Country profile

Early warning assessment related to the 2025 targets for municipal waste and packaging waste

Spain

June 2022

European Environment Agency

Contents

Acknowledgements

This draft assessment has been prepared by the ETC/WMGE and the successive ETC/CE under guidance of the European Environment Agency and with inputs from a consortium led by Rambøll Group under contract with the European Commission. It builds to a large extent on the answers provided by the Ministry for the Ecological Transition and the Demographic Challenge in March 2021 to a questionnaire developed by the EEA and ETC/WMGE. The EEA and ETC/CE would like to thank the Spanish authorities for the information provided and for the kind review of drafts of the assessments in 2021 and April 2022.

1 Introduction

1.1 Background and purpose

The Waste Framework Directive 2008/98/EC (as amended by Directive (EU) 2018/851) includes a target to recycle and prepare for reuse, by 2025, 55 % of municipal waste generated. The Packaging and Packaging Waste Directive (94/62/EC as amended by Directive (EU) 2018/852) includes targets for the recycling of packaging waste, both in total and by material, to be achieved by 2025. The Landfill Directive (1999/31/EC as amended by Directive (EU) 2018/850) requires to limit the landfilling of municipal waste to 10 % of the generated municipal waste by 2035. The Directives also foresee that the European Commission, in cooperation with the European Environment Agency, publishes early warning reports on the Member States' progress towards the attainment of the targets, including a list of Member States at risk of not attaining the targets within the respective deadlines, three years ahead of the target dates. This assessment is a contribution from the EEA to the early warning reports according to Article 11b Waste Framework Directive and Art. 6b Packaging and Packaging Waste directive.

This document is an early warning assessment for Spain. The document is based on the analysis of a number of factors affecting recycling performance (success and risk factors). The assessment aims at concluding whether Spain is at risk of missing the targets for municipal waste and packaging waste set in EU legislation for 2025. In addition, it provides a preliminary assessment of the prospects for meeting the 2035 target for landfilling of municipal waste.

The assessment takes into account information that was available before 10 May 2022.

1.2 Approach

The assessment follows a methodology developed by the EEA and ETC/WMGE and consulted with the Eionet in 2020 (ETC/WMGE, 2021), which was adjusted in 2021 taking into account experiences with applying the methodology in 2021 (ETC/CE & ETC/WMGE, 2022). This methodology uses a set of quantitative and qualitative success and risk factors that have been identified to affect the recycling performance. The assessment is to a large extent based on the information provided by the Member State in the reply to an EEA-ETC/WMGE questionnaire as well as on available data and information from Eurostat and other relevant sources. In addition, a consortium under contract with the European Commission (led by Rambøll Group) has conducted a critical review of the draft assessment in Q4/2021 and provided further information.

More specifically, chapter 2.1 assesses the likelihood for Spain to achieve the target to prepare for reuse and recycle at least 55 % of municipal solid waste (MSW) for 2025. Chapter 2.2 assesses the likelihood for Spain to achieve the overall packaging waste and specific packaging materials' recycling targets for 2025. Chapter 2.3 examines the prospects for Spain to landfill less than 10 % of the generated municipal solid waste by 2035. The official early warning assessment for the landfilling target is only due in 2032 and accordingly, the assessment contained in Chapter 2.3 is only preliminary.

1.3 Member State profile – context parameters

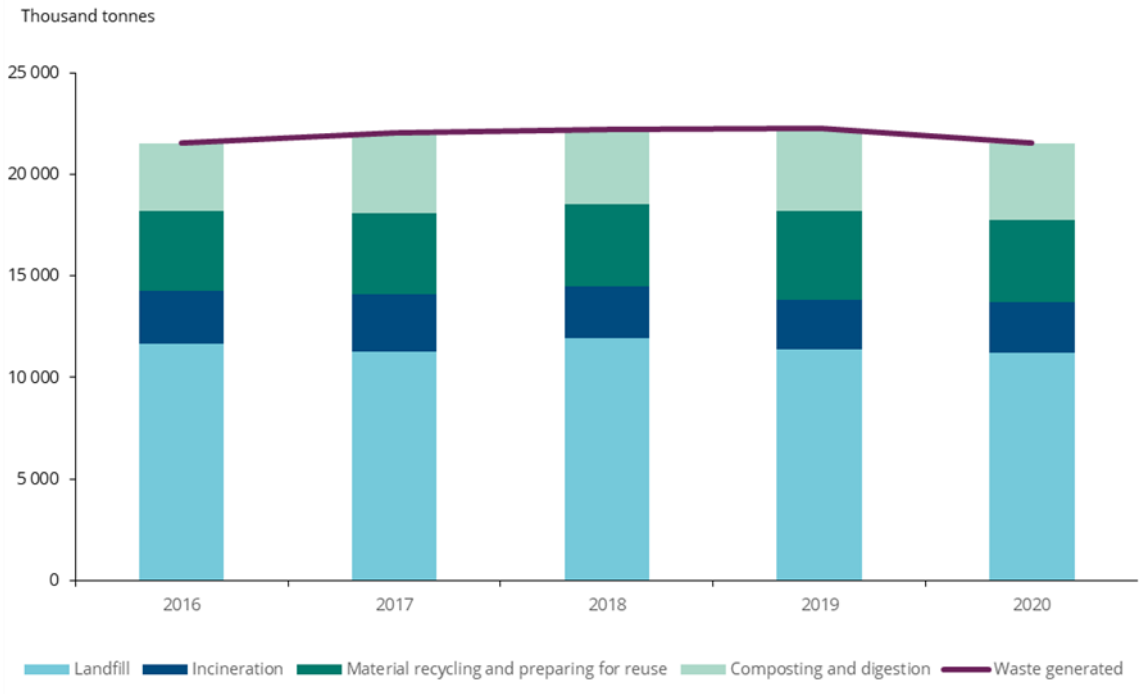
Municipal waste generation and treatment

Spain generates around 22 million tonnes of municipal waste annually, and total waste generation has slowly but steadily increased from 2016 onwards but decreased slightly in 2020 to 21.5 million tonnes (Figure 1.1). Waste generation corresponded to 455 kg/cap in 2020, below the (estimated) EU average of 505 kg/cap. The country still relies heavily on landfilling, showing a minor decrease of the landfill share from 54.1 % to 52.0 % in the period 2016-2020. Nevertheless, the total tonnage of landfilled waste remained fairly constant over the same period, fluctuating between 11.9 and 11.2 million tonnes. The amount of waste sent to incineration was also stable, shifting within a range of 2.5 to 2.8 million tonnes annually, and accounting between 11 and 12 % of the total volume of treated waste. The rate of material recycling and composting/digestion increased from 33.9 % to 36.4 % between 2016 and 2020.

Spain is heavily reliant on mechanical biological treatment (MBT) plants for pre-treatment of the not separately collected fraction of MSW (residual fraction). This residual fraction consists for about 40 % of organic materials in Spain. In 2019, of the 143 biological treatment plants in Spain, 88 received residual MSW, whereas only 55 plants are equipped to treat separately collected biowaste. About 74 % of all MSW that is landfilled in Spain, consists of reject from MBT, packaging sorting, and bio-waste treatment; the remaining 26 % is residual MSW that is directly landfilled without any pre-treatment (Ministry for the Ecological Transition and the Demographic Challenge, 2021).

In summary, both waste generation and waste treatment have been rather stable in the period 2016-2020.

Figure 1.1 Municipal waste generation and treatment in Spain between 2016 and 2020, in thousand tonnes



Note: Data for 2020 are flagged as estimates.

Source: Eurostat (2022b)

Legal Framework

- Directive (EU) 2018/850 of the European Parliament and of the Council of 30 May 2018 amending Directive 1999/31/EC on the landfill of waste has been transposed by Royal Decree 646/2020, of 7 July 2020 (de Miguel and Fernández, 2021).
- On 8 April 2022, the new Law on Waste and Contaminated Soil for a Circular Economy was published in the Official State Gazette (BOE) (Jefatura del Estado, 2022). The Law implements the modifications introduced by Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018, which amended Directive 2008/98/EC on waste as well as the so-called Directive on single-use plastics, i.e. Directive (EU) 2019/904 of the European Parliament and the Council of 5 June 2019 on reducing the impact of certain plastic products on the environment.
- Directive (EU) 2018/852, on packaging and packaging waste, is still in the process of transposition.
- The Spanish circular economy strategy *España Circular 2030* (Ministerio para la Transición Ecológica y el Reto Demográfico, No date) includes a 15 % reduction target of waste generation, compared to what was generated in 2010; a target for reducing food waste generation in the entire food chain: 50 % reduction per capita at the household and retail consumption level and 20 % in the production and supply chains as compared to 2020; and a target to increase reuse and preparing for reuse to reach 10 % of municipal waste generated.

Waste management plan(s)

Spain has a National Waste Management Plan 2016-2022, the National Waste Framework Plan (PEMAR) 2016-2022 (Dirección General de Calidad y Evaluación Ambiental y Medio Natural, 2015), as well as regional waste management plans.

According to the Spanish authorities, 14 Autonomous Communities and the Autonomous City of Ceuta have a waste management plan in accordance with the content provided for in Article 28 of Directive 2008/98/EC modified by Directive (EU) 2018/851, and have been notified to the European Commission in accordance with article 33(1) of Directive 2008/98, and according to the format established in the Decision (2013/727/EU) establishing a format for notifying the information on the adoption and substantial revisions of the waste management plans and the waste prevention programmes (MITECO, 2022):

- Andalucía (notified on 14 April 2021): Plan Integral de Residuos de Andalucía (PIREC 2030);
- Principado de Asturias (notified on 6 April 2017): Plan estratégico de residuos del Principado de Asturias 2017-2024 (PERPA) and their annexes;
- Islas Baleares (notified on 5 August 2020):
    - Mallorca: Plan Director Sectorial de Residuos no Peligrosos de la isla de Mallorca 2018-2030.
    - Menorca: Plan Director Sectorial de Prevención y Gestión de Residuos no Peligrosos de Menorca 2019-2025
    - Ibiza: Plan Director Sectorial de Prevención y Gestión de Residuos no Peligrosos 2019-2023
    - Formentera: Plan Director Sectorial de Prevención y Gestión de Residuos no Peligrosos
    - Plan de residuos peligrosos de las Islas Baleares http://www.caib.es/eboibfront/ca/2020/11151);
- Canarias (pending notification): Plan Integral de Residuos de Canarias 2021-2027;
- Cantabria (notified on 24 July 2017): Plan de Residuos de la Comunidad Autónoma de Cantabria 2017-2023;

- Castilla-La Mancha (notified on 14 April 2021): Plan Integrado de Gestión de Residuos de Castilla-La Mancha;
- Cataluña (notified on 9 May 2018): Programa de prevención y gestión de residuos 2020 (PRECAT20) and Plan territorial sectorial de infraestructuras de gestión de residuos municipales de Cataluña 2020 (PINFRECAT20);
- Ceuta (notified on 8 October 2018): Plan de gestión de residuos de Ceuta 2016-2022;
- Comunidad de Madrid (notified on 9 January 2019): Estrategia de Residuos de la Comunidad de Madrid (2017-2024);
- Comunidad Foral de Navarra (notified on 13 January 12017): Plan de Residuos de Navarra 2017-2027;
- Comunidad Valenciana (notified on 22 March 2021): Plan integral de residuos de la Comunidad Valenciana (reviewed in 2019);
- Extremadura (notified on 13 January 2017): Plan Integrado de Residuos de Extremadura (PIREX) 2016-2022 (modified in 2020);
- La Rioja (notified on 5 December 2016): Plan Director de Residuos de La Rioja 2016-2026;
- Murcia (notified on 17 January 2017): Plan de Residuos de la Región de Murcia 2016-2020 (extended and adapted in July 2020 until 31/12/2022);
- País Vasco (notified on 13 December 2021): Plan de prevención y gestión de residuos de Euskadi 2030.

Three Autonomous Communities plus the Autonomous City of Melilla have waste management plans in accordance with Article 28 of Directive 2008/98/EC but are in the process of being reviewed or updated based on Directive (EU) 2018/851:

- Aragón (approval of the revised plan is expected in the first quarter of 2022);
- Castilla y León (approval of the revised plan is expected in the first quarter of 2022);
- Galicia (approval of the revised plan is expected in the first quarter of 2022);
- Melilla (approval of the revised plan is expected in 2022).

As an example for the content of the regional waste management plans, information for Andalucía, Comunidad Valenciana and Castilla-La Mancha is given below:

- Andalusia: The Regional Waste Management Plan (RWMP) *Comprehensive Waste Plan Andalusia. Towards a Circular Economy in the 2030 Horizon* (Junta de Andalucía, 2021) has been approved by the Regional Ministry for Agriculture, Livestock, Fishing and Sustainable Development on 6 April 2021. The Plan states that in accordance with the provisions of Section 5 of Article 14 of Law 22/2011, of 28 July, on waste and contaminated soils, the plan will be evaluated and reviewed no later than six years after its entry into force, without prejudice of the updates and specific modifications that are deemed appropriate as a result of deviations in the objectives, regulatory changes or the need to adapt to technical progress. The regional WMP covers all waste streams with dedicated chapters covering targeted waste streams.
- Valencia: The *Review and Adaptation of the Comprehensive Waste Plan of the Valencian Community* was approved by the Decree 55/2019, of 5 April, that approves the revision of the Comprehensive Waste Plan of the Valencian Community (DOGV No. 8536, of April 26, 2019) (Consellería de Agricultura, Medio Ambiente, Cambio Climático y Desarrollo Rural, 2019).
- Castilla-La Mancha: The Regional Waste Management Plan (RWMP) *Integrated Waste Management Plan for Castilla-La Mancha* (Plan Integrado de Gestión de Residuos de Castilla-La Mancha, 2016) has been approved with a decree of the Directorate General for the Circular Economy of the Regional Ministry for Sustainable Development on 23 March 2021. The application period is 2016-2022. The Plan was approved in 2016 and runs until 2022. As established in section 2 of the Plan, its evaluation and review will be carried out after six years, i.e. in 2022. Work is currently underway on the evaluation for the revision of the Plan.

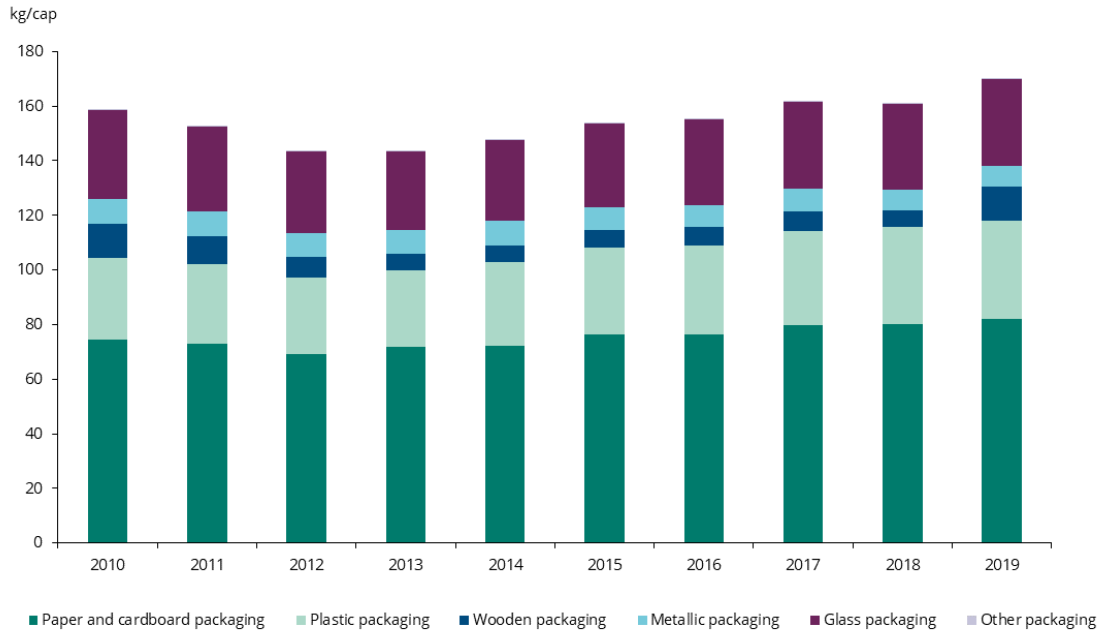
Implementation of previous early warning recommendations

Spain had been considered being at risk of missing the 2020 target of 50 % preparation for re-use / recycling for municipal waste by the European Commission (EC, 2018b), and it received a set of policy recommendations (EC, 2018a). Annex 1 lists the recommendations and a self-assessment of the Spanish authorities on the status of taking them into account.

Packaging waste generation and treatment

In Spain, more than 8 million tonnes (170 kg/cap) of packaging waste were generated in 2019, slightly below the EU average of 177 kg/cap. After hitting a low during 2012 and 2013, the total weight of packaging waste generation per capita in 2018 reached the same level as in 2010, but with a shift from wooden packaging towards plastic and paper and cardboard packaging (Figure 1.2). In 2019, a new all-time high was reached for the amount of packaging waste generated.

Figure 1.2 Packaging waste generation in Spain between 2010 and 2019, in kg per capita



Source: Eurostat (2022c)

Capture rate for recyclables

The capture rate is a good performance indicator of the effectiveness of the separate collection system. The capture rate is calculated by dividing the separately collected weight of a certain material for recycling by the weight of the material in total municipal waste. The residual MSW composition that was used for calculating the contribution of a specific material group to the total MSW volume is from 2010 and thus might not represent the current composition any more, but more recent data is not available. Data on the volumes of separately collected material streams were provided by the Spanish authorities (MITECO, nd). It is important to note that these data do not differentiate between households and non-household sources. Data on the separate collection of the individual packaging material fractions of metals and plastic were obtained from Ecoembes (2021). Capture rates in Spain, as shown in Table 1.1, vary between 49 % for glass, and 4 % for textiles, evidencing an important potential for improving the separate collection rates.

Table 1.1 Capture rates for different waste fractions in Spain

	Residual waste composition (%)([b])	Residual waste composition (tonnes)([a])	Separately collected amounts (tonnes)([b])	Materials in total MSW (tonnes)	Capture rates (%)
Reference year	2010	2018	2018		
Mixed municipal waste, total		17 646 563			
Paper and cardboard	14 %	2 444 049	1 067 384	3 511 433	30 %
Metals	3 %	603 512	260 023	863 535	30 %
Glass	5 %	873 505	834 764	1 708 269	49 %
Plastic	13 %	2 248 172	571 910	2 820 082	20 %
Bio-waste	47 %	8 323 884	1 005 679	9 329 563	11 %
Textiles	5 %	968 796	40 344	1 009 140	4 %
Wood	2 %	356 461	136 153	492 614	28 %

([a]) Note: Share of material in residual waste (household waste only) multiplied with the amount of residual waste in 2018 as reported in the questionnaire by the Ministry for the Ecological Transition and the Demographic Challenge (2021)

([b]) Source: As reported in the EEA-ETC/WMGE questionnaire by the Ministry for the Ecological Transition and the Demographic Challenge (2021); MITECO (nd); Ecoembes (2021).

2 Success and risk factors likely to influence future performance

2.1 Target for preparing for reuse and recycling of municipal waste

This chapter aims at assessing the prospects of Spain to achieve the **55 % preparing for reuse and recycling target** for municipal waste in 2025. For a detailed description of the methodology followed, the development of success/risk factors and their impact on recycling, please consult the methodology report (ETC/CE & ETC/WMGE, 2022).

2.1.1 Current situation and past trends

SRF MSWR-1.1: Distance to target

The overall recycling rate of Spain shows that the distance to target is 18.6 percentage points (Figure 2.1). In this analysis the recycling rate is calculated by dividing the summed amounts of recycling of materials and of composting and digestion by the total generated amounts. The data source used is the Eurostat data set *Municipal waste by waste management operations [env_wasmun]* (following the OECD/Eurostat Joint Questionnaire); Data reported by Member States according to Article 10.2(a) of the Waste Framework Directive are not used for this assessment as the reporting methods differ by Member State, resulting in a lack of comparability between Member States. The data source used here is assumed to be the best available proxy, given that data in accordance with the rules on the calculation of the attainment of the targets as defined in Article 11a are not yet available.

In Spain the organic material resulting from the treatment of residual MSW in MBT installations is rightly not considered as compost, but is referred to as bio-stabilized material (Gallardo, 2014). In 2019, 8.9 million tons of MSW treated in so-called composting MBT, resulted in about one million tonnes of bio-stabilized material (MITECO, nd). The amounts reported as 'composted or digested' include outputs (bio-stabilized material) from MBT plants treating mixed municipal waste (Eurostat, 2017). In 2019, about 1.1 million tonnes of bio-waste was collected separately in Spain (Ministry for the Ecological Transition and the Demographic Challenge, 2021). If only these amounts are counted as recycled, the recycling rate would drop to 20 %. From 2027, the biostabilized MBT outputs will not be allowed to be counted as recycled waste according to the Waste Framework Directive, resulting in an urgent need to move to separate collection of bio-waste in Spain.

Figure 2.1 Recycling rate in Spain between 2016 and 2020, in percentage

Note: Data for 2020 are flagged as Eurostat estimates.
Source: Eurostat (2022b)

The actual distance to the target for the most recent data point is a key factor determining the likelihood of meeting/not meeting the target. The closer the Member State is to the target already, the more likely it becomes that the target will be met. For Spain, the recycling rate is 36.4 % in 2020 (Figure 2.1), which is 18.6 percentage points below the target. When using 2019 data as basis for the assessment given that 2020 data is still an estimate, the recycling rate was 38.0 %, 17 percentage points below the target.

However, the data used for this analysis are based on a different methodology than the calculation rules for the target. A study of the impact of the new calculation rules has not been carried out in Spain. A few Member States have provided quantified estimates indicating how the application of the new reporting rules would influence the recycling rate (compared to the data reported to Eurostat under the Joint Eurostat/OECD questionnaire), resulting in reductions between 3.8 and 13 percentage points, and on average 5.5-6.7 percentage points. In the case of Spain, both composting and recycling figures do however not account for discarded waste resulting from their respective operations. Instead, these discarded waste amounts have been added to landfilling and incineration figures (Eurostat, 2017). While the effect of the new calculation rules depends on how Spain currently reports the data, an effect of a reduction with 5 percentage points is assumed for this assessment, bringing the recycling rate down to 31.4 % in 2020 (33 % in 2019). However, this assumption will not result in a change of the assessment for this SRF.

Summary result

Distance to target > 15 percentage points	Based on currently available data Spain's recycling rate was 36.4 %, 18.6 percentage points below the 2025 target. Considering however the impact of the new calculation rules, we assume a reduction with 5 percentage points for this assessment, resulting in an estimated recycling rate of 31.4 %, 23.6 percentage points below the target. If 2019 data is used for the assessment, given that the 2020 data is still an estimate, the distance to the target would be 22 percentage points.
Robustness of the underlying information	The currently available data do not yet reflect the calculation rules applicable to the target. Spain has not yet quantified the influence of the new calculation rules on the recycling rate (at the time of writing this assessment). However, also a recycling rate which would be 5 percentage points below the currently reported, would not change the assessment for this SRF.

SRF MSWR-1.2: Past trend in municipal solid waste recycling rate

For Spain, the recycling rate over the last five years shows very modest improvements. The recycling rate is 36.4 % in 2020, which is 2.6 percentage points higher as compared to 2016, reflecting an average yearly improvement of 0.6 percentage points. Especially, the variation over the years of the contribution of digestion and composting is considerable, accounting for between 15.6 and 18.3 % of the total generated waste (Figure 2.1).

Meeting the target will thus require an annual increase of 3.7 percentage points annually in the period 2020-2025, demanding a significant improvement of the pace compared to the average yearly improvement in the previous 5-year period.

Summary result

RR < 45% and increase in last 5 years < 10 percentage points	The recycling rate has increased by 2.6 percentage points over the past five years. For Spain, the application of the new calculation rules would indicate an estimated recycling rate of 31.4 % in 2020.
Robustness of the underlying information	There are no breaks in the time series data. The currently available data does not yet reflect the calculation rules applicable to the target. The Ministry for the Ecological Transition and the Demographic Challenge is developing a national register, where complete information about waste generation, treatment and disposal will be compiled. Treatment capacities and efficiency will be among the information required from the treatment plants.

2.1.2 Legal instruments

SRF MSWR-2.1: Timely transposition of the revised Waste Framework Directive into national law

Timely transposition of the Waste Framework Directive, as amended by Directive 2018/851, into national law within the foreseen period is key for a waste management system in line with EU requirements.

Spain has transposed the amended Waste Framework Directive into national law, more than one year after the deadline of 5 July 2020. In April 2022, the new Law on Waste and Contaminated Soil for a Circular Economy came into force (Jefatura del Estado, 2022).

Summary result

Transposition with delay of > 12 months	The transposition has been delayed by more than 12 months
Robustness of the underlying information	The new Law on Waste and Contaminated Soil for a Circular Economy (Ley 7/2022) was published in the Official State Gazette (Jefatura del Estado, 2022).

SRF MSWR-2.2: Responsibilities for meeting the targets, and support and enforcement mechanisms, e.g. tools, fines etc.

Clearly defined responsibilities, enforcement and support mechanisms for meeting the targets across different entities and governance levels are important for achieving high recycling rates. The clearer the responsibilities for meeting the targets and accountability for failing the targets are, the higher the chance that the targets will be met.

In Spain, the competences on waste management mainly fall on the regional authorities (Comunidades Autónomas). Waste collection and treatment systems are designed and operated locally, either by single municipalities or groups of them (e.g. mancomunidades, diputaciones, etc.). The State Waste Management Framework Plan 2016-2022 (PEMAR) indicates the structure and contents of the regional waste management plans, and has extended the responsibility of achieving the recycling targets to the Autonomous Communities. However, a lack of enforcement instruments at national level appears to limit the capacity of national authorities to enforce this requirement. Moreover, even when the PEMAR establishes minimum contents for the Regional Waste Management Plans, these contents are perceived as too general and do not necessarily ensure the accomplishment of targets at regional level (Eunomia, 2018).

According to the Ministry for the Ecological Transition and the Demographic Challenge, national authorities mainly have a coordinating role and provide the legislative framework at national level. The new Law on Waste and Contaminated Soil for a Circular Economy introduces national landfill and incineration taxes, in replacement of the taxes established by some regional authorities. Regarding the consequences if the competent regional authorities do not take enough or ineffective actions, currently, the only existing mechanism is the infringement procedure of the European Union. Although the sanctions are imposed on Spain as a Member State, the Royal Decree 515/2013, of 5 July, regulates the allocation of European sanctions to the subnational authorities ('Comunidades Autónomas', 'Comunidad foral', 'Entidades Locales', including the 'Diputaciones forales', 'Ciudades con Estatuto de Autonomía') that are responsible for the non-compliance (Eunomia Research & Consulting Ltd, 2018). Under the previous Law on Waste 22/2011, a gap was still identified between the regional and the local levels, since the specific contribution of local authorities for the accomplishment of the WFD has not been defined. Article 26 of the new Law 7/2022 (Jefatura del Estado, 2022) however explicitly considers the possibility for regional authorities (autonomous communities) to determine the contribution that local entities must make to meet the targets, either individually or associated with other entities. In addition, an infraction was introduced in case of not implementing mandatory separate collection. Furthermore, a maximum percentage was set for non-targeted materials in separately collected biowaste, of 20 % from 2022 and 15 % from 2027, and the possibility was opened for establishing maximum impurity levels for other waste fractions too.

The Ministry for the Ecological Transition and the Demographic Challenge (MITECO) has indicated (Ministry for the Ecological Transition and the Demographic Challenge, 2021) that there is a body for technical cooperation and collaboration between public authorities, the Commission of Coordination on Waste, that allows the exchange of information, and facilitates the adoption of measures by public authorities in order to comply with waste regulations in force. The specific roles and responsibilities

of the Coordination Commission on Waste are clearly defined in the new Law. The Coordination Commission on waste will be chaired by the General Directorate for Quality and Environmental Assessment and the vice-presidency will be exercised by one of the representative members of the autonomous communities. By ministerial order, the 30 members that will make up the Commission will be appointed, including one member designated by each of the autonomous communities, one member designated by each of the cities of Ceuta and Melilla, three members of the local entities designated by the State-wide association with the greatest presence and eight members representing the ministerial departments or bodies attached to them (Boletín Oficial de las Cortes Generales, Senado, 2022).

Additionally, Spain has been granted funding for an initiative that supports the implementation of improved recycling collection and treatment systems at the municipal level, through the EU's Technical Support Instrument (TSI).

Summary result

Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets	Clearly delimited responsibilities and the introduction of enforcement mechanisms regarding waste management and extended producer responsibility, as well as the introduction or modification of economic instruments, are contained in the new Law on Waste and Contaminated Soil for a Circular Economy. The Law addresses the gap between regional and local level authorities with respect to the specific contributions to the accomplishment of waste management objectives, by opening the possibility for autonomous communities to determine the contribution that local entities must make for meeting the targets, either individually or associated with other entities. Support mechanisms are in place.
Robustness of the underlying information	Credible information received from the Spanish authorities through the EEA-ETC/WMGE questionnaire.

2.1.3 Economic instruments

SRF MSW-3.1: Taxes and/or ban for landfilling residual- or biodegradable waste

Bans and taxes on landfilling of residual municipal waste can help to discourage strong reliance on residual waste treatment and thus support recycling.

The new Law on Waste and Contaminated Soils introduces a national landfill tax, in replacement of the taxes established by some of the regional authorities. The tax set at the national level establishes the minimum baseline, regional authorities (autonomous communities) can opt to increase this landfill tax in their respective regions. The tax distinguishes municipal solid waste (MSW) (40 EUR/t) and reject from treatment of MSW (30 EUR/t). In Spain, the rejects from mechanical biological treatment (MBT) plants represent about 65 % – 75 % of the volume of the initial MSW (Esteban-Altabella et al., 2020). No escalator mechanisms are included −nor foreseen to be included− on the national level.

In general, the landfilling of waste without prior treatment is banned, and there is an express prohibition of the landfilling of separately collected waste and of unsold surpluses of non-perishable products such as textiles, toys or electrical appliances. However, the ban is not fully implemented as a considerable amount of untreated municipal waste is still landfilled. The national landfill tax introduced in the new Law on Waste and Contaminated Soil for a Circular Economy intends to discourage this practice. Nevertheless, it remains unclear how a tax can be established on an activity that is not permitted by law.

In addition, a Ministerial Order is expected to pass before 1 January 2023, containing a list of waste that cannot be landfilled, which will include, among others, the prohibition of the direct landfilling of municipal waste that is suitable for preparation for reuse, recycling or other recovery.

Summary result

Yes, taxes > 30 EUR/t([a])	Minimum tax rates contained in the new Law on Waste and Contaminated Soil for a Circular Economy: • MSW Landfill tax: 40 EUR/t (corresponding to 41.9 EUR/t rescaled based on purchasing power parities) • Tax for rejects from pre-treatment: 30 EUR/t (corresponding to 31.4 EUR/t rescaled based on purchasing power parities) No escalators are included on the national level.
Robustness of the underlying information	The tax rates are contained in the approved text of the new Law on Waste and Contaminated Soil for a Circular Economy.

([a]) Note: Rescaled based on purchasing power parities Eurostat (2020a)

SRF MSWR-3.2: Taxes on municipal waste incineration

Taxes on incineration of residual municipal waste can help to discourage strong reliance on residual waste treatment and thus support recycling.

The new Law on Waste and Contaminated Soils introduces a tax on incineration at national level, in replacement of the taxes currently established by the regional authorities. Regional authorities (autonomous communities) can increase this national landfill tax in their respective region. On the national level, no escalator is included nor foreseen to be included.

A Ministerial Order will establish a list of waste that can be prepared for reuse or recycling and that cannot be destined for incineration. Incineration, with or without energy recovery, and landfilling of separately collected waste for preparation for reuse and recycling are prohibited (Boletín Oficial de las Cortes Generales, Senado, 2022).

Summary result

Yes, taxes > 7 EUR/t([a])	• MSW incineration facilities coded as D10: MSW 20 EUR/t and reject MSW 15 EUR/t (corresponding to respectively 20.9 EUR/t and 15.7 EUR/t rescaled based on purchasing power parities) • MSW incineration facilities coded as R01: MSW 15 EUR/t and reject MSW 10 EUR/t (corresponding to respectively 15.7 EUR/t and 10.5 EUR/t rescaled based on purchasing power parities) • Other incineration facilities: MSW 20 EUR/t and reject MSW 15 EUR/t (corresponding to respectively 20.9 EUR/t and 15.7 EUR/t rescaled based on purchasing power parities) No escalator is foreseen on the national level.
Robustness of the underlying information	The tax rates are contained in the approved text of the new Law on Waste and Contaminated Soil for a Circular Economy.

([a]) Note: Rescaled based on purchasing power parities Eurostat (2020a)

SRF MSWR-3.3: Pay-as-you-throw (PAYT) system in place

PAYT systems are designed to incentivize citizens to make a bigger effort in separating their waste at source. However, a PAYT system should be designed with the appropriate level of source separation encouragement to ensure that citizens do not misplace waste in recycling bins in order to avoid

residual waste charges. Overall, PAYT usually has a positive effect on source separation and thus recycling rates through direct involvement of citizens.

PAYT schemes are still scarcely applied by municipalities in Spain. In 2018, 16 municipalities out of almost 9 000 municipalities in Spain were found to have PAYT schemes in place. Moreover, the existing PAYT in Spain are volume-based, and there are no weight-based schemes (European Commission, 2019). These can be characterised as a weak PAYT scheme as the economic incentive to sort waste at source is not very visible to citizens compared to weight-based or sack-based schemes. The Spanish authorities (Ministry for the Ecological Transition and the Demographic Challenge, 2021) indicated that the draft version of the proposed Law on Waste would introduce some provisions aimed at advancing the implementation of PAYT systems, however, apart from a generic reference to the PAYT principle in article 11, and a mentioning of PAYT systems as an exemplary practice in Annex V, no such provisions were identified. As a preliminary step to the implementation of PAYT schemes, art. 11.3 of the new Law on Waste states that local authorities will have to introduce, on a mandatory basis, a specific and differentiated fee that reflects the real cost of municipal waste management .

Summary result

Less than 50% of the population covered by PAYT	Far less than 50 % of the population is covered by PAYT schemes. The latest information available indicates 16 out of 9 000 municipalities had such schemes in place.
Robustness of the underlying information	No quantitative data on PAYT are available.

2.1.4 Separate collection system

SRF MSWR-4.1: Convenience and coverage of separate collection systems for the different household waste fractions

Separate collection systems are a key enabler for high recycling rates and for collecting recyclables at adequate quality. Generally, the more convenient and accessible these systems are for their users, the better results they deliver. The assessment methodology categorises different types of collection systems (door-to-door, bring points with a density of > 5 per km^2, bring points with a density of < 5 per km^2, civic amenity site) for assessing the degree of convenience, and differentiates between cities (densely populated), towns and suburbs (intermediate densely populated) and rural (thinly populated areas). It then calculates which share of the population is served by which type of system. The assessment is done on a material basis and takes into account the different materials according to their average share in municipal waste. This is described in more detail in the methodology (ETC/CE & ETC/WMGE, 2022).

For Spain, according to the most recent data, the percentage of households living in cities is 51 %, in towns and suburbs 24 %, and in rural areas 25 % (Eurostat, 2021a).

The new Law on Waste 7/2022 determines in Article 25 which municipal waste fractions are subject to mandatory separate collection. These fractions are:

- paper, metal, plastic, and glass;
- bio-waste from households before 30 June 2022 for local entities with a legal population of more than 5 000 inhabitants, and before 31 December 2023 for the rest. Separate collection of bio-waste will also be understood as the separation and recycling at source through domestic or community composting;
- textile waste before 31 December 2024;

- cooking oils used before 31 December 2024;
- household hazardous waste before 31 December 2024, to ensure that they do not contaminate other waste streams of local competence;
- bulky waste (furniture and fixtures waste) before 31 December 2024; and
- other waste fractions determined by regulation.

The collection systems used for paper do not distinguish between packaging, waste paper and non-packaging waste paper. No information was made available on separate collection systems for flat glass and for non-packaging metals and plastics. The implementation of separate collection systems is the responsibility of the local authorities. Due to the great variety of circumstances and needs among municipalities, there are different systems in place. However, the most widespread system provides separate collection using four different waste bins (lightweight packaging, glass packaging, paper and cardboard and mixed residual waste). Some Autonomous Communities and municipalities have already introduced a fifth bin for the separate collection of bio-waste, sometimes making source separation of bio-waste mandatory. The latter is reported to be the case in Cataluña, Navarra and certain territories in other regions. The fraction of lightweight packaging includes metal (both steel and aluminium), plastic and composite packaging. This system is usually complemented with a network of civic amenity sites that allow the separate collection of other waste streams such as WEEE, bulky waste or textiles. In addition, WEEE is also collected through take-back systems (reverse logistics) at retailers.

Table 2.1 gives an overview of the collection system in Spain.

Table 2.1 Characterisation of the collection system in Spain

	Cities (densely populated areas)					**Towns and suburbs** (intermediate density areas)					**Rural areas** (thinly populated areas)			
	Door-to-door - separate	Door-to-door - co-mingled	Bring point (>5 per km²)	Bring point (<5 per km²)	Civic amenity site	Door-to-door - separate	Door-to-door - co-mingled	Bring point (>5 per km²)	Bring point (<5 per km²)	Civic amenity site	Door-to-door - separate	Door-to-door - co-mingled	Bring point	Civic amenity site
Residual waste			xx			x		x			x		x	
Paper and Cardboard			xx			x		x			x		x	
Ferrous metals			xx				x	x				x	x	
Aluminium			xx				x	x				x	x	
Glass			xx			x		x			x		x	
Plastic			xx				x	x				x	x	
Bio-waste			xx			x		x						
Food											x		x	
Garden											x		x	
Textiles				x	xx					x				x
Wood					xx					x				x
WEEE					xx					x				x
Composite packaging			xx				x	x				x	x	
Bulky waste	xx				xx	x				x	x			x
Used cooking oil				x	x				x	x			x	x

Note: xx: dominant system; x: other significant systems. Grey cells indicate high convenience collection systems.

Source: Ministry for the Ecological Transition and the Demographic Challenge (2021)

Taking this into account, Spain shows good national coverage with respect to the separate collection of paper and cardboard and of packaging of all types of materials. Less information is available on the nature and performance of separate collection systems for non-packaging metals and plastics from households which are not targeted by the same collection system. Packaging consisting of ferrous metals, aluminium, plastic and composite materials are usually collected commingled. Door-to-door separate collection of bio-waste is mainly limited to some towns and suburbs in areas of intermediate population density. Textiles, wood and WEEE can be dropped off at civic amenity sites only.

There is currently no quantified information available about the convenience and coverage of current separate collection systems for the different waste fractions.

Summary result

Paper and cardboard	A high share of the population is covered by high convenience collection services	A mix of high-density bring point and door-to-door collection systems are used with very high coverage across the country.
Metals	A high share of the population is covered by high convenience collection services	A mix of high-density bring point and door-to-door collection systems are used with very high coverage across the country
Plastics	A high share of the population is covered by high convenience collection services	A mix of high-density bring point and door-to-door collection systems are used with very high coverage across the country
Glass	A high share of the population is covered by high convenience collection services	A mix of high-density bring point and door-to-door collection systems are used with very high coverage across the country.
Bio-waste	A low share of the population is covered by high convenience collection services	Door-to-door separate collection of bio-waste is mainly limited to some towns and suburbs in areas of intermediate population density.
Wood	A high share of the population is covered by high convenience collection services	Most of the wood waste is collected as bulky waste, and for this fraction most municipalities have a door-to-door collection system, in addition to civic amenity sites.
Textiles	A low share of the population is covered by high convenience collection services	Textile waste is mainly collected at civic amenity sites, which is less convenient for citizens. In cities, textiles are usually collected by social economy entities through containers in the streets (low-density bring points).
WEEE	Medium convenience collection services dominate	WEEE is mainly collected through take-back at retailers (reverse logistics) and at civic amenity sites, which is considered to be medium convenience level for citizens.
Robustness of the underlying information		The underlying information is robust with respect to paper and cardboard, for packaging materials, textiles and WEEE. Door-to-door collection of bio-waste is limited to a few Autonomous Communities and municipalities, without quantitative information. The limitation to packaging of the door-to-door and bring point collection for plastics, glass and metals reduces the effectiveness of the system.

SRF MSWR-4.2: Firm plans to improve the convenience and coverage of separate collection for the different household waste fractions

The new Law on Waste and Contaminated Soil for a Circular Economy establishes a schedule for the implementation of new separate collection systems for bio-waste, textiles, used cooking oils, hazardous household waste and bulky waste. This separate collection may be carried out through container collection, door-to-door collection, delivery and reception systems and other collection methods. It makes the separate collection of textile waste, used cooking oil, domestic hazardous waste, and bulky waste from households mandatory as from 31 December 2024. For bio-waste, such separate collection will be mandatory for municipalities with more than 5 000 inhabitants as from 30 June 2022, and for the whole country as from 31 December 2023.

Although plans to expand the coverage of separate collection systems for textiles and bio-waste indeed exist, no details are available on the nature and characteristics of the collection systems that would be deployed for these fractions with the newly introduced obligations for separate collection, as local authorities can decide autonomously which collection system best suits their needs.

Therefore, no judgement on the intended convenience level can be made. The new Law on Waste and Contaminated Soil for a Circular Economy only states that among the collection systems for the mandatorily separately collected fractions that are implemented by the local entities, the most efficient collection models must be prioritized, such as door-to-door or the use of closed or intelligent containers that guarantee similar collection ratios. Moreover, to ensure effective systems for separate collection, art. 25 of the Law establishes a maximum percentage of non-targeted materials allowed in separately collected bio-waste, with the possibility of establishing such maximum levels also for other waste fractions, and exceeding these percentages is considered an infraction (MITECO, 2022).

The new Law on Waste and Contaminated Soil for a Circular Economy continues to allow a co-mingled collection of some of the waste fractions for which a separate collection obligation has been established, as long as it does not hamper their subsequent recycling, among other conditions for exemption[1].

The Spanish authorities expect that some local entities will intend to move towards the possibility of allowing non-packaging waste of similar materials to be deposited in the already existing bins for separate collection, when it can be safely assumed that their presence does not negatively affect recycling efforts.

In June 2021, the European Commission endorsed the Recovery and Resilience Plan for Spain (European Commission, 2021). The Plan (Gobierno de España, 2021) considers a component (C12.I3) that specifically refers to investments in support of the implementation of waste regulations. The corresponding actions explicitly include the implementation of new separate collection systems, especially for bio-waste, and the improvement of existing ones, budgeted at EUR 280 million (Ministry for the Ecological Transition and the Demographic Challenge, 2021).

Summary result

Paper and cardboard	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Metals	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	
Plastics	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	
Glass	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	

[1] According to the Ministry for the Ecological Transition and the Demographic Challenge '*prior assessment of the Coordination Commission on waste may be exempted by regulation from the obligation to collect waste separately, provided that at least one of the following conditions is met: a) The joint collection of certain types of waste does not affect their suitability to be prepared for reuse, recycling or other recovery operations […], and produces, after such operations, a result of a comparable quality and quantity equivalent to that achieved by separate collection*'

Bio-waste	There are plans to improve the collection service but unclear plan for implementation	A dedicated budget has been made available for implementation of new separate collection systems, especially bio-waste, and improvement of existing ones. With respect to bio-waste, coverage is mandatory for municipalities with more than 5 000 inhabitants as of 30 June 2022, and will be nation-wide as from 31 December 2023, as required by the Waste Framework Directive, but there are no specific requirements with respect to the character of the system.
Wood	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	A dedicated budget has been made available for implementation of new separate collection systems and improvement of existing ones. Separate collection of bulky waste, including wooden furniture and other household wood waste will be mandatory over the whole territory, as from 31 December 2024, , as required by the Waste Framework Directive, but there are no specific requirements with respect to the character of the system.
Textiles	There are plans to improve the collection service but unclear plan for implementation	A dedicated budget has been made available for implementation of new separate collection systems and improvement of existing ones. With respect to textiles, coverage is planned to be nation-wide as from 31 December 2024, but there are no specific requirements with respect to the character of the system.
WEEE	There are plans to improve the collection service but unclear plan for implementation	A dedicated budget has been made available for implementation of new separate collection systems and improvement of existing ones.
Robustness of the underlying information		The new Law on Waste and Contaminated Soil for a Circular Economy does not contain national requirements on the type and convenience levels of the collection systems, the implementation of which falls under the responsibility of the local authorities. The Law however states that among the collection systems for the mandatorily separately collected fractions that are implemented by the local entities, the most efficient collection models must be prioritized, such as door-to-door or the use of closed or intelligent containers that guarantee similar collection ratios.

2.1.5 Extended producer responsibility (EPR) and similar schemes

SRF MSWR-5.1: Fee modulation in EPR schemes for packaging

Within EPR schemes, fee modulation (or eco-modulation) is a system with different fees for different types of packaging material and designs. While basic fee modulation, i.e. different fees for the main material groups, are common, advanced fee modulation can create stronger incentives for packaging producers to design for recycling and thus create favourable conditions for higher recycling rates. The level of advancement of the fee modulation is assessed against four criteria that have been selected as benchmarks for a well-designed eco-modulated fee system:

- recyclability, for example differentiating between PET and PS, between different colours of PET, or between 100% cardboard boxes and laminated beverage cartons;
- sortability and disruptors, for example a malus for labels/caps/sleeves made of other materials, which are not fitted for the recycling technologies of the main packaging;
- recycled content; and
- if there is a transparent compliance check by the PRO that producers report correctly.

In Spain, there is a differentiated fee by type of material for packaging, and additional differentiations apply within some material groups, such as steel and aluminium in the case of metal packaging, and PET and different types of HDPE and LDPE in the plastic packaging group. The fees are said to have been calculated to cover the extra cost of the selective collection of packaging waste, depending on the type of material[2]. Currently, no mention is made of any of the assessment criteria of advanced fee modulation. The text of the new Law on Waste and Contaminated Soil for a Circular Economy only refers to the possibility of eco-modulation in generic terms[3].

The version of 28 September 2021 of the draft Royal Decree on Packaging and Packaging Waste (Ministerio para la Transición Ecológica y el Reto Demográfico, 2021) however, incorporated minimum requirements for the modulation of the financial contribution to collective PRO:

1. Regarding the modulation criterium of recyclability, in Annex VIII of the draft Royal Decree it is considered as a bonus '*the improvement of the recyclability of packaging, which must be audited and certified by entities other than the packaging producers and the product producers themselves and in close collaboration with the waste managers*'.
2. Regarding the presence of disruptors and sortability, Annex VII establishes as a malus:
    a. The presence of disruptors affecting sorting or recycling, whatever the percentage of the disruptor.
    b. The presence of substances after recycling that may compromise the use of the recycled material.
    c. The need to implement specific measures to ensure the recycling of certain categories of packaging.
3. It also establishes specific maluses for several disruptors present in packaging made of certain materials (glass, paper/cardboard, PET, rigid plastic, and PVC).
4. With respect to recycled content, Annex VII establishes the incorporation of secondary raw materials that originates from the recycling of packaging as a bonus, with a lower weight for non-recyclable packaging or packaging with low recyclability as compared to more easily recyclable packaging, as to account for the possible future loss of materials.
5. Regarding the criterium of a transparent compliance check, article 21 of the draft version stated that PROs, both individual and collective, must implement an adequate self-monitoring system to evaluate the quality of the data collected and reported in their annual reports, supported by independent audits.

Furthermore, this 28 September 2021 version of the draft of the new Spanish packaging legislation established possible criteria to modulate the financial contributions of producers for each type of similar packaging, taking into account the nature and quantity of the materials used in its

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2 https://www.ecoembes.com/es/empresas/ingresos-punto-verde/tarifa-punto-verde-por-material

3 The translated text reads: '*The financial contribution paid by the producer of the product to fulfill its obligations in terms of extended producer responsibility must […] in cases of collective compliance with obligations, and as far as possible, be modulated for each product or group of similar products, especially taking into account their durability, that they can be repaired, reused and recycled, and the presence of hazardous substances*'.

manufacture, including durability, repairability, reusability, and recyclability, their superfluity, recycled content, the presence of hazardous substances or other factors that might affect reuse, recycling or the incorporation of recycled content, among others. PROs were allowed to further develop the modulation of financial contributions in a transparent and non-discriminatory manner, adopting an approach based on the life cycle of packaging, taking these or similar criteria into account. The draft included the provision of a forecast of the effects of the modulation within a period of 4 years, as well as the possibility of reviewing the criteria and making them binding.

The final draft text of the new packaging decree that was notified to the European Commission on 6 May 2022 (Ministerio para la Transición Ecológica y el Reto Demográfico, 2022), was however reported (ANEABE Aguas Minerales de España, 2022) to have undergone important modifications in relation to the one published by the Ministry for the Ecological Transition and Demographic Challenge on 28 September 2021 (Ministerio para la Transición Ecológica y el Reto Demográfico, 2021) that was discussed here above, and which was submitted to allegations in a public hearing. The present assessment does not include an analysis of those modifications that affect or relate to fee modulation.

Summary result

No advanced fee modulation	Differentiated fees are applied for different packaging materials. Fees are calculated to cover the extra cost of the selective collection of packaging waste, and only depend on the type of material. Currently, no reference is made to any of the criteria for assessment of advanced fee modulation. However, criteria for advanced fee modulation taking into account all four assessment criteria have been proposed in the draft new Spanish packaging legislation currently in process.
Robustness of the underlying information	Information provided by the Ministry for the Ecological Transition and the Demographic Challenge retrieved from the Spanish household packaging PRO website and the EU database on national technical regulations (TRIS).

2.1.6 Treatment capacity for bio-waste

SRF MSWR-6.1: Capacity for the treatment of bio-waste

Bio-waste is the largest single waste fraction in municipal waste, and adequate treatment capacity needs to be made available.

The current capture rate of the total generation of bio-waste (food and garden) in Spain is estimated to be only about 11 %, with a collection of 19 kgs/person/year in 2018 (Table 1.1). For food waste alone, the capture rate was estimated to be 3 % (Zero Waste Europe, 2020). These figures indicate that significant additional volumes of bio-waste to be collected are to be expected when extending its separate collection as foreseen in the new Law on Waste and Contaminated Soil for a Circular Economy.

The Spanish authorities acknowledge that the lack of investment is a key challenge to overcome, both for the implementation of separate collection systems and for the construction of new facilities that increase the existing capacity in order to treat additional, separately collected bio-waste. The earlier mentioned (see 2.1.4) Recovery and Resilience Plan for Spain (Gobierno de España, 2021), already endorsed by the European Commission (European Commission, 2021), includes a component (C12.I3) that refers to investments in the construction of specific facilities for the treatment of separately collected bio-waste (EUR 96.2 million) and in the improvement of existing MBT plants, among others, aligned with the *Study on investment needs in the waste sector and on the financing of municipal waste management in Member States* (COWI et al., 2019). Indeed, investment needs in the waste

sector in Spain are among the highest in Europe for the coming years. For instance, with regard to the costs associated with replacement of bio-waste facilities that have reached end-of-life, for the period from 2021 to 2035, Spain ranks fourth among the EU Member States, with a total estimated cost of EUR 270 million, of which EUR 77 million corresponds to the replacement of open air composting facilities, EUR 39 million to in-vessel composting, and EUR 155 million to anaerobic digestion (European Commission, 2019).

The 2019 annual report published on the website of the Ministry for the Ecological Transition and the Demographic Challenge (Ministerio para la Transición Ecológica, nd), does not include information on investments in bio-waste collection and treatment that are realized or planned by the regions. However, in accordance with the distribution of competences for waste management in Spain, part of the above mentioned funds foreseen in the Recovery and Resilience Plan (Gobierno de España, 2021) have already been distributed in the 2021 budget to the Autonomous Regions for implementing the corresponding actions. The timeframe established for the investments covers the period from March 2020 to May 2026. However, investments that specifically target bio-waste, taking into account the obligation of its separate collection and treatment foreseen in both the Waste Framework Directive and the new Law on Waste and Contaminated Soil for a Circular Economy, are likely to be the first to be addressed by the regions. (Ministry for the Ecological Transition and the Demographic Challenge, 2021)

No quantitative information was provided by the Spanish authorities on the existing, planned or projected capacities of bio-waste treatment facilities. Reported capacity, from data corresponding to 35 of the 50 existing bio-waste treatment facilities, covers 81 % of the municipal bio-waste that was separately collected in 2018. Currently, not more than 11 % of the organic fraction of MSW generated in Spain is separately collected. At the same time, bio-waste accounts for 47.2 % of the total volume of mixed residual waste collected in Spain (2010 reference), which corresponds to a total volume of 8.3 million tonnes of bio-waste. The residual waste, including the bio-waste contained in it, is either directly landfilled or incinerated, or goes to composting or anaerobic digestion in MBT plants, were a bio-stabilized material is produced that cannot be used as compost. (Ministry for the Ecological Transition and the Demographic Challenge, 2021)

It can thus be concluded that there is not enough bio-waste treatment capacity, not even for half of the bio-waste currently contained in the residual MSW.

Summary result

Bio-waste capacity below 80 % of generated municipal bio-waste but firm plans to close the gap	Reported capacity, from data corresponding to 35 of the 50 existing bio-waste treatment facilities, covers 81 % of the municipal bio-waste that was separately collected in 2018. There is currently no capacity to treat a significant part of the 8.3 million tons of potentially generated bio-waste that is currently being collected as part of the mixed MSW. However, since March 2020, earmarked funding has been made available for the construction of specific facilities for the treatment of separately collected bio-waste, and for the improvement of existing MBTs.
Robustness of the underlying information	Available quantitative information does not fully cover existing, planned or projected capacity for the treatment of bio-waste.

SRF MSWR-6.2: Legally binding national standards and Quality Management System for compost/digestate

To create a market for compost and digestate, they should be of a good quality for use as a soil improver or fertilizer. Legally binding standards provide guarantees regarding the quality of the

compost/digestate produced. A quality management system aims at addressing different elements of a production process to ensure a stable and high-quality output (product) which helps toward reaching a defined quality for the product.

Spain is reported to have mature national standards for compost quality embedded in national legislation while the implementation of a quality assurance system for the production of compost from bio-waste has not yet started (EEA, 2020). Nevertheless, the Spanish Fertilisers Regulation (Ministerio de la Presidencia, 2013) includes, among other requirements, in its article 12 the requirements for the producer of fertilisers, including some requirements for quality management. Besides, in article 14 there are requirements for internal quality control systems for manufacturers of fertiliser products. According to this Regulation three-monthly analyses are required for organic products to verify compliance with the requirements of Annex V, which include requirements for organic nitrogen, moisture, particle size, hygienisation (microorganisms), heavy metals, use limitations, furfural and polyphenols. The Spanish Fertilisers Regulation (Ministerio de la Presidencia, 2013) categorises compost under five kinds according to the raw materials used (organic amendment compost, manure compost, green compost, vermicompost, and 'alperujo' compost), and distinguishes three different quality levels depending exclusively on the compost's heavy metals content. The organic fraction of municipal waste not separately collected was used, among other organic fractions, to produce organic amendment type compost, until in 2013, this fraction was no longer legally allowed for producing compost. Separately collected organic municipal waste so far only contributed marginally to the production of officially registered organic amendment composts in Spain (Puyuelo et al., 2019). The Spanish authorities expect that the legal obligation to implement the separate collection of bio-waste established in the new Law 7/2022 on Waste and Contaminated Soil for a Circular Economy, as well as the investments foreseen under the Recovery and Resilience Funds to implement such separate collection, will increase the production of high quality compost to be used as fertiliser.

Article 28 of the new Law 7/2022 on Waste and Contaminated Soil for a Circular Economy establishes at national level end-of-waste criteria for compost and digestate. These criteria are the same as those set out at EU level in the Fertilizing Products Regulation ((EU) 2019/1009). In addition, the Spanish Fertilisers Regulation (Ministerio de la Presidencia, 2013) is to be amended to achieve coherence with Regulation (EU) 2019/1009 and with the new end-of-waste criteria for compost and digestate established by Law 7/2022 at national level. (MITECO, 2022)

Summary result

Legally binding national standards for compost/digestate quality but no quality management system	The Spanish Fertilisers Regulation categorises compost in five categories according to the raw materials used and distinguishes three different quality levels depending exclusively on the compost's heavy metals content.
Robustness of the underlying information	Legal text available (Ministerio de la Presidencia, 2013), and information provided by the Ministry for the Ecological Transition and the Demographic Challenge.

2.2 Target for the recycling of packaging waste

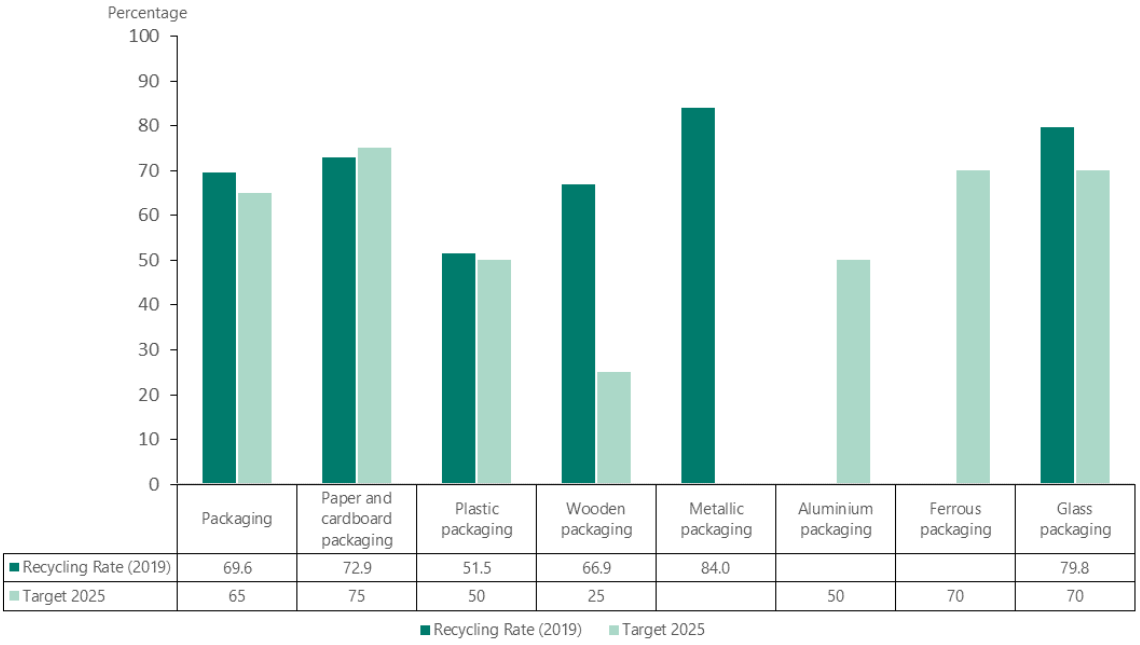
This chapter aims at assessing the prospects of the Spain to achieve the **65 % recycling target for packaging waste** in 2025 as well as the **material specific packaging waste recycling targets** (50 % of plastic; 25 % of wood; 70 % of ferrous metals; 50 % of aluminium; 70 % of glass; 75 % of paper and cardboard). In order to conclude on this likelihood, the analysis takes stock of the status of several factors that are proven to influence the levels of recycling in a country. For a detailed description of the methodology followed, the development of success/risk factors and their impact on recycling, please consult the methodology report (ETC/CE & ETC/WMGE, 2022).

2.2.1 Current situation and past trends

SRF P-1.1 Distance to target

The actual distance to the target for the most recent data point is a key factor determining the likelihood of meeting or not meeting the target. This analysis is based on data reported by Spain to Eurostat in accordance with Commission Decision 2005/270/EC as last amended by the Commission Implementing Decision 2019/665 (EC, 2019), published in the dataset *Recycling rates of packaging waste for monitoring compliance with policy targets, by type of packaging [env_waspacr].* The latest available data refer to 2019. The performance of Spain for 2019 is illustrated in Figure 2.2.

Figure 2.2 Packaging recycling rates for Spain in 2019, in percentage



	Packaging	Paper and cardboard packaging	Plastic packaging	Wooden packaging	Metallic packaging	Aluminium packaging	Ferrous packaging	Glass packaging
Recycling Rate (2019)	69.6	72.9	51.5	66.9	84.0			79.8
Target 2025	65	75	50	25		50	70	70

Source: Eurostat (2022d), EU (2018)

For Spain, the reported recycling rates in 2019 for total packaging, plastics, wooden and glass packaging already exceed the 2025 targets. For paper and cardboard, the distance to target is only 2.1 percentage points. Ferrous metals exceed the target by 28.8 percentage points. For aluminium packaging the distance to target is just 0.1 percentage point.

However, the recycling rates presented here are based on the calculation rules of the Commission Decision 2005/270 before it was amended by the Commission Implementing Decision 2019/665, and

the new calculation rules will only be mandatory to be used for the reference year 2020 and onwards. A key difference in the new calculation rules compared to the old rules is that the amount of sorted packaging waste that is rejected by the recycling facility shall not be included in the reported amount of recycled packaging waste.

As a matter of sensitivity analysis, to assess what the impact of these new calculation rules could be (change in calculation point), recycling losses found in literature (EXPRA, 2014) are applied to the packaging recycling rates as reported for reference year 2019:

- Paper and cardboard packaging: decrease by 10 %, from 72.9 % to 65.6 %
- Plastic packaging: decrease by 21 %[4], from 51.5 % to 40.6 %
- Metal packaging: decrease by 14 %, from 98.8 % to 85.0 % for ferrous metals, and from 49.1 % to 42.2 % for aluminum
- Glass packaging: decrease by 5 %, from 79.8 % to 75.8 %
- Wooden packaging: decrease by 11 % from 66.9% to 59.5 %
- Total packaging: calculated based on the amounts of each packaging material generated and recycled in 2019, the recycling rate would drop from 69.6 % to 62 %.

Taking these recycling loss rates into account would result in plastic packaging and paper and cardboard packaging not meeting the recycling target anymore. Next to this, the Spanish authorities have identified a traceability problem with respect to the packaging waste data, which is intended to be addressed through the register of product producers that is considered in the draft legislation on packaging waste (Ministerio para la Transición Ecológica y el Reto Demográfico, 2022) that is expected to be adopted at the end of 2022 (MITECO, 2022). No estimates are made for packaging put on the market by free riders, de minimis, online sales and private imports/exports (Eurostat, 2021b). A study is currently being carried out to estimate free riders in household packaging. It is expected to be completed by the end of 2022 (MITECO, 2022).

In addition, according to the calculated capture rates for paper and cardboard, plastic, metals and glass (Section 1.3), a considerable amount of these materials are included in the mixed municipal waste although not all of this material is packaging. Nevertheless, comparing the rather high recycling rates with the rather low or modest capture rates from municipal waste gives some indication that the reported recycling rates might be overestimated.

Summary result

Total packaging	< 5 percentage points below target	Spain reports a recycling rate of 69.6 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 62.0 %, 3.0 percentage points below the 2025 target.
Paper and cardboard packaging	5 - 15 percentage points below target	Spain reports a recycling rate of 72.9 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 65.6 %, 9.4 percentage points below the 2025 target.

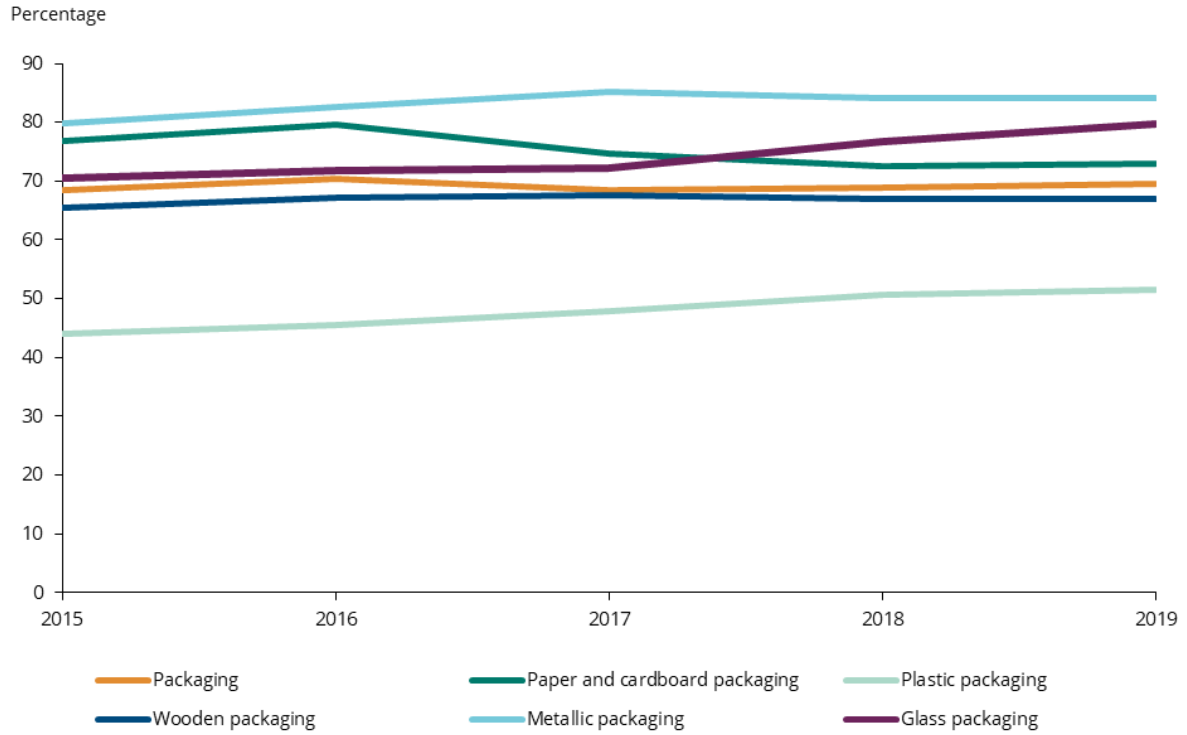
[4] This is the weighted recycling loss taking into account the 29 % recycling loss for packaging waste from household sources (66 %) and the 5 % recycling loss for packaging waste from commercial sources (33 %).

Ferrous metals packaging	Target exceeded	Spain reports a recycling rate of 98.8 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 85.0 %, 15 percentage points above the 2025 target.
Aluminium packaging	5 - 15 percentage points below target	Spain reports a recycling rate of 49.1 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 42.2 %, 7.8 percentage points below the 2025 target.
Glass packaging	Target exceeded	Spain reports a recycling rate of 79.8 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 75.8 %, 5.8 percentage points above the 2025 target.
Plastics packaging	5 - 15 percentage points below target	Spain reports a recycling rate of 51.5 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 40.6 %, 9.4 percentage points below the 2025 target.
Wooden packaging	Target exceeded	Spain reports a recycling rate of 66.9 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 59.5 %, 34.5 percentage points above the 2025 target.
Robustness of the underlying information		The assessment is limited by the fact that the recycling rates for 2019 reported by Spain to Eurostat do not yet reflect the new calculation rules, and the impact of the new calculation rules has therefore been estimated based on literature. It is possible there is underreporting of the generated packaging waste, related to the use of industry declarations to obtain data on packaging waste generated for packaging other than glass, while no general estimates are used to improve coverage of data on packaging waste generated (Eurostat, 2022a).

SRF P-1.2: Past trend in packaging waste recycling

The development of the historical trend in the recycling rate indicates previous efforts towards packaging waste recycling. In this analysis the recycling rate reported in the Eurostat dataset *Recycling rates of packaging waste for monitoring compliance with policy targets, by type of packaging [env_waspacr]* (latest data year: 2019) is used. The recycling trends for packaging waste by material in Spain are illustrated in Figure 2.3.

Figure 2.3 Trend in packaging waste recycling rates in Spain between 2015 and 2019, in percentage



Note: Spain reported separate data for aluminium and steel packaging for the first time in 2018, therefore the trend is shown only for metallic packaging.

Source: Eurostat (2022d)

Overall, the recycling levels of packaging remained rather stable over the past five years. The recycling rate for paper and cardboard packaging however strongly decreased since 2016.

Summary result

Total packaging	RR > 60% and increase in last 5 years < 5 percentage points	The recycling rate increased by 1.2 percentage points over the past five years and is estimated at 62.0 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Paper and cardboard packaging	RR > 65%, and increase in last 5 years < 10 percentage points	The recycling rate decreased by 4.0 percentage points over the past five years and is estimated at 65.6 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Ferrous metals packaging	RR > 70%	The recycling rate of total metals packaging increased by 4.1 percentage points over the past five years and is estimated at 85 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Aluminium packaging	RR > 40%, and increase in last 5 years < 10 percentage points	The recycling rate of total metals packaging increased by 4.1 percentage points over the past five years and is estimated at 42.2 % if the new calculation rules would be applied (taking into account losses in the recycling plants)

Glass packaging	RR > 70%	The recycling rate increased by 9.4 percentage points over the past five years and is estimated at 75.8 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Plastics packaging	RR > 40% and increase in last 5 years < 10 %	The recycling rate increased by 7.5 percentage points over the past five years and is estimated at 40.6 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Wooden packaging	RR > 25%	The recycling rate increased by 1.4 percentage points over the past five years and is estimated at 59.5 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Robustness of the underlying information		It is possible there is underreporting of the generated packaging waste, related to the use of industry declarations to obtain data on packaging waste generated for packaging other than glass, while no general estimates are used to improve coverage of data on packaging waste generated (Eurostat, 2021b).

2.2.2 Legal instruments

SRF P-2.1: Timely transposition of the revised Packaging and Packaging Waste Directive into national law

Timely transposition of the Packaging and Packaging Waste Directive as amended by Directive 2018/852, into national law within the foreseen period is key for a waste management system in line with EU requirements.

Directive (EU) 2018/852 on packaging and packaging waste is still in the process of transposition in Spain, although approval and adoption were initially expected by the end of 2020 (European Environmental Bureau, 2020). The approval of the DRDPPW, scheduled for the end of 2022, is expected to complete the transposition in Spain of Directive (EU) 2018/852 (MITECO, 2022).

Summary result

No full transposition yet	The approval of the draft Royal Decree on Packaging and Packaging Waste, scheduled for the end of 2022, is expected to complete the transposition in Spain of Directive (EU) 2018/852.
Robustness of the underlying information	Full information on the progress of the legislative process is publicly available.

SRF P-2.2: Responsibilities for meeting the targets, and enforcement mechanisms, e.g. fines etc.

Royal Decrees will specify obligations of extended producer responsibility organisations for each specific waste stream. These obligations include the setting of waste management objectives that, as a minimum, must be achieved.

The new Law 7/2022 on Waste and Contaminated Soil for a Circular Economy contains a chapter that is dedicated to the sanctioning regime and updated Law 22/2011 on Waste and Contaminated Soil previously in force. For this purpose, certain offenses and penalties have been defined with greater precision, especially those relating to extended producer responsibility.

Regarding extended producer responsibility organisations, the new Law 7/2022 on Waste and Contaminated Soil for a Circular Economy establishes non-compliance with the defined targets for these organisations as an infraction. In the new Law, a separate chapter is dedicated to the sanctioning regime and supposes an update of the content of the preceding Law on Waste and contaminated Soils. To this end, certain infractions and sanctions have been classified with greater precision, especially those related to the EPR. In the event of non-compliance with the obligations of extended producer responsibility by the individual or collective systems, the competent authority to initiate the sanctioning procedure will be the autonomous community corresponding to the territory where the infraction is committed, which may also suspend the activity of the system in its territory. The new Law states that in the case of the regulation regarding EPR, the adaptation of the regulations corresponding to the provisions of this Law will be carried out before 5 January 2023. Article. 41 of the new Law on Waste, indicates that the quantitative targets applied to the PROs will be consistent with the recycling targets, so that the sanction for non-compliance with these EPR targets could be considered equivalent to a sanction for not reaching the recycling targets.

The Ministry for the Ecological Transition and the Demographic Challenge (MITECO) indicates that the new Law on Waste and Contaminated Soil for a Circular Economy establishes that, to prevent free-riding of EPR obligations, the e-commerce platforms would be considered producers of products and, therefore, will have to comply with the corresponding EPR obligations (Ministry for the Ecological Transition and the Demographic Challenge, 2021).

Summary result

Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	The responsibility for reaching the targets is set on PROs. Objectives and targets are set in Royal Decrees, per material type. The new Law on Waste updates the existing sanctioning regime and introduces explicit dispositions with respect to the obligations of e-commerce platforms. However, there are no support tools in place.
Robustness of the underlying information	The text of the newly approved Law on Waste and Contaminated Soil for a Circular Economy is publicly available.

2.2.3 Economic instruments

SRF P-3.1: Taxes and/or ban for landfilling residual- or biodegradable waste

Bans and taxes on landfilling of residual waste can help to discourage landfilling and thus support recycling, also of packaging waste.

As described in Section 2.1.3 in more detail, regional landfill taxes and landfill bans on biodegradable or non-treated waste are in place. The new Law on Waste and Contaminated Soil for a Circular Economy considers a national landfill tax that substitutes previously existing regional taxes. A Ministerial Order will contain a list of wastes that cannot be landfilled, which will include, among others, a prohibition to directly landfill municipal waste that is suitable for preparation for reuse, recycling or other recovery.

Summary result

Yes, taxes > 30 EUR/t([a])	Minimum tax rates contained in the new Law on Waste and Contaminated Soil for a Circular Economy: • MSW Landfill tax: 40 EUR/t (corresponding to 41.9 EUR/t rescaled based on purchasing power parities) • Tax for rejects from pre-treatment: 30 EUR/t (corresponding to 31.4 EUR/t rescaled based on purchasing power parities) No escalators are included on the national level.
Robustness of the underlying information	The tax rates are contained in the approved text of the new Law on Waste and Contaminated Soil for a Circular Economy.

([a]) Note: Rescaled based on purchasing power parities Eurostat (2020a)

SRF P-3.2: Taxes on municipal waste incineration

Taxes on incineration of residual waste can help to discourage strong reliance on residual waste treatment and thus support recycling. As described in Section 2.1.3 in more detail, Spain will also introduce a tax on incineration at the national level, which will replace the few incineration taxes currently established by the regional authorities.

Summary result

Yes, taxes > 7 EUR/t([a])	• MSW incineration facilities coded as D10: MSW 20 EUR/t and reject MSW 15 EUR/t (corresponding to respectively 20.9 EUR/t and 15.7 EUR/t rescaled based on purchasing power parities) • MSW incineration facilities coded as R01: MSW 15 EUR/t and reject MSW 10 EUR/t (corresponding to respectively 15.7 EUR/t and 10.5 EUR/t rescaled based on purchasing power parities) • Other incineration facilities: MSW 20 EUR/t and reject MSW 15 EUR/t (corresponding to respectively 20.9 EUR/t and 15.7 EUR/t rescaled based on purchasing power parities) No escalator is foreseen on the national level.
Robustness of the underlying information	The tax rates are contained in the approved text of the new Law on Waste and Contaminated Soil for a Circular Economy.

([a]) Note: Rescaled based on purchasing power parities Eurostat (2020a)

SRF P-3.3: Packaging taxes

Packaging taxes can support the aim to reduce packaging waste generation and/or to influence the choice of packaging materials and encourage recyclability and eco-design.

According to the information available, currently a tax of 0.1 EUR/plastic bag on disposable plastic bags is in place in Andalusia. The new Law on Waste and Contaminated Soil for a Circular Economy introduces a national tax on the manufacture, import or intra-community acquisition of non-reusable plastic packaging, including the packaging types specified in Directive 94/62/EC on packaging and packaging waste. However, in order to promote the recycling of plastic products, the amount of recycled plastic contained in products that are targeted by the tax will not be taxed. Thereto, the tax base will be constituted by the amount of non-recycled plastic, expressed in kilograms, contained in the products subject to the tax. This national tax rate on single-use plastic packaging −as well as on all non-reusable plastic products that serve to contain liquid or solid products, or to wrap goods or food products− is set to 0.45 EUR/kg. No other material than plastic packaging is targeted.

Summary result

Limited packaging tax	A national tax of 0.45 EUR/kg of non-recycled plastic contained in non-reusable plastic packaging is introduced in the new Law on Waste and Soil Contamination. The tax is limited to plastics packaging only.
Robustness of the underlying information	The tax rate is contained in the approved text of the new Law on Waste and Contaminated Soil for a Circular Economy.

SRF P-3.4: Pay-as-you-throw (PAYT) system in place

As a large share of packaging waste is generated in households, incentivising households to separate packaging waste at source, e.g. by applying PAYT systems, is relevant for meeting the recycling targets for packaging waste.

In Spain, PAYT schemes are applied in 16 municipalities out of almost 9 000. Moreover, the existing PAYT in Spain are volume-based, and there are no weight-based schemes (European Commission, 2019).

Summary result

Less than 50% of the population covered by PAYT	Far less than 50 % of the population is covered by PAYT schemes. The latest information available indicates 16 out of 9 000 municipalities had such schemes in place.
Robustness of the underlying information	No quantitative data on PAYT are available.

SRF P-3.5: Deposit return systems

Deposit Return Systems (DRS) generate high capture rates for packaging covered by the system and thus contribute to increased recycling rates.

No DRS systems are currently in place in Spain. However, the new Law on Waste and Contaminated Soil for a Circular Economy establishes separate collection objectives for single use plastic bottles, with the purpose of allocating them to recycling:

- By 2023 at the latest, 70 % by weight of that put on market;
- By 2025 at the latest, 77 % by weight of that put on market;
- By 2027 at the latest, 85 % by weight of that put on market;
- By 2029 at the latest, 90 % by weight of that put on market.

The put-on market weight of these products may be considered equivalent to the amount of waste generated from them, including the part that is littered, in that same year. If the objectives set in 2023 or 2027 are not met, at the national level, a DRS will be implemented throughout the territory within two years, to guarantee compliance with the objectives in 2025 and 2029 respectively.

Summary result

Aluminium drink cans	No DRS for drink cans	Currently, no DRS systems are in place in Spain.
Plastic bottles	No DRS for drink bottles	Currently, no DRS systems are in place in Spain. A DRS for single use plastic bottles will be introduced if the 2023 or 2027 separate collection objectives as set in the new Law on Waste and Contaminated Soil for a Circular Economy are not met.
Plastic crates	No DRS for plastic crates	No DRS systems are in place in Spain.
Glass bottles	No DRS for drink bottles	No DRS systems are in place in Spain.
Wooden packaging	No DRS for wooden packaging	No DRS systems are in place in Spain.
Robustness of the underlying information		Information included in the legislation.

2.2.4 Separate collection system

SRF P-4.1: Convenience and coverage of separate collection for different packaging waste fractions

As a large part of packaging waste comes from households, separate collection systems for households and similar sources are a key condition for achieving high recycling rates for packaging waste and for collecting recyclables at adequate quality. Such systems generally deliver better results the more convenient and accessible they are for their users, also compared to the collection of residual waste. The material specific assessment considers packaging waste from both household and non-household sources. For assessing the convenience and coverage of separate collection systems for households, the same methodology is used here as described in section 2.1.4.

Spanish authorities have indicated (Ministry for the Ecological Transition and the Demographic Challenge, 2021) that the new Law on Waste and Contaminated Soil for a Circular Economy and Law 11/1997 on Packaging and Packaging Waste that are currently in force, establish the obligation of separate collection of packaging waste among other. The new Law on Waste and Contaminated Soil for a Circular Economy explicitly indicates that the initial producer or other holder of non-hazardous commercial waste must separate at source. The responsibility of the initial producers or other holders of non-hazardous commercial waste is stated to end when they have delivered the waste in conformity with all applicable regulations. In the case of commercial waste not managed by the local entity, or industrial waste, separation at source and subsequent separate collection of paper, metals, plastic and glass waste is mandatory. For industrial and commercial packaging waste in particular, the separate collection obligations currently fall on the final holder of the packaging waste. A new Royal Decree on Packaging and Packaging Waste that has been submitted to public consultation would extend the application of the EPR to commercial and industrial packaging. This implies that the packers that use this type of packaging will have to take charge of their waste. (MITECO, 2021).

Summary result

Paper and cardboard packaging	**1. Packaging waste from households** A high share of the population is covered by high convenience collection services	High convenience collection systems have been rolled out over the whole territory, and also commercial sources and industry will have to sort packaging waste at source.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household paper and cardboard packaging waste	
Ferrous metals packaging	**1. Packaging waste from households** A high share of the population is covered by high convenience collection services	High convenience collection systems have been rolled out over the whole territory, and also commercial sources and industry will have to sort packaging waste at source. No distinction is made at collection points between steel and aluminum packaging
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household ferrous metals packaging waste	
Aluminium packaging	**Packaging waste from households** A high share of the population is covered by high convenience collection services	
Glass packaging	**1. Packaging waste from households** A high share of the population is covered by high convenience collection services	High convenience collection systems have been rolled out over the whole territory, and also commercial sources and industry will have to sort waste at source.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household glass packaging waste	
Plastics packaging	**1. Packaging waste from households** A high share of the population is covered by high convenience collection services	High convenience collection systems have been rolled out over the whole territory, and also commercial sources and industry will have to sort packaging waste at source.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household plastics packaging waste	
Wooden packaging	**Packaging waste from non-household sources** Separation at source is mandatory for non-household wooden packaging waste	
Robustness of the underlying information		The information was provided by the Ministry for the Ecological Transition and the Demographic Challenge and extracted from the Spanish waste legislation in force.

Note: The main source for aluminium packaging waste is drink cans from households, therefore the assessment does not consider aluminium non-household waste.

SRF P-4.2: Firm plans to improve the convenience and coverage of separate collection for the different packaging waste fractions

Concrete plans are needed to improve the type and coverage of separate collection. This SRF is more relevant for MS and materials that do not score 'green' in SRF P-4.1. The assessment is done on a material basis and summing up the scores of the different materials according to their average share

in packaging waste[5]. Again, the material specific assessment considers packaging waste from both household and non-household sources. It is assumed that these sources are of similar size, since Spain did not provide information on the shares of household/non-household waste generation.

Separate collection is mandatory for all packaging in the current packaging legislation, which also includes commercial and industrial packaging, but the obligations in this case fall on the final holder of the packaging waste. A new Royal Decree on Packaging and Packaging Waste that has been submitted to public consultation would extend the application of the EPR to commercial and industrial packaging, which until now was only applied to them on a very limited basis: compulsorily for the packaging, of all material types, of plant protection products or voluntarily for the rest. This implies that the packers that use this type of packaging will have to take charge of organizing and financing the management of their waste (MITECO, 2021).

Summary result

Paper and cardboard packaging	**1. Packaging waste from households** N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	2. Packaging waste from non-household sources N/A (for countries already having mandatory sorting at source)	
Ferrous metals packaging	**1. Packaging waste from households** N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	2. Packaging waste from non-household sources N/A (for countries already having mandatory sorting at source)	
Aluminium packaging	**Packaging waste from households** N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Glass packaging	**1. Packaging waste from households** N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	2. Packaging waste from non-household sources N/A (for countries already having mandatory sorting at source)	

[5] Based on data from Eurostat on the share of packaging materials in total packaging generated in 2018

Plastics packaging	**1. Packaging waste from households** N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	2. Packaging waste from non-household sources N/A (for countries already having mandatory sorting at source)	
Wooden packaging	**Packaging waste from non-household sources** N/A (for countries already having mandatory sorting at source)	
Robustness of the underlying information	The information was provided by the Ministry for the Ecological Transition and the Demographic Challenge and extracted from the Spanish waste legislation in force.	

2.2.5 Extended producer responsibility (EPR) and similar schemes

SRF P-5.1: Coverage of EPR schemes

The following EPR system(s) are in place for packaging in Spain:

- ECOEMBES (Ecoembalajes España SA), covering lightweight packaging, and paper and cardboard, from households;
- ECOVIDRIO, covering household glass packaging only;
- Sigfito Agroenvases S.L., covering agricultural product packaging only, such as fertilizer, biostimulant and nutritional packaging;
- AEVAE (Asociación Española para la Valorización de Envases), covering phytosanitary product and fertilizer packaging;
- SIGRE, covering medicine containers and expired medicines.

The new Spanish packaging legislation pretends to introduce EPR schemes for commercial and industrial packaging. More specifically, the draft text version of 28 September, 2021 (Ministerio para la Transición Ecológica y el Reto Demográfico, 2021) establishes that producers who place commercial and industrial packaging on the market shall set up PRO's within eighteen months of its entry into force. As the new legislation is expected to be adopted by the end of 2022, this means that PRO's for non-household packaging will be in place by mid-2024 at the latest (MITECO, 2022).

Summary result

All main packaging fractions([a]) are covered by EPR schemes but none or only one covers household and non-household packaging	The PRO's for cans, plastic, beverage cartons, paper and carboard, and glass packaging only cover household packaging. EPR schemes that cover non-household sources are currently limited to medicine containers and agricultural plant protection and fertilizer products packaging, of all packaging material types. However, the new Spanish packaging legislation aims to introduce collective EPR schemes for commercial and industrial packaging.
Robustness of the underlying information	Credible information obtained from packaging PROs official websites and from the Ministry for the Ecological Transition and the Demographic Challenge.

([a]) **Note:** Paper and cardboard, Ferrous metals, Aluminium, Glass, Plastic

SRF P-5.2: Fee modulation in EPR schemes for packaging

As explained in Section 2.1.5, fee modulation (or eco-modulation) is a system with different fees for different types of packaging material and designs. The assessment is the same as described in Section 2.1.5. Details on fee modulation in Spain can be found under SRF MSWR-5.1, in section 2.1.5.

Summary result

No advanced fee modulation	Differentiated fees are applied for different packaging materials, and within a same material group (e.g. metals and plastics). Fees are calculated to cover the extra cost of the selective collection of packaging waste, and only depend on the type of material. No reference is made to any of the criteria for assessment of advanced fee modulation. However, criteria for advanced fee modulation taking into account all four assessment criteria are proposed in a draft version of the new Spanish packaging legislation currently in process.
Robustness of the underlying information	Information retrieved from the Spanish packaging PRO websites

SRF P-5.3 Material specific EPR assessment

The material specific assessment is based on a combination of the coverage of the material-specific EPR schemes and the use of fee modulation for the specific packaging material. The assessment takes the different situations for different types of materials into account: Plastics packaging is the packaging material that is the most difficult to recycle out of the packaging materials targeted by the Packaging and Packaging Waste Directive. Fee modulation therefore plays a larger role for plastic packaging than for the other materials and is therefore rated differently from paper/cardboard, ferrous metals, aluminium and glass. The methodology foresees a green score for plastics packaging only if all four fee modulation assessment criteria mentioned above are met. On the other hand, wooden packaging is mainly generated by commercial and industrial sources and fee modulation is less relevant, therefore the methodology only relies on EPR schemes for wooden packaging from commercial and industrial sources.

Summary result

SRF P-5.3.1 EPR scheme for paper and cardboard packaging waste	EPR scheme covering only household packaging	Spain has an EPR scheme in place covering household paper and cardboard packaging, as well as EPR schemes covering agricultural packaging of all packaging material types. In the future, the application of the EPR will be extended to commercial and industrial packaging.
SRF P-5.3.2 EPR scheme for ferrous metals packaging waste	EPR scheme covering only household packaging	Spain has an EPR scheme in place covering household metal packaging, as well as EPR schemes covering agricultural packaging of all packaging material types. In the future, the application of the EPR will be extended to commercial and industrial packaging.
SRF P-5.3.3 EPR scheme for aluminium packaging waste		
SRF P-5.3.4 EPR scheme for glass packaging waste	EPR scheme covering only household packaging	Spain has an EPR scheme in place covering household glass packaging, as well as EPR schemes covering agricultural packaging of all packaging material types. In the future, the application of the EPR will be extended to commercial and industrial packaging.

SRF P-5.3.5 EPR scheme for plastic packaging waste	EPR scheme covering only household packaging	Spain has an EPR scheme in place covering household plastic packaging, as well as EPR schemes covering agricultural packaging of all packaging material types. In the future, the application of the EPR will be extended to commercial and industrial packaging.
SRF P-5.3.6 EPR scheme for Wooden packaging waste	No EPR scheme	Spain has no EPR scheme in place covering wooden household packaging. EPR schemes covering agricultural packaging consider all packaging material types. In the future, the application of the EPR will be extended to commercial and industrial packaging.
Robustness of the underlying information		Credible information received from the Spanish authorities through the EEA-ETC/WMGE questionnaire.

2.3 Target on landfill of municipal waste

2.3.1 Current situation and past trends

SRF LF-1.1: Distance to target

The Landfill Directive (1999/31/EC), as amended by Directive 2018/850, sets a target to reduce, by 2035, the amount of municipal waste landfilled to 10 % or less of the total amount of municipal waste generated (by weight).

Data to show the current rate of landfilling in line with the reporting rules will only be reported by mid-2022. Therefore, this analysis calculates the landfilling rate based on the current Eurostat dataset *Municipal waste by waste management operations [env_wasmun]*; by dividing the amount of landfilled waste by the total amount of waste generated. The overall landfilling rate of Spain was 52.0 % in 2020. About 74 % of all MSW that is landfilled in Spain, consists of reject from various waste treatment processes; the remaining 26 % is residual MSW that is directly landfilled without any pre-treatment (Ministry for the Ecological Transition and the Demographic Challenge, 2021).

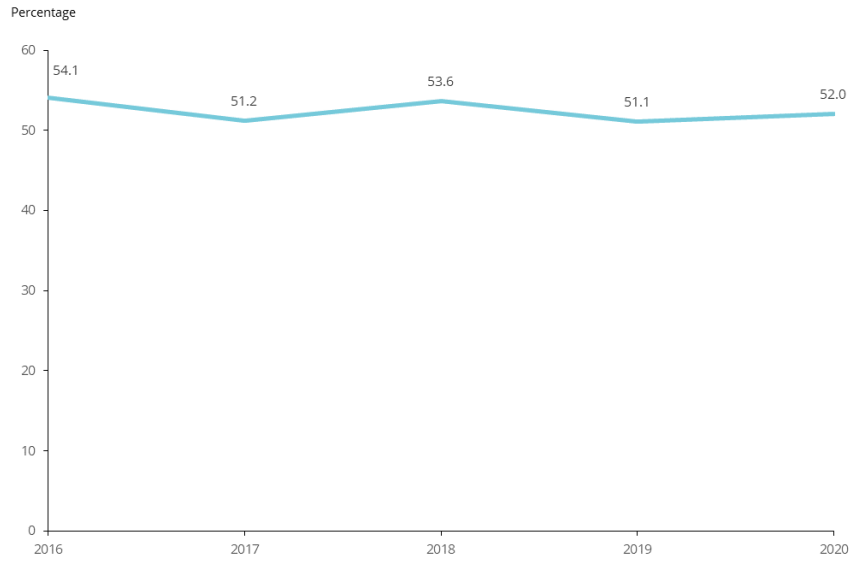
Summary result

Distance to target > 20 percentage points, or no data reported	The distance to the target is 42.0 percentage points with a landfilling rate of 52.0 % in 2020.
Robustness of the underlying information	The data is derived from Eurostat and is considered to be rather robust. However, the reported landfill rate might increase once the new calculation rules laid down in the Commission Implementing Decision (EU) 2019/1885 will be applied. Based on the available information, it is currently not possible to quantify the impact of the new calculation rules on the landfill rate.

SRF LF-1.2: Past trend in municipal solid waste landfill rate

Over the past five years, the overall landfilling rate of Spain has not changed substantially (Figure 2.4).

Figure 2.4 Landfilling in Spain between 2016 and 2020, in percentage



Source: Eurostat (2022b)

Note: Data for 2020 are flagged as estimates.

Summary result

Landfill rate in 2020 > 25% and decrease in last 5 years < 15 percentage points	The landfilling rate in 2020 was 52.0 % with only a minor change over the past five years
Robustness of the underlying information	There are no breaks in the time series data.

SRF LF-1.3: Diversion of biodegradable municipal waste from landfill

According to Art. 5(2c) of the EU Landfill Directive, Member States had to ensure that by 2016, biodegradable municipal waste going to landfills is reduced to 35 % of the total amount (by weight) of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available

Spain generated about 12 million tonnes of biodegradable municipal waste in the reference year. Of this weight, 32 % was still landfilled in 2016, so reaching the target of 35 %. Later, further reductions were reported, with 31 % in 2018 and 29 % in 2019 (EC, 2022). This reduction was mainly achieved through pre-treatment of mixed municipal waste in MBT plants.

Summary result

Target for reducing the amount of biodegradable municipal waste (BMW) landfilled to 35% of BMW generated in 1995 has been achieved in 2016	32 % of the reference weight of biodegradable municipal waste for Spain was landfilled in 2016, so the target has been reached.
Robustness of the underlying information	Data reported by the Spanish authorities to the European Commission.

3 Conclusion

This risk assessment indicates whether Spain is at risk of not meeting the targets. The 'total risk' categorization is the result of the sum of the individual scores of each SRF as described in the previous chapter, where the assessment of each SRF results in a score of **2 points (green), 1 point (amber) or 0 points (red)**, depending on the assessment of the SRF. As some SRFs are considered to have a higher impact on meeting the target, the score of the SRF is multiplied by the defined weight of the SRF. As some SRFs might not be applicable to Spain, only the SRFs relevant to Spain are taken into account to define the maximum score. Spain is considered to be 'not at risk' if its score is 50 % or more of this maximum score, and 'at risk' if its score is less than 50 % of the maximum score.

3.1 Prospects for meeting the recycling target for municipal solid waste

23% **of maximum score**	Based on the provided information and the analysis done, it is concluded that Spain is **at risk for not meeting the MSW recycling target in 2025**.
Current situation and past trends:	Based on currently available data Spain's recycling rate lies at 36.4 %, 18.6 percentage points below the 2025 target. If 2019 data is used for the assessment given that the 2020 data is still an estimate, the distance to the target would be 17 percentage points. Considering however the impact of the new calculation rules, it is likely that the recycling rate was even lower. The recycling rate has only slightly improved over the last five years, so the pace of improvement needs speeding up considerably.
Legal instruments:	The new Law on Waste and Contaminated Soil for a Circular Economy transposed the modifications introduced by Directive (EU) 2018/851 on waste, was approved by the Spanish Congress in March 2022, almost two years after the deadline of 5th of July 2020.,
Economic instruments:	At current, only 16 out of 9 000 municipalities had PAYT schemes in place, so little or no incentives are provided for the citizens to prevent (residual) waste generation. The new Law on Waste and Contaminated Soil for a Circular Economy introduces elevated national landfill and incineration taxes, however without escalator mechanisms. Regional authorities (autonomous communities) can increase these taxes in their respective regions.
Separate collection systems:	A mix of high-density bring point and door-to-door collection systems are used with very high coverage across the country for paper and cardboard, metals, plastics and glass, but limited to packaging waste only for metals and plastics. Currently, not more than 10 % of the organic fraction of MSW generated in Spain is separately collected. At the same time, bio-waste accounts for 47.2 % of the total volume of mixed residual waste collected in Spain. Door-to-door collection of bio-waste is limited to a few Autonomous Communities and municipalities. The new Law on Waste and Contaminated Soil for a Circular Economy establishes separate

	collection of biowaste to be nation-wide as from 31 December 2023, but there seem to be no national requirements on the coverage and convenience levels of the collection systems, the implementation of which falls under the responsibility of the local authorities.
Extended producer responsibility:	Differentiated fees are applied for different packaging materials in order to cover the extra cost of the selective collection of packaging waste, but they lack granularity and only depend on the type of material.
Bio-waste treatment capacity and quality management:	If the separate collection of organic waste could be increased substantially over the next years, there seems to be a considerable lack of capacity to treat a significant part of the 8.3 million tons of potentially generated bio-waste that is currently being collected as part of the residual, mixed MSW. A more comprehensive assessment of the corresponding needs would require the provision of additional quantitative information on existing, planned or projected biowaste treatment capacity. Through the 2021 Recovery and Resilience Plan for Spain, earmarked funding has been made available for extending treatment capacity for bio-waste.

3.2 Prospects for meeting the recycling target for packaging waste

59 % **of maximum score**	Based on the provided information and the analysis done, it is concluded that Spain is **not at risk for not meeting the 65 % recycling target for total packaging waste in 2025**	
47 % of maximum score	Paper and cardboard packaging	At risk
67 % of maximum score	Ferrous metals packaging	Not at risk
44 % of maximum score	Aluminium packaging	At risk
63 % of maximum score	Glass packaging	Not at risk
41 % of maximum score	Plastics packaging	At risk
63 % of maximum score	Wooden packaging	Not a risk
Current situation and past trends:	Spain reports recycling rates for all packaging materials above the targets, except for paper and cardboard and aluminium. When the impact of the application of the new reporting rules is estimated, the distance to the target for plastics, aluminium and paper and cardboard packaging lies above 5 percentage points. There are however some challenges to overcome in order to maintain this situation. An unfortunate trend is observed with regard to the recycling rate for paper and cardboard packaging, which has decreased by 4 percentage points over the last five years.	

	It is possible there is some degree of underreporting of the generated packaging waste, related to the use of industry declarations to obtain data on packaging waste generated for packaging other than glass, while no general estimates are used to improve coverage of data on packaging waste generated.
Legal instruments:	The revised Packaging and Packaging Waste Directive has not been fully transposed into national law yet. The responsibility for reaching the targets is set on PROs. Objectives and targets are set in Royal Decrees, per material type. The new Law on Waste and Contaminated Soil for a Circular Economy updates the existing sanctioning regime. Under current legislation, the obligation of separate collection also applies to non-household packaging waste, of all material types. At present, this obligation is the responsibility of the final holder of the packaging waste. Under the new Law on Waste and Contaminated Soil for a Circular Economy, all kinds of packaging, including industrial and commercial packaging, will however also be mandatorily covered by extended producer responsibility (EPR) schemes, whereas such coverage now is only mandatory for agricultural plant protection products packaging, of all material types, and voluntary for all other.
Economic instruments:	No DRS systems are in place in Spain. A DRS for single use plastic bottles will be introduced if the 2023 or 2027 objectives as set in the new Law on Waste and Contaminated Soil for a Circular Economy are not met, and a draft version of the newly proposed Spanish packaging legislation establishes that to guarantee the technical, environmental, and economic viability of the implementation of DRS, cans and cartons for beverages will be included in the system. The new Law on Waste and Contaminated Soil for a Circular Economy also introduces a national tax of 0.45 EUR/kg of non-recycled plastic contained in non-reusable plastic packaging. The new Law on Waste and Contaminated Soil for a Circular Economy introduces elevated national landfill and incineration taxes, however without escalator mechanisms. Regional authorities (autonomous communities) can increase these taxes in their respective regions.
Separate collection systems:	High convenience collection systems have been rolled out over the whole territory for household packaging. For industrial and commercial packaging waste, the separate collection obligations currently fall on the final holder of the packaging waste. The initial producer or other holder of non-hazardous commercial waste must also separate paper, metals, plastic and glass waste at source.

Extended producer responsibility:	The PRO's for cans, plastic, beverage cartons, paper and carboard, and glass packaging only cover household packaging. EPR schemes that cover non-household sources are limited to medicine containers and agricultural plant protection and fertilizer products packaging, of all packaging material types. In the future, the application of the EPR will be extended to commercial and industrial packaging.

3.3 Prospects of meeting the landfill of municipal waste target

14 % **of maximum score**	Based on the provided information and the analysis done, it is concluded that Spain is **at risk for not meeting the 2035 target to reduce the amount of municipal waste landfilled to 10 % or less of the total amount of municipal waste generated.**
Current situation and past trends:	Based on currently available data, Spain's landfilling rate lies at 52 %, so the distance to the 2025 target is 42 percentage points. Very little progress in reducing the landfill rate was made over the past 5 years.
Diversion of biodegradable municipal waste from landfill:	32 % of the reference weight of biodegradable municipal waste for Spain was landfilled in 2016, decreasing to 29 % in 2019. This was mainly achieved by pre-treatment of mixed municipal waste.

List of abbreviations

Abbreviation	Name
BMW	Biodegradable Municipal Waste
CAS	Civic Amenity Site
DRDPPW	Draft Royal Decree on Packaging and Packaging Waste
DRS	Deposit Return System
EC	European Commission
EEA	European Environment Agency
Eionet	European Environmental Information and Observation Network
EPR	Extended producer responsibility
ETC/CE	European Topic Centre on Circular Economy and resource use
ETC/WMGE	European Topic Center / Waste and Materials in a Green Economy
HDPE	High-density polyethylene
LDPE	Low-density polyethylene
MBT	Mechanical biological treatment
MS	Member state
MSW	Municipal solid waste
NWMP	The National Waste Management Plan
PAYT	Pay-as-you-throw
PET	Polyethylene terephthalate
PPWD	Packaging and Packaging Waste Directive
PRO	Producer Responsibility Organisation
RR	Recycling rate
SRF	Success and risk factor
TOC	Total organic carbon
VAT	Value Added Tax
WEEE	Waste Electric and Electronic Equipment
WFD	Waste Framework Directive

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Annex 1 Implementation of previous early warning recommendations

Recommendations on separate collection

1) Introduction of compulsory separate collection of food and garden waste in national legislation, accompanied by a set of qualitative criteria, such as minimum collection rates and minimum collection quality standards (e.g. minimum frequency of collection or maximum plastic contamination rate).

The new Law 7/2022 on Waste and Contaminated Soil for a Circular Economy includes the extension of the obligation of separate collection of bio-waste to the entire national territory. Furthermore, a maximum percentage was set for non-targeted materials in separately collected biowaste, of 20% from 2022 and 15% from 2027, and the possibility was opened for establishing maximum impurity levels for other waste fractions too. In case of exceedance, legal sanctions will be applicable.

2) Introduction of binding separate collection targets at municipal level, with penalties for non-compliance to enforce them

The State Waste Management Framework Plan 2016-2022 (PEMAR) transferred the obligation to fulfil the collection targets to the regional authorities (autonomous communities). This obligation has been reinforced in the text of the new Law 7/2022 on Waste and Contaminated Soil for a Circular Economy, which also establishes that the autonomous communities (CCAA) will be entitled to determine the contribution of local authorities to the achievement of these targets. Failure to comply with the provisions of the law is subject to specified sanctions.

Recommendations on economic instruments

3) Introduction of mandatory municipal waste charges for households, accompanied by an indication of the minimum cost recovery level for waste management. These financial resources should support the necessary changes in waste collection and treatment.

In the case of municipal waste management costs, the new Law 7/2022 on Waste and Contaminated Soil for a Circular Economy states in its article 13 (translated) that '*In the case of waste management costs of local competence, […] local entities will establish, within three years from the entry into force of this law, a rate or, where appropriate, a non-tax, specific, differentiated and non-deficit public patrimonial benefit, which allows the implementation of payment systems for generation and that reflects the real cost, direct or indirect, of the waste collection, transport and treatment operations*' As of April 2022, this recommendation is considered as implemented.

4) Introduction of a harmonised taxation scheme for waste disposal (i.e. landfill and incineration) operating across all Autonomous Communities.

The new Law on Waste and Contaminated Soil for a Circular Economy introduces a harmonized tax on landfilling and incineration, applicable throughout the national territory.

Recommendations on monitoring

5) Publication by the Ministry of Agriculture, Fishing, Food and Environment of an annual review of municipal waste management in each region, including:

- *regional performance in terms of recycling rates and distance to target;*
- *operational measures implemented in the waste sector;*
- *investments in the waste sector;*
- *economic and legal instruments put in place by the regions.*

The 2019 annual report published on the website of the Ministry (Ministerio para la Transición Ecológica, nd), provides figures on the regional performance in terms of separate collection, recycling rates, and distance to target, but does not include information on operational measures, investments and economic and legal instruments put in place by the regions. Therefore, this recommendation is considered as partially implemented.

6) Collection of the information by the Ministry on commercial waste that is privately managed and could contribute to the overall municipal waste recycling rate.

Currently, regional authorities with waste management competences are in process to collect information on commercial waste. An electronic information system on waste, harmonized at national level, is under development, and would include information on privately managed commercial waste. Therefore, the recommendation is considered as in process of implementation.

Recommendations on technical support to municipalities

7) Development of a system at national level that provides technical support for municipalities, specifically in the following areas:

a) choosing collection services;
b) service procurement;
c) service management;
d) communication campaigns;

coupled with active sharing of good ideas and practices that can improve efficiency in terms of cost reduction and improvement in performance.

Since 2017, the European Commission has provided expertise to help design reform projects in Member States through the Structural Reform Support Programme (SRSP). As of 2021, the Technical Support Instrument (TSI), its successor, continues to support reforms with an emphasis on the green and digital transitions. The TSI also supports the preparation and implementation of Member States' Recovery and Resilience Plans (European Commission, 2021). In this context, Spain has been granted funding for an initiative that supports the implementation of improved recycling collection and treatment systems at the municipal level.

In addition, various studies have been carried out on specific issues that may provide technical support to municipalities, such as the following:

- Waste management systems in island areas;
- Waste management systems in rural areas;
- Collection and recycling of waste paper generated in Universities:

Recommendations on communication and awareness-raising programmes

8) Development of a set of national communications materials addressed to the public for use at local level, with clear and consistent messages. These materials should be used as part of awareness-raising campaigns, in leaflets, and at civic amenity sites.

A single example of a national communication material for awareness raising was provided, referring to a poster on the measures to reduce the use of single use plastic bags. National awareness campaigns on plastic waste and on circular economy, the latter including recommendations for improving source separation of waste, are being planned.

Annex 2 Detailed scoring of success and risk factors

Assessment sheet - Recycling target for municipal waste

MS Spain

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
MSWR-1.1	Distance to target	Distance to target > 15 percentage points or no data reported	5	0
MSWR-1.2	Past trends in municipal solid waste recycling rate	RR < 45% and increase in last 5 years < 10 percentage points	1	0
Legal instruments				
MSWR-2.1	Timely transposition of the revised WFD into national law	Transposition with delay of > 12 months, or no full transposition yet	1	0
MSWR-2.2	Clearly defined responsibilities for meeting the targets and support and enforcement mechanisms	Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets OR Unclear responsibilities but clearly defined enforcement mechanisms and a good set of support tools for meeting the recycling targets OR Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	1	1
Economic instruments				
MSWR-3.1	Taxes and/or ban for landfilling residual or biodegradable waste	Yes, taxes > 30 EUR/t*	1	1
MSWR-3.2	Taxes on municipal waste incineration	Taxes > 7 EUR/t*, but without escalator	1	1
MSWR-3.3	Pay-as-you-throw (PAYT) system	No or less than 50% of the population covered by PAYT	1	0

Separate collection systems				
MSWR-4.1	Convenience and coverage of separate collection systems for the different household waste fractions			
	Paper and cardboard	A high share of the population is covered by high convenience collection services	0.46	0.92
	Metals	A high share of the population is covered by high convenience collection services	0.08	0.16
	Plastics	A high share of the population is covered by high convenience collection services	0.28	0.56
	Glass	A high share of the population is covered by high convenience collection services	0.18	0.36
	Bio-waste	A low share of the population is covered by high convenience collection services	0.84	0
	Wood	A high share of the population is covered by high convenience collection services	0.06	0.12
	Textiles	A low share of the population is covered by high convenience collection services	0.06	0
	WEEE	Medium convenience collection services dominate	0.04	0.04
MSWR-4.2	Firm plans to improve the convenience and coverage of separate collection systems for the different household waste fractions			
	Paper and cardboard	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.23	0
	Metals	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.04	0
	Plastics	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.14	0
	Glass	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.09	0
	Bio-waste	There are plans to improve the collection service but unclear plan for implementation	0.42	0.42
	Wood	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.03	0
	Textiles	There are plans to improve the collection service but unclear plan for implementation	0.03	0.03
	WEEE	There are plans to improve the collection service but unclear plan for implementation	0.02	0.02

Extended producer responsibility (EPR) and similar schemes				
MSWR-5.1	Fee modulation in EPR schemes for packaging	No advanced fee modulation OR fee modulation meets less than two assessment criteria	1	0
Bio-waste treatment capacity and quality management				
MSWR-6.1	Capacity for the treatment of bio-waste	Bio-waste capacity below 80% of generated municipal bio-waste but firm plans to close the gap	1	1
MSWR-6.2	Legally binding national standards and Quality Management System for compost/digistate	Legally binding national standards for compost/digestate quality but no quality management system	1	1
			Total score	**7.63**
			Maximum score	32.94
				23%

Assessment sheet - Recycling target for packaging waste

MS Spain

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
P-1.1	Distance to target - Overall packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Paper and cardboard packaging	5 - 15 percentage points below target	5	5
	Distance to target - Ferrous metals packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Aluminium packaging	5 - 15 percentage points below target	5	5
	Distance to target - Glass packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Plastics packaging	5 - 15 percentage points below target	5	5
	Distance to target - Wooden packaging	< 5 percentage points below target, or target exceeded	5	10
P-1.2	Past trends in packaging waste recycling rate	RR > 60% and increase in last 5 years < 5 percentage points, or RR > 55%, and increase in last 5 years < 10 percentage points, or RR < 55% and increase in last 5 years > 10 percentage points	1	1
	Past trends in paper and cardboard packaging recycling	RR > 70% and increase in last 5 years < 5 percentage points, or RR > 65%, and increase in last 5 years < 10 percentage points, or RR < 65% and increase in last 5 years > 10 percentage points	1	1
	Past trends in ferrous metals packaging recycling	RR > 65% and increase in last 5 years > 5 percentage points, or RR > 60% and increase in last 5 years > 10 %, or RR > 70%	1	2
	Past trends in aluminium packaging recycling	RR > 45% and increase in last 5 years < 5 percentage points, or RR > 40%, and increase in last 5 years < 10 percentage points, or RR < 40% and increase in last 5 years > 10 percentage points	1	1
	Past trends in glass packaging recycling	RR > 65% and increase in last 5 years > 5 percentage points, or RR > 60% and increase in last 5 years > 10 %, or RR > 70%	1	2

	Past trends in plastic packaging recycling	RR > 45% and increase in last 5 years < 5 percentage points, or RR > 40%, and increase in last 5 years < 10 percentage points, or RR < 40% and increase in last 5 years > 10 percentage points	1	1
	Past trends in wooden packaging recycling	RR > 20% and increase in last 5 years > 5 percentage points, or RR > 15% and increase in last 5 years > 10 %, or RR > 25%	1	2
Legal instruments				
P-2.1	Timely transposition of the revised Packaging and Packaging Waste Directive into national law	Transposition with delay of > 12 months, or no full transposition yet	1	0
P-2.2	Clearly defined responsibilities for meeting the targets and support and enforcement mechanisms	Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets OR Unclear responsibilities but clearly defined enforcement mechanisms and a good set of support tools for meeting the recycling targets OR Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	1	1
Economic instruments				
P-3.1	Taxes and/or ban for landfilling residual or biodegradable waste	Taxes > 30 EUR/t*	1	1
P-3.2	Taxes on municipal waste incineration	Taxes > 7 EUR/t*	1	1
P-3.3	Packaging taxes	Limited packaging tax	1	1
P-3.4	Pay-as-you-throw (PAYT) system	No or less than 50% of the population covered by PAYT	1	0
P-3.5	Deposit-return systems for aluminium drink cans	No or voluntary DRS for some drink cans	1	0
	Deposit-return systems for glass drink bottles	No or voluntary DRS for some drink bottles	1	0
	Deposit-return systems plastic drink bottles	No or voluntary DRS for some drink bottles	1	0
	Deposit-return systems for plastic crates	No or voluntary DRS for some plastic crates	1	0
	Deposit-return systems for wooden packaging	No or voluntary DRS for some wooden packaging	1	0

Separate collection systems				
P-4.1	Convenience and coverage of separate collection systems for the different packaging waste fractions			
	Paper and cardboard packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Paper and cardboard packaging (non-household)	Separation at source is mandatory for non-household paper and cardboard packaging waste	1	2
	Ferrous metals packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Ferrous metals packaging (non-household)	Separation at source is mandatory for non-household ferrous metals packaging waste	1	2
	Aluminium packaging	A high share of the population is covered by high convenience collection services	2	4
	Glass packaging (household)	A high share of population is covered by high convenience collection services	1	2
	Glass packaging (non-household)	Separation at source is mandatory for non-household glass packaging waste	1	2
	Plastics packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Plastics packaging (non-household)	Separation at source is mandatory for non-household plastic packaging waste	1	2
	Wooden packaging	Separation at source is mandatory for non-household wooden packaging waste	2	4
P-4.2	Firm plans to improve the convenience and coverage of separate collection systems for the different packaging waste fractions			
	Paper and cardboard (household)	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	0.5	0
	Paper and cardboard (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Ferrous metals packaging (household)	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	0.5	0
	Ferrous metals packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Aluminium packaging	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	1	0
	Glass packaging (household)	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.5	0
	Glass packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0

	Plastics packaging (household)	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.5	0
	Plastics packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Wooden packaging	N/A (for countries already having mandatory sorting at source)	1	0
Extended producer responsibility (EPR) and similar schemes				
P-5.1	Coverage of EPR schemes	Not all main packaging fractions* are covered by EPR schemes OR All main packaging fractions are covered by EPR schemes but none or only one covers household and non-household packaging	1	0
P-5.2	Fee modulation in EPR schemes for packaging	No fee modulation OR fee modulation meets less than two assessment criteria	1	0
P-5.3	Material specific EPR assessment - Paper and cardboard packaging waste	No EPR scheme or EPR scheme covering only household, industrial OR commercial packaging	1	0
	Material specific EPR assessment - Ferrous metals packaging waste	No EPR scheme or EPR scheme covering only household OR non-household packaging	1	0
	Material specific EPR assessment - Aluminium packaging waste	No EPR scheme or EPR scheme covering only household OR non-household packaging	1	0
	Material specific EPR assessment - Glass packaging waste	No EPR scheme or EPR scheme covering only household OR non-household packaging	1	0
	Material specific EPR assessment - Plastics packaging waste	No EPR scheme or EPR scheme covering only household, industrial OR commercial packaging OR EPR scheme but without fee modulation	1	0
	Material specific EPR assessment - Wooden packaging waste	No EPR scheme or EPR scheme covering only industrial OR commercial packaging	1	0
Total packaging recycling target				**19.00**
			Maximum score	32.00
				59%

Paper and cardboard recycling target

Total score	**14.00**
Maximum score	30.00
	47%

Ferrous metals packaging recycling target

Total score	**20.00**
Maximum score	30.00
	67%

Aluminium packaging recycling target

Total score	**14.00**
Maximum score	32.00
	44%

Glass packaging recycling target

Total score	**20.00**
Maximum score	32.00
	63%

Plastics packaging recycling target

Total score	**14.00**
Maximum score	34.00
	41%

Wooden packaging recycling target

Total score	**20.00**
Maximum score	32.00
	63%

Assessment sheet - Target for landfilling of municipal waste

MS Spain

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
LF-1.1	Distance to target	Distance to target > 20 percentage points, or no data reported	5	0
LF-1.2	Past trends in municipal solid waste landfill rat	Landfill rate in 2020 > 25% and decrease in last 5 years < 15 percentage points	1	0
LF-1.3	Diversion of biodegradable municipal waste from landfill	Target for reducing the amount of biodegradable municipal waste (BMW) landfilled to 35% of BMW generated in 1995 has been achieved in 2016 or in the year specified in the derogation where applicable	1	2
			Total score	**2.00**
			Maximum score	14.00
				14%