

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



**Slovakia** 

June 2022

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# Acknowledgements

This draft assessment was prepared by the ETC/WMGE and the successive ETC/CE under guidance of the European Environment Agency and with inputs from a consortium led by Rambøll Group under contract with the European Commission. It builds to a large extent on the answers provided by the Ministry of the Environment of the Slovak Republic and Slovak Environmental Agency in August 2021 to a questionnaire developed by the EEA and ETC/WMGE. The EEA and ETC/CE would like to thank the Slovak authorities for the information provided and for the kind review of drafts of this assessment in 2021 and May 2022.

# 1 Introduction

## 1.1 Background and purpose

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

This document is an early warning assessment for Slovakia. 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 Slovakia 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 Slovakia 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 Slovakia to achieve the overall packaging waste and specific packaging materials' recycling targets for 2025. Chapter 2.3 examines the prospects for Slovakia 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*

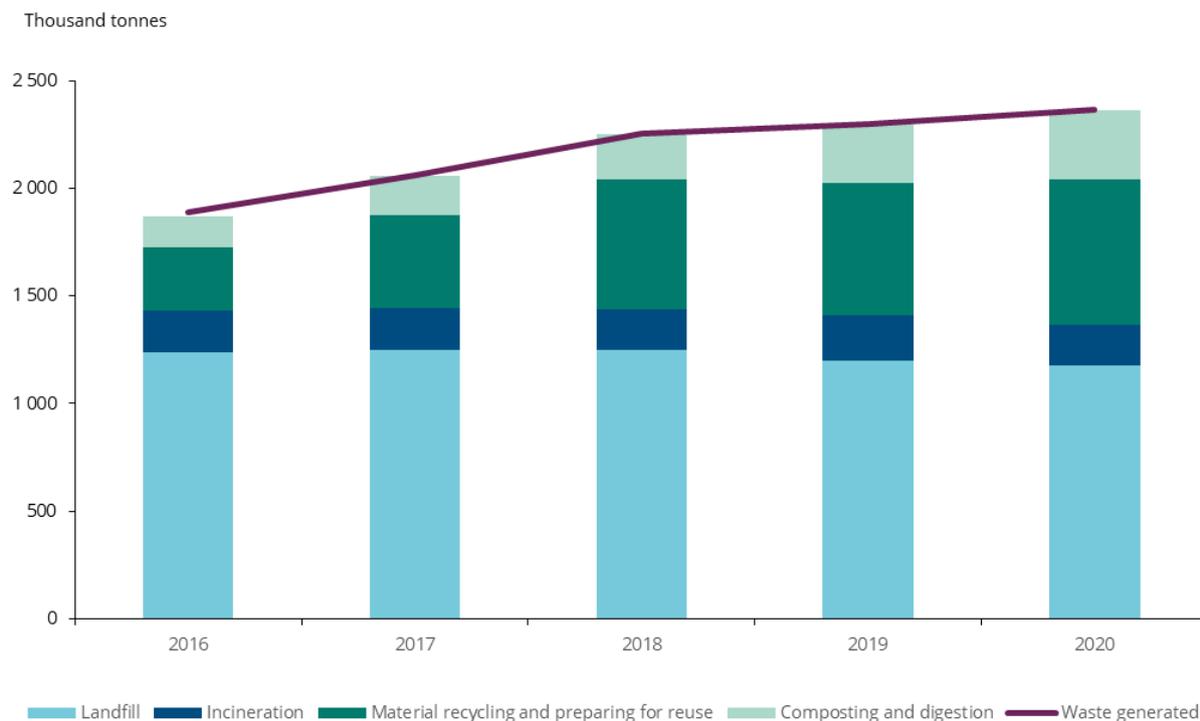
Slovakia has shown an increasing municipal waste generation over the past five years, with around 2.4 million tonnes of municipal waste in 2020 (Figure 1.1). There was a significant yearly increase between 2016 and 2018, which has slowed down since. Municipal waste generation corresponds to 433 kg/cap in 2020, which is below the (estimated) EU average of 505 kg/cap.

Slovakia still landfills nearly half of the municipal waste generated; although the share of landfilling has decreased by 15.7 percentage points from 2016, it was still at 49.7 % in 2020. In addition, in the report by EC (2019b), it is stated that Slovakia still had problems with illegal landfilling as well as proper rehabilitation and closure of old landfills. The Slovak authorities have confirmed that in some municipalities the problem of dumping persists, due to an improperly set system of municipal waste management or local fee for municipal waste. In the same period, the overall recycling rate has increased from 23.0 % to 42.2 %. The share of material recycling increased from 15.4 % to 28.5 %, whereas composting and digestion increased from 7.6 % to 13.7 %. However, according to EC (2019b), the high increase in the past years was mostly caused by the changes in statistical reporting more than by enhanced recycling performance. Slovakia has two municipal waste incinerators in operation in Bratislava and Kosice. The share of waste incineration has remained stable at around 10 % during the past years, although going down to 7.9 % in 2020. According to a draft analysis performed by the Institute for Environmental Policy (*Analysis of the development of waste management in Slovakia*, currently under review), mixed municipal waste is either directly landfilled, incinerated with energy recovery, or treated at mechanical biological treatment (MBT) plants, with the outputs being used as refuse-derived fuel in a cement plant. No additional sorting is performed for residual waste, except for a small amount of scrap metal that is being sorted during MBT or energy recovery (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

According to EC (2019b), there were still inconsistencies in reporting to Eurostat compared to national statistics at the time of writing the EC report, although some improvements had been made in the recent years. A new Waste Management Information System was piloted in 2018, and the system should enhance data collection and processing with regard to international reporting and waste management planning.

Due to the high number of municipalities in Slovakia (around 3 000), waste collection and treatment is fragmented, inefficient and unable to benefit from economies of scale. Moreover, many small municipalities are likely to have limited resources to create collection services of high quality and carry out data collection at an adequate level (EC, 2019b).

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



**Source:** Eurostat (2022b)

### *Legal Framework*

According to EC (2019b), Slovakia has a rather intricate legislative framework for waste management. The Waste Act (No. 79/2015) came into force in 2016 and has been amended several times since then. Based on the Act, EPR for packaging waste was introduced in Slovakia in 2016. The separate collection of bio-waste became mandatory for individual households not practicing home composting in 2017. However, due to insufficient specification of sorting requirements and several exemptions included (e.g. food waste does not have to be collected in municipalities that send their residual waste for incineration), the separate collection and treatment of food waste in particular has not been efficient. In 2018, a fee for disposable light plastic bags was implemented (EC, 2019b). The recent amendment No. 460/2019 is especially relevant for transposing the WFD and PPWD, including the reuse and recycling target for municipal waste and the recycling targets for packaging waste.

The Act on Fees for Waste Disposal, effective from 2014 to 2018, implemented a landfill tax, called a fee in Slovakia, but the rate of the fee was too low to induce enhanced separate collection. Thus, increased fee levels were introduced in the Act on Fees for Waste Disposal (No. 329/2018) that entered into force in January 2019. Together with the 2019 amendment of the Act on the Environmental Fund No. 587/2004, which aims to increased sorting of municipal packaging and non-packaging waste and introduced reinforced rules for landfill operation and closure, these measures aim to divert recyclables from landfills (EC, 2019b).

The general legislative framework concerning waste and packaging is presented below:

- Act on Waste No. 79/2015 and on amendments to certain acts (Amended several times between 2016-2021. Act No. 460/2019 amending and supplementing Act No. 79/2015 is especially relevant

for transposing WFD and PPWD. In addition, Act No. 285/2020 amending Acts No. 79/2015 and No. 302/2019 as amended by Act No. 74/2020 is especially relevant for transposing WFD);

- Act on Fees for Waste Disposal No. 329/2018 and on the amendment of Act on the Environmental Fund No. 587/2004 and on the amendment of certain acts (Amended in 2019 and 2021. Act No. 67/2021 amending Act No. 329/2018 and amending Act. No 587/2004 is especially relevant for transposing WFD);
- Act on the deposit of disposable beverage packaging No. 302/2019 and amending certain acts (Amended in 2020. Act No. 285/2020 amending Acts No. 79/2015 and No. 302/2019 as amended by Act No. 74/2020 is especially relevant for transposing WFD);
- Regulation of the Government No. 388/2005 setting limits for the recovery of electrical waste and for the reuse and recycling of components, materials and substances (Amended in 2010);
- Regulation of the Government 330/2018 establishing the amount of rates of fees for waste disposal and details related to the redistribution of income from fees for waste disposal (Amended in 2020 and 2021);
- Decree of the Ministry of the Environment No. 365/2015 establishing the Waste Catalogue (Amended in 2017);
- Decree of the Ministry of the Environment No. 366/2015 on record-keeping and reporting obligations (Amended in 2017, 2018, 2020. Decree No. 317/2020 amending Decree No. 366/2015 is especially relevant for transposing WFD and PPWD);
- Decree of the Ministry of the Environment No. 371/2015 implementing certain provision of the Act on waste (Amended in 2017, 2018, 2020. Decree No. 348/2020 amending Decree No. 371/2015 is especially relevant for transposing WFD);
- Decree of the Ministry of the Environment No. 382/2018 on landfilling of waste and storage of waste mercury (Amended in 2021);
- Decree of the Ministry of the Environment No. 373/2015 on extended producer responsibility and the management of specified dedicated waste (Amended several times between 2017-2021. Decree No. 25/2021 amending Decree No. 373/2015 is especially relevant for transposing PPWD);
- Notification No. 368/2015 as a Decree No. 1/2015 on Uniform method for analytical inspection of waste; and
- Notification of the Ministry of the Environment No. 222/2020 on the issuance of the measure of 29 July 2020 no. 1/2020 on the methodology of mixed waste analysis. (The Ministry of the Environment, 2021)

Slovakia has transposed the amended Packaging and Packaging Waste Directive into national law, but the full transposition of the Waste Framework Directive is still in progress (status as of November 2021). The legislative amendments especially relevant for the transposition of the WFD and PPWD are mentioned above.

### *Waste management plan(s)*

*The Waste Management Plan of the Slovak Republic for 2016 – 2020*, approved in 2015, set objectives to be achieved by 2020 e.g. for obtaining the target of 50 % municipal waste recycling, limiting the amount of biodegradable municipal waste landfilled, as well as objectives for packaging and non-packaging waste fractions. The measures to achieve these objectives included:

- implementation of Extended producer responsibility (EPR) into the separate collection system of municipal waste for those fractions that are covered by the EPR principle;
- implementation of the principle that the amount of landfill fee varies depending on the sorting level of municipal waste;
- adoption of a common methodology for the definition of MSW composition;
- analysing the possibility of implementation of a new system for disposable beverage packaging collection, based on an evaluation of municipal waste separate collection efficiency;

- support to financing projects focusing on home and community composting, the modernisation of currently existing composting plants as well as biogas facilities treating food waste;
- adoption of a nationwide home composting plan;
- carrying out the *Action Plan on Support of Placement of Compost from Biodegradable Waste on the Market*;
- investigation of the possibility of introducing a ban on landfilling biodegradable municipal waste with total organic carbon (TOC) content exceeding 5 weight-%;
- support for using alternative fuels produced from residual municipal waste in case their material recovery is not appropriate in an environmentally suitable manner;
- enhancement of MSW separate collection; and
- support to funding technologies aiming at reaching a high recycling level. (Ministry of Environment of the Slovak and Republic, 2015; EEA, 2016)

A new national Waste Management Plan (WMP) for 2021-2025 (Ministry of the Environment of the Slovak Republic, 2021) was adopted on 24 November 2021. At the present, regional WMPs are not in place, but according to § 9 point 4) of the Waste Act, regional WMPs shall be developed based on the national WMP, and the drafts shall be submitted for environmental impact assessment. The WMP covers all waste streams with dedicated sections on targeted waste streams.

Several waste streams are covered by separate collection schemes, such as paper, plastics, metals, glass, composite packaging, biodegradable waste, bulky waste, small construction waste and hazardous waste. However, separate collection of municipal waste can be assessed as insufficient, and many municipalities don't comply with the obligation. To improve separate collection, the WMP foresees a number of measures, such as the introduction of Act No 329/2018 on fees for waste, that shall disadvantage landfilling, and a deposit system for single-use beverage packaging which has entered into force in January 2022.

The main objective of the Slovak waste management by 2025 is to divert waste away from landfill, especially for municipal waste. To reach this goal, the expansion of certain waste treatment technologies play an important role, especially for recycling, preparing for reuse and energy recovery.

The latest environmental policy called *Greener Slovakia - Strategy of the Environmental Policy of the Slovak Republic until 2030* approved by the Slovak Government in 2019, states that waste management is amongst the biggest environmental challenges Slovakia is currently facing, and describes a target to recycle 60 % of municipal waste by 2030 (including preparation for reuse); and to decrease the share of landfilling to < 25 % by 2035. According to the Strategy, important measures to help in achieving these targets include e.g. an extension of the current deposit return system (DRS), limitation of the use of disposable plates and cups, supporting the establishment of reuse centres, gradual increasing of landfill fees to divert recyclables from landfill, widening the use of pay-as-you-throw (PAYT) systems, improving the functionality of the extended producer responsibility (EPR) system, increasing the use of preventive measures in the prevention of illegal dumping, limiting the generation of biodegradable and food waste, enhanced educational and awareness-raising activities, and improvement of the data collection and processing (Ministry of Environment of the Slovak Republic, 2019).

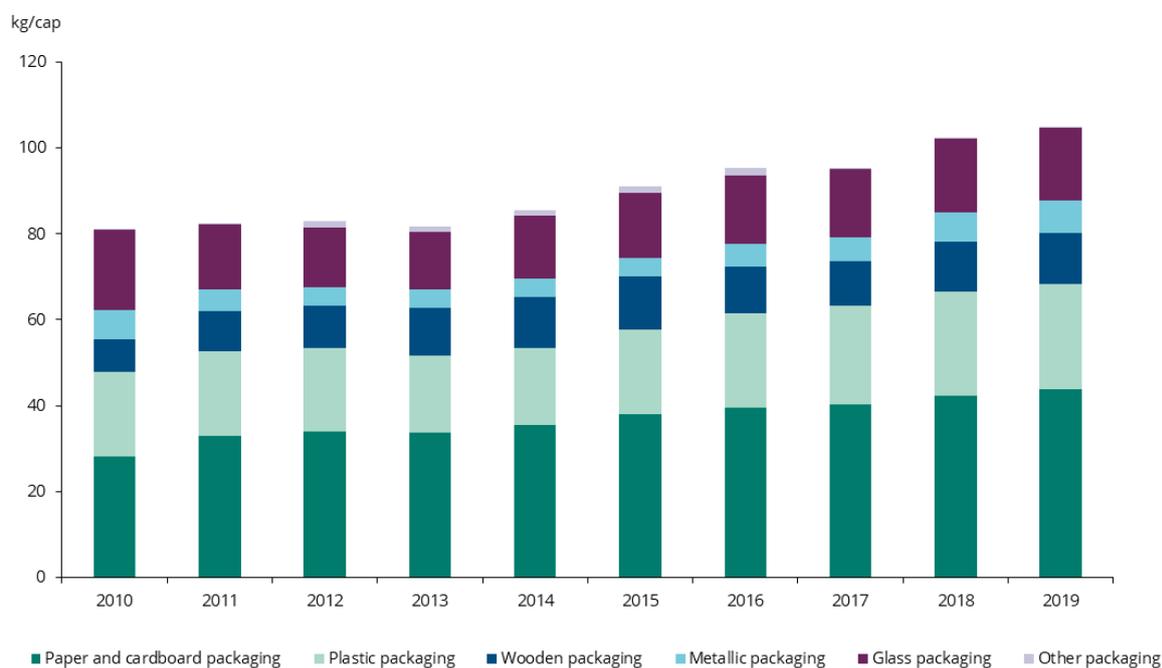
#### *Implementation of previous early warning recommendations*

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

### Packaging waste generation and treatment

In Slovakia, 571 406 tonnes (105 kg/cap) of packaging waste were generated in 2019 (Figure 1.2), which is well below the estimated EU average of 177 kg/cap. The total packaging waste generation per capita has increased steadily by 29.5 % since 2010, with an increase in all packaging waste fractions. Data on packaging waste generated are derived from producer responsibility organisations (PROs) and individual packaging producers (Eurostat, 2022a). The two largest PROs in Slovakia are Naturpack (having contracts with 24 cities in Slovakia in 2020) and Envipak (having contracts with 38 cities in Slovakia in 2020). Smaller PROs are for example Nowas, Recyklogroup, Recobal, Sewa, and Elekos. Between 2010 and 2019, the overall recycling rate for packaging waste increased from 45.7 % in 2010, to 67.5 % in 2019 (Eurostat, 2022a).

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



Source: Eurostat (2022c)

### 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 Slovakia, Table 1.1 shows the calculated capture rates for different waste fractions.

This indicates that there is room for improvement to capture higher shares of all generated recyclables except metals and wood waste. However, the residual waste composition that is used in the calculation of capture rates for Slovakia is based on the data on composition analysis conducted in 45 municipalities (out of around 3 000) only. In addition, the separately collected amounts refer to household waste only.

Table 1.1 Capture rates for different waste fractions in Slovakia

	Residual waste composition (%) <sup>(b)</sup>	Residual waste composition (tonnes) <sup>(a)</sup>	Separately collected amounts (tonnes) <sup>(b)</sup>	Materials in total MSW (tonnes)	Capture rates (%)
Reference year	2017-2019	2019	2020		
<b>Mixed municipal waste, total</b>		<b>1 166 419<sup>(b)</sup></b>			
<b>Paper and cardboard</b>	7 %	78 967	97 720	176 687	55 %
<b>Metals</b>	3 %	38 259	382 539	420 798	91 %
<b>Glass</b>	5 %	56 571	78 778	135 349	58 %
<b>Plastic</b>	11 %	126 556	68 536	195 092	35 %
<b>Bio-waste</b>	46 %	535 736	300 928	836 664	36 %
<b>Textiles</b>	5 %	55 055	4 655	59 710	8 %
<b>Wood</b>	0.25 %	2 916	30 781	33 697	91 %

**(<sup>a</sup>) Note:** Share of material in residual waste (household waste only) multiplied with the amount of residual waste in 2019 as reported in the questionnaire by the Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency (2021)

**(<sup>b</sup>) Source:** As reported in the EEA-ETC/WMGE questionnaire by the Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency (2021)

## 2 Success and risk factors likely to influence future performance

### 2.1 Target for preparing for reuse and recycling of municipal waste

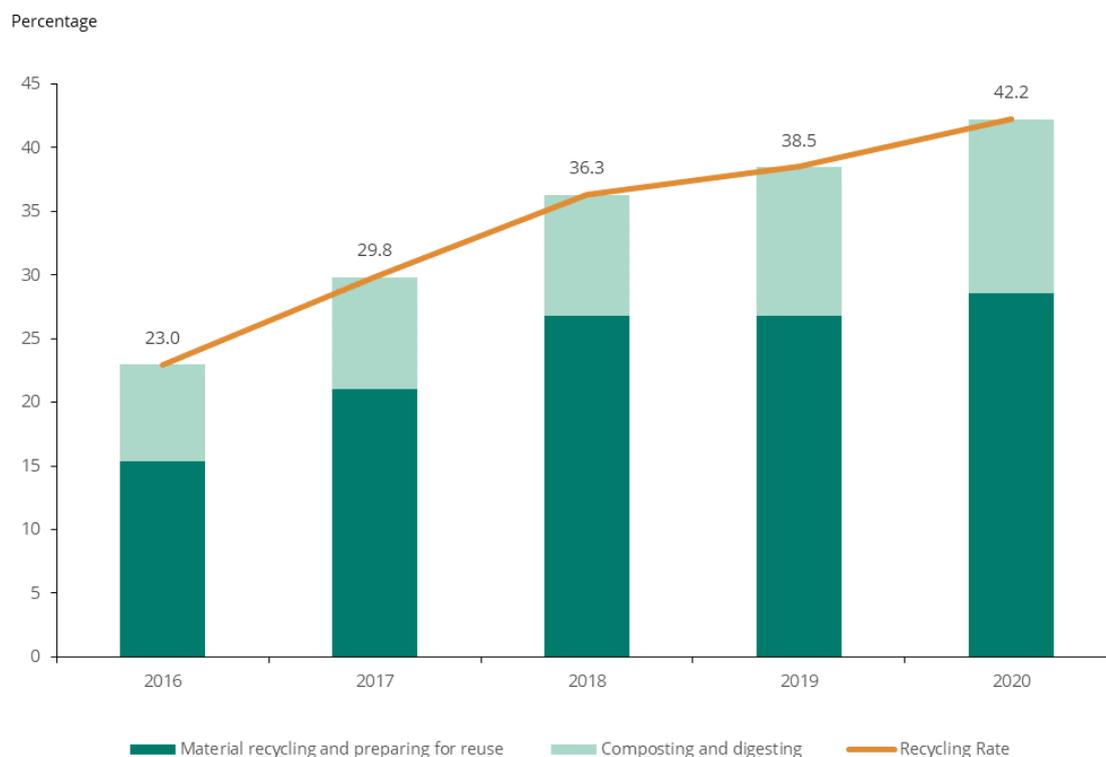
This chapter aims at assessing the prospects of Slovakia to achieve the 55 % preparing for reuse and recycling target for municipal waste in 2025. For a detailed description of the methodology followed, the development of success/risk factors and their impact on recycling, please consult the methodology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

#### 2.1.1 Current situation and past trends

##### *SRF MSWR-1.1: Distance to target*

The overall recycling rate of Slovakia steeply increased from 23 % to 42.2 % between 2016-2020 (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.

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



Source: Eurostat (2022b).

The actual distance to the target for the most recent data point is a key factor determining the likelihood of meeting/not meeting the target. The closer the Member State is to the target already, the more likely that the target will be met.

In the previous Early warning report by EC (2018a), Slovakia was recommended to make *'Improvements to the national waste data system following adoption of the revised Waste Directives, including covering all municipal packaging waste under municipal waste reporting'*, as previously packaging wastes (i.e. codes under category 15 'Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified' in the European List of Waste) were not included in the MSW statistics. According to the Slovak authorities, the new waste management information system (ISOH) is being launched gradually and is expected to be fully operational in 2023. As a result of the clarification of the municipal waste definition in the WFD, all packaging waste under code 15 should have been included in the reporting for the year 2020 (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021), but according to new information provided by the Slovak authorities in January 2022, this was not yet the case.

For Slovakia, the recycling rate is 42.2 % in 2020, which is 12.8 percentage points below the target for 2025. Meeting the target will require an average increase of 2.6 percentage points annually in the period between 2020 and 2025, which is less than the average 4.8 percentage point annual increase in the previous five year period (2016-2020). However, according to EC (2019b), the high increase in the past years was mostly caused by changes in statistical reporting than by enhanced recycling performance.

However, the data used for this analysis are based on a different methodology than the calculation rules for the target. The impact of the application of the new calculation rules to the recycling rate has not been quantified yet in Slovakia. 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 Slovakia 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 37.2 % in 2020. This assumption will result in a change of the assessment for this SRF.

### Summary result

Distance to target > 15 percentage points	Based on currently available data, Slovakia's recycling rate lies at 42.2 %, 12.8 percentage points below the 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 37.2 %, 17.8 percentage points below the target.
Robustness of the underlying information	The currently available data do not yet reflect the calculation rules applicable to the 2025 target. Slovakia has not assessed the influence of the new calculation rules on the recycling rate (at the moment of writing this assessment). A recycling rate which would be 5 percentage points below the currently reported one would change the assessment for this SRF.

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

The recycling rate over the last five years shows an increase by 19.2 percentage points (Figure 2.1). However, due to the above-mentioned inconsistencies in reporting, it cannot be estimated whether

the increase is mainly caused by enhanced recycling performance or adjustments in the statistical reporting.

### Summary result

RR < 45 % and increase in last 5 years > 10 percentage points	The recycling rate has increased by 19.2 percentage points over the past five years. For Slovakia, the application of the new calculation rules would indicate an estimated recycling rate of 37.2 % in 2020.
Robustness of the underlying information	There are no breaks in the time series data indicated. However, the increase in the recycling rate may be caused not only by actual improvements in waste management but also by adjustments in the statistical reporting.

### 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.

Slovakia has not yet fully transposed the amended Waste Framework Directive into national law, 13 months after the deadline of 5 July 2020. So far, 11 transposition measures have been communicated (EUR-LEX, 2021a).

### Summary result

Transposition with delay of > 12 months, or no full transposition yet	The amended WFD has not been fully transposed into national legislation.
Robustness of the underlying information	Assessment based on information provided by the Commission (status as of November 12 <sup>th</sup> , 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.

According to the Slovak authorities, the policy for MSW management is in the responsibility of the following authorities and stakeholders:

- Ministry of Environment of the Slovak Republic is responsible for waste management at national level, preparing national waste legislation, and proposing provisions of legislation concerning landfill fees approved by the Government or the National Council. Tasks of the Ministry also include preparation of methodical guidance for district offices under the Ministry of the Interior in order to support appropriate implementation of certain legislative provisions. With respect to the DRS system starting in Slovakia in 2022, the Ministry will appoint three representatives to the supervisory board of the trustee and review the administrator's annual accounts, among other (OdpadyPortal, 2021).
- Municipalities are responsible for management of residual waste and separately collected municipal waste from households, mixed waste from sources similar in nature and

composition to household waste, and minor construction waste in their administrative areas. Municipal responsibilities include the operation of the systems of separate collection that are financed through PROs. Furthermore, they are responsible to set details of the MSW management in their generally binding regulations and impose fines for offences in waste management (in addition to distinct offices). The collection standards for municipal waste are laid down in the Decree of the Ministry of the Environment No. 371/2015 implementing certain provision of the Act on waste as amended. For waste belonging to Extended Producer Responsibility scheme, the municipalities enable a PRO to realize separate collection based on a written agreement between the PRO and the municipality, according to the Waste Act No. 79/2015. The PRO then selects the collection service providers to be contracted by the municipality or city.

- Producer responsibility organizations (PROs) and producers meeting EPR obligations individually are responsible for achieving the targets set for product categories falling under the EPR system (i.e. electric and electronic equipment (EEE), batteries and accumulators, packaging and non-packaging products). The main PROs are Envipak and Naturpack, while smaller PROs as Nowas, Recyklogroup, Recobal, Sewa, Elekos, etc, also operate in Slovakia. They are obliged to organize the separate collection of these fractions and finance all the costs resulting from collection and waste management. PROs have contracts with every municipality (COWI et al., 2019).
- Natural persons and legal entities that generate municipal waste are responsible for the management of their separately collected waste fractions that are not covered by EPR (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

In the previous Early Warning Report, *'Revision of the roles and responsibilities of the extended producer responsibility (EPR) schemes and how they integrate with municipal services, to ensure that the approach aligns with the new service standards, and that producers fund the full cost of the parts of the system that they are responsible for'* was recommended for Slovakia (EC, 2018a). According to the Slovak authorities, there have been several amendments of the Waste Act and its implementing regulations since this recommendation were given, especially concerning management of packaging and non-packaging products. These changes have been aiming at setting up better EPR regulations in general, and also between producers, municipalities and waste collection operators, as well as adaptation of these rules to practical problems (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

Penalties for infringement of duties are defined in the waste legislation, and have been implemented in practice:

- A fine for improper treatment of municipal waste can be imposed by a municipality (up to EUR 1 500) or a district office (up to EUR 2 500) upon natural persons (citizens). Examples of such situations may include e.g. non-compliance of the municipal generally binding regulation, not joining the collection system, or incorrect sorting.
- A fine varying from EUR 800 – EUR 80 000 can be imposed upon a municipality if its collection system for municipal waste does not fulfil the requirements as set in the Waste Act by a district office or the Slovak Environmental Inspectorate.
- A fine ranging from EUR 800 – EUR 80 000 for non-compliance to the municipal generally binding regulation or for not joining the collection system etc. can be imposed by a district office or the Slovak Environmental Inspectorate upon legal persons or sole traders.
- A fine ranging from EUR 500 – EUR 10 000 for an infringement of the provisions of Act No. 329/2018 Coll. on fees for the waste landfilling can be imposed by a district office or the Slovak Environmental Inspectorate.

- A fine varying from EUR 1 500 – EUR 200 000 for non-compliance to the EPR requirements can be imposed by a district office or the Slovak Environmental Inspectorate on a packaging PRO. If a PRO does not meet the obligations specified in the Waste Act, the Ministry can revoke the authorization of the PRO. A packaging PRO that has terminated the contract with a municipality and has not assured separate collection of packaging waste or until the municipality has contracted with another PRO, can be imposed a fine 1.5 times higher than the costs of ensuring separate collection in a municipality. The same level of fine can also be imposed if a packaging PRO has not covered the costs of separate collection, including settlement of documents on amounts collected and recovered within three months from the conclusion of a new contract (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

Slovak authorities have indicated that there are no mandatory recycling targets imposed to individual municipalities, nor fines for municipalities for not meeting the national recycling targets. At packaging PRO level however, each PRO must meet the targets for packaging waste individually, and interim targets for separate collection were set for PROs in the run-up to the EU targets to be met by 2025.

According to the Waste Act, the original waste generator/producer/importer is responsible for the management of municipal waste, even if it is separately collected from non-household sources that are not covered by extended producer responsibility. The costs are to be paid by the original waste generator/producer/importer.

At municipality level, there is no obligation to statistically distinguish between packaging and non-packaging material. For example, in the case of separate collection of plastic waste, all collected waste is included under EURAL waste code N° 20 01 39, regardless of the amount of packaging/non-packaging waste.

Support for municipalities to enhance separate collection is given in the form of various subsidies. In addition, waste management operators are supported to improve the state of waste management. More specifically, financial support actions related to municipal waste management include:

- The compliance with the provisions of the Waste Act as well as all relevant regulations in the field of waste management is prerequisite for the disbursement of EU funds. Compliance with the separate collection standards is part of the criteria for granting financial support within the Operational Program Environmental Quality and its subsequent implementation.
- It is possible to seek financing from the OP KŽP programme and Envirofond contributions to assure and improve minimum service standards for waste collection, excluding separate collection of fractions under EPR. In addition, it is planned to allocate financing to support implementation of the service standards in the operational program for the years 2021 - 2027 (OP Slovakia).
- Two measures were introduced in the Waste Management Plan 2016-2020, which aimed to support the financing of projects targeting to construct biogas facilities that would treat biodegradable wastes from industrial and municipal sources. The measures were partly realized for municipal waste and fully realized for industrial waste via a grant scheme within the Operational Program of Environmental Quality targeted to biodegradable waste recovery. In addition, the new Waste Management Plan for 2021-2025 contains a measure to support the financing of separate collection of household food waste and projects for building new plants and the modernization of existing plants, with a focus on the recovery of biodegradable kitchen and restaurant waste.
- In 2022, the Environmental Fund provides funding for municipalities to support separate collection of MSW, prevention and recovery of biodegradable municipal waste, the

introduction and improvement of a separate collection system at municipal level and the establishment of civic amenity sites and reuse centres. The Fund pays a contribution to the municipalities that ensure the separate collection of household food waste via separate containers and to recover all collected household food waste in treatment facilities. Municipalities may only use the contribution paid for the above-mentioned purposes (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

In the previous Early Warning Report, it was recommended for Slovakia to *‘Setting up of a national forum on municipal waste recycling to facilitate a good working relationship between the national government institutions, municipalities and producer responsibility organisations. This should help improve communication between the national government and the municipalities, and could lead to a shared understanding of the problems and solutions’* (EC, 2018a). According to the Slovak authorities, such forum has not been established by the Ministry of the Environment, but representatives in the field of waste management take part in conferences, and work meetings organised by the Ministry when needed. According to the Waste Act, the Coordination centre shall at least annually ensure, as appropriate, a dialogue between actors (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

A national communication campaign *‘Improving information and providing advice on improving the quality of the environment in Slovakia’* organised by the Slovak Environment Agency aims to provide better information to the public and parties involved. Particularly in the field of information and consultancy, the campaign promotes the objectives of the Operational Program of Environmental Quality. Waste management is covered by the target to increase the recovery rate of waste in order to prepare it for re-use and recycling and by promoting waste prevention. The campaign focusses on awareness-raising and improving access to information, creating tools, advice and support to exchange information between stakeholders, and to unify and streamline communication in environmental protection (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The Slovak Environmental Inspectorate, a component of waste management inspection, is the body of the state administration of waste management that is authorized to control the achieving of the various targets (including recycling targets) that have been transposed from the corresponding EU directives. These objectives are specifically stated in the Waste Act no. 79/2015 and in Act no. 302/2019 on disposable packaging for beverages, and their respective amendments. Both pieces of legislation identify the responsibilities for ensuring that the targets are met. The Slovak Ministry of environment is setting up interim targets for packaging PROs based at their market share, in order to meet national waste management objectives.

### Summary result

Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets	Responsibilities are clearly defined, and support tools are in place. However, no clear targets are defined to the municipalities and fines for municipalities that relate to the requirements they are responsible for are not specified to be related to reaching the targets. The enforcement mechanisms that apply to municipalities are not clearly linked to either targets or service levels.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the EEA and ETC/WMGGE questionnaire.

### 2.1.3 Economic instruments

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

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

The Act on the Environmental Fund (No. 17/2004) implemented a landfill tax, called a fee in Slovakia, in 2004, but the rate of the fee was too low to induce enhanced separate collection (EC, 2019b). In the previous Early Warning Report by EC (2018a) it was recommended that Slovakia should perform a *“Revision of the landfill tax to ensure other residual waste treatment and disposal techniques (such as incineration) are also covered, so as to more effectively push waste up the hierarchy to the ‘preparation for reuse and recycling’ level, rather than just to the ‘recovery’ level.”* Another source states that *‘as many as two-thirds of all municipalities in Slovakia collected significantly lower amounts of fees for waste than the real costs were’*. The calculation method for the determination of the landfill fee was changed in 2019, and the fee is now based on the sorting level of municipal waste to be deposited (CEWEP, 2020). The fee rates are applied to residual waste and bulky waste. Revenues from the fee are destined to the Environmental Fund, and can be used only for activities connected with waste management specified in the Act on the Environmental Fund. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The sorting level is calculated as the amount of separately collected materials divided by the municipal waste generated in each municipality, thus incentivising separate collection (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021):

Sorting level x (in percentage)	2020 (EUR/t)	from 2021 onwards (EUR/t)
$x \leq 10$	26	33
$10 \leq x \leq 20$	24	30
$20 \leq x \leq 30$	22	27
$30 \leq x \leq 40$	13	22
$40 \leq x \leq 50$	12	18
$50 \leq x \leq 60$	11	15
$x > 60$	8	11

A calculation provided by Denkstatt for the critical review of this assessment shows that in 2020, all counties reached a municipal waste separation rate above 20 % (Denkstatt/Ramboll Group, 2021).

Changes to the landfill fee are planned by the Ministry of the Environment for 2021, but no specific fee amounts have been defined yet. The current legislation is planned to be amended with the aim to set and increase the level of fees for 2022 and beyond. In addition, the Slovak authorities indicate that the treatment of waste prior to landfilling needs to be incorporated into the legislation (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

According to the Waste Act, it is not allowed to landfill sorted biodegradable waste from kitchens and restaurants, sorted fractions of MSW covered by EPR (excl. non-recoverable waste after final sorting), garden waste (excl. non-recoverable waste after final sorting), waste that has not undergone any treatment except inert waste, waste for which treatment is not technically possible, or waste of which treatment would not reduce the waste amount or not prevent danger to health or the environment.

Untreated residual waste may be landfilled until 31 December 2022 in case separate collection of biodegradable waste, waste falling under EPR, hazardous waste, and collection and transport of bulky waste and small construction waste are organised in a municipality. From the beginning of 2023, all residual waste needs to be treated before its landfilling. The output from treatment needs to fulfil the parameters set for biological stability (AT4 < 10mg O<sub>2</sub>/g dry matter, GS21 < 20 l/kg dry matter). A new ban on the disposal of biodegradable waste from wholesale, retail and distribution by landfilling was recently added to the Waste Act through amendment Act No. 372/2021 Coll. (Article I(4) of the Amendment, Section 13(e)(7)(7) of the Waste Act). This amendment will enter into force on 1 January 2023 (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

### Summary result

Ban in place for landfilling residual or biodegradable waste	<p>Slovakia has a landfill fee depending on the level of sorting of municipal waste, varying widely from 11 to 33 EUR/t in 2021 (corresponding to 12.5 to 37.4 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)). The fee was introduced in 2020 and increased in 2021.</p> <p>Slovakia has a landfill ban on sorted biodegradable waste from households and restaurants, and municipal garden waste, and bans on landfilling of untreated mixed municipal waste, as well as biodegradable waste from wholesale, retail and distribution, applying from 2023.</p>
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE.

### *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.

Slovakia has two waste incinerators, but there is no tax on waste incineration nor tax on waste exported for incineration in place. No additional taxation changes are planned on incineration either. However, in the draft law amending the Waste Act currently under approval, a ban on energy recovery of waste that can be recovered or recycled is being proposed (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

### Summary result

No incineration taxes	Slovakia has no incineration tax in place.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE

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

PAYT systems are designed to incentivize citizens to make a bigger effort in separating their waste at source. However, a PAYT system should be designed with the appropriate level of source separation encouragement to ensure that citizens do not misplace waste in recycling bins in order to avoid residual waste charges. Overall, PAYT usually has a positive effect on source separation and thus recycling rates through direct involvement of citizens.

According to the Institute for the Environmental Policy (2019), 167 municipalities, representing around 6 % of the municipalities and around 13 % of the population in Slovakia, had PAYT systems in place in 2018. In 2019, the coverage had increased to 15 % (192 municipalities) and according to the

Slovak authorities, an increasing trend can be observed compared to the flat-rate collection (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021). No uniform system is used, but the schemes varies in each municipality. A volume based system based on collection frequency and volume of the container was the most common method in 2018 and used in 93 municipalities, whereas 69 municipalities use tag collection (citizens buy a tag in advance and put it on a full container when it needs to be emptied), and five municipalities use bins labelled with a barcode/QR code (the principle is same as in the tag system) (Institute for the Environmental Policy, 2019). The fees can be decided by the municipalities and vary in the range of 0.0033 EUR/l (or 0.0066 EUR/kg) and 0.0531 EUR/l (or 0.1659 EUR/kg). The Ministry of the Environment of the Republic of Slovakia and Slovak Environmental Agency (2021) state that a generally binding regulation is needed to unify the system.

### Summary result

Less than 50 % of the population covered by PAYT	In 2019, around 15 % of the Slovak population were covered by PAYT. In recent years, new systems using smart solutions have been introduced.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE

#### 2.1.4 Separate collection system

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

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

For Slovakia, according to the most recent data, the percentage of households living in cities is 38 %, in towns and suburbs 33 % and in rural areas 29 % (Eurostat, 2021a).

According to the Slovak authorities, residual waste is usually collected via bring points from housing properties with multiple apartments, and using door-to-door collection from individual properties. The fractions falling under EPR are similarly separately collected via bring points from housing properties with multiple apartments, but in individual properties bring points and door-to-door collection are both used. However, in recent years, door-to-door collection of plastics, composite materials, metals and paper and cardboard has been increased significantly. Glass waste is collected mostly via bring points in all properties. Door-to-door collection is mostly organised using a bag system, but also a container-based system is used in many municipalities. Packaging wastes and non-packaging plastic, paper and glass wastes are generally collected using the same bin, and the responsible packaging PROs, in cooperation with waste companies, calculate the shares of both waste streams, according to periodic analyses of the collected wastes. The price is then averaged. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

Producers are responsible for the separate collection of waste falling under EPR (EEE, batteries and accumulators, and packaging and non-packaging products). To be able to increase separate collection efficiency, 'separate collection standards' were introduced in the Act on Waste and implementing regulations, and packaging PROs are responsible to fulfil the collection standards in the municipality. In addition, requirements for waste collection containers are described in Decree no. 371/2015, including e.g. specific color-coding of containers for different fractions. Co-mingled collection is possible in case subsequent sorting can be ensured, and this method does not prevent recycling. With regards to this possibility, five various combinations of separate collection are currently being used (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021):

- Paper, glass, and metals separately, co-mingled collection for plastics and composite packaging based on cardboard;
- Paper, glass, and composite packaging based on cardboard separately, co-mingled collection for plastics and metals;
- Paper and glass separately, co-mingled collection for plastics, composite packaging based on cardboard and metals;
- Paper, glass, and plastics separately, co-mingled collection for metals and composite packaging based on cardboard packaging;
- Paper, glass, plastics, metals and composite packaging based on cardboard separately.

Municipalities are responsible for the separate collection of biodegradable waste. Home-composting is the prevailing method used especially in areas with individual properties, whereas in larger cities separate collection using collection containers is used. The collection system can be decided by municipalities. Separate collection of garden waste is mandatory, and individual municipalities have fulfilled this obligation by organising home composting with composters or separate collection. Furthermore, municipalities need to ensure a seasonal collection campaign of garden waste at least in spring and autumn. According to 'separate collection standards' for biodegradable municipal waste, municipalities need to ensure collection capacity of at least 250 litres per person per year, and comply with the set minimum collection frequency. Garden waste and food waste can be collected together (co-mingled (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

Currently, some exemptions apply concerning the introduction of separate collection of household kitchen waste. During 2021–2023 the exemptions will be gradually removed in accordance with the Act No. 460/2019 and modified minimum requirements for bio-waste separate collection will be adopted. The exemption from carrying out separate collection of food waste due to economic unfeasibility has ended as of January 2021. At the moment, the requirement to carry out separate collection of food waste does not cover the part of the municipality that recovers this waste as energy (by activity R1), demonstrates that every household composts their own waste, or demonstrates that technical problems of waste collection in historic city centres and rural areas do not allow separate collection. From the beginning of 2023, the first and last exemption will end (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The separate collection of WEEE is organised via civic amenity sites, collection points and take back points. In addition, calendar collections are organised for WEEE. The latter means that on dates announced in advance, citizens can hand over their WEEE to a mobile collection unit parked at a designated spot. According to the Slovak authorities, the current system is sufficiently efficient, except for small household appliances. The collection of WEEE from citizens seems to be problematic, as the transferred WEEE is in many cases incomplete, due to the scavenging of valuable parts (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The separate collection of textiles is currently provided voluntarily by charities and collection companies (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The separate collection of non-household waste is mandatory in Slovakia (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

Table 2.1 gives an overview of the collection systems in Slovakia.

**Table 2.1 Characterisation of the collection system in Slovakia**

	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 km <sup>2</sup> )	Bring point (<5 per km <sup>2</sup> )	Civic amenity site	Door-to-door - separate	Door-to-door - co-mingled	Bring point (>5 per km <sup>2</sup> )	Bring point (<5 per km <sup>2</sup> )	Civic amenity site	Door-to-door - separate	Door-to-door - co-mingled	Bring point	Civic amenity site
Mixed/residual waste			xx			x		x			x			
Paper and Cardboard			xx		x	x		x		x	x		x	x
Ferrous metals			xx		x	x		x		x	x		x	x
Aluminium			xx		x	x		x		x	x	x	x	x
Glass			xx					x			x		x	
Plastic			xx		x	x		x			x	x	x	
Bio-waste*														
food			x			x					x			
garden			xx		x	x		x		x	x			x
Textiles				x					x				x	
Wood					x					x				x
WEEE					x	x				x	x			x
Composite packaging**			xx			x		x			x	x		

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

**Source:** Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency (2021)

Examining capture rates for recyclables gives an overview of the effectiveness of the whole collection system for the different materials (see Section 1.3). The modest capture rates for paper and cardboard, glass, plastics, bio-waste, and textiles (between 8 - 58 %) show that their separate collection is not efficient enough and indicates that there is room for improvement to capture higher shares of these waste fractions. However, the residual waste composition that is used in the calculation of capture rates for Slovakia is based on the data on composition analysis conducted in 45 municipalities only. In addition, the separately collected amounts refer to household waste only.

## Summary result

Paper and cardboard	A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
Metals	A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
Plastics	A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
Glass	A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
Bio-waste	A low share of the population is covered by high convenience collection services	Door-to-door separate collection of food waste exists in towns and suburbs, and in rural areas, but not as dominant system. In 2020, only 2 579 tonnes of household food waste were separately collected. Most of the collection methods used for garden waste represent low convenience level.
Wood	A low share of the population is covered by high convenience collection services	Wood waste is collected at civic amenity sites only.
Textiles	A low share of the population is covered by high convenience collection services	Textile waste is collected at high convenience collection points only in rural areas, representing 29 % of the population.
WEEE	High to medium convenience collection services dominate	WEEE is mainly collected at civic amenity sites, collection points and take back points. In towns, suburbs, and rural areas, mobile units offer neighbourhood and door-to-door collection at days announced in advance.
Robustness of the underlying information		Although door-to-door or high convenience collection points seem to be the dominant systems for paper and cardboard, plastics, and glass, their capture rates vary from 35 % to 58 %, showing that their separate collection is not very efficient.

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

Slovakia plans to introduce DRS for aluminium cans and plastic bottles starting from 2022 according to the Act No. 302/2019 Coll. on disposable beverage packaging and Act No. 79/2015 Coll. on waste. An EPR system is implemented, with an *Advance System Administrator* as responsible organization. This organization is responsible for collecting funds from entities that place disposable beverage packaging on the market, and for collection, treatment and recycling of this packaging. Targets are defined in Act 302/2019. The authorities expect an increase of the separate collection of plastics and metal packaging by 7.5 %.

In addition, EPR is likely to be introduced for textile waste. A functional system for textile collection is going to be set up from 1 January 2025 by the Act No. 79/2015 Coll. on waste (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The National Waste Management Plan targets a reduction with 25 % of the share of biodegradable municipal waste towards 2025, proposes measures to achieve that target and identifies responsible entities. The measures include:

- Amendment of Act no. 152/1995 Coll. on food, allowing the sale of food after the date of minimum durability. The Ministry of Agriculture and Rural Development of the Slovakia is responsible for the Food Act;
- The Ministry of the Environment included measures in the food waste chapter of the Waste Prevention Program 2019 – 2025, such as the provision of a prohibition to landfill food waste from wholesale, retail and distribution with effect from 1 January 2023 (Act no. 372/2021 Coll.); the possibility to lift exemptions from the obligation to introduce and ensure the separate collection of biodegradable kitchen waste from households from 1 January 2021 (Act no. 460/2019 Coll.). The latter implies that, from 2021, a municipality can use the exception for domestic composting only if it can demonstrate that all households compost their own waste;
- The Ministry of the Environment publishes information leaflets on its website, among other aiming the prevention of food waste generation by households;
- The Slovak Environment Agency in cooperation with the Ministry of the Environment of the Slovak Republic organized a conference on Waste Prevention in 2021;
- Through the Operational Program Environmental Quality, calls were announced that focus on the recovery of biodegradable municipal waste, in support of increasing the capacity of existing composting plants.

Decree No. 384/2020 amending the Decree No. 371/2015 introduces a new annex 10 b with minimum mandatory requirements on the frequency of service and the type and size of collection containers for the collection of biodegradable municipal waste from households, practically enforcing door-to-door collection.

### Summary result

Paper and cardboard	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	A high share of the population is already covered by high convenience collection services.
Metals	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	A high share of the population is already covered by high convenience collection services. Additionally, Slovakia plans to introduce DRS for aluminium cans and plastic bottles starting from 2022
Plastics	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	A high share of the population is already covered by high convenience collection services. Additionally, Slovakia plans to introduce DRS for aluminium cans and plastic bottles starting from 2022.
Glass	N/A (for countries in which a 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	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	The National Waste Management Plan targets a reduction with 25 % of the share of biodegradable municipal waste towards 2025, proposes measures to achieve that target, and identifies responsible entities. The measures include legal initiatives aiming for improved bio-waste collection services and coverage, as well as awareness raising campaigns, and support for increasing composting capacity.
Wood	No firm plans to improve the convenience and coverage	No plans presented.
Textiles	No firm plans to improve the convenience and coverage	Act No.372/2021 introduces the obligation of the municipality to provide for the separate collection of textile from 2025, as required by the Waste framework Directive.
WEEE	N/A (for countries in which a 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.
Robustness of the underlying information		Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE

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

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

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

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

EPR was introduced in the Waste Act (No. 79/2015) and has been fully implemented since 2016. It covers sorted household packaging waste for the following fractions: paper, plastics, glass, metals, wood, and multilayer packaging as well as non-packaging paper, plastics, glass, and multilayer combined cardboard-based materials. According to legislation, producers of products falling under EPR are obliged to cover all the costs for sorted waste, including costs resulting from operation, maintenance, and investments (COWI et al., 2019). However, producers do not pay for the management of packaging waste that is left in the mixed municipal waste, and in some cases citizens are instructed to sort non-recyclable packaging waste to the residual waste bin (Institute for Environmental Policy, 2020).

Producers can fulfil this obligation by joining the producer responsibility organisation (PRO), or by taking care of the responsibilities individually. The operation of PROs is financed via fees collected from producers. Currently there are 10 PROs for packaging in Slovakia, as well as some individual producers. In 2020, the market coverage of the two most important PROs, ENVI-PAK and NATUR-PACK, was 88 % (Institute for Environmental Policy, 2020). PROs are obliged to have contracts with every municipality. In practice, PROs have difficulties in financing new investments, which has been one of the reasons behind the low recycling rate in Slovakia. Municipalities are not allowed to invest in building new infrastructure of sorted waste (COWI et al., 2019). The Slovak authorities have clarified that all investments in infrastructure that are necessary for wastes covered by an EPR scheme must be borne by the waste companies, that in turn can reflect these costs in the unit price for waste management.

Producers of industrial and commercial packaging can fulfil their EPR obligations individually instead of through joining a PRO. However, in practice a large amount of industrial waste also enters the scheme, as companies sell their wastes directly to recycling operators. This creates a considerable amount of recyclable waste, which helps to achieve the recycling targets set (Institute for Environmental Policy, 2020).

There is no advanced fee modulation in place yet. However, due to EU legislation, the application of eco-modulation will become mandatory in Slovakia. The method of application will be specified by legislation and will be based on guidance prepared by the EC (Institute for Environmental Policy, 2020).

According to the Waste Act, Coordination centres must work in collaboration with the Ministry and the inspection authority to identify free-riders and producers failing to meet the specified obligations laid down in the Act. If a distributor supplies products that come from unregistered producers directly to end-users, the obligations of a producer are transferred to the distributor (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

### Summary result

No advanced fee modulation	There is no advanced fee modulation based on the four assessment criteria presented above.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE

## 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.

As reported by the Slovak authorities, there are currently 123 composting plants and 24 biogas plants operating in Slovakia. The combined capacity of these plants amounts to 808 000 tonnes (composting plants 550 000 tonnes, and bio-gas plants 259 000 tonnes). Home composting is not included in the estimated capacity (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021). However, the composting plants treat waste coming from other sources as well, which restricts the treatment of municipal waste, and the current capacity for the treatment of municipal bio-waste is unclear.

According to *Analysis of the development of waste management in Slovakia* (currently under review), a demand for higher treatment capacity is expected in the future. The amount of separately collected garden waste has been increasing by around 24 % per year since 2016, amounting to nearly 250 000 tonnes in 2019. The composition analysis shows that the share of garden waste still amounts to around 20 % of residual municipal waste, representing 234 000 tonnes, whereas the share of food waste is 24 %, representing around 281 000 tonnes. This implies that the annual capacity needed to treat all municipal bio-waste would be around 765 000 tonnes (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

### Summary result

No capacity information available	The nominal capacity is not known. There are plans to increase the treatment capacity in the future, but there are no firm plans, i.e. plans that have clear responsible entities, defined targets, and timeline available yet.
Robustness of the underlying information	The available treatment capacity is not dedicated to municipal bio-waste treatment only.

### *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.

According to EEA (2020), Slovakia does not have national standards for the compost quality nor quality management system for the production of compost from bio-waste (EEA, 2020).

In the previous Early warning report by EC (2018a) it was recommended for Slovakia that *“In order to facilitate the marketing of good quality compost, an end-of-waste standard that gives output of appropriate quality ‘product’ status would be desirable.”* According to the Slovak authorities, due to the need of e.g. set standards for compost quality and support for the marketing of compost, a new decree on compost and composting is planned to be prepared. However, this is not yet completed due to lack of staff capacity of Waste Management Department at the Ministry. In the new Waste Management Plan for 2021-2025 that is currently being drafted, an introduction of a quality label for quality compost is being proposed and shall be implemented by 2024. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

### Summary result

No national standards or quality management system	There are no national standards or quality management system in use in Slovakia.
Robustness of the underlying information	Based on information provided by Slovakia to the EEA in 2019 as contribution to the EEA’s work on bio-waste.

## 2.2 Target for the recycling of packaging waste

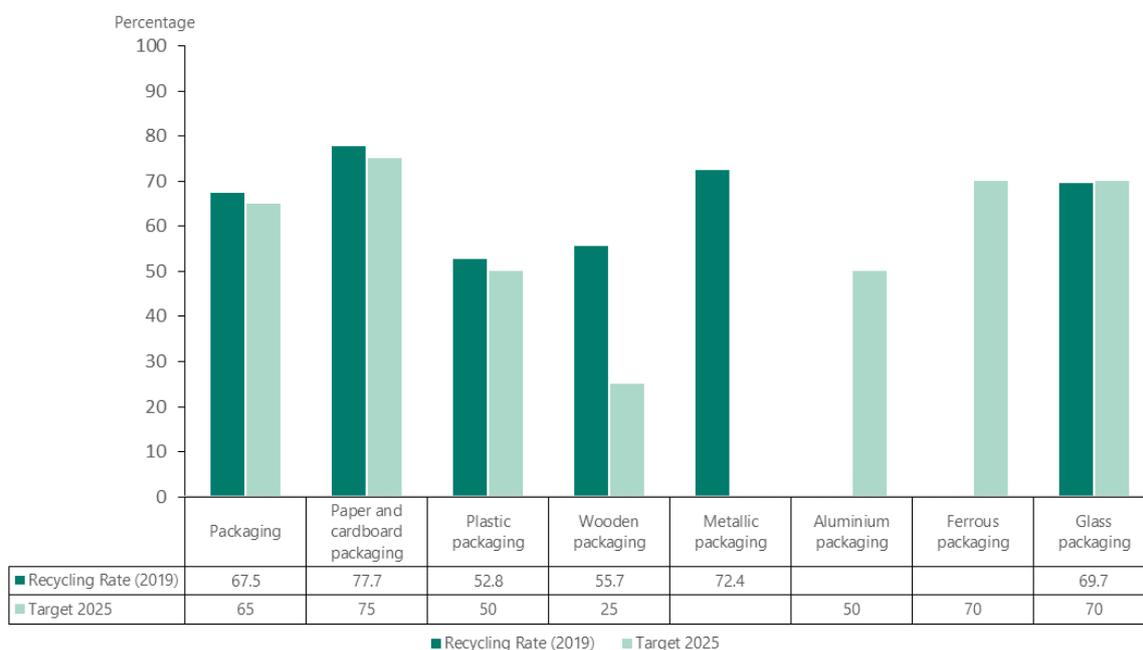
This chapter aims at assessing the prospects of Slovakia to achieve the 65 % recycling target for packaging waste in 2025 as well as the material specific packaging waste recycling targets (50 % of plastic; 25 % of wood; 70 % of ferrous metals; 50 % of aluminium; 70 % of glass; 75 % of paper and cardboard). 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 Slovakia 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 Slovakia is illustrated in Figure 2.2.

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



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

The reported recycling rate for packaging waste is 2.5 percentage points above the 2025 target of 65 %. In addition, the recycling rates for plastics, paper and cardboard, ferrous packaging, and wooden packaging already exceed the target. For glass the distance to target is 0.3 percentage points. The recycling rate for aluminium packaging is 20.7 %, almost 30 percentage points below the target.

Data on packaging waste are derived from PROs and individual packaging producers. No estimates are used to improve data coverage with regard to free-riding, online sales, private imports/exports or

packaging put on the market by entities below reporting thresholds (de minimis). This means that there is a risk of underreporting the amount of packaging placed on the market, and consequently overestimated recycling rates. Audits conducted by the Slovak Environment Inspectorate are used to verify the data on packaging waste generated and recycled (Eurostat, 2021b). In the previous Early warning report, the reliability of the packaging waste statistics was questioned, and Slovakia was recommended to perform an *“Introduction of a requirement for packaging producer data to be reviewed by third-party auditors to ensure the accuracy of data on packaging placed on the market, and consequently of the recycling rates under the Packaging and Packaging Waste Directive.”* According to the Slovak authorities, the Ministry of the Environment aims to prepare a new packaging law to improve functioning of the EPR system, including mandatory audits of producers performed by independent third-party auditors (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

However, the recycling rates presented are based on the calculation rules of the Commission Decision 2005/270 before it was amended by the Commission Implementing Decision 2019/665 and will likely differ from the recycling rates to be reported according to the new calculation rules. The new calculation rules will only be mandatory to be used for the reference year 2020 and onwards. A key difference in the new calculation rules compared to the old rules is that the amount of sorted packaging waste that is rejected by the recycling facility shall not be included in the reported amount of recycled packaging waste.

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

- Paper and cardboard packaging: decrease by 10 %, from 77.7 % to 69.9 %
- Plastic packaging: decrease by 21 %<sup>1</sup>, from 52.8 % to 41.7 %
- Steel packaging: decrease by 14 %, from 105.1 % to 90.4 %
- Aluminum packaging: decrease by 14 % from 20.7 to 17.8 %
- Glass packaging: decrease by 5 %, from 69.7 % to 66.2 %
- Wooden packaging: decrease by 11 % from 55.7 % to 49.6 %
- Total packaging: Calculated based on the amounts of each packaging material generated and recycled in 2019, the recycling rate would drop from 67.5 % to 59.7 %.

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

### Summary result

Total packaging	5 - 15 percentage points below target	Slovakia reports a recycling rate of 67.5 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 59.7 %, 5.3 percentage points below the 2025 target.
Paper and cardboard packaging	5 - 15 percentage points below target	Slovakia reports a paper and cardboard packaging recycling rate of 77.7 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 69.9 %, 5.1 percentage points below the 2025 target.

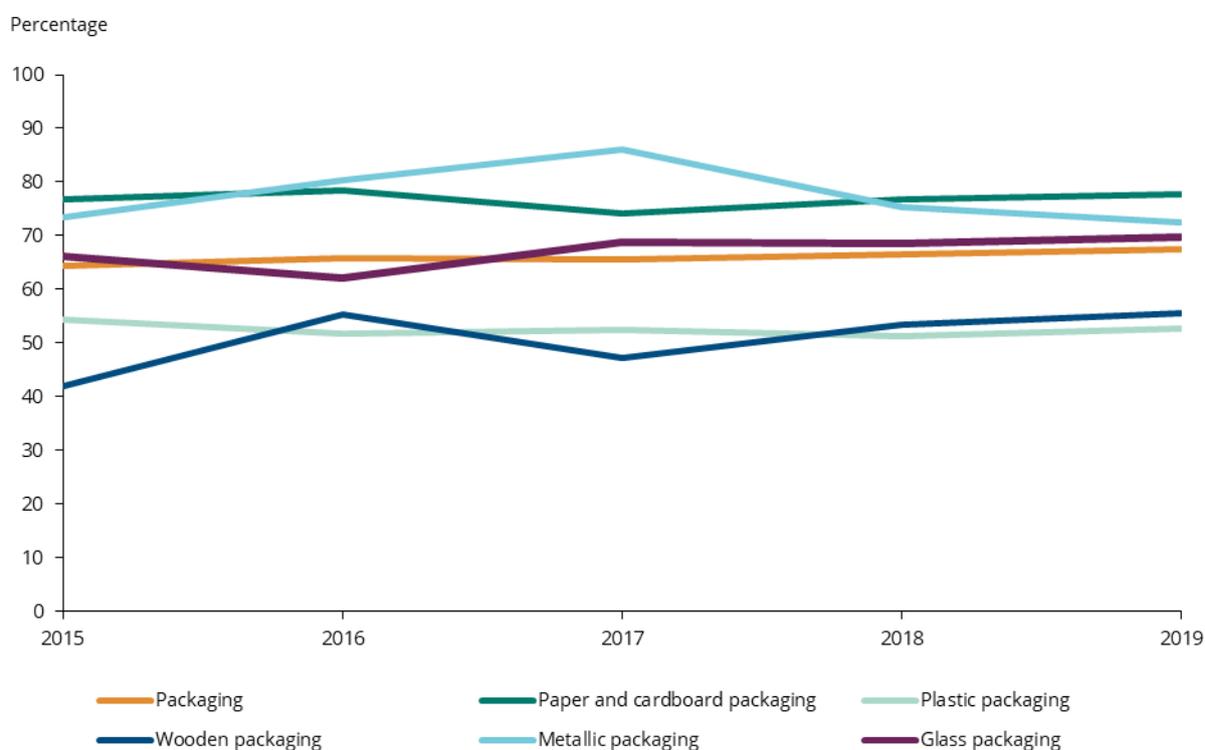
<sup>1</sup> This is the weighted recycling loss taking into account the 29 % recycling loss for packaging waste from household sources (66 %) and the 5 % recycling loss for packaging waste from commercial sources (33 %).

Ferrous metals packaging	Target exceeded	Slovakia reports a recycling rate of 105.1 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 90.4 %, 20.4 percentage points above the 2025 target.
Aluminium packaging	> 15 percentage points below target, or no data reported	Slovakia reports a recycling rate of 20.7 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 17.8 %, 32.2 percentage points below the 2025 target.
Glass packaging	< 5 percentage points below target	Slovakia reports a glass packaging recycling rate of 69.7 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 66.2 %, 3.8 percentage points below the 2025 target.
Plastics packaging	5 - 15 percentage points below target	Slovakia reports a recycling rate of 52.8 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 41.7 %, 8.3 percentage points below the 2025 target.
Wooden packaging	Target exceeded	Slovakia reports a recycling rate of 55.7 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 49.6 %, 24.6 percentage points above the 2025 target.
Robustness of the underlying information		The assessment is limited by the fact that the recycling rates for 2019 reported by Slovakia 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. The amounts of packaging placed on the market might be underreported as no estimates are made to improve coverage due to free-riding etc., and no third-party auditing of the PRO's data takes place yet.

### *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 Slovakia are illustrated in Figure 2.3.

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



**Note:** Slovakia reported separate data for aluminium and steel packaging for the first time in 2019

**Source:** Eurostat (2022c)

The overall packaging recycling rate has remained stable in Slovakia during the past five years, with an increase of 3.2 percentage points between 2015 and 2019. There is an increasing trend for wooden packaging, by 13.6 percentage points since 2015. The recycling rate for glass packaging increased by 3.5 percentage points in total between 2015 and 2019, however, the recycling rate peaked in 2013 to 72.9 % but then dropped to 62.2 % in 2016, going up since to the current 69.7 %. With regard to other packaging waste fractions, the change has been more restrained during the five-year period considered, although some fluctuations between different years can be observed. The decrease for metallic packaging was 1.1 percentage points, whereas the recycling rates for plastic packaging decreased by 1.6 percentage points and for paper and cardboard packaging increased by 0.9 percentage points.

## Summary result

Total packaging	RR > 55%, and increase in last 5 years < 10 percentage points	The recycling rate increased by 3.2 percentage points over the past five years and is estimated at 59.7 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Paper and cardboard packaging	RR > 65%, and increase in last 5 years < 10 percentage points	The recycling rate increased by 0.9 percentage points over the past five years and is estimated at 69.9 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Ferrous metals packaging	RR > 70%	No separate data is available for aluminium and steel packaging waste regarding the past trend. The recycling rate for metallic packaging is used instead. The recycling rate decreased by 1.1 percentage points over the past five years and is estimated at 90.4 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Aluminium packaging	RR < 40% and increase in last 5 years < 10 percentage points	No separate data is available for aluminium and steel packaging waste regarding the past trend. The recycling rate for metallic packaging is used instead. The recycling rate decreased by 1.1 percentage points over the past five years and is estimated at 17.8 % if the new calculation rules would be applied (taking into account losses in the recycling plants).
Glass packaging	RR > 65% and increase in last 5 years < 5 percentage points	The recycling rate increased by 3.5 percentage points over the past five years and is estimated at 66.2 % 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 decreased by 1.6 percentage points over the past five years and is estimated at 41.7 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Wooden packaging	RR > 25%	The recycling rate increased by 13.6 percentage points over the past five years and is estimated at 49.6 % if the new calculation rules would be applied (taking into account losses in the recycling plants)
Robustness of the underlying information		<p>The assessment is limited by the fact that the recycling rates for 2019 reported by Slovakia 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.</p> <p>For ferrous metals and aluminium, no trend data is available for the period 2015-2019, so the trend for total metals is used as a proxy.</p>

### 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.

Slovakia has transposed the amended PPWD into national law, seven months after the deadline of 5 July 2020. All together six transposition measures have been communicated (EUR-LEX, 2021b). The new law on packaging is planned to be introduced by the end of 2022 (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

### Summary result

Transposition with a delay of less than 12 months	The amended PPWD has been transposed into national legislation in February 2021.
Robustness of the underlying information	Credible information received from the European Commission (status as of 12 November 2021).

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

The recycling policy for packaging waste is the responsibility of the following authorities and stakeholders:

- Ministry of Environment of the Slovak Republic is responsible for waste management at national level, preparing national waste legislation, and proposing provisions of legislation concerning landfill fees approved by the Government or the National Council. Tasks of the Ministry also include preparation of methodical guidance for district offices under the Ministry of the Interior Affairs in order to support appropriate implementation of certain legislative provisions.
- Producer responsibility organizations (PROs) and producers meeting EPR obligations individually are responsible for achieving the targets set for product categories falling under the EPR system (i.e. EEE, batteries and accumulators, packaging and non-packaging products). They are obliged to organize the separate collection of these fractions and finance all the costs resulting from collection and waste management. PROs have contracts with every municipality (COWI et al., 2019). For the same packaging material, obliged parties (waste generators) must engage with a single PRO. In addition, in a municipality, a waste collection company can only have one agreement per single type of separated material with that particular PRO that has an agreement for this type of material with the municipality.
- As EPR systems also apply to non-household packaging wastes legal persons or sole traders are responsible for the management of packaging waste they generate. Usually the form of meeting collection and recycling targets is through individual authorisation (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021). Rules for separate collections are set up by the Act No. 79/2015 Coll. on waste.
- EPR systems do not apply to other, non-packaging wastes (COWI et al., 2019).

As described in Section 2.1.2. a fine varying from EUR 1 500 – EUR 200 000 for non-compliance of the EPR requirements can be imposed upon a packaging PRO. The Slovak Environmental Inspectorate, a department of the waste management inspection, is the body of the state administration that is also authorized to control the fulfilment of the waste targets that have been transposed into the Slovak legal system. These targets are specifically stated in Act no. 79/2015 Coll. on waste, and its amendments, and in Act no. 302/2019 Coll. on advance disposable packaging for beverages, and its amendments. Both pieces of legislation identify the responsible entities that must ensure that the targets are met. Packaging producers are among those obliged parties (they fulfil their responsibilities through PROs). The Ministry of Environment is setting up interim targets to PROs based on their market share, in order to meet national waste targets. If a PRO does not meet the obligations specified in the Waste Act, the authorization of the PRO can be revoked. A packaging PRO that has terminated the contract with a municipality and that has not assured separate collection of packaging waste until the municipality has contracted another PRO, can be imposed to a fine 1.5 times higher than the costs of ensuring separate collection in a municipality. The same level of fine can also be imposed if the

packaging PRO has not covered the costs of separate collection, including settlement of documents on amounts collected and recovered within three months from the conclusion of a new contract. In addition, a fine ranging from EUR 800 – EUR 80 000 for non-compliance of the municipal generally binding regulation or not joining the collection system etc. can be imposed upon legal persons or sole traders (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The responsibilities are valid for both household and non-household packaging waste. All companies have the obligation to inform the PRO about their waste flow, also in the case they realize their own packaging waste collection, and the corresponding data and information is included in the national waste statistics. According to the Waste Act no. 79/2015 Coll., each PRO is obliged to submit to the Ministry of Environment, a yearly report on its activities. PROs calculate the share of packaging and non-packaging materials in order to deliver these data to the Ministry of Environment, where the data of the various PROs are merged. This distribution between packaging and non-packaging materials is not published by the Slovak Statistical Office, but can be found in the annual reports of some PROs.

No specific support actions influencing the recycling rate of packaging waste were described by the Slovak authorities.

### Summary result

Clearly defined responsibilities but weak/no enforcement mechanisms for meeting the recycling targets, and no/weak support tools.	Responsibilities are defined, and targets are clear, for both household and non-household packaging waste. Enforcement mechanisms are however not related to reaching the targets. Support mechanisms are not described.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE.

### 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 1 in more detail, Slovakia increased landfill fee levels in 2019. The level of the fee varies depending on the separation level of municipal waste. Slovakia has banned landfilling of sorted biodegradable food waste from households and restaurants, and biodegradable municipal garden waste.

### Summary result

Ban in place for landfilling residual or biodegradable waste	Slovakia has a landfill fee depending on the level of sorting of municipal waste, varying widely from 11 to 33 EUR/t in 2021 (corresponding to 12.5 to 37.4 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)). The fee was introduced in 2020 and increased in 2021. Slovakia has a landfill ban on sorted biodegradable waste from households and restaurants, and municipal garden waste, and a ban on landfilling untreated mixed municipal waste applies from 2023.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE.

### *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 1, Slovakia does not have waste incineration tax.

#### **Summary result**

No incineration taxes	Slovakia has no incineration tax in place.
Robustness of the underlying information	Clarifications asked from the Slovak authorities.

### *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, Slovakia has no packaging taxes in place. Fee for lightweight plastic carrier bags was introduced in the beginning of 2018 and at the end of 2019 it was extended to cover plastic carrier bags, excluding very lightweight plastic carrier bags (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

According to the Slovak authorities, in the new Waste Management Plan for 2021-2025 that is currently being drafted, some measures focussing on packaging and non-packaging waste are being introduced. The target is to improve the performance of the EPR scheme by adopting a new legislation to be able to increase the transparency and effectiveness of funding the whole scheme, including recycling. Subsequently, a minimum fee for individual material types to produce these products will be introduced, i.e. bonus-malus principle with regards to recyclability (eco-modulation) (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

#### **Summary result**

Taxes for plastic carrier bags only	Slovakia applies taxes for plastic carrier bags only, excluding other packaging forms and materials. 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 Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE.

### *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.

As described in Section 1 in more detail, in 2019, PAYT was used in 192 municipalities in Slovakia.

#### **Summary result**

Less than 50 % of the population covered by PAYT	In 2019, around 15 % of the Slovak population were covered by PAYT. In recent years, new systems using smart solutions have been introduced.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE.

### 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.

In Slovakia, mandatory DRS schemes exist for returnable reusable beverage packaging. According to the Slovak authorities, they cover most of the cans and plastic bottles, and some specific glass bottles, but no quantitative data exists. In addition, there are voluntary schemes covering wooden pallets, as well as nearly all plastic crates (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021). Regarding disposable beverage packaging, operation of the deposit system for this category of beverage packaging has been launched from 1 January 2022.

#### Summary result

Aluminium drink cans	Mandatory for nearly all drink cans	A mandatory DRS covering most of the aluminium drink cans.
Glass drink bottles	Mandatory for some drink bottles	A mandatory DRS covering some glass drink bottles.
Plastic drink bottles	Mandatory for nearly all drink bottles	A mandatory DRS covering most of plastic drink bottles.
Plastic crates	Voluntary for nearly all plastic crates	A voluntary DRS covering most of the plastic crates.
Wooden packaging	Voluntary for some wooden packaging	A voluntary DRS covering wooden pallets.
Robustness of the underlying information		Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE.

### 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.

The fractions falling under EPR are separately collected via bring points from housing properties with multiple apartments, but in individual properties bring points and door-to-door collection are both used. However, in recent years, door-to-door collection of plastics, composite materials, metals and paper and cardboard has been increased significantly. Glass waste is collected mostly via bring points in all properties. Door-to-door collection is mostly organised using a bag system, but also container-based system is used in many municipalities (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

Producers are responsible for the separate collection of waste falling under EPR (EEE, batteries and accumulators, packaging and non-packaging products). Packaging PROs are responsible to fulfil the

collection standards in the municipality (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The separate collection of non-household waste is mandatory in Slovakia (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021). However, EPR does not apply to non-household wastes (COWI et al., 2019) other than packaging.

### Summary result

Paper and cardboard packaging	<b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
	<b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household paper and cardboard packaging waste	Separate collection is mandatory for households and non-households.
Ferrous metals packaging	<b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
	<b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household ferrous metals packaging waste	Separate collection is mandatory for households and non-households.
Aluminium packaging	<b>Packaging waste from households</b> A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
Glass packaging	<b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
	<b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household glass packaging waste	Separate collection is mandatory for households and non-households.
Plastics packaging	<b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services	Door-to-door or high convenience collection points are the dominant systems.
	<b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household plastic packaging waste	Separate collection is mandatory for households and non-households.
Wood packaging	<b>Packaging waste from non-household sources</b> 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		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 the different packaging waste fractions*

Concrete plans are needed to improve the convenience and coverage of separate collection. This SRF is more relevant for MS and materials that do not score 'green' in SRF P-4.1. The assessment is done on a material basis and summing up the scores of the different materials according to their average share in packaging waste<sup>2</sup>. Again, the material specific assessment considers packaging waste from both household and non-household sources.

Slovakia plans to introduce DRS for aluminium cans and plastic bottles starting from 2022 (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021). No other plans were described by the Slovak authorities.

**Summary result**

Paper and cardboard packaging	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.
	N/A (for countries already having mandatory sorting at source)	Separate collection is mandatory for households and non-households.
Ferrous metals packaging	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.
	N/A (for countries already having mandatory sorting at source)	Separate collection is mandatory for households and non-households.
Aluminium packaging	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	A high share of the population is already covered by high convenience collection services. Additionally, Slovakia plans to introduce DRS for aluminium cans and plastic bottles starting from 2022.
Glass packaging	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.
	N/A (for countries already having mandatory sorting at source)	Separate collection is mandatory for households and non-households.
Plastics packaging	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	A high share of the population is already covered by high convenience collection services. Additionally, Slovakia plans to introduce DRS for aluminium cans and plastic bottles starting from 2022.
	N/A (for countries already having mandatory sorting at source)	Separate collection is mandatory for households and non-households.
Wooden packaging	N/A (for countries already having mandatory sorting at source)	Sorting at source is mandatory for non-households.
Robustness of the underlying information		Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE.

<sup>2</sup> Based on data from Eurostat on the share of packaging materials in total packaging generated in 2018.

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

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

As described in Section 2.1.5, EPR in Slovakia covers sorted household packaging waste for the following fractions: paper, plastics, glass, metals, wood, and multilayer packaging as well as non-packaging paper, plastics, glass, and multilayer combined cardboard-based materials. Producers can fulfil their EPR obligations by joining the producer responsibility organisation (PRO), or by taking care of the responsibilities individually. However, in practice a large amount of industrial waste also enters the scheme, as companies sell their wastes directly to recycling operators. This creates considerable amount of recyclable waste, which helps to obtain the recycling targets set (Institute for Environmental Policy, 2020).

#### Summary result

All main packaging fractions <sup>(a)</sup> are covered by EPR schemes, covering household and non-household packaging	Slovakia has EPR covering both household and non-household packaging. However, PRO's do not always pay for the management of the share of packaging waste that is collected as part of mixed municipal waste.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE

<sup>(a)</sup> **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 four assessment criteria presented above.
Robustness of the underlying information	Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE

### SRF P-5.3 Material specific EPR assessment

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

## Summary result

SRF P-5.3.1 EPR scheme for Paper and cardboard packaging waste	EPR scheme covering household and non-household packaging	EPR obligations apply both to household and commercial/industrial packaging, and producers can fulfil the obligation either individually or through PRO's. No advanced fee modulation is applied.
SRF P-5.3.2 EPR scheme for Ferrous metals packaging waste	EPR scheme covering household and non-household packaging	EPR obligations apply both to household and commercial/industrial packaging, and producers can fulfil the obligation either individually or through PRO's. No advanced fee modulation is applied.
SRF P-5.3.3 EPR scheme for Aluminium packaging waste	EPR scheme covering household and non-household packaging	EPR obligations apply both to household and commercial/industrial packaging, and producers can fulfil the obligation either individually or through PRO's. No advanced fee modulation is applied.
SRF P-5.3.4 EPR scheme for Glass packaging waste	EPR scheme covering household and non-household packaging	EPR obligations apply both to household and commercial/industrial packaging, and producers can fulfil the obligation either individually or through PRO's. No advanced fee modulation is applied.
SRF P-5.3.5 EPR scheme for Plastic packaging waste	EPR scheme covering household, industrial and commercial packaging but no or only basic fee modulation is applied.	EPR obligations apply both to household and commercial/industrial packaging, and producers can fulfil the obligation either individually or through PRO's. No advanced fee modulation is applied.
SRF P-5.3.6 EPR scheme for Wooden packaging waste	EPR scheme covering all non-household packaging	EPR obligations apply both to household and commercial/industrial packaging, and producers can fulfil the obligation either individually or through PRO's.
Robustness of the underlying information		Credible information received from the Slovak authorities in response to the questionnaire by the EEA and ETC/WMGE, and information found in literature.

## 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 Slovakia was 49.7 % in 2020 (calculated based on Eurostat (2022b)).

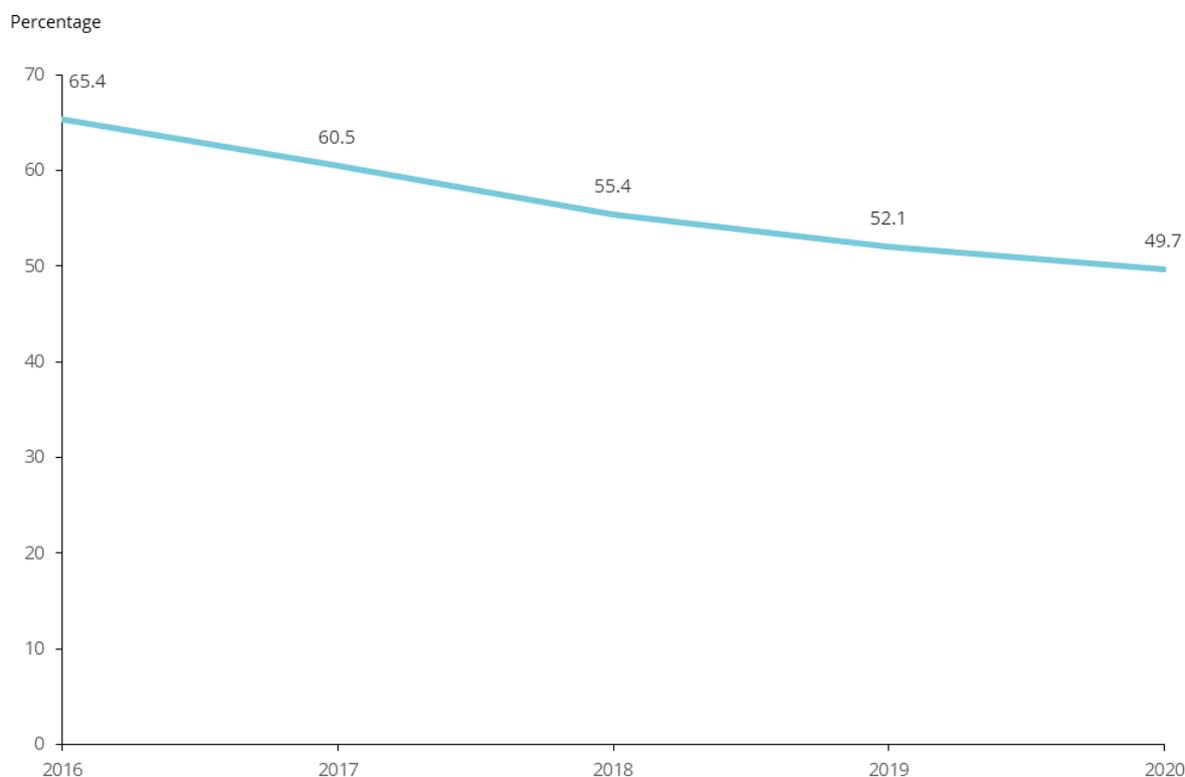
#### Summary result

Distance to target > 20 percentage points	The distance to target is 39.7 percentage points with a landfilling rate of 49.7 % in 2020.
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, the overall landfilling rate of Slovakia has decreased by 15.7 percentage points, from 65.4 % to 49.7 % (Figure 2.4). Despite the good progress, the distance to target is significant with 39.7 percentage points. To meet the target, Slovakia must speed up the pace of reducing landfilling.

**Figure 2.4 Landfilling in Slovakia between 2016 and 2020, in percentage**



**Source:** Eurostat (2022b).

**Summary result**

Landfill rate in 2020 > 25 % and decrease in last 5 years > 15 percentage points	The landfilling rate in 2020 was 49.7%, with a decrease over the past five years of 15.7 percentage points.
Robustness of the underlying information	There are no breaks in the time series data. 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-1.3: Diversion of biodegradable municipal waste from landfill***

According to Art. 5(2c) of the EU Landfill Directive, Member States had to ensure that by 2016, biodegradable municipal waste going to landfills is reduced to 35 % of the total amount (by weight) of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available. However, Slovakia benefits from a 4-year derogation period and thus has to meet the target by 2020.

Slovakia generated just below 1 million tonnes of biodegradable municipal waste in the reference year 1995. In 2016, a volume equivalent to 64 % of this amount was still being landfilled. In 2017 this was 59 %; in 2018 it was 54 % and in 2019 eventually it was 47 % (EC, 2022)

## Summary result

<p>Target for reducing the amount of biodegradable municipal waste (BMW) landfilled to 35% of BMW generated in 1995 has not been achieved yet and available data indicate that it is unlikely to be achieved</p>	<p>Slovakia still reported landfilling 47 % in 2019 of the total amount (by weight) of biodegradable municipal waste produced in 1995. Slovakia benefits from a four-year derogation period, but is not likely to meet the target by 2020, despite the declining trend over the past years.</p>
<p>Robustness of the underlying information</p>	<p>Based on information received from the European Commission.</p>

### 3 Conclusion

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

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

<p><b>22 %</b> of maximum score</p>	<p>Based on the provided information and the analysis done, it is concluded that Slovakia is <b>at risk for not meeting the MSW recycling target in 2025.</b></p>
<p>Current situation and past trends:</p>	<p>The recycling rate was 42.2 % in 2020, which is 19.2 percentage points below the target of 55 %. The recycling rate has increased by 23.6 percentage points since 2015. If the new calculation rules were applied, the recycling rate might be around 37.2 %. However, Slovakia intends to apply for a derogation to postpone the deadline for attaining the target, resulting in a derogation target of 50 % for 2025. The distance to such a derogated target would be 14.2 percentage points.</p>
<p>Legal instruments:</p>	<p>The amended WFD has not been fully transposed into national law yet. Responsibilities are clearly defined and support tools are in place, but enforcement mechanisms are lacking.</p>
<p>Economic instruments:</p>	<p>Since 2020, Slovakia has a landfill tax (fee) depending on the level of sorting (separate collection) of municipal waste in each municipality. In addition, a landfill ban on sorted biodegradable waste from households and restaurants, and municipal garden waste applies, and bans on landfilling of untreated mixed municipal waste, as well as biodegradable waste from wholesale, retail and distribution, will apply from 2023. No incineration tax is in place. In 2019, only around 15 % of the Slovak population is covered by PAYT, but this percentage is expected to rise over the following years.</p>

<p>Separate collection systems:</p>	<p>Door-to-door collection or high convenience collection points are the dominant system for paper and cardboard, metals, plastics and glass wastes, both packaging and non-packaging.</p> <p>A low share of the population is covered by high convenience collection services for wood, textiles and bio-waste.</p> <p>There are plans to improve the collection service for bio-waste, aluminium and plastics. For textiles there are also plans, but unclear implementation.</p> <p>WEEE is mainly collected at civic amenity sites, collection points and take back points. In towns, suburbs, and rural areas, mobile units offer neighbourhood and door-to-door collection at days announced in advance.</p>
<p>Extended producer responsibility:</p>	<p>There is currently no advanced fee modulation applied to incentivise design for recycling.</p>
<p>Bio-waste treatment capacity and quality management:</p>	<p>The available treatment capacity is not dedicated to municipal bio-waste treatment only. The Slovak authorities are planning to increase the capacity for the treatment of bio-waste in future, but there are no firm plans available yet.</p> <p>There are no national standards or quality management system for compost quality.</p>

### 3.2 Prospects for meeting the recycling targets for packaging waste

<b>47 %</b> of maximum score	Based on the provided information and the analysis done, it is concluded that Slovakia is <b>at risk for not meeting the 65 % recycling target for packaging waste in 2025</b>	
47 % of maximum score	Paper and cardboard	At Risk
67 % of maximum score	Ferrous metals packaging	Not at Risk
35 % of maximum score	Aluminium packaging	At Risk
63 % of maximum score	Glass packaging	Not at Risk
49 % of maximum score	Plastics packaging	At Risk
66 % of maximum score	Wooden packaging	Not at Risk
Current situation and past trends:	<p>The total packaging recycling rate (revised estimate to account for the impact of the new calculation rules) is 59.7 %, 5.3 percentage points below the 2025 target. All waste streams are less than 15 percentage points below target, except for aluminium packaging, for which the distance to target is still 32.2 percentage points.</p> <p>The total packaging recycling rate has only increased by 3.2 percentage points over the past five years.</p>	
Legal instruments:	<p>The amended PPWD was transposed into national legislation with a delay of less than 12 months.</p> <p>Responsibilities are defined, and targets are clear, for both household and non-household packaging waste. Enforcement mechanisms are however not related to reaching the targets. Support mechanisms are not described.</p>	
Economic instruments:	<p>Since 2020, Slovakia has a landfill tax (fee) depending on the level of sorting (separate collection) of municipal waste in each municipality. In addition, a landfill ban on sorted biodegradable waste from households and restaurants, and municipal garden waste applies, and bans on landfilling of untreated mixed municipal waste, as well as biodegradable waste from wholesale, retail and distribution, will apply from 2023.</p> <p>No incineration tax is in place.</p> <p>Only around 15 % of the Slovak population is covered by PAYT.</p> <p>Slovakia does not have packaging taxes in place.</p> <p>Mandatory DRS schemes exist for beverage aluminium cans and plastic drink bottles, and for some glass drink bottles. In addition, there is a voluntary scheme covering nearly all plastic crates. For wooden packaging, there is only a voluntary DRS.</p>	

Separate collection systems:	The coverage and convenience level for the collection of packaging waste from households is high, and sorting at source is mandatory for households and non-households.
Extended producer responsibility:	Slovakia has EPR covering both household and non-household packaging. However, PRO's do not always pay for the management of the share of packaging waste that is collected as part of mixed municipal waste.

### 3.3 Prospects of meeting the landfill of municipal waste target

<b>7 %</b> <b>Of maximum score</b>	Based on the provided information and the analysis done, it is concluded that Slovakia is <b>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.</b>
Current situation and past trends:	The landfilling rate for municipal waste was 49.7 % in 2020, indicating a distance to target of 39.7 percentage points. Over the past five years, the overall landfilling rate of Slovakia has decreased by 15.7 percentage points.
Diversion of biodegradable municipal waste from landfill:	Slovakia still reported landfilling in 2019 of 47 % of the total amount (by weight) of biodegradable municipal waste produced in 1995. Slovakia benefits from a four-year derogation, but is still not likely to meet the target by 2020.

## List of abbreviations

<b>Abbreviation</b>	<b>Name</b>
DRS	Deposit Return System
EC	European Commission
EEA	European Environment Agency
EEE	Electrical and Electronic Equipment
Eionet	European Environmental Information and Observation Network
EPR	Extended producer responsibility
ETC/CE	European Topic Centre on Circular Economy and resource use
ETC/WMGE	European Topic Centre on Waste and Materials in a Green Economy
MBT	Mechanical biological treatment
MS	Member state
MSW	Municipal solid waste
PAYT	Pay-as-you-throw
PET	Polyethylene terephthalate
PPWD	Packaging and Packaging Waste Directive
PRO	Producer Responsibility Organisation
PS	Polystyrene
PS	Polystyrene
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 2018, the European Commission assessed that Slovakia would be at risk of not meeting the Waste Framework Directive's target to prepare for re-use and recycle at least 50 % of municipal waste, and provided a set of policy recommendations to improve the situation (EC, 2018a). This annex lists the recommendations and a self-assessment of the Slovak authorities on the status of taking them into account.

## Recommendations on economic incentives for municipalities

- 1) *Development of national minimum service standards for waste collection (including bio-waste) to specify, for example, the type and volume of containers, minimum and maximum frequency of collection and type of vehicle used, taking into account the type of housing stock, typical climate, etc.*

The collection standards for municipal waste are laid down in the Decree of the Ministry of the Environment No. 371/2015 implementing certain provision of the Act on waste as amended (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

The Slovak authorities consider this recommendation implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

- 2) *Revision of the Waste Act to stipulate the use of such standards while setting penalties for failing to meet these standards to incentivise compliance.*

Municipalities and packaging PROs are responsible for implementing collection standards. Penalties for non-compliance of the obligations are laid down in the Waste Act. Fines varying from EUR 800 to EUR 80 000 can be imposed on a municipality if its collection system for municipal waste does not fulfil the requirements set in the Waste Act. Furthermore, fines varying from EUR 1 200 to EUR 80 000 can be imposed on a packaging PRO for non-compliance of the separate collection requirements for municipal packaging and non-packaging waste. A packaging PRO that has terminated the contract with a municipality and has not assured separate collection of packaging waste until municipality has contracted with another PRO, can be imposed a fine 1.5 times higher than the costs of ensuring separate collection in a municipality. The same level of fine can be also imposed if packaging PRO has not covered the costs of separate collection, including settlement of documents on amounts collected and recovered within three months from the conclusion of a new contract. More information can be found in the Waste Act. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

- 3) *Cascading down recycling targets to municipal level accompanied by penalties, fiscal or otherwise, that are punitive, with adequate time for the municipalities to improve their performance.*

Recycling targets are laid down in national level. The targets related to certain products are transposed to individual EPR schemes based on their market share. As the current EPR system and legislation on packaging and non-packaging waste need revision, this recommendation will be considered as a part

of these actions. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation not implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

- 4) *Revision of the spending under the operational programme for cohesion policy funds to ensure funding is available to support implementation of the service standards (see point 1)*

It is possible to seek financing from the OP KŽP programme and Envirofond contributions to assure and improve minimum service standards for waste collection, excluding separate collection of fractions under EPR. In addition, it is planned to allocate financing to support implementation of the service standards in the operational program for the years 2021 - 2027 (OP Slovakia). (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

- 5) *Revision of the landfill tax to ensure other residual waste treatment and disposal techniques (such as incineration) are also covered, so as to more effectively push waste up the hierarchy to the 'preparation for reuse and recycling' level, rather than just to the 'recovery' level.*

The calculation method for determination of landfill fee was changed in 2019, and the fee rate is now based on the sorting level of municipal waste to be deposited. The sorting level of municipal waste is the ratio of the weight of all separately collected municipal waste in a municipality ending up in a sorting/recycling/recovery facility in the previous calendar year to the weight of municipal waste generated in the same municipality for the previous calendar year. Changes to the landfill fee are planned by the Ministry of the Environment already during this year, but no specific fee amounts have been defined yet. The current legislation will be amended. The increase of the current landfill fee is one key action introduced in the new Waste Management Plan for 2021-2025 that is currently being drafted. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation partly implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

#### **Recommendations on extended producer responsibility schemes**

- 6) *Revision of the roles and responsibilities of the extended producer responsibility (EPR) schemes and how they integrate with municipal services, to ensure that the approach aligns with the new service standards, and that producers fund the full cost of the parts of the system that they are responsible for.*

There has been several amendments of the Waste Act and its implementing regulations since this recommendation has been given, especially concerning management of packaging and non-packaging products. These changes have been aiming at setting up better EPR regulations in general, and also between producers, municipalities and waste collection operators, as well as adaptation of these rules to practical problems. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation partly implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

7) *Introduction of a requirement for packaging producer data to be reviewed by third-party auditors to ensure the accuracy of data on packaging placed on the market, and consequently of the recycling rates under the Packaging and Packaging Waste Directive.*

The Ministry of the Environment aims to prepare a new packaging law to improve functioning of the EPR system. Mandatory audits of producers performed by independent third-party auditors should be included in measures described. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation not implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

#### **Recommendations on engagement from municipalities**

8) *Setting up of a national forum on municipal waste recycling to facilitate a good working relationship between the national government institutions, municipalities and producer responsibility organisations. This should help improve communication between the national government and the municipalities, and could lead to a shared understanding of the problems and solutions.*

Such forum has not been established by the Ministry of the Environment, but representatives in the field of waste management take part in conferences, and working meetings organised by the Ministry when needed. According to the Waste Act, Coordination center shall ensure, as appropriate, dialogue between actors involved at least annually. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation not implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

#### **Recommendations on spending of EU funds**

9) *Linking disbursement of EU funds to funding criteria matched to implementation of the minimum service standards, while giving municipalities incentives to work together to procure waste systems across multiple municipalities, thus improving efficiency.*

The compliance with the provisions of the Waste Act as well as all relevant regulations in the field of waste management is prerequisite for the disbursement. Compliance with the separate collection standards is part of the criteria for granting financial support within the Operational Program Environmental Quality and its subsequent implementation. Municipal associations can apply for financial contributions from the EU funds, although municipal collaboration is not particularly favoured within the grant scheme. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation partly implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

## Recommendations on incentives for households

*10) Research to determine the minimum level of local fees needed to achieve high levels of recycling performance and to subsequently increase the fees accordingly. This minimum level should be set based on a detailed analysis of the likely minimum cost of implementing the minimum service standards, from which the contribution from producers under the EPR schemes should be deducted.*

A local fee for municipal waste and small construction waste is collected by the municipality based on generally binding municipal regulation that is typically annually accepted. All waste management costs of mixed waste, small construction waste (in case PAYT is not used for small construction waste) and biodegradable waste, costs of separate collection of fractions not covered by the EPR, costs resulting from incorrect sorting of separately collected fractions under EPR, as well as costs exceeding the usual costs determined in the Waste Act are included in the fee. The costs resulting from separate collection of fractions under EPR, including their collection and sorting at the civic amenity sites, may not be included in the fee. The amount of the fee shall be based on the actual costs of municipal waste and small construction waste management in the municipality. Earnings from the fee shall be used only for the collection and management of municipal waste and small construction waste. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The amount of the flat-rate of this fee varies considerably between different regions. The lowest fees (less than EUR 10 /inhabitant in many municipalities) are collected in the eastern Slovakia. Low level of fees creates one of the most important obstacles to enhance waste management, thus it is targeted to increase the minimum fee level so that all actual costs of collection and management can be covered. A gradual increase in the flat fee from EUR 81 M to EUR 88 M can be observed between 2017-2019. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation partly implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

## Recommendations on management of bio-waste

*11) Removal of all exemptions enshrined in law related to the requirement to sort kitchen waste. This is to ensure that the uptake of food waste collection is not limited.*

The requirement to ensure separate collection of bio-waste has been developed as follows:

- 1.11.2009: A requirement for municipalities to sort biodegradable waste in accordance with the strategy of biodegradable waste management
- 1.1.2013: From this date onwards, municipalities were required to sort municipal bio-waste, the kitchen operator is shall ensure the management of sorted kitchen and restaurant waste. Exemptions from the separate collection requirement of bio-waste for municipalities were also introduced.
- 1.1.2016: The separate collection requirement was tightened, municipalities are obliged to separate bio-waste to three components; green waste from gardens, kitchen waste from households and used edible oils and fats. In case municipality applies an exception, separate collection of household kitchen waste is not mandatory.
- 1.1.2017, 1.1.2018: An implementation of minimum requirements for bio-waste separate collection, including specific container color, minimum container size for green waste or requirement to provide composting tank, collection capacity for household kitchen waste, and minimum collection frequency

- 2021–2023: The exemptions concerning the introduction of separate collection of household kitchen waste will be gradually removed in accordance with the Act No. 460/2019 and modified minimum requirements for bio-waste separate collection will be adopted. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The exemption from carrying out separate collection of kitchen waste due to economic infeasibility has been removed from the beginning of January 2021. At the moment, the requirement to carry out separate collection of kitchen waste does not cover the part of the municipality which recovers these wastes as energy (by activity R1), demonstrates that every household composts their own wastes, or demonstrates that technical problems of waste collection in historic city centres and rural areas do not allow separate collection. From the beginning of 2023, the first and last exemption will be abolished. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

*12) Clarification within the minimum service standards which types of collection method are suitable for bio-waste (including specifying the need for separate containment for food and garden waste); and which approaches should be ruled out due to likely high levels of contamination (e.g. unrestricted access to on-street bins).*

The separate collection requirements for municipal waste are laid down in the Decree of the Ministry of the Environment No. 371/2015. A manual targeted to municipalities, called “*Collection of biodegradable municipal waste*” will be published shortly on the website of the Ministry. It aims to support municipalities to better understand the issue of introducing the separate collection of biodegradable household waste in their area. It highlights the reasons and contexts behind the separate collection requirement and the basic factors having effect on the economics of waste management, the quality and amount of bio-waste collected. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021) In addition, a methodological manual, called “*Requirements for municipalities for separate collection of biodegradable municipal waste*” has been published. The Ministry has also prepared leaflets regarding to bio-waste prevention and composting. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

*13) Consideration of using the design-build-operate contracts for procuring biogas (or other) treatment plants to ensure appropriate facilities are developed.*

Two measures were introduced in the Waste Management Plan 2016-2020, which aimed to support the financing of projects targeting to construct biogas facilities that would treat biodegradable wastes from industrial and municipal sources. The measures were carried through partly for municipal waste and fully for industrial waste via grant scheme within the Operational Program Environmental Quality targeted to biodegradable waste recovery. In addition, the new Waste Management Plan for 2021-2025 that is currently being drafted contains a measure to support the financing of separate collection of household kitchen waste and projects for building new and modernization of existing plants, with focus on recovery of biodegradable kitchen and restaurant waste. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation partly implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

*14) Support to the roll out of home composting by implementing economic support measures (e.g. allowing less frequent and cheaper residual waste collections, or simply reducing householder waste fees for home composters).*

The Slovak authorities are currently planning to develop a methodology to include home composting in the sorting of municipal waste, which would result in cheaper collection costs of residual municipal waste. The Slovak authorities consider this recommendation not implemented. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

*15) Support to the development of community/on-farm composting in more rural areas with support from EU funds.*

Measures which aim to prevent biodegradable municipal waste generation by supporting home composting, community composting and farm composting are included in the prepared Partnership Agreement of the Slovak Republic for 2021-2027, and the new operational program of Slovakia. The Slovak authorities consider this recommendation partly implemented. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

*16) In order to facilitate the marketing of good quality compost, an end-of-waste standard that gives output of appropriate quality 'product' status would be desirable.*

Due to the need of e.g. set standards for compost quality and support for the marketing of compost, a new decree on compost and composting is planned to be prepared. However, this is not yet completed due to lack of staff capacity of Waste Management Department at the Ministry. In the new Waste Management Plan for 2021-2025 that is currently being drafted, an introduction of a quality label for quality compost is being proposed and shall be implemented by 2024. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation not implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

*17) Setting up a dedicated national support programme on bio-waste collection and composting to help develop the standards and markets, and to ensure economically efficient development of bio-waste collection and recycling.*

In 2022, the Environmental Fund provides funding for municipalities to support separate collection of MSW, prevention and recovery of biodegradable municipal waste, and introduction and improvement of separate collection system in municipal level and establishment of civic amenity sites and reuse centres. The Environmental Fund gets revenues from the landfill fee and the fee for depositing waste at a sludge bond, which it can use for expenditures for the coming years. The Fund pays contribution to the municipalities that ensure the separate collection of household kitchen waste through container and recover all collected household kitchen waste in treatment facilities. Municipalities may use the contribution paid only to above mentioned purposes. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

### Recommendations on technical support to municipalities

18) *Development of a system at national level that provides technical support for local councils, 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.*

A national communication campaign "*Improving information and providing advice on improving the quality of the environment in Slovakia*" organised by the Slovak Environment Agency aims to provide better information to the public and parties involved. Information activities, programs and guidance are organised in the project. Particularly in the field of information and consultancy, the campaign will promote considerably the objectives of the Operational Program Environmental Quality. Waste management is covered by the target of *Increasing the recovery rate of waste with a view to preparing it for re-use and recycling and promoting waste prevention*. The campaign will promote creating systemic solution of effective environmental quality information, awareness-raising and improving access to information, creating tools, advice and support for exchange of information between stakeholders, and to unify and streamline communication in environmental protection. Events, information campaigns and programs, conferences, seminars, webinars, workshops, forums, exhibitions, excursions, publications, printed, promotional and advertising materials, as well as PR communication are identified as means to spread information. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation partly implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

### Recommendations on improving data quality

19) *Improvements to the national waste data system following adoption of the revised Waste Directives, including covering all municipal packaging waste under municipal waste reporting.*

The new waste management information system (ISOH) is being launched gradually, and it is expected to be fully operational in 2023. Through the system currently in use it is possible to get outputs with a certain time interval in the required forms, but no possibility to control waste generation and management of individual operators effectively; the statistics on waste generation and management are reported by the Statistical Office of the Slovak Republic. As a result of the clarification of the municipal waste definition in the WFD, all packaging waste under code 15 should be included in the reporting for the year 2020. (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021)

The Slovak authorities consider this recommendation partly implemented (Ministry of the Environment of the Slovak Republic & Slovak Environmental Agency, 2021).

## **Annex 2 Detailed scoring of success and risk factors**

# Assessment sheet - Recycling target for municipal waste

MS Slovakia

Date

Jun-22

SRF		Assessment result	Weight	Score
<b>Current situation and past trends</b>				
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 > 50% and increase in last 5 years < 5 percentage points, or RR > 45%, and increase in last 5 years < 10 percentage points, or RR < 45% and increase in last 5 years > 10 percentage points	1	1
<b>Legal instruments</b>				
MSWR-2.1	Timely transposition of the revised WFD into national law	Transposition with delay of > 12 months, or no full transposition yet	1	0
MSWR-2.2	Clearly defined responsibilities for meeting the targets and support and enforcement mechanisms	Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets OR Unclear responsibilities but clearly defined enforcement mechanisms and a good set of support tools for meeting the recycling targets OR Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	1	1
<b>Economic instruments</b>				
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 collection systems				
MSWR-4.1	Convenience and coverage of separate collection systems for the different household waste fractions			
	Paper and cardboard	A high share of the population is covered by high convenience collection services	0.46	0.92
	Metals	A high share of the population is covered by high convenience collection services	0.08	0.16
	Plastics	A high share of the population is covered by high convenience collection services	0.28	0.56
	Glass	A high share of the population is covered by high convenience collection services	0.18	0.36
	Bio-waste	A low share of the population is covered by high convenience collection services	0.84	0
	Wood	A 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	High to medium convenience collection services dominate	0.04	0.08
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	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.04	0.08
	Plastics	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.14	0.28
	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	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.42	0.84
	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	N/A (for countries where high to medium convenience collection services dominate already)	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 capacity 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	No national standards or quality management system, or still under development	1	0
<b>Total score</b>				<b>7.28</b>
Maximum score				33.32

22%

# Assessment sheet - Recycling target for packaging waste

MS Slovakia

Date

Jun-22

SRF		Assessment result	Weight	Score
<b>Current situation and past trends</b>				
P-1.1	Distance to target - Overall packaging	5 - 15 percentage points below target	5	5
	Distance to target - Paper and cardboard packaging	5 - 15 percentage points below target	5	5
	Distance to target - Ferrous metals packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Aluminium packaging	> 15 percentage points below target, or no data reported	5	0
	Distance to target - Glass packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Plastics packaging	5 - 15 percentage points below target	5	5
	Distance to target - Wooden packaging	< 5 percentage points below target, or target exceeded	5	10
P-1.2	Past trends in packaging waste recycling rate	RR > 60% and increase in last 5 years < 5 percentage points, or RR > 55%, and increase in last 5 years < 10 percentage points, or RR < 55% and increase in last 5 years > 10 percentage points	1	1
	Past trends in paper and cardboard packaging recycling	RR > 70% and increase in last 5 years < 5 percentage points, or RR > 65%, and increase in last 5 years < 10 percentage points, or RR < 65% and increase in last 5 years > 10 percentage points	1	1
	Past trends in ferrous metals packaging recycling	RR > 65% and increase in last 5 years > 5 percentage points, or RR > 60% and increase in last 5 years > 10 %, or RR > 70%	1	2
	Past trends in aluminium packaging recycling	RR < 40% and increase in last 5 years < 10 percentage points	1	0
	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 percentage points, or RR < 60% and increase in last 5 years > 10 percentage points	1	1

	Past trends in plastic packaging recycling	RR > 45% and increase in last 5 years < 5 percentage points, or RR > 40%, and increase in last 5 years < 10 percentage points, or RR < 40% and increase in last 5 years > 10 percentage points	1	1
	Past trends in wooden packaging recycling	RR > 20% and increase in last 5 years > 5 percentage points, or RR > 15% and increase in last 5 years > 10 %, or RR > 25%	1	2
<b>Legal instruments</b>				
P-2.1	Timely transposition of the revised Packaging and Packaging Waste Directive into national law	Transposition with a delay of less than 12months	1	1
P-2.2	Clearly defined responsibilities for meeting the targets and support and enforcement mechanisms	Unclear responsibilities and weak/no enforcement mechanisms for meeting the recycling targets, but good set of support tools. OR Unclear responsibilities and no/weak support tools for meeting the recycling targets, but clearly defined enforcement mechanisms. OR Clearly defined responsibilities but weak/no enforcement mechanisms for meeting the recycling targets, and no/weak support tools. OR Unclear responsibilities, weak/no enforcement mechanisms and lack of support tools for meeting the recycling targets.	1	0
<b>Economic instruments</b>				
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	Mandatory DRS for nearly all drink cans	1	2
	Deposit-return systems for glass drink bottles	Mandatory for some or voluntary DRS for nearly all drink bottles	1	1
	Deposit-return systems plastic drink bottles	Mandatory DRS for nearly all drink bottles	1	2
	Deposit-return systems for plastic crates	Mandatory for some or voluntary DRS for nearly all plastic crates	1	1
	Deposit-return systems for wooden packaging	No or voluntary DRS for some wooden packaging	1	0

Separate collection systems				
P-4.1	Convenience and coverage of separate collection systems for the different packaging waste fractions			
	Paper and cardboard packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Paper and cardboard packaging (non-household)	Separation at source is mandatory for non-household paper and cardboard packaging waste	1	2
	Ferrous metals packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Ferrous metals packaging (non-household)	Separation at source is mandatory for non-household ferrous metals packaging waste	1	2
	Aluminium packaging	A high share of the population is covered by high convenience collection services	2	4
	Glass packaging (household)	A high share of population is covered by high convenience collection services	1	2
	Glass packaging (non-household)	Separation at source is mandatory for non-household glass packaging waste	1	2
	Plastics packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Plastics packaging (non-household)	Separation at source is mandatory for non-household plastic packaging waste	1	2
	Wooden packaging	Separation at source is mandatory for non-household wooden packaging waste	2	4
P-4.2	Firm plans to improve the convenience and coverage of separate collection systems for the different packaging waste fractions			
	Paper and cardboard (household)	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	0.5	0
	Paper and cardboard (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Ferrous metals packaging (household)	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	0.5	0
	Ferrous metals packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Aluminium packaging	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	1	2
	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)	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.5	1
	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
<b>Extended producer responsibility (EPR) and similar schemes</b>				
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
<b>Total packaging recycling target</b>				<b>15.22</b>
Maximum score				32.22

47%

**Paper and cardboard recycling target**

<b>Total score</b>	<b>14.00</b>
Maximum score	30.00

47%

**Ferrous metals packaging recycling target**

<b>Total score</b>	<b>20.00</b>
Maximum score	30.00

67%

**Aluminium packaging recycling target**

<b>Total score</b>	<b>12.00</b>
Maximum score	34.00
	35%

**Glass packaging recycling target**

<b>Total score</b>	<b>20.00</b>
Maximum score	32.00
	63%

**Plastics packaging recycling target**

<b>Total score</b>	<b>17.00</b>
Maximum score	35.00
	49%

**Wooden packaging recycling target**

<b>Total score</b>	<b>21.00</b>
Maximum score	32.00
	66%

# Assessment sheet - Target for landfilling of municipal waste

MS Slovakia

Date

Jun-22

SRF		Assessment result	Weight	Score
<b>Current situation and past trends</b>				
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 < 20% and decrease in last 5 years < 5 percentage points, or Landfill rate in 2020 < 25%, and decrease in last 5 years < 10 percentage points, or Landfill rate in 2020 > 25% and decrease in last 5 years > 15 percentage points	1	1
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 not been achieved in 2016 or in the year specified in the derogation where applicable, or data not reported. Or in case of derogation: Target for reducing the amount of biodegradable municipal waste (BMW) landfilled to 35% of BMW generated in 1995 has not been achieved yet and available data indicate that it is unlikely to be achieved	1	0
<b>Total score</b>			<b>1.00</b>	
Maximum score			14.00	

7%