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



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# 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 Poland. 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 Poland 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 Poland 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 Poland to achieve the overall packaging waste and specific packaging materials' recycling targets for 2025. Chapter 2.3 examines the prospects for Poland 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

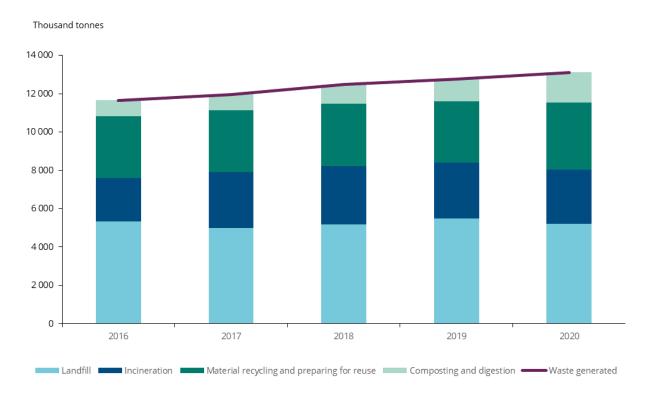
It should be noted that this assessment relies on the data reported on a voluntary basis by Member States to Eurostat under the Joint OECD/Eurostat questionnaire, not on the data that Member States report to the European Commission for verifying compliance with the target of Art. 10(2) Waste Framework Directive to recycle and prepare for 50 % of municipal waste (specific types of household and similar wastes) by 2020, following the reporting rules defined in the European Commission Implementing Decision 2011/753/EU. The reason for this choice is that Member States can choose between four different methodologies to verify compliance with the 2020 target, rendering the data difficult to compare between Member States. Data that correspond to the reporting rules for the 2025 target (Commission Implementing Decision (EU) 2019/1004) is due to be reported by 30 June 2022 and was thus not yet available at the time of writing of this assessment.

Poland has shown an increasing municipal waste generation over the past five years, with around 13.1 million tonnes of municipal waste in 2020 (Figure 1.1). This corresponds to 346 kg/cap, which is well below the (estimated) EU average of 505 kg/cap. For Poland, the waste generation before 2020, and treatment figures reported for reference years 2015-2019 for different recycling, recovery and disposal categories are flagged as estimates in Eurostat's database. According to the Ministry of Climate and Environment (2021), however, from 2014 onwards the waste generation data should not be flagged as estimated any more, as they cover waste collected from the total population, without estimates used. In addition, as described in the Eurostat methodology, the amount of waste treated in final treatment operations should be reported as amount of municipal waste by waste management. Therefore, the amount of waste which properties are modified in pre-treatment operations (and is no longer considered as municipal waste) has been later additionally estimated since 2017. (Ministry of Climate and Environment, 2021)

The country still relies strongly on landfilling; although its share has decreased by 6 percentage points since 2016, it was still 39.8 % in 2020. At the same time, the share of waste incineration has increased from 19.4 % to 21.5 %. The overall recycling rate has increased only by 3.9 percentage points during the five-year period considered, from 34.8 % to 38.7 % (Data reported according to Art. 10(2) WFD indicate a recycling rate of 36 % for 2019). The increase is caused by composting and digestion, of which the share has increased by 5 percentage points. The share of material recycling has decreased by 1.2 percentage point, from 27.8 % to 26.7 %. In the report by the EC (2019b), it is stated that despite the efforts made, Poland continues to have problems with illegal landfilling and waste dumping.

In 2016, the National Waste Management Plan (NWMP) 2022 was adopted in Poland. According to the EC (2019b), separate waste collection and recycling are in the focus of the NWMP and regional plans. To obtain these targets, the NWMP proposed large-scale investments in certain collection sites, separate collection, and conversion of MBT plants to sort separately collected dry recyclables fractions and compost bio-waste. According to the Ministry of Climate and Environment (2021), the process of conversion of MBT plants has already started. In addition, investments in additional waste-to-energy or co-incineration capacities are foreseen, with a limitation of the municipal waste incineration capacity (including co-incineration) to 30 %. The EC (2019b), however, notes that there may be increased pressure in the future to invest in larger energy recovery capacity to be used as a treatment method for the outputs generated in numerous residual waste facilities.

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



**Note**: Data for all treatment options for 2016-2019 and for waste generated for 2016-2017 are flagged as estimates

Source: Eurostat (2022a)

Today, Poland has eight municipal waste incinerators in operation, located in Konin, Poznań, Białystok, Bydgoszcz, Kraków, Warszawa, Szczecin and Rzeszów, with a permitted total annual capacity of 1 185 000 tonnes (Ministry of Climate and Environment, 2022c). The capacity has increased significantly during the past years, as in 2014, Poland had only one MSW incinerator with a yearly capacity of 42 000 tonnes (EEA, 2016). According to the Report on the National Waste Management Plan for the period from 1 January 2014 to 31 December 2016, in 2016, 170 MBT plants were in operation in Poland for treatment of residual waste, with an annual capacity of 10.8 million tonnes (Ministry of Climate and Environment, 2021). This capacity is high compared to the amount of total municipal waste generated and may represent an overcapacity that might hamper the efforts to increase recycling. According to the Ministry of Climate and Environment (2021), however, a reduction in the share of residual MSW in the entire stream of collected waste is described in the NWMP 2022 (with a simultaneous increase in the share of separately collected fractions). As a result, Poland's policy regarding the further development of the MBT facilities assumes the conversion of the plants to be able to sort separately collected fractions of dry recyclables and compost bio-waste. In addition, new installations for automated sorting (cleaning) of separately collected waste paper, plastic, multimaterial waste, metals, as well as retrofitting some existing sorting installations are recommended in the NWMP. Currently, data on the amounts of the recyclables extracted from residual waste are not available. (Ministry of Climate and Environment, 2021)

#### Legal Framework

Poland has renewed its waste legislation recently to comply with the EU waste legislation, and the transposition of the revised Waste Framework Directive and the revised Packaging and Packaging

Waste Directive was notified in December 2021. Polish acts are adopted by the Parliament and signed by the President. Polish regulations are adopted and signed by ministers or adopted by the Council of Ministers and signed by the Prime Minister. The general legislative framework concerning waste and packaging is presented below:

- Act on maintaining cleanliness and order in municipalities (amended in 2021) (Council of Ministers of Poland, 2021b)
- Act on waste (last amended in 2021) (Council of Ministers of Poland, 2013)
- Act on the management of packaging and packaging waste (last amended in 2021) (Marshal of Polish Parlament, 2021)
- Regulation on separate collection of municipal waste (Minister of Climate and Environment, 2021a)
- Regulation on the method of calculating the rates of preparation for reuse and recycling of municipal waste (Minister of Climate and Environment, 2021b)
- Regulation on recycling fee rate (amended in 2019) (Minister of Environment of Poland, 2019)
- Regulation on product charges' rates for particular kinds of packaging (amended in 2014) (Minister of Environment of Poland, 2014)
- Act on the obligations of entrepreneurs with regard to the management of some waste and on product fee (amended in 2020) (Marshal of Polish Parlament, 2020)
- Act on the prevention of food waste (2019) (Council of Ministers of Poland, 2019); and
- Regulation on the rates of environmental fees (amended in 2020) (Minister of Climate of Poland, 2020).

#### Waste management plan(s)

The National Waste Management Plan of Poland was approved by the Council of Ministers in July 2016 (Council of Ministers of Poland, 2016) together with an annex to this plan which was approved by the Council of Ministers in May 2021 (Council of Ministers of Poland, 2021a). The objectives and tasks presented in the NWMP 2022 relate to the years 2016 to 2022 and prospectively to 2030. The main objective of the document is to define the waste management policy compliant with the waste hierarchy and with the polluter pays principle. The goal of waste management is to reduce the amount of waste generated, and to increase recycling and reuse, to ensure rational waste management and to reduce the negative environmental impact of waste. The NWMP 2022 addresses municipal waste, hazardous waste, packaging waste, waste products such as waste oils, waste batteries and waste accumulators, WEEE, ELV; as well as municipal sewage sludge and waste subject to cross-border movement. The NWMP 2022 also includes marine litter. The NWMP 2022 describes actions necessary for the reduction of waste generation and for improvements in the structure of the waste management system. Specific measures in the NWMP 2022 include actions in environmental education, developing separate waste collection, and creation of repair and reuse networks. Methods of monitoring and evaluation of the implementation of the objectives set out in the NWMP 2022 are also defined. (Council of Ministers of Poland, 2016) The annex to the NWMP from 2021 focusses on the investments needed that will contribute to achieving the targets set by the relevant EU directives. (Council of Ministers of Poland, 2021a)

#### Implementation of previous early warning recommendations

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

#### Packaging waste generation and treatment

In Poland, around 6.5 million tonnes (172 kg/cap) of packaging waste were generated in 2019 (Figure 1.2), which is slightly below the (estimated) EU average of 177 kg/cap in the same year. Packaging waste generation has increased with around 51 % since 2010, with an increase in all packaging waste fractions. The waste generated per capita in 2019 is the highest in the period 2010-2019. Data on packaging waste generated are derived from producers and extended producer responsibility organisations (Eurostat, 2021). Between 2010 and 2019, the recycling rate for packaging waste was lowest in 2013, with 36 %. After that, it remained above 50 %, and 55 % in 2019.

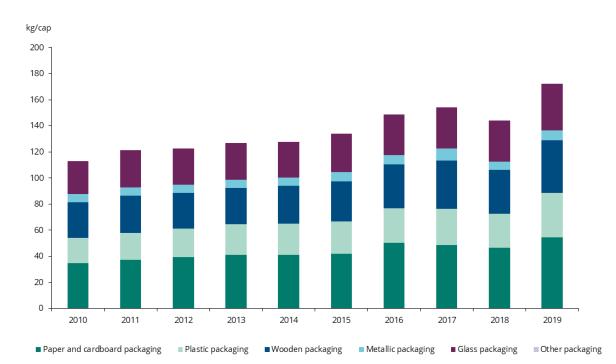


Figure 1.2 Packaging waste generation in Poland between 2010 and 2019, in kg per capita

Source: Eurostat (2022b)

#### Capture rates 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. For Poland, the composition of residual waste (%), was not available, and therefore the capture rates could not be calculated. According to the Ministry of Climate and Environment (2021), there is a project ongoing to analyse waste composition in Poland, but the results of the study are not yet available at the time of writing this assessment.

# 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 Poland 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 municipal waste recycling rate of Poland has remained rather stable between 2016 and 2019, with a slight decrease during this period with 0.7 percentage points, from 34.8 % to 34.1 %. However, in 2020 the recycling rate went up by 4.6 percentage points to 38.7 % (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.

Percentage 45 38.7 40 34.8 34.3 34.1 33.8 35 30 25 20 15 10 5 0 2016 2017 2018 2019 2020 Material recycling and preparing for reuse Composting and digesting Recycling Rate

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

**Note**: Data for all treatment options for 2016-2019 and for waste generated for 2016-2017 are flagged as estimates

Source: Eurostat (2022a).

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 that the target will be met. For Poland, the recycling rate is 38.7 % in 2020, which is below the target for 2025. The distance to the target of 55 % is 16.3 percentage points. Meeting the target will require an average increase of 3.3 percentage points annually in the period between 2020 and 2025, requiring stepping up the pace compared to the average 1.0 percentage point annual increase in the previous five-year period (2016-2020). The increase in the amount of municipal waste composted and digested is likely to reflect the introduction of separate collection of bio-waste (see Section 2.1.4).

However, the data used for this analysis are based on a different methodology than the calculation rules for the target. The Polish authorities report that the impact of the new calculation rules has not been assessed in Poland (Ministry of Climate and Environment, 2021). 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. While the effect depends on how Poland currently reports the data, an effect of a reduction with 5 percentage points is therefore assumed for this assessment, bringing the recycling rate down to 62 %. This assumption does not result in a change of the assessment for this SRF.

#### **Summary result**

Distance to target > 15 percentage points	Based on currently available data Poland's recycling rate lies at 38.7 %, 16.3 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 33.7 %, 21.3 percentage points below the target.
Robustness of the underlying information	Poland has not assessed the impact of the new calculation rules on the recycling rate. A recycling rate below the currently reported one is likely if these were taken into account, but would not result in a change in the assessment for this SRF.

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

The recycling rate over the past five years shows an increase with 3.9 percentage points (Figure 2.1). This indicates that the efforts made over the last years to increase recycling in Poland have not been effective enough. At the same time, the generation of municipal solid waste has continued to increase.

#### **Summary result**

RR < 45 % and increase in last 5 years < 10 percentage points	The recycling rate has increased by 3.9 percentage points over the past five years. For Poland, the application of the new calculation rules would result in an estimated recycling rate of 33.7 %.
Robustness of the underlying information	There are no breaks in the time series data.

#### 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.

Poland has notified the full transposition of the revised Waste Framework Directive in December 2021. The national EPR system for packaging and packaging waste will be adapted by 5 January 2023, as required in the Waste Framework Directive. (Ministry of Climate and Environment, 2021)

#### **Summary result**

Transposition with delay of > 12 months	The WFD has been transposed into Polish national law with a delay of more than 12 months.
Robustness of the underlying information	Credible information received from Polish authorities and the European Commission (status as of 12 November 2021).

# 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 the accountability for failing the targets are, the higher the chance that the targets will be met.

The Ministry of Climate and Environment is responsible for the development, implementation and monitoring of national waste management policies and plans, and for preparing national waste legislation. The Ministry of Economic Development and Technology supports the Ministry of Climate and Environment in implementing waste regulations. Poland is divided into 16 voivodeships (regions), whose administrations prepare regional waste management plans and issue the majority of waste treatment permits. (Ministry of Climate and Environment, 2021)

As described by the Ministry of Climate and Environment (2021), the recycling policy for MSW is in the responsibility of municipalities. The responsibilities of the municipalities are defined in national legislation. Municipalities shall organise the municipal waste management system within their area covering all property owners. In addition, municipalities should establish civic amenity sites located in a way that provides an easy access for all residents. Municipalities are responsible for waste collection from the properties, and operation of the civic amenity sites. The waste collection is organised by municipal companies and private operators. The Act on maintaining cleanliness and order in municipalities sets an obligation for municipalities to collect at least paper, metal, plastic, glass, multimaterial packaging, and biodegradable waste separately at source. There are minimum requirements defined for the municipalities to follow, for example as regards to collection frequency and convenience of bring points. In addition, recycling and recovery targets for municipalities are defined in the same Act. (Ministry of Climate and Environment, 2021)

Municipalities are obliged to attain targets concerning the rates of preparation for reuse and recycling of municipal waste. Poland has introduced partial targets giving municipalities time to better organise their systems and infrastructure in order to attain the targets of the EU Waste Framework Directive. These partial targets are defined as follows (Ministry of Climate and Environment, 2022c):

- 20% year 2021;
- 25% year 2022;
- 35% year 2023;
- 45% year 2024;
- 55% year 2025;
- 56% year 2026;
- 57% year 2027;
- 58% year 2028;
- 59% year 2029;
- 60% year 2030;
- 61% year 2031;
- 62% year 2032;
- 63% year 2033;
- 64% year 2034;
- 65% year 2035 and following years.

Fines are imposed for not meeting the targets. These fines are calculated by multiplying the unit rate of the landfilling fee for residual municipal waste, with the missing weight of municipal waste required to obtain the appropriate level of recovery and recycling target. According to the Ministry of Climate and Environment (2021), problems regarding the application of this provision have not been reported. The fine is similar to the landfill fee, and it is imposed by the voivodeship inspector for environmental protection. This instrument is implemented across the country. It is centrally monitored by the Ministry of Climate and Environment and Inspectorate for the Protection of Environment. Moreover, there are regional financial services who monitor and audit financial performance of municipalities. (Ministry of Climate and Environment, 2021)

The supportive measures in place described by the Polish authorities are focused on providing guidance and information. Two websites<sup>1</sup> provided by the Ministry of Climate and Environment emphasise the promotion of recycling and contain answers to frequently asked questions, educational and information materials, and downloadable digital materials (e.g. guidelines for waste sorting). The websites' target audiences are residents, entrepreneurs, and municipal authorities. In addition, good practices are shared by the Ministry of Climate and Environment, e.g. expertise concerning MSW issues. Municipalities can also ask for interpretations of regulations on the waste management system from the Ministry, which in response prepares interpretations of the rules laid down in the Acts. (Ministry of Climate and Environment, 2021)

In addition, three expert reports targeting municipalities have been prepared to provide support and guidance for operating waste management systems at municipal level (Ministry of Climate and Environment, 2021):

- The efficiency of collection systems was analysed using several criteria such as municipality type (urban, rural, urban-rural), building type (single-family, multi-family), density of buildings, and waste fractions collected;
- Recommendations for the development of a network for repair and reuse, and guidelines setting the minimum functionality aspects of separate collection points; and
- Guidelines for analysing the composition and properties of waste, and verification of results.

#### **Summary result**

Clearly defined responsibilities, enforcement mechanisms and good set of support tools for meeting the recycling targets	MSW management and recycling is the responsibility of municipalities, enforcement mechanisms for non-compliance with targets are in place, as are support mechanisms.			
Robustness of the underlying information	Credible information received from the Polish 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.

In 2019, Poland landfilled 43 % of the municipal waste generated. Poland has collected a landfill fee since 2001, but in 2018, based on the Regulation on unit rates of environmental fees, the fee was significantly increased. The fee was increased annually, being PLN 140 per tonne (corresponding to around 31 EUR/t in June 2021) in 2018, PLN 170 per tonne (corresponding to around 38 EUR/t in June 2021) in 2019, and PLN 270 per tonne (corresponding to around 60 EUR/t in June 2021) in 2020. The unit rate is indexed to the inflation index annually. There is an exemption in the tax concerning the waste from MBT with waste codes 19 05 99 and 19 06 04: in case the landfilled waste meets specific parameters (e.g. on respiration activity², ignition loss and organic carbon content) as laid down in the Regulation on unit rates of environmental fees, the fee shall be reduced to 25 % (approx. EUR 15) of the total rate. (Ministry of Climate and Environment, 2021)

naszesmieci.mos.gov.pl. and gov.pl/web/klimat/odpady

Respiration activity is a parameter expressing the oxygen demand of the waste sample during 4 days, should be below 10 mg  $O_2$ /g dry matter. The ignition loss should be less than 35%, and organic carbon content should be less than 20% dry matter.

Poland has banned landfilling of separately collected biodegradable waste in 2013. In addition, since 2016 there has been a ban on combustible waste with a total organic carbon content (TOC) above 5 %, loss of ignition (LOI) value above 8 % and calorific value exceeding 6 MJ/kg in force. (CEWEP, 2020) The ban does not apply to waste from MBT with codes 19 05 99 and 19 06 04 (stabilised waste as output of MBT treatment) (Ministry of Climate and Environment, 2021).

According to the Polish authorities, there are no changes planned to the taxation or bans (Ministry of Climate and Environment, 2021).

#### **Summary result**

Ban in place for landfilling residual or biodegradable waste	Poland has a landfill tax with an escalator and bans on landfilling separately collected biodegradable waste, and combustible waste with > 5 % TOC, > 8 % LOI, and calorific value > 6 MJ/kg. The current level of tax (2020) is PLN 270 per tonne (corresponding to 103.8 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)). A reduced landfill tax applies for MBT outputs that meet certain conditions.
Robustness of the underlying information	The information is robust, as it is based on Polish legislation.

#### SRF MSWR-3.2: Taxes on municipal waste incineration

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

Poland incinerated 23 % of the municipal waste generated in 2019. Poland has no incineration tax in place and there is no tax on waste exported for incineration. No additional taxation changes are planned on incineration either. However, waste incineration plants need to pay environmental fees for gas and dust emissions. (Ministry of Climate and Environment, 2021)

#### **Summary result**

No incineration taxes	Poland has no tax on waste incineration.
Robustness of the underlying information	The information is robust and was provided by Polish authorities through the EEA-ETC/WMGE questionnaire.

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

PAYT systems are designed to incentivise 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.

According to the Ministry of Climate and Environment (2021), Poland has a PAYT system in use, but it is targeted only to non-household waste producers. The system is based on collection frequency and declared number of bags or containers. According to a 2021 survey, out of the 1 868 responding municipalities<sup>3</sup>, around 73 % indicated to use PAYT based fees for municipal waste from non-household waste producers. (Ministry of Climate and Environment, 2021).

Poland has 2 477 municipalities – 1<sup>st</sup> January 2022 (https://stat.gov.pl/statystyka-regionalna/jednostki-terytorialne/podzial-administracyjny-polski/)

However, the *Act on maintaining cleanliness and order in municipalities* states that the Municipal Council shall determine an increased waste management fee to property owners who do not fulfil the obligation to sort municipal waste at source. In this case, the increased fee should be two to four times higher than the regular rate. Furthermore, properties home-composting bio-waste can also be given a reduced waste management fee in proportion to the reduction of the costs of municipal waste management from households. (Council of Ministers of Poland, 2021b)

There are no data about of the coverage of the PAYT system in Poland, but inspections reported by the Chief Inspectorate of Environmental Protection show that in all reviewed municipalities the delegated act to distinguish the price in 2020 was established (Głólwny Inspektor Ochrony Środowiska, 2021). The waste collector is also responsible for continuously verifying whether the owners of properties covered by the municipal system separate waste properly. If the property owner does not separate waste properly, the municipality charges an increased fee for the collection of mixed waste (Polish Ministry of Climate and Environment, 2022).

#### **Summary result**

Less than 50 % of the population covered by PAYT	According to the Polish legislation, PAYT is mandatory for non-residential properties (i.e. non-household waste generators). There are no data on the application of PAYT for households.
Robustness of the underlying information	Information received from the Polish authorities through the EEA-ETC/WMGE questionnaire, complemented with information provided by a consultant.

#### 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 km², bring points with a density of < 5 per km², 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).

According to the national waste legislation, municipalities shall organise the municipal waste management system within their area covering all property owners, and have to set up separate collection of paper and cardboard, metals, plastics, glass, multi-material packaging waste and biowaste, as well as creating easy access to collection of a range of other waste types including hazardous waste, WEEE and others (see note below Table 2.1). In addition, every shop with an area exceeding 400 square metres is obliged to collect WEEE, and batteries are also collected in every shop exceeding 25 square metres, independent of citizens buying new items. Municipalities are responsible for waste collection from the properties, and operation of the civic amenity sites. Door-to-door separate collection is mandatory for paper, metal, plastic, glass and bio-waste, but municipalities can also collect other fractions door-to-door. Food and garden waste are mainly collected together as biowaste, but there are also municipalities that collect these two fractions separately, however, no data

are available on how many municipalities decided for such a system. In a system that collects garden and food waste separately, wood waste is collected together with garden waste. (Ministry of Climate and Environment, 2021)

The whole country has a unified separate collection system, which is mandatory for every property owner. In case of failing to meet this obligation, the normal fee paid by a given property owner is multiplied (between two and four times, depending on municipality). In addition, each municipality needs to establish at least one civic amenity site within its area itself or in co-operation with another municipality. According to the Ministry of Climate and Environment (2021) there are currently only few municipalities in Poland that do not have a civic amenity site located in their area. The waste fractions collected at civic amenity sites include paper, metals, plastic, glass, multi-material packaging waste, bio-waste, hazardous waste, expired drugs and chemicals, needles and syringes, waste batteries and accumulators, WEEE, furniture and other bulky waste, used tires, C&DW, textiles and clothing waste. Municipalities can choose whether to make a distinction between the collection systems for packaging waste and non-packaging municipal waste. (Ministry of Climate and Environment, 2021)

The separate collection of recyclables originating from businesses and companies is mandatory for the same fractions as for households. According to the Act on maintaining cleanliness and order in municipalities, property owners (both households and non-households) can be imposed fines for non-compliance of the obligations, including separate collection of waste, as listed in Article 5(1). (Ministry of Climate and Environment, 2021) Table 2.1 gives an overview of the collection system in Poland.

Table 2.1 Characterisation of the collection system in Poland

	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					xx					xx			
Paper and Cardboard	xx		х	х	x	xx		х	x	х	xx		х	х
Ferrous metals		XX	Х	Х	х		XX	Х	х	Х		XX	Х	х
Aluminium		xx	х	Х	х		XX	х	х	Х		xx	Х	х
Glass	xx		х	х	х	xx		х	х	х	xx		х	х
Plastic		xx	х	х	х		xx	х	х	х		xx	х	х
Bio-waste	xx		х	х	х	xx		х	х	х	xx		х	х
food														
garden														
Textiles					х					х				х
Wood					Х				_	Х				х
WEEE				х						Х				х
Composite packaging		xx					XX					xx		
Other(a)					Х					Х				х

(a) **Note**: Hazardous waste, expired drugs and chemicals, waste that does not qualify as medical waste and is generated in the household as a result of taking medical products in the form of injections and monitoring level of substances in the blood (in particular needles and syringes), waste batteries and accumulators, furniture and other bulky waste, used tires, construction and demolition waste

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

collection systems.

Source: Ministry of Climate and Environment (2021)

There seems to be no significant deviation in the presence of collection systems between the different types of urbanised areas. Door-to-door separate collection is the prevailing method for collection of paper and cardboard, glass, bio-waste and residual municipal waste, whereas the most common method to collect metals, plastics and composite packaging is door-to-door co-mingled collection. However, for all these fractions, also bring point collection and civic amenity site collection are in place. Textile waste and WEEE are only collected at low service level collection points, mostly at civic amenity sites. WEEE is also collected at every shop with an area exceeding 400 square metres. Wood is collected at civic amenity sites or, in some municipalities, together with garden waste.

#### **Summary result**

Paper and cardboard	A high share of the population is covered by high convenience collection services	Door-to-door collection is the dominant system.
Metals	A high share of the population is covered by high convenience collection services	Co-mingled door-to-door collection is the dominant system.
Plastics	A high share of the population is covered by high convenience collection services	Co-mingled door-to-door collection is the dominant system.
Glass	A very high share of the population is covered by high convenience collection services	Door-to-door collection is the dominant system.
Bio-waste	A high share of the population is covered by high convenience collection services	Door-to-door collection is the dominant system.
A low share of the population is Wood covered by high convenience collection services		Wood is mainly collected at civic amenity sites which are considered low-convenience for citizens.
A low share of the population is  Textiles covered by high convenience collection services		Only lower service level collection points are in place.
WEEE Medium convenience collection services dominate		WEEE is collected through take-back systems at retailers and at civic amenity sites.
Robustness of the u	nderlying information	Credible information received from the Polish authorities through the EEA-ETC/WMGE questionnaire. The efficiency of separate collection via examining the capture rates cannot be done due to the lack of source data.

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

According to the Ministry of Climate and Environment (2021), there are no firm plans to introduce or change the separate collection systems in use within the next three years. Poland plans to incorporate derogations set in article 10 of the WFD into national law. (Ministry of Climate and Environment, 2021)

#### **Summary result**

Paper and cardboard	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	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)	A 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)	A high share of the population is already covered by high convenience collection services.
Glass	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	A high share of the population is already covered by high convenience collection services.
Bio-waste  N/A (for countries in which a very high share of the population is already covered by high convenience collection services)		A high share of the population is already covered by high convenience collection services.
Wood	No firm plans to improve the convenience and coverage	No firm plans presented.
Textiles	No firm plans to improve the convenience and coverage	No firm plans presented.
WEEE No firm plans to improve the convenience and coverage		No firm plans presented.
Robustness o	f the underlying information	Credible information received from the Polish authorities through the EEA-ETC/WMGE questionnaire and comments provided during review of the draft assessment.

#### 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 Producer Responsibility Organisation (PRO) that producers report correctly.

The EPR scheme for packaging was established in 2002. The obligations to establish a new recovery organisation are laid down in the Act on packaging and packaging waste. Every producer that puts packaged products on the market (including imported products) needs to fulfil the EPR obligations laid down in the same Act. Most producers of products covered by EPR sign a contract with a PRO, which are then responsible to meet the recycling and recovery targets set, as well as other obligations laid down in the legislation (e.g. reporting, educational campaigns) on behalf of the producers. A product fee has to be paid to the marshal of the voivodeship by producers/PROs in case the targets are not met. (Ministry of Climate and Environment, 2021)

The EPR scheme covers both household and non-household sources for all packaging material categories. There is no advanced fee modulation in place in Poland. However, preparation considering the compliance of the EPR system with Article 8 and 8a of the WFD is currently ongoing in Poland. Advanced fee modulation is planned to be a part of the system. (Ministry of Climate and Environment, 2021)

Since 2019, reports on packaging put on the market are submitted through an electronic registry (BDO). The Polish authorities consider the registry to be useful to identify and prevent free-riding. In addition, every producer needs to have a registry number, which is placed in every document such as invoices. There are financial penalties for non-registration, and for putting on the market packaged products that originate from non-registered producers. (Ministry of Climate and Environment, 2021) The reported data do not include estimates for online sales, private imports/exports, de minimis rule or free-riding (Eurostat, 2021).

#### **Summary result**

No advanced fee modulation	There is no advanced fee modulation based on the assessment criteria presented above, and no auditing of data takes place. However, advanced fee modulation is planned to be part of the system.
Robustness of the underlying information	Credible information received from the Polish authorities through the EEA-ETC/WMGE questionnaire.

#### 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.

In order to assess a potential gap in bio-waste treatment capacity compared to the bio-waste generated, the amount of bio-waste in municipal waste is estimated based on waste composition data. For Poland, the most recent available composition data refer to 2008, as published in the Polish National Waste Management Plan 2022. According to these data, the combined share of kitchen (food) and garden waste and waste from green areas accounts for 36.6 % of the MSW generated in Poland, which results in an estimated overall amount of generated bio-waste of 4.7 million tonnes. The available treatment capacity for bio-waste in Poland amounts to 1.5 million tonnes, excluding home-composting (Ministry of Climate and Environment, 2021). The capacity is sufficient to treat currently separately collected bio-waste (1.02 million tonnes), but not all of the municipal bio-waste generated; the current capacity amounts to less than a third of all generated bio-waste. As reported by the Ministry of Climate and Environment (2021), the capacity of the existing plants will be increased with the increase in the amount of separately collected bio-waste.

A study (Jędrczak et al., 2020) published in 2020 which looked at the current situation aiming to predict the future bio-waste capacity demand and investment needs, supports the estimated current capacity for treatment of separately collected bio-waste. Furthermore, the study highlights that over time the separate collection of bio-waste is planned to increase in Poland and subsequently the residual MSW will decrease, leading to an over-capacity for MBT. Therefore, part of the MBT capacities are planned to be converted for the processing of separately collected bio-waste. (Jędrczak et al., 2020) This is also foreseen by the law, that allows treatment of selected municipal waste at MBT plants under certain conditions (Council of Ministers of Poland, 2016), and the conversion process has started. In the annex to the NWMP published adopted in 2021, the Polish Government identified investment needs for bio-waste treatment capacity of an additional 1 056 million tonnes per year by 2028 and 1 305 million tonnes per year by 2034 (Council of Ministers of Poland, 2021a).

Current capacities for the biological treatment of mixed municipal waste in MBT facilities in Poland are almost 5 million tonnes, while the capacity specified as potential for the treatment of separately collected bio-waste at MBT plants through conversion is estimated to be almost 1.8 million tonnes (Jędrczak et al., 2020). If all this potential capacity was realised, the total capacity for bio-waste treatment would amount to 3.3 million tonnes annually, corresponding to about 70% of the generated bio-waste. While the conversion process has started, no clear plans for the implementation of such conversion activities are currently available.

#### Summary result

Bio-waste treatment capacity below 80 % of generated municipal bio-waste and no plans to extend capacity, or no capacity information available	The current capacity is sufficient to treat less than a third of all bio-waste generated. The conversion of MBT capacity to treat separately collected bio-waste is foreseen and has started and investment needs have been identified but no clear plans for the implementation are currently available.	
Robustness of the underlying information	The data on MSW composition used for the calculation of generated biowaste are from the year 2008 and may not represent the current situation.	

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

To create a market for compost and digestate, compost 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.

Poland has national standards for compost quality defined in the Polish regulations for fertilisers, defining quality parameters for plant nutrients and pollution levels. Meanwhile, the implementation of a quality management system for the production of compost from bio-waste has not yet started (EEA, 2020).

Legally binding national standards for compost/digestate quality but no quality management system	No quality management system for the production of compost from biowaste. However, there are national standards for the compost quality.
Robustness of the underlying information	Based on information provided by the Polish Ministry of Climate and Environment to the EEA in 2019 as contribution to the EEA's work on biowaste.

### 2.2 Target for the recycling of packaging waste

This chapter aims at assessing the prospects of Poland 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 Poland to Eurostat in accordance with Commission Decision 2005/270/EC as last amended by the Commission Implementing Decision 2019/665 (EC, 2019a), 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 Poland for 2019 is illustrated in Figure 2.2.

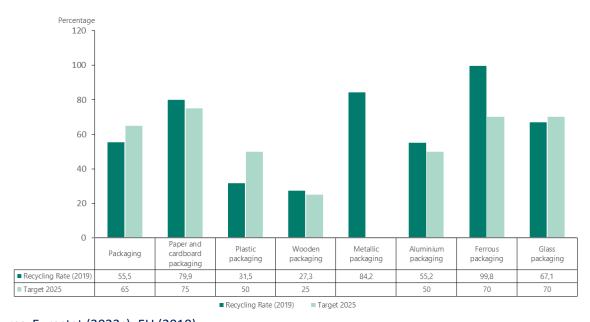


Figure 2.2 Packaging recycling rates for Poland in 2019, in percentage

**Source**: Eurostat (2022c), EU (2018)

For Poland the reported recycling rate for total packaging waste is 9.5 percentage points below the 2025 target of 65 %. The recycling rates for paper and cardboard, metals, and wood exceed the target already. For glass the distance to target is 2.9 percentage points, for plastics 18.5 percentage points (Figure 2.2).

In the previous Early warning report (EC, 2018), the reliability of the packaging waste statistics was questioned, and Poland was recommended to improve the data quality of packaging put on the market. As explained in Section 2.1.5, information on packaging put on the market has to be reported through an electronic registry since 2019.

For Poland the data on packaging waste generated and treated are derived from producers and PROs. With regard to waste generation data, no estimates are used to improve data coverage, nor verification processes to validate the accuracy of data. It should be noted that this method of estimation of generated packaging waste might miss on quantities generated through online sales and free riders. As a result, the generated quantities might in fact be higher than reported, which also affects the recycling rates. Audits of large treatment facilities conducted by external accredited auditors are used to verify the packaging waste treatment data. (Eurostat, 2021)

The recycling rates presented are based on the calculation rules of the Commission Decision C(2005)854 and will likely differ from the recycling rates to be reported according to the calculation rules laid down in Commission Implementing Decision 2019/665. The Polish authorities report that the impact of the new calculation rules has not yet been assessed in Poland (Ministry of Climate and Environment, 2021). 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 79.9 % to 71.9 %
- Plastic packaging: decrease by 21 %<sup>4</sup>, from 31.5 % to 24.9 %
- Metal packaging: decrease by 14 %. Assuming that the effect is the same for ferrous and aluminium packaging, this leads to a decrease from 99.8 % to 85.8 % for ferrous metals, and from 55.2 % to 47.5 % for aluminium.
- Glass packaging: decrease by 5 %, from 67.1 % to 63.7 %
- Wooden packaging: decrease by 11 % from 27.3 % to 24.3 %
- Total packaging: Calculated based on the amounts of each packaging material generated and recycled in 2019, the recycling rate would drop from 55.5 % to 49.7 %.

The assessment in the summary table below takes these estimated reduced recycling rates into account.

#### **Summary result**

Poland reports a recycling rate of 55.5 %. However, if the new calculation rules are applied (taking into Total > 15 percentage points below target account losses in the recycling plants), the estimated packaging recycling rate would drop to 49.7 %, 15.3 percentage points below the 2025 target. Poland reports a recycling rate of 79.9 %. However, Paper and if the new calculation rules are applied (taking into cardboard < 5 percentage points below target account losses in the recycling plants), the estimated packaging recycling rate would drop to 71.9 %, 3.1 percentage points below the 2025 target. Poland reports a recycling rate of 99.8 %. However, Ferrous if the new calculation rules are applied (taking into metals Target exceeded account losses in the recycling plants), the estimated packaging recycling rate would drop to 85.8 %, 15.8 percentage points above the 2025 target

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 %).

Aluminium packaging	< 5 percentage points below target	Poland reports a recycling rate of 55.2 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 47.5 %, 2.5 percentage points below the 2025 target.
Glass packaging	5 - 15 percentage points below target	Poland reports a recycling rate of 67.1 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 63.7 %, 6.3 percentage points below the 2025 target.
Plastics packaging	> 15 percentage points below target	Poland reports a recycling rate of 31.5 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 24.9 %, 25.1 percentage points below the 2025 target.
Wooden packaging	< 5 percentage points below target	Poland reports a wooden packaging recycling rate of 27.3 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 24.3 %, 0.7 percentage point below the 2025 target.
Robustness of the underlying information		The assessment is limited by the fact that the recycling rates for 2019 reported by Poland 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. Additionally, data are based on EPR data only, which may lead to underreporting of the waste generated and an overestimation of the recycling rates.

### 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 Poland are illustrated in Figure 2.3.

Percentage 100 90 80 70 60 50 40 30 20 10 Ω 2016 2018 2019 2015 2017 Packaging Paper and cardboard packaging Plastic packaging Wooden packaging Metallic packaging Glass packaging

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

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

Source: Eurostat (2022c)

The overall packaging recycling rate has been stable in Poland during the past five years and even decreased in the more recent years (decrease of 3.6 percentage points from 2015 to 2019). Between 2018 and 2019 a significant drop in the recycling rates is visible, which is explained by the Polish authorities by the implementation of an electronic registry. Thereof the generated waste is assessed more holistically and overestimation of recycling rates was counteracted.

After a two-year period of very high, around 50 %, recycling rates for wood between 2014 and 2015, the trend for wooden packaging has been decreasing, with 23.2 percentage points since 2015. According to the Ministry of Climate and Environment (2021), there were signals that some PROs were fulfilling their additional obligation of recycling targets for packaging waste originating from households by non-household wooden pallets. Due to this, the law was changed and the interest in recycling of wooden pallets decreased. The recycling rates of all other packaging waste fractions increased, most prominently for metals packaging by 22.2 percentage points and glass packaging 9.9 percentage points. Progress for plastic packaging by 0.7 percentage points and paper and cardboard packaging by 2.3 percentage points was rather modest, and improvements for these materials need to speed up in order to meet the 2025 targets.

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Total packaging	RR < 55% and increase in last 5 years < 10 percentage points	The recycling rate decreased by 2.1 percentage points over the past five years and is estimated to be at 49.7 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Paper and cardboard packaging	RR > 70% and increase in last 5 years < 5 percentage points	The recycling rate increased by 2.3 percentage points over the past five years and is estimated to be at 71.9 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Ferrous metals packaging	RR > 70 %	The recycling rate increased by 22.2 percentage points over the past five years and is estimated to be at 85.5 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Aluminium packaging	RR > 45% and increase in last 5 years > 5 percentage points	The recycling rate increased by 22.2 percentage points over the past five years and is estimated to be at 35.8 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Glass packaging	RR > 60% and increase in last 5 years > 10 %	The recycling rate increased by 9.9 percentage points over the past five years and is estimated to be at 63.7 % 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 percentage points	The recycling rate increased by 0.7 percentage points over the past five years and is estimated to be at 24.9 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Wooden packaging	RR > 20% and increase in last 5 years < 5 percentage points	The recycling rate decreased by 23.2 percentage points over the past five years and is estimated to be at 24.3 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Robustness of the underlying information		No trend data are available for aluminium and steel for the period 2015-2019, so the trend for total metals is used as a proxy.  The assessment is limited by the fact that the recycling rates for 2019 reported by Poland 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.  Amounts put on the market might be underestimated, as they were derived solely from EPR data and not adjusted accordingly (e.g. for freeriders). The introduction of an electronic registry applicable from 2019 onwards seems to already have improved the quality of waste generation data.

#### 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.

Poland has notified the full transposition of the revised Packaging and Packaging Waste Directive in December 2021.

#### **Summary result**

Transposition with delay of > 12 months	The PPWD was transposed into national legislation with a delay of more than 12 months.
Robustness of the underlying information	Assessment is based on information from the Ministry of Climate and Environment provided in April 2022.

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

The Ministry of Climate and Environment is responsible for development, implementation and monitoring of national waste management policies and plans and preparing national waste legislation. The Ministry of Economic Development and Technology supports the Ministry of Climate and Environment in implementing waste regulations. Poland is divided into 16 voivodeships (regions), whose administrations prepare regional waste management plans and issue the majority of waste treatment permits. (EEA, 2016).

According to the Polish authorities, recycling of packaging waste is the responsibility of packaging producers, and their responsibilities are defined in the national legislation. Every producer that puts packaged products on the market (including imported products) needs to fulfil the EPR obligations. Most producers of products covered by EPR sign a contract with a PRO, which are then responsible to meet the recycling and recovery targets set as well as other obligations laid down in the legislation (e.g. reporting, educational campaigns) on behalf of the producers. The responsibility of municipalities is to organise separate collection of municipal waste including packaging from households and other properties chosen by municipalities. Producers do not cover the costs of separate collection of packaging waste to municipalities.

PROs are obliged to achieve recycling targets by recycling packaging waste from households. Most of the PROs collaborate with municipalities, but this is not defined by law. After pre-sorting, the collected packaging wastes are sold to recycling companies (different systems are in place depending on municipalities and contracts with waste operators). The costs of recycling are partly refunded by the EPR system.

In order to prove the required level of recycled packaging put on the market, the producers and importers of packaging can either themselves collect the packaging waste and transport it to the recycler or have the PROs fulfil their requirements (upon agreement). This way, the PRO takes over the obligation to recover and recycle packaging put on the market. The proof of the recycling level reached is calculated based on the Packaging Recycling Notes provided by recyclers to the PROs. By paying for these tradeable packaging recovery notes, the producers and importers are also partially financing the recycling costs. (Ministry of Climate and Environment, 2021) If producers cannot confirm that they meet the targets they must pay the product fee. The product fee is calculated based on the

achieved recycling rate (if it is below the minimum target) for every packaging material (both together and separately) and the fee rate for each packaging material.

The PROs are also obliged to achieve recycling levels for the household packaging waste determined in the delegated act. A PRO, which has not fulfilled the obligation, is obliged to pay a product fee calculated for individual types of packaging in the event of failure to achieve the required recycling level. (Ministry of Climate and Environment, 2021) The fees differ depending on the type of packaging material in question. According to the Act on packaging and packaging waste, the maximum amount of the product fee is PLN 4 500 per tonne (corresponding to around EUR 1 000 per tonne in June 2021).

In the previous Early warning report (EC, 2018), it was recommended that Poland should make improvements to the EPR system for packaging and alignment with the general minimum requirements in the revised Waste Framework Directive, while ensuring, specifically that producers provide better cost coverage, including the cost of dealing with unrecycled packaging disposed of by households as residual waste.

While an extended set of support mechanisms is available for municipal waste addressing municipal authorities, citizens and entrepreneurs, similar support mechanisms seem to not be developed for packaging waste producers and PRO's.

#### Summary result

Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	The responsibilities are divided between producers and municipalities. Producers are obliged to achieve recycling targets by recycling household packaging waste, whereas the responsibility of municipalities is to organise separate collection of household packaging waste. Enforcement mechanisms for not reaching the recycling targets are in place, but support tools are related to MSW management and not packaging.
Robustness of the underlying information	Credible information received from the Polish through the EEA-ETC/WMGE questionnaire and during the review of this assessment.

#### 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, Poland has a landfill tax in place. Poland has also banned landfilling of separately collected biodegradable waste. In addition, there is a ban on combustible waste with a TOC above 5 %, LOI above 8 % and calorific value exceeding 6 MJ/kg.

Ban in place for landfilling residual or biodegradable waste	Poland has a landfill tax with an escalator and bans on landfilling separately collected biodegradable waste, and combustible waste with > 5 % TOC, > 8 % LOI, and calorific value > 6 MJ/kg. The current level of the tax (2020) is PLN 270 per tonne (corresponding to 103.8 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)). A reduced landfill tax applies for MBT outputs that meet certain conditions.
Robustness of the underlying information	The information is robust as it is based on requirements set in Polish legislation.

#### 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, Poland has no incineration tax in place. However, waste incineration plants need to pay environmental fees for gas and dust emissions.

#### **Summary result**

No incineration taxes	Poland has no tax on waste incineration.	
Robustness of the underlying information	The information is robust.	

#### 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, Poland has no packaging taxes in place. However, there is a recycling fee for plastic carrier bags that is currently PLN 0.2 (around EUR 0.04) per bag (OECD, 2020), but plastic bags are only a very small part of all packaging.

Poland is planning to implement a single-use-plastic fee, collected by retail trade units, wholesale trade units or catering units in sales of single-use plastic packaging or products in single-use plastic packaging, accompanied by an obligation to ensure that reusable packaging or packaging made of materials other than plastic is available for sale to purchasers. (PwC Studio - Prawo i Podatki, 2021)

#### **Summary result**

No packaging taxes	Poland applies taxes for plastic carrier bags only. Thus, this tax will not have an impact on reducing total packaging waste generation, influencing the choice of packaging materials, or encouraging recyclability and eco-design.
Robustness of the underlying information	Credible information received from the Polish through the EEA- ETC/WMGE questionnaire, complemented with information from literature.

#### 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.

The assessment is the same as described in Section 2.1.3.

Less than 50 % of the population covered by PAYT	According to the Polish legislation, PAYT is mandatory for non-residential properties (i.e. non-household waste generators). There are no data the application of PAYT for households.	
Robustness of the underlying information	Information received from the Polish authorities through the EEA-ETC/WMGE questionnaire, complemented with information provided by a consultant.	

#### 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.

There is no legislative basis for deposit return systems in Poland. Any system available is purely voluntary and organised by producers. Poland has a voluntary DRS system covering some specific glass drink bottles which is run by the largest Polish breweries. The deposit in this system is PLN 0.5 per bottle. (Ministry of Climate and Environment, 2021)

A new draft law (Ministry of Climate and Environment, 2022b) amending the Act on packaging and packaging waste and other acts presents the introduction of a mandatory DRS in Poland for plastic bottles up to 3 litres and glass bottles up to 1.5 litres. All stores with an area of more than 100 square meters are to be obliged to collect bottles covered by the deposit system and return the deposit. Smaller stores will be able to pick up bottles and return the deposit voluntarily. All points of sale will be obliged to charge the deposit. It is expected that the law will come into force in 2023 and the DRS should be implemented withing 24 months after that. (Ministry of Climate and Environment, 2022a; money.pl, 2022)

#### **Summary result**

Aluminium drink cans	No DRS	No DRS for aluminium drink cans.
Plastic drink bottles	No DRS	No DRS for plastic bottles.
Glass drink bottles	Voluntary for some drink bottles	Voluntary DRS covering some glass bottles.
Plastic crates	No DRS	No DRS for plastic crates.
Wooden packaging	No DRS	No DRS for wooden packaging.
Robustness of the underlying information		Credible information received from the Polish authorities through the EEA-ETC/WMGE questionnaire.

#### 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 of packaging waste and for collecting recyclables at adequate quality. Generally, the more convenient and accessible these systems are for their users, the better results they can deliver. 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.

In Poland, door-to-door separate collection is mandatory for paper, metal, plastic, and glass, but municipalities can also collect other fractions door-to-door. Municipalities can choose whether to have a distinction between collection systems for packaging waste and for non-packaging waste. The separate collection of recyclables originating from businesses and companies is mandatory for the same fractions as for households. (Ministry of Climate and Environment, 2021)

There seems to be no significant deviation in the presence of collection systems between the different types of urbanised areas. The Polish authorities did not mark any dominant collection systems, and therefore all marked systems are assumed to be equally important. Taking this into account, Poland uses separate door-to-door collection for paper and cardboard, metals, glass and plastics (metals, plastics and composite packaging are collected together). However, for all these fractions, also bring-point collection and civic amenity site collection are in place.

	1. Packaging waste from households A very high share of the population is		
Paper and cardboard packaging	covered by high convenience collection services	Door-to-door collection is the dominant system.	
	2. Packaging waste from non- household sources Separation at source is mandatory for non-household paper and cardboard packaging waste	Separate collection is mandatory for households and non-households.	
Ferrous	1. Packaging waste from households A very high share of the population is covered by high convenience collection services	Door-to-door collection is the dominant system.	
metals packaging	2. Packaging waste from non- household sources Separation at source is mandatory for non- household ferrous metals packaging waste	Separate collection is mandatory for households and non-households.	
Aluminium packaging	1. Packaging waste from households A very high share of the population is covered by high convenience collection services	Door-to-door collection is the dominant system.	
Glass - packaging	1. Packaging waste from households A very high share of the population is covered by high convenience collection services	Door-to-door collection is the dominant system.	
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household glass packaging waste	Separate collection is mandatory for households and non-households.	
Plastics packaging	Packaging waste from households A very high share of the population is covered by high convenience collection services	Door-to-door collection is the dominant system.	
	2. Packaging waste from non- household sources Separation at source is mandatory for non- household plastic packaging waste	Separate collection is mandatory for households and non-households.	

Wooden packaging	Packaging waste from non- household sources Separation at source is mandatory for non- household wooden packaging waste	Separate collection is mandatory for households and non-households.
Robustness of the underlying information		The efficiency of separate collection via examining the capture rates cannot be done due to lacking source data. Separation at source is mandatory for non-household packaging waste, but there is no information about how this requirement is implemented.

**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 different packaging waste fractions

Concrete plans are needed to improve the convenience and coverage of separate collection. This SRF is only 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<sup>5</sup>. Again, the material specific assessment considers packaging waste from both household and non-household sources.

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 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 N/A (for countries already having mandatory sorting at source)	This SRF is not relevant for Poland, since the coverage and convenience level for the collection of packaging waste from households is medium to high and the separate collection for non-households is mandatory for all fractions.
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)	

Based on data from Eurostat on the share of packaging materials in total packaging generated in 2018.

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 N/A (for countries already having mandatory sorting at source)	
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 N/A (for countries already having mandatory sorting at source)	
Wooden packaging	Packaging waste from non- household N/A (for countries already having mandatory sorting at source)	
Robustness o	f the underlying information	Credible information received from the Polish authorities in response to the EEA-ETC/WMGE questionnaire.

#### 2.2.5 Extended producer responsibility (EPR) and similar schemes

#### SRF P-5.1: Coverage of EPR schemes

In Poland, every producer that puts packaged products on the market (including imported products) needs to fulfil the EPR obligations. Most producers of products covered by EPR sign a contract with a PRO, which is then responsible to meet the recycling and recovery targets set as well as other obligations laid down in the legislation (e.g. reporting, educational campaigns) on behalf of the producers. The EPR scheme covers both household and non-household sources for all packaging material categories. (Ministry of Climate and Environment, 2021)

#### **Summary result**

All main packaging fractions(a) are covered by EPR schemes, covering household and nonhousehold packaging	Poland has EPR schemes in place covering household, industrial and commercial packaging for all packaging fractions.
Robustness of the underlying information	Credible information received from the Polish authorities through the EEA-ETC/WMGE questionnaire.

(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.

#### **Summary result**

No advanced fee modulation	There is no advanced fee modulation based on the assessment criteria presented above.
Robustness of the underlying information	Credible information received from the Polish authorities through the EEA-ETC/WMGE questionnaire.

#### 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.

SRF P-5.3.1 EPR scheme for Paper and cardboard packaging waste	EPR scheme covering household and non-household packaging	Poland has an EPR scheme in place covering household, industrial and commercial packaging for paper and cardboard packaging waste but no advanced fee modulation.
SRF P-5.3.2 EPR scheme for Ferrous metals packaging waste	EPR scheme covering household and non-household packaging	Poland has an EPR scheme in place covering household, industrial and commercial packaging for ferrous metals packaging waste but no advanced fee modulation.
SRF P-5.3.3 EPR scheme for Aluminium packaging waste	EPR scheme covering household and non-household packaging	Poland has an EPR scheme in place covering household, industrial and commercial packaging for aluminium packaging waste but no advanced fee modulation.
SRF P-5.3.4 EPR scheme for Glass packaging waste	EPR scheme covering household and non-household packaging	Poland has an EPR scheme in place covering household, industrial and commercial packaging for glass packaging waste but no advanced fee modulation.
SRF P-5.3.5 EPR scheme for Plastic packaging waste	EPR scheme covering household and non-household packaging but without fee modulation	Poland has an EPR scheme in place covering household, industrial and commercial packaging for plastic packaging waste. EPR schemes do not apply fee modulation in the system.
SRF P-5.3.6 EPR scheme for Wooden packaging waste	EPR scheme covering all non- household packaging	Poland has an EPR scheme in place covering household, industrial and commercial packaging for wood packaging waste.
Robustness of the underlying information		Credible information received from the Polish 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 (EU) 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 Poland was 39.8 % in 2020 (calculated based on Eurostat (2022a)). A very large share of the municipal waste that is landfilled in Poland are MBT outputs (Ministry of Climate and Environment, 2021).

#### **Summary result**

Distance to target > 20 percentage points	Poland is 29.8 percentage points from reaching the 2035 target.
Robustness of the underlying information	The data are derived from Eurostat and are 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 (2016-2020), the overall landfilling rate of Poland has decreased by 6 percentage points, from 45.7 % to 39.8 % (Figure 2.4).

Despite the progress, the distance to target is still very big, with 29.8 percentage points, and the landfilling rate has remained rather stable at 42-43 % during the period 2016-2019 and went down in 2020 to 39.8 %. To meet the target, Poland will have to significantly speed up the pace of reducing landfilling.

Percentage 50 45.7 43.0 41.8 41.6 39.8 40 35 30 25 20 15 10 5 2016 2017 2018 2019 2020

Figure 2.4 - Landfilling in Poland between 2016 and 2020, in percentage

Source: Eurostat (2022a).

#### **Summary result**

Landfill rate in 2020 > 25 % and decrease in last 5 years < 15 percentage points	The landfill rate decreased by 6 percentage points over the past five years but is still 39.8 % in 2020, so the distance to target is very large.
Robustness of the underlying information	There are no breaks in the time series data, however, the waste generation before 2018 and landfilling data reported in Eurostat's database are flagged as estimates.

#### 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 are available.

Poland's landfill rate in 2018 was 11 % of the total amount (by weight) of biodegradable municipal waste generated in 1995. No newer data for 2019 were available (EC, 2022) .

Target for reducing the amount of biodegradable municipal waste (BMW) landfilled to 35 % of BMW generated in 1995 has been achieved in 2016	Poland has reported 13% biodegradable waste (related to the total amount by weight of biodegradable municipal waste produced in 1995) landfilled for 2016 and 11% for 2018 and has reached the target.
Robustness of the underlying information	Credible information received from the Polish authorities and the European Commission.

### 3 Conclusion

This risk assessment indicates whether Poland is at risk of not meeting the targets. The 'total risk' categorisation 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 Poland, only the SRFs relevant to Poland are taken into account to define the maximum score. Poland is considered to be 'not at risk' if its score is more than 50 % of this maximum score, and 'at risk' if its score is less than 50 % of this maximum score.

#### 2.4 Prospects for meeting the recycling target for municipal solid waste

<b>27 %</b> of maximum score	Based on the provided information and the analysis done, it is concluded that Poland is at risk for not meeting the MSW recycling target in 2025.
Current situation and past trends:	Based on currently available data Poland's recycling rate lies at 38.7 %, 16.3 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 33.7 %, 21.3 percentage points below the target.
	The recycling rate has increased by 3.9 percentage points over the past five years.
Legal instruments:	Poland has transposed the revised WFD with a delay of more than 12 months.  Responsibilities are clearly defined, and enforcement mechanisms and support tools for meeting the targets are in place.
Economic instruments:	Poland has a landfill tax with an escalator as well as a ban on landfilling of separately collected biodegradable waste, and combustible waste.  Poland has no tax on waste incineration.
	PAYT is mandatory for non-household sources of municipal waste while there are no data on the application of PAYT for households.

Separate collection systems:	There seems to be no significant deviation in the presence of collection systems between the different types of urbanised areas. Door-to-door separate collection is the prevailing method for collection of paper and cardboard, glass, bio-waste, and comingled metals, plastics and composite, complemented with collection at bring points and civic amenity sites. Textile waste is only collected at low service level collection points, and mostly at civic amenity sites. Wood is collected at civic amenity sites or, in some municipalities, together with garden waste. WEEE is collected through take-back systems at retailers and at civic amenity sites.  There are currently no firm plans to further improve the convenience and coverage of collection systems for wood, textiles and WEEE.
Extended producer responsibility:	There is currently no advanced fee modulation applied to incentivise design for recycling.
Bio-waste treatment capacity and quality management:	Bio-waste treatment capacity is significantly below 80 % of total generated municipal bio-waste. There are national standards for compost quality in place, but no quality management system exists.

# Prospects for meeting the recycling targets for packaging waste

30 % of maximum score	Based on the provided information and the analysis done, it is concluded that Poland is at risk for not meeting the 65 % recycling target for total packaging waste in 2025		
66 % of maximum score	Paper and cardboard packaging	Not at risk	
<b>67</b> % of maximum score	Ferrous metals packaging	Not at risk	
<b>63</b> % of maximum score	Aluminium packaging	Not at risk	
47 % of maximum score	Glass packaging	At risk	
21 % of maximum score	Plastics packaging	At risk	
<b>63</b> % of maximum score	Wooden packaging	Not a risk	
	Poland reports a total packaging waste recycling rate of 55.5 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 49.7 %, 15.3 percentage points below the 20 target. The recycling rate decreased by 2.1 percentage points over the past five years.		
Current situation and past trends:	The recycling rate of plastics packaging is of most concern and only increased by 0.7 percentage points over the past five years and is estimated to be at 24.9 % if the new calculation rules would be applied (taking into account losses in the recycling plants).		
	In the previous Early warning report, t packaging waste statistics was question recommended to improve the data que market. Since 2019, data on packaging be reported through an electronic reg	ned, and Poland was ality of packaging put on the put on the market have to	
	The Packaging and Packaging Waste D transposed into Polish national law wi months		
Legal instruments:	The responsibilities are divided between producers and municipalities. Producers are obliged to achieve recycling targets by recycling household packaging waste, whereas the responsibility of municipalities is to organise separate collection of household packaging waste. Enforcement mechanisms for not reaching the recycling targets are in place, but support tools are related to MSW management and not packaging.		
Economic instruments:	Poland has a landfill tax with an escala landfilling of separately collected biod combustible waste. There is no tax on	egradable waste, and	

	Packaging taxes are limited to plastic carrier bags, with limited impact on total packaging.
	PAYT is mandatory for non-household sources of municipal waste while there are no data on the application of PAYT for households.
Separate collection systems:	The coverage and convenience level for the collection of packaging waste from households is high, source separation is mandatory for commercial and industrial packaging waste. There are no plans to further improve convenience or coverage.
Extended producer responsibility:	There is currently no advanced fee modulation applied to incentivise design for recycling.

# 2.5 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 Poland 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:	Poland is 29.8 percentage points from reaching the 2035 target, the distance to target is very large. The landfill rate has decreased by 6 percentage points over the past five years.  Poland has invested strongly in MBT capacity, and a large share of the landfilled waste constitutes MBT outputs.
Diversion of biodegradable municipal waste from landfill:	Poland has reported 13% biodegradable waste (related to the total amount by weight of biodegradable municipal waste produced in 1995) landfilled for 2016 and 11% for 2018 and has reached the target.

# **List of abbreviations**

Abbreviation	Name
C&DW	Construction and demolition waste
DRS	Deposit Return System
EC	European Commission
EEA	European Environment Agency
ELV	End-of-Life Vehicles
EPR	Extended producer responsibility
ETC/CE	European Topic Centre on Circular Economy and resource use
ETC/WMGE	European Topic Centre on Waste and Materials in a Green Economy
LOI	Loss on ignition
LoW	List of Waste
MBT	Mechanical biological treatment
MS	Member state
MSW	Municipal solid waste
NWMP	The National Waste Management Plan
PAYT	Pay-as-you-throw
PPWD	Packaging and Packaging Waste Directive
PRO	Producer Responsibility Organisation, in Poland they are called Packaging Recovery Organisations
RR	Recycling rate
SRF	Success and risk factor
TOC	Total organic carbon
WEEE	Waste Electric and Electronic Equipment
WFD	Waste Framework Directive

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# Annex 1 Implementation of previous early warning recommendations

In their response to the EEA-ETC/WMGE questionnaire (Ministry of Climate and Environment, 2021), the Ministry of Climate and Environment reported that Poland has addressed the recommendations given in the previous Early warning report. The recommendations and the actions taken are described in this section (self-assessment by the Ministry of Climate and Environment).

#### Recommendations on extended Producer Responsibility for packaging waste

1) Improvements to the EPR system for packaging and alignment with the general minimum requirements in the revised Waste Framework Directive, while ensuring, specifically that producers provide better cost coverage, including the cost of dealing with unrecycled packaging disposed of by households as residual waste.

Poland has notified the transposition of all revised directives. The transposition of revised Waste Framework Directive and Packaging and Packaging Waste Directive was notified in December 2021 (Ministry of Climate and Environment, 2022c). The new EPR system will be adapted by January 5<sup>th</sup> 2023, as required in the Directive. The Polish authorities consider this recommendation implemented. (Ministry of Climate and Environment, 2021)

2) Improvements to the quality of data reported on packaging placed on the market.

Since 2019, reports on packaging put on the market are submitted through an electronic BDO register. The register is useful to identify and prevent free-riding. The Polish authorities consider this recommendation implemented. (Ministry of Climate and Environment, 2021)

#### Recommendations on financial incentives for regional enforcement of municipal targets

3) As the annual recycling target for municipalities increases to 50 % in 2020, the number of municipalities failing to meet it is likely to increase. Guidance from the Ministry of Environment on the consistent application of fines for failing to meet the target would be beneficial to ensure they act as the required deterrent.

The calculation of fines is described in the Act on maintaining cleanliness and order in municipalities (see also Section 2.1.2). Problems regarding to the application of this provision have not been reported. The Polish authorities consider this recommendation not implemented. (Ministry of Climate and Environment, 2021)

#### Recommendations on technical support to municipalities

- 4) 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.

5) Research into best practices and monitoring (e.g. through a survey) of municipalities' implementation of the sorting obligation, getting their feedback on challenges and barriers and developing tools to support them.

Three expert's reports for municipalities were prepared by request of the Ministry providing support and guidance for operating waste management system at municipal level:

- 1) The efficiency of collection systems were analysed using several criteria such as municipality type (urban, rural, urban-rural), building type (single/multi-family), density of buildings, and waste fractions collected
- 2) Recommendations for the development of a network for repair and reuse, and guidelines setting the minimum functionality aspects of separate collection points
- 3) Guidelines for analysing the composition and properties of waste, and verification of results. (Ministry of Climate and Environment, 2021)

Two websites provided by the Ministry of Climate and Environment emphasise the promotion of recycling and contain answers to frequently asked questions, educational and information materials, and downloadable digital materials (e.g. guidelines for waste sorting). The sites are directed to the residents, entrepreneurs, and municipality authorities. In addition, good practices are shared by the Ministry, e.g. expertise concerning MSW. Municipalities can also ask for interpretations of regulations on waste management system from the Ministry, which in response prepares interpretations of the rules laid down in the Acts. (Ministry of Climate and Environment, 2021)

The Polish authorities consider these recommendations implemented. (Ministry of Climate and Environment, 2021)

# Annex 2 Detailed scoring of success and risk factors

## Assessment sheet - Recycling target for municipal waste

MS Poland

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 ins	struments		
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, enforcement and good set of support mechanisms for meeting the recycling targets	1	2
	Economic	instruments		
MSWR-3.1	Taxes and/or ban for landfilling residual or biodegradable waste	Ban, or landfill tax > 30 EUR/t* with escalator, or landfill tax > 45 EUR/t	1	2
MSWR-3.2	Taxes on municipal waste incineration	No incineration taxes or taxes < 7 EUR/t*	1	0
MSWR-3.3	Pay-as-you-throw (PAYT) system	No or less than 50% of the population covered by PAYT	1	0

	Separate colle	ection 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 high share of the population is covered by high convenience collection services	0.84	1.68
	Wood	A low share of the population is covered by high convenience collection services	0.06	0
	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	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.42	0
	Wood	No firm plans to improve the convenience and coverage	0.03	0
	Textiles	No firm plans to improve the convenience and coverage	0.03	0
	WEEE	No firm plans to improve the convenience and coverage	0.02	0

	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 capac	ity and quality management			
MSWR-6.1	Capacity for the treatment of bio-waste	Bio-waste treatment capacity below 80% of generated municipal bio-waste and no plans to extend capacity, or no capacity information available	1	0	
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	
_					
		То	tal score	8.72	
		Maxim	um score	32.16	

## Assessment sheet - Recycling target for packaging waste

MS Poland

Date Jun-22

SRF		Assessment result	Weight	Score
	Current situation	n and past trends		
P-1.1	Distance to target - Overall packaging	> 15 percentage points below target, or no data reported	5	0
	Distance to target - Paper and cardboard packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Ferrous metals packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Aluminium packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Glass packaging	5 - 15 percentage points below target	5	5
	Distance to target - Plastics packaging	> 15 percentage points below target, or no data reported	5	0
	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 < 55% and increase in last 5 years < 10 percentage points	1	0
	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%, or RR > 50%	1	2
	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  Past trends in wooden packaging recycling	RR < 40% and increase in last 5 years < 10 percentage points  RR > 20% and increase in last 5 years < 5 percentage points, or  RR > 15%, and increase in last 5 years < 10 percentage points, or  RR < 15% and increase in last 5 years > 10 percentage points	1	0
	Legal ins	struments		l
P-2.1	Timely transposition of the revised Packaging and Packaging Waste Directive into national law		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 i	instruments		
P-3.1	Taxes and/or ban for landfilling residual or biodegradable waste	Ban, or landfill tax > 30 EUR/t* with escalator	1	2
P-3.2	Taxes on municipal waste incineration	No incineration taxes or taxes < 7 EUR/t*	1	0
P-3.3	Packaging taxes	No packaging taxes	1	0
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 colle	ection 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)	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.5	1
	Paper and cardboard (non-household)	Firm plans to introduce mandatory sorting at source for non-household paper and cardboard packaging waste	0.5	1
	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 responsib	ility (EPR) and similar schemes				
P-5.1	Coverage of EPR schemes	All main packaging fractions* are covered by EPR schemes, covering household and non-household packaging	1	2		
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	EPR scheme covering household and non-household packaging	1	1		
	Material specific EPR assessment - Ferrous metals packaging waste	EPR scheme covering household and non-household packaging	1	1		
	Material specific EPR assessment - Aluminium packaging waste	EPR scheme covering household and non-household packaging	1	1		
	Material specific EPR assessment - Glass packaging waste	EPR scheme covering household and non-household packaging	1	1		
	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	EPR scheme covering all non-household packaging	1	2		
Total packaging recycling target 9.82						
lotal pack						
Maximum score 32.8						

Paper and cardboard recycling target

	Total score	21.00
E	Maximum score	32.00

66%

30%

Ferrous metals packaging recycling target

Total score	20.00		
Maximum score	30.00		

67%

Aluminium packaging recycling target	
Total score	20.00
Maximum score	32.00
	63%
Glass packaging recycling target	
Total score	15.00
Maximum score	32.00
	47%
Plastics packaging recycling target	
Total score	7.00
Maximum score	34.00
	21%
Wooden packaging recycling target	
Total score	20.00
Maximum score	32.00

63%

# Assessment sheet - Target for landfilling of municipal waste

MS Poland

Jun-22 Date

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				<b>2.00</b> 14.00			
Maximum score							

14%