relation to these activities; and the income and expenses relating to the operation of the system.
- In addition, the individual and collective systems shall make available to the public, via their websites, annually updated information on the achievement of the targets for prevention, separate collection, reuse, recycling and recovery, by packaging types and materials, as well as the

²⁹ The Product Producers Registry is attached to the Directorate General for Environmental Quality and Assessment and the Natural Environment of the Spanish Ministry for the Ecological Transition and the Demographic Challenge (MITERD). The section corresponding to each waste stream is created by the specific regulation of each waste stream (arts. 38.2 Waste Act and 7.2 Royal Decree 293/2018).

- planned audits on financial management and data quality (art. 21.1.k) of the Packaging Royal Decree).
- PROs must make publicly available information on their chosen legal form; the producers participating in the system; the financial contributions paid by producers; the system for allocating packaging waste to waste managers, as well as the list of finally selected waste managers and the corresponding facilities; and respond to consumer enquiries on how to comply with the obligations of the EPR.
 - The communications and authorisations provided for in the Waste Act are registered by the Autonomous Communities in their respective registries and incorporated, within a maximum period of 15 days, in the Waste Production and Management Registry, which is shared and unique throughout the national territory.
 - Natural or legal persons who carry out professional collection and waste treatment operations shall report annually on the quantity, nature and origin of the waste generated, and on the quantity of products, materials, substances and waste resulting from preparation for re-use, recycling, other recovery operations and disposal operations. The information must be sent to the Autonomous Communities in which they have facilities and, in the case of waste under local jurisdiction, also to the corresponding LE. The Autonomous Communities incorporate this information into the Electronic Waste Information System (eSIR) of the Ministry for Ecological Transition and the Demographic Challenge³⁰.

The Autonomous Communities, with the collaboration of the LE, must maintain up-to-date information on waste management in their area of competence, in particular for waste under local jurisdiction. This information should include the available infrastructures and, for each infrastructure, the quantification and periodic characterisation of incoming and outgoing waste, and the specific destinations for recovery or disposal of outgoing waste. In the case of waste under local jurisdiction, the LE must send an annual report on waste management to the Autonomous Community.

Finally, reporting obligations to the European Commission are established. The MITERD will send the European Commission information each calendar year on the management of packaging waste at the national level. The MITERD is also required to submit information on adopted or substantially revised waste

³⁰ Art. 65.3 of the Waste Act. The eSIR is made up of the registers, platforms and IT tools that provide the necessary information to monitor and control the management of waste and contaminated soils in Spain, to draw up policies in this area and to contribute to compliance with international information requirements (art. 66 of the Waste Act).

management plans and waste prevention programmes within 18 months after the end of the year in question.

3. COMPETITION BACKGROUND

This section sets out the main actions taken by the competition authorities and international reference institutions in this area.

At the **international level and in terms of competition advocacy actions** and sector reports, the OECD's guide on EPR (OECD, 2016), which focuses on competition advocacy, is worth highlighting. The guidance stresses that effective recycling requires competition in the markets for products, collection, sorting, recovery and disposal, and in EPR systems. It also indicates that EPR systems, by transferring part of the cost of waste management to producers and providing them with incentives for efficiency, have helped to increase recycling rates, reduce the proportion of waste going to disposal and contain the costs of the system.

Meanwhile, the European Commission (2005) analysed the organisation of systems to comply with the obligations established in the European Directives, specifically in the sectors of packaging waste, vehicles and Waste from Electrical and Electronic Equipment (hereinafter WEEE). They noted challenges in establishing a framework for cooperation between waste management systems and maintaining competition. In addition, they addressed the relationship between the systems and the collection and treatment companies, stressing the importance of promoting transparent and non-discriminatory tendering procedures.

Competition authorities in neighbouring countries have also taken action in this area. The 2012 report of the French authority and its opinion "*Avis n° 16-A-27 du 27 décembre 2016*"³¹, which deals with the opening of the sector to competition, can be highlighted. They note that the "financial model" such as the one in France, where the management system channels payments from the companies to the PA without directly organising collection, can be problematic when producers switch systems if the system of origin has built up provisions (cash reserves) for potential future charges. In response, they recommend adopting a financial balancing mechanism between management systems to ensure adequate redistribution in a multi-stakeholder environment, and also that a neutral supervisory body should oversee the above-mentioned provisions. They also propose to consider the adoption of an "operational model", in which management systems are made responsible for collection and transport, in order to boost efficiency.

Meanwhile, the German authority published a report in 2012 (*Bundeskartellamt, 2012*) which estimates that the introduction of competition in Germany in the

³¹ Autorité de la Concurrence. (2016). *Avis n° 16-A-27 du 27 décembre 2016 concernant l'ouverture de la filière de traitement des emballages ménagers à plusieurs éco-organismes.*

previous decade, with the move from a single collective system to nine, resulted in a 50% saving compared to pre-opening costs. It also estimated, taking a conservative approach, a welfare gain for consumers equivalent to €5.6 billion between 2003 and 2011.

In the **international** arena, with regard to **competition enforcement**, several cases have been investigated. In general, they have been linked to abuses of dominant position by hindering the entry of new EPR systems, by preventing access to essential goods for the exercise of the activity or by exclusionary practices towards certain waste managers. On the one hand, the Italian Competition Authority imposed a fine of more than €27 million in 2020 on Corepla, a plastics consortium, for abusing its dominant position in the market for recycling PET food packaging³². In order to acquire the right to operate in the market, the new entrant Coripet had to demonstrate its operational capacity within two years of the provisional authorisation, but its activity was hindered by Corepla, which blocked agreements with Coripet that were essential for the latter to be able to operate. On the other hand, the European Commission fined Altstoff Recycling Austria €6 million in 2016. It was penalised for blocking competitors' access to essential infrastructure in the Austrian household packaging waste disposal market between 2008 and 2012³³.

At the **national** level, and in the field of **competition advocacy**, the CNMC has published several reports on draft legislation on waste. In particular, [IPN/CNMC/041/21](#) on the Draft Packaging and Packaging Waste Royal Decree assessed positively the alignment with EU legislation and the focus on the circular economy by setting minimum recycling and recovery targets, extending producers' obligations and including ecomodulation criteria in producers' financial contributions. However, it pointed to risks such as the possible exchange of commercially sensitive information within PRO, which could increase the risk of collusion. Furthermore, it took a negative view of the unjustified setting of different targets for different types of packaging and products, which could create competitive disadvantages. Finally, a possible lack of clarity was noted with regard to the specifications relating to the operation of the collective system in the autonomous territories and the clarifications arising from the report of the Coordination Commission, which could affect the application of the principle of national validity with regard to authorisations³⁴.

³² See: <https://en.agcm.it/en/media/press-releases/2020/11/A531>.

³³ See: https://ec.europa.eu/commission/presscorner/detail/en/IP_16_3116.

³⁴ Specifically, the CNMC underlined that the current regulation may generate uncertainties as to how collective waste management systems should operate in different Autonomous Communities. The clarifications in the Coordination Commission's report are critical because they set out the guidelines to be followed in order for the authorisations issued to be valid

The CNMC's [IPN/CNMC/013/20](#) on the Draft Waste and Contaminated Land Act assessed the regulation positively, as it sets clear waste reduction targets and recognises the national validity of the activity authorisation granted by Autonomous Communities, improving legal certainty and establishing uniform rules at EU level to avoid competitive disadvantages between Member States. However, the risk of PROs handling sensitive information was pointed out, and the requirement of authorisation for certain activities instead of prior communication or responsible declaration was negatively assessed. In addition, as regards the duration of the authorisations, an indefinite rather than a limited duration was recommended.

Some of these concerns have also been raised by the CNMC in regulatory reports on waste regulations for other materials:

- The [IPN/DP/0014/14](#) on the Draft Royal Decree on electrical and electronic equipment and its waste considers that the responsibility attributed to the Waste Coordination Commission to assess whether a collective system respects competition may be inadequate. Furthermore, it warns of the need to better coordinate the responsibilities of users of electrical and electronic equipment regarding the supply of goods for re-use, including the obligation to put used equipment to a second use where this is feasible. It also proposes to consider integrating the multiple registries provided for in the articles into a single registry to simplify and improve the efficiency of the system.
- The [IPN/CNMC/006/15](#) on the Draft Royal Decree amending the Royal Decree on batteries and accumulators and the environmental management of their waste underlines the lack of clarity on how the free collection, storage and transport operations will be made compatible with the possibility of passing on an amount in the price of the products to consumers. It also warns that setting uniform prices throughout the territory of the collective system can lead to inefficiencies. In addition, it suggests considering the integration of the multiple registries mentioned in the articles into a single registry.
- The [IPN/CNMC/015/19](#) on the Draft Ministerial Order for the development of the electronic platform for the management of waste from electrical and electronic equipment raises the question of who should bear the costs of the platform, given its partial public funding.
- The [IPN/CNMC/037/19](#) on the Draft Royal Decree amending Royal Decree 1619/2005 on the management of end-of-life tyres considers that

throughout the national territory. If these guidelines are not clearly defined or are interpreted inconsistently between the different Autonomous Communities, there is a risk that authorisations will not be uniformly applicable throughout Spain.

the reference to UNE standards to accredit the inspection of used tyres may raise competition concerns by creating barriers to entry for new competitors. For this reason, the CNMC recommends justifying the requirement of UNE standards to certify the quality and safety of used tyres. Furthermore, the obligation to display the registration number on commercial documents and the redundant provision of information that is already in the possession of the administration is negatively assessed.

- The [IPN/CNMC/008/20](#) on the Draft Royal Decree amending Royal Decree 106/2008 on batteries and accumulators and the environmental management of their waste, as well as Royal Decree 110/2015 on waste from electrical and electronic equipment, warns about the possibility of sensitive information exchange at vertical level between companies at different levels of the production or distribution chain.
- The [PRO/CNMC/001/21](#) on the principle of national effectiveness in collective waste management systems highlights the importance of applying throughout the national territory the validity of the authorisation for the creation of collective EPR systems.
- The [IPN/CNMC/021/23](#) on the Draft Royal Decree on the management of tobacco product waste containing filters and filters marketed for use with tobacco products highlights the concern that separate collection of tobacco product waste does not seem justified on efficiency grounds, given the lack of knowledge about the possibilities for recycling or recovery of this waste.
- The [IPN/CNMC/029/23](#) on the Draft Royal Decree on tyres and the management of their waste stresses the lack of specification of targets and time periods for compliance due to the uncertainty of the market for granulated rubber and its recovery. In addition, it points out that the impossibility of participating in several PROs at the same time hampers competition. It is envisaged to modulate the information required from newly created systems to facilitate their entry into the market. As regards the allocation of waste to each PRO, given that the allocation is based on forecasts, the absence of a mechanism to correct possible deviations between forecasts and actual data is negatively assessed.

In the **national antitrust domain**, several cases related to the sector can be highlighted. On the one hand, and with regard to glass packaging, in 2005, in case [A 350/04 ECOVIDRIO](#), among other issues, commitments were established to minimise the flow of information available in Ecovidrio in order to prevent the exchange of sensitive information, it was demanded that the calculation of tariffs for member companies be made according to objective criteria and, finally, that the allocation of glass waste to glass companies be carried out in an objective

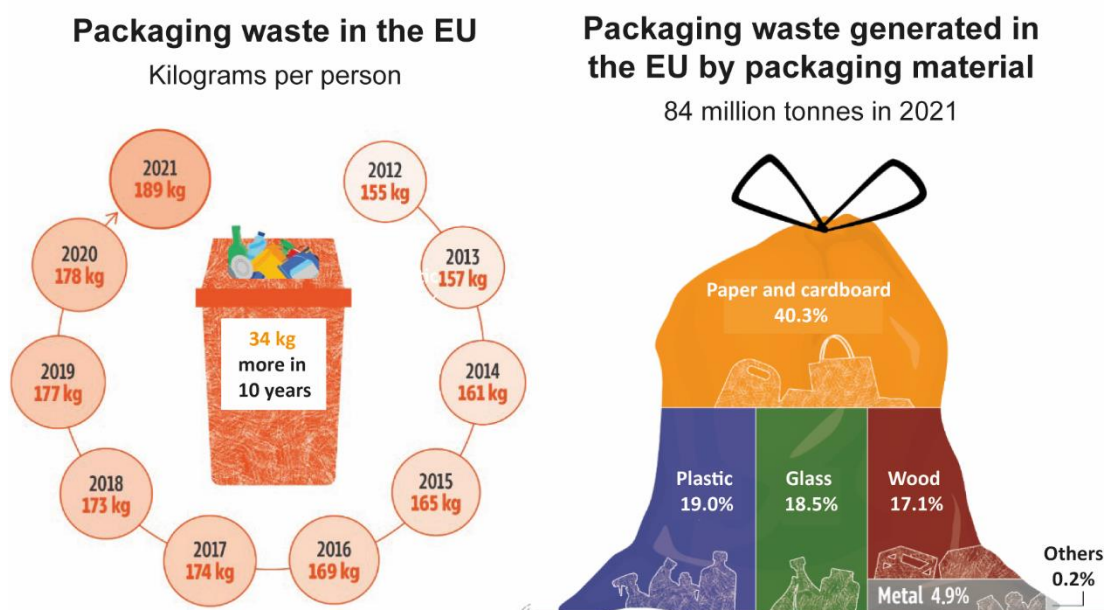
and transparent manner. Furthermore, in 2008 (file [537/02 Glass Recycling](#)) a fine of €300,000 was imposed on Ecovidrio for facilitating a geographic distribution of the market in Galicia and abusing its dominant position by refusing to allow a company to join Ecovidrio.

Regarding waste tyres, in 2010 in the file [2800/07 SIGNUS ECOVALOR and TYRE MANUFACTURERS](#) a commitment was established to return a part of the fee for tyres not marketed in Spain, which is verified through an independent third party to avoid the exchange of sensitive information.

Finally, as a more recent precedent, in 2023 the CNMC issued a resolution determining the conventional termination of the file [S/0021/21 ECOEMBES AUCTIONS](#). This focused on Ecoembes' waste auction procedure used since at least 2004, which was carried out without guarantees of transparency and publicity, making it difficult for recycling companies to participate. The CNMC decided to declare the commitments submitted by Ecoembes adequate and binding. These commitments include (i) the implementation of a new electronic awarding procedure processed by an external and independent provider, (ii) the reduction of processing times, (iii) the recognition of the possibility for companies to improve the first bid submitted, (iv) the limitation to 40% of the number of areas that can be awarded to a single recycler, (v) improvements in relation to the setting of the quantities to be auctioned, (vi) the creation of registers of penalties, guarantees and approvals to provide greater transparency.

4. MARKET CHARACTERISTICS

According to [Eurostat](#), approximately 84 million tonnes of packaging waste were generated in the EU in 2021, about 189 kg per inhabitant, of which 8.6 million tonnes were generated in Spain, about 183 kg per person, accounting for 10% of the EU total. Its trend has been upwards: the per capita figure has grown since 2012 by 22% in the EU and 28% in Spain.

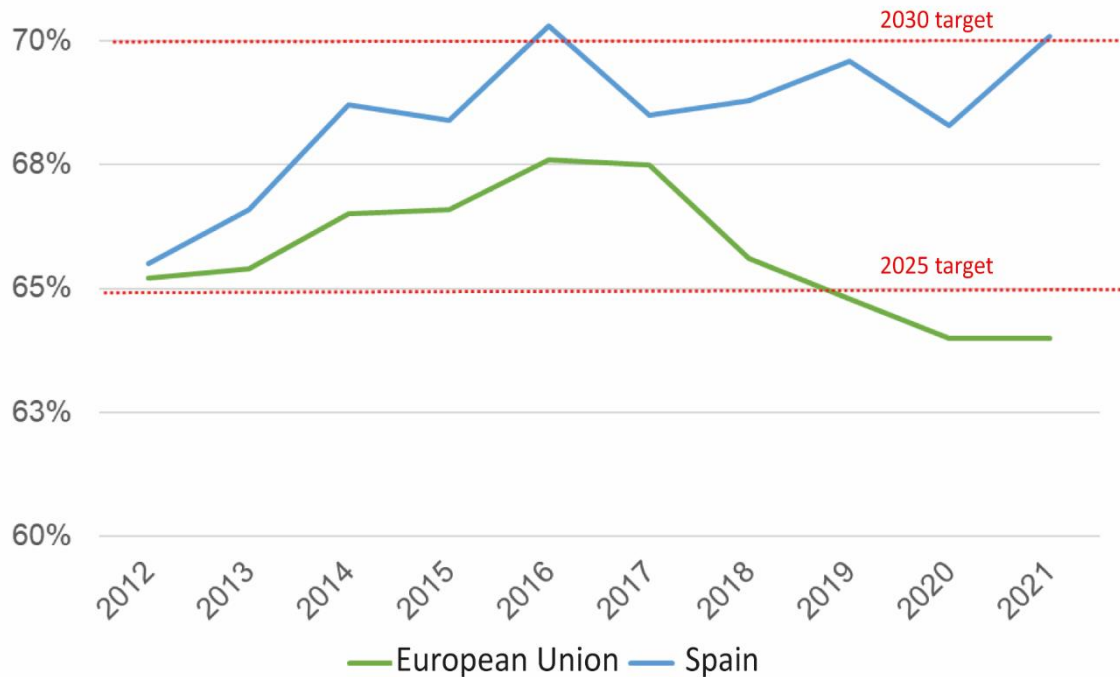


Source: European Parliament infographics based on Eurostat data.

In terms of its direct weight in the Spanish economy, according to the latest Spanish National Statistics Institute (INE) data, in 2022 waste management accounted for a national expenditure of €15.465 billion and contributed a Gross Value Added of €6.66 billion (0.5% of total GVA). In addition, waste management activities employed about 120,000 people in Spain, about 0.5% of the total number of employees. The evolution over time reflects an increase in the number of employed persons compared to 2010, when the number of employed persons was less than 70,000. However, these figures underestimate their real influence on the economy, as the many companies that package their products are affected by what happens in the sector.

Regarding the amount of packaging waste that is recycled, [Eurostat](#) data estimate that in 2021 (latest available data) a recycling rate of 64% was achieved for the EU as a whole, and 70% for Spain. These figures put us in a favourable position to meet the targets set by the EU for Member States and the EU itself of 65% by 2025 and 70% by 2030.

Figure 1: Packaging recycling rate in Spain and in the EU



Source: Eurostat (env_waspacr).

In terms of material targets, Spain exceeds the 2025 targets in several cases. Overall, in 2021 (latest available data) Spain was above the EU according to Eurostat.

Table 1: Packaging waste recycling rate by material

Material	Spain 2021	EU 2021	2025 target	2030 target
Paper and cardboard	78%	83%	75%	85%
Plastic	56%	41%	50%	55%
Wood	65%	32%	25%	30%
Metals	83%	75%	70%	80%
Aluminium	56%	NA.	50%	60%
Glass	71%	74%	70%	75%
Total	70%	64%	65%	70%

Source: Eurostat (env_waspacr).

4.1. The operators: the PROs for household packaging

In Spain, until 2024 there have been two household packaging PROs, which currently continue to dominate the sector: (i) Ecoembes, for light packaging and paper/cardboard; and (ii) Ecovidrio, for glass packaging.

Box 1

ECOEMBES

Ecoembalajes España, S.A. (Ecoembes) is a non-profit public limited company created in 1996 to manage light household packaging waste. It manages waste paper and cardboard packaging, wood, aluminium, steel, polyethylene terephthalate (PET), Tetra Brik (beverage carton), high-density polyethylene (HDPE), flexible plastic, other plastics and other materials (textiles, ceramics, etc.).

In 2023, Ecoembes had 14,611 member companies and 23 shareholders, including companies, associations and federations³⁵. In short:

- Ecoembes obtains resources from the fees paid by its member companies, sometimes referred to as “paying for the Green Dot”³⁶. In 2023, Ecoembes earned €606.6 million through fees, 85% of its total revenues.
- Ecoembes compensates LE financially for the collection, transport, separation and sorting activities at packaging waste treatment plants.

³⁵ A company is considered to be a member if it complies with its legal obligation, imposed by the Packaging Royal Decree, by signing a PRO membership contract.

Regarding Ecoembes shareholders, they can be consulted at:

<https://www.ecoembestransparencia.com/gobernanza/organos-de-gobierno/#junta-accionistas>.

The shareholders are 60% packers, 20% trade and distribution entities, and 20% representatives of packaging producers. At the same time, it should be noted that shareholder companies (i.e. those that are not federations or associations) are also member companies. By contrast, shareholder associations are not member companies as they have no production activity.

³⁶ The Green Dot symbol is a logo consisting of two arrows in a circle, which has been used so far by Ecoembes and Ecovidrio to identify the packaging included in their system. This label has become optional with the new Packaging Royal Decree. In addition, the fee that each company pays to these PROs to cover the cost of packaging waste management is also known as the "Green Dot". The Green Dot fee to be paid by each company is mainly determined by the number and weight of the packaging it places on the market. Every year, Ecoembes establishes the fees to be paid for each packaging material, taking into account the costs derived from the management of its waste, including the income obtained from the sale of the recovered material to waste managers, if any.

- The resulting materials are allocated by Ecoembes to authorised waste managers. They can obtain revenues from these allocations if the materials have a positive value, and costs if they have a negative value.

Box 2

ECOVIDRIO

The Ecological Company for the Recycling of Glass Packaging (Ecovidrio) is a non-profit association created in 1995 with the aim of creating a collective system for the management of glass packaging, as well as ensuring compliance with the recycling targets set in the regulations.

Its operation is similar to that of Ecoembes, except that Ecovidrio is generally responsible for the collection and transport of glass packaging waste deposited in the glass containers. It therefore obtains income from the fees paid by its member producers and from the sale of the material, with which it finances the collection and transport of glass packaging waste or, in some cases, compensates the LE that have not transferred these activities to it.

In 2022, Ecovidrio had 2,530 member companies, from which it received €66 million in "Green Dot" revenues, which represents 78% of its income. The remainder comes from the sale of material. The fee payable by each member firm is calculated as the sum of two coefficients; one related to the number of containers placed on the market by each packer and the other related to the weight of these containers. The first coefficient distributes the fixed costs, while the second coefficient distributes the variable costs.

PROs have two main sources of income: (i) the allocation of materials to recycling managers, which accounts for approximately 25% of its revenue, and the remainder is (ii) fees paid by the adhering members³⁷.

On the costs of PROs, the OECD (2016) estimates that in general, collection and treatment costs amount to 60-80% of the total, compared to 10-40% for recovery or disposal costs and 5-10% for administration costs and other activities (information, awareness-raising campaigns, etc.). These figures are consistent with those of Ecoembes³⁸: in 2022, 60% of its expenditure came from sorting and treatment activities, 33% from collection activities, 2% from awareness campaigns and 5% from structural costs. The data are also in line with those reflected by Ecovidrio in its 2022 Sustainability Report: operating costs (collection, containerisation, intensive plans, public administration, chain monitoring and mobilisation) account for 93% while the rest corresponds to structural costs (overheads, consultancy, systems, etc.).

³⁷ Dráb, Engel & Krištofóry (2020). See also Ecovidrio's Sustainability Report (2022) and Ecoembes' transparency portal: <https://www.ecoembestransparencia.com/gastos-e-ingresos/>.

³⁸ See: <https://www.ecoembestransparencia.com/gastos-e-ingresos/>

4.2. Household packaging waste value chain

The household packaging waste value chain has a circular format and two main streams:

- (i) Waste streams: from household consumption, it goes through collection, transport, sorting and recycling, until it reaches the producers again to be incorporated once more into their production.
- (ii) Economic flow, or flow of payments and receipts to cover the costs of the system, in which the PROs receive their revenues and, with these revenues, pay the LE for the waste management work.

Each of these stages is described in more detail in the following sections.

Diagram 1: Management of household packaging waste

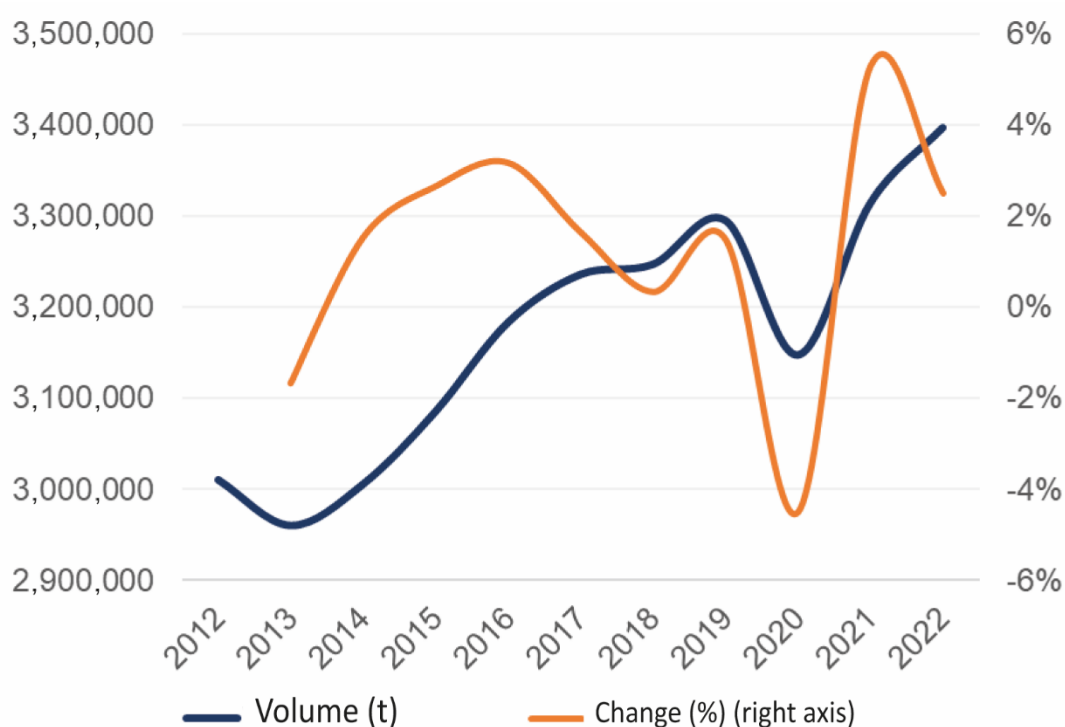


Source: own elaboration.

4.2.1. Market entry and waste generation

The first step is the placing of packaged products on the market. When the product is consumed, the waste from its packaging is generated. Data provided by Ecoembes and Ecovidrio show that in 2022, its member companies reported placing a total of 3,397,616 tonnes of household packaging on the market, so that, if we cross-check these data with those provided by [Eurostat](#), we can see that household packaging represents almost 40% of the total packaging waste generated in Spain. Of these, 1,871,327 tonnes, 55% correspond to household packaging managed by Ecoembes and 1,526,289 tonnes, 45%, to household packaging managed by Ecovidrio. The following graph shows its evolution.

Figure 2: Household packaging placed on the market by member companies



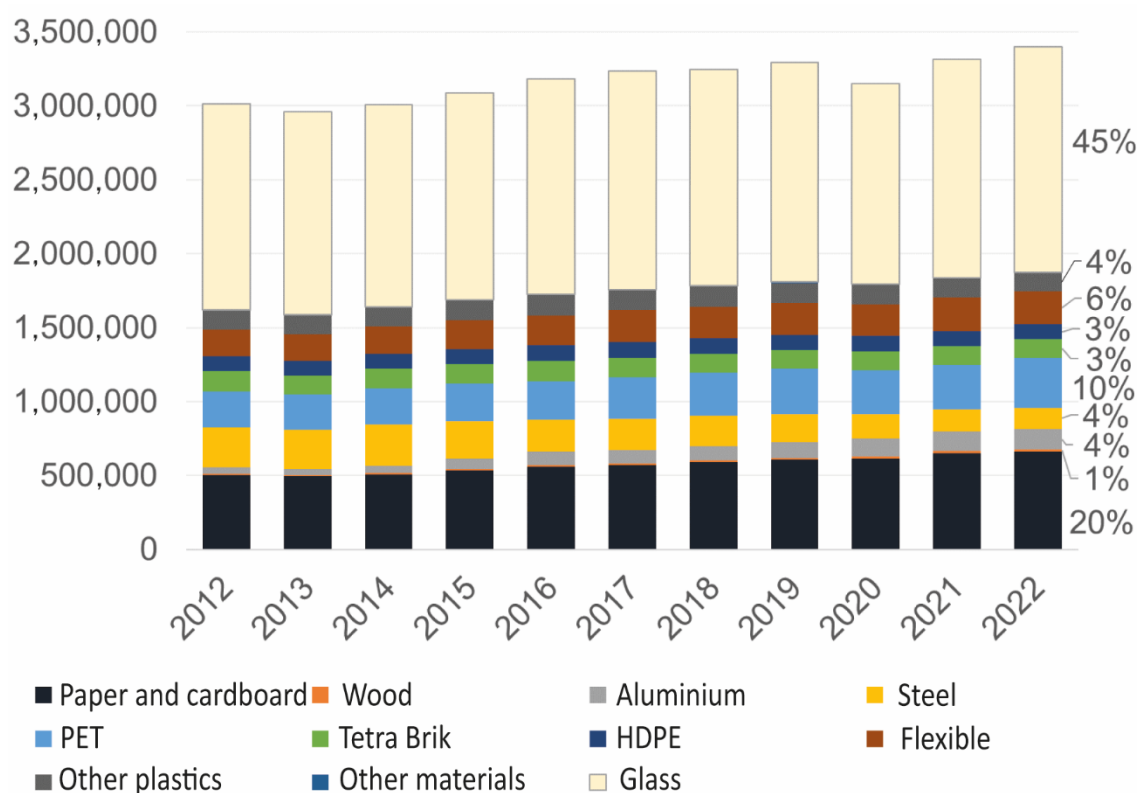
Source: own elaboration based on information provided by Ecoembes and Ecovidrio, based on the classification of packaging carried out by each of the PROs³⁹.

³⁹ Although the Packaging Royal Decree contains definitions for household, commercial and industrial packaging, there are still some interpretative doubts in certain cases which may have a moderate influence on the figures. In particular, packaging used in the HORECA channel, which is often the same as that distributed to households and may be deposited in municipal containers and end up in the same management circuit as household packaging. In the case of Ecoembes, the figure for packaging placed on the market includes only household packaging, while Ecovidrio also includes the so-called "assimilated to household" packaging, which is the same as household packaging but consumed in the service sector,

The figures show a general upward trend, with occasional drops. Cumulative growth over the decade 2012-2022 is around 13%, a figure similar to that of Spanish GDP growth over the same period.

The distribution by material of household packaging placed on the market by Ecoembes and Ecovidrio member companies in the period 2012-2022 is shown below.

Figure 3: Material of household packaging placed on the market by member companies (tonnes)



Source: own elaboration based on information provided by Ecoembes and Ecovidrio.

The evolution since 2012 shows a constant predominance of glass, although with a slight decrease in its importance in the total. In contrast, paper and cardboard

mainly in the HORECA channel. On the other hand, both the Waste Act and its predecessor (Act 22/2011 of 28 July on waste and contaminated soils) assimilate some commercial and industrial waste to household waste. Specifically, art. 2.at) of the Waste Act considers household waste to be "waste similar in composition and quantity [...] generated in services and industries, which is not generated as a consequence of the activity of the service or industry itself".

have increased from 16.7% to 19.5%, reflecting a certain shift in packaging materials. With regard to plastic packaging, the use of PET has increased significantly since 2012 reaching 10% of the market share, while for HDPE and other plastics its share has remained relatively constant at around 3 - 4%. The use of aluminium has grown considerably in relation to metal packaging, although the share of aluminium in the total is still low, while the use of steel has decreased over the last decade.

4.2.2. Collection and transport to sorting and treatment plants

In Spain, the model is based on separate collection through specific containers for light packaging waste (yellow container), paper and cardboard waste (blue container) and glass packaging waste (green container). In addition, municipalities set in their by-laws the separate collection of other waste fractions, typically the organic fraction and the remaining fraction. From the remaining fraction, which includes the containers and bins where the waste that is not separated goes, packaging that would correspond to other fractions but has not been correctly separated can also be recovered.

After collection, the waste is transported directly to waste management facilities in the case of blue and green containers (paper/cardboard and glass), as they are single-material containers, with a low content of the materials known as "improper", or waste that does not correspond to the container in question. All other packaging waste (yellow container) is transported to sorting and treatment plants.

4.2.3. Agreements and management models: organisational vs. financial

Agreements between LE and PROs play an essential role in establishing the conditions of service provision and funding by PROs. They can also determine the management model itself, depending on the role of PROs in the organisation of these services. The agreements delimit whether the local authority carries out all or part of the organisation of waste management, or whether it is carried out by the PROs⁴⁰.

The agreements are preferably signed with the corresponding Autonomous Community (which will guarantee the participation of the local authorities to negotiate and monitor), or directly with the local authority, with the prior knowledge and agreement of the Autonomous Community⁴¹.

⁴⁰ Art. 33.1 of the Packaging Royal Decree.

⁴¹ Art. 44.2 of the Waste Act and art. 33.2 of the Packaging Royal Decree.

With regard to agreements, by the end of 2023, Ecoembes had signed 147 agreements with PA. Of these, 16 are framework agreements with Autonomous Communities or cities, all except Asturias, and the rest with LE, whether grouped in some legal form (commonwealth, consortium, etc.) or individually.

The duration of agreements, and especially the time it takes to negotiate them, can have an impact on competitive dynamics. In this respect, the agreements signed by Ecoembes have an average duration of 4.2 years (50.7 months)⁴², and have taken 5.3 months to negotiate. For these calculations, the starting date of negotiations has been considered to be the proposal of a draft agreement, usually drafted by Ecoembes. This draft is presented at a meeting with the heads of each Autonomous Community and is normally sent to that Autonomous Community for discussion or negotiation beforehand.

As of September 2023, Ecovidrio had signed 875 agreements with PA. Of these, 11 are framework agreements with Autonomous Communities or cities⁴³ and the rest with LE, whether grouped together (commonwealth, consortium, etc.) or individually. The agreements signed by Ecovidrio have an average duration of 6.4 years (77.3 months). As to the duration of the negotiations, in response to a request for information from the CNMC, Ecovidrio indicates that it can vary substantially: from 3 to 5 months in some cases, while in others it has taken more than 1 year, or even 2 years.

With regard to the model for the provision of these services in Spain, firstly, it should be noted that the LE can provide them independently or in association, in accordance with the provisions of Act 7/1985, of 2 April 1985, regulating the Bases of Local Government (LRBRL). They can also opt for direct or indirect management. The first covers management by the local authority itself, by a local autonomous body, by a local public business entity or by a local trading company whose share capital is publicly owned. Indirect management refers to the service concession contract, as set out in Act 9/2017 on Spanish Public Procurement.

The LE may also agree in the agreement with the EPR systems that the organisation, in whole or in part, of the management of household packaging waste (and commercial packaging waste, when it falls under their responsibility) will be carried out by the PROs instead of by the local authority. More specifically,

⁴² According to the data provided by Ecoembes in response to a request for information, there are 20 agreements that do not have a specific expiry date, but will expire when new agreements are signed that are adapted to the provisions of the Packaging Royal Decree. The average duration of the existing agreements was calculated on the assumption that these 20 agreements are valid until 31/12/2023. If these 20 agreements are excluded from the calculation, the average duration of the agreements is 42.3 months, i.e. 3.6 years.

⁴³ At present, Ecovidrio has not signed agreements with the Autonomous Communities of Andalusia, Aragon, Cantabria, Castile and Leon, La Rioja, Murcia, Navarre and the Basque Country.

the LE can assign to the PROs, via agreements, the sale of the material recovered in the packaging sorting plants, as well as of the packaging waste recovered from other fractions (remaining, inorganic or waste dispersed in other treatment plants for mixed fractions), or even the operations of separate collection, transport, sorting and treatment.

In the event of taking on these functions, PROs should enter into agreements with waste managers, avoiding anti-competitive practices. The legislation also provides for them to enter into agreements, where appropriate, with other EPR systems, when they carry out the management of their packaging waste, for financial compensation for the management operations they have carried out.

The question of who organises the collection and treatment of waste is essential for the efficiency of waste management, as it can account for up to two thirds of the total cost. In addition, collection and transport are activities with natural local monopoly characteristics where there is no room for competition in the market, and a choice has to be made between providing them under a pure monopoly regime or introducing a system of competition for the market.

Internationally, two collection and treatment models stand out⁴⁴:

- Organisational: adopted in Germany and Austria, it is called "organisational" because the responsibility for the collection and treatment of packaging waste is transferred to the PROs. Thus, it is the PROs that manage these activities, deciding on both organisational and financial aspects, within the limits agreed with the LE. The fees paid by the product producers are used by the PROs to remunerate the collection and treatment companies selected through competitive procedures. In general, there is no financial flow between PROs and LE.
- Financial: adopted in Spain, Italy and France. In these countries, the collection and treatment of packaging waste is the responsibility of the LE, which are in charge of organising and providing the services directly or indirectly, and are financed by the PROs, as agreed in the agreements. Therefore, the PROs collect the fees paid by the member producers and transfer them to the LE.

In "financial" models, PROs are only able to influence the way collection and treatment is provided through the negotiation of agreements. In fact, differences between PROs and PA on the efficiency and costs associated with these

⁴⁴ The terminology used to refer to these models varies between reports or jurisdictions. For example, the French *Autorité de la Concurrence* refers to them as "operational" and "financial" (*Autorité de la Concurrence*, 2016). The German regulation defines its model as a "dual system", because municipal and PROs collection coexist, depending on the waste. The OECD distinguishes between "dual models" and "shared responsibility models" (OCDE, 2016).

activities are common and have become one of the main sticking points in negotiations. In case several PROs compete, under the "financial" model their ability to differentiate in the fees charged to producers (the "Green Dot fees") is limited, as they do not have the ability to have a differentiated influence on the municipal costs of collection and treatment.

In "organisational" models, PROs decide how to organise collection and treatment. They establish the material and human resources used, the technologies applied, the frequency of service provision or the capacity and location of the treatment plants, although the regulations usually oblige the PROs to sign agreements with the LE in which the latter can establish minimum criteria. Thus, PROs have more scope to improve their efficiency, as these activities account for the largest share of costs⁴⁵.

With regard to who currently carries out the collection in Spain, according to Ecoembes data for 2023, in the case of the yellow container (light packaging) and the blue container (paper and cardboard), no current agreement foresees that the collection is carried out by the PRO, i.e. it is always carried out by the LE. On the other hand, in the case of glass containers, 99.7% of the agreements grant collection to Ecovidrio.

4.2.4. Recovery and sorting in treatment plants

Waste is separated at sorting and treatment plants using different technologies by material (aluminium, steel, polyethylene terephthalate (PET), Tetra Brik or beverage carton, high-density polyethylene (HDPE), flexible plastic, and other plastics). There are 97 sorting and treatment plants in Spain⁴⁶ which are mostly publicly owned and can be managed either directly by the LE or indirectly by private companies through a service concession contract. According to data provided by Ecoembes, in 2022, 74% of the packaging placed on the market had sorting and treatment plants with technology for its correct separation.

According to data provided by Ecoembes and Ecovidrio, 2,639,850 tonnes of packaging waste were collected in 2022, of which 1,627,314 tonnes (61.6%) corresponds to materials managed by Ecoembes and 1,012,536 (38.4%) to

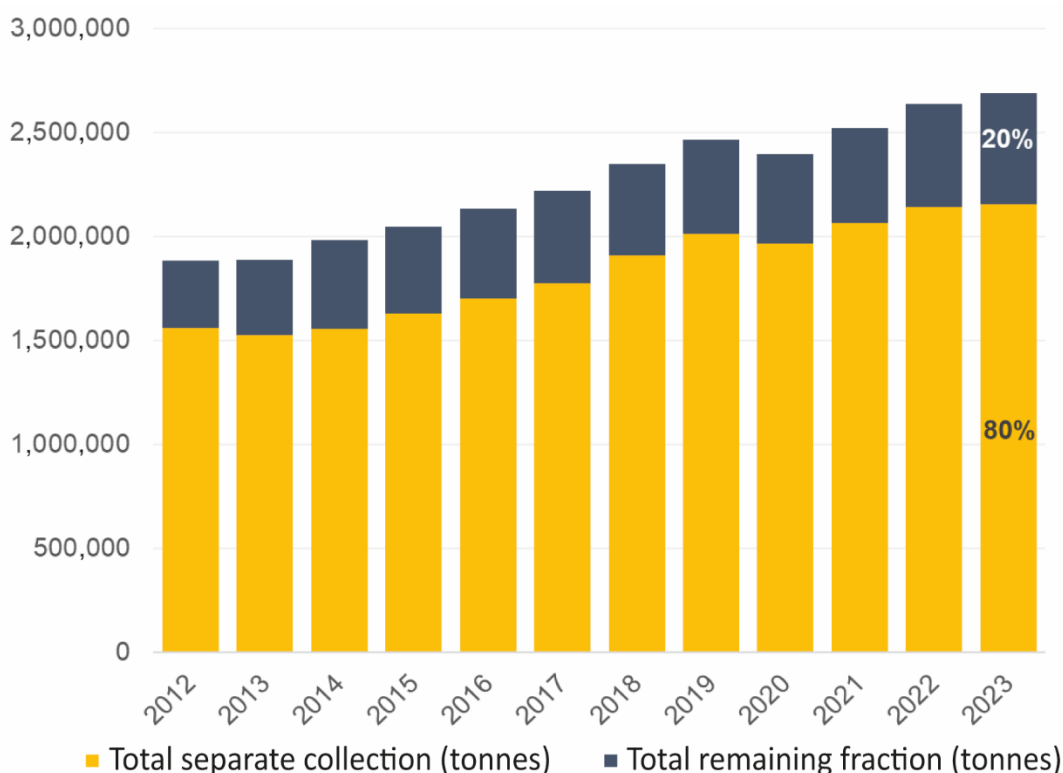
⁴⁵ For these reasons, the French Authority, (Autorité de la Concurrence, 2016) took a position in favour of moving from a "financial" to an "organisational" model. In particular, *"it notes a certain inefficiency in terms of costs or production capacity, which the arrival of new competitors will probably not be able to correct in a 'financial' type system, given the limited incentives for price competition between PROs whose main task is to redistribute the contributions of the companies to the local authorities. It therefore recommends that [...] the household packaging sector should consider moving to an 'operational' model, which is more suitable for competition between PROs"*.

⁴⁶ See: <https://www.ecoembes.com/es/el-proceso-de-reciclaje/datos-de-reciclaje-de-envases-domestico-en-espana/reciclaje-de-envases-domesticos/barometro>

glass. Not all of them were recovered through separate collection, reflecting the fact that there is still room for improvement in sorting by citizens. In 2022 in particular, 2,144,195 tonnes (81.2%) were recovered through the separate collection system, while 495,655 tonnes (18.8%) were recovered from the remaining fraction. As for recycled materials managed by Ecoembes in 2023, 1,231,460 tonnes (73%) came from separate collection (1,012,036 tonnes from municipal collection and the rest from collection in places of high concurrence), and 452,430 tonnes (27%) came from the remaining fraction. 93% of glass packaging waste (924,283 tonnes) was recovered through separate collection in 2023, with the remainder in the remaining fraction, reflecting improved separation of this material.

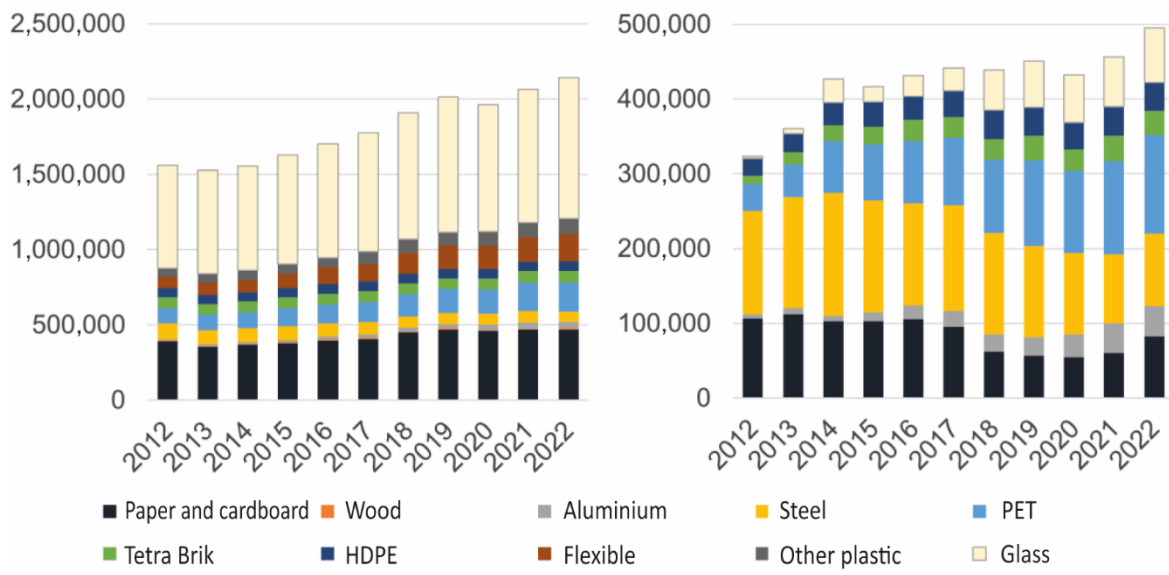
The following graphs show the evolution by material of the packaging waste collected through separate collection and of the remaining fraction, in the latter case, recovered in sorting plants.

Figure 4: Collection of household packaging waste



Source: own elaboration based on information provided by Ecoembes and Ecovidrio.

Figure 5: Household packaging waste collected through separate collection (left) and remaining fraction (right), in tonnes



Source: information provided by Ecoembes and Ecovidrio. Note: the collection through the remaining fraction of waste wood, flexible or other plastics has been non-existent in the period.

Most of the packaging waste recovered through separate collection is glass (43.78%) and paper/cardboard (21.98%). The rest of the materials recovered represent less than 10% of the total. The most abundant material in packaging waste recovered from the remaining fraction is PET (26.76%), followed by steel (19.45%). The evolution of glass in recent years, whose weight has been increasing due to investment in glass recovery technologies in municipal solid waste sorting plants, stands out⁴⁷.

As for glass packaging waste, despite the fact that, in principle, it does not go through a treatment plant as it is collected in single-product containers, a small part of it does end up in the remaining fraction due to incorrect separation. There are two main options to try to recover them:

⁴⁷ Article 29 of the Packaging Royal Decree establishes the following minimum targets for the recovery of household packaging waste through separate collection, which the systems must guarantee: 65% in 2025, 75% in 2030 and 85% in 2035, for the products placed on the market by the participating producers. They shall also achieve the following minimum separate collection targets by weight of household packaging waste by material: (a) plastic: 55% in 2025, 65% in 2030 and 75% in 2035; b) wood: 30% in 2025, 40% in 2030 and 60% in 2035; c) ferrous metals: 50% in 2025, 60% in 2030 and 80% in 2035; d) aluminium: 30% in 2025, 40% in 2030 and 60% in 2035; e) glass: 70% in 2025, 80% in 2030 and 90% in 2035; f) beverage and food cartons: 70% in 2025, 80% in 2030 and 90% in 2035; g) paper/cardboard: 75% in 2025, 90% in 2030 and 95% in 2035. Targets are to be achieved at both national and regional level.

- Manual recovery through triage by operators of the municipal waste treatment facility. Their recovery is small. In 2022, Ecovidrio had 20 manual glass sorting agreements with remaining fraction treatment plants, 18.4% of the total number of municipal waste sorting plants.
- Automatic recovery by specific machinery in the refining phase (removal of impurities) after composting. By means of screening, densimetry and aeration systems, the organic fraction is separated from the inorganic fraction (stones, ceramics, porcelain and glass) and, once separated, the inorganic fraction is subjected to selection by means of optical systems that separate the glass from the other materials. Recovery is more efficient but can only be done in plants that compost and refine. In 2022, Ecovidrio had 31 automatic glass recovery agreements with remaining fraction treatment plants, 28.4% of the total number of municipal waste sorting plants.

4.2.5. Delivery of the material to waste managers

Waste managers are natural or legal persons, public or private, who carry out waste collection, transport, sorting, recovery or disposal operations (art. 2 of the Waste Act). The permit system applies both to waste managers carrying out waste collection and treatment operations and to the storage and treatment facilities themselves. Natural or legal persons must apply for authorisation in the Autonomous Community where they have their domicile or registered office. The authorisation is valid throughout the national territory and cannot be conditional on the ownership of waste treatment facilities in the territory of that Autonomous Community.

Moreover, depending on the agreement, the allocation of the materials resulting from the treatment plants can be carried out by the collective system or by the local authority. In the latter case, and if the treatment plant is indirectly managed, the local authority can hand over the sale of the material to the concessionary company of the sorting plant in the concession contract.

According to data provided by Ecoembes through a request for information, 57.8% of the agreements signed with Ecoembes foresee that it will be responsible for allocating the materials collected in the yellow container⁴⁸. This means that, although the materials are physically in the sorting and treatment plants owned by private or local authorities, it is Ecoembes that determines to which managers they are handed over. 14.28% of the agreements signed with Ecoembes grant it the authority to sell materials from the remaining fraction. As for Ecovidrio, 7 of

⁴⁸ No agreement with Ecovidrio provides for the latter to manage the sale of glass packaging waste in the yellow bag.

the 11 framework agreements signed with Autonomous Communities foresee the possibility for Ecovidrio to manage the sale of glass packaging waste from the remaining fraction⁴⁹. The percentage of agreements that cede the sale of materials from the paper and cardboard container to Ecoembes is 0%. Finally, as far as the materials obtained from the glass container are concerned, all the framework agreements signed by Ecovidrio with Autonomous Communities or cities assign the sale of the material to Ecovidrio.

The 2022 regulations require the PROs to establish an award system in electronic format in accordance with the principles of hierarchy, self-sufficiency and proximity, which guarantees the principles of publicity, competition and equality, and ensures free competition and the traceability of the waste awarded until it is fully treated. Previously, the regulations gave PROs wide latitude in the design of award systems. Thus, among other issues, Ecovidrio and Ecoembes have granted specific approvals to waste managers in order to be able to participate, so that by the end of 2023 there were 495 recycling plants in Spain authorised by the Autonomous Communities and approved by Ecoembes⁵⁰ and 18 waste glass packaging managers approved by Ecovidrio⁵¹.

There is waste with positive value, for the acquisition of which the waste managers offer a financial consideration to the waste holder (Ecoembes, the local authority, or the concessionary company of the sorting plant), and waste with negative value, for which it is the waste holder who pays the waste managers to take care of the waste. Waste with positive value is typically waste that is more easily recycled and sold.

The following table shows the data on the weight of income and expenditure, reported by Ecoembes and Ecovidrio, corresponding to the allocation of the different types of materials over the last ten years.

⁴⁹ Framework agreements signed with the Autonomous Communities of the Canary Islands, Castile-La Mancha, Valencia, Extremadura, Catalonia, Galicia and Madrid.

⁵⁰ See: <https://www.ecoembes.com/es/el-proceso-de-reciclaje/datos-de-reciclaje-de-envases-domestico-en-espana/reciclaje-de-envases-domesticos>

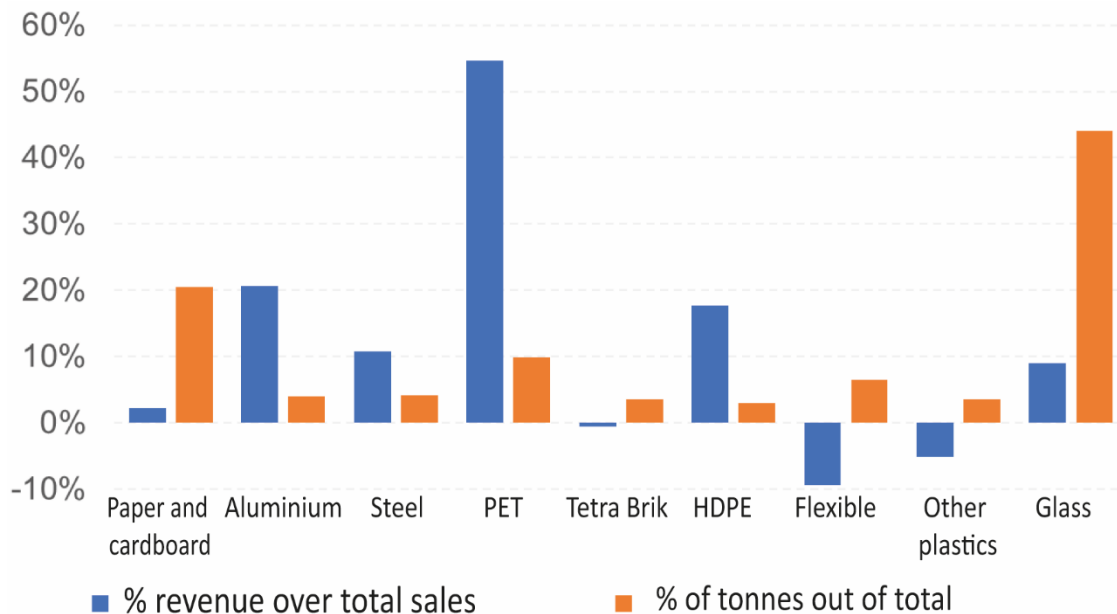
⁵¹ Information provided by Ecovidrio in response to a request for information.

Table 2: Percentage of revenue from sales of each material out of total revenue from sales of material, by year

Year	Paper and cardboard	Aluminium	Steel	PET	Tetra Brik	HDPE	Flexible	Other plastics	Glass
2012	4.5%	6.2%	14.4%	38.3%	0.2%	17.2%	N/A	-19.6%	38.7%
2013	3.3%	5.3%	18.5%	38.9%	0.3%	14.8%	N/A	-13.9%	32.8%
2014	2.3%	5.6%	21.1%	29.9%	-0.1%	19.5%	N/A	-13.6%	35.3%
2015	3.1%	8.8%	15.4%	30.7%	-0.2%	23.0%	N/A	-13.1%	32.2%
2016	5.4%	18.4%	16.2%	26.6%	-0.5%	27.5%	N/A	-22.6%	29.0%
2017	5.8%	26.2%	24.7%	20.9%	0.0%	14.2%	N/A	-20.1%	28.4%
2018	-1.1%	23.8%	24.3%	26.7%	0.2%	21.9%	N/A	-19.2%	23.3%
2019	-1.7%	20.1%	21.0%	37.2%	0.2%	23.6%	N/A	-21.4%	21.0%
2020	-3.3%	23.0%	21.3%	51.0%	0.2%	15.7%	N/A	-37.5%	29.5%
2021	3.1%	22.1%	22.0%	42.0%	-0.4%	20.1%	N/A	-26.3%	17.4%
2022	2.2%	20.7%	10.8%	54.7%	-0.5%	17.7%	-9.4%	-5.2%	9.0%

Source: own elaboration based on data provided by Ecoembes and Ecovidrio.

Figure 6: Percentage of revenue from sales of each material over total revenue from sales of material, and percentage of tonnes of packaging of each material placed on the market over total packaging placed on the market, by 2022



Source: own elaboration based on data provided by Ecoembes and Ecovidrio. Notes: Ecoembes has not reported any income/expenses from the sale of wood. Information on "Flexible" material is only provided from 2022 onwards, when separate sales of "Flexible" material started.

Ecoembes sets minimum quality requirements for the materials recovered from the yellow bin, which the sorting plants deliver to the waste managers. These conditions are known as "Recovered Materials Technical Specifications" (ETMR in Spanish) and are published on the Ecoembes website⁵². If the recovery or recycling companies that receive the materials consider that they do not comply with the ETMR, they can initiate a non-compliance management procedure, in which Ecoembes mediates to reach an agreement between the owner or concessionaire of the sorting plant and the waste manager, or, if no agreement is reached, to take a decision to resolve the conflict. The manager, Ecoembes, and the take-back or recycler shall jointly search for the origin of the non-conformity and define the appropriate means to solve it within a maximum period of two months.

Ecovidrio also establishes, in the framework agreements with the regional administrations, quality standards that glass packaging waste must meet before being delivered to the managers.

The regulations prior to 2022 did not make any specifications in this respect, but the new Packaging Royal Decree indicates that the managers of the separation and classification plants, the managers of the recycling plants, the PROs, the Autonomous Communities and the LE must agree on the minimum quality requirements for the different fractions of these materials. These minimum requirements shall be applicable throughout the territory of the State (art. 11.2 of the Packaging Royal Decree).

4.2.6. Recycling and other material treatment

Once the material has been allocated, the managers carry out different treatments on the materials, including further sorting and washing operations. They will then recycle the material if possible.

Recovery or recycling refers to the process of extracting resources or energy from waste. Waste that cannot be recycled or recovered must be treated to reduce its volume and toxicity before disposal. This includes methods such as incineration (with or without energy recovery), composting for organic waste or other treatments.

Achieving a high level of recycling is a key objective in waste management. Therefore, quality information on the level of recycling is particularly relevant. As such, at the end of 2023, ten Autonomous Communities had some form of

⁵² See: <https://www.ecoembes.com/es/recicladores-y-recogidas-fuera-del-hogar/residuo-municipal/especificaciones-tecnicas-de-materiales-recuperados-etmr>.

regional regulation of waste managers⁵³, of which only five regulated traceability (Basque Country, Balearic Islands, Galicia, the Community of Navarre and the Valencian Community). Likewise, the Packaging Royal Decree establishes, in Annex II, that in order to ensure, inter alia, the reliability and accuracy of the data collected on recycled packaging waste, an effective system of quality control and traceability of packaging waste shall be established, based on the information contained in the Waste Information System (eSIR). By the end of 2023, this procedure was not yet developed. Similarly, although waste managers are obliged to provide information on their activities to the Autonomous Communities where they operate through annual waste management reports, this information is not published. The MITERD, for its part, prepares an annual report on the generation and management of packaging waste in which it provides data on its recycling, based on the information provided by the PROs or waste managers⁵⁴.

The quality of information may also be diminished by the existence of fraud. The Packaging Royal Decree establishes that in order to check compliance with the packaging waste recycling targets, corrections based on waste characterisation will be made to the data provided by the PROs for packaging placed on the market. As far as the CNMC is aware, the latest characterisation carried out by the Ministry corresponds to the period 2010-2012⁵⁵.

On the other hand, another measure foreseen by the Packaging Royal Decree that can help to boost data quality is the creation of a packaging section in the Product Producers Registry, obliging all producers to register and submit information on the placing of packaging on the market on an annual basis.

Beyond recycling, energy recovery is another possible destination for packaging waste, which is the thermal treatment of the waste for transformation and energy recovery through the application of heat energy (incineration, pyrolysis, drying, etc.). These treatments are not final, as they generate waste that has to be managed according to its characteristics. For a thermal treatment of waste to be considered as energy recovery, it must have an energy efficiency of at least 65%⁵⁶. The following table shows the percentage of packaging waste destined for

⁵³ Andalusia, the Canary Islands, Castile and Leon, Catalonia, Valencia, Madrid, the Balearic Islands, Galicia, the Basque Country and Navarre.

⁵⁴ See: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/publicaciones/Memoria-anual-generacion-gestion-residuos.aspx>

⁵⁵ Available at the following link: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/publicaciones/residuos-2013-estudio-plan-piloto-caracterizacion-residuos-urbanos-origen-domiciliario.html>

⁵⁶ Annex II of Act 7/2022 of 8 April on waste and contaminated soils for a circular economy. For installations authorised under EU legislation applicable before 1 January 2009, the threshold is 60%.

energy recovery, distinguishing by material, between 2012 and 2022, based on information provided by Ecoembes.

Table 3: Percentage of packaging waste destined for energy recovery out of total packaging waste put on the market, 2012-2022

Year	Total	Paper and cardboard	Wood	Aluminium	Steel	PET	Tetra Brik	HDPE	Flexible	Other plastics
2012	4.9%	2.9%	2.2%	0.0%	0.1%	5.4%	5.0%	5.4%	15.8%	8.9%
2013	5.0%	2.9%	7.7%	0.0%	0.1%	5.3%	4.9%	5.9%	16.5%	8.6%
2014	5.0%	3.0%	2.4%	0.0%	0.1%	5.5%	4.9%	5.5%	16.3%	8.7%
2015	4.9%	2.9%	2.2%	0.0%	0.1%	5.3%	4.9%	5.2%	15.8%	9.0%
2016	5.0%	1.9%	4.1%	0.0%	0.1%	6.5%	4.9%	5.2%	15.6%	10.7%
2017	5.0%	2.3%	4.7%	0.0%	0.1%	5.6%	4.6%	4.5%	15.5%	11.1%
2018	5.0%	2.1%	3.7%	0.0%	0.1%	5.8%	4.4%	5.3%	15.5%	11.8%
2019	5.0%	2.4%	3.8%	0.0%	0.1%	6.2%	4.9%	5.5%	13.6%	12.3%
2020	5.0%	2.7%	4.5%	0.0%	0.1%	6.0%	4.6%	7.4%	14.2%	8.1%
2021	5.0%	2.6%	13.1%	0.0%	0.0%	4.8%	4.8%	5.5%	14.8%	10.5%
2022	5.0%	3.0%	7.8%	0.0%	0.0%	4.9%	4.7%	5.2%	14.1%	10.8%

Source: own elaboration based on information provided by Ecoembes.

The table shows that the general trend in the energy recovery of packaging waste in Spain remains fairly stable, despite the increase in the volume of waste. Improved recycling capacity for various materials may be absorbing volumes that would previously have been destined for energy recovery.

Waste that has not been recycled, recovered or treated ends up in final disposal. The most common method is landfilling, although efforts are being made to minimise this option due to its environmental impact.

4.3. Commercial packaging waste

Commercial packaging is not subject to EPR until 1 January 2025. The subjection of this packaging to EPR is one of the relevant changes of the waste regulation approved in 2022. To date, and as a starting point for the sector before undergoing the EPR at the beginning of 2025, it should be noted that there have been different routes for the management of its waste.

On the one hand, reusable packaging is common among commercial packaging, especially in catering establishments and bars. Glass stands out, in examples

such as beer or soft drink containers. For this type of packaging, closed reuse circuits based on reverse logistics have existed since the 1970s, whereby empty reusable packaging is collected by suppliers at the time of new deliveries and subsequently treated, refilled and put back into circulation⁵⁷.

In the case of non-reusable commercial packaging, there are two possibilities:

- The local authority has, by virtue of its by-laws, competence over the management of commercial waste, in which case it must have a system in place to exercise this competence. According to AIReF (2023), in 2019 19.6% of the municipalities in its sample had a specific collection service for lightweight commercial packaging waste, 28.5% for glass and 53.4% for paper and cardboard⁵⁸.
- The local authority does not have competence over the management of commercial waste, so that the final waste holder (the shop, restaurant, etc.) is the one who makes agreements with waste managers to remove the waste from their premises.

As of 31 May 2024, 32,819 producers were registered in the packaging section of the Product Producers Registry. According to information received in October 2023 in response to a request for information, at that time there were 2,787 registered producers of reusable commercial packaging and 11,346 registered producers of single-use commercial packaging⁵⁹.

As commercial packaging will be subject to EPR from 1 January 2025 under the new legislation, product producers will be obliged to finance and organise the total management of their waste through EPR systems, taking over this role from the businesses that generate the waste, unless municipal by-laws provide for

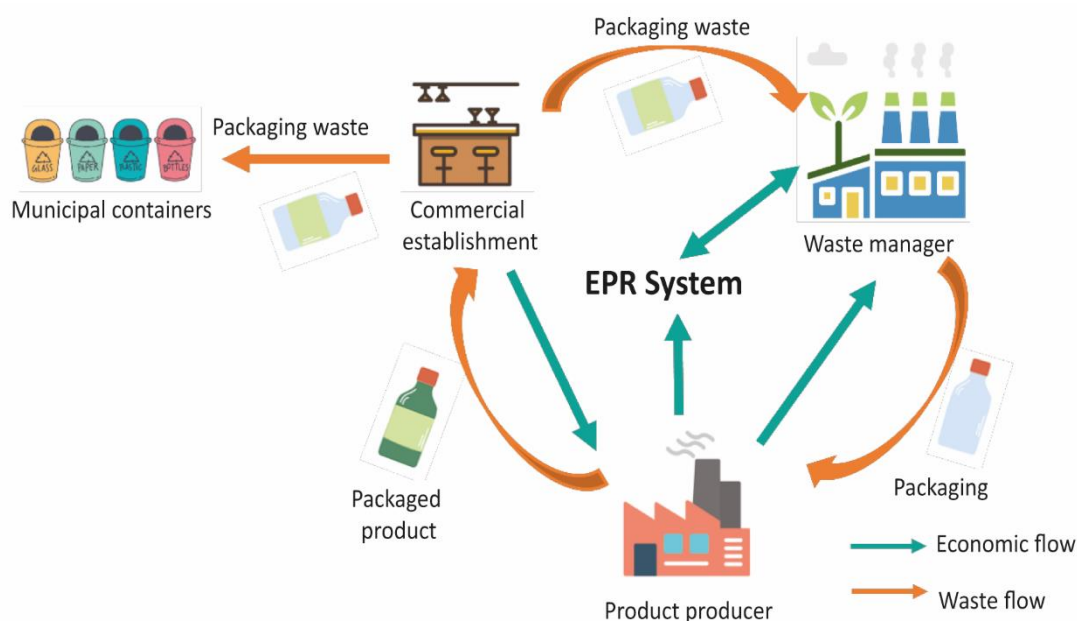
⁵⁷ These circuits were regulated in the so-called "HORECA Orders": (i) Order of 31 December 1976 on compulsory guarantee of containers and packaging for sales of beer and soft drinks; and (ii) Order of 16 July 1979 on compulsory guarantee of containers and packaging for sales of bottled drinking water. Both have been repealed with the Packaging Royal Decree, which establishes a DRS for reusable packaging.

⁵⁸ In addition, 23% had a specific commercial collection service for the organic fraction and 30% for the remaining fraction (AIReF, 2023). AIReF highlights in its study the low quality of the information on municipal waste collection that it has been able to collect due to the limited and uneven capacity of the Autonomous Communities and municipalities to collect and report the data. The Autonomous Communities reported the requested information with significant gaps in the spatial dimension, in the separate collection fractions, or in the time series. The sample covers a selection of 598 municipalities, of which only 27% (160) satisfactorily reported the minimum information considered on separate collection (information from 2015 to 2019 for the remaining fraction, glass packaging, lightweight packaging, paper/cardboard and organic fraction).

⁵⁹ This includes producers of reusable commercial packaging (2,385) and producers of reusable HORECA packaging (402). It must be noted that the same producer can place both reusable and single-use commercial packaging on the market and would therefore be included in both lists.

municipal management. Under the new set-up, the costs associated with the management of commercial packaging waste will no longer be borne by the retailers, but by the product producers, who will finance the EPR systems (individual and collective) which, in turn, will be responsible for managing the waste treatment through contracts with waste managers. Therefore, businesses should follow the instructions of the EPR systems as to where or to whom to deliver their packaging waste, as shown in the diagram below.

Diagram 2: Commercial packaging waste management from 2025 onwards



Source: own elaboration.

The Packaging Royal Decree allows EPR systems to sign agreements with retailers in order to simplify management, so that they assume responsibility for the organisation and management of waste on behalf of the producers, and the appropriate information and financing mechanisms must be established for each of the parties.

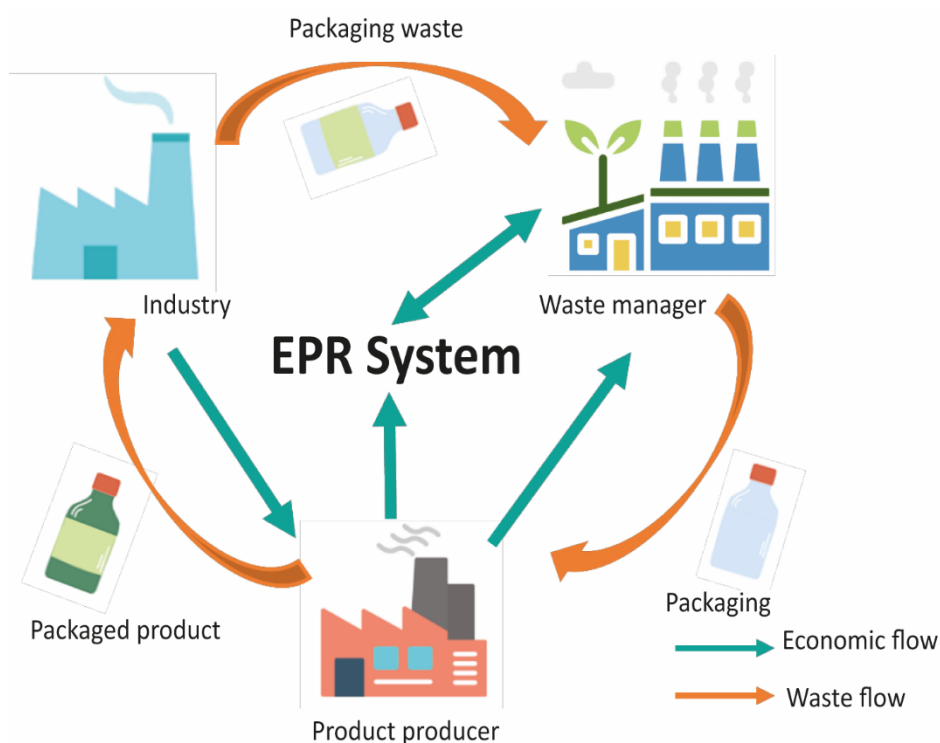
4.4. Industrial packaging waste

Industrial packaging is also not subject to EPR until 1 January 2025. This change is another relevant modification of the new packaging waste regulation. Prior to 2025, industry has directly managed its packaging waste. Thus, industrial companies purchase from their suppliers the packaged products necessary for the development of their activity. Once consumed, the non-reusable packaging

that contained them becomes waste. The industrial company contracts directly with waste managers to manage the waste.

With the new Waste Act and the Packaging Royal Decree, from 1 January 2025, they will be obliged to manage their waste through EPR systems. The costs associated with industrial packaging waste management will no longer be borne by the industries purchasing the packaged goods, but by their suppliers, as producers of those packaged products. The latter will finance the EPR systems (individual and collective) which, in turn, will manage the waste treatment through contracts with waste managers. Industries should therefore follow the instructions of the EPR systems as to where or to whom to deliver their packaging waste.

Diagram 3: Industrial packaging waste management as of 2025



Source: own elaboration.

As in the case of commercial packaging, in order to simplify management, the Packaging Royal Decree allows EPR systems to sign agreements with industries, so that they assume, on behalf of producers, the responsibility for the organisation and management of waste, and the appropriate information and financing mechanisms must be established for each of the parties.

As of 31 May 2024, 32,819 producers were registered in the packaging section of the Product Producers Registry. According to information received in October 2023 in response to a request for information, at that time there were 3,373 registered producers of reusable industrial packaging and 8,644 registered producers of single-use industrial packaging⁶⁰.

⁶⁰ Due to the short time that the packaging section of the Product Producers Registry has been operational (it was created with the Packaging Royal Decree), MITERD does not yet have data on the amount of industrial packaging placed on the market by these producers. On the other hand, consideration should be given to the fact that the same producer can place both reusable and single-use industrial packaging on the market and would therefore be included in both lists.

5. INTERNATIONAL EXPERIENCE

This section describes the experience of countries in Spain's geographical vicinity where, through the introduction of regulatory reforms and, on occasions, the intervention of the competition authorities, the opening up to a competitive model and the efficient coexistence of competing PROs has taken place.

The countries analysed are: Germany, a benchmark in terms of recycling and competition between PROs; Austria, due to its transition in 2015 from a monopoly to competition following a reform motivated by a sanctioning competition case by the European Commission; France and Italy, with an administrative organisation and distribution of powers in waste matters similar to Spain, although with differences of interest; and Slovenia, which, after a period of competition, is considering returning to a single PRO after experiencing judicial conflicts and difficulties in the coordination between PROs, which reflects the importance of having an adequate framework.

5.1. Germany

The law in force in Germany is the Packaging Act (*Verpackungsgesetz*, hereinafter referred to as *VerpackG*), in force since 2019⁶¹. After the first waste management legislation was passed in 1991, a monopoly on collective waste management was created in the country by the company DSD⁶². In 1998 the law was reformed, allowing for the existence of several PROs. An obligation was also introduced for PROs to tender collection, sorting and recycling services to make them more competitive, to procure materials in a competitive manner, and to publish information on the costs associated with different materials. In addition, the intervention of both the *Bundeskartellamt* and the European Commission favoured the entry of competition⁶³. Germany also opted for an "organisational" model, whereby PROs organised the collection and sorting of waste.

⁶¹ The main sources of the section are: Bünemann et al. (2020) and *Bundeskartellamt* (2012).

⁶² In 1991 the Packaging Ordinance (*Verpackungsverordnung*, *VerpackV*) was adopted. It stipulated that producers and importers were obliged to take back the packaging of their products or, alternatively, to contribute financially to an EPR system that would take care of it. Beforehand, 95 companies set up *Duales System Deutschland* (DSD) in 1990, the only PRO in existence until 2003.

⁶³ The *Bundeskartellamt* had argued that the collectors contracted by DSD should be able to be contracted in parallel and on a non-discriminatory basis by other competing PROs (what it called "shared use") because these undertakings had a position of local dominance. This position was adopted by the European Commission in its Decision 2001/837/EC, which prohibited DSD from including exclusivity clauses in its contracts with waste collectors that would prevent parallel procurement. The same Decision shortened the duration of the initial

The coexistence of PROs made it necessary to conclude agreements between them for the organisation of waste collection and sorting, which remained unique per region and tendered by DSD. In 2005, the PROs in operation at the time signed a contract for the first time to determine the amounts that competing PROs were to pay DSD for collection and sorting costs, which were automatically linked to the volume of packaging participating in each system. This contract made it easier for competing PROs to negotiate 'shared-use' agreements with the transport and waste collection companies that won DSD's tenders. In 2008, a new amendment was approved which established the possibility for incoming PROs to adhere to agreements signed between existing PROs and the competent regional or municipal entities. In addition, DSD was no longer the sole tendering authority for collection contracts, and the PROs were obliged to set up a coordination body to determine the market shares of each PRO in each collection region, to coordinate the tendering of collection contracts and to share the costs of collection between PROs. As a result of these obligations, the PROs set up the company "Gemeinsame Stelle dualer Systeme Deutschlands GmbH" (hereinafter referred to as 'Gemeinsame Stelle'). Finally, DSD separated the use of the "Green Dot" logo in 2009 from the producers' membership of its PRO, so that producers who were members of any other PRO were allowed to display it on their packaging under a brand licensing agreement.

5.1.1. Packaging waste collection and co-ordination agreements

PROs are responsible for the separate collection of lightweight packaging waste and glass waste in Germany. The collection of the remaining household waste (remaining, organic and paper/cardboard fraction) is the responsibility of the public waste management authorities (regional or municipal) designated by the laws of the individual *Länder*. Currently, there are more than 400 public waste management entities. In addition, PROs are responsible for the reuse or recycling of all packaging waste subject to the regulation and are subject to specific targets.

PROs can collaborate with each other to set up and manage collection structures, although the conditions are set out in agreements signed with the public waste management bodies of the different federal states, referred to in the regulations as "coordination agreements" (similar to the agreements that must be signed with

contracts until 2003, which allowed collection and treatment services to be put out to tender and resulted in a cost reduction of more than 20% (OECD, 2016).

Another decision (2001/463/EC) prohibited DSD from charging producers the full amount of the Green Dot if it could be shown that they were using the services of another competing PRO. In addition, DSD, at the request of the Bundeskartellamt, changed its shareholding structure between 2003 and 2004 by removing waste disposal companies and distribution companies from the share capital because their presence created conflicts of interest. As a result of these reforms and actions, new PROs were able to appear on the market.

the PA in Spain). The VerpackG states that collection should be based on the existing collection structures of the waste management authorities, and that the arrangements should take particular account of the interests of the public authority. There is a single agreement with each waste management authority, which links all PROs operating in that territory. The VerpackG requires that, in the event that several PROs coexist, they must appoint a single common representative vis-à-vis the administration. The agreement is valid if it has the consent of the administration and at least two thirds of the PROs concerned. If a new PRO enters, it must adhere to the existing coordination agreement.

Public waste management authorities are free to unilaterally set requirements for the type of collection system (in containers, at collection points or a combination of both) or the characteristics and the frequency and period of emptying of containers, which the coordination agreement must respect regarding the collection of plastic, metal and composite packaging. The agreement may provide that the collected plastic, metal and composite packaging waste is stored in a facility owned by the public authorities, in which case the VerpackG foresees that the PROs compensate the public authorities by paying a fee.

Once collected, the waste is allocated to each PRO according to its market share. From here, each PRO is responsible for the separation and recycling of its own waste. In 2021, there were 7 PROs that were vertically integrated with waste collection companies and/or waste managers.

As regards the collection of paper and cardboard packaging, given that it is deposited in mono-material containers where non-packaging waste is also deposited and which is the responsibility of the public waste management authorities, the VerpackG foresees that in the coordination agreements it can be agreed that PROs use the public infrastructure. In that case they will have to pay a fee to the public authority or, alternatively, the PROs will take care of the collection of the paper/cardboard waste that is not packaging and will be compensated by the public authority through the payment of a fee. The parties may also agree that the recovery of waste paper/cardboard is the responsibility of the collector⁶⁴. The financial compensation to the responsible party in this arrangement, if an agreement is reached, should also reflect the market value of the materials. If joint recovery is not agreed, the non-collecting party may require the other party to deliver its share of the collected materials at its own expense.

The main German municipal associations and federations and the PROs agreed in 2018 on consensus documents, aimed at guiding the individual negotiations, in anticipation of the difficulties that could arise in the negotiations of coordination agreements to adapt to the changes introduced by the VerpackG. The documents

⁶⁴ Paper and cardboard packaging waste recovery would be the responsibility of the PROs and the rest would be the responsibility of the PA.

were submitted to the *Bundeskartellamt*, which considered that they did not raise competition concerns.

PROs must choose a provider for the provision of collection services through a competitive tendering procedure via an electronic platform. The development and operation of the platform, as well as the technical execution of the tenders, should be carried out by a neutral service provider bound to secrecy with regard to the information processed through the platform. For each collection area, PROs must designate a PRO responsible for the tender, referred to in the regulation as the "tender leader". The tender leader assumes "primary cost responsibility" for the collection in the area, which implies that it must bear at least 50% of the collection costs, with the objective of pursuing maximum efficiency. Once the contract has been awarded, the other PROs may enter into individual shared-use contracts with the successful bidder for their share.

The VerpackG regulates the main aspects of the tendering process, in particular those related to the publicity of the process, the deadlines or the appeals of unsuccessful bidders. In practice, the leadership of tenders is drawn for each territorial area every six years. The collection of lightweight packaging waste and glass waste is tendered separately, and for each fraction about one third of the contracts are tendered annually.

As regards the collection of paper and cardboard packaging specifically, insofar as it is collected together with non-paper and cardboard packaging waste, there are two possibilities: either the PROs and the public waste management authority jointly tender out the collection service, or they agree that one of the parties will carry out the tendering. In both cases, the provisions of public procurement law apply.

5.1.2. Gemeinsame Stelle and Zentrale Stelle Verpackungsregister (ZSVR)

Monitoring and coordination takes place through two entities.

On the one hand, there is the company "Gemeinsame Stelle dualer Systeme Deutschlands GmbH", commonly known as Gemeinsame Stelle, created by the PROs following the 2008 regulatory changes. Its functions are regulated in the VerpackG, which obliges new PROs to participate in it within three months of obtaining authorisation. The VerpackG entrusts the Gemeinsame Stelle with the following tasks:

- Distribution of waste disposal costs based on the market shares of each PRO (according to the number of subscribers)⁶⁵.

⁶⁵ For each public waste management authority, there is a single coordination agreement and a single tendering procedure for each service, the costs of which are to be shared between

- Coordination of tendering for packaging collection services in a competitively neutral manner. In particular, it determines the tender leaders for each collection area.
- Designation of the PROs' representative for the negotiation of coordination agreements with the public waste management authorities in the Länder where more than one PRO operates.
- Coordination of the information measures imposed by law on PROs in a competitively neutral manner and sharing of the costs of these measures according to the market shares determined by the Zentrale Stelle Verpackungsregister (ZSVR Central Packaging Registration Agency in English).

Regarding the ZSVR, the VerpackG obliged packaging producers and distributors as well as their associations to set up a private-law foundation under this name in 2017. ZSVR is responsible for ensuring that all obliged companies participate in the system. Thus, all producers must register with ZSVR and adhere to a PRO before placing their products on the market and, once a year, report to both on the quantity of packaging placed on the market and its composition.

The VerpackG assigns ZSVR various functions. Some of them involve the exercise of public powers and are therefore subject to administrative regulations and legal and technical supervision by the Federal Environment Agency (*Umweltbundesamt*). These include:

- Register of producers and quantities of packaging placed on the market.
- The receipt and examination of data reports that producers and PROs are required by law to provide.
- Verification of the financial capacities of PROs.
- The calculation and publication of PROs' market shares.
- Decisions on the classification of packaging as regulated or non-regulated packaging, in case of interpretative doubts.
- Verification of packaging quantities declared by PROs.
- Development of inspection guidelines, in agreement with the *Bundeskartellamt*.

all PROs putting packaging into circulation in those territories. Until VerpackG came into force, Gemeinsame Stelle calculated the market shares of each PRO in order to determine these payments, but since 2019 this function ([the calculation of market shares](#)) has been the responsibility of the ZSVR, which has developed a [methodology](#) for this together with the *Bundeskartellamt*. Gemeinsame Stelle fixes the payments for each PRO on the basis of the market shares calculated in this way.

- Bringing non-compliance to the attention of the competent waste authorities of the *Bundesländer*.
- Transmission of data to other environmental authorities.

The ZSVR is financed by the PROs according to their respective market share⁶⁶.

5.2. Austria

There are 6 PROs for household packaging waste in Austria (their scope also includes commercial packaging)⁶⁷. Producers subject to EPR are allowed to participate in more than one PRO for a given type of packaging, although the producer is obliged to provide the PROs with clear delimitation criteria, e.g. on a customer or percentage basis. On the other hand, switching between PROs is allowed during the last quarter of each year.

In 2013, following an abuse of dominance procedure initiated by the European Commission⁶⁸, the Austrian Waste Act (AWG, *Abfallwirtschaftsgesetz*) was amended to open up the area of household packaging to competition. The main innovations introduced by the Act to facilitate competition between PROs are detailed below.

5.2.1. Collection organisation between PROs

In Austria, the LE collect remaining fraction, paper and waste deposited at collection points. The organisation of the separate collection of lightweight packaging, metals and glass is the responsibility of the PROs. The regulation imposes the joint use of a single infrastructure for PROs.

⁶⁶ Both public and private law entities are involved in the organisation of its bodies. Representatives of the producers, the *Bundesländer*, the municipalities and the Ministries of Economic Affairs and the Environment sit on the Board of Trustees, which sets the guidelines for the company's activities and appoints and dismisses the Executive Committee. The ZSVR also has an advisory council with representatives of producers, the Ministry of Economic Affairs, the Ministry of the Environment, the Federal Environment Agency, the *Bundeländer*, associations of municipalities, collection service providers, waste managers, PROs and environmental and consumer associations.

⁶⁷ Information from Flanderka & Stroetmann (2015) and the Austrian regulation: https://www.bmk.gv.at/themen/klima_umwelt/abfall/recht/vo/verpackung.html.

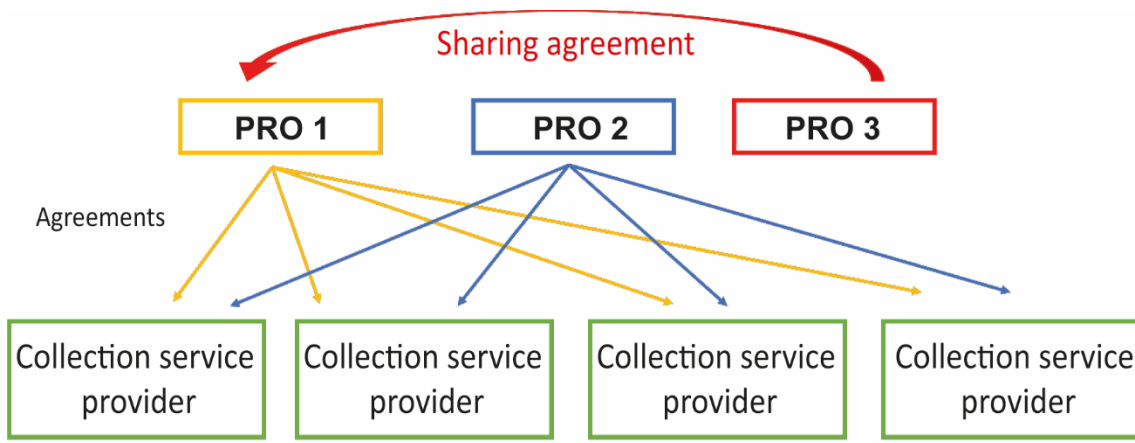
⁶⁸ In 2011, following a complaint from a potential entrant, the European Commission opened an infringement case ([AT.39759](#)) against ARA (then the only PRO for household and commercial packaging in Austria) for possible abuse of a dominant position by preventing competitors from gaining access to the household waste collection infrastructure necessary to operate on the market, and for putting pressure on customers and collection service providers not to contract with competitors. Finally, in 2016, the EC fined ARA €6 million.

The technical details of the collection, such as the collection model, the collection capacity per inhabitant per year or the required infrastructure density are determined by the Ministry of the Environment with the participation of all parties concerned (PROs, *Länder*, cities and municipalities, social agents and the Packaging Coordination Body).

Each PRO must have agreements in place to ensure collection throughout Austria (see diagram 4). To do so, they have two options:

- Sign agreements with all collection service providers in each region (option chosen by PROs 1 and 2 in Diagram 4). These collection service providers are obliged by law to sign contracts with all PROs and to offer them the same economic conditions, except for differences based on objective causes.
- Sign an agreement with another PRO that already has agreements with collection service providers in each region ("sharing agreement", *Mitbenutzungsvertrag*, option chosen by PRO 3 in diagram 4). The PRO acting as an intermediary (the one that has agreements with all collection service providers, PRO 1 in diagram 4) is obliged to sign these "sharing agreements" with other PROs. In addition to the delivery of the packaging, these agreements specify the amounts to be paid by the contracting PRO (PRO 3 in diagram 4) to the intermediate PRO for the cost of separate collection, as well as the compensation to the local authorities for the packaging collected in the remaining fraction.

Diagram 4: Arrangements between PROs to ensure collection of packaging waste throughout Austria



Source: own elaboration based on information from the Austrian Ministry of Environment.

The collection service providers in each region are chosen through a public tender organised by a PRO appointed by the Ministry of Environment. Specifically, every 5 years the Ministry of the Environment assigns each PRO (except those that have delegated to others through shared use agreements) a collection area based on its market share⁶⁹. The appointed PRO has to tender in accordance with public procurement rules and cannot accept bids from companies within its group or use subcontracting to gain indirect access⁷⁰.

Municipalities or associations of municipalities which have an existing infrastructure for the collection of household packaging (containers, vehicles, staff, service contracts with third parties) have the right to demand that the existing infrastructure be taken over or used, in which case the tendering procedure is not carried out. Municipalities must indicate their collection capacity and associated costs. The contract with the local authority stipulates the compensation of reasonable collection costs, which are determined on a consensual basis. Costs in excess of the agreed reasonable cost are borne by the municipality.

5.2.2. The Packaging Coordination Body

In June 2014, [VKS](#) (*Verpackungskoordinierungsstelle*), a non-profit limited company, was founded as a subsidiary of the Federal Environment Agency (*Umweltbundesamt GmbH*), which in turn belongs to the Ministry of the Environment. All PROs must sign a service and financing agreement with VKS to be authorised by the Ministry. The agreement, which is the same for all PROs and negotiated between the Ministry and PROs, sets out the division of tasks and their financing.

The main function of the VKS is to ensure fair competition between all PROs operating in the packaging collection market. To this end, it ensures the establishment and enforcement of a level playing field for all participants, as well as the determination of arbitration modalities in case of disputes. In particular, its core competences are:

- For all packaging (household and industrial):
 - Coordination and unification of criteria for carrying out checks on the quantities of packaging placed on the market by producers belonging to

⁶⁹ The PRO's market share is intended to roughly match the percentage of waste collected in that area compared to the national total. For PROs 'used' by another PRO (under a sharing agreement), the market share is the sum of the share of the intermediary PRO and that of the PROs with which it has signed sharing agreements.

⁷⁰ The Ministry of Environment has a guide for PROs on collection tendering: https://www.bmk.gv.at/themen/klima_umwelt/abfall/Kreislaufwirtschaft/verpackungen/sammeln_verwerten/leitfaden.html

the PROs. This ensures equal treatment of participants and uniform application of the inspections to be carried out.

- Design of arbitration procedures in case of disagreement between PROs and other agents (such as municipalities).
- Carrying out analyses relating to the collection of packaging.
- For household packaging:
 - Coordination of PRO's information/awareness campaigns for end-consumers, including financial compensation for services provided by municipalities in this respect.
 - Collaboration in the design of cost-efficient packaging collection.
- For industrial packaging:
 - Register of waste generation points. This is an electronic database where industries can register the type and quantity of packaging waste they expect to generate.
 - Conclusion of the necessary agreements with the operators of the collection points and provision of the necessary data.

5.3. France

Household packaging in France has been subject to the EPR since 1992. Producers can comply with the EPR individually or collectively, although, as is the case in Spain, in practice they have all opted to join a PRO.

The regulation has never excluded the possibility of more than one PRO managing the same packaging waste stream, but in practice there was no competition between PROs until 2018. Currently, 3 PROs are authorised for household packaging, structured in two business groups:

- The Citeo group: in 2021 it had a market share by packaging volume of more than 99.5%. This group is made up of two PROs:
 - Citeo, formerly Ecoemballages, present since 1992. It manages household packaging of almost all types of materials (steel, aluminium, paper/cardboard and plastic).
 - Adelphe, a subsidiary of Citeo since 2005. Established in 1993 by the wine and spirits industry as PRO for household glass packaging. Currently, producers from other industries are members and it also manages packaging made of other materials (plastic and paper/cardboard), although glass is still the predominant material.

- Léko, owned by the German multinational Reclay Group. It obtained its authorisation as a PRO for the first time for the period 2018-2022.

5.3.1. Competition entry and authorisation of new PROs

PROs are non-profit organisations that must be licensed by the State. The regulations for authorisation are detailed in a set of terms of reference adopted by ministerial order, which is valid for 6 years. These terms of reference define the tasks that PROs must perform during the authorisation period, as well as the commitments they must fulfil.

The entry of more than one company was made possible by a modification of the terms of reference. The new terms introduced provisions regulating the coexistence of competing PROs, specifying their relations with local authorities and creating compensation mechanisms between PROs. Various public bodies were also entrusted with functions related to peaceful coexistence between PROs.

PROs may request the assistance of the French Environment and Energy Management Agency (ADEME) for studies and assessments prior to their approval. They must prepare a dossier to apply for authorisation that takes into account their specific characteristics and products, includes all the required information and proves that they are able to meet the regulatory requirements set out in the legislation (in particular by demonstrating their capacity to achieve the objectives set, by proving that a financial guarantee has been established or, where applicable, that they comply with the provisions on re-use). There is no "standard" dossier, and it is up to each PRO to develop its own.

5.3.2. PROs relationship with LE

Once the authorisation has been obtained, PROs have 30 days to enter into a contract with any local authority responsible for the collection and/or treatment of household waste upon request. The contract should be based on a standard contract. This is a contract agreed between PRO and the representatives of LE represented in the Household Packaging Committee of the Intersectoral Commission for EPR (CIFREP)⁷¹. It covers the following five household packaging materials: steel, aluminium, plastics, glass and paper/cardboard. The contract fixes, among other things, the payment to be made by PRO to the local

⁷¹ The CIFREP is a representative body of the sectors affected by the EPR and is asked for its opinion: 1) on the draft terms of reference establishing the waste stream framework and targets and 2) on the approval of PROs. It is made up of 5 colleges, each representing producers, local authorities, associations, waste managers and the State. Source: French Ministry of the Environment (<https://www.ecologie.gouv.fr/cadre-general-des-filieres-responsabilite-elargie-des-producteurs>).

authority, based on the so-called top-down scale (i.e. the funding to the LE for collection and sorting activities), which are the payment rules regulated in the terms of reference.

All household packaging waste must meet standards defined in the terms of reference, similar to ETMR in Spain, to be eligible for funding from the PROs. PROs are obliged to finance 80% of the net reference costs of an "optimised collection and sorting service". Both the net reference costs and the optimised collection and sorting service are defined and regulated in the terms of reference, but the LE can organise their collection and sorting service as they see fit in order to meet the targets.

5.3.3. Relationship between PROs

The terms of reference foresee three tools to organise the coexistence of several authorised PROs in the area of household packaging:

- A system of coexistence between PROs.
- A financial balancing mechanism.
- A specific balancing mechanism for obligations to organise the take-back of certain plastic waste.

As for the **coexistence system between PROs**, the terms of reference foresee that, where several PROs are authorised, they must establish a coexistence system in accordance with the provisions of competition law. If necessary, the authorisation given to each PRO shall specify the modalities or details of coexistence. Once authorisation has been granted, the system must be operational within four months. An operator's authorisation may be withdrawn if he refuses to participate in the implementation, operation and missions of the coexistence system as a whole. All new PROs are automatically included in the system one month after their authorisation.

As regards the **financial balancing mechanism**, the terms of reference foresee that, if several PROs are authorised, a mechanism must be put in place to ensure that each of the PROs contributes equally to the costs of collection, sorting and treatment of household packaging waste incurred by the LE. The financial balancing mechanism distributes the contributions according to the so-called "upstream market shares" of the PROs (calculated on the basis of the quantity of packaging placed on the market by each PRO), as determined by ADEME, and the "downstream market shares" (what proportion each PRO has paid out of the total payments made to the LE). It also takes into account the costs of managing the contracts signed with the local authorities, as well as those necessary to meet the requirements of the terms of reference. The responsibility for determining the amounts to be settled lies with the Ministry of the Environment or the body

determined by it. In practice, the financial balancing mechanism allows a new PRO to operate without the need to have concluded agreements with all LE. In that case, insofar as it will not be paying all LE for the collection and sorting services, its share of the total will be lower, and it will have to compensate the PROs that do have contracts with the LE and that are bearing these costs⁷².

Finally, with the transfer to PROs of the responsibility for organising the take-back (sale and delivery) of certain mixed plastic waste, a new specific "physical" balancing mechanism was created in 2022, which aims to determine which PROs are responsible for organising the take-back of which waste. The starting point is that each PRO organises the sale and delivery of mixed plastic waste materials recovered by the municipalities with which it has signed contracts. The balancing mechanism comes into play when, on the basis of such contracts, a PRO organises the take-back of a percentage of waste in excess of its "upstream" market share (packaging placed on the market). In fact, this is the situation in practice, because Citeo is the only company that currently has signed contracts with LE in France.

Under the mechanism, the "surplus" PRO must make available to the other "deficit" PROs (currently only Léko) the quantity of waste for which they are responsible for recovery in proportion to their respective quotas (the "surplus" waste). Considering that in 2021 Citeo's market share was more than 99.5%, it had to make 0.5% of the mixed plastics material obtained from municipal treatment plants available to Léko. The terms of reference foresee that the operational conditions for the implementation of this mechanism will be defined by an agreement between the PROs, to be ratified by the Ministers for the Environment and the Economy.

The terms of reference also foresee rules to try to limit the transfer of market power from a dominant operator in collection and sorting to the market for the sale and recovery of mixed plastic waste materials. However, these rules only apply if several PROs have agreements with the LE, which is currently not the case.

5.4. Italy

5.4.1. EPR Compliance Systems

Since 2006, the regulation on packaging waste management is the *Testo Unico Ambientale* (hereinafter TUA), which obliges producers to choose between:

⁷² In fact, this is what is happening: Léko has not signed any contracts with LEs, which are exclusively financed by the Citeo group, so that Léko transfers a large part of the fees paid by its member companies to the Citeo group, under the financial balancing mechanism, as indicated in Autorité de la Concurrence (2022).

- a) Join one of the national consortia. These are the most widely used systems, equivalent to the PROs in the Spanish system (hereinafter, we will refer to them as PROs).
- b) Organise management autonomously, also collectively, throughout the national territory. They must comply with the obligations imposed on all other systems.
- c) Certify on their own responsibility that a packaging return system has been adopted. To date, there is no case in Italy.

Two types of PROs can be distinguished: 1) the *Consorzio Nazionale Imballaggi* (hereinafter CONAI)⁷³; and 2) 7 sectoral or branch-specific PROs for each packaging material (steel, aluminium, paper, wood, plastic and glass). The relationship between the two types of PROs is vertical since, among other reasons, the member institutions make their contributions to CONAI, which is responsible for distributing the payments among the PROs. Thus, CONAI leads the seven sectoral PROs. Producers and users of packaging may not participate in more than one PRO or stand-alone system for each type of packaging.

The TUA sets out the various functions of CONAI, including:

- 1) Ensure the necessary cooperation between PROs, autonomous systems, refund systems and other economic operators.
- 2) Lead coordination between PA, PROs and other operators.
- 3) Divide the compensation for the increased costs of separate collection, as well as the costs of recycling and recovery of packaging waste delivered to the separate collection service, between producers and users. Thus, it determines and charges PRO members.
- 4) Promote voluntary agreements between PROs, stand-alone systems, devolution systems and public and private entities.

On the other hand, it is worth mentioning independent operators. They differ from the others in that they are profit-oriented, are not set up as autonomous systems and are not subject to any organisational obligations or to providing their service in a uniform manner throughout the national territory. Producers and users of packaging who have decided to delegate compliance with the EPR to independent operators are still subject to CONAI membership and payment, as there is no certainty that their packaging will always be recovered. The payment

⁷³ CONAI is one of the largest PROs in Europe, with more than 1,000,000 member companies. It is composed of two categories: packaging producers, who account for only 0.7% of the consortia, and packers, who make up the remaining 99.3%.

made to CONAI in this case would have no consideration other than formal compliance with the requirements of the EPR⁷⁴.

5.4.2. CONAI system funding

The financing comes from the *Contributo Ambientale CONAI* (hereinafter CAC), the amount of which is determined by CONAI itself, following the calculation criteria set out in the TUA, which comprise the “*proportion to the total quantity, weight and type of packaging material placed on the national market*” by the members of PRO, and also “*the uses and criteria*” defined in article 224 of the TUA. Producers and users of packaging must submit an Annual Declaration of Waste (DAR) detailing the quantity of packaging placed on the Italian market. This declaration is submitted to the CONAI or to the autonomous system to which they belong.

The TUA stipulates that producers (and users) are obliged to bear at least 80% of the costs related to differentiated collection and transport services and preliminary sorting operations.

5.4.3. Relationship between EPR systems and LE

An important aspect is the *ANCI-CONAI Framework Agreement*⁷⁵. This instrument, in force until the end of 2024, foresees the possibility for municipalities (or third party service providers) to sign agreements with CONAI committing the municipalities to carry out the differentiated collection of packaging waste and, subsequently, to deliver the collected materials to the same PROs. Under the agreement, the material-specific PROs take back the waste that is included in the urban separate collection, each in its own branch, in return for payment to the municipalities of compensation to cover the additional costs incurred in providing the service.

Alongside this agreement, *Technical Annexes* related to the aluminium, steel, paper and board, wood, glass, plastic and bioplastic supply chains have been signed. These set quality ranges corresponding to different levels of compensation that the specific PROs for each material branch must pay to the

⁷⁴ As a consequence, CONAI considers both segments together in the calculation of recycled packaging waste because all packaging producers fulfil their obligations under the EPR by joining the pooled system and paying the CAC. According to CONAI's 2022 report, 73.3% of packaging was recycled in Italy in 2021. Of this percentage, 50% was due to sectoral PROs, 48% to independent operators and the remaining 2% to stand-alone systems (which account for 16% of recycling in the plastic packaging chain).

⁷⁵ National Association of Italian Municipalities (ANCI). The agreement would be equivalent to an agreement signed by one of the incumbent PROs in Spain and the Spanish Federation of Municipalities and Provinces (FEMP).

municipalities. The higher the quality of the material collected, the higher the compensation PROs have to pay to the LE⁷⁶.

5.5. Slovenia

In Slovenia, a packaging management system based on the EPR was first introduced in 2000⁷⁷. After the creation of the first PRO (Slopak), other waste management systems started to appear, mostly for profit.

In 2006, when two PROs already existed, the *Packaging and Packaging Waste Handling Decree* was approved. According to the 2006 legislation, collection service providers were responsible for covering the costs of door-to-door municipal packaging waste collection. Thus, 71 municipal service providers collected the packaging. PROs covered the costs of waste management from the moment they collected waste from public service providers, and were also responsible for collecting non-municipal waste directly from producers.

Specifically, the system involved some 9,400 production companies paying fees to one of the 6 PROs. As several PROs were operating, their share in packaging waste management had to correspond to the market share of the producers belonging to each PRO. The quotas were set quarterly by the Ministry of Environment separately for four packaging materials: paper and board, glass, wood and mixed packaging.

The determination of these quotas was the subject of continuous disputes leading to problems of non-collection and accumulation of packaging waste. In 2018, Interzero (one of the 6 PROs) challenged the system before the Administrative Court, which found that there was no legal basis for setting the quotas, so they were not obliged to respect them. According to the court, the PROs set unregulated prices for producers' tariffs, which, combined with the lack of cost reporting obligations, amounted to a deviation from the "polluter pays" principle. Moreover, it was not clear from the PROs' reports how much of their revenue came from fees paid by producers and how much came from the sale of materials. Tariffs were normally negotiated between producers and PROs, and there was no supervisory body. Ecomodulation was also not monitored.

In the face of conflicts and a lack of coordination, the third Environmental Protection Act (ZVO-2) was adopted in 2022, making it mandatory for each waste stream to be managed by a single non-profit PRO operating under one

⁷⁶ As regards the financing arrangements between the autonomous systems and the LE, the Italian legislation does not specifically require the latter to sign contracts with all autonomous packaging waste management systems that are alternatives to PROs, nor does it require them to guarantee the same financial conditions to all of them.

⁷⁷ Sources for the section: Constitutional Court of Slovenia (2023); Berger et al. (2023).

supervisory body. It must be owned by producers of the same type, who together must account for at least 51% of the total marketing of these products and individual ownership may not exceed 25%.

Moreover, the regulatory change established that the PROs also cover the costs of differentiated collection. It also prohibits any capital or family links between PROs and the companies operating the system for the differentiated collection and sorting of materials (subcontractors), so that the former can only manage the system by selecting subcontractors through public tenders. It also calls for the ecomodulation of tariffs.

Although the new law was scheduled to enter into force at the beginning of 2023, four PROs filed an appeal for constitutional review of these reforms and, as a result, it is temporarily suspended pending the ruling of the Constitutional Court. For the time being, the Constitutional Court has referred a question to the EU Court of Justice for a preliminary ruling, requesting interpretation and assessment of the validity of the new law.

6. COMPETITION BARRIERS

This section analyses the competition barriers in the packaging waste management sector in Spain, which have led to a monopoly situation until 2024. This situation is not exceptional on the international scene: collective monopoly systems were common after the introduction of the EPR, when the legal and organisational framework was new. However, monopoly is not inescapable, as can be seen from the introduction and establishment of competition in a number of neighbouring countries. Promoting a competitive model can achieve, among others, the following benefits:

- A more effective, innovative and efficient waste management system.
- More suppliers of materials for waste managers. PROs are a major source of supply for these managers, who would benefit from competition among their suppliers, e.g. through more varied and affordable offers.
- Choice for product producers. While it is true that the legislation allows producers to fulfil their legal obligation through individual systems, this is neither technically nor economically feasible, with very few exceptions.

Regarding the above, the CNMC has already warned that the existence of a monopoly regime for certain categories of packaging, as has occurred in Spain, may cause harm both to operators and ultimately to consumers. Thus, in case [S/0206/09](#), *Ecoembalajes España*, the CNC (2011), the predecessor of the current CNMC, considered that “*Ecoembes constitutes a service or facility essential for the fulfilment of a legal obligation for [the companies] [...]*” and recalled that “*as a de facto monopolist not exposed to any competitive pressure, Ecoembes has a special duty of transparency towards its customers [...]*”. In the same vein, the CNMC (2021b) noted that “*given that compliance through individual systems can be complex and very costly, producers have no other alternative for the fulfilment of their obligations than to adhere to the only existing [system], in accordance with the contractual conditions and tariffs set by it, and they have little room for negotiation in this process*”. CNMC (2021b) also indicated that “*as far as the allocation of material to waste managers is concerned, this is done in accordance with the procedures and requirements set [by the system], and waste managers must accept these conditions if they want access to the material*”.

The case of Germany illustrates the potential benefits of opening up to competition. The introduction of new PROs and competitive tenders for collection and sorting significantly reduced costs between 2003 and 2012: collection costs decreased by 44%, sorting and processing costs by 76%, and ancillary costs by 8%. In that period, the incumbent PRO (DSD) reduced its market share from 100% to 18% in 2020 (Ahlers, Hemkhaus, Hibler, & Hannak, 2021). Moreover, the opening up to competition in Germany has contributed to the adoption of

innovations: some technical improvements that were already available during DSD's monopoly were only widely adopted after competition was introduced OECD (2016)⁷⁸.

Another study by the German competition authority (*Bundeskartellamt*, 2012) estimated annual savings of €1 billion through competition between PROs. It also estimated that the costs of collection and recycling of household packaging, which are ultimately borne by the consumer through product prices, had been reduced by more than 50%. Finally, it estimated, on a conservative basis, a welfare gain for consumers equivalent to €5.6 billion for the period 2003-2011. The *Bundeskartellamt* links this success to a large extent to the PROs' taking over the organisation of the collection and treatment of packaging and the tendering of these services under the system of the "tender leader" and the "main responsibility for costs", which would have allowed, among other things, for efficiency improvements and the adoption of innovations.

The competitive model therefore offers a number of notable benefits. With a view to boosting it, a number of competition barriers can be identified on the basis of the information contained in this study. These are set out in detail below.

6.1. Authorisation of new PROs

6.1.1. Information required in the application for authorisation

EPR systems must submit a responsible communication in the case of individual systems or an application for authorisation for collective systems to the Autonomous Community in which their head office is located, with the content established in the Packaging Royal Decree, in order to start their activity. The amount of information requested is high and the estimates required are complex, because they depend on agreements to be reached with other public and private agents after obtaining authorisation, who may be disinterested or reluctant to deal with systems that have not yet been authorised. Furthermore, the regulation does not contemplate the relationship between possible incoming PROs with the LE and the PROs already installed, which makes it difficult to make the estimates that need to be included in the application for authorisation to operate. By way of example, the content of the application includes:

- An annual estimate during the period of validity of the authorisation, for each Autonomous Community, of the quantities of packaging waste in

⁷⁸ According to OECD (2016): “*The adoption of better sorting techniques is attributed to the opening up of competition*”, “*While new sorting techniques were already available during DSD's monopoly, they became widespread only after the entry of competition*”.

tonnes, by type and material, as well as its destination (reuse, recycling, recovery, or disposal, expressed in weight and as a percentage).

- Details of the functioning and operational conditions of the management. For example, minimum collection frequencies, intended destinations of the waste, identification of the operators and facilities to which the collection and treatment operations are assigned, and a description of the envisaged procurement or contracting processes and conditions.
- Estimate of the costs arising from collaboration agreements signed with PA for the collection, separation and sorting of packaging waste, information obligations and awareness-raising campaigns, and the costs arising from contracts with waste managers and agreements with distributors.

In other neighbouring countries, applicants must also provide a large amount of information in order for the PROs to show their capacity. In this respect, in some countries, such as France, the information dossiers accompanying the application for authorisation may incorporate different information on a case-by-case basis, in particular the specific characteristics and products to be managed by PRO, and the French agency ADEME even offers assistance to applicants to facilitate this procedure.

Ultimately, the stringent information requirements may constitute a significant entry barrier.

6.1.2. Negative administrative silence in the processing of authorisations

The Autonomous Community where the PRO has its registered office has a period of 6 months to decide on the granting of authorisation, which may be extended for a further 6 months. Once this period has elapsed, negative administrative silence shall apply if no express decision has been notified. In contrast, in the case of an application for renewal of authorisation, if the period has elapsed without any express decision having been notified, the authorisation previously granted shall be deemed to have been extended until the express decision on the application for renewal has been notified, which may be either in favour or against. The Waste Act is also more permissive in the case of producers who are not legally subject to EPR, but voluntarily submit to EPR⁷⁹.

⁷⁹ Art. 39 of the Waste Act provides that “*without prejudice to the ordinary processing of the authorisation [...], in the case of collective systems, the Autonomous Communities may grant, within three months of the submission of the application for authorisation, a provisional authorisation allowing them to start their activity, after verification of the completeness of the documentation and provided that the application is accompanied by a copy of the financial guarantee subscribed calculated in accordance with what is established by regulation*”.

6.1.3. Territorial specifications and clarifications made by the Waste Coordination Commission

A novelty in the new regulatory framework is that the authorisation of packaging PROs becomes nationally effective. In addition, it establishes the referral of the application to the Waste Coordination Commission for the preparation of a report prior to the authorisation decision, once the completeness of the file has been checked. According to the Waste Act, *“the report shall include, where appropriate, the specifications proposed by the Autonomous Communities after evaluation of the application, regarding the performance of the collective system in their respective territories”*. The Packaging Royal Decree, in turn, indicates that the authorisation *“will incorporate the details derived from the report of the Coordination Commission on waste and compliance with the obligations derived from the extended producer responsibility, including, where appropriate, the specifications relating to the performance of the collective system in the autonomous territories”*.

The CNMC has already ruled on the territorial specifications and the clarifications made by the Coordination Commission in the Report on the Principle of National Effectiveness in Collective Waste Management Systems (PRO/CNMC/001/21), as well as in the report issued on the Draft Packaging and Packaging Waste Royal Decree (CNMC, 2021b). In particular, the latter indicated: *“The express reference to the validity throughout the national territory of the authorisation of collective systems for EPR packaging waste disposal granted by the Autonomous Communities is to be welcomed. [...] However, [...] the vagueness of the terms ‘specifications and clarifications’ and the lack of clarity as to their scope in the [Draft Royal Decree] could affect the effective application of the principle of validity throughout the national territory. While respecting the competences of the Autonomous Communities on this point, greater specificity is recommended as regards the use that can be made of them, so that these specifications and clarifications do not lead to differences between operators that are not duly justified”*.

The national effectiveness of authorisations for collective waste management systems ensures a homogeneous operation throughout the national territory. There is no justification in waste legislation for territorially limiting authorisations to collective waste management systems, and state waste legislation provides a common and harmonised regulatory standard.

However, there is still ambiguity regarding the scope of the specifications and clarifications in the Packaging Royal Decree, which could affect the effective application of the principle of validity throughout the national territory, particularly

if it gives rise, *de facto*, to different authorisations and regulations in each Autonomous Community. This could discourage new operators.

6.1.4. Deadline for the issuance of reports by the Waste Coordination Commission

Neither the Waste Act nor the Packaging Royal Decree establishes a specific time limit for the Coordination Commission to issue a report on applications for authorisation, within the general period of 6 months available to the competent Autonomous Community to issue a decision, which may be extended for a further 6 months.

The lack of specification in the Packaging Royal Decree of a deadline for the issuing of the report by the Coordination Commission makes it possible for delays to occur in the decision by the competent Autonomous Community on the application for authorisation of the PRO.

6.1.5. Insufficient resources in the PA

The ease of entry of new PROs will depend on the capacity of the processing Autonomous Communities to absorb the increased workload of the new regulations⁸⁰. Only with regard to EPR, the obligations of producers and, by extension, of PA as administrators and supervisors increase. For example, the Waste Act makes new waste streams (textiles, furniture and furnishings, non-packaging agricultural plastics) subject to EPR. The impact of this potential barrier is exemplified in the case of WEEE, where some authorisations were delayed by up to 4 years due to staffing constraints, as well as appeals against PA's decisions (more details in the WEEE Annex).

Thus, the increased workload will require increased resources in the administrations concerned. The starting point is uneven as some Autonomous Communities have specialised administrative bodies, most notably the Catalan Waste Agency, as opposed to most of the Autonomous Communities, where the responsibilities for waste management are embedded in the relevant department for the environment. Lack of resources hampers supervision, the procedures for

⁸⁰ AIReF (2023) agrees: “*The insufficient allocation of resources to waste management at the different administrative levels, as well as the lack of further specialisation of the assigned staff, hinder the achievement of the set objectives. As has been noted in the various interviews with administrations, both at national, regional and local level, in all cases a lack of personnel and financial resources allocated to waste management has been reported in order to be able to cope with the recently approved regulatory framework and to achieve the objectives that derive from it. It is worth highlighting the existing differences in the provision of personal resources, both between Autonomous Communities and between municipalities*”.

authorising PROs and the negotiation and monitoring of agreements between PROs and PA.

6.1.6. Duration of authorisations

PROs authorisations have a duration of 8 years, after which they must be renewed by a new application. Regarding this issue, the CNMC has recommended "*assessing that the term of the authorisation could be indefinite, given that there is no limit to the number of authorisations and [...], the Coordination Commission can monitor compliance with the authorisations and the conditions of exercise, thus eliminating administrative burdens*" (CNMC, 2020a).

Considering that there is no limit to the number of authorisations and that the Coordination Commission can monitor compliance with the authorisations and the conditions of exercise, the need for renewal every 8 years may place an unjustified administrative burden on PROs.

6.2. Producer shifts between PROs

The Packaging Royal Decree states that "*the product producer that leaves a collective extended responsibility system must inform the system of origin, the new system in which it is integrated or which it constitutes, and the Product Producers Registry, before the last quarter of the year. However, the shift from one system of responsibility to another shall be conditional upon the producer's proof that he is up to date with his financial obligations to the extended producer responsibility system of origin. The shift from one responsibility system to another means that the new system takes over the producer's obligations arising from the placing on the market of packaging in the following year in full". (underlining added). Thus, the shift will have to be reported during the first three quarters of a year and will be effective from 1 January of the following year.*

Limiting the time at which switching between systems can take place may be justified in order to provide some financial stability to PROs⁸¹. However, this may pose an entry barrier for new PROs, depending on when they gain authorisation. If the regulation limits the time of switching between PROs to, for example, the

⁸¹ This is also the case for the regulation of WEEE. art. 8.3 of Royal Decree 110/2015, of 20 February, on waste from electrical and electronic equipment, establishes that the change of the system through which the producer fulfils its obligations shall be communicated during the months of October, November and December and the modification shall be effective as of 31 December of the year in which the modification is submitted. It is also observed in other countries' regulations: in France, the standard membership contract can be terminated at the latest in October of year N for year N+1; in Austria, likewise, switching between PROs is allowed during the last quarter of each year.

last quarter of the year, and a new PRO obtains its authorisation to operate at the beginning of a year, producers will not actually be able to join until the end of the year and the system will not be able to start its effective activity until the year following the authorisation, which puts it at a competitive disadvantage with respect to PROs already in operation. This situation is particularly relevant for PROs managing household packaging, since, as producers were already subject to EPR for more than two decades, new entrants will only be able to recruit producers who are already members of established PROs⁸².

Another relevant aspect that may hinder changes is the possibility of using logos associated with waste management, recycling and sustainability. In particular, it was compulsory to mark packaging included in a PRO by means of an accreditation symbol until 2022, which is identical throughout the territory (art. 7.3 of Act 11/1997), a function that was fulfilled by the Green Dot. Therefore, the vast majority of producers incorporated the Green Dot before 2022 on their packaging through labelling, 'offset' printing, screen printing, embossing or rotogravure, etc. This logo is owned by the German PRO DSD and Ecoembes has the rights to use it in Spain, so it can decide who uses it, and has an agreement with Ecovidrio allowing it to use it without any payment in return. From 2022, this logo is no longer mandatory, but it is still present on the vast majority of packaging and remains a reference for many citizens. Given the costs and investments that may be involved for some producers in adapting their packaging and also because of the recognition of this logo among the public, some producers may consider it as a factor in deciding whether to switch PRO and thus disadvantage those PROs that cannot use it.

6.3. Producer participation in more than one PRO

Spanish legislation restricts the participation of producers in more than one PRO simultaneously in the case of single-use packaging. In particular, producers may not, for household packaging, participate in several systems where they place the same product on the market in primary and secondary packaging of the same material. The limitation applies to commercial and industrial packaging where the same product is placed on the market in packaging made of the same material, unless the product is packaged in primary packaging and intended for different activities. This is not the case for reusable packaging, which can participate in several EPR systems for the same product in reusable packaging of the same

⁸² In the case of the PROs for commercial and industrial packaging to be created in Spain, as they will be subject to EPR under the new packaging regulation, they all start from the same situation with no member companies. In this case, the "first-mover advantage" will come into play: producers can choose to join the PRO that is approved first in order to ensure their regulatory compliance. This would explain why there are already several PROs initiatives for commercial and industrial packaging.

material and category (household, commercial and industrial), provided that the traceability and ownership of this packaging is guaranteed for each of the DRs.

In other countries, regulations allow for simultaneous participation by setting clear rules. For example, producers subject to EPR are allowed to participate in more than one system for a given type of packaging in Austria for household packaging, although the producer is obliged to establish clear demarcation criteria, e.g. by allocating the packaging that participates in each system according to the target customer or according to a specific percentage.

Allowing simultaneous participation in more than one PRO could intensify competition by enabling producers to have better information by having first-hand knowledge of several systems at the same time, and by reducing the difficulty and risk involved in switching PROs by being able to do so partially. A possible disadvantage could be the increased cost of supervision for PA, although the Austrian case shows that it is possible to introduce mechanisms to address this issue, e.g. with clear allocation criteria. There are also examples in Spain, such as with reusable packaging, where the regulations do allow this if traceability is guaranteed.

6.4. Negotiating agreements: deadlines and alternatives

The new packaging regulation gives EPR systems a maximum period of 12 months from their authorisation (PROs) or communication (IPRs) to sign agreements with the PA. Although the regulation does not specify what would happen if the 12-month period is not complied with, as it is an obligation, it could lead to the withdrawal of the authorisation.

A period of 12 months is short for negotiating agreements with PA, based on previous experience. After the opening of negotiations, and not counting the time previously invested in the elaboration of a draft agreement, it has taken from 3 to 30 months for the incumbent packaging PROs and the PA to conclude the negotiations. In addition, for new incoming PROs, 12 months is a tight deadline to negotiate agreements with all of the PA involved in this area at national level, as there are many of them (Ecoembes has 145 agreements and Ecovidrio has 875).

The deadline aims to speed up the agreements and rebalance the bargaining power between PROs and PA, which is currently skewed in favour of PROs. This imbalance of bargaining power has the following causes.

Firstly, the legislation assigns by default to the LE the responsibility for the management of household packaging waste and, if so indicated in their municipal by-laws, also commercial packaging waste. However, the financial responsibility lies with the EPR systems. The instrument in which the funding is determined is

the agreement, so that until it is signed, the local authority does not receive funding from the EPR system, although it has to provide the service anyway, assuming the cost. The consequence is that the local authority has greater urgency to reach an agreement to receive the funding.

Secondly, the imbalance is due to shortages of specialised staff in many PA. Agreement negotiations are complex and require detailed organisational and financial knowledge of these activities. PROs have specialised staff, which is not the case in virtually any public administration.

Thirdly, the 1997 Packaging Act and the 1998 Packaging Regulation contained little detail as to what PROs had to finance⁸³. The new regulation seeks to alleviate this problem in three ways:

- More detail on what PROs have to finance.
- Establishment of arbitration mechanisms in the case of discrepancies between the Administration and the PROs on the contents of the agreement, particularly the economic ones.
- The possibility for the LE to transfer packaging waste management activities (collection, transport, sorting and classification, and sale) to PROs during the negotiation, in which case PROs will decide how to organise and finance them, and the agreement will be limited to detailing the planned use and conditions of use of public spaces⁸⁴.

These developments are expected to help improve the course of the negotiations.

Neighbouring countries use other tools in to facilitate and balance negotiations, alternative or complementary to the existence of maximum deadlines. In particular, some have more detailed regulations on the content of agreements

⁸³ The 1997 and 1998 rules state that they were to finance the additional cost of separate collection compared with the collection system in force until then (without separation), “including among the costs [...] the amount of the depreciation and the financial burden of the necessary investment in rolling stock and infrastructure”. The consequence was frequent disagreements between PROs and LE on the economic aspects and the degree of efficiency of the LE in the provision of services.

⁸⁴ By directly managing the entire process, PROs would have greater control and traceability of waste, from collection to final treatment. This would allow them to identify and address inefficiencies, as well as to quickly implement improvements or corrections. Therefore, the assumption of responsibility by PROs at the collection and treatment stage could lead to cost efficiencies. This measure would reduce the financial burden transferred to citizens through municipal waste charges, which in turn would prevent the potential gap in local authorities between revenues and management costs. It would also serve to align the economic interests of PROs with public environmental objectives, as the deployment of more selective and effective collection systems to ensure that the materials collected are of higher quality and easier to recycle would reduce the costs of PROs.

and financing, as well as coordinating bodies to support and lay the groundwork for negotiations. The following can be highlighted:

- In France, there is a standard contract agreed between the PROs and the LE in the Intersectoral Commission for EPR (CIFREP), which serves as a reference for concrete agreements. In addition, the basic conditions of the payments to be made by PRO to the local authority (the so-called top-down scale) are regulated, as set out in the standard contract. To ensure efficiency, the regulation foresees a maximum ceiling for the financing of PROs to the LE of 80% of the net reference costs of an "optimised collection and sorting service", the characteristics of which are defined in the regulation.
- Germany regulates the content and details of the negotiation of agreements between PROs and LE. Thus, waste management authorities can unilaterally determine requirements on the type of collection system (containerised, point-of-use or a combination of both), the characteristics of the containers, and the frequency and period of emptying of the containers. The regulation also gives indications on cost sharing between LE and PROs. Also in 2018, municipal federations and PROs agreed on documents to guide individual negotiations. The documents were reviewed by the *Bundeskartellamt*, which found that they did not raise competition concerns⁸⁵.
- In Austria, the technical details of the collection (collection scheme, collection capacity or infrastructure) are determined by the Ministry of the Environment in consultation with PROs, the *Länder*, LE, social agents and the Packaging Coordination Body.

In conclusion, a 12-month period may be insufficient to negotiate agreements with all the PA involved. This requirement raises barriers to entry, discouraging potential new entrants because of the risk of missing the deadline and facing the possible withdrawal of their authorisation. In addition, they will have difficulty operating without the agreements and will be a less attractive alternative for producers subject to EPR, raising the risk of unsuccessful market entry. As for the objective of boosting the negotiations and rebalancing bargaining power, alternative measures can be taken, such as more detailed regulation, the establishment of a standard agreement, or the appointment of an independent body to promote coordination and resolve disputes.

⁸⁵ See: <https://www.dstgb.de/themen/kommunale-abfallwirtschaft/aktuelles/verpackungsgesetz-orientierungshilfe-fuer-die-verhandlung-der-abstimmungsvereinbarung/>

6.5. Challenges and uncertainties about the coexistence of agreements

There is uncertainty as to how the simultaneous validity of agreements of a given administration with several PROs would work. In particular, the following can be noted:

- It is uncertain whether it will be necessary to review the existing agreements with the PROs each time a new one comes in, in order to determine the share of funding to be allocated to each.
- The new legislation foresees the possibility for PROs to agree with the PA to take on the complete management of packaging waste, taking charge of the collection, transport, sorting, classification and sale of the material. In the case of several competing PROs, it is not clear what would happen if one of them takes over the management via an agreement. As collection activities are natural local monopolies, only a PRO can take them over. In this situation, the regulations do not provide for the content of the agreements of PROs that do not assume these functions, how the funding of each would be channelled, nor how another PRO could opt to obtain full management.

At the international level, two approaches can be observed to address the above:

1. **In France, PROs can operate without having signed agreements** with the LE and, thanks to a system of financial equilibrium between PROs, entrants pay the incumbent their share of the funding according to their market share. This has made it possible to break the monopoly of the Citeo group allowing the entry of Léko, which as of 2022 had not signed any agreement with LE.
2. **In Germany, the LE signs a single agreement with all operational PROs.** Incoming PROs must adhere to this agreement. When renegotiating, PROs appoint a common representative and the agreement reached is binding on all. To conclude the agreement, the document must have the consent of the relevant administration and at least two-thirds of the PROs concerned.

Thus, uncertainty regarding the possible coexistence of multiple agreements between the same public administration and several PROs may act as an entry barrier and discourage the entry of new PROs.

6.6. Relationship and coordination between competing PROs

International experience shows that, when there are several PROs, it is essential that the regulations regulate the relations between them, including the distribution

of responsibilities and their interaction with the PA. Public intervention is also needed in areas such as the calculation of market shares, monitoring of EPR systems and dispute settlement.

Neither the Waste Act nor the Packaging Royal Decree dedicates a section to the coexistence of competing EPR systems. The articles that regulate it are scattered throughout the two legal texts, which may create doubts as to their interpretation. Furthermore, some relevant aspects are not present in the regulation. The following sub-sections examine this issue.

6.6.1. Responsibility sharing: market share

Referring to the distribution of responsibility for meeting separate collection targets, article 21.2 of the Packaging Royal Decree stipulates that, if deemed necessary, the distribution shall be in accordance with the market share of each EPR system, measured as the amount of packaging placed on the market by each system based on the information available in the Product Producers Registry. The market share will be calculated by MITERD, on the proposal of the Waste Coordination Commission, and published in a resolution of the Director General for Environmental Quality and Assessment.

This is the only article of the Royal Decree that refers to the market share as the tool for allocating responsibilities between competing PROs, and it does so in relation to compliance with separate collection targets. No further reference is made to the market share, although there are other areas where responsibility sharing is also necessary, such as the sharing of the costs of packaging waste management or the allocation of responsibility for the sale of recovered material.

On the other hand, art. 21.2 of the Packaging Royal Decree foresees the publication of the resolution of the Director General for Environmental Quality and Assessment on the MITERD website "*if deemed necessary*". In a market where several PROs compete for the management of the same packaging waste stream, it will generally be necessary to share responsibilities. Furthermore, there is no detail on when the resolution will be published, which could create delays and uncertainty.

The limited use of the market share only to allocate collection targets between PROs, without clarity on its application in the distribution of waste management costs - which is delegated in the Packaging Royal Decree to an agreement between PROs - and in the allocation of responsibilities for the sale of recovered material, creates uncertainty and may lead to conflicts between PROs. Nor is any kind of intervention by any public administration foreseen. This situation may cause conflicts or, alternatively, lead to excessive coordination between PROs and thus harm competition. In addition, the lack of a defined deadline for the

publication of market shares by MITERD may compromise the planning capacity of PROs, affecting their efficiency and operational strategy.

6.6.2. PROs' liability: the introduction of a mixed model

The Packaging Royal Decree partially regulates what would happen in the event that a PRO manages, through an agreement with the LE, to take over the complete management of household packaging waste at a municipal level. Thus, art. 33.1 of the Packaging Royal Decree indicates that, when an agreement establishes that waste management is to be carried out "by the system itself", "the extended product responsibility system must assume, through waste managers with whom it has concluded agreements, the operations of packaging waste management, including its separate collection, transport, classification and treatment, with the system acting as the holder of the waste". Regarding agreements with waste managers, the Packaging Royal Decree indicates that they must avoid anti-competitive practices and that the conditions for contracting waste managers must respect "the principles of publicity, competition and equality, in order to guarantee free competition, as well as the principles of protection of human health, the environment and the waste hierarchy, and, where appropriate, self-sufficiency and proximity"⁸⁶.

As regards financing, when it is assumed by an EPR system, art. 34.6 of the Packaging Royal Decree foresees that "the corresponding extended producer responsibility system shall finance all the costs inherent to such management". art. 21.1.e) states that EPR systems "shall conclude agreements, where appropriate, with other extended producer responsibility systems when they carry out the management of their packaging waste for financial compensation for the management operations they have carried out" (underlining added).

With this regulation, the Spanish legislator opts for a mixed system: by default, it is a system of a "financial" nature (because management corresponds by default to the LE) which, however, may become "organisational" in some areas, based on the PROs' negotiations with specific PA. As such, it could result in a mixed, highly complex system, where "organisational" and "financial" systems could coexist in different parts of the territory. The CNMC is not aware of other surrounding countries that have opted for such a model.

If new PROs were to enter the market, they could try to differentiate themselves by taking over the management and thus try to reduce costs in order to attract producers with lower tariffs. Whether a PRO takes over the total management of household packaging waste depends exclusively on the negotiation of an

⁸⁶ Art. 21.1.d) of the Packaging Royal Decree in relation to art. 47.2.c) of the Waste Act. The literal quotation is from art. 47.2.c) of the Waste Act. Underlining added.

agreement with the competent authority. This is relevant from a competition perspective because this PRO would become a *de facto* monopolist in a territorial area. The regulation does not foresee a system of competition for the market, nor a time limit, nor, in general, how a competing PRO could opt to obtain this management, beyond negotiation with the competent administration. Nor does it prevent that, over time, a PRO could spread over much or all of the national territory, giving rise to a monopoly.

The current situation of the Spanish market, taking as a reference the agreements in force between Ecoembes, Ecovidrio and the PA, is that the collection of packaging waste materials managed by Ecoembes is entirely in the hands of the LE, while for glass packaging waste, 99.7% of the agreements provide for Ecovidrio to manage it. As for the duration of the existing agreements, those signed by Ecoembes have an average duration of 4 years and 3 months, while those signed by Ecovidrio have an average duration of 6 years and 5 months.

A comparison with the regulation in countries that have opted for an "organisational" model, such as Germany or Austria, shows that, in order to maintain competition, a complex allocation system is in place in these countries. Under this system, each PRO is allowed to take only a share of the market proportional to its share, the monopoly is granted only for a certain period of time, it is obliged to tender for the provision of services on a competitive basis, it is prohibited from participating through subsidiaries or associated companies in the same tenders, and settlement systems are established for the sharing of costs and organisation of financial flows as well as for the distribution and delivery of the collected materials. All this with the intervention of an independent third party:

- In Austria, the Ministry of Environment allocates each PRO a collection area based on its quota every 5 years. The designated PRO is responsible for tendering the collection in that area in accordance with public procurement rules and may not accept bids from or subcontract to companies within its group. The Ministry of Environment has published guidance on the subject for PROs⁸⁷.
- In Germany, the PROs appoint, through the Gemeinsame Stelle, a PRO responsible for tendering in each collection area. In practice, lots are drawn for each area every six years. The collection of lightweight packaging waste and glass waste is tendered separately, and for each fraction about one third of the contracts are tendered annually. The tender leader should bear at least 50% of the costs, with the aim of pursuing maximum efficiency. It also requires competitive tendering through an electronic

⁸⁷ See:
https://www.bmk.gv.at/themen/klima_umwelt/abfall/Kreislaufwirtschaft/verpackungen/sammeln_verwerten/leitfaden.html

platform and regulates the main aspects of the tendering process (publicity, deadlines and appeals).

Therefore, in other "organisational" models, collection areas are allocated in proportion to market shares, through the intervention of an independent body with competence at national level. This is only possible if the whole territory is divided into collection areas. Spanish legislation, by opting for a mixed system, makes it difficult to organise along these lines, as the decision to opt for one model or another is delegated to negotiations between PROs and PA at a lower level than that of the State.

The question therefore arises as to whether a mixed model would be appropriate to establish a regulatory framework similar to that in force in countries that have opted for an "organisational" model, when part of the territory could opt for a "financial" model. In particular, uncertainty could exist with regard to:

- Which administration would be best placed to decide whether an "organisational" or a "financial" model is applied in its territorial area.
- Which administration would be best placed to allocate collection areas among PROs, as it is not known how many territorial areas would be left under an "organisational" model, particularly as this number could change over time.
- Which Administration would be best placed to determine the market shares (which would have a lower territorial scope than those published in the resolution of the D.G. for Environmental Quality and Assessment provided for in art. 21.1 of the Packaging Royal Decree), to set and supervise the economic settlements between PROs and the distribution and physical allocation of the waste collected.

According to the Packaging Royal Decree, management also covers sorting, classification and delivery (sale) activities, where competition is possible, in contrast to collection and transport activities, which have the characteristics of a natural local monopoly. As the regulations stand, if a PRO takes over the management via an agreement, it would also be responsible for the sorting, classification and delivery of the material, thus preventing competition in these activities as well. By contrast, only the collection and transport of household packaging waste to a storage point is provided on a monopoly basis in countries where an "organisational" model has been chosen, such as Austria or Germany. From there, the waste is distributed among PROs on a market share basis and each one manages the sorting, classification and delivery of the material. These activities, moreover, already exist in competition in Spain for commercial and industrial packaging, since, until the introduction of the new regulatory framework, the final holders (retailers and industries) were responsible for its management, negotiating with the waste managers they considered appropriate.

Moreover, the Packaging Royal Decree foresees that the PRO which agrees via an agreement to take full responsibility for the management of household packaging waste “*shall act as the holder of the waste*”. From this, it can be deduced that it will be responsible for selling all the material, which implies that it will be the sole supplier for the waste managers in the area.

Regarding the sharing of costs between systems, the Packaging Royal Decree delegates this to an agreement between PROs. It does not specify criteria for the distribution of costs, nor does it foresee any intervention on the part of the PA. Lack of specificity can lead to uncertainty and conflicts that can undermine the functioning of the sector.

Box 3

COLLABORATION AGREEMENT BETWEEN ECOEMBES AND ECOVIDRIO

In Spain, there is a precedent of a collaboration agreement between Ecoembes and Ecovidrio for joint declaration by member producers. However, to the extent that these are non-competing systems, it is not transferable to competing PROs.

Since 1997, Ecoembes and Ecovidrio have had a collaboration agreement for the fulfilment of their respective EPR obligations for single-use household packaging. The most recent version of the agreement is from 2023, which adapts to the new regulatory framework while essentially maintaining the previous functioning: producers can use a joint declaration mechanism, whereby they can join a single system (Ecoembes or Ecovidrio), jointly declaring all the packaging they put on the market, including that not managed by the system they join.

Each of the systems is responsible for the management of packaging of materials under its responsibility, informing the other of the packaging declared annually by their respective members for products packaged in materials under the scope of the other PRO, as well as the amounts collected in this respect.

As for the financial contributions, they will be set by the PRO with which the producer has signed the membership contract, with the amount (and criteria) set by Ecovidrio for products packaged in glass material and by Ecoembes for materials other than glass. Consequently, the costs will be borne by Ecovidrio in the case of glass and by Ecoembes in the case of all other materials. Ecoembes and Ecovidrio settle the amounts to be transferred under this agreement on a quarterly basis. The agreement also states that Ecoembes, the licensee of the "Green Dot" symbol, allows Ecovidrio to use it.

On the other hand, with the entry of new competing PROs, there is a risk that this agreement, by granting benefits to the PROs signatories and their companies, could cause an imbalance that reduces the ability of other PROs to compete.

In short, the current mixed system may hinder competitive dynamics and does not provide for mechanisms to favour competition between PROs in the collection and transport, sorting, classification and delivery phases. Furthermore, a PRO could have a monopoly on these activities in different territorial areas, without the

regulations providing for any limitations in this respect, even in the case of sorting, classification and delivery of material, activities which can be provided in competition. The articles regulating the take-over of the management of household packaging waste seem to assume the existence of a single system, without providing details of how a competition model would work.

6.7. Packaging waste allocation

The allocation of recovered packaging waste from sorting and treatment plants may be the responsibility of the LE or PROs, depending on the agreement between them. For materials collected in the yellow bin, 57.82% of the agreements signed with Ecoembes stipulate that Ecoembes will be responsible for their allocation⁸⁸. This means that, although the materials are physically in the sorting and treatment plants, whether privately owned or owned by local authorities, it is Ecoembes that determines to which managers they are handed over. As far as materials from the remaining fraction are concerned, 14.29% of the agreements signed with Ecoembes grant it the sale of the material, while 7 framework agreements signed by Ecovidrio with Autonomous Communities (out of a total of 11 signed with these PA) foresee the possibility for Ecovidrio to manage the sale of glass packaging waste from the remaining fraction⁸⁹. As for the materials from the paper and cardboard container, no agreement provides for Ecoembes to sell the recovered material. Finally, for materials obtained from the glass container, all framework agreements signed by Ecovidrio assign the sale of the material to Ecovidrio.

As a result, the main source of household packaging waste in Spain is Ecoembes (for paper/cardboard, plastics and metals) and Ecovidrio (for glass). Due to the volume of packaging waste generated at the household level, they are also one of the main sources of supply for waste managers.

The systems therefore play an important role in the market for the sale and purchase of household packaging waste. To promote a high level of competition and efficiency in this market, the CNMC deems it essential to address two additional aspects analysed below.

⁸⁸ To calculate this percentage, only those cases have been considered in which the activity in question is included in the agreement and is carried out by Ecoembes. Therefore, cases in which the activity is not foreseen in the agreement or it is included, but not carried out by Ecoembes, are excluded. Moreover, no agreement with Ecovidrio provides for it to manage the sale of the glass packaging waste in the yellow bag.

⁸⁹ Framework agreements signed with the Autonomous Communities of the Canary Islands, Castile-La Mancha, Valencia, Extremadura, Catalonia, Galicia and Madrid.

6.7.1. Electronic allocation procedure

Until the Packaging Royal Decree, there was no regulation on how packaging waste was to be handed over to the waste collectors for recovery. As a result, PROs have applied the award systems they have considered appropriate, which have sometimes been the subject of proceedings for contravention of competition law⁹⁰. According to the information published on their respective websites, Ecoembes opted until 2013 for a sealed envelope award system and Ecodivrio for electronic tendering.

The new Packaging Royal Decree introduces the obligation to establish an award system in electronic format in accordance with the principles of hierarchy, self-sufficiency and proximity, which guarantees the principles of publicity, competition and equality, and ensures free competition and traceability of the waste awarded until its complete treatment. The introduction of an electronic auction system for materials is a positive step to improve transparency and competition in the allocation of materials. It is also positive that the legislation requires the guarantee of compliance with the principles of publicity, competition, equality, free competition and traceability of waste until it is fully treated, although it does not go into detail on the formulas for ensuring that these principles are complied with, which could limit its effectiveness.

6.7.2. Quality of the material awarded

The systems play a central role in the minimum quality conditions that the collected materials must meet. Ecoembes sets the so-called Recovered Materials Technical Specifications (ETMR), which are the minimum quality conditions that must be met by the materials that the sorting plants deliver to waste managers. In the case of Ecodivrio, in the framework agreements with the regional administrations, it sets quality standards that glass packaging must meet before being delivered to the managers.

⁹⁰ Ecodivrio has been sanctioned twice for acts aimed at sharing the glass recovery market and driving the complainant companies out of the market. See, for example, case [S/537/02](#), which resolved a sanctioning file against Ecodivrio with the imposition of a sanction of €150,000 for infringement of art. 1 of Act 16/1989 and an additional sanction of €150,000 for infringement of art. 6 of Act 16/1989. See also [S/0021/21](#), proceedings against Ecoembes for possible abuse of dominant position. The Competition Chamber of the CNMC Council decided to declare the commitments submitted by ECOEMBES on 30 October 2023 as adequate and binding. The various commitments include the implementation of a new electronic awarding procedure processed by an external and independent provider, the reduction of processing times, the recognition of the possibility for companies to improve the first bid submitted, the limitation to 40% of the number of areas that can be awarded to a single recycler, improvements in relation to the setting of the quantities to be auctioned, as well as the creation of registers of penalties, guarantees and approvals to provide greater transparency on these issues.

The setting of minimum quality conditions is relevant, as they influence:

- The price of bids to be made by waste managers in the auctions for the allocation of materials.
- The investments in waste sorting and treatment plants, which may provide incentives or disincentives for the adoption of new technologies.
- The development of new technologies by waste managers.

The new Packaging Royal Decree foresees, in art. 11.2, that “*the minimum quality requirements for the different fractions of materials recovered from packaging waste under local jurisdiction in packaging sorting plants and other mixed fraction treatment plants for the separation and classification of packaging waste shall be agreed by consensus between the managers of these plants, the managers of recycling plants, the collective systems of extended producer responsibility, the Autonomous Communities and the local authorities. These minimum requirements shall be applicable throughout the territory of the State*”.

On the other hand, art. 11.2 refers to quality conditions “*for material fractions recovered from packaging waste under local responsibility at packaging sorting plants and other mixed fraction treatment plants for the separation and sorting of packaging waste*” (underlining added). It should be considered that not all packaging waste goes through a sorting and separation plant. For example, quality is equally relevant for glass packaging waste which, being collected completely separately, is directly handed over to waste managers after collection.

The CNMC welcomes the new features of the regulation. However, there are still uncertainties regarding the minimum quality requirements for the materials awarded and, moreover, these do not extend to all materials. The lack of detail in the Recovered Materials Technical Specifications (ETMR) means that key aspects necessary for effective consensus building are not specified, which could negatively impact the system. Furthermore, these specifications do not apply to glass, although quality conditions are equally important for glass, which is collected separately and does not require sorting in sorting plants.

6.8. Traceability and fraud detection

Fraud has consequences both for sustainability and for the resources of PA⁹¹. It occurs when companies subject to EPR fail to declare their packaging or falsify data. Fraud in reporting and adherence to PROs creates a distortion of

⁹¹ Fraud in the area of EPR also affects the calculation of the EU's own resources following Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of the EU's own resources and repealing Decision 2014/335/EU, Euratom, which foresees a contribution of €0.80 per kg of non-recycled plastic packaging.

competition, as some companies avoid costs that others bear, thus affecting the fairness and efficiency of the market. This behaviour reduces the reliability of statistics and hampers the effective implementation of recycling and waste management policies. Failure to reflect true packaging volumes and recycling rates compromises resource allocation and environmental planning, highlighting the importance of improving traceability and accuracy in reporting.

PROs play a key role in promoting and verifying compliance. They manage crucial data on the amount and type of packaging that their member companies place on the market and recycle. Furthermore, as it is a task of general interest, it is necessary for the PA to be involved in the supervision of the system. To improve information and traceability of packaging, one of the measures foreseen by the new Packaging Royal Decree is the creation of a packaging section in the Product Producers Registry. This register is based on information provided by the product producers, who annually report on the quantities by weight by type of material of the packaging placed on the market, as well as the number of units. They must also specify the mode of compliance with the obligations of the EPR scheme and, where applicable, the collective system to which they belong. The CNMC welcomes this measure.

Furthermore, the Packaging Royal Decree establishes that in order to ensure, inter alia, the reliability and accuracy of the data collected on recycled packaging waste, an effective system of quality control and traceability of packaging waste will be established, based on the information contained in the Waste Information System (eSIR)⁹². But the information in the eSIR itself ultimately depends on the information provided by the waste managers.

In addition, although MITERD produces an annual report on the generation and management of packaging waste⁹³ which provides data on recycling, it is based on the information provided by the PROs and waste managers, and therefore suffers from the same limitations mentioned above. Furthermore, it does not distinguish between commercial, industrial and household packaging.

Finally, the Packaging Royal Decree also addresses the issue of fraud. It establishes that, in order to check compliance with the packaging waste recycling targets, corrections based, inter alia, on waste characterisation will be made to the data provided by the PROs for packaging placed on the market. However, in response to a request for information from the CNMC, MITERD has confirmed that the latest characterisation carried out by the Ministry corresponds to the

⁹² Annexe II of Royal Decree 1055/2022. This procedure has not yet been developed.

⁹³ See: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/publicaciones/Memoria-anual-generacion-gestion-residuos.aspx>

period 2010-2012⁹⁴. Packaging waste characterisation is essential in order to have independent data to verify the reliability of the information. The development of these involves the collection of representative samples of waste from different sources (households, industries, shops, etc.) or from different material streams (organics, plastics, paper, etc.). The collected samples are analysed to determine their composition (types of materials), quantity (weight or volume), and other relevant properties such as moisture, presence of contaminants, etc. The waste in the samples is classified and categorised according to different criteria, such as type of material, recyclability, hazardousness, etc. These data provide a detailed and independent picture of the sector, which facilitates a better understanding of the situation and the detection of fraud.

In short, despite the advances brought about by recent regulatory changes, the current regulation does not detail how the traceability of waste will be reliably guaranteed, mainly because it is based on the information provided by producers, waste managers and PROs, without integrating independent external data sources. This reliance on internal data without effective external verification limits the ability to control and validate the accuracy of waste information. Although PROs can carry out audits of adhering members, the lack of an independent and robust mechanism for cross-checking this data poses a risk in terms of ensuring traceability and reliability of information along the waste chain.

6.9. Commercial and industrial packaging EPR challenges

From 1 January 2025, product producers of commercial and industrial packaging will be obliged to finance and organise the management of their waste through EPR systems, taking over this role from commercial and industrial waste generators. Various public and private agents have pointed out that the current functioning of the commercial and industrial waste management market is competitive, with a large number of waste managers competing to manage commercial and industrial waste⁹⁵.

⁹⁴ Available at the following link: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/publicaciones/residuos-2013-estudio-plan-piloto-caracterizacion-residuos-urbanos-origen-domiciliario.html>

In its response, MITERD reports that a new characterisation is planned to be carried out in the coming months, although it will take time for the information to become available because the characterisation period should be 12 months, in order to take into account seasonal variations in the year. However, some Autonomous Communities are carrying out characterisations of their waste (Madrid, Catalonia, Castile and Leon, etc.), so they will have more up-to-date information for their Autonomous Community.

⁹⁵ This assessment can be found, for example, in the responses to the public consultation carried out by the CNMC on the subject of this study, available at

The new regulation will change the structure of these markets and will have competition implications, which are discussed below.

6.9.1. Concentration of demand for commercial and industrial packaging waste management services

Under the new set-up, the costs associated with the management of industrial and commercial packaging waste will no longer be borne by industry and commerce, but by the product producers, who will finance EPR systems. EPR systems will, in turn, be responsible for the management of waste and enter into contracts with waste managers. Industries and businesses should therefore follow the instructions of the EPR systems as to where or to whom to deliver their packaging waste.

This is a radical change. The collection, which is now atomised in individual shops and industries, could be concentrated in the PROs with the changeover to the new system. However, in order to simplify management, the Packaging Royal Decree establishes that, by signing agreements with companies, PROs may delegate the physical delivery of packaging waste to industries and businesses, but they maintain the obligation to finance the costs of waste management. As EPR schemes retain the financing obligation, they become the new counterpart of waste managers in any case. This reduces the power of companies vis-à-vis PROs, which could direct waste streams under their responsibility to waste managers of their choice.

6.9.2. Coordination between competing commercial and industrial packaging PROs

In the likely event of the entry of several competing PROs for commercial and industrial packaging, they will have to reach agreements among themselves to organise collection and financing.

With regard to waste collection, although it is expected that the PROs will try to maintain the current organisation as far as possible through agreements with the final waste holders and waste managers, it could happen that some PROs decide to organise the collection themselves. Furthermore, even if all PROs were to enter into agreements with final waste holders and waste managers, it is possible that not all PROs have agreements with all waste managers. Taking into account that industries and retailers will generate packaging waste from producers who will be members of different PROs and that it will not be feasible in practice for

<https://www.cnmc.es/consulta-publica-de-la-cnmc-sobre-el-sector-de-la-gestion-de-residuos-de-envases>.

them to distinguish and separate packaging waste according to the PRO to which each producer is a member, the consequence is that final holders of the waste will most likely end up delivering to their collectors packaging waste from producers who are members of PROs with which those collectors do not have a financing agreement in place.

With regard to financing, following the guidelines set out in art. 21.2 of the Packaging Royal Decree, the distribution of responsibilities between PROs should generally be based on the market share of each one, determined by resolution of the D.G. for Environmental Quality and Assessment of MITERD on the basis of the information available in the Product Producers Registry. MITERD's planned intervention is the determination, by means of a resolution, of the minimum separate collection targets for the annual period to be met by each of the systems at state and autonomous community level. However, additional issues will need to be determined in practice, such as how much each PRO has to finance, how much each PRO has financed from its agreements with waste managers, how much PROs should compensate each other, and who should oversee payments and resolve any conflicts that may arise.

Thus, the regulation does not clearly address key issues regarding the sharing and settlement of liabilities, particularly financial liabilities, between PROs. Experience in other countries and waste streams, such as WEEE, shows that it has been necessary to establish coordination offices between PROs.

Box 4

PRIVATE AND PUBLIC COORDINATION MECHANISMS IN WEEE

Given the absence of regulation and the need for an instrument of coordination between PROs for the collection of household and professional WEEE, the **IT Platform for the Management of WEEE (OfiRaee)** was created in 2007, as a result of a voluntary agreement between the existing PROs and outside the coordination mechanisms provided for in the WEEE regulations⁹⁶. Currently, 8 of the 11 PROs operating in the market are involved. Its function is to centralise, by means of its own IT tool, the WEEE collection requests sent from any storage point (municipal clean points, temporary storage centres, etc.). OfiRaee handles the applications automatically, processes them and assigns them to one of the authorised PROs. After that, each PRO manages the removal and transport of WEEE by authorised transporters to the authorised treatment plants⁹⁷.

⁹⁶ In 2007, there were 8 operational PROs in the market and all agreed to participate in OfiRAEE: AMBILAMP, ECOASIMELEC, ECOFIMÁTICA, ECOLEC, ECOLUM, ECO-RAEE'S, ECOTIC and EUROPEAN RECYCLING PLATFORM.

⁹⁷ See: <https://www.ofiraae.es/>. A similar initiative has emerged for the coordination of the management of waste portable batteries and accumulators (OfiPilas).

In 2015, through the approval of *Royal Decree 110/2015, of 20 February, transposing Directive 2012/19/EU of the European Parliament and of the Council, of 4 July 2012, on waste from electrical and electronic equipment*, the regulation introduced two coordination tools, still pending creation by ministerial order: (i) the WEEE collection **allocation office**; and (ii) the **electronic WEEE management platform**.

On 23 May 2022, the Draft Ministerial Order⁹⁸ was opened for public consultation. It has not yet entered into force.

Thus, the challenge in physical material allocation and financing costs sharing between PROs for commercial and industrial packaging lies in the ambiguity of how these aspects will be managed when several PROs compete with each other. On the one hand, waste collection is complicated because not all PROs will have agreements with all waste managers. Furthermore, industries and businesses cannot separate packaging waste from producers who are members of different PROs according to the PRO of each producer. This leads to waste ending up in the hands of waste managers without adequate financing arrangements. On the other hand, financing becomes complex, as beyond the minimum annual collection targets set by MITERD, it is required to clarify how much each PRO should and has financed, how they will compensate each other, and who will monitor and resolve financial differences. The regulation does not clearly detail the procedure for the allocation and settlement of responsibilities, in particular financial ones, between PROs, creating potential conflicts and challenges in the efficient management of this waste.

6.9.3. Conflicts of interest due to the entry of waste managers into PROs

The extension of EPR to commercial and industrial packaging has another potential implication that may create conflicts of interest in PROs. Under the new obligation, there will be waste managers - specifically those who carry out final treatment of packaging waste - who sell their products in a package and could therefore become subject to EPR and would have to adhere to a PROs. The Packaging Royal Decree specifies that the Waste Coordination Commission will assess, in order to process authorisations, *“the absence of conflict of interest between the members of the system or those who form part of the executive bodies and other operators, especially with the waste managers with whom they have to contract”*.

The interpretation is subject to some uncertainty, as it can be argued that waste managers would not be covered by the EPR, insofar as the EPR affects product

⁹⁸ Available here: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/participacion-publica/residuos-2022-proyecto-om-desarrolla-plataforma-electronica-gestion-residuos-aparatos-ae-y-oficina-asignacion-recogidas.html>.

producers, meaning packers, who are “*economic agents dedicated to the packaging of products for placing on the market*”, and the definition of “packaging” in the Packaging Royal Decree does not include waste⁹⁹. However, waste managers carrying out final treatment could be bound by the extension of the EPR and would have to set up IPRs or join a PRO. The Packaging Royal Decree defines waste managers as natural or legal persons who carry out any of the operations that make up waste management, including recovery.

The definition of “recovery” includes different recycling activities and the type of facilities in which they are carried out, such as operation “*R0307 Recycling of organic waste for the production of materials or substances*”, which is carried out in “[f]acilities which obtain pellets or flakes or other plastic formats from the treatment of waste plastics when the material reaches the end of waste status”, operation “*R0403 Recycling of metal waste to scrap*”, which is carried out at “[f]acilities which obtain scrap metal from metal waste where the material obtained reaches the end of waste status”, or operation “*R0504 Recycling of waste glass to calcine*”, which is carried out at “*waste glass crushing [f]acilities where the calcine reaches the end of waste status*” (underlining added).

Thus, in the event that the material obtained by these managers is placed on the market in a package, the managers would be considered product producers for the purposes of the Packaging Royal Decree, would be subject to the EPR and would have to assume the management and financing of the packaging through their participation in EPR systems. This could cause conflicts of interest in PROs, insofar as waste managers will be involved in the systems that are to organise the management of packaging waste, including the selection of waste managers for the treatment of packaging waste.

⁹⁹ Art. 2 of the Packaging Royal Decree.

7. CONCLUSIONS AND RECOMMENDATIONS

Competition between packaging PROs can drive efficiency, effectiveness and innovation in the sector and thus facilitate the transition to a more sustainable economy that better preserves the environment and public health. If competition exists, companies subject to EPR will not have to take on the monopolist's terms, and will have alternatives available to them. This will create a competitive pressure that will discipline PROs, inducing them to improve their management. This promotes a more efficient recycling system and facilitates rationalisation of expenditure, resulting in savings for PA, businesses and citizens.

Given its importance for the environment, public health and the economy, the study has analysed the management of packaging waste, which has historically been monopolised. The most relevant conclusion is that, **in order to achieve competition in this area, it is crucial that regulation and authorities actively promote it.** This is clear both from the analysis of the sector in Spain and from international experience, and also from experience in other waste streams. They show the challenge of, on the one hand, organising collection and transport activities, which have the characteristics of a natural local monopoly and, on the other hand, managing the complex multilateral relations between competing PROs and PA. And while the new Waste Act and the Packaging Royal Decree make notable progress, further progress is needed in removing barriers to promote a competitive model that will ensure efficient coexistence between PROs. Otherwise, it is possible that the situation of recent decades will continue and, although the regulations do not explicitly prohibit competition, the barriers to entry and the difficulties of coordination between PROs and PA will hinder or even prevent it *de facto*.

The analysis has identified a number of barriers that could be removed. These include those that hinder the entry of new PROs, either because of a difficult and uncertain authorisation process, or because of the obligation to reach complex agreements within short timeframes with multiple PA and incumbent PROs. It may also be difficult to maintain a competitive balance over time under a "mixed" model (financial and operational) in particular without a detailed regulatory framework regarding the relationship between PROs. There are also challenges related to achieving high levels of transparency, preventing conflicts of interest that may arise in PROs, adopting quality supervision to combat fraud and encouraging competitive procedures in the allocation of waste.

In view of the above, and in order to promote competition and efficiency, a number of recommendations are set out below.

ONE. REDUCE ENTRY BARRIERS

I. Remove barriers to the authorisation of PROs

I.A. *Establish a system of consultation and assistance for the preparation of applications for authorisation and limit requests to what is necessary*

The information required by regulation in applications for notification and authorisation of EPR systems, particularly PROs, is very extensive and detailed. Among other things, information is requested that can only be known with certainty following agreements with public and private agents after authorisation. This can be difficult for an entrant to obtain and can constitute an entry barrier. While much of what is requested may be essential to assess the authorisation, **it is recommended to check that what is requested is limited to what is necessary.**

In France, the public agency ADEME assists new incoming PROs with studies and assessments prior to their approval, as a best practice. Difficulties of access, in terms of information, could be alleviated if similar assistance were provided by the competent PA in Spain. Therefore, **a system of consultation and assistance by the competent administrations** should be established whereby EPR initiatives have access to market data and information and can receive advice on the preparation of applications for authorisation, including, inter alia, the appropriate methodologies for making the necessary estimates. Although the Autonomous Communities are the competent administration for the submission of applications, MITERD is probably better placed to carry out these functions, as it has data at the national level.

I.B. *Assess whether to change from negative to positive the meaning of administrative silence in the processing of applications for authorisation of PROs*

The Waste Act and the Packaging Royal Decree provide for a period of 6 months, extendable for a further 6 months, to resolve applications for authorisation of PROs. Once this period has elapsed, negative administrative silence will apply if no express decision has been notified (art. 20.4 of the Packaging Royal Decree). In contrast, the Waste Act is more permissive with PROs of producers who voluntarily submit to the EPR, which are allowed to operate with a provisional authorisation three months after the application for authorisation (art. 39 of the Waste Act).

It is foreseeable that most of the applications will be submitted to a reduced number of Autonomous Communities as a consequence of the 'headquarters

effect', concentrating the workload. This, added to the increased workload for the Autonomous Communities that will result from the new Waste Act, increases the likelihood that the deadline will be insufficient if the PA do not manage to resize in time. The refusal of authorisation by administrative silence blocks the entry of competitors, causing significant harm to competition.

In view of the above, **an assessment is recommended as to whether it would be appropriate to change the meaning of administrative silence to positive**, which would facilitate the entry of new competitors. This could be accompanied by strengthened supervisory efforts to monitor compliance with authorisations and conditions of exercise, and to revoke the authorisation if appropriate. If the sense of silence is not changed, the competent authorities are urged to justify the reasons why negative administrative silence is considered necessary and proportionate, as well as to adopt all necessary measures, including those recommended in this report, to prevent applications for authorisation from ending in administrative silence, given that otherwise the entry of competitors is blocked without an express decision to justify it.

I.C. *Ensure that the territorial specifications included in the authorisation by the Waste Coordination Commission are justified and proportionate, and do not lead to a breach of the national effectiveness of the authorisations*

With the new Packaging Royal Decree, the authorisation of packaging PROs becomes nationally effective and unique, being requested from the Autonomous Community where the system has its registered office (art. 50.2 of the Waste Act). During its processing, the application is forwarded to the Waste Coordination Commission for its report prior to the Autonomous Community's decision. The Coordination Commission may incorporate clarifications or specifications regarding the performance of the collective system in the autonomous territories (art. 20.3 of the Packaging Royal Decree).

As regards the territorial specifications, the CNMC reiterates what is stated in the report on the Draft Packaging and Packaging Waste Royal Decree (CNMC, 2021b): *“The express reference to the validity throughout the national territory of the authorisation of collective systems for EPR packaging waste disposal granted by the Autonomous Communities is to be welcomed. [...] However, [...] the vagueness of the terms “specifications and clarifications” and the lack of clarity as to their scope in the [Draft Royal Decree] could affect the effective application of the principle of validity throughout the national territory.”* Therefore, **it is recommended to ensure that the territorial specifications included by the Commission in the authorisation are justified and proportionate and do not lead to a breach of the national effectiveness of the authorisations.**

I.D. Specify in the Packaging Royal Decree a deadline for the issuing of a report by the Waste Coordination Commission in the processing of the application for authorisation of PROs

Neither the Waste Act nor the Packaging Royal Decree foresees a specific time limit for the Coordination Commission to report on applications for authorisation, within the general time limit available to the Autonomous Community competent to take a decision. This could cause excessive delays.

The CNMC recommends that a time limit be set for the procedure, in particular taking into account the negative meaning of administrative silence in the event of failure to resolve. The 10-day reporting period generally provided for in art. 80 of Act 39/2015, of 1 October, on the Common Administrative Procedure of Public Administrations, could be taken as a reference, adapting it where necessary. Alternatives such as the establishment of an internal deadline based on an agreement within the Commission are welcomed, although it is recommended that the deadline be established in the regulations in order to make them more effective.

I.E. Establish indefinite validity of authorisations

Authorisations for PROs have a duration of 8 years, after which they must be renewed by means of a new application (art. 50.2 of the Waste Act). In this respect, the **recommendation of indefinite duration** included in CNMC is **reiterated** (2020a): *“Assess that the term of the authorisation could be indefinite, given that there is no limit to the number of authorisations and [...], the Coordination Commission can monitor compliance with the authorisations and the conditions of exercise, thus eliminating administrative burdens”*.

II. Eliminate the 12-month deadline for signing agreements

A period of 12 months (art. 33.3 of the Packaging Royal Decree) may be too short to negotiate the agreements with the PA, according to experience in the negotiation of this type of agreement. While the aim of the time limit is to rebalance the bargaining power between PROs and the PA and to avoid unnecessary delays, it has other relevant implications. The new incoming PROs have this period to negotiate agreements with all the PA involved in waste management at national level, which can be very difficult in practice. Without the agreements, they will not be able to start operating fully and with guaranteed stability and could thus be a less attractive alternative for producers subject to EPR, which may make it considerably more difficult for them to start up.

Alternatives exist to facilitate and accelerate agreement negotiations. For example, among the recommendations of this study are the elaboration of a standard agreement, a greater degree of detail in the regulations or the designation of an independent body to promote coordination and resolve conflicts. In this respect, the new regulatory framework introduces two important new features. First, the regulation is more detailed in terms of what EPR systems have to finance. Secondly, in the case of disputes over the contents of the agreement, particularly financial disputes, the rules provide for them to be settled by arbitration. These developments are expected to help accelerate the negotiations.

Overall, **the maximum time limit for the signature of the agreements should be removed**, given its effect as a barrier and the existence of alternatives. Should it be decided to maintain this deadline, given how complicated and restrictive it may be for a new incoming PRO, the competent authorities are urged to take the necessary measures, particularly those recommended in this study such as creating a single agreement system or working on a standard agreement, to streamline and accelerate the signing of agreements as well as the resolution of disputes, and to provide for extensions in exceptional cases, so that any new entrant has reasonable certainty that the regulatory deadline can be met.

III. Ease the possibility for producers to switch PROs to enhance competition among them

The ability to switch PROs and the agility of change is essential to boost competition. To this end, the following is recommended.

III.A. *Replace the limitation for producers on switching between PROs before the last quarter of the year with a notice period*

Article 17.4 of the Packaging Royal Decree limits the possibility for producers to switch between PROs, stating that they must do so before the last quarter of the year, with the new PRO assuming the obligations of the producer in the following year. This limitation may be justified in order to provide some financial stability to PROs. However, it may also pose a barrier to entry for new PROs, especially in the case of household packaging at present since, having been subject to EPR for many years, entrants will largely have to recruit producers already adhering to established PROs.

Therefore, **the CNMC considers that a minimum notice period for switching is preferable**. The same philosophy that the Packaging Royal Decree applies, in art. 22.1, to the scenario in which a PRO ceases its activity, would be used. In such a case, they must give three months' notice to all the member producers, in

order to ensure compliance with their obligations, as well as to the administrative authority that granted their authorisation.

III.B. *Assess whether it would be possible to allow participation in more than one PRO*

Spanish legislation restricts the participation of producers in more than one PRO in the case of placing single-use packaging on the market (art. 17.3 of the Packaging Royal Decree). Other countries, such as Austria, allow it by setting clear rules, e.g. by allocating packaging between PROs according to the customer it is sold to or according to a specific percentage.

The CNMC has already expressed its views on this issue in [IPN/CNMC/029/23](#) on the Draft Royal Decree on tyres and tyre waste management, which highlights that allowing participation in multiple PROs could give producers the possibility to know, assess and choose the system they prefer, thus benefiting competition and encouraging more efficient management. Accordingly, **the possibility of allowing simultaneous participation in more than one PRO for single-use packaging is recommended to be evaluated**. If this option is restricted, adequate justification should be provided, based on duly substantiated reasons of general interest.

III.C. *Facilitate access on fair, reasonable and non-discriminatory terms for all packaging PROs to the symbols associated with packaging waste management, in particular the Green Dot*

Until 2022, it was compulsory to mark packaging included in a PRO by means of an accreditation symbol, which was identical throughout the territory of the system (art. 7.3 of Act 11/1997), a function that was fulfilled by the Green Dot. This obligation has been removed as of 2022. However, unequal access to the right to use the Green Dot can be an entry barrier for new PROs. On the one hand, all household and many commercial packaging uses the Green Dot, so if a producer wanted to join a new PRO that is not licensed to use this symbol, he would be obliged to change his packaging and bear the cost of changing the design and manufacture of the packaging. Also, given the widespread recognition of the Green Dot due to its mandatory use until 2022, some consumers may prefer products identified with this logo, as they see it as an indicator of sustainability. These two factors could put PROs unable to use it at a competitive disadvantage.

In this regard, it should be recalled that the Green Dot is a symbol registered by the German DSD, and Ecoembes has the rights to use it in Spain.

Given their potential to act as a competition barrier, **authorities are recommended to facilitate and monitor that PROs have access to symbols and logos associated with packaging waste management**, such as the Green Dot, on fair, reasonable and non-discriminatory terms. Accordingly, consideration could be given to the possibility that agreements between PROs may contain clauses on the transfer of rights of use where one of them so requests and where relevant, that these clauses contain fair, reasonable and non-discriminatory conditions for the transfer of rights and, in the absence of agreement, that the matter may be submitted to arbitration. Similarly, these rights of use agreements could also be considered as specific agreements distinct from the general agreements between PROs, if in some cases this is advisable for reasons of time-shortening or other reasons.

TWO. ESTABLISH AN EFFICIENT AND PRO-COMPETITIVE FRAMEWORK FOR COORDINATION BETWEEN PUBLIC AND PRIVATE AGENTS

IV. Thoroughly regulate the coexistence of competing EPR systems

The Spanish regulatory framework does not exclude the possibility of the coexistence of several systems. However, detailed regulatory development is necessary to ensure efficient coexistence and prevent competition problems.

A crucial lesson from international cases of successful opening up to competition is that regulation plays a key role. Regulation has had to be adapted in all cases to establish the rules governing the relationship between the PROs, the distribution of responsibilities and their interaction with the PA. Public intervention by competent bodies is also necessary to specify the basic aspects of market functioning, to monitor the proper performance of EPR systems and to resolve disputes. Thus, for example, among other challenges posed by the entry of new PROs is the adaptation of the agreement between Ecoembes and Ecovidrio to the new scenario. Although these two PROs do not compete with each other, the existence of an agreement between the majority operators that grants benefits to their member companies could harm the other PROs and make it difficult for them to compete on a level playing field, which may make it advisable to rethink it.

Furthermore, **the CNMC considers that further regulatory development is desirable with regard to how the distribution and settlement of responsibilities**, particularly financial but also logistical, between competing PROs for any category of packaging (household, commercial or industrial) **will be carried out**. The Packaging Royal Decree only regulates the distribution of

costs between systems and not the physical distribution of waste, delegating the latter to an agreement between PROs, without specifying criteria for the distribution of costs or providing for any type of intervention on the part of the PA.

In practice, a number of aspects are likely to need to be determined in detail. In particular, those relating to the cost and quantity of waste to be financed and collected by each PRO, how much each PRO has *de facto* financed and collected on the basis of the agreements it has with PA and waste managers, how much PROs should compensate each other, or who should monitor and resolve conflicts over financial and waste flows.

Neither the Waste Act nor the Packaging Royal Decree dedicates a specific chapter or section to the coexistence of competing EPR systems. The articles that regulate it are scattered throughout the two regulatory texts, which generates doubts about their interpretation and, furthermore, some relevant aspects are not addressed or developed.

Therefore, **the CNMC recommends including a chapter in the Packaging Royal Decree dedicated to regulating in detail the coexistence of competing systems, paying particular attention to the elements described below.**

IV.A. Use the market share as the basic criterion for allocating responsibilities between competing PROs

Art. 21.2 of the Packaging Royal Decree is the only article of the regulation which specifies a criterion for allocating responsibilities between competing PROs, opting for the market share. However, it only refers to allocating responsibility for meeting separate collection targets. No further reference is made to the market share, although there are other areas where responsibilities need to be shared between competitors, such as the distribution of the costs of packaging waste management or the allocation of responsibility for the sale of recovered material.

The market share is recommended as a general benchmark criterion for the allocation of responsibilities between competing systems.

IV.B. Make it compulsory to publish the resolution on minimum collection targets for PROs and set the time for the publication of this resolution

There are two aspects of art. 21.2. of the Packaging Royal Decree that should be reviewed. The first is that it currently provides for the publication of the resolution of the D.G. for Environmental Quality and Assessment “if deemed necessary”. **The CNMC considers it advisable to delete this subparagraph**, as it will always be necessary to share responsibilities between competing PROs.

The second is that the article does not detail when the resolution will be published. **The CNMC considers it advisable to set the date of publication.**

IV.C. Develop the regulation on the assumption by a PRO of the management of household packaging waste and its relationship with other PROs

A novelty of the Packaging Royal Decree is that it foresees the possibility for a PRO to agree with LE, via an agreement, to carry out the management of household packaging waste, including the activities of collection and transport to a storage centre, sorting, classification and delivery (sale) of the material (arts. 32 and 33 of the Royal Decree on Packaging). Should this happen, Spain would have a "mixed" organisational model which, as far as the CNMC has been able to ascertain, is not applied in other countries.

Its classification as "mixed" is due to the fact that it is based on a "financial" system, in which management corresponds by default to the LE, which would become "organisational" in certain areas of the national territory on the basis of specific agreements between PROs and PA. In this way, "organisational" and "financial" systems could coexist in different parts of the territory, without the regulation setting out details on how they would work or mechanisms to prevent a single PRO from gaining a monopoly over all markets through negotiations.

With regard to this possibility, **the CNMC considers that the regulation should be more detailed and take into account in particular the following elements:**

- **The transfer of household packaging management to a PRO should not depend solely on negotiation at local or regional level**, because of its implications on the market structure beyond the municipal sphere. The decision to move from a "financial" to an "organisational" model, and the model to be followed in general, must be taken and coordinated at the national level.
- **If an organisational model (total or mixed) is chosen, it should be taken into account that only the activities of waste collection and transport to a storage facility are activities with a natural local monopoly character.** From that point onwards, each PRO should be responsible for a quantity of waste proportional to its market share and be free to choose, on a competitive basis, who provides sorting and separation activities and to whom it sells the resulting material. As the legislation is currently drafted, all these activities covering waste management could be brought under the responsibility and organisation of a single system.
- **If an organisational model (total or mixed) is chosen, a mechanism should be established to allocate collection areas among the**

different competing PROs according to their respective market shares. It should be regulated how and by whom and for how long a given PRO assumes responsibility for organising the collection. The procedure for choosing the service provider should also be regulated, ensuring that it facilitates a high level of competition.

- **The involvement of the organising PRO or subsidiaries or associated companies in vertically related activities in the same municipality or area,** such as recovery and selection or adjudication, should not be allowed in order to avoid conflicts of interest.
- **A procedure should be regulated for the distribution and delivery of the collected material to each PRO according to its market share,** in accordance with art. 21.2 of the Packaging Royal Decree. Each PRO must act as the final holder of that part of the waste, taking responsibility for its sorting, separation and sale. The Packaging Royal Decree should regulate where and how the physical distribution of waste between competing PROs would take place. Another possibility that could be envisaged in the regulation is that PROs could agree that the collector is also responsible for the final sale of the material, with the corresponding financial compensation being made at a later date.
- **Responsibility for the calculation of market shares and the allocation of costs and waste quantities should be assigned to a public body independent of the PROs.** Also the monitoring of the system and the resolution of disputes between PROs should be dealt with by an independent public body.

IV.D. Use the competition authority as a benchmark for assessing coordination mechanisms to promote a competitive sector

The example of Germany shows that the competition authority can play a very important role in supporting competition and efficiency in the sector. On the one hand, it can assist in designing agreements between LE and PROs, as well as agreements between different PROs, in order to ensure that their design is efficient and pro-competitive. It is also essential that the competition authority continues to closely monitor the sector in order to prevent and, if necessary, sanction potential anti-competitive practices that may arise, including abusive practices by those with a dominant position or horizontal agreements contrary to competition law.

Therefore, **it is recommended that the competition authority be taken into account as a reference**, first, in the drafting of regulations; second, in the design of agreements and arrangements between public and private agents in the sector; and, third, in the event that conflicts with potential effects on competition

need to be resolved. It is recalled that the CNMC may be requested by the different entitled parties to prepare, in the exercise of its consultative function, reports both on draft regulations and on issues relating to the maintenance of effective competition in the markets (ex article 5.2 of Law 3/2013). The competition authority should also continue to monitor the sector closely to ensure compliance with the law.

V. Establish a coordinating and monitoring body

Experience in the management of other waste streams, such as WEEE, reaffirms the need to establish co-ordination offices between PROs. The same can be observed in the experience of our neighbouring countries.

On the one hand, a coordinating body can provide the basis for the various negotiations between public and private agents and help to prevent and resolve conflicts. Moreover, the assignment to an independent third party of responsibility for the allocation and settlement of responsibilities between PROs, both logistical and financial, and for the resolution of disputes, lends credibility and transparency to the system.

It is therefore **recommended that a coordinating body be established**, the State Administration being best placed to do so. This body could play a central role in putting in place mechanisms for sharing and settling responsibilities between PROs, both logistical and financial, as well as for dispute resolution. In this sense, with the incorporation of new PROs, frictions could arise that would make it difficult to reach agreements between PROs. In case of conflicts or excessive delays in reaching these agreements, this body could intervene as a mediator or even resolve the conflicts. Furthermore, given the challenges to competition in the sector, it would be desirable for the coordination body and the competition authority to work closely together to address issues that could affect competitive dynamics.

VI. Introduce a single agreement system with each administration with financial compensation between PROs based on market shares

EPR systems in Spain have to sign agreements with all PA involved in waste management (art. 33 of the Packaging Royal Decree). This obligation, with the added requirement to do so within a maximum period of 12 months (art. 33.3 of the Packaging Royal Decree), can make it very difficult for new PROs to become active. Moreover, the regulation does not specify how simultaneous agreements with several PROs would work, which creates uncertainty. On the one hand, the question arises as to whether it will be necessary to revise the existing

agreements each time the number of systems changes in order to redetermine each system's share of funding. On the other hand, it is not clear what would happen if one of them were to take over the entire packaging waste management via an agreement in some areas. Finally, the regulation allows PROs to operate after having obtained authorisation even if they have not signed agreements. This means that they can recruit companies and charge them for EPR management even though they lack the mechanisms to pay the LE until the agreements are signed. The regulation does not clarify how PROs should operate during this transitional period.

Two possible solutions adopted by neighbouring countries can be considered. On the one hand, in France, PROs can operate without having signed agreements with the LE and, thanks to a system of financial equilibrium between PROs, entrants pay the incumbent their share of the funding according to their market share. This has made it possible to break the monopoly of the Citeo group and the entry of Léko, which as of 2022 had not signed any agreement with LE. In Germany, on the other hand, the LE sign a single agreement with all operational PROs. Incoming PROs must adhere to this agreement. When it comes time to renegotiate, the PROs have to appoint a representative for all of them and the agreement reached binds them all. The document has to have the consent of the public waste management authority and at least two thirds of the PROs concerned before the agreement can be concluded.

To avoid the agreements becoming an entry barrier and to clarify operations in the transitional period when a PRO is authorised but does not have signed agreements, **removing the obligation for all PROs to sign bilateral agreements with the PA is recommended. It is recommended to replace it by a single agreement with each administration**, either signed by all PROs as in Germany or by a single one as in France, and a system of financial compensation between PROs based on market share.

VII. Draft a standard agreement at the state level

A standard or basic agreement on basic aspects of services and remuneration for public authorities, drawn up with the participation of all stakeholders, would facilitate and accelerate negotiations between PROs and PA. It would also help to rebalance the bargaining power between the parties by reducing the need for a time limit on the signing of agreements. On the basis of this standard agreement, the necessary modifications would be made to adapt the agreement in question to each individual case.

This instrument has already been considered for other waste streams, such as WEEE. For packaging waste, a specific coordination and monitoring body or,

alternatively, the existing Coordination Commission, through the packaging working group, may be appropriate fora to elaborate it.

It is therefore recommended that a standard or basic agreement be drawn up at the national level to serve as a reference in negotiations between PROs and PA.

VIII. Develop the mandate to agree on minimum quality requirements among all agents concerned

The PROs have been instrumental in setting the minimum quality conditions to be met by the collected materials. These conditions are very relevant for the functioning of the sector, as they influence:

- The price of bids to be made by the managers in the auctions for the allocation of materials.
- Investments in sorting and treatment plants, affecting incentives for the development or adoption of new technologies.
- The development and speed of incorporation of new recycling technologies by waste managers.

Article 11.2 of the new Packaging Royal Decree stipulates that the minimum quality requirements for the different fractions of packaging waste materials recovered at sorting and treatment plants shall be agreed by consensus. These requirements shall apply at national level.

The CNMC welcomes this new article. It also considers that it should be further developed and, in line with what has been observed in neighbouring countries, **recommends establishing a more relevant role for regulation and public administration in the determination of minimum quality requirements.** Furthermore, **it is recommended to amend art. 11.2 of the Packaging Decree to include** not only packaging waste recovered at sorting and treatment plants, but **all packaging waste collected**, since separately collected materials (such as glass) do not pass through these plants, and the minimum quality requirements are equally relevant in these cases.

In addition, **it is recommended to develop art. 11.2. to include a clear mandate to initiate the work**, indicating that the Waste Coordination Commission has the initiative for the work and specifying a timeframe for the determination of the quality requirements and the frequency of their review.

IX. Provide the PA, particularly the Autonomous Communities and LE, with the necessary material and human resources

The new Waste Act and the Packaging Royal Decree substantially increase the workload of the PA, in particular the Autonomous Communities. Administrations must have sufficient human and material resources to be able to carry out their work and thus not unnecessarily disadvantage economic operators. The lack of resources in the area of packaging waste management is particularly detrimental to the processing of permits and the negotiation of agreements. A delay in any of these is an entry barrier for new systems.

As for authorisations, the speed of entry of new PROs will depend to a large extent on the capacity of the processing Autonomous Communities to absorb the increased workload, particularly in those that concentrate applications by virtue of a "headquarters effect". The starting point is not the same, with some Autonomous Communities having specialised administrative bodies for waste, compared to the majority of Autonomous Communities where the competences for waste management are embedded in the regional department responsible for the environment.

As a result, **a review of the resources of the PA is recommended to ensure that they are sufficient** to carry out their tasks effectively.

THREE. PROMOTE TRANSPARENCY

X. Improve traceability and fraud detection

Traceability is important to prevent infringements and to know the situation in the sector, including how much material is effectively reintegrated into the economic process, in order to make accurate diagnoses that facilitate the adoption of the most appropriate measures. The following recommendations are therefore made.

X.A. Introduce a specific regulation on the traceability of packaging waste by all the Autonomous Communities.

Ten Autonomous Communities had some form of regional regulation of waste managers by the end of 2023¹⁰⁰. Of these, only five regulated traceability (the Basque Country, the Balearic Islands, Galicia, Navarre and Valencia).

¹⁰⁰ Andalusia, the Canary Islands, Castile and Leon, Catalonia, Valencia, Madrid, the Balearic Islands, Galicia, the Basque Country and Navarre.

Establishing mechanisms to improve traceability at all stages of packaging waste management is essential. This would allow for greater control over infringements and ensure that waste follows the proper path to recycling or disposal. It is therefore important that there is adequate supervision by PA of transport, illegal waste collection or the sale or transfer of waste under irregular conditions. Specific regulations by the Autonomous Communities and the adoption of tracking technologies can help prevent and detect illegal transport, improper collection, and other related problems.

Therefore, **the Autonomous Communities, within their competences and in a coordinated manner and in collaboration with the national administration, should establish a specific regulatory framework that clearly defines the traceability requirements for waste managers.** This would include specifications on what information should be collected, how it should be reported and by what deadlines. This framework should also set standards for monitoring systems and technologies to be used.

X.B. Develop a state-wide programme for periodic packaging waste characterisation

The development of a state-wide programme of regular packaging waste characterisation would make it possible to cross-check producers' declarations with independent data. These characterisations are very useful for the monitoring of the system, enabling fraud detection and deterrence. For waste characterisations to be effective in detecting fraud, they must be part of a comprehensive approach that also includes verification of data, auditing of processes and application of sanctions when irregularities are detected.

Therefore, **a state-wide programme of periodic packaging waste characterisations is recommended.**

X.C. Give the competent Ministry the ability to request audits of specific producers

Based on the precedent set by Royal Decree 110/2015 on WEEE, whereby MITERD can require audits to ensure the veracity of the information collected in annual producer declarations, granting a similar capacity to MITERD for the management of packaging waste could replicate the benefits observed in the WEEE sector. In particular, it would help to verify the accuracy of the information reported, improve fraud detection and prevention, and ensure compliance with the EPR.

To adopt this capability, regulatory changes would need to be made to clearly define MITERD's new control functions, including the criteria for requesting audits

and the procedures to be followed. Criteria for requesting audits should be based on factors such as the volume of packaging reported, discrepancies in previous reports or allegations of fraudulent practices. In addition, detailed procedures should be established for the conduct of audits, including who may conduct audits, how they are to be conducted, and how the results will be reported and used.

When MITERD identifies the need to verify the information reported by a producer against the established criteria, it would request an audit. Audits would be carried out by independent and accredited bodies, and producers would be obliged to cooperate with the audits and provide all necessary information and access. The results of the audits would be reported to MITERD, which would use them to verify the information reported by producers and take action if irregularities are detected.

This ability to require audits would strengthen the verification of data and the detection of fraud in the management of packaging waste, exerting a deterrent effect, improving the reliability of data on packaging placed on the market and ensuring that all producers comply with their obligations. Furthermore, making the results of audits public, while respecting the confidentiality of commercially sensitive information where necessary, would increase transparency and build confidence in the packaging waste management system. Audits could be financed by the producer, following the model of the Integrated Industrial Registry for WEEE.

Ultimately, the competent Ministry should be given the ability to request audits of specific producers.

FOUR. PREVENT AND REMEDY CONFLICTS OF INTEREST

XI. Restrict the participation of associations and federations in the PROs

Under the current rules, there is no explicit limitation for an association or federation to be part of a PRO, or several or none, as long as it complies with the principles and guidelines set out in the legislation, including competition law. Likewise, the regulation does not exclude their participation in the bodies and committees of PROs, including those exercising executive functions.

There is a risk in a competitive environment that the competitive dynamics may be impaired by the associations' participation in PROs, even if they do not engage in anti-competitive practices. One of the main concerns is the reduction of incentives for companies to switch PROs when their association is part of the PRO, either because of the favourable signalling towards that PRO implicit in the

association's membership, or because of the increased availability of information or influence that the association provides in the PRO in question. Such participation also increases the risk of competition law infringements, for example through the exchange of sensitive information or because the association directs its members to the PRO to which it belongs.

The participation of associations or federations in several or all PROs is also not risk-free. An important one is collusion: the partnership could facilitate coordination between the different PROs in which it participates through, for example, the exchange of commercially sensitive information. Conflicts of interest may also arise, especially if the objectives or strategies of different PROs conflict with each other, which could compromise impartiality in decision-making.

Therefore, **regulations should prohibit the participation of associations or federations in PROs**, either as shareholders or through any other form of participation.

XII. Prevent and remedy conflicts of interest arising from the membership of final waste managers in PROs for commercial and/or industrial packaging

Under the new packaging regulation, as of 1 January 2025, producers of commercial and industrial packaging products must be part of individual or collective EPR systems. One of the consequences is that waste managers who carry out final treatment and sell the resulting materials in a package may be subject to EPR for such packaging, with the consequent obligation to set up IPRs or join a PRO.

The entry of final waste managers into PROs will create conflicts of interest within PROs. This follows from the fact that waste managers will participate in the systems that determine the selection of waste managers for waste treatment. Therefore, **the CNMC urges competent authorities to pay particular attention when supervising PROs and to ensure that the systems establish internal mechanisms to avoid potential conflicts of interest**. The CNMC is also available to advise these authorities at any time.

FIVE. PROMOTE COMPETITION IN THE ALLOCATION OF WASTE

XIII. Develop regulation on the electronic awarding system for packaging waste

The new Packaging Royal Decree introduces the obligation to establish an electronic awarding system (art. 22.1.d) of the Royal Decree on Packaging). It must respect the principles of hierarchy, self-sufficiency and proximity, guarantee publicity, competition and equality, and ensure free competition and traceability of the waste awarded until it is fully treated.

The CNMC welcomes this obligation and considers that it will contribute to the transparency and efficiency of the process. It also considers it advisable to further develop regulation by importing best practices from neighbouring countries. For example, in Germany, the Packaging Act regulates the details of the electronic awarding system and entrusts a neutral service provider with the development and operation of the electronic platform as well as the technical execution of tenders.

In addition, at the end of 2023, the CNMC issued a decision determining the commitment decision of case [S/0021/21 ECOEMBES AUCTIONS](#). In this decision, the CNMC declared the commitments submitted by Ecoembes adequate and binding. These include: (i) the implementation of a new electronic awarding procedure handled by an external and independent provider; (ii) the reduction of processing times; (iii) the recognition of the possibility for companies to improve the first bid submitted; (iv) the limitation to 40% of the number of areas that can be awarded to a single recycler; (v) improvements in relation to the setting of the quantities to be auctioned; (vi) the creation of registers of penalties, guarantees and approvals to provide greater transparency. These commitments introduce very significant improvements in waste disposal, boosting competition, transparency and efficiency. However, these commitments only apply to Ecoembes by the very nature of the resolution and would therefore not affect the other packaging PROs.

Therefore, **special attention should be given to the obligation to establish an electronic awarding system for the auctioning of packaging waste, as well as further regulatory development of the details of the system's features and the responsibility for management.** It is also recommended that the commitments set out in case [S/0021/21 ECOEMBES AUCTIONS](#) be used as a reference point for the development of the above-mentioned electronic awarding system.

ANNEX: EPR REGULATION OF ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

EPR for waste from electrical and electronic equipment (WEEE) was introduced in Spain with *Act 22/2011, of 28 July, on waste and contaminated soils*, which establishes that WEEE always has a person responsible for compliance with the obligations deriving from its production and management.

The implementing legislation is Royal Decree 110/2015, of 20 February, which transposes Directive 2012/19/EU of the European Parliament and of the Council, of 4 July 2012, on waste from electrical and electronic equipment¹⁰¹ (hereinafter, **WEEE Royal Decree**). According to it, producers must:

- 1) Finance separate collection, transport and treatment of household and professional WEEE, as well as coordination tools and awareness and information campaigns in this area.
- 2) When involved in the organisation of the management of WEEE, comply with the collection, preparation for re-use, recycling and recovery targets set out in the Royal Decree.

There are currently eleven WEEE PROs in operation in Spain, of which only three deal with the management of certain types of WEEE (and therefore only compete with the other PROs for those categories of equipment), while the others cover all 7 categories covered by the legislation¹⁰².

i. WEEE collection

WEEE must be collected separately from other waste. According to the WEEE Royal Decree, different agents may collect WEEE from households:

- a) Within the framework of their competences in the field of household waste, the LE shall set up systems for the separate collection of household WEEE, which shall be free of charge at least for the user.

¹⁰¹ The WEEE Royal Decree has subsequently been amended by: 1) Royal Decree 27/2021 of 19 January amending Royal Decree 106/2008 of 1 February on batteries and accumulators and the environmental management of their waste and Royal Decree 110/2015 of 20 February on waste from electrical and electronic equipment; 2) Royal Decree 208/2022 of 22 March on financial guarantees for waste.

¹⁰² In 2005, 7 of the current 11 PROs started operating in the WEEE management market: AMBILAMP, ECOASIMELEC, ECOLEC, ECOLUM, ECO-RAEE'S, ECOTIC, ERP. PROs specialising in only certain categories of WEEE are: AMBILAMP, ECOASIMELEC (Recyclia Group), Ecofimática (Recyclia Group). See: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/temas/prevencion-y-gestion-residuos/flujos/responsabilidad-ampliada.html#residuos-de-aparatos-electricos-y-electronicos>

- b) Distributors, irrespective of the size of their sales area, shall, when users purchase a new household electrical or electronic equipment (EEE), accept the delivery, at least free of charge, of WEEE of an equivalent type or which has fulfilled the same functions as the equipment being purchased.
- c) Producers of EEE may set up collection networks for WEEE of household origin from products and brands placed by them which ensure collection throughout the national territory. In addition, competent authorities may require producers to provide for the necessary collection networks to be set up in certain areas or for certain categories and sub-categories of WEEE, subject to a statement of reasons.
- d) Waste managers authorised for the collection of each type of WEEE, including social economy entities authorised to do so.

In accordance with *Act 7/2022 of 8 April on waste and contaminated soils for a circular economy*, individual and collective systems must enter into agreements with waste managers or, where appropriate, with other economic agents and with other EPR systems to coordinate the organisation of the management of waste generated by their products and the financing thereof, avoiding anti-competitive practices. In addition, Royal Decree 110/2015 establishes that producers of EEE may reach agreements with the LE on the managers who will carry out the collection from the facilities, the preparation for reuse and the specific treatment¹⁰³. This has led to the signing of agreements between the EPR systems and the LE that regulate the conditions for the collection of WEEE from households (or WEEE that can be assimilated to those from private households, in accordance with the definition established in article 3. l) of the WEEE Royal Decree)¹⁰⁴ deposited in municipal facilities.

As regards the collection of professional WEEE, producers of EEE shall organise the separate collection of WEEE through IPRs or PROs. For historical waste (from products put on the market before 13 August 2005), collection shall be organised by producers of EEE only if they are replaced by new equivalent products or by new products performing the same functions. In other cases, the organisation of the collection and the financing of its management shall be left to the professional user, who may entrust the management of professional WEEE to authorised operators.

ii. Establishment of WEEE EPR systems

¹⁰³ Art. 21 of Royal Decree 110/2015.

¹⁰⁴ According to art. 3. l): “EEE that might be used both in private households and by users other than private households, when it becomes waste, shall be considered as household WEEE”.

Producers can choose to set up IPRs or PROs, which are subject to a number of common obligations in the case of WEEE:

1. Participation in the organisation, operation and financing of the electronic WEEE management platform and the collection allocation office.
2. Signing of agreements or contracts with distributors to establish the conditions for financing, collection, storage, sorting of WEEE and delivery to the managers.
3. Conclusion of agreements or contracts with authorised waste managers and preparation for re-use centres to finance the costs of collection and treatment of collected WEEE.
4. Delivery to MITERD, before 28 February of the year following the compliance period, of an annual report for each Autonomous Community with information on the management of the waste collected from the territory of that Autonomous Community.
5. Delivery to MITERD, before 31 October of the current year, of a report with the forecasts for the following year in terms of prevention, preparation for re-use, collection, recycling and recovery of WEEE by categories and subcategories in each Autonomous Community and at the national level. The report shall contain an estimate of the quotas to be applied to each producer on the basis of the appliances placed on the market in the current year, the parameters justifying them and forecasts of revenue and expenditure. In addition, according to article 8, EPR systems could make use of the information contained in the Integrated Industrial Registry, and the market share of each system by category and sub-category could be made publicly available. In addition, producers of EEE, with a market share per category of more than 0.1%, shall draw up three-year WEEE prevention plans incorporating their prevention measures. The plans shall be submitted by 31 October preceding the three-year period to which they relate. At the end of the three-year plan, producers shall submit a monitoring report on the three-year plan. The Ministry shall forward each Autonomous Community the information relating to its territory.

Where producers opt for an individual system, they shall submit a notification to the competent body of the Autonomous Community in which their head office is located, accompanied, where appropriate, by the financial guarantee signed in accordance with article 48 et seq. The communication is unique and valid nationwide. The individual system communication shall identify the EEE that the producer intends to place on the market and the waste that he intends to collect.

PROs must apply for authorisation prior to the start of their activity before the competent body of the Autonomous Community where the system plans to establish its head office. The authorisation is unique and valid nationwide. The

Waste Coordination Commission will assess the content of the application for authorisation and the suitability of the operation of the collective system for the fulfilment of the obligations of the EPR (the duration of which will be 4 years). It will analyse, among other aspects, the application of objective, transparent and non-discriminatory conditions in the relations between the systems and the rest of the waste operators, as well as the agreements between collective systems. Decision-making and information provision should not lead to an increased risk of collusion between producers in the system, nor between the system and other waste management operators.

In accordance with Law 7/2022, in the case of PROs, the maximum period for processing the authorisation shall be six months, which may be extended, duly motivated, for reasons arising from the complexity of the dossier; this extension must be made before the original period has expired. If the deadline has elapsed without notification of a decision, the application will be considered rejected (negative administrative silence applies)¹⁰⁵. The authorisation must include both specifications relating to the performance of the collective system in the autonomous territories and details deriving from the report of the Waste Coordination Commission and compliance with the obligations deriving from the EPR¹⁰⁶.

In addition, in the event that producers of household EEE become IPRs or PROs, they shall subscribe to an annual financial guarantee and accredit this before the competent body in the Autonomous Community where the notification is to be submitted or the authorisation of the system to which they have adhered is to be requested. The amount of the financial guarantee for each producer shall be determined on the basis of the minimum annual collection targets for household WEEE and the average costs of management calculated by categories and sub-categories of EEE.

According to art. 48 of Royal Decree 110/2015, the producer of household EEE who opts for a IPR must present the accreditation of the subscription of the financial guarantee together with the communication to the competent body of the Autonomous Community. In accordance with art. 49 of Royal Decree 110/2015, the producer of household EEE that opts for a PRO shall subscribe to the financial guarantee through the collective system. In fact, the application for authorisation of the PRO will be accompanied by the documentation relating to

¹⁰⁵ Art. 50 of Act 7/2022.

¹⁰⁶ Annexe XVIII of Royal Decree 110/2015. Article 13 of Act 7/2022 includes, among the functions of the Coordination Commission, the drafting of mandatory reports on the authorisations of the PROs, as well as the issuing of recommendations on communications relating to the IPRs and the agreements that both systems establish with the competent PA.

the financial guarantee that the collective system will subscribe to, calculated as the sum of the guarantees of the producers constituting the system¹⁰⁷.

iii. Producer switching between WEEE EPR systems

The Royal Decree provides for a mechanism whereby producers can switch to other individual or collective systems¹⁰⁸. In particular, this change must be communicated during the months of October, November and December to the original EPR system, to the new system and to the Integrated Industrial Registry. The change shall be effective as of 31 December of the year of submission. The financial guarantee lodged, where applicable, by the producer shall be reallocated to the destination system¹⁰⁹. Additionally, producers may opt for a combination of several EPR systems in case they place products of different categories and sub-categories of EEE on the market¹¹⁰.

iv. Financing obligations for WEEE EPR systems

For household waste from EEE which producers have placed on the market after 13 August 2005, the financing shall be proportionate to their market share of each category of EEE¹¹¹. The costs for the management of WEEE shall include¹¹²:

- a) The identification, sorting and storage of WEEE delivered to collection facilities.
- b) The transport of WEEE from collection facilities to preparation for re-use centres and treatment facilities.
- c) The preparation for re-use, specific treatment, recovery and disposal of collected WEEE.
- d) The establishment and maintenance of WEEE co-ordination instruments.

¹⁰⁷ Arts. 48 and 49 of Royal Decree 110/2015.

¹⁰⁸ Art 8 of Royal Decree 110/2015.

¹⁰⁹ Art. 41 of Royal Decree 110/2015.

¹¹⁰ Art. 38 of Royal Decree 110/2015.

¹¹¹ The requirement for references to market shares is linked to the financing obligations of each producer. The CNMC has already ruled in IPN/DP/0014/14 on the exclusive use of market shares in the calculation of these obligations. In particular, it argued that: "*the use of market share as the sole criterion may lead to disregarding other criteria such as energy efficiency or environmental management, which, taking into account the nature of this type of waste, could also be taken into consideration in order to encourage more efficient management by producers*". However, Royal Decree 110/2015 maintains the single criterion of market shares.

¹¹² Art 43 of Royal Decree 110/2015.

- e) They shall establish reimbursement mechanisms for contributions made by producers to the system to which they belong and which relate to products transferred out of the Spanish market¹¹³.
- f) They may also finance the costs of collection and transport of WEEE from households to collection facilities.

Moreover, in relation to the costs for the management of historical household WEEE (prior to 13 August 2005), the responsibility for the financing of these costs will be borne by all producers of EEE operating on the market when these costs are incurred.

As regards the financing for professional WEEE, for products put on the market after 13 August 2005, producers shall contribute at least to the financing of the costs of collection, preparation for re-use, specific treatment, recovery and disposal of professional WEEE. Professional EEE producers will also participate in the financing of the coordination instruments. For historical waste that is replaced by new equivalent products, the financing of the costs shall be borne by the producers of these products when they supply them. For other historical waste, the financing of the costs will be borne by professional users through WEEE managers registered or entered in the Waste Production and Management Registry.

v. Coordination between WEEE EPR systems

The coordination of the management of WEEE is the responsibility of the competent authorities through the specialised working group of the Waste Coordination Commission. This working group involves the sectors concerned, in particular EEE producers, EPR systems, distributors and WEEE managers.

The WEEE coordination functions include:

- 1) The evaluation of the proper management of WEEE, of the application of the EPR, of the participation of all the agents involved in the collection and management, as well as the coordination of the information on the collection and management in the whole state territory and the provision to the PA of the information that facilitates their supervision and inspection tasks.
- 2) The WEEE working group proposes minimum separate collection targets for the annual compliance period to the Waste Coordination Commission by 20 March of each year, at national and regional level by categories and professional or household use, expressed in tonnes or kilograms, for the annual compliance period. This is based on information on the market

¹¹³ Modification of art. 43 of Royal Decree 110/2015 from Royal Decree 27/2021.

share of EEE producers from the Integrated Industrial Registry, information derived from the electronic platform and, if necessary, the amount of historical waste generated in each category.

In the event that extended responsibility schemes fail to meet their objectives, the WEEE working group issues a report analysing the seriousness of the non-compliance.

- 3) The WEEE working group coordinates the content and efficiency of awareness and information campaigns at national and regional level on the prevention and reuse of EEE and the correct collection and management of WEEE. To this end, the extended responsibility schemes shall submit their campaign proposals to the working group well in advance of their launch, indicating in particular the activities to be carried out, the objectives of the campaign, its territorial distribution and the budget earmarked for the campaign.

In order to carry out coordination, Royal Decree 110/2015 regulates two tools, which are still pending creation by ministerial order:

- The WEEE collection allocation office.
- The electronic WEEE management platform.

On 23 May 2022, the Draft Ministerial Order¹¹⁴ was published for public consultation, but it has not yet been approved by the Council of Ministers, so the regulations that develop these two tools in more detail have not yet entered into force. Although the publication of the ministerial order has been delayed, the electronic platform is up and running in its most up-to-date version in the pre-production environment¹¹⁵.

The above tools are regulated in the Royal Decree of 2015. However, long before that date, the PROs had established a coordination mechanism through a voluntary agreement among themselves (see box below).

¹¹⁴ Available here: <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/participacion-publica/residuos-2022-proyecto-om-desarrolla-plataforma-electronica-gestion-residuos-aparatos-ae-y-oficina-asignacion-recogidas.html>

¹¹⁵ See: <https://preservicio.mapa.gob.es/sso/login?service=https%3A%2F%2Fpreservicio.mapa.gob.es%2Fraee-web-adv%2Flogin%2Fcas>

Box 5

IT PLATFORM FOR THE MANAGEMENT OF THE WEEE (OFIRAE)

Given the need for a coordination instrument between PROs for the collection of household and professional WEEE, the WEEE Management Information Platform (OfiRae) was created in 2007, as a result of a voluntary agreement between the existing PROs outside the coordination mechanisms provided for in the WEEE regulations¹¹⁶.

Currently, 8 of the 11 PROs operating in the market are involved. Its function is to centralise, by means of its own IT tool, the WEEE collection requests sent from any storage point (municipal clean points, temporary storage centres, etc.). OfiRae automatically handles the applications, processes them and assigns them to the authorised PROs. After that, each PRO manages the removal and transport of WEEE by authorised transporters to the authorised treatment plants¹¹⁷.

Apart from the WEEE collection allocation office and the electronic WEEE management platform, the Integrated Industrial Registry plays a key role in the coordination.

vi. Integrated Industrial Registry. Calculation of market shares and allocation of separate collection targets

Royal Decree 110/2015 regulates the functioning of the Integrated Industrial Registry¹¹⁸, where producers must declare on a quarterly basis the type and quantity of appliances they place on the market¹¹⁹. Producers who are members

¹¹⁶ In 2007, there were 8 operational PROs in the market and all agreed to participate in OfiRAEE: AMBILAMP, ECOASIMELEC, ECOFIMÁTICA, ECOLEC, ECOLUM, ECO-RAEE´S, ECOTIC and EUROPEAN RECYCLING PLATFORM.

¹¹⁷ See: <https://www.ofirae.es/>. A similar initiative has emerged for the coordination of the management of waste portable batteries and accumulators (OfiPilas).

¹¹⁸ This Registry is attached to the Ministry of Industry and Tourism, through the Directorate-General for Industrial Strategy and Small and Medium-sized Enterprises of the Secretariat of State for Industry. The CNMC in [IPN/DP/0014/14](#) suggested simplifying actions and reducing institutions by integrating the Registries envisaged (on the one hand, the Waste Production and Management Registry and, on the other hand, the Integrated Industrial Registry). However, this was not finally adopted in Royal Decree 110/2015.

¹¹⁹ According to art. 8 of Royal Decree 110/2015, the functions performed by the Integrated Industrial Registry for EEE are: 1) act as a register of producers (or their authorised representatives), so that a producer cannot place its products on the Spanish market unless it is registered in the registry; 2) provide producers with their identification number, a critical element without which they cannot market any equipment in Spain; 3) have specific codes for each type of equipment placed on the market in each category and subcategory; 4) receive information on EEE placed on the Spanish market by all producers, classified by category, subcategory (if applicable) and use (household or professional); 5) it can exercise control functions by requesting audits from producers to verify that the information reported

of a PRO may delegate the reporting obligation to the PRO, acting as an authorised representative. In turn, IPRs and PROs shall provide an annual report to MITERD by 28 February of the year following the compliance period, indicating, among other aspects, the quantity in weight and units of household and professional EEE placed on the national market by the system's producers by category and subcategory and the aggregate market share in each of them. The above documentation shall be accompanied by a report audited by an external and independent entity that endorses the veracity of the data provided¹²⁰.

The Registry shall communicate annually to each producer, before 31 January, its market share. This market share will be used to establish the distribution of the obligations under the EPR for the current year, by weight and units, type of appliance, categories and subcategories and use: household or professional. Similarly, before 31 January, it shall inform each PRO of its market share, as well as the market shares of each of its member producers.

With regard to the collection targets, by 28 February of each year, MITERD shall publish the minimum national targets for separate collection by category, professional or household use, for the annual compliance period, which shall be the calendar year concerned, expressed in kilograms or tonnes¹²¹. In addition, before 31 March each year, the MITERD, at the proposal of the Waste Coordination Commission, will publish the minimum separate collection targets to be met by producers at national and regional level by categories and professional or household use, for the annual compliance period, expressed in kilograms or tonnes. These targets will be calculated on the basis of the market share derived from the Integrated Industrial Registry. Additionally, estimated collection targets will be published in which, in addition to the producers' market share, information on other collection and management channels that are not financed by EEE producers will be taken into account.

MITERD, on a proposal from the Waste Coordination Commission, may lower the producer targets on the basis of estimates made by the WEEE working group of

on EEE placed on the market is correct; 6) as it has the information on producers and quantities reported, it is the system agent that has the function of informing the other agents on the market shares of each producer and/or the collective systems of extended producer responsibility.

On the other hand, according to art. 8 of Royal Decree 110/2015, "the Integrated Industrial Registry will be connected to the Waste Production and Management Registry in the necessary terms and, especially, in relation to the registration of individual and collective extended responsibility systems and their corresponding updates or modifications. It shall also be connected as necessary to the electronic platform for the management of WEEE provided for in article 55.

¹²⁰ Art. 41. e) of Royal Decree 110/2015. The specific content to be contained in the annual report is detailed in Annex XVIII.

¹²¹ Art. 29 of Royal Decree 110/2015.

the Waste Coordination Commission with regard to waste collected outside the EPR.

vii. Allocation Office

Royal Decree 110/2015 provides for the creation, by ministerial order, of an office for the allocation of WEEE collections, which will be responsible for the proper allocation of collections and the monitoring of compliance with the assigned collection targets. It will be supervised by the WEEE Working Group of the Waste Coordination Commission¹²².

The Draft Ministerial Order states that the Office will be managed and financed by the producers of EEE through all the EPR systems represented therein. The amount to be contributed by each system will be proportional to its market share.

EPR systems of WEEE shall be represented in the bodies of the allocation office and shall have the right to participate and vote in decision-making affecting the organisation and management of this tool. The LE and distributors will in no case be integrated as participants¹²³.

Specifically, according to the Royal Decree, its functions are¹²⁴:

- 1) Account for all collections of household and professional WEEE from the available information derived from the electronic platform.
- 2) Make mandatory allocations throughout the state to extended responsibility systems for the collection and management of WEEE.
- 3) In case extended responsibility schemes have agreements with WEEE collection points, the office shall allocate the requests from these collection points to the extended responsibility schemes that have signed the agreement.
- 4) It may also act as an intermediary between the LE and distributors and, on the other hand, waste managers for the collection and management of waste.

The allocation of WEEE shall be made by collection fractions and treatment groups according to the collection target derived from the market share of household and professional EEE in the national market of each extended

¹²² Art. 56 of Royal Decree 110/2015.

¹²³ Art. 11 of the Draft Ministerial Order, which develops the electronic platform for the management of waste from electrical and electronic equipment and the office for the allocation of collections of this waste.

¹²⁴ Art. 56 of Royal Decree 110/2015.

responsibility scheme. The allocation of collection of household WEEE shall be separate from collection of professional WEEE¹²⁵.

viii. WEEE e-platform

Information on WEEE collected shall be entered into an electronic WEEE platform. The electronic WEEE management platform will compile updated information on the collection and management of WEEE from all channels and agents provided for in the regulations, in each Autonomous Community and at the national level.

The platform will allow the status or traceability at each stage of the waste to be known. It will also allow the allocation office, when operational, to properly allocate and record WEEE collections. Each operator will only be able to access the necessary data relevant to its activity¹²⁶. In addition, the electronic platform will enable PA to exercise the powers of monitoring, supervision and control, the provision of information and the control of compliance with EU collection targets. The information shall be kept available on the electronic platform for at least five years¹²⁷.

The implementation of the electronic platform, its maintenance and management will be financed 55% by MITERD and 45% by EEE producers¹²⁸. The Draft Ministerial Order determines that the managing body of the electronic platform is the Unit for the Circular Economy of the Directorate General for Environmental Quality and Assessment. MITERD shall own the intellectual property rights of the electronic platform. The WEEE working group will carry out the supervision, coordination and monitoring of the functioning of the electronic platform¹²⁹.

¹²⁵ Art. 56 of Royal Decree 110/2015.

¹²⁶ Art. 55 of Royal Decree 110/2015. The Draft Ministerial Order developing the electronic platform for the management of waste from electrical and electronic equipment and the collection allocation office of May 2022 aimed to establish the mandatory incorporation into the electronic platform of the different operators involved in the WEEE collection and management cycle according to a progressive timetable. Although the publication of the ministerial order has been delayed, the electronic platform is up and running in its most up-to-date version in the pre-production environment.

¹²⁷ Art. 55 of Royal Decree 110/2015.

¹²⁸ Third additional provision of Royal Decree 110/2015.

¹²⁹ Art. 55.6 of Royal Decree 110/2015.

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