

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



**Lithuania** 

June 2022

# Contents

Acknowledgements.....	1
1 Introduction.....	2
1.1 Background and purpose.....	2
1.2 Approach.....	2
1.3 Member State profile – context parameters.....	3
2 Success and risk factors likely to influence future performance.....	7
2.1 Target for preparing for reuse and recycling of municipal waste.....	7
2.1.1 Current situation and past trends.....	7
2.1.2 Legal instruments.....	9
2.1.3 Economic instruments.....	11
2.1.4 Separate collection system.....	12
2.1.5 Extended producer responsibility (EPR) and similar schemes.....	16
2.1.6 Treatment capacity for bio-waste.....	17
2.2 Target for the recycling of packaging waste.....	19
2.2.1 Current situation and past trends.....	19
2.2.2 Legal instruments.....	24
2.2.3 Economic instruments.....	24
2.2.4 Separate collection system.....	26
2.2.5 Extended producer responsibility (EPR) and similar schemes.....	30
2.3 Target on landfill of municipal waste.....	32
2.3.1 Current situation and past trends.....	32
3 Conclusion.....	35
3.1 Prospects for meeting the recycling target for municipal solid waste.....	35
3.2 Prospects for meeting the recycling target for packaging waste.....	36
3.3 Prospects of meeting the landfill of municipal waste target.....	38
List of abbreviations.....	39
References.....	40
Annex 1 Detailed scoring of success and risk factors.....	42

# 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 Lithuanian Ministry of the Environment to a questionnaire developed by the EEA. The EEA and ETC/CE would like to thank the Lithuanian 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 Lithuania. 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 Lithuania 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 Lithuania 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 Lithuania to achieve the overall packaging waste and specific packaging materials' recycling targets for 2025. Chapter 2.3 examines the prospects for Lithuania 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*

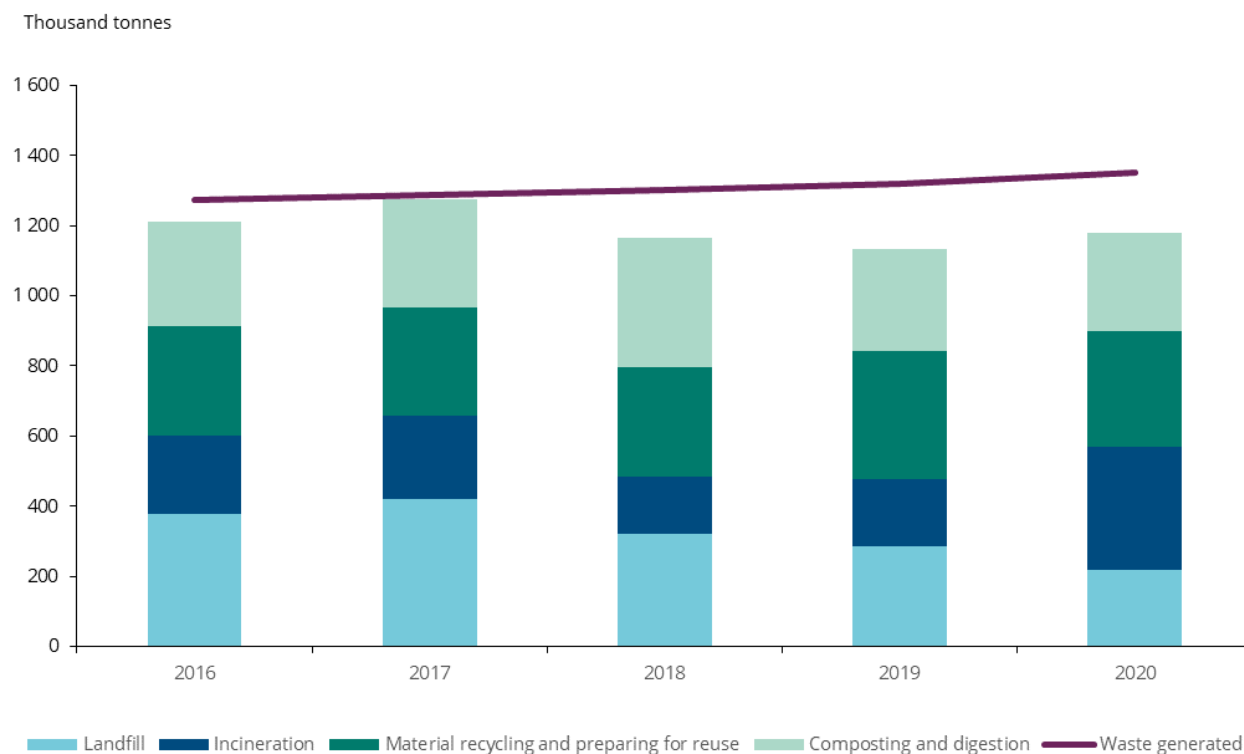
The annual municipal waste generation in Lithuania shows a rather stable value around 1.3 million tonnes since 2016 is 1.35 million tonnes in 2020 (Figure 1.1). Waste generation per capita is slowly increasing from 444 kg/cap in 2016 to 483 kg/cap in 2020, but still remains under the (estimated) EU average of 505 kg/cap. Lithuania reduced its reliance on landfilling by heavily increasing the treatment capacity for mixed municipal waste, including both mechanical biological treatment (MBT) and incineration (with energy recovery). Two new waste incineration plants started to operate in 2020 resulting in an increase of waste incineration capacity from 255 000 tonnes per year to 615 000 tonnes per year (Ministry of Environment, 2021b). Consequently, the landfill rate dropped from 29.8 % in 2016 to 16.3 % in 2020, while incineration increased to 25.9 %. The landfilled waste now includes a considerable share of MBT outputs, as untreated waste is not allowed to be landfilled since 2013. During the same period, material recycling slightly increased while the amounts composted and digested more than doubled, strongly driven by MBT outputs reported as composted/digested (Eurostat, 2021b).

In 2018, 2019 and 2020, the treated amounts of municipal waste were considerably lower than the generated amounts. This is due to mass losses during MBT treatment as well as to temporary storage of combustible MBT outputs. The drop in treatment rate in 2019 is related to an increase in temporary storage of combustible MBT outputs (refuse-derived fuel, RDF) that could not be incinerated because the incineration plant had reached its full capacity in 2019 (Lithuanian Environmental Protection Agency, 2019). This waste is expected to be incinerated in the two new incineration plants that started operation in 2021 (Environmental Protection Agency of Lithuania, 2020).

While in 2010, 6 % of the Lithuanian population was not covered by municipal waste collection, in 2019, 99 % of the territory is covered by collection services (Environmental Protection Agency of Lithuania, 2020; Eurostat, 2017).

In summary, main trends are the increasing waste generation per capita, decreasing landfill rates and increasing composting/digestion.

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



**Source:** Eurostat (2022b)

### *Legal Framework*

The main legal acts related to municipal waste and packaging waste comprise:

- Law on Waste Management (Lietuvos Respublikos Seimas, 1998);
- Law on Taxes on Environmental Pollution (Lietuvos Respublikos Seimas, 1999). This law covers the taxes for packaging, batteries and accumulators, as well as parts of vehicles (including tires);
- Law on Packaging and Packaging Waste (Lietuvos Respublikos Seimas, 2013);
- Order - Minimum service requirements for the municipal waste management (Minister of the Environment of the Republic of Lithuania, 2012);
- National Waste Management Plan 2014-2020 (Lietuvos Respublikos Vyriausybė, 2002).

### *Waste management plan(s)*

The National Waste Management Plan (NWMP) 2014–2020 approved by Government Resolution (The Government of the Republic of Lithuania, 2022). A new plan is under preparation and is expected to be adopted in mid-2022. No new WMP has been notified to the Commission by the end of 2021. The implementation of the principles of waste management is regulated at the state level by the NWMP, at the regional level by regional waste management plans, at the municipal level by municipal waste management plans and municipal waste management rules. The purpose of the NWMP is to set strategic waste management goals until 2020, tasks and measures necessary to achieve the set goals, and the structures for financing of the municipal waste management system. The plan addresses municipal waste and waste from production and other economic activities. The long-term strategic goal of waste management is to reduce the amount of waste generated, to ensure the safe management of waste and the rational use of material and energy resources, thus reducing the use

of natural and other resources and landfilling. The NWMP states the implementation of the waste hierarchy, extended producer responsibility for packaging, WEEE, ELV, oils, batteries. The NWMP also defines the waste collection systems, such as waste treatment facilities and capacities.

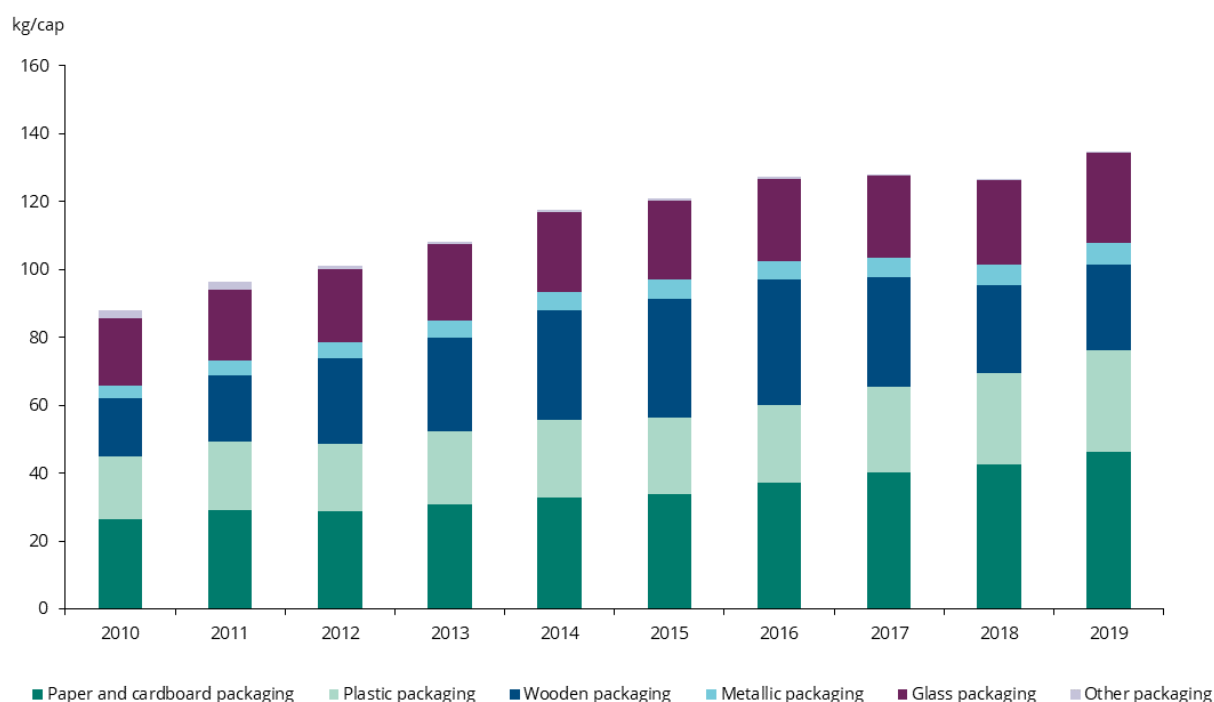
Municipalities are responsible for the implementation of the tasks set out in the NWMP:

- By 2020 at least 50 % (in terms of waste volume) of paper and board, metals, plastics and glass waste in the municipal waste stream is prepared for re-use and recycling;
- By 2016 to recycle, reuse or otherwise use (for example, to obtain energy) at least 45 % of municipal waste (measured by the amount of waste);
- By 2020 to recycle, reuse or otherwise use (for example, for energy) at least 65 % of municipal waste (measured by the amount of waste);
- By 2020 to ensure that municipal biodegradable waste disposed of in landfills does not account for more than 35 % of municipal biodegradable waste generated in 2000.

### *Packaging waste generation and treatment*

In Lithuania, 375 000 tonnes (134 kg/cap) of packaging waste was generated in 2019, which is below the EU average of 177 kg/cap. Packaging waste generation has been increasing over the past decade (Figure 1.2). Wooden packaging waste generation has significantly decreased in 2017-2018 compared to 2015-2016, while other packaging fractions are fluctuating a bit between years, with a trend of increasing waste generation for these packaging materials (Eurostat, 2022c). Wooden packaging generation is strongly influenced by the economic activities of just one company that is dominating the use of wooden packaging in Lithuania (Eurostat, 2022a).

**Figure 1.2 Packaging waste generation in Lithuania 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.

Based on data from the Ministry of Environment (2021) on residual waste composition and separate collection volumes, the capture rate is calculated as the share of the separately collected amount in the total generation of the same material. The calculated capture rates for different waste fractions in Lithuania are presented in Table 1.1.

**Table 1.1 Capture rates for different waste fractions in Lithuania**

	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	2019		2019		
Mixed municipal waste, total		750 926			
Paper and cardboard	6.32 %	47 459	121 588	169 046	72 %
Metals	1.68 %	12 616	143 248	155 864	92 %
Glass	4.44 %	33 341	48 888	82 229	59 %
Plastic	12.72 %	95 518	35 679	131 197	27 %
Bio-waste	19.41 %	145 755	99 593	245 348	41 %
Textiles	7.85 %	58 948	3 352	62 300	5 %
Wood	0.93 %	6 984	7 562	14 546	52 %

**(<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 Environment (2021b)

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

The calculated capture rates show that there is still room for improvement to capture higher shares for most of the generated waste especially textiles, plastics and bio-waste. The capture rate for metals is high at 92 %. According to the Lithuanian Ministry of Environment (2021b), the data on metals waste include just waste from the 15 and 20 sections of the European List of Waste. Although it is likely that some waste managers have assigned incorrect codes, the amounts of waste they declare are considered not significant.

Moreover, the shares of the materials listed in Table 1.1 only cover for 53 % of the residual waste composition, and the fractions not listed in the table (such as, for example, a fine fraction) might include some of these materials. In that case, the calculated capture rates would be overrated.



## 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 Lithuania 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).

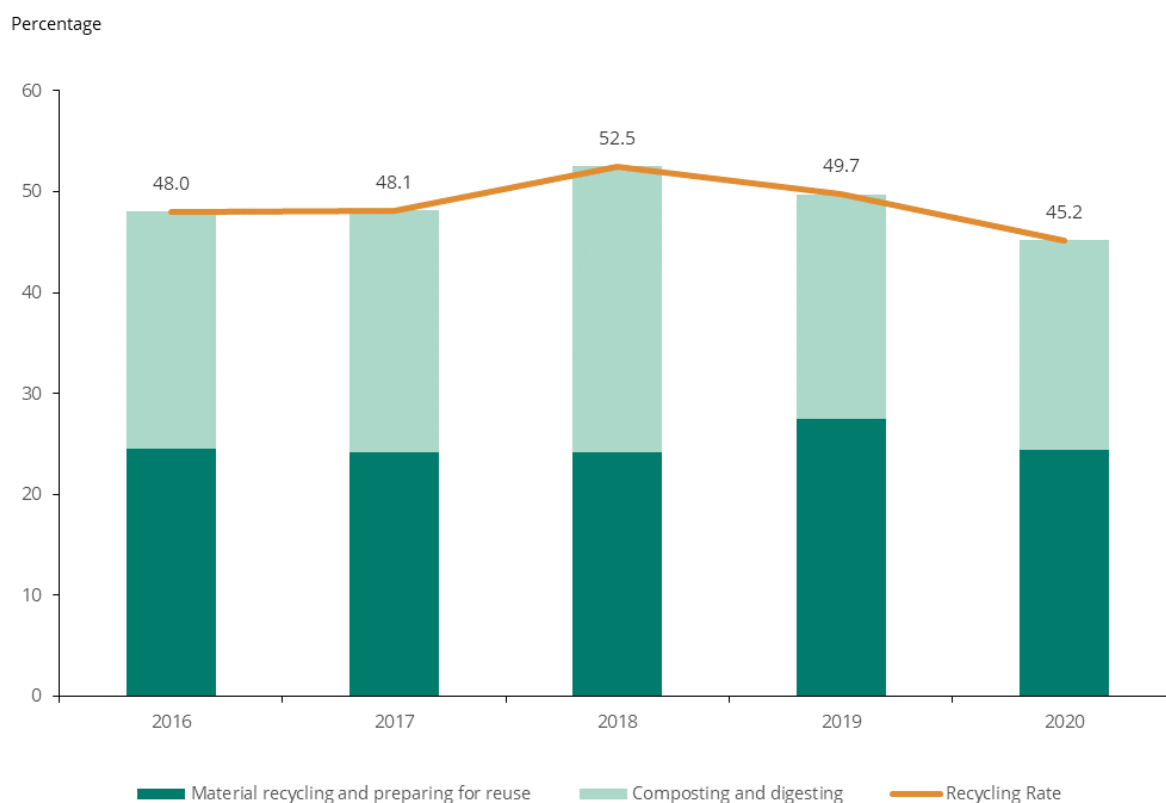
#### 2.1.1 Current situation and past trends

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

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. For Lithuania, the recycling rate was 45.2 % in 2020 (Figure 2.1). The Lithuanian authorities confirm that the data for 2020 published by Eurostat and used in this assessment, already follow the new calculation rules applying to the 2025 target according to the Commission Implementing Decision (EU) 2019/1004 (Ministry of the Environment of the Republic of Lithuania, 2022).

Moreover, the amounts reported as composted or digested include outputs (bio-stabilized material) from MBT plants treating mixed municipal waste (Lithuanian Environmental Protection Agency, 2019). In 2018, about 99 592 tonnes of bio-waste were collected separately in Lithuania (Ministry of Environment, 2021b). If only the separately collected amounts were counted as recycled, the recycling rate would drop to 35 %. From 2027, the bio-stabilized MBT outputs will not be allowed to be counted as recycled waste according to the Waste Framework Directive, resulting in an urgent need to move to separate collection of bio-waste in Lithuania.

**Figure 2.1 Recycling rate in Lithuania between 2016 and 2020, in percentage**



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

**Summary result**

Distance to target 5 - 15 percentage points	Lithuania’s recycling rate was 45.2 % in 2020, 9.8 percentage points below the 2025 target.
Robustness of the underlying information	The Lithuanian authorities confirm that the data for 2020 published by Eurostat and used in this assessment, already follow the new calculation rules applying to the 2025 target according to the Commission Implementing Decision (EU) 2019/1004.

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

Over the last five years, the recycling rate decreased from 48 % to 45.2 % (Figure 2.1). Material recycling has remained steady and was 24.4 % in 2020 and composting and digestion has decreased from 23.5 % in 2016 to 20.7 % in 2020. Composting and digestion peaked at 28 % in 2018 and dropped since, while material recycling peaked at 27.5 in 2019 and dropped since (Figure 2.1). The increase in composting and digestion was mainly driven by a strong increase in the treatment of mixed municipal waste in MBT plants.

More specifically, the overall recycling rate of Lithuania shows an increase between 2016 and 2018, mainly driven by increasing composting and digestion and a small increase in material recycling to support the increasing trend. Between 2018 and 2020 the overall recycling rate decreased from 52.5 % to 45.2 %, mainly due to a decrease of composting and digestion (Figure 2.1). The Lithuanian Ministry of Environment explains this by the fact that a significant part of the composted waste from MBT plants (‘technical compost’) was stored in the expectation that it would be incinerated later in two new incineration plants that started operation in 2021 (Ministry of Environment, 2021a). Another

reason for the decrease in the recycling rate is that in 2020, the new calculation points according to the Commission Implementing Decision (EU) 2019/1004 are applied. If the trend is calculated based on 2016-2019 only, assuming that 2020 data are not fully comparable with previous data because of this change, a small increase of 1.7 percentage points is observed. However, this does not affect the assessment of this SRF.

### Summary result

RR > 45%, and increase in last 5 years < 10 percentage points	The recycling rate has decreased by 2.8 percentage points over the past five years (an increase of 1.7 percentage points between 2016-2019), and the recycling rate was 45.2 % in 2020.
Robustness of the underlying information	Data reported to Eurostat. 2020 data take into account the new calculation rules applying to the 2025 target according to the Commission Implementing Decision (EU) 2019/1004.

### 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.

Lithuania has transposed the amended Waste Framework Directive in August 2021, i.e. with a delay of more than 12 months.

### Summary result

Transposition with delay of > 12 months, or no full transposition yet	The amended Waste Framework Directive has been transposed into national law with a delay of more than 12 months after the deadline of 5 July 2020.
Robustness of the underlying information	Information provided by the European Commission (status as of 12 November 2021)

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

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

According to the Lithuanian authorities, the following stakeholders have responsibilities with respect to meeting the targets of MSW recycling (Ministry of Environment, 2021b):

- The national government defines the targets for the recycling of municipal waste and packaging waste as well as responsibilities of stakeholders for the management of municipal waste in the Law on Waste Management. (Law on Waste Management, as last amended in June 2021 (Lietuvos Respublikos Seimas, 1998)). Implementation measures are defined in the National waste prevention and management plan.
- Regional Development Councils develop and approve regional waste prevention and management plans with the main aim to coordinate the actions of municipalities in the

organisation of municipal waste management systems and the setting up of waste recovery or disposal facilities common to several municipalities.

- Municipalities have to draw up municipal waste prevention and management plans, approved by municipal councils. These shall include measures and targets. Municipalities shall organise the municipal waste management systems necessary for the management of the municipal waste generated on their territory, ensure the functioning of those systems, and manage the provision of the municipal waste management service. They also have to report on the implementation of the measures to the Environmental Protection Agency.
- The Environmental Protection Agency is responsible for collecting and publishing reports on the implementation of the measures.
- Producers/importers and Producer Responsibility Organisations for packaging and WEEE have to organise separate collection, transport, preparation for recovery and recovery of all packaging/EEE placed on the domestic market, and/or participate in the organisation of the management of such waste in municipal waste management systems by contracting waste management companies (Law on Packaging and Packaging Waste (Lietuvos Respublikos Seimas, 2013)). This is usually done through contracts between producers/producer responsibility organisations and the municipalities. A producer/importer not participating in a PRO has to pay taxes to the state according to the Waste Management Program (Producer responsibility also applies for batteries, accumulators, oils, end-of-life vehicles, tyres and other parts of vehicles, however, these are mostly not part of municipal waste except of some batteries, and thus not addressed in this assessment).

Minimum service requirements for the collection of municipal waste, including separate collection of recyclables, are defined in the Order on the approval of minimum quality requirements for municipal waste management services (Minister of the Environment of the Republic of Lithuania, 2012), adopted by the Minister of the Environment.

The support mechanisms for improving the efficiency and performance of the responsible entities, Lithuania has implemented a tracking system for monitoring of performance, and performance data by municipality and region is published annually. In addition, there is a programme for sharing good practices, as well as co-operation between municipalities on infrastructure planning (Ministry of Environment, 2021b).

If producers/importers of packaging do not meet the targets set in Lithuanian legislation, they have to pay packaging taxes (see Section 2.2.3 for further details), and similar taxes apply to batteries, accumulators and certain vehicle parts. In order to support the enforcement of the producers'/importers' responsibilities on WEEE, the Law on waste management (Art. 342) (Lietuvos Respublikos Seimas, 1998) requires producer responsibility organisations to provide for a bank guarantee or to sign an insurance to guarantee for the financing of proper management of the WEEE. The insurance fee can be taken if the producer does not respect its obligations (Ministry of Environment, 2021b).

The revenues of the packaging taxes and WEEE insurance fees go to a special fund, the Waste Prevention and Management Program, administrated by the Ministry of Environment. The Program funds different types of solutions for waste prevention and better management (including special solutions for packaging) (Ministry of Environment, 2021b).

### Summary result

Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets	Responsibilities for meeting the municipal waste recycling target are overall well defined in the Lithuanian legislation but consequences for municipalities in case of not meeting the targets are unclear. Strong support tools are in place to further facilitate better recycling performance.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

### 2.1.3 Economic instruments

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

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

In Lithuania, there is a ban on landfilling of untreated municipal waste, as well as a ban on landfilling of biodegradable waste from gardens, parks and green areas. In addition, there is a tax of 10 EUR/t in 2021 for the disposal of non-hazardous waste at landfills, with an escalator increasing the tax by 5 EUR/t annually up to 25 EUR/t in 2024. The tax covers also outputs of MBT plants that are landfilled. The revenues of the landfill tax go to the Waste Prevention and Management Program (Ministry of Environment, 2021b).

### Summary result

Ban in place for landfilling residual or biodegradable waste	Lithuania has a landfill ban in place. There is a landfill tax of 10 EUR/t for non-hazardous waste and MBT plant outputs (corresponding to 14.5 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)), with a planned annual increase to EUR 25 in 2024 i.e. with an escalator.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

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

Taxes on incineration of residual municipal waste can help to discourage strong reliance on residual waste treatment and thus support recycling. The assessment relates to the tax to be paid for domestic MSW (i.e. not for incineration of imported waste), as only this is relevant as an incentive to divert domestic waste from incineration and influencing the recycling rate.

There is no incineration tax in Lithuania (Ministry of Environment, 2021b).

### Summary result

No incineration taxes	There is no incineration tax in Lithuania.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

#### *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.

Lithuania has a PAYT system for MSW collection for households served by door-to-door collection for mixed municipal waste both in cities, towns and suburbs and rural areas. Fees for households served by bring points for residual waste are calculated based on the average amounts of residual waste collected in a certain territory (e.g. a municipality) and thus depend on a collective effort. Based on information in Table 2.1 (Section 2.1.4) about the share of the population served by the different types of collection systems, it can be estimated that more than half but less than 80 % of the population is covered by PAYT systems. The fees for collection are based on residual waste collection volumes, whereas separate collection at bring points is free of charge, creating an economic incentive for sorting at source through the reduction of residual waste management fees. Municipalities can choose from three types/combinations of types of PAYT systems (Ministry of Environment, 2021b; Lietuvos Respublikos Seimas, 2013):

- 1) container size and amount of containers;
- 2) container size, amount of containers and frequency of collection;
- 3) weight of waste.

No overview is available on the actual implementation of the three types of PAYT systems across municipalities.

### Summary result

PAYT scheme implemented in some regions/municipalities (50-80% of the population covered)	Lithuania has partly rolled out PAYT.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire and follow-up information, combined with own estimations.

### 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 Lithuania, according to the most recent data, the percentage of households living in cities is 45 %, in towns and suburbs 2 % and in rural areas 53 % (Eurostat, 2021a).

Both households and companies are obliged to sort their waste for separate collection. The collection system does not distinguish between packaging waste and non-packaging waste. The separate

collection system serves both households and non-household producers of municipal waste. The collection from households covers all different fractions (Table 2.1), while the collection from non-household sources covers paper and cardboard, ferrous metals, aluminium, glass and plastics. Collection from non-households is arranged through contracts with waste management companies, offering individual services including containers and transportation of the waste (Ministry of Environment, 2021b). Mandatory separate collection of bio-waste will be introduced as of 2023 and of textiles as of 2025.

The municipalities are responsible for separate collection of recyclable waste. In cities there must be at least one bring point per 600 inhabitants, bulky waste is collected door-to-door at least twice a year. In Table 2.1, collection is characterised as door-to-door collection only when the waste collection point is within the building's own yard, otherwise it is a bring point (Ministry of Environment, 2021b). Minimum service requirements to be followed by waste collectors are defined at the national level (Minister of the Environment of the Republic of Lithuania, 2012).

In order to ensure separate collection from non-household sources, a warning or a fine of EUR 20 to 80 for non-compliance can be applied as enforcement mechanism (Ministry of Environment, 2021b).

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

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

	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
Residual waste	x		xx			xx		x			xx			
Paper and Cardboard		x	xx		x		x	xx		x		xx	x	x
Ferrous metals		x	xx		x		x	xx		x		xx	x	x
Aluminium		x	xx		x		x	xx		x		xx	x	x
Glass	x		xx		x	x		xx		x	xx		x	x
Plastic		x	xx		x		x	xx		x		xx	x	x
Bio-waste*	xx					xx					xx			
food														
garden					xx					xx				xx
Textiles				xx	x				x	xx				xx
Wood					xx					xx				xx
WEEE	x		xx		x			xx		x			xx	xx
Composite packaging		x	xx		x			xx		x		xx	x	x
Other: Bulky waste	x				xx	x	x			xx	x			xx

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

**Source:** Ministry of Environment (2021b)

Table 2.1 shows that bring points are the dominant collection system in cities for all fractions except of bio-waste, which is only collected door-to-door. Garden waste is mainly collected at civic amenity sites. In rural areas, door-to-door collection of either separate fractions or co-mingled fractions is dominant. In cities, the service level of residual waste collection is similar to the collection of recyclables, mainly bring point collection.

Taking this into account, the service level of separate waste collection for MSW is generally high with door-to-door, co-mingled and high-density collection points. For garden waste, textiles, and wood waste, the service level of the system is characterised by low-density collection points and/or collection at civic amenity sites. WEEE is collected through take back at retailers, complemented by collection at civic amenity sites, and in cities also via door-to-door collection.

The low capture rate for bio-waste (see section 1.3) is explained by the fact that the separate collection system is not being fully rolled out, and the low capture rate for plastics might be due to citizens' low acceptance to use the bring points for plastics. According to the data on separately collected volumes provided by the Ministry of Environment, around 96 % of the collected bio-waste is garden waste. From this, it is concluded that food waste collection, or combined food and garden waste collection is practiced only in very few municipalities (Ministry of Environment, 2021b). In the region of Alytus, citizens and the catering sector have received free composting boxes and kitchen caddies for food waste from the regional waste management centre and are being reminded that it is mandatory to separate bio-waste from residual waste at source and that residual waste containers will not be emptied if they contain bio-waste. This is expected to significantly increase bio-waste sorting in the area (European Compost Network, 2022).

**Summary result**

Paper and cardboard	A high share of the population is covered by high convenience collection services	In cities, high-density bring points are the dominant collection system, with some co-mingled collection and supported by collection at civic amenity sites. In rural areas, co-mingled is the dominant collection system, supported by bring points and collection at civic amenity sites.
Metals	A high share of the population is covered by high convenience collection services	In cities, high-density bring points are the dominant collection system, with some co-mingled collection and supported by collection at civic amenity sites. In rural areas, co-mingled is the dominant collection system, supported by bring points and collection at civic amenity sites.
Plastics	A high share of the population is covered by high convenience collection services	In cities, high-density bring points are the dominant collection system, with some co-mingled collection and supported by collection at civic amenity sites. In rural areas, co-mingled is the dominant collection system, supported by bring points and collection at civic amenity sites.



Glass	A high share of the population is covered by high convenience collection services	In cities, high-density bring points are the dominant collection system, with some door-to-door collection and supported by collection at civic amenity sites. In rural areas, door-to-door is the dominant collection system, supported by bring points and collection at civic amenity sites.
Bio-waste	A low share of the population is covered by high convenience collection services	Food waste collection is not yet common in Lithuania, but door-to-door collection has started. Garden waste is collected mainly at civic amenity sites.
Wood	A low share of the population is covered by high convenience collection services	Wood waste is only collected at civic amenity sites in both urban and rural areas, however, bulky waste which usually contains wood waste, is collected door-to-door at least two times a year.
Textiles	A low share of the population is covered by high convenience collection services	In cities, low-density bring points are the dominant collection system, supported by collection at civic amenity sites. In rural areas, civic amenity site is the only collection system.
WEEE	High to medium convenience collection services dominate	Retailers selling EEE have to take back WEEE. This is complemented with collection at civic amenity sites, and in cities also some door-to-door collection.
Robustness of the underlying information		Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire and follow-up information provided.

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

Lithuania is planning to improve the collection system of both bio-waste and textiles. Currently mainly garden waste is collected separately while food waste mostly still stays within the mixed municipal waste. Municipalities report the need for door-to-door collection containers and for bring points to the Ministry of Environment, and this is used for the planning of increasing the density of the collection infrastructure. The planned improvement of separate collection of food waste (or combined food and garden waste) will support Lithuania in increasing the recycling rate and reaching the recycling targets as stated in the Waste Framework Directive (WFD).

Textiles are currently collected at low-density bring points and the plan is to increase the density of collection points. However, municipalities are not yet well prepared for separate collection of textiles from households as sorting capacity is too low to tackle additional amounts, and better sorting infrastructure will need to be in place to motivate citizens to participate in separate collection.

However, no clear time plan has been presented for the roll-out of the improvements in collection systems.

## Summary result

Paper and cardboard	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Metals	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Plastics	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Glass	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Bio-waste	There are plans to improve the collection service but unclear plan for implementation	Lithuania has indicated plans to introduce separate collection of bio-waste by 2023, while the collection currently focusses on garden waste. However, the concrete implementation of these plans is unclear.
Wood	There are plans to improve the collection service but unclear plan for implementation	Lithuania is planning to improve the service level through increasing the density of civic amenity sites.
Textiles	There are plans to improve the collection service but unclear plan for implementation	Lithuania has indicated plans to improve the service level in cities. Currently, textiles are collected at low-density bring points and the plan is to increase the density of collection points by 2025. However, the concrete implementation of these plans is unclear.
WEEE	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Robustness of the underlying information		Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

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

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

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

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

In Lithuania, there are three active PROs for packaging, organised as public bodies (Ministry of Environment, 2021b):

- 1) Pakuočių tvarkymo organizacija;
- 2) Gamtos ateitis;
- 3) Žalioji taška.

The EPR in Lithuania covers packaging waste from both household and non-household sources and all three PROs cover the following materials (Ministry of Environment, 2021b):

- Paper and cardboard packaging;
- Ferrous metals packaging;
- Aluminium packaging;
- Glass packaging;
- Plastics packaging;
- Wooden packaging;
- Composite and any other packaging.

The fee for the management of packaging waste that is to be paid to the ERP organisation by the members, must be differentiated according to the types of materials and the suitability of the type of packaging for reuse and recycling as stated in the 2021 amended of Law on Packaging and Packaging Waste Management (Ministry of the Environment of the Republic of Lithuania, 2022). Furthermore, there is monitoring by the PRO's and State inspectors to prevent free-riding of EPR obligations. State inspectors and the PROs communicate towards businesses if the nature of their activities indicate EPR requirements according to the Law. (Ministry of Environment, 2021b)

### Summary result

No advanced fee modulation	Fee modulation meets less than two assessment criteria
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire and comments provided during the review of this assessment in May 2022.

### 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 Lithuanian authorities, the country's separately collected bio-waste was 99 593 tonnes in 2019, which is slightly more than the available bio-waste treatment capacity for MSW in the country (Environmental Protection Agency Lithuania, 2021; Ministry of Environment, 2021b). The total generation of bio-waste within total municipal waste, including separately collected bio-waste and bio-waste present in the residual waste fraction, is estimated to be 245 000 tonnes (calculated based on data provided by Ministry of Environment (2021)), and most of the bio-waste is treated as part of mixed municipal waste in MBT plants. The reported bio-waste treatment capacity of approximately 100 000 tonnes is significantly lower than the total generation of bio-waste (Ministry of Environment, 2021b).

In order to meet the expected increase in separately collected bio-waste due to the plans for implementing separate collection systems in municipalities (see Section 2.1.4), there are plans for adapting the current MBT facilities to be suitable for separate treatment of separately collected bio-

waste (personal communication with prof. Gintaras Denafas and Prof. Jolita Kruopienė from Kaunas University of Technology).

### Summary result

Bio-waste treatment capacity below 80% of generated municipal bio-waste and no plans to extend capacity, or no capacity information available	The reported bio-waste treatment capacity of approx. 100 000 tonnes is significantly lower than the total generation of biowaste, which is 245 000 tonnes.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire and completed by info from local experts.

### *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.

Currently Lithuania has a national standard for compost quality, but there is no quality management system in place for the production of compost (EEA, 2020).

### Summary result

Legally binding national standards for compost/digestate quality but no quality management system	Currently Lithuania has a national standard for compost quality, but no quality management system for the production of compost.
Robustness of the underlying information	This information is robust. It was provided by the Lithuanian authorities for the development of the 2020 EEA report bio-waste in Europe – turning challenges into opportunities.

## 2.2 Target for the recycling of packaging waste

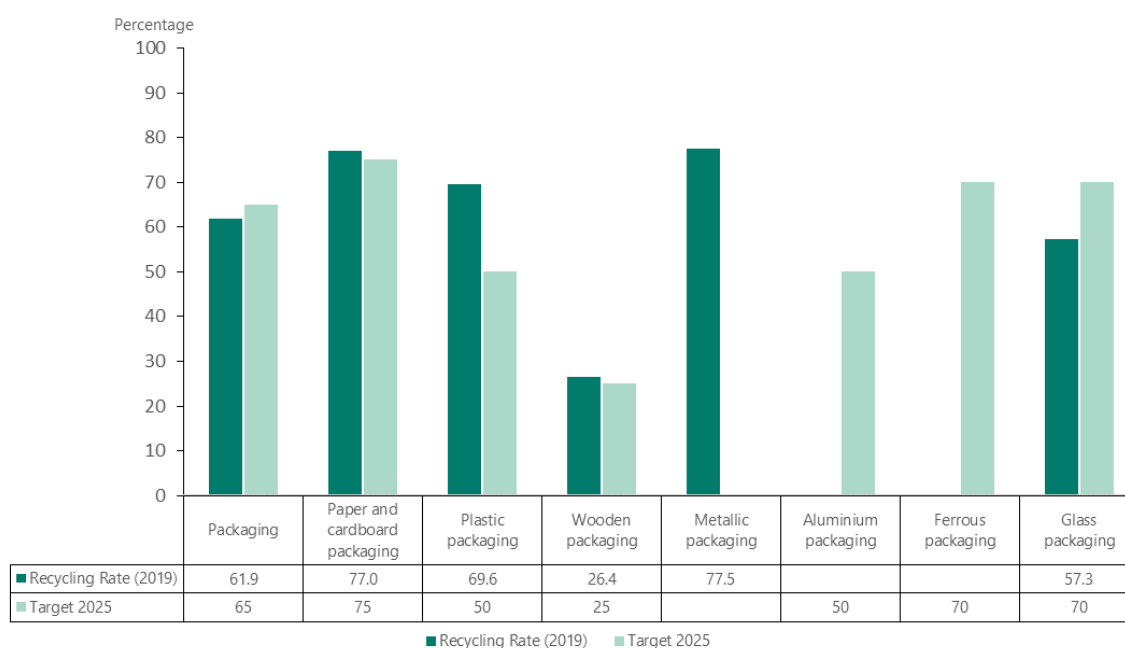
This chapter aims at assessing the prospects of Lithuania to achieve the **65 % recycling target for packaging waste** in 2025 as well as the **material specific packaging waste recycling targets** (50 % of plastic; 25 % of wood; 70 % of ferrous metals; 50 % of aluminium; 70 % of glass; 75 % of paper 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 Lithuania to Eurostat in accordance with Commission Decision 2005/270/EC as last amended by the Commission Implementing Decision 2019/665 (EC, 2019), published in the dataset *Recycling rates of packaging waste for monitoring compliance with policy targets, by type of packaging [env\_waspacr]*. The latest available data refer to 2019. The performance of Lithuania is illustrated in Figure 2.2.

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



**Note:** Data for aluminium and ferrous packaging are flagged as estimates.

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

For Lithuania the reported recycling rates for paper and cardboard, plastics, wooden packaging and metals exceed the targets. For total packaging, the distance to target is 3.1 percentage points and for glass 12.7 percentage points (Eurostat, 2022d).

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), losses in recycling plants 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 77.0 % to 69.3 %
- Metal packaging: decrease by 14 %, from 77.5 % to 66.7 %
- Glass packaging: decrease by 5 %, from 57.3 % to 54.4 %
- Plastic packaging: decrease by 21 %<sup>1</sup>, from 69.6 % to 54.9 %
- Wooden packaging: decrease by 11 % from 26.4 % to 23.5 %
- Total packaging: calculated based on the amounts of each packaging material generated and recycled in 2019, the recycling rate would drop from 61.9 % to 54.4 %.

Data on packaging waste generation are reported by producers as packaging put on the market. Lithuania uses no estimates for improving the data to include private imports, online sales or free-riders, but includes in the reported data estimates for entities below the reporting threshold (de-minimis) (Eurostat, 2022a). This means that there might be some underreporting of the packaging waste put on the market. Starting with the reference year 2020, the Ministry of Environment plans to improve packaging waste generation statistics using data on waste management (Ministry of Environment, 2021a)

The reported recycling rate for plastics packaging was the highest rate of all EU member states in 2019, although the capture rate for plastics from municipal waste is rather low as indicated in Table 1.1 above.

### Summary result

Total packaging	5 - 15 percentage points below target	Lithuania reports a recycling rate of 61.9 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 54.4 %, 10.6 percentage points below the 2025 target.
Paper and cardboard packaging	5 - 15 percentage points below target	Lithuania reports a recycling rate of 77.0 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 69.3 %, 5.7 percentage points below the 2025 target.
Ferrous metals packaging	< 5 percentage points below target	Lithuania reports a recycling rate of 79.1 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants and assuming the same losses for ferrous as for total metals), the estimated recycling rate would drop to 68.0 %, 2 percentage points below the 2025 target.

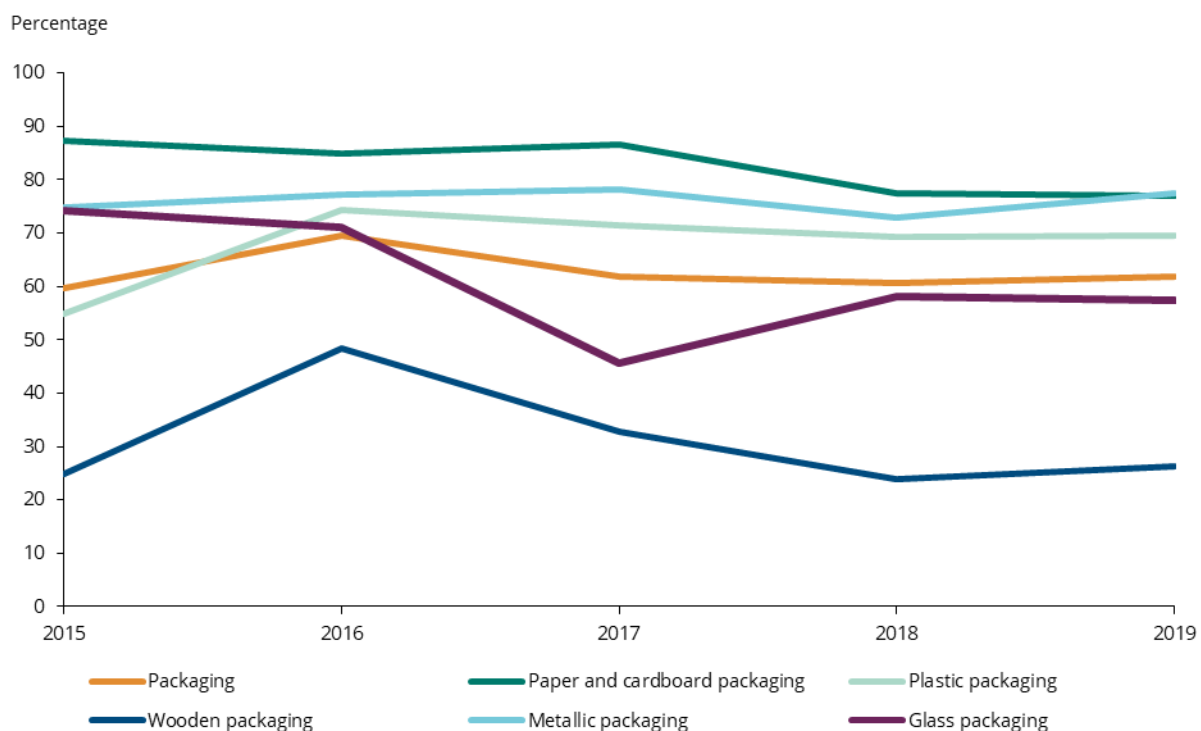
<sup>1</sup> This is the weighted recycling loss taking into account the 29 % recycling loss for packaging waste from household sources (66 %) and the 5 % recycling loss for packaging waste from commercial sources (33 %).

Aluminium packaging	Target exceeded	Lithuania reports a recycling rate of 73.8 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants and assuming the same losses for aluminium as for total metals), the estimated recycling rate would drop to 63.5 %, 13.5 percentage points above the 2025 target.
Glass packaging	> 15 percentage points below target	Lithuania reports a recycling rate of 57.3 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 54.4 %, 15.6 percentage points below the 2025 target.
Plastics packaging	Target exceeded	Lithuania reports a recycling rate of 69.6 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 54.9 %, 4.9 percentage points above the 2025 target.
Wooden packaging	< 5 percentage points below target	Lithuania reports a recycling rate of 26.4 %. However, if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 23.5 %, 1.5 percentage points below the 2025 target.
Robustness of the underlying information		<p>The yearly fluctuations in recycling rates (Figure 2.3) make the data from a specific year less robust. The trends are a better indicator of performance in the case of Lithuania.</p> <p>Data on packaging waste generation are reported by producers as packaging put on the market. Lithuania does not estimate packaging put on the market by free riders or imported by private persons which might lead to an underestimation of packaging waste generated. The assessment is limited by the fact that the recycling rates for 2019 reported by Lithuania 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>

### ***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 Lithuania are illustrated in Figure 2.3.

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



**Note:** Lithuania reported separate data for aluminium and steel packaging for the first time in 2019, therefore a trend can only be shown for total metals packaging.

**Source:** Eurostat (2022d)

The overall packaging recycling rate has slightly increased in Lithuania during the past five years, from 59.8 % in 2015 to 61.9 % in 2019. Paper and cardboard packaging recycling has already exceeded the target with a good margin, but has decreased since 2015. Plastics recycling increased quite strongly from 55 % in 2015 to 74 % in 2016 and 2017 but fell down to 69.6 % in 2019. The recycling of wooden packaging fluctuates around 25 %, with a sudden peak of 48 % in 2016. Metallic packaging showed a rather stable trend over the 2015-2019 period. Also glass packaging recycling fluctuated, and dropped by 15.6 percentage points since 2015 (Eurostat, 2022d).

In 2016 the packaging waste collection system in Lithuania was improved, which led to increasing recycling rates for total packaging, plastics and metals compared to the years before. A deposit return system was introduced for plastic bottles, with significant impact on the recycling of plastics packaging. The peak of wooden packaging waste recycling in 2016 was linked to one producer utilising waste packaging in the production of wooden packaging, producing higher volumes of packaging in 2016. There are indications that a large part of the wooden packaging reported as recycled in 2016 by the industry was actually incinerated with energy recovery. The drop for glass packaging recycling in 2017 is related to a change in the waste management system (Eurostat, 2022a). The decrease in paper and cardboard packaging recycling was explained by a decrease in demand for paper and cardboard packaging (Ministry of Environment, 2021a).

Data on packaging waste generation are based on industry declarations on products put on market (Eurostat, 2022a). There is monitoring in place by the PRO to prevent free-riding of EPR obligations (Ministry of Environment, 2021b).



In summary, the recycling rates for all packaging fractions fluctuate significantly over time, not indicating any type of clear trends. It can be assumed that this is also influenced by storage between years.

### Summary result

Total packaging	RR < 55% and increase in last 5 years < 10 percentage points	The recycling rate increased by 2.1 percentage points over the past five years and is estimated at 54.4 %, taking into account the new calculation rules (losses in the recycling plants are considered).
Paper and cardboard packaging	RR > 65%, and increase in last 5 years < 10 percentage points	The recycling rate decreased by 5.7 percentage points over the past five years and is estimated at 69.3 %, taking into account the new calculation rules (losses in the recycling plants are considered).
Ferrous metals packaging	RR > 65% and increase in last 5 years < 5 percentage points	The recycling rate of metallic packaging is used, as Lithuania only reports ferrous and aluminium packaging separately as of 2019. The recycling rate increased by 2.6 percentage points over the past five years and is estimated at 68.0 %, taking into account the new calculation rules (losses in the recycling plants are considered).
Aluminium packaging	RR > 50%	The recycling rate of metallic packaging is used, as Lithuania only reports ferrous and aluminium packaging separately as of 2019. The recycling rate increased by 2.6 percentage points over the past five years and is estimated at 63.5 %, taking into account the new calculation rules (losses in the recycling plants are considered).
Glass packaging	RR < 60% and increase in last 5 years < 10 percentage points	The recycling rate decreased by 15.6 percentage points over the past five years and is estimated at 54.4 %, taking into account the new calculation rules (losses in the recycling plants are considered).
Plastics packaging	RR > 50%	The recycling rate increased by 14.8 percentage points over the past five years and is estimated at 54.9 %, taking into account the new calculation rules (losses in the recycling plants are considered).
Wooden packaging	RR > 20% and increase in last 5 years > 5 percentage points	The recycling rate increased by 1.6 percentage points over the past five years and is estimated at 23.5 %, taking into account the new calculation rules (losses in the recycling plants are considered).
Robustness of the underlying information	The yearly fluctuations make the data for one specific year less robust. The assessment is limited by the fact that the recycling rates for 2019 reported by Lithuania 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.	

## 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.

Lithuania has transposed the amended Packaging and Packaging Waste Directive in August 2021, i.e. with a delay of more than 12 months.

#### Summary result

Transposition with delay of > 12 months, or no full transposition yet	The amended Packaging and Packaging Waste Directive has been transposed into national law with a delay of more than 12 months after the deadline of 5 July 2020.
Robustness of the underlying information	Information provided by 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.*

As described in Section 2.1.2 in more detail, Lithuania's waste legislation defines the responsibilities, enforcement mechanisms or support mechanisms for meeting the targets. As an enforcement mechanism, producers must pay packaging taxes in case targets for recycling are not met (see Section 2.2.3). The tax revenues go to the special fund (Waste Prevention and Management Program) which is administered by the Ministry of Environment. The Fund receives other tax revenues as well, and is used to finance improvements in waste prevention and waste management, including in the area of packaging.

#### Summary result

Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	Responsibilities for meeting the packaging waste recycling targets are well defined in the Lithuanian legislation, enforcement mechanisms are in place but support tools for facilitating increasing recycling rates are missing.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

## 2.2.3 Economic instruments

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

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

As described in Section 2.1.3 in more detail, Lithuania has landfilling bans and a landfilling tax.

### Summary result

Ban in place for landfilling residual or biodegradable waste	Lithuania has a landfill ban in place. There is a landfill tax of 10 EUR/t for non-hazardous waste and MBT plant outputs (corresponding to 14.5 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)), which includes an escalator.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

### 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. There is no incineration tax in Lithuania.

### Summary result

No incineration taxes	There is no incineration tax in Lithuania.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

### 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.

Lithuania implements an escalator on packaging taxes and starting in 2022, the taxes will differ between reusable or recyclable single-use packaging and non-recyclable single-use packaging. The packaging tax is used as a means of enforcing legislation, levied only on producers/importers that fail to meet the Lithuanian targets for packaging reuse or packaging waste management. The definitions for recyclable, reusable and single-use packaging are aligned with the EU requirements and laid down in the law on Packaging and Packaging Waste Management (Ministry of Environment, 2021a).

The producers are obliged to report volumes of packaging put on the market annually and to declare volumes of both packaging put on market and waste generated to the State Tax Inspectorate, which then indicates the amount of tax to be paid (Ministry of Environment, 2021b). The tax revenues go to the special fund (Waste Prevention and Management Program) which is administered by the Ministry of Environment. The Fund receives other tax revenues as well, and is used to finance improvements in waste prevention and waste management, including in the area of packaging.

### Summary result

No packaging taxes	Lithuania has packaging taxes in place with the aim to support the enforcement of packaging waste recycling targets. Thus, in this assessment the taxes are considered enforcement mechanisms in SRF MSWR-2.2 and not packaging taxes in this SRF.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

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

Given the relevance of packaging waste management from households for the recycling targets of packaging waste, PAYT systems influence the recycling rate of packaging waste.

As described in Section 2.1.3 in more detail, Lithuania has partly rolled out PAYT.

### Summary result

PAYT scheme implemented in some regions/ municipalities (50-80% of the population covered)	Lithuania has partly rolled out PAYT.
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire and follow-up information, combined with own estimations.

### 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 Lithuania there is a mandatory DRS system for beverage cans and bottles and a voluntary system for plastic crates and wooden packaging. The mandatory system applies to beverage packaging of 0.1–3 litres of certain beverages (water, juices, nectars, soft drinks, beer, cider, cocktails, other light alcohol drinks) (Lietuvos Respublikos Seimas, 2013; Ministry of Environment, 2021b).

### Summary result

Aluminium drink cans	Mandatory DRS for nearly all drink cans	The mandatory system covers nearly all aluminium cans.
Glass drink bottles	Mandatory DRS for some specific drink bottles	The mandatory system covers some specific drink bottles of 0.1–3 litres.
Plastic drink bottles	Mandatory DRS for some specific drink bottles	The mandatory system covers some specific drink bottles of 0.1–3 litres volume.
Plastic crates	Voluntary DRS for some specific plastic crates	The voluntary system covers some specific plastic crates.
Wooden packaging	Voluntary DRS for some wooden packaging	The voluntary system covers some specific wooden packaging.
Robustness of the underlying information		Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

### 2.2.4 Separate collection system

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

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

As described in Section 2.1.4 in more detail, separate collection is mandatory in Lithuania for both households and non-households. The service level of separate waste collection is in general high for packaging waste with door-to-door, co-mingled and high-density collection points.

Separation of packaging waste at source is mandatory for producers of commercial and industrial packaging waste. Collection from non-households is arranged through contracts with waste management companies, offering individual services including containers and transportation of the waste. Smaller commercial waste holders of packaging waste can also use the separate collection scheme organised by the municipalities.

### Summary result

Paper and cardboard packaging	<p><b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services</p>	<p>In cities, high-density bring points are the dominant collection system, with some co-mingled collection and supported by collection at civic amenity sites.</p> <p>In rural areas, co-mingled is the dominant collection system, supported by bring points and collection at civic amenity sites.</p>
	<p><b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household paper and cardboard packaging waste</p>	<p>The separate collection system applies both to household and non-household producers of municipal waste.</p>
Ferrous metals packaging	<p><b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services</p>	<p>In cities, high-density bring points are the dominant collection system, with some co-mingled collection and supported by collection at civic amenity sites.</p> <p>In rural areas, co-mingled is the dominant collection system, supported by bring points and collection at civic amenity sites.</p>
	<p><b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household ferrous metals packaging waste</p>	<p>The separate collection system applies both to household and non-household producers of municipal waste.</p>
Aluminium packaging	<p><b>Packaging waste from households</b> A high share of the population is covered by high convenience collection services</p>	<p>In cities, high-density bring points are the dominant collection system, with some co-mingled collection and supported by collection at civic amenity sites.</p> <p>In rural areas, co-mingled is the dominant collection system, supported by bring points and collection at civic amenity sites.</p> <p>There is a mandatory DRS covering nearly all aluminium cans.</p>
Glass packaging	<p><b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services</p>	<p>In cities, high-density bring points are the dominant collection system, with some door-to-door collection and supported by collection at civic amenity sites.</p> <p>In rural areas, door-to-door is the dominant collection system, supported by bring points and collection at civic amenity sites.</p>
	<p><b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household glass packaging waste</p>	<p>The separate collection system applies both to household and non-household producers of municipal waste.</p>

Plastics packaging	<b>1. Packaging waste from households</b> A high share of the population is covered by high convenience collection services	In cities, high-density bring points are the dominant collection system, with some co-mingled collection and supported by collection at civic amenity sites. In rural areas, co-mingled is the dominant collection system, supported by bring points and collection at civic amenity sites.
	<b>2. Packaging waste from non-household sources</b> Separation at source is mandatory for non-household plastic packaging waste	The separate collection system applies both to household and non-household producers of municipal waste.
Wooden 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 non-household wooden packaging waste.
Robustness of the underlying information		Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

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

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

To improve the convenience and coverage of separate collection, concrete plans are needed. 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.

Lithuania has not reported on any plans to improve the separate collection system for packaging waste.

---

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

## Summary result

Paper and cardboard packaging	<b>1. Packaging waste from households</b> N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	<b>2. Packaging waste from non-household sources</b> N/A (for countries already implementing mandatory sorting at source for non-household paper and cardboard packaging waste)	
Ferrous metals packaging	<b>1. Packaging waste from households</b> N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	<b>2. Packaging waste from non-household sources</b> N/A (for countries already implementing mandatory sorting at source for non-household ferrous metals packaging waste)	
Aluminium packaging	<b>Packaging waste from households</b> N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
Glass packaging	<b>1. Packaging waste from households</b> N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	<b>2. Packaging waste from non-household sources</b> N/A (for countries already implementing mandatory sorting at source for non-household glass packaging waste)	
Plastics packaging	<b>1. Packaging waste from households</b> N/A (for countries in which a high share of the population is already covered by high convenience collection services)	
	<b>2. Packaging waste from non-household sources</b> N/A (for countries already implementing mandatory sorting at source for non-household plastic packaging waste)	
Wooden packaging	<b>Packaging waste from non-household sources</b> N/A (for countries already implementing mandatory sorting at source for non-household wooden packaging waste)	
Robustness of the underlying information		Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

## 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 in more detail, in Lithuania there are three active Producer Responsibility Organisations (PROs) covering packaging waste from both household and non-household sources and covering all packaging materials.

#### Summary result

All main packaging fractions <sup>(a)</sup> are covered by EPR schemes, covering household and non-household packaging	In Lithuania, there is an EPR system in place, covering packaging waste from both household and non-household sources for all packaging materials
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

<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

As described in Section 2.1.5 in more detail, Lithuania applies fee modulation in the EPR scheme based on recyclability.

#### Summary result

No advanced fee modulation	Fee modulation meets less than two assessment criteria
Robustness of the underlying information	Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

### SRF P-5.3 Material specific EPR assessment

As, described in Section 2.1.5, the EPR covers packaging waste from both household and non-household sources and Lithuania does not apply advanced fee modulation.

#### Summary result

SRF P-5.3.1 EPR scheme for Paper and cardboard packaging waste	EPR scheme covering household and non-household packaging	Lithuania applies fee modulation in the EPR scheme based on recyclability. The EPR scheme covers packaging waste from both household and non-household sources.
SRF P-5.3.2 EPR scheme for Ferrous metals packaging waste	EPR scheme covering household and non-household packaging	Lithuania applies fee modulation in the EPR scheme based on recyclability. The EPR scheme covers packaging waste from both household and non-household sources.
SRF P-5.3.3 EPR scheme for Aluminium packaging waste	EPR scheme covering household and non-household packaging	Lithuania applies fee modulation in the EPR scheme based on recyclability. The EPR scheme covers packaging waste from both household and non-household sources.



SRF P-5.3.4 EPR scheme for Glass packaging waste	EPR scheme covering household and non-household packaging	Lithuania applies fee modulation in the EPR scheme based on recyclability. The EPR scheme covers packaging waste from both household and non-household sources.
SRF P-5.3.5 EPR scheme for Plastic packaging waste	EPR scheme without advanced fee modulation	Lithuania applies fee modulation in the EPR scheme based on recyclability. The EPR scheme covers packaging waste from both household and non-household sources.
SRF P-5.3.6 EPR scheme for Wooden packaging waste	EPR scheme covering all non-household packaging	The EPR scheme covers packaging waste from all non-household sources.
Robustness of the underlying information		Credible information received from the Lithuanian authorities through the EEA-ETC/WMGE questionnaire.

## 2.3 Target on landfill of municipal waste

### 2.3.1 Current situation and past trends

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

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

Data to show the current rate of landfilling in line with the reporting rules will only be reported by mid-2022. Therefore, this analysis calculates the landfilling rate based on the current Eurostat dataset *Municipal waste by waste management operations [env\_wasmun]*; by dividing the amount of landfilled waste by the total amount of waste generated. The overall landfilling rate of Lithuania was 16.3 % in 2020 (Eurostat, 2022b).

#### Summary result

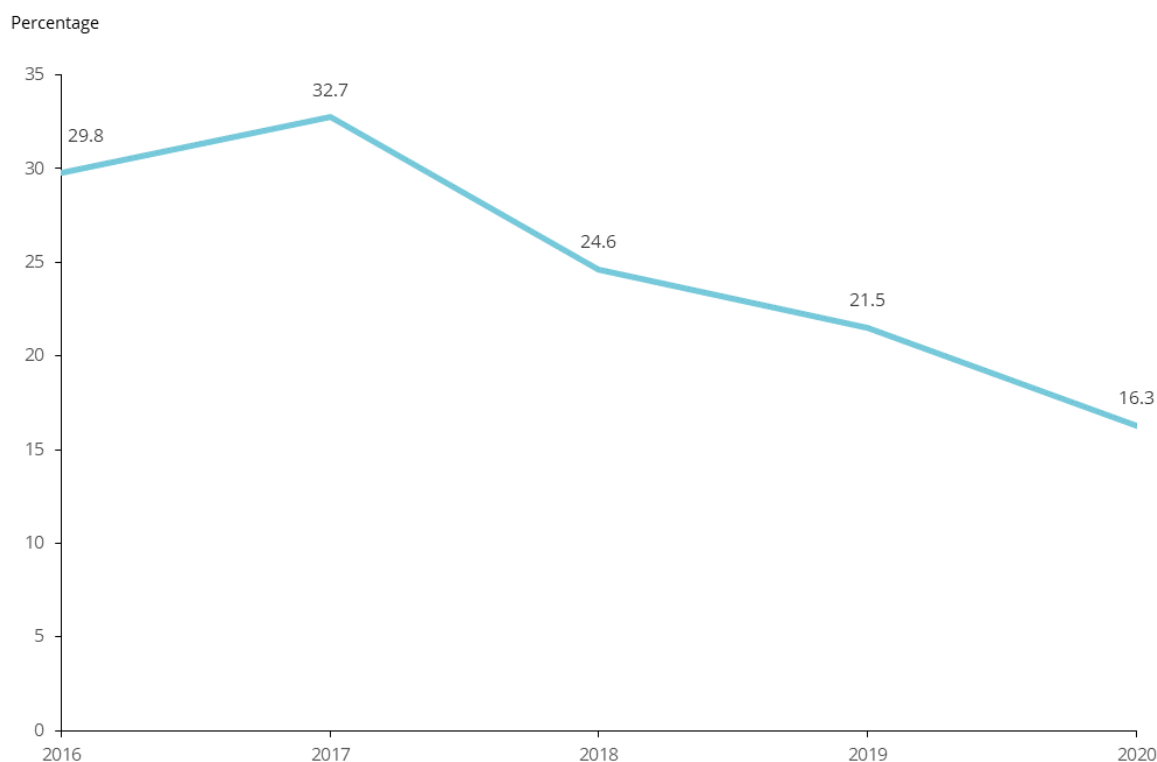
Distance to target < 10 percentage points, or target exceeded	The distance to target is 6.3 percentage points with a landfilling rate of 16.3 % in 2020.
Robustness of the underlying information	The data can be considered robust. Lithuania has significantly increased the incineration capacity since 2019 and once this new capacity is in operation it is expected that landfilled amounts will go further down.

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

Over the past five years, the overall landfilling rate of Lithuania shows a strong decreasing trend. (Figure 2.4).

Lithuania has significantly increased the incineration capacity in 2020, from 255 000 tonnes in 2019 to 615 000 tonnes in 2020. When this capacity is used, assuming incineration will replace landfilling as treatment for residual waste, it will cover the treatment of all waste landfilled in 2019 (301 000 tonnes) (Ministry of Environment, 2021b; Eurostat, 2021b). As such, it is expected to further reduce the distance to target.

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



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

**Summary result**

Landfill rate in 2020 < 25% and decrease in last 5 years > 10 percentage points	The Landfill rate decreased by 13.5 percentage points and was 16.3 % in 2020.
Robustness of the underlying information	The data is derived from Eurostat and is considered to be rather robust. Lithuania has significantly increased the incineration capacity since 2019 and it is expected it will cover the treatment of all waste landfilled in 2019.

**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, Lithuania has benefited from a derogation period and thus had to meet the target by 2020.

Lithuania reported 3 % biodegradable waste landfilled in 2019 in comparison to the biodegradable waste generated in 1995, and performs therefore well within the target (EC, 2022).

### Summary result

Target for reducing the amount of biodegradable municipal waste (BMW) landfilled to 35% of BMW generated in 1995 has been achieved in 2016 or in the year specified in the derogation where applicable	Lithuania has reported 3 % biodegradable waste landfilled in 2019 in comparison to the biodegradable waste generated in 1995, and 4 % already in 2016, and performs therefore well within the target.
Robustness of the underlying information	Based on officially reported data which is well in line with otherwise reported statistical data on landfilling of municipal waste.

## 3 Conclusion

This risk assessment indicates whether Lithuania 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 Lithuania, only the SRFs relevant to Lithuania are taken into account to define the maximum score. Lithuania 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

<b>41 %</b> of maximum score	Based on the provided information and the analysis done, it can be concluded that Lithuania is <b>at risk for not meeting the MSW recycling target in 2025.</b>
Current situation and past trends:	Lithuania’s recycling rate of municipal waste decreased with 2.8 percentage points since 2015 to 45.2 % in 2020.
Legal instruments:	The amended WFD has been fully transposed into national law, but with a delay of more than 12 months after the deadline of 5th July 2020.  Responsibilities are overall defined and support tools are in place. However, only weak or no enforcement mechanisms are in place in case of not meeting the targets.
Economic instruments:	Lithuania has a ban on landfilling of untreated municipal waste, and a landfill tax for non-hazardous waste and MBT plant outputs, with an escalator.  Lithuania does not have incineration taxes.  A PAYT scheme is currently partly rolled out.
Separate collection systems:	The dominating system of collection are high-density bring points for paper and cardboard, glass, plastics and metals, and packaging waste and non-packaging waste are collected together.  Food waste collection is not yet common in Lithuania, but door-to-door collection has started. Garden waste, wood, textiles are collected mainly via low-density bring points or at civic amenity sites. WEEE is collected through take back at retailers, in cities also some door-to-door collection, and at civic amenity sites.  It is planned to increase the density of collection points for textiles and wood waste and to extend the separate

	collection of bio-waste, however, concrete plans for the implementation are not yet defined.
Extended producer responsibility:	EPR schemes are in place for all packaging materials from households and non-households. Lithuania applies fee modulation in the EPR scheme based on recyclability aiming to incentivise design for recycling.
Bio-waste treatment capacity and quality management:	Bio-waste treatment capacity is significantly below the amount of total generated municipal bio-waste. There are national standards for compost quality in place but no quality management system exists.

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

<b>47 %</b> of maximum score	Based on the provided information and the analysis done, it is concluded that Lithuania is <b>at risk for not meeting the 65 % recycling target for packaging waste in 2025</b>	
50 % of maximum score	Paper and cardboard	Not at Risk
67 % of maximum score	Ferrous metals packaging	Not at Risk
72 % of maximum score	Aluminium packaging	Not at Risk
31 % of maximum score	Glass packaging	At Risk
62 % of maximum score	Plastics packaging	Not 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 54.4 %, 10.6 percentage points below the 2025 target. Paper and cardboard is more than 5 percentage points below target, while for glass packaging the distance to target is more than 15 percentage points.</p> <p>Recycling rates for all packaging fractions fluctuate significantly over time, not indicating any type of clear trends. The total packaging recycling rate increased only by 2.1 percentage points over the past five years.</p>	

<p>Legal instruments:</p>	<p>The amended Packaging and Packaging Waste Directive has been transposed into national law with a delay of more than 12 months.</p> <p>Responsibilities for meeting the packaging waste recycling targets are well defined in the Lithuanian legislation, enforcement mechanisms are in place but support tools for facilitating increasing recycling rates are missing.</p>
<p>Economic instruments:</p>	<p>Lithuania has a landfill ban for untreated municipal waste and a landfill tax with an escalator.</p> <p>Lithuania does not have an incineration tax.</p> <p>Packaging taxes are applied with the aim to support the enforcement of packaging waste recycling targets: these are therefore considered enforcement mechanisms.</p> <p>A PAYT scheme is partly rolled out, covering 50-80 % of the population.</p> <p>A mandatory DRS covers nearly all aluminium cans, plastic drink bottles of 0.1–3 litres and glass drink bottles of 0.1–3 litres. There are voluntary systems covering some specific plastic crates and wooden packaging.</p>
<p>Separate collection systems:</p>	<p>The dominating system of collection are high-density bring points for paper and cardboard, glass, plastics and metals, and packaging waste and non-packaging waste are collected together.</p> <p>No changes to the collection system for packaging waste materials are currently planned.</p>
<p>Extended producer responsibility:</p>	<p>EPR schemes are in place for all packaging materials from households and non-households. Lithuania applies fee modulation in the EPR scheme based on recyclability aiming to incentivise design for recycling.</p>

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

<p style="text-align: center;"><b>100%</b> of maximum score</p>	<p>Based on the provided information and the analysis done, it can be concluded that Lithuania is <b>not at risk for not meeting the landfill targets in 2035.</b></p>
<p>Current situation and past trends:</p>	<p>The overall landfilling rate of Lithuania was 16.3 % in 2020, 6.3 percentage points above the target. In 2020, Lithuania significantly increased the incineration capacity, which is expected to further reduce landfilling.</p>
<p>Diversion of biodegradable municipal waste from landfill</p>	<p>Lithuania has reported 3 % biodegradable waste landfilled for 2019 of the total amount (by weight) of biodegradable municipal waste generated in 1995, and therefore met the 2016 target (35 % reduction).</p>



## List of abbreviations

<b>Abbreviation</b>	<b>Name</b>
(N)WMP	(National) Waste Management Plan
DRS	Deposit Return System
EC	European Commission
EEA	European Environment Agency
EEE	Electric and Electric 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 Center / 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
RR	Recycling rate
SRF	Success and risk factor
WEEE	Waste Electric and Electronic Equipment
WFD	Waste Framework Directive

## References

- EC, 2019, Commission Implementing Decision (EU) 2019/665 of 17 April 2019 amending Decision 2005/270/EC establishing the formats relating to the database system pursuant to European Parliament and Council Directive 94/62/EC on packaging and packaging waste (notified under document C(2019) 2805) (Text with EEA relevance.) (OJ L 112, 26.4.2019, p. 26–46).
- EC, 2022, Data on the landfill of biodegradable municipal waste, 2018-2019, provided to the EEA by the European Commission, status 14/01/22.
- EEA, 2020, *Bio-waste in Europe — turning challenges into opportunities*, EEA report No 4/2020, European Environment Agency (<https://www.eea.europa.eu/publications/bio-waste-in-europe>) accessed 20 June 2020.
- Environmental Protection Agency Lithuania, 2021, ‘Waste treatment summary by waste code’ (<https://atliekos.gamta.lt/cms/index?rubricId=01f545a1-ebed-4f2d-b05a-2b1bf5e7494b>) accessed 10 May 2021.
- Environmental Protection Agency of Lithuania, 2020, Municipal waste data quality report for Lithuania (as delivered to Eurostat).
- ETC/CE & ETC/WMGE, 2022, *Methodology for the Early Warning assessment related to certain waste targets*, ETC/CE Report, European Topic Centre on Circular Economy and resource use (<https://www.eionet.europa.eu/etcs/etc-ce/products/etc-ce-products/methodology-for-the-early-warning-assessment-related-to-certain-waste-targets>).
- ETC/WMGE, 2021, *Methodology for the Early warning assessment related to certain waste targets*, ETC/WMGE Working Paper, European Topic Centre on Waste and Materials in a Green Economy (<https://www.eionet.europa.eu/etcs/etc-wmge/products/etc-reports/methodology-for-the-early-warning-assessment-related-to-certain-waste-targets>) accessed 29 April 2021.
- EU, 2018, Directive (EU) 2018/852 of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62/EC on packaging and packaging waste (text with EEA relevance) (OJ L 150, 14.6.2018, p. 141-154).
- European Compost Network, 2022, ‘News from Lithuania - Separate collection of food-waste started’, ECN (<https://www.compostnetwork.info/news-from-lithuania/>).
- Eurostat, 2017, Country specific notes on municipal waste data - Last update September 2017, (<https://ec.europa.eu/eurostat/documents/342366/351758/Footnotes-MW/d0579b7d-a998-47d1-b983-fa384509da1a>).
- Eurostat, 2020, ‘Comparative price levels of consumer goods and services’ ([https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Comparative\\_price\\_levels\\_of\\_consumer\\_goods\\_and\\_services](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Comparative_price_levels_of_consumer_goods_and_services)) accessed 6 May 2021.
- Eurostat, 2021a, ‘Household characteristics by degree of urbanisation (HBS\_CAR\_T315)’ ([https://ec.europa.eu/eurostat/databrowser/view/HBS\\_CAR\\_T315\\_\\_custom\\_37301/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/HBS_CAR_T315__custom_37301/default/table?lang=en)) accessed 6 May 2021.
- Eurostat, 2021b, ‘Municipal waste by waste operations (env\_wasmun)’ ([https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env\\_wasmun&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env_wasmun&lang=en)) accessed 17 February 2021.
- Eurostat, 2022a, Country-specific notes referring to data on packaging and packaging waste - Revision March 2022, (<https://ec.europa.eu/eurostat/documents/342366/13429143/Country+specific+notes+for+packaging+and+packaging+waste.pdf/59ea2d73-3416-b40b-1771-2eb33e0b8486?t=1648204996107>).

Eurostat, 2022b, 'Municipal waste by waste operations [env\_wasmun]' ([https://ec.europa.eu/eurostat/databrowser/view/ENV\\_WASMUN/default/table](https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table)) accessed 14 February 2022.

Eurostat, 2022c, 'Packaging waste by waste management operations [env\_waspac]' ([https://ec.europa.eu/eurostat/databrowser/view/ENV\\_WASPAC\\_\\_custom\\_842634/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ENV_WASPAC__custom_842634/default/table?lang=en)) accessed 12 March 2022.

Eurostat, 2022d, 'Recycling rates of packaging waste for monitoring compliance with policy targets, by type of packaging [env\_waspacr]' ([https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env\\_waspacr&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env_waspacr&lang=en)) accessed 12 March 2022.

EXPRA, 2014, The effects of the proposed EU packaging waste policy on waste management practice: a feasibility study, ([https://www.expra.eu/downloads/expra\\_20141004\\_f\\_UGGge.pdf](https://www.expra.eu/downloads/expra_20141004_f_UGGge.pdf)).

Lietuvos Respublikos Seimas, 1998, Law on Waste Management Nr VIII-787 (Žin. 1998, Nr. 61-1726).

Lietuvos Respublikos Seimas, 1999, Law on Taxes on Environmental Pollution Nr VIII-1183 (Žin. 1999, Nr. 47-1469).

Lietuvos Respublikos Seimas, 2013, Methodology for Determining the Amount of the Fee or Other Charges for the Collection of Municipal Waste from Waste Holders and Waste Management Nr. 711 (Žin. 2013, Nr. 85-4260).

Lietuvos Respublikos Vyriausybė, 2002, National Waste Management Plan 2014-2020, Nr 519 (Žin. 2002, Nr. 40-1499).

Lithuanian Environmental Protection Agency, 2019, Municipal Waste Reporting Data Quality / Methodology Report Lithuania.

Minister of the Environment of the Republic of Lithuania, 2012, Order on minimum service requirements for the municipal waste management Nr. D1-857 (Žin. 2012, Nr. 125-6295).

Ministry of Environment, 2021a, Comments to the 1st draft of the Early Warning Assessment Related to the 2025 Targets for Municipal and Packaging Waste – Lithuania, Ministry of Environment of the Republic of Lithuania.

Ministry of Environment, 2021b, Questionnaire to Member States for providing information into the Early Warning analyses – Lithuania.

Ministry of the Environment of the Republic of Lithuania, 2022, Information and comments provided to the EEA by the Ministry of the Environment of the Republic of Lithuania during the review of this assessment by e-mail dated 6 May 2022.

The Government of the Republic of Lithuania, 2022, Ruling on the approval of the State Plan for Waste Prevention and Management for 2021–2027.

# **Annex 1 Detailed scoring of success and risk factors**

# Assessment sheet - Recycling target for municipal waste

MS Lithuania

Date Jun-22

SRF		Assessment result	Weight	Score
<b>Current situation and past trends</b>				
MSWR-1.1	Distance to target	Distance to target 5 - 15 percentage points	5	5
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	PAYT scheme implemented in some regions/ municipalities (50-80% of population covered) OR No or less than 50% of the population covered by PAYT but firm plans for rolling out	1	1

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	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.04	0
	Plastics	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.14	0
	Glass	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.09	0
	Bio-waste	There are plans to improve the collection service but unclear plan for implementation	0.42	0.42
	Wood	There are plans to improve the collection service but unclear plan for implementation	0.03	0.03
	Textiles	There are plans to improve the collection service but unclear plan for implementation	0.03	0.03
	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/digestate	Legally binding national standards for compost/digestate quality but no quality management system	1	1
			<b>Total score</b>	<b>13.56</b>
			Maximum score	32.96

41%

# Assessment sheet - Recycling target for packaging waste

MS Lithuania

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	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Glass packaging	> 15 percentage points below target, or no data reported	5	0
	Distance to target - Plastics packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Wooden packaging	< 5 percentage points below target, or target exceeded	5	10
P-1.2	Past trends in packaging waste recycling rate	RR < 55% and increase in last 5 years < 10 percentage points	1	0
	Past trends in paper and cardboard packaging recycling	RR > 70% and increase in last 5 years < 5 percentage points, or RR > 65%, and increase in last 5 years < 10 percentage points, or RR < 65% and increase in last 5 years > 10 percentage points	1	1
	Past trends in ferrous metals packaging recycling	RR > 65% and increase in last 5 years < 5 percentage points, or RR > 60%, and increase in last 5 years < 10 percentage points, or RR < 60% and increase in last 5 years > 10 percentage points	1	1
	Past trends in aluminium packaging recycling	RR > 45% and increase in last 5 years > 5 percentage points, or RR > 40% and increase in last 5 years > 10 %, or RR > 50%	1	2
	Past trends in glass packaging recycling	RR < 60% and increase in last 5 years < 10 percentage points	1	0



	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 %, or RR > 50%	1	2
	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 percentage points, or RR < 15% and increase in last 5 years > 10 percentage points	1	1
<b>Legal instruments</b>				
P-2.1	Timely transposition of the revised Packaging and Packaging Waste Directive into national law	Transposition with delay of > 12 months, or no full transposition yet	1	0
P-2.2	Clearly defined responsibilities for meeting the targets and support and enforcement mechanisms	Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets OR Unclear responsibilities but clearly defined enforcement mechanisms and a good set of support tools for meeting the recycling targets OR Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	1	1
<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	PAYT scheme implemented in some regions/ municipalities (50-80% of population covered) OR No or less than 50% of the population covered by PAYT but firm plans for rolling out	1	1
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 for some or voluntary DRS for nearly all drink bottles	1	1
	Deposit-return systems for plastic crates	No or voluntary DRS for some plastic crates	1	0
	Deposit-return systems for wooden packaging	No or voluntary DRS for some wooden packaging	1	0

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

	Plastics packaging (household)	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.5	0
	Plastics packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Wooden packaging	N/A (for countries already having mandatory sorting at source)	1	0
<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>15.00</b>
				Maximum score 32.00

47%

**Paper and cardboard recycling target**

<b>Total score</b>	<b>15.00</b>
Maximum score	30.00

50%

**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>23.00</b>
Maximum score	32.00
72%	

**Glass packaging recycling target**

<b>Total score</b>	<b>10.00</b>
Maximum score	32.00
31%	

**Plastics packaging recycling target**

<b>Total score</b>	<b>21.00</b>
Maximum score	34.00
62%	

**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 Lithuania  
Date

Jun/22

SRF	Assessment result	Weight	Score	
<b>Current situation and past trends</b>				
LF-1.1	Distance to target	Distance to target < 10 percentage points, or target exceeded	5	10
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 < or = 10%	1	2
LF-1.3	Diversion of biodegradable municipal waste from landfill	Target for reducing the amount of biodegradable municipal waste (BMW) landfilled to 35% of BMW generated in 1995 has been achieved in 2016 or in the year specified in the derogation where applicable	1	2
<b>Total score</b>			<b>14,00</b>	
Maximum score			14,00	
				100%