Country profile

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

Sweden

June 2022

European Environment Agency

Contents

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 Swedish EPA in May 2021 to a questionnaire developed by the EEA and ETC/WMGE. The EEA and ETC/CE would like to thank the Swedish authorities for the information provided and for the kind review of drafts of this assessment in 2021 and April 2022.

1 Introduction

1.1 Background and purpose

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

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

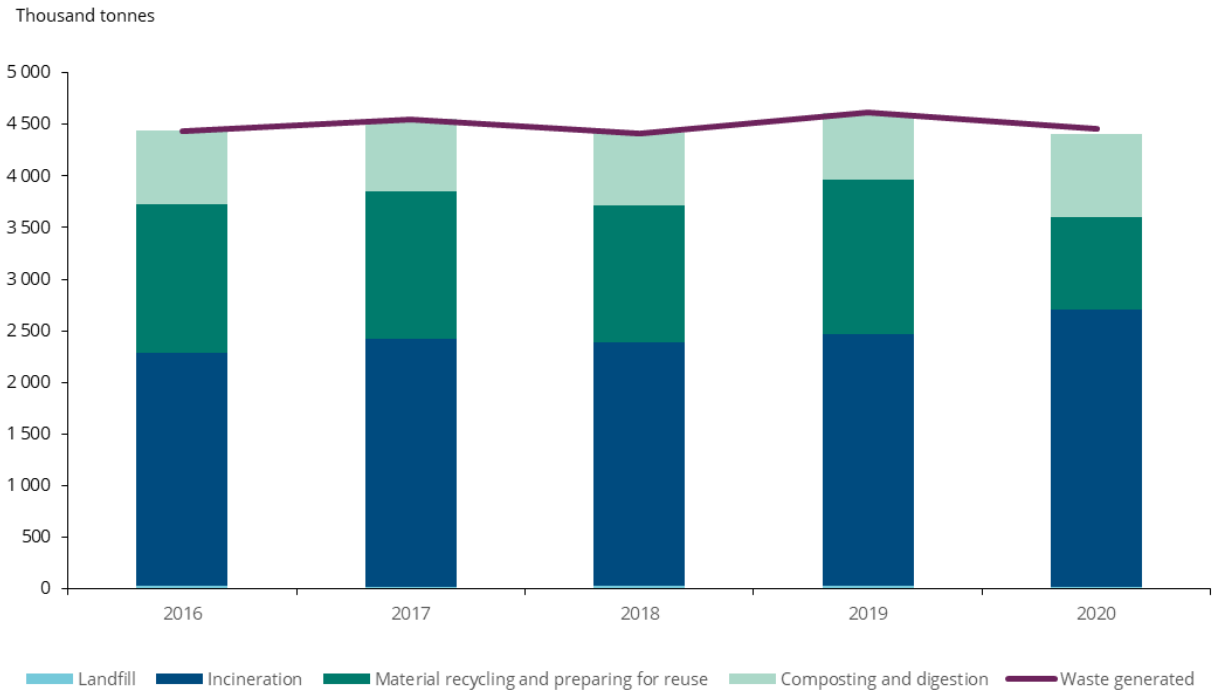
1.3 Member State profile – context parameters

Municipal waste generation and treatment

The annual municipal waste generation in Sweden is quite stable, fluctuating around 4.5 million tonnes, with an increase to 4.6 million tonnes in 2020 (Figure 1.1). Waste generation per capita was at 431 kg/cap in 2020 and remains below the (estimated) EU average of 505 kg/cap. As there is a break in time series of data reported to Eurostat between 2019 and 2020 (Eurostat, 2022b), the trend can only be analysed before this break. Sweden strongly relies on waste incineration, accounting for approximately 53 % of municipal waste treatment between 2016 and 2019. Material recycling accounts for approximately 31 % in the period 2016-2019. In 2020 material recycling only accounts for 20 % of the municipal waste treatment. The reduction is a result of Sweden applying the new calculation rules of the WFD as of the year 2020. Composting and digestion represents approximately 15 % of the waste treatment in the period 2016-2019. In 2020 there is an increase to 18.1 %. The landfilling rate is less than 1 %. The recycling rate (material recycling and composting and digestion) has decreased from 47.5 % in 2015 to 46.6 % in 2019 and is 38.3 % in 2020 (Eurostat, 2022b).

The Swedish waste generation and treatment seems to have stagnated at a stable level during the period 2016-2019, where incineration is slightly above 50 % of the total treatment and recycling is slightly under 50 % of the total treatment. After the break in time series, when the calculation methodology was changed according to the rules of the WFD, waste incineration is about 60 % of municipal waste treatment and recycling 40 % in 2020.

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



Note: There is a break in time series between 2019 and 2020 for waste generation, material recycling, composting and digestion. For incineration and landfill, there is a break in time series, estimated.

Source: Eurostat (2022b)

Legal Framework

In Sweden, the following legal acts are of relevance for the area of waste:

- The Environmental Code (Riksdagsförvaltningen, 1998) – the country's package of environmental laws – includes general consideration of resources and waste. The purpose of the Environmental Code is to promote sustainable development which will ensure a healthy and sound environment for present and future generations. To achieve this, the Code is to be applied so that reuse and recycling, as well as other management of materials, are encouraged and natural cycles are established and maintained (Swedish EPA, 2021b).
- The Waste Ordinance (Sveriges riksdag, 2020) includes regulations concerning waste, waste management and waste prevention measures. The Waste Ordinance also includes requirements concerning the classification of waste.
- Landfill Ordinance (Sveriges riksdag, 2001)
- Law on waste tax (Sveriges riksdag, 1999)
- The Swedish Environmental Protection Agency's regulations and general advice on the management of combustible waste and organic waste (Naturvårdsverket, 2004).
- Law on the tax on waste incinerated (Sveriges riksdag, 2019).
- Regulation and recycling targets concerning packaging materials. Ordinance (2018: 1462) on producer responsibility for packaging (Riksdagsförvaltningen, 2018).
- Regulations and recycling targets concerning electrical and electronic equipment (EEE): Swedish Ordinance (SFS 2014:1075) on producer responsibility for EEE (Riksdagsförvaltningen, 2014)
- Regulations and recycling targets concerning batteries: Swedish Ordinance (2008:834) on producer responsibility for batteries (Riksdagsförvaltningen, 2008).
- Swedish Ordinance (2009:1031) on producer responsibility for medicines (Riksdagsförvaltningen, 2009).
- Regulations and recycling targets concerning cars. Ordinance (2007: 185) on producer responsibility for cars.
- Regulations and requirements concerning municipal waste management plans and waste prevention plans: Swedish Environmental Protection (NFS 2020:6) (Naturvårdsverket, 2020).
- According to the Environmental Code (Riksdagsförvaltningen, 1998), each municipality should, in addition to the local waste management plan, also have local regulations concerning the handling of municipal waste (Miljöbalken 15 kap 41 §).

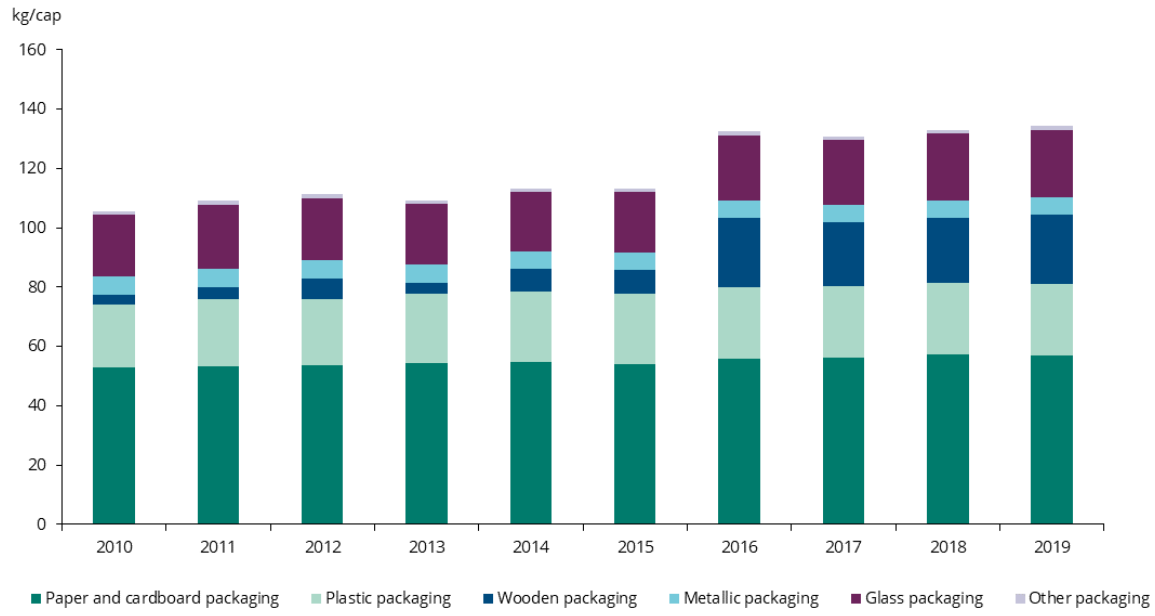
Waste management plan(s)

Sweden has a National Waste Management Plan (NWMP) and Waste Prevention Program for the period of 2018-2023, which was revised in 2020 (Naturvårdsverket, 2021a). Municipalities are obliged to have local waste management plans. There are 290 municipalities in Sweden and some of them have co-developed regional waste management plans. The NWMP covers the whole of Sweden and also describes export and import of waste to and from Sweden. The document covers all waste flows except radioactive waste. The long-term goal in Sweden's NWMP is a circular economy in which resources are retained in circulation or return into nature's own cycles in a sustainable way. The hazardous substances should not be used in new products and the use of other hazardous substances should be reduced as far as possible. The targets to achieve an increase in the preparation for reuse and recycling of municipal solid waste (MSW) set in the NWMP are in line with the EU directive. The targets for recycling of packaging waste are in several cases higher than the recycling targets at the EU level. Sweden also has a separate national target for food waste recycling for retail, stores, and households.

Packaging waste generation and treatment

In Sweden, almost 1.4 million tonnes (134 kg/cap) of packaging waste were generated in 2019, which is well below the EU average of 177 kg/cap. In comparison with 2010, packaging waste generation has increased by 27.1 % in 2019, which can be mainly attributed to the increase in wooden packaging generation (Eurostat, 2021c). However, the wooden packaging data include a break in 2014 where the data collection methodology was revised and this might explain the trend (Swedish EPA, 2021b). If wooden packaging is not taken into consideration, the overall increase during the last ten years would only result in 8.1 %. Currently the packaging waste generation in Sweden is based on materials put on the market, as reported by the producer responsibility organizations (Eurostat, 2022a).

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



Source: Eurostat (2022c)

Capture rates for recyclables

The capture rate is a good performance indicator of the effectiveness of the separate collection system. The capture rate is calculated by dividing the separately collected weight of a certain material for recycling by the weight of the material in total municipal waste. For Sweden, Table 1.1 shows the calculated capture rates for different waste fractions.

Table 1.1 Capture rates for different waste fractions in Sweden

	Residual waste composition (%)([b])	Residual waste composition (tonnes)([a])	Separately collected amounts (tonnes)([b])	Materials in total MSW (tonnes)	Capture rate (%)
Reference year	2018	2018			
Mixed municipal waste, total		2 392 000			
Paper and cardboard	17 %	399 464	376 400	775 864	49 %
Metals	2 %	38 272	210 530	248 802	85 %
Glass	3 %	59 800	216 020	275 820	78 %
Plastic	14 %	330 096	135 700	465 796	29 %
Bio-waste	31 %	729 560	741 110	1 470 670	50 %
Textiles	3 %	81 328	3 150	84 478	4 %
Wood	-				-

([a]) Note: Share of material in residual waste multiplied with the amount of residual waste (i.e. energy recovered and landfilled) in 2018 (Eurostat, 2022b). The waste composition analysis relates to household waste but it is assumed in the calculation that the same composition applies to non-household municipal waste.

([b]) Source: As reported in the EEA-ETC/WMGE questionnaire by Swedish EPA (2021b)

This indicates that there is significant room for improvement to capture higher amounts of the generated textiles, plastics, paper and cardboard and bio-waste, and to some extent also of glass and metals.

2 Success and risk factors likely to influence future performance

2.1 Target for preparing for reuse and recycling of municipal waste

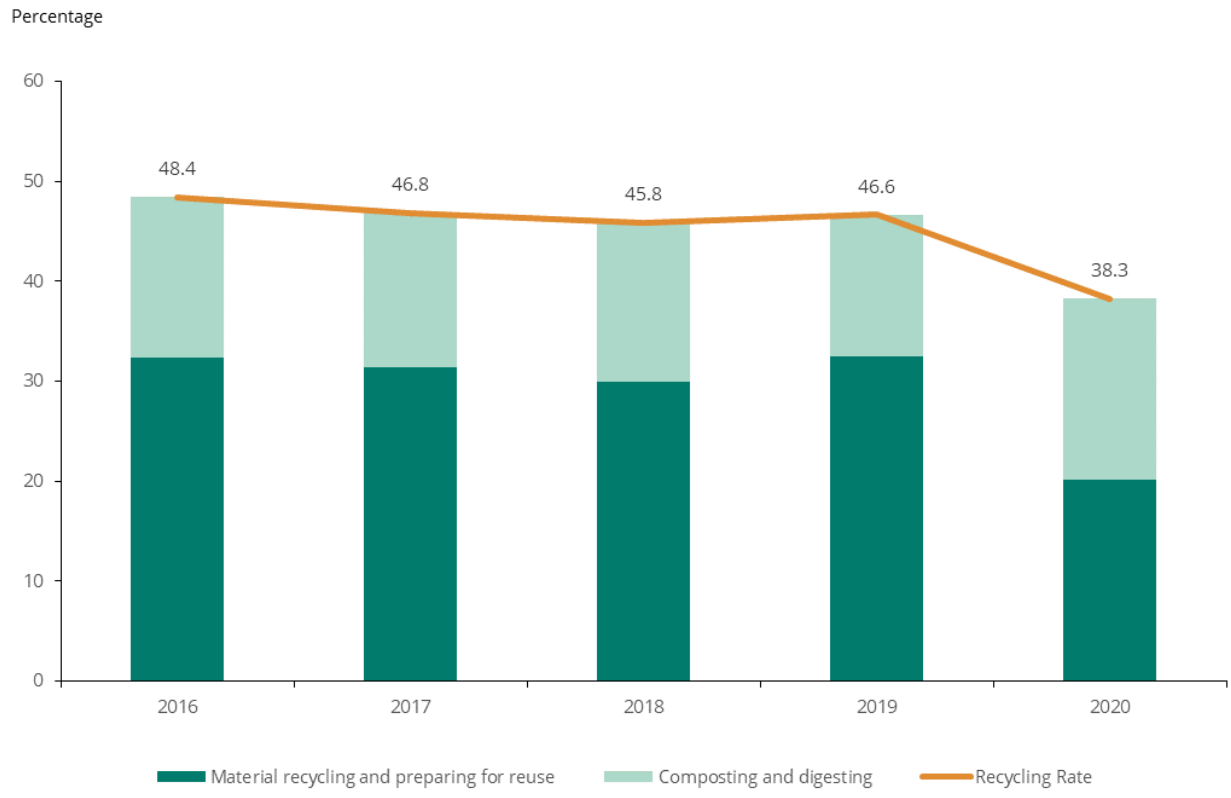
This chapter aims at assessing the prospects of Sweden to achieve the **55 % preparing for reuse and recycling target** for municipal waste in 2025. For a detailed description of the methodology followed, the development of success/risk factors and their impact on recycling, please consult the methodology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

2.1.1 Current situation and past trends

SRF MSWR-1.1: Distance to target

The overall recycling rate of Sweden shows a small decline in the period 2016 to 2019. However, after the break in time series in 2020, there is a significant drop. This is because Sweden has applied the new calculation rules, including new calculation points, as of the year 2020 in the calculation of the recycling rates of MSW (Figure 2.1). In this analysis the recycling rate is calculated by dividing the summed amounts of recycling of materials and of composting and digestion by the total generated amounts. The data source used is the Eurostat data set *Municipal waste by waste management operations [env_wasmun]*.

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



Note: There is a break in time series between 2019 and 2020.

Source: Eurostat (2022b)

The actual distance to the target for the most recent data point is a key factor determining the likelihood of meeting/not meeting the target. The closer the Member State is to the target already, the more likely it becomes that the target will be met. For Sweden, the recycling rate is 38.3 % in 2020, which is 16.7 percentage points below the 2025 target of 55 %.

The recycling rates for municipal waste are affected by the adoption of the EU common municipal waste definition. Since 2021 the updated EU definition of Municipal Waste has been implemented in the legislation. The concept household waste was earlier implemented in the Swedish legislation, considered to be equal to municipal solid waste. It is now recognised that not all MSW has been covered so far by the municipal responsibility, mainly MSW from businesses. Since it is a newly recognized problem, the Swedish authorities have not yet been able to estimate the quantities and impact this change might have on recycling rates (Swedish EPA, 2021b).

Summary result

Distance to target > 15 percentage points	Based on currently available data, Sweden's recycling rate was 38.3 % in 2020, which is 16.7 percentage points below the 2025 target. The impact of the application of the new calculation rules to the recycling rate has been quantified in Sweden and is thus already reflected in the calculated recycling rate.
Robustness of the underlying information	In this analysis the recycling rate is calculated based on Eurostat data on waste generation and treatment. The new calculation rules have been applied in Sweden.

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

The recycling rate over the period 2016 - 2019 shows a stable level, slightly below 50 % (Figure 2.1). This indicates that not many supportive measures have been introduced recently, which could have increased the recycling rate. In 2020 the new calculation rules have been applied, resulting in a significant drop in the recycling rate.

Summary result

RR < 45% and increase in last 5 years < 10 percentage points	The recycling rate in Sweden has remained stable over the period 2016-2019. After applying the new calculation rules, the recycling rate has dropped to 38.3 %.
Robustness of the underlying information	There is a break in the time series data between 2019 and 2020.

2.1.2 Legal instruments

SRF MSWR-2.1: Proper and timely transposition of the relevant articles 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.

Sweden has transposed the Waste Framework Directive before the deadline.

Summary result

Transposition without delay	Sweden has transposed the amended WFD into national law by the transposition deadline.
Robustness of the underlying information	Credible information received from 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 accountability for failing the targets are, the higher the chance that the targets will be met.

The Swedish system of environmental objectives includes objectives for recycling and requirements on waste collection and treatment (Swedish EPA, 2021b). The objectives are specified in the Environmental Quality Objectives including milestone targets for the recycling of both MSW and packaging waste (Naturvårdsverket, 2018a, 2021b). Sweden also has a separate target for food waste recycling for retail, stores, and households.

The municipalities are responsible for the collection and treatment of municipal waste as well as for monitoring waste streams and reporting waste collection and treatment data to the Swedish EPA. Every municipality must have a local waste management plan. The plan shall contain objectives and measures for management and prevention of the waste covered by municipal responsibility. The local objectives are based on relevant national objectives, strategies, and policies. The local waste plan shall describe how the objectives and measures will be followed up and contain a report of the policy instruments that will be used to achieve the objectives and implement the measures of the plan. To the extent that the municipality can influence it, the plan shall also contain objectives and measures to prevent and manage the waste that the municipality is not responsible for.

The EPA is responsible for national waste statistics, co-ordinating and in-depth evaluation of the compliance with the waste targets as specified in the Environmental Objective milestone targets. The EPA also provides some guidance on compliance with current legislation, the national waste management plan and the waste prevention plan, supporting both the management of MSW and packaging waste. The Swedish Waste management Association (Avfall Sverige) develops guidance material and promotes knowledge sharing between municipalities (Avfall Sverige, personal communication, 29 March 2022; Swedish EPA, 2021b) .

A packaging producer is required to ensure that an appropriate collection system is in place for packaging for which the producer is responsible. A collection system that is deemed appropriate must be accessible, easy to use and otherwise provide good service for the waste holder. Currently the Swedish Government is aiming to implement the minimum requirements for EPR schemes as stated in the Waste Framework Directive (Swedish EPA, 2021b).

In Sweden all producers should be connected to a PRO or be able to provide a way of collecting and handling the waste from their products. The major PRO in Sweden is FTI that collects packaging from households and businesses. TMR is the other PRO with the same responsibility. Except from FTI and TMR, there are systems for the reuse of packaging, of which the biggest are Svenska Retursystem and Norrlandspall. For plastic beverage bottles and metal cans there is a mandatory deposit return system and the responsible PRO is Returpack. The PRO´s report collected amounts to the Swedish EPA. The

Swedish EPA is not supporting the PROs but gives guidance on what good service levels are for the collection system for packages (Avfall Sverige and Swedish EPA, personal communication, 29 March 2022).

Sweden has no enforcement mechanisms if the municipalities do not take sufficient measures towards increased material recycling, but according to legislation, the municipalities are obliged to describe their measures and results in follow-up of local or regional waste plans (Swedish EPA, 2021b).

Related to enforcement mechanisms of packaging waste, the Swedish EPA can impose a penalty notice to producers avoiding the producer responsibility obligations such as neither taking care of the waste management responsibilities themselves nor joining a PRO taking care of the obligations on their behalf (Swedish EPA, 2021b). However, as the enforcement is hard to achieve due to the presence of free riders, the use of this enforcement mechanism hasn´t had the potential effect (Swedish EPA, personal communication, 29 March 2022).

The County administrative board in their role as a supervising authority handles process applications for waste operations that require a permit or notification. They also handle matters concerning transportation and dumping of waste and share a responsibility for supervising waste management together with the municipalities. According to the waste regulation, the County administrative board also has the responsibility to compile the municipalities' waste plans and submit the summary to the Swedish EPA.

The Swedish Association of Local Authorities and Regions (SALAR) is an employers' organisation and all municipalities and regions are members of SALAR. The organisation facilitates the work of municipalities by supporting their work, including monitoring of development concerning legislation and protecting municipalities' interests in inquiries and remittance.

Summary result

Clearly defined responsibilities and good set of support mechanisms but weak/no enforcement mechanisms for meeting the recycling targets	Sweden reports clearly defined responsibilities but weak enforcement mechanisms for meeting the recycling target, however, Sweden also presents several support mechanisms to improve the efficiency and performance of the responsible entities.
Robustness of the underlying information	Credible information received from the Swedish 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.

Sweden has a ban on landfilling organic and combustible waste (Sveriges riksdag, 2001). There are some exemptions in the legislation, such as for sorted combustible waste containing less than 18 % total organic carbon (TOC), and waste containing less than 10 % TOC (Naturvårdsverket, 2004)). The county administrative board can also grant exemptions from the ban (Sveriges riksdag, 2001).

Sweden also has a tax which applies to landfilling or storage (for a period longer than three years) of more than 50 tonnes of waste. There are some exemptions in the legislation, such as for recovery at site in landfill constructions and for treatment at site such as composting or digestion, combustion, or

production of waste derived fuels (Sveriges riksdag, 1999). The landfill tax is yearly adjusted, in 2021 it is SEK 573 per tonne (Skatteverket, 2022).

Summary result

Ban in place for landfilling residual or biodegradable waste	Sweden has a landfill ban in place. The landfill tax of SEK 573 per tonne (55 EUR/t, corresponding to 42.3 EUR/t rescaled based on purchasing power parities (Eurostat, 2020) is yearly adjusted.
Robustness of the underlying information	Credible information received from the Swedish 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.

Sweden has a tax on waste entering a waste incineration or co-incineration installation, not on waste exported for incineration. The tax is currently SEK 125 per tonne but will be index adjusted in 2023. (Sveriges riksdag, 2019; Swedish EPA, 2021b)

Summary result

Yes, taxes > 7 EUR/t([a]) without escalator	Sweden has a tax on incineration of SEK 125 per tonne (12 EUR/t, corresponding to 9.2 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)). The tax will be index adjusted although this cannot be considered as an escalator as it does not increase the relative expense of incineration.
Robustness of the underlying information	Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire.

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

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.

The dominating basis for waste fees in Sweden is based on container volume and collection frequency. Several municipalities have introduced a weight-based fee for waste collection. In addition, the size of the fee is smaller for bio-waste than for residual waste and in some municipalities, the collection of bio-waste is free of charge. The system can be characterised as a weak PAYT scheme as the economic incentive to sort waste at source is not very visible to citizens compared to weight-based or sack-based schemes. Only 33 out of 290 of the municipalities had a weight-based charge in 2019 (Swedish EPA, 2021b; Avfall Sverige, 2020).

Summary result

PAYT scheme fully rolled out (to at least 80% of the population)	Sweden has a fully rolled out PAYT system, mostly based on container volume and collection frequency.
Robustness of the underlying information	Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire.

2.1.4 Separate collection system

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

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

For Sweden, according to the most recent data, the percentage of households in cities is 26 %, in towns and suburbs 19 % and in rural areas 55 % (Eurostat, 2021b).

In Sweden the municipalities have the freedom to implement the separate collection system of their choice, that is why the service varies between municipalities. Food waste is the only fraction which is widely separately collected through door-to-door collection. Up to 85 % of the municipalities offer door-to-door collection of food waste to some extent, including for high-rise buildings (Swedish EPA, 2021b).

Regarding textile waste collection, there is no obligation on separate collection of textile waste in Sweden. The collection is mainly implemented in cooperation with charity organisations collecting textiles for reuse (Swedish EPA, 2021b).

Sweden implements an EPR for WEEE and the producers are obliged to arrange for at least one collection point in every municipality. The collection points should be easily accessible, and the consumer should be able to leave the WEEE easily and free of charge. Sellers of consumer electronics are also obliged to take back the corresponding item as sold to the customer free of charge, as well as to take back smaller items free of charge in large stores (Swedish EPA, 2021b).

Sweden implements an EPR for packaging waste with more than 5 000 bring points for sorted packaging waste. Some municipalities also offer door-to-door collection of packaging waste; more than half of Sweden's households have door-to-door collection of packaging. The collection system for packaging waste does not accept non-packaging waste of the same material, these are collected at civic amenity sites. Sorting advice on composite packaging is to sort it based on the main material (Swedish EPA, 2021b).

Also, companies are obliged to sort their packaging waste for separate collection. Companies are in general not allowed to use the bring point system and civic amenity sites for sorting packaging waste. In some civic amenity sites however, companies can sort their packaging waste free of charge or at a

cost, depending on the volume of packaging waste. Companies can also procure the packaging waste management to private contractors themselves. The packaging materials which are mandatory to collect separately are the following (Swedish EPA, 2021b):

- Paper and carboard;
- Ferrous metals;
- Aluminium;
- Metal cans (part of deposit return system for beverage bottles);
- Glass;
- Plastic;
- Plastic bottles (part of deposit return system for beverage bottles);
- Wood.

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

Table 2.1 Characterisation of the collection system in Sweden

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

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

Source: Swedish EPA (2021b)

Taking this into account, Sweden has a range of options for separate collection, with different services in different municipalities. The service level is on a moderate level due to the dominating low-density bring point collection system. The methodology for this assessment considers bring points in rural areas as a high service level, leading to a high service level of the population living in rural areas and a low service level for cities, towns and suburbs.

Summary result

Paper and cardboard	A medium share of the population is covered by high convenience collection services	Bring points are the dominating system for paper and cardboard packaging waste which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for paper and cardboard packaging waste, but this not fully rolled out.
Metals	A medium share of the population is covered by high convenience collection services	Bring points are the dominating system for metal packaging waste, which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for metal packaging waste, but this is not fully rolled out.
Plastics	A medium share of the population is covered by high convenience collection services	Bring points are the dominating system for plastic packaging waste, which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for plastic packaging waste, but this is not fully rolled out.
Glass	A high share of the population is covered by high convenience collection services	Bring points are the dominating system for glass packaging waste. There is high convenience door-to-door collection for glass packaging waste, but this is not fully rolled out.
Bio-waste	A high share of the population is covered by high convenience collection services	For food waste, door-to-door collection is the dominant system across the country. For garden waste, civic amenity sites are the dominating system.
Wood	A low share of the population is covered by high convenience collection services	Civic amenity sites are the dominating system in cities, towns and suburbs. In rural areas, there is no collection service for the separate collection of wood waste.
Textiles	A low share of the population is covered by high convenience collection services	Civic amenity sites are the dominating system across the country.
WEEE	High to medium convenience collection services dominate	Different bring-systems are used, including take back at retailers and bring points
Robustness of the underlying information		Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire. Swedish municipalities apply different types of separate collection systems for the different materials. However, no quantitative information is available for the coverage of each system. This means that the population coverages in this table are rough estimates.

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

The implementation of mandatory separate collection of all bio-waste in Swedish legislation is planned. The Swedish EPA has conducted an assignment for the Government resulting in proposals of alternatives on separation of bio-waste from households and non-households. Decisions concerning the new legislation are expected in order to be implemented no later than 31 December 2023. Sweden is also aiming to implement an EPR scheme for textiles; a proposal for an EPR ordinance for textiles

has been sent for consultation and the government is currently working on the feedback (Swedish EPA, 2021b, 2022).

Regarding WEEE, Sweden is looking into the option of implementing a DRS on small electronics (Swedish EPA, 2021b).

Sweden is planning changes in the separate collection systems for packaging waste. The Government has conducted a study on this topic and suggested implementation of door-to-door collection as the main collection system. The following materials are included in the study (Swedish EPA, 2021b, 2022):

- Paper and carboard;
- Ferrous metals;
- Aluminium;
- Glass;
- Plastic;
- Wood.

Summary result

Paper and cardboard	There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste, but there are no firm plans on how the system will be improved.
Metals	There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste, but there are no firm plans on how the system will be improved.
Plastics	There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste, but there are no firm plans on how the system will be improved.
Glass	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	Sweden is planning changes in the separate collection systems for packaging waste, but there are no firm plans on how the system will be improved.
Bio-waste	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	The implementation of mandatory separate collection of bio-waste in Swedish legislation is planned.
Wood	There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste, but there are no firm plans on how the system will be improved.
Textiles	There are plans to improve the collection service but unclear plan for implementation	Sweden is aiming to implement EPR for textiles, but there are no firm plans yet.
WEEE	N/A (for countries where high to medium convenience collection services dominate already)	Sweden is looking into the option of implementing a DRS on small electronics, but there are no firm plans yet.
Robustness of the underlying information		Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire. The planned changes in the systems are in early planning phase and no firm plans are presented at this stage.

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 applied in the fee system:

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

In Sweden, there are six major active PROs for packaging (Swedish EPA, 2021b):

1. FTI (household and non-household packaging);
2. TMR (household and non-household packaging);
3. Returpack (deposit return system for beverage plastic bottles and metal cans);
4. Svensk Glasåtervinning (glass bottles);
5. Svenska Retursystem (reusable plastic boxes for retail);
6. NorrlandspallAB (reusable wood pallets).

The EPR on packaging in Sweden covers packaging waste from both household and non-household sources and covers the following materials (Swedish EPA, 2021b):

- Paper and cardboard packaging;
- Ferrous metals packaging;
- Aluminium packaging;
- Glass packaging;
- Plastics packaging;
- Wooden packaging;
- Other packaging materials.

Sweden aims to broaden the regulation on EPR to cover also private import from online sales. In order to improve the supervision of the packaging EPR and to prevent free-riding, as of 2021 all producers, independent on turnover and volumes, must register with the SEPA (Swedish EPA, 2021b).

In Sweden, fee modulation by PROs is currently not regulated, but it will be as part of the Swedish implementation of the minimum requirements in Article 8a of the WFD. Today, FTI and TMR apply fee modulation based on recyclability criteria for paper and cardboard packaging as well as for plastic packaging. The fee modulation aims to reflect the actual costs of recycling and to create incentives for design for recycling and thus create favourable conditions for higher recycling rates. Fee modulation is also applied indirectly for composite packaging, which is categorised based on the main material, usually paper (Swedish EPA, 2021b). Two fee levels are defined for paper and cardboard packaging and for plastics packaging. For example, the lower fee applies for all paper and cardboard packaging that only consists of paper fibres, and for plastics packaging, a list of conditions exist to qualify for the lower fee. Returpack that collects plastic beverage bottles and metal cans also applies fee modulation based on recyclability.

Summary result

No advanced fee modulation	Only two out of six PROs in Sweden apply some limited fee modulation based on recyclability for paper and cardboard and plastic packaging.
Robustness of the underlying information	Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire.

2.1.6 Treatment capacity for bio-waste

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

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

As reported by the Swedish authorities, the country's separately collected bio-waste amounted to 686 000 tonnes in 2019 (Swedish EPA, 2021b). The Swedish authorities report the available capacity for the treatment of bio-waste to 2.3 million tonnes for anaerobic and 1.5 million tonnes for composting. The capacities are based on environmental permits. The total generation of bio-waste within total municipal waste, including separately collected bio-waste and bio-waste present in the residual waste fraction, was 1 437 000 tonnes in 2019 (own calculations, Table 1.1). In addition, the Swedish authorities estimate a current home-composting capacity of 48 000 tonnes (Swedish EPA, 2021b). Although the existing composting and anaerobic digestion capacity in Sweden is not dedicated to municipal bio-waste, there is enough overcapacity to conclude that Sweden will not face capacity issues if the separate collection of bio-waste increases in the future.

The implementation of mandatory separate collection of bio-waste in Swedish legislation is planned. In 2019 the capture rate for bio-waste is 50 % (Table 1.1), which is expected to increase in the future.

Summary result

Enough bio-waste treatment capacity for 80% of generated municipal bio-waste	The available treatment capacity exceeds the total bio-waste generation in Sweden.
Robustness of the underlying information	Reported data on separate collection is not consistent. Need to clarify. It remains unclear how much capacity is available specifically for municipal separately collected bio-waste.

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

To create a market for compost and digestate, 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.

Sweden has legally binding national standards for compost/digestate quality in place, and also a voluntary quality assurance system in place that most treatment plants comply with (EEA, 2020).

Summary result

Legally binding national standards for compost/digestate quality in place, and quality management system in place	Sweden has legally binding national standards for compost quality, and a voluntary quality assurance system in place that most treatment plants comply with.
Robustness of the underlying information	The information is based on legal standards.

2.2 Target for the recycling of packaging waste

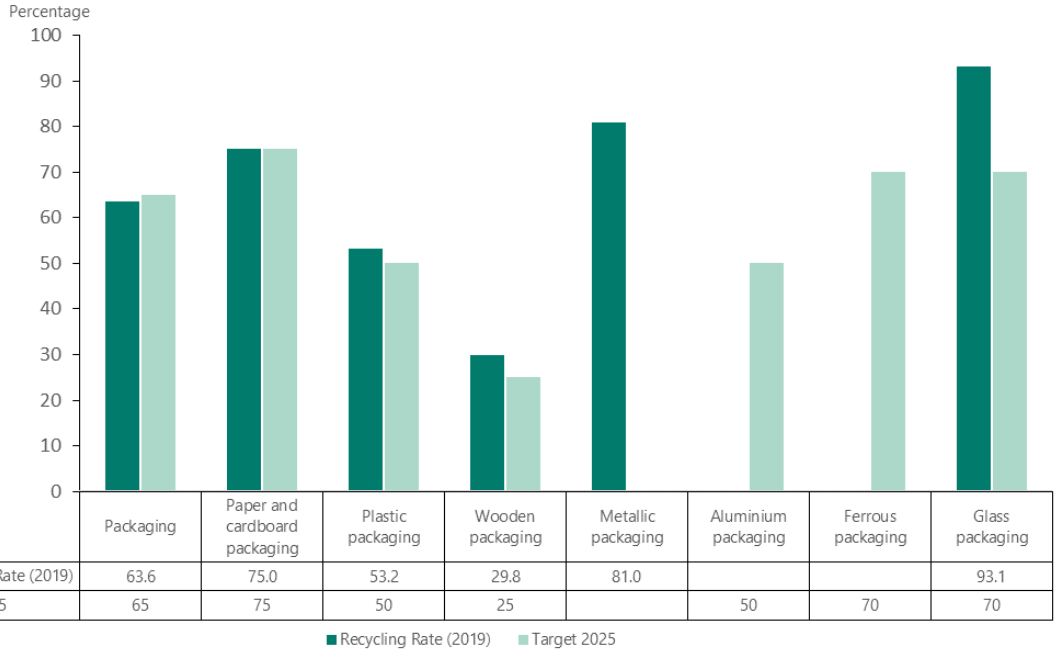
This chapter aims at assessing the prospects of the Sweden to achieve the **65 % recycling target for packaging waste** in 2025 as well as the **material specific packaging waste recycling targets** (50 % of plastic; 25 % of wood; 70 % of ferrous metals; 50 % of aluminium; 70 % of glass; 75 % of paper 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/WMGE, 2021).

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 Sweden 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 Sweden for 2019 is illustrated in Figure 2.2.

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



	Packaging	Paper and cardboard packaging	Plastic packaging	Wooden packaging	Metallic packaging	Aluminium packaging	Ferrous packaging	Glass packaging
Recycling Rate (2019)	63.6	75.0	53.2	29.8	81.0			93.1
Target 2025	65	75	50	25		50	70	70

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

For Sweden, the reported recycling rates level reach or exceed the targets for all packaging materials (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. Sweden has no official information on how the new calculation rules will affect the recycling rates.

The Swedish Waste management association has developed recycling estimates based on actual recycling output. Based on this analysis, it estimates that only about 35 % of the plastics packaging collected from households is actually recycled while 65 % is sent to energy recovery (Avfall Sverige, 2020). This does not include plastics packaging from the deposit return system and from commercial or industrial sources which usually has a much lower loss rate during sorting and recycling. The Swedish EPA (Naturvårdsverket) has estimated that 40 % of separately collected plastic waste is actually recycled (Naturvårdsverket, 2018b). A decrease in both plastics and paper and cardboard packaging recycling rates are expected.

As a matter of sensitivity analysis, to assess what the impact of these new calculation rules could be (change in calculation point), recycling losses and sorting losses (applicable for wooden packaging waste and plastic waste) and recycling losses (applicable for metals and paper/cardboard packaging) 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 75 % to 67.5 %
- Plastic packaging: The measurement point for plastic packaging waste is the input of the sorting plant. Sorting losses and recycling losses are deducted, leading to a total decrease by 29.8 % [1], from 53.2 % to 37.4 %
- Metal packaging: decrease by 14 %, from 76.2 % to 65.5 % (aluminium packaging), from 85.8 % to 73.8 % (steel packaging)
- Glass packaging: the calculation point is the output of the recycling plant (Eurostat, 2021c). No deductions are applied
- Wooden packaging: The calculation point is separately collected wood waste. Deductions for sorting and recycling losses are applied, leading to a total decrease by 19.7 %[2] from 29.8% to 23.9 %.
- Total packaging: calculated based on the amounts of each packaging material generated and recycled in 2019, the recycling rate would drop from 63.6 % to 56.2 %.

Sweden reports packaging data based on EPR POM-data complimented by estimates (Eurostat, 2021c). It should be noted that this method of estimation of generated packaging waste might miss on quantities generated through online sales, de minimis rule and free riders. As a result, the generated quantities might in fact be higher than reported, which also affects the recycling rates.

1 Relative deductions for sorting losses are stated with 11% (weighted average for commercial and household waste) and relative deductions for recycling losses are stated with 21% (weighted average for commercial and household waste. Calculation for total (relative) deduction: 1-(1-0.21) x (1-0.11) (EXPRA, 2014)

2 Relative deductions for sorting losses are stated with 10% (weighted average for commercial and household waste) and relative deductions for recycling losses are stated with 11% (weighted average for commercial and household waste. Calculation for total (relative) deduction: 1-(1-0.1) x (1-0.11) (EXPRA, 2014)

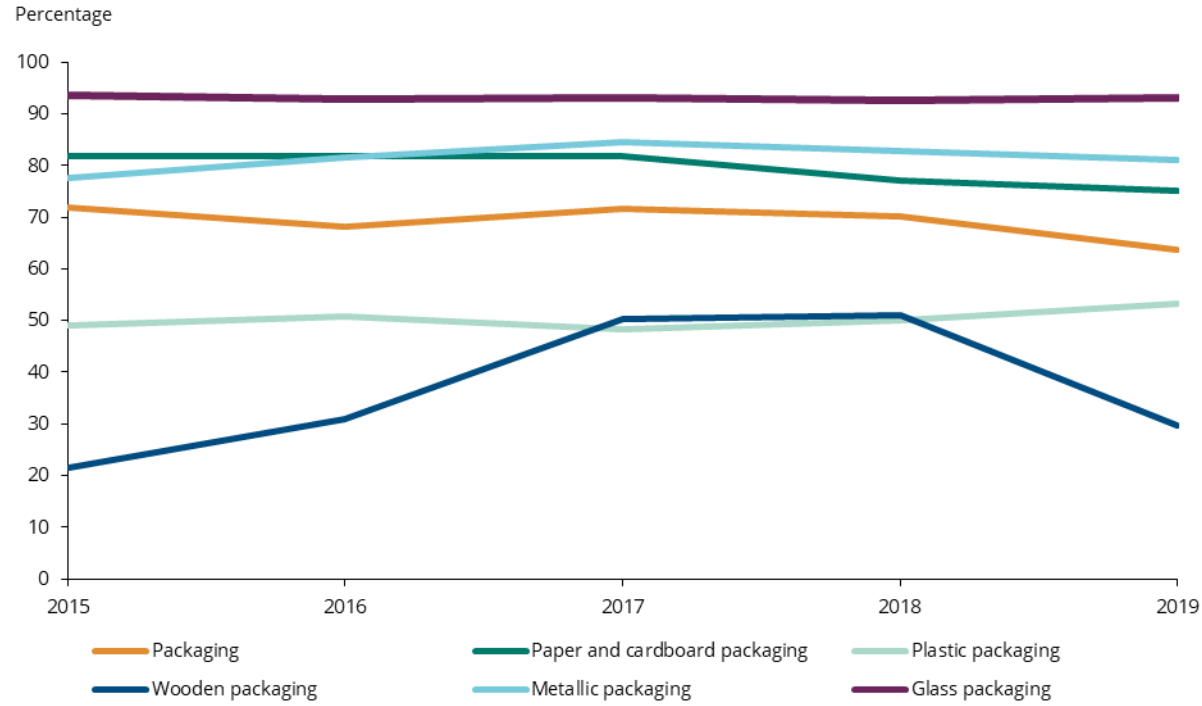
Summary result

Total packaging	5 - 15 percentage points below target	Sweden reports a recycling rate of 63.6 %. However if the new calculation rules are applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 56.2 %, 8.8 percentage points below the 2025 target.
Paper and cardboard packaging	5 -15 percentage points below target	Sweden reports a recycling rate of 75.0 %. However, if the new calculation rules are applied, the recycling rate is expected to drop to 67.5 %, 7.5 percentage points below the 2025 target.
Ferrous metals packaging	Target exceeded	Sweden reports a recycling rate of 85.8 %. However, if the new calculation rules are applied, the recycling rate is expected to drop to 73.8 %, 3.8 percentage points above the 2025 target.
Aluminium packaging	Target exceeded	Sweden reports a recycling rate of 76.2 %. However, if the new calculation rules are applied, the recycling rate is expected to drop to 65.5 %, 15.5 percentage points above the 2025 target.
Glass packaging	Target exceeded	Sweden reports a recycling rate of 93.1 %, 23.1 percentage points above the 2025 target. Corrections for recycling and sorting losses are already accounted for, for glass packaging waste.
Plastics packaging	5 -15 percentage points below target	Sweden reports a recycling rate of 53.2 %. However, if the new calculation rules are applied, the recycling rate is expected to drop to 37.4 %, 12.6 percentage points below the 2025 target.
Wooden packaging	< 5 percentage points below target	Sweden reports a recycling rate of 29.8 %. However, if the new calculation rules are applied, the recycling rate is expected to drop to 23.9 %, 1.1 percentage points below the 2025 target.
Robustness of the underlying information		The packaging waste generation is based on materials put on the market, as reported by the PROs. Thus, it can be assumed that a large share of waste generated is left out of the statistics, such as packaging material from distance online sales. There is an underreporting issue concerning the generated packaging waste amounts, which results in overestimated recycling rates. No estimates are available to assess the effect of an inclusion of the non-reported packaging placed on the market on the recycling rates although a decrease in both plastic and paper and cardboard packaging recycling rates are expected by the Swedish EPA. Especially the reliability of the paper and cardboard and glass and steel packaging data need further investigation.

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 Sweden are illustrated in Figure 2.3.

Figure 2.3 Trend in packaging waste recycling rates in Sweden between 2016 and 20120, in percentage



Note: Sweden reported separate data for aluminium and steel packaging for the first time in 2019
Source: Eurostat (2022d)

The overall packaging recycling rate has been decreasing by 11.4 %. While it has been relatively stable between 2015 and 2018, it dropped significantly in 2019. This may be partly explained by a significant drop in the recycling rate for wooden packaging waste, which is due to a change in methodology. The treatment of wooden packaging waste was re-allocated by the Swedish authorities from *recycling* to *wooden packaging repair*. Regarding the reporting of recycling of wooden packaging waste, Sweden has had some methodological issues in the past, resulting in larger than 100 % recycling rates. The reason for this mainly lies in the unknown number of free riders. In 2016-2017 the data was affected by changes in reporting routines leading to a steep rise in recycling rates (Eurostat, 2022a). Aluminium and glass packaging recycling has slightly decreased, paper and cardboard packaging decreased by 9.6 percentage points over the last five years. All other fractions have an increasing trend. Between 2015 and 2019, plastics and steel packaging show an increase of 8.6 and 9.6 percentage points respectively (Eurostat, 2022a).

In general, reporting of recycling of packaging in Sweden has encountered some problems with data quality.

Summary result

Total packaging	RR > 55%, and increase in last 5 years < 10 percentage points	Sweden reports a decrease in the recycling rate of 8.2 percentage points over the last five years, and a recycling rate is estimated at 56.2% (if the new calculation rules are applied).
Paper and cardboard packaging	RR > 65%, and increase in last 5 years < 10 percentage points	Sweden reports a decrease in the recycling rate of 6.7 percentage points over the last five years, and a recycling rate is estimated at 67.5 % (if the new calculation rules are applied).
Ferrous metals packaging	RR > 70%	Sweden reports an increase in the recycling rate of 7.5 percentage points over the last five years, and a recycling rate is estimated at 73.8 % (if the new calculation rules are applied).
Aluminium packaging	RR > 50%	Sweden reports a decrease in the recycling rate of 1 percentage points over the last five years, and a recycling rate is estimated at 65.5 % (if the new calculation rules are applied).
Glass packaging	RR > 70%	Sweden reports a decrease in the recycling rate of 0.5 percentage points over the last five years, and the recycling rate is 93.1 %.
Plastics packaging	RR < 40% and increase in last 5 years < 10 percentage points	Sweden reports an increase in the recycling rate of 4.2 percentage points over the last five years, and a recycling rate is estimated at 37.4 % (if the new calculation rules are applied).
Wooden packaging	RR > 20% and increase in last 5 years > 5 percentage points	Sweden reports an increase in the recycling rate of 8.3 percentage points over the last five years, and a recycling rate is estimated at 23.9 % (if the new calculation rules are applied). Given the methodological inconsistencies over the past years the trend data is to be viewed critically.
Robustness of the underlying information		The trends over time seem to be robust as there are no breaks in time series indicated except for wooden packaging. However, the reporting of recycling of packaging in Sweden has encountered some problems with data quality. There is an underreporting issue concerning the generated packaging waste amounts, which results in overestimated recycling rates. No estimates are available to assess the effect of an inclusion of the non-reported packaging placed on the market on the recycling rates. Reliability of the paper and cardboard, glass and steel packaging data need further investigation.

2.2.2 Legal instruments

SRF P-2.1: Proper and 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.

The PPWD has been transposed into national law in Sweden before the deadline.

Summary result

Transposition without delay	The PPWD has been transposed into national law without delay.
Robustness of the underlying information	Credible information received from the European Commission (status as of 12 November 2021).

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

As described in Section 2.1.2 in more detail, the Swedish EPA can impose penalty notices to producers avoiding the producer responsibility obligations such as neither taking care of the waste management responsibilities themselves nor joining a PRO taking care of the obligations on their behalf. However, as the enforcement is hard to achieve due to presence of free riders, the use of this enforcement mechanism hasn´t had the potential effect (Swedish EPA, personal communication, 29 March 2022).

In Sweden all producers should be connected to a PRO or be able to provide a way of collecting and handling the waste from their products. The major PRO in Sweden is FTI that collects packaging from households and businesses. TMR is the other PRO with the same responsibility. Except from FTI and TMR there are systems for reuse of packaging, of which Svenska Retursystem and Norrlandspall are the biggest. For plastic beverage bottles and metal cans there is a mandatory deposit return system and the responsible PRO is Returpack. The PROs report the collected amounts to the Swedish EPA. The Swedish EPA is not supporting the PROs but gives guidance on what are good service levels for the collection system for packages (Avfall Sverige and Swedish EPA, personal communication, 29 March 2022) (Swedish EPA, 2022).

Summary result

Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets	Sweden is reporting clearly defined responsibilities, weak enforcement mechanisms and good set of support mechanisms for meeting the targets
Robustness of the underlying information	Credible information received from the Swedish 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, Sweden has a landfill ban and a landfill tax with escalator.

Summary result

Ban in place for landfilling residual or biodegradable waste	Sweden has a landfill ban in place. The landfill tax of SEK 573 per tonne (55 EUR/t, corresponding to 42.3 EUR/t rescaled based on purchasing power parities (Eurostat, 2020) is yearly adjusted.
Robustness of the underlying information	Credible information received from the Swedish 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. As described in Section 2.1.3 in more detail, Sweden has a tax on incineration without escalator.

Summary result

Yes, taxes > 7 EUR/t([a]) without escalator	Sweden has a tax on incineration of SEK 125 per tonne (12 EUR/t, corresponding to 9.2 EUR/t rescaled based on purchasing power parities (Eurostat, 2020)). The tax will be index adjusted although this cannot be considered as an escalator as it does not increase the relative expense of incineration.
Robustness of the underlying information	Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire.

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

SRF P-3.3: Packaging taxes

Packaging taxes can support the aim to reduce packaging waste generation and/or to influence the choice of packaging materials and encourage recyclability and eco-design. According to the information available, Sweden has a tax on plastic carrier bags but no other packaging taxes.

Summary result

No packaging taxes	Sweden applies taxes for plastic carrier bags only, excluding other packaging forms and materials. Thus, this tax will not have an impact on reducing the total packaging waste generation, influencing the choice of packaging materials, or encouraging recyclability and eco-design.
Robustness of the underlying information	Credible information received from the Swedish 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, Sweden has a fully rolled out PAYT mainly based on container volume and collection frequency.

Summary result

PAYT scheme fully rolled out (to at least 80% of the population)	Sweden has a fully rolled out PAYT system, mostly based on container volume and collection frequency.
Robustness of the underlying information	Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire.

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.

One Swedish PRO, Returpack, manages the national DRS. The DRS is mandatory for aluminium drink cans and plastic drink bottles (Swedish EPA, 2021b)

There are also some systems for the reuse of packaging in place in Sweden. These are mostly business-to-business (B2B) with deposit return systems to make the packaging rotate several times (Swedish EPA, 2022).

Summary result

Aluminium drink cans	Mandatory for nearly all drink cans	The mandatory system covers ready-to-drink beverages
Glass drink bottles	No DRS for glass drink bottles	No DRS in place.
Plastic drink bottles	Mandatory for nearly all drink bottles	The mandatory system covers ready-to-drink beverages
Plastic crates	No DRS for plastic crates	No DRS in place.
Wooden packaging	No DRS for wooden packaging	No DRS in place.
Robustness of the underlying information		Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire. No quantitative information available about how much of the packaging is covered by the different DRS schemes.

2.2.4 Separate collection system

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

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

As described in Section 2.1.4 in more detail, separate collection is mandatory in Sweden for both households and non-households. In general, households have access to a higher level of service compared to businesses. According to the Swedish EPA, the sorting rate in businesses can highly differ, and the fact that sorting is compulsory does not always mean that it is also done. The Swedish EPA sees a potential to improve both the degree of sorting and the level of service for both households and businesses. The Swedish government is reviewing the packaging ordinance of 2018 with a view to reinforce the obligation on producers to finance the nationwide development of door-to-door collection. A public consultation of the proposal has been carried out (Swedish EPA, 2021a).

Summary result

Paper and cardboard packaging	**1. Packaging waste from households** A medium share of the population is covered by high convenience collection services	Bring points are the dominating system for paper and cardboard packaging waste which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for paper and cardboard packaging waste, but this not fully rolled out.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household paper and cardboard packaging waste	The separate collection of packaging from non-household sources is mandatory in Sweden.
Ferrous metals packaging	**1. Packaging waste from households** A medium share of the population is covered by high convenience collection services	Bring points are the dominating system for metal packaging waste, which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high-convenience door-to-door collection for metal packaging waste, but this is not fully rolled out.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household ferrous metals packaging waste	The separate collection of packaging from non-household sources is mandatory in Sweden.
Aluminium packaging	**Packaging waste from households** A medium share of the population is covered by high convenience collection services	Bring points are the dominating system for metal packaging waste, which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for metal packaging waste, but this is not fully rolled out. Furthermore, there is a mandatory DRS for aluminium beverage cans.
Glass packaging	**1. Packaging waste from households** A high share of the population is covered by high convenience collection services for packaging	Bring points are the dominating system for glass packaging waste.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household glass packaging waste	The separate collection of packaging from non-household sources is mandatory in Sweden.

Plastics packaging	**1. Packaging waste from households** A medium share of the population is covered by high convenience collection services	Bring points are the dominating system for plastic packaging waste, which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for plastic packaging waste, but this is not fully rolled out. Furthermore, there is a mandatory DRS for plastic beverage bottles.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household plastic packaging waste	The separate collection of packaging from non-household sources is mandatory in Sweden.
Wooden packaging	**Packaging waste from non-household sources** Separation at source is mandatory for non-household wooden packaging waste	The separate collection of packaging from non-household sources is mandatory in Sweden.
Robustness of the underlying information		Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire. Swedish PROs and municipalities apply different types of separate collection systems for the different materials. However, no quantitative information is available for the coverage of each system. This means that the population coverages in this table are rough estimates.

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

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

To improve the convenience and coverage of separate collection, concrete plans are needed. This SRF is only relevant for MS and materials that do not score 'green' in SRF P-4.1. The assessment is done on a material basis and summing up the scores of the different materials according to their average share in packaging waste[3]. Again, the material specific assessment considers packaging waste from both household and non-household sources. It is assumed that these sources are of similar size.

Sweden is planning changes in the separate collection systems for packaging waste. Currently the Government is conducting a study on this topic (Swedish EPA, 2021b). As indicated above, the Swedish government is reviewing the packaging ordinance of 2018 with a view to reinforce the obligation on producers to finance the nationwide development of door-to-door collection. A public consultation of the proposal is foreseen in the autumn 2021 (Swedish EPA, 2021a).

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

Summary result

Paper and cardboard packaging	**1. Packaging waste from households** There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste. The planned changes in the systems are in early planning phase and no firm plans are presented at this stage.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory separation at source for non-household paper and cardboard packaging waste)	
Ferrous metals packaging	**1. Packaging waste from households** There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste. The planned changes in the systems are in early planning phase and no firm plans are presented at this stage.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory separation at source for non-household ferrous metals packaging waste)	
Aluminium packaging	**Packaging waste from households** There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste. The planned changes in the systems are in early planning phase and no firm plans are presented at this stage.
Glass packaging	**1. Packaging waste from households** N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	Although a high share of the population is already covered by high convenience collection services, Sweden is planning changes in the separate collection systems for glass packaging waste. The planned changes in the systems are still in early planning phase and no firm plans are presented at this stage.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory separation at source for non-household glass packaging waste)	
Plastics packaging	**1. Packaging waste from households** There are plans to improve the collection service but unclear plan for implementation	Sweden is planning changes in the separate collection systems for packaging waste. The planned changes in the systems are in early planning phase and no firm plans are presented at this stage.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory separation at source for non-household plastic packaging waste)	.

Wooden packaging	**Packaging waste from non-household sources** N/A (for countries already implementing mandatory separation at source for non-household wooden packaging waste)	
Robustness of the underlying information		Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire. The planned changes in the systems are in early planning phase and no firm plans are presented at this stage.

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 Sweden there are six major PROs covering packaging waste from both household and non-household sources and covering all packaging materials.

Summary result

All main packaging fractions([a]) are covered by EPR schemes, covering household and non-household packaging	In Sweden, the EPR scheme covers packaging waste from both household and non-household sources for all packaging materials
Robustness of the underlying information	Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire.

([a]) **Note:** Paper and cardboard, ferrous metals, aluminium, glass, plastic

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

As explained in Section 2.1.5, fee modulation (or eco-modulation) is a system with different fees for different types of packaging material and designs. The assessment is the same as described in Section 2.1.5

In Sweden, fee modulation by PRO's is currently not regulated, but it will be as part of the implementation of the minimum requirements in article 8a in WFD. Today the biggest PROs, FTI, TMR and Returpack, apply fee modulation based on recyclability.

Summary result

No advanced fee modulation	Sweden applies some limited fee modulation based on recyclability criteria for paper and cardboard and plastic packaging.
Robustness of the underlying information	Credible information received from the Swedish authorities through the EEA-ETC/WMGE questionnaire.

SRF P-5.3 Material specific EPR assessment

The material specific assessment is based on a combination of the coverage of the material specific EPR schemes and the use of fee modulation for the specific packaging material. The assessment takes the different situations for different types of materials into account: Plastics packaging is the packaging material that is the most difficult to recycle out of the packaging materials targeted by the Packaging and Packaging Waste Directive. Fee modulation therefore plays a larger role for plastic

packaging than for the other materials and is therefore rated differently from paper/cardboard, ferrous metals, aluminium and glass. The methodology foresees a green score for plastics packaging only if all four fee modulation assessment criteria mentioned above are met. On the other hand, wooden packaging is mainly generated by commercial and industrial sources and fee modulation is less relevant, therefore the methodology only relies on EPR schemes for wooden packaging from commercial and industrial sources.

As, described in Section 2.1.5, the EPR covers packaging waste from both household and non-household sources and Sweden applies fee modulation based on recyclability for paper and cardboard packaging as well as for plastics packaging.

Summary result

SRF P-5.3.1 EPR scheme for Paper and cardboard packaging waste	EPR scheme covering household and non-household packaging, including fee modulation with only one assessment criterium	Sweden applies fee modulation based on recyclability for paper and cardboard packaging as well as for plastic packaging
SRF P-5.3.2 EPR scheme for Ferrous metals packaging waste	EPR scheme covering household and non-household packaging, but no advanced fee modulation applied	Sweden does not apply fee modulation for ferrous metals in the EPR scheme. 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, but no advanced fee modulation applied	Sweden does not apply fee modulation for aluminium in the EPR scheme. 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, but no advanced fee modulation applied	Sweden does not apply fee modulation for glass in the EPR scheme. 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 with fee modulation, but only based on recyclability	Sweden applies fee modulation based on recyclability for plastics. 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 Swedish 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 Sweden was 0.8 % in 2019. Sweden has a very high incineration capacity and, thus, landfill rates are also expected to stay at a low level in the future.

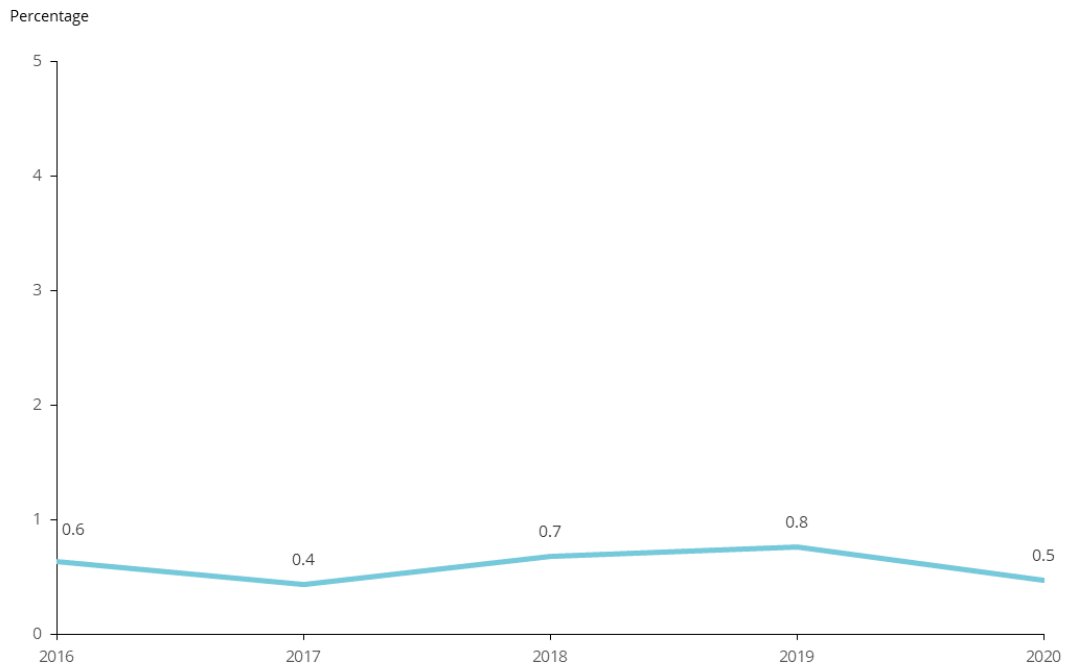
Summary result

Target exceeded	The overall landfilling rate of Sweden was 0.5 % in 2020
Robustness of the underlying information	The data are derived from Eurostat and are considered to be rather robust. However, the reported landfill rate might slightly increase once the new calculation rules laid down in the Commission Implementing Decision (EU) 2019/1885 will be applied. Based on the available information, it is currently not possible to quantify the impact of the new calculation rules on the landfill rate.

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

Over the past five years, the overall landfilling rate of Sweden is less than 1 % (Figure 2.4).

Figure 2.4 Landfilling in Sweden between 2015 and 2019, in percentage



Source: Eurostat (2022b)

Summary result

Landfill rate in 2020 < or = 10%	The landfilling rate of Sweden was below 1 % throughout the period 2016-2020.
Robustness of the underlying information	The data is derived from Eurostat and is considered to be rather robust. However, the reported landfill rate might increase once the new calculation rules laid down in the Commission Implementing Decision (EU) 2019/1885 will be applied. Based on the available information, it is currently not possible to quantify the impact of the new calculation rules on the landfill rate.

SRF LF-1.3: 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.

Sweden reported 1 % 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	Sweden has reported 1 % biodegradable waste landfilled in 2019 in comparison to the biodegradable waste landfilled in 1995 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 Sweden 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 Sweden, only the SRFs relevant to Sweden are taken into account to define the maximum score. Sweden 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

47 % **of maximum score**	Based on the provided information and the analysis done, it is concluded that Sweden is **at risk for not meeting the MSW recycling target in 2025**.
Current situation and past trends:	The overall recycling rate of Sweden shows a small decline in the period 2016 to 2019. However, after the break in time series in 2020, there is a significant drop. This is because Sweden has applied the new calculation rules as of the year 2020 in the calculation of the recycling rates of MSW. Based on currently available data Sweden's recycling rate was 38.3 % in 2020, which is 16.7 percentage points below the 2025 target.
Legal instruments:	Sweden has transposed the amended Waste Framework Directive into national law by the transposition deadline. Regarding the responsibilities and enforcement mechanisms, all responsible stakeholders are clearly defined but for MSW management Sweden does not have any enforcement mechanisms with consequences for failing in attaining the targets. Improving the waste management performance is highly reliant on the supporting enforcement mechanisms for reaching the MSW targets. However, Sweden also presents several support mechanisms to improve the efficiency and performance of the responsible entities.

Economic instruments:	Sweden has a ban on landfilling organic and combustible waste. The landfill tax of SEK 573 per tonne (55 EUR/t, corresponding to 42.3 EUR/t rescaled based on purchasing power parities) is yearly adjusted. Sweden has a tax on incineration of municipal waste of SEK 125 per tonne (equals 12 EUR/t, corresponding to 9.2 EUR/t rescaled based on purchasing power parities). Sweden has a fully rolled out PAYT system. The dominating basis for waste fees is based on container volume and collection frequency, and some municipalities have introduced weight-based fees. In addition, the size of the fee is smaller for bio-waste than for residual waste and in some municipalities, the collection of bio-waste is free of charge.
Separate collection systems:	The service level of the separate collection is only on a moderate level due to the dominating low-density bring point collection system. The collection system for packaging waste does not accept non-packaging waste, which is collected at civic amenity sites. For glass, a high share of the population is covered by high convenience collection services but only packaging is targeted. Also for bio-waste, a high share of the population is covered by high convenience collection services but only food waste is targeted. For paper and cardboard, metals and plastic, a medium share of the population is covered by high convenience collection services but only packaging is targeted. Bring points are the dominating systems, which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for packaging waste, but this is not fully rolled out. High to medium convenience collection services dominates for WEEE as well. Different bring-systems are used, including take back at retailers and bring points For wood and textiles, civic amenity sites are the dominating system across the country. In rural areas, there is no collection service for the separate collection of wood waste. Sweden is planning changes in the separate collection systems for packaging waste and the implementation of mandatory separate collection of bio-waste. There are no firm plans on how these systems will be implemented, but they are expected to support an increase in the capture rates and recycling rate of MSW.

Extended producer responsibility:	In Sweden, there are six major PROs for packaging, covering packaging waste from both household and non-household sources for all packaging materials. In Sweden, fee modulation by PROs is not currently regulated, but it will be as part of the implementation of the minimum requirements in the WFD. Today the major PROs apply fee modulation n based on recyclability for paper and cardboard and plastics packaging.
Bio-waste treatment capacity and quality management:	There is a significant overcapacity for bio-waste treatment in Sweden. It remains unclear how much capacity is available for municipal separately collected bio-waste since the available capacity is also covering waste from the food industry. However, although the capacity is not only dedicated to municipal bio-waste, there is enough overcapacity to conclude that Sweden will not face capacity issues if the separate collection of bio-waste increases in the future. Sweden has legally binding national standards for compost quality, and a voluntary quality assurance system in place that most treatment plants comply with.

Prospects for meeting the recycling target for packaging waste

60 % **of maximum score**	Based on the provided information and the analysis done, it is concluded that Sweden is **not at risk for not meeting the 65 % recycling target for packaging waste in 2025**	
60 % of maximum score	Paper and cardboard	Not at Risk
79 % of maximum score	Ferrous metals packaging	Not at Risk
76 % of maximum score	Aluminium packaging	Not at Risk
78 % of maximum score	Glass packaging	Not at Risk
53 % of maximum score	Plastics packaging	Not at Risk
81 % of maximum score	Wooden packaging	Not at Risk
Current situation and past trends:	The total packaging recycling rate for 2019 is 63.6 %, 1.4 percentage points below the 2025 target. However, if the new calculation rules are applied, the recycling rate is expected to drop to 56.2 %, 8.8 percentage points below the 2025 target. The reported recycling rates level with or exceed the targets for all packaging materials. Sweden reports a decrease in the recycling rate of 11.4 percentage points over the last five years. While the overall packaging recycling rate has been relatively stable between 2015 and 2018, it dropped significantly in 2019. This may be partly explained by a significant drop in the recycling rate for wooden packaging waste, which is due to a change in methodology. The generated packaging waste amounts might be underreported, resulting in overestimated recycling rates. Currently the packaging waste generation in Sweden is based on materials put on the market, as reported by the PROs. No estimates are available to assess the effect of an inclusion of the non-reported packaging placed on the market on the recycling rates.	
Legal instruments:	The amended PPWD is transposed into national law in Sweden by the transposition deadline. Regarding the responsibilities and enforcement mechanisms, all responsible stakeholders are clearly defined, but in contrast to MSW, Sweden also has enforcement mechanisms for producers avoiding their producer responsibility obligations or fail at reaching the recycling targets. However, Sweden does not report any support mechanisms for the PROs, helping them in achieving high recycling rates.	

Economic instruments:	Sweden has a ban on landfilling organic and combustible waste. The landfill tax of SEK 573 per tonne (55 EUR/t, corresponding to 42.3 EUR/t rescaled based on purchasing power parities) is yearly adjusted. Sweden has a tax on incineration of municipal waste of SEK 125 per tonne (equals 12 EUR/t, corresponding to 9.2 EUR/t rescaled based on purchasing power parities). Sweden has a tax on plastic carrier bags aiming to influence the choice of packaging materials. However, this is not enough to be considered as a broad tax on packaging waste. Sweden has a fully rolled out PAYT system. The dominating basis for waste fees is based on container volume and collection frequency, and some municipalities have introduced weight-based fees. Sweden has a mandatory DRS for aluminium beverage cans and plastic beverage bottles.
Separate collection systems:	Separate collection is mandatory in Sweden for both households and non-households. The separate collection system targets packaging waste, and the collection system does not accept non-packaging waste, which is collected at civic amenity sites. For households, the service level of the separate collection system is only on a moderate level due to the dominating low-density bring point collection system. For glass, a high share of the population is covered by high convenience collection services. For paper and cardboard, metals and plastic, a medium share of the population is covered by high convenience collection services. Bring points are the dominating systems, which are considered to be of high convenience for people living in rural areas, but of lower convenience for people living in cities, towns and suburbs. There is high convenience door-to-door collection for packaging waste, but this is not fully rolled out. For non-households, the separate collection of packaging waste is mandatory, supporting the recycling of non-household packaging. Sweden is planning improvements in the separate collection systems for packaging waste, but there are no firm plans on how these systems will be implemented.
Extended producer responsibility:	In Sweden, there are six active PROs for packaging, covering packaging waste from both household and non-household sources for all packaging materials. In Sweden, fee modulation by PROs is currently not regulated, but it will be as of 2023. Today only one of six PROs in Sweden applies some limited fee modulation based on recyclability for paper and cardboard and plastic packaging.

3.2 Prospects of meeting the landfill of municipal waste target

100 % **of maximum score**	Based on the provided information and the analysis done, it is concluded that Sweden is **not at risk for not meeting the 2035 target to reduce the amount of municipal waste landfilled to 10 % or less of the total amount of municipal waste generated.**
Current situation and past trends:	Over the past five years, the overall landfilling rate of Sweden is less than 1 %. Sweden has a very high incineration capacity and, thus landfill rates are also expected to stay at a low level in the future.
Diversion of biodegradable municipal waste from landfill:	Sweden has reported 0 % biodegradable waste landfilled in 2018 in comparison to the biodegradable waste landfilled in 1995 and performs therefore well within the target.

List of abbreviations

Abbreviation	Name
DRS	Deposit Return System
EC	European Commission
EEA	European Environment Agency
EEE	Electrical and Electronic Equipment
Eionet	European Environmental Information and Observation Network
EPR	Extended producer responsibility
ETC/CE	European Topic Centre on Circular Economy and resource use
ETC/WMGE	European Topic Centre on Waste and Materials in a Green Economy
MBT	Mechanical biological treatment
MS	Member state
MSW	Municipal solid waste
NWMP	National Waste Management Plan
PAYT	Pay-as-you-throw
PET	Polyethylene terephthalate
PPWD	Packaging and Packaging Waste Directive
PRO	Producer Responsibility Organisation
PS	Polystyrene
SRF	Success and risk factor
TOC	Total Organic Carbon
WEEE	Waste Electric and Electronic Equipment
WFD	Waste Framework Directive

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Annex 1 Detailed scoring of success and risk factors

Assessment sheet - Recycling target for municipal waste

MS Sweden

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
MSWR-1.1	Distance to target	Distance to target > 15 percentage points or no data reported	5	0
MSWR-1.2	Past trends in municipal solid waste recycling rate	RR < 45% and increase in last 5 years < 10 percentage points	1	0
Legal instruments				
MSWR-2.1	Timely transposition of the revised WFD into national law	Transposition without delay	1	2
MSWR-2.2	Clearly defined responsibilities for meeting the targets and support and enforcement mechanisms	Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets OR Unclear responsibilities but clearly defined enforcement mechanisms and a good set of support tools for meeting the recycling targets OR Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	1	1
Economic instruments				
MSWR-3.1	Taxes and/or ban for landfilling residual or biodegradable waste	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	Taxes > 7 EUR/t*, but without escalator	1	1
MSWR-3.3	Pay-as-you-throw (PAYT) system	PAYT scheme fully rolled out (to at least 80% of the population) OR Implemented in some regions / municipalities (50-80% covered) and firm plans for rolling out to at least 80% of the population	1	2

Separate collection systems				
MSWR-4.1	Convenience and coverage of separate collection systems for the different household waste fractions			
	Paper and cardboard	A medium share of the population is covered by high convenience collection services	0.46	0.46
	Metals	A medium share of the population is covered by high convenience collection services	0.08	0.08
	Plastics	A medium share of the population is covered by high convenience collection services	0.28	0.28
	Glass	A high share of the population is covered by high convenience collection services	0.18	0.36
	Bio-waste	A high share of the population is covered by high convenience collection services	0.84	1.68
	Wood	A low share of the population is covered by high convenience collection services	0.06	0
	Textiles	A low share of the population is covered by high convenience collection services	0.06	0
	WEEE	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	There are plans to improve the collection service but unclear plan for implementation	0.23	0.23
	Metals	There are plans to improve the collection service but unclear plan for implementation	0.04	0.04
	Plastics	There are plans to improve the collection service but unclear plan for implementation	0.14	0.14
	Glass	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.09	0
	Bio-waste	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.42	0
	Wood	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	Enough bio-waste treatment capacity for 80% of generated municipal bio-waste	1	2
MSWR-6.2	Legally binding national standards and Quality Management System for compost/digistate	Legally binding national standards for compost/digestate quality in place, and quality management system in place	1	2
			Total score	**15.41**
			Maximum score	32.94
				47%

Assessment sheet - Recycling target for packaging waste

MS Sweden

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
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	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Plastics packaging	5 - 15 percentage points below target	5	5
	Distance to target - Wooden packaging	< 5 percentage points below target, or target exceeded	5	10
P-1.2	Past trends in packaging waste recycling rate	RR > 60% and increase in last 5 years < 5 percentage points, or RR > 55%, and increase in last 5 years < 10 percentage points, or RR < 55% and increase in last 5 years > 10 percentage points	1	1
	Past trends in paper and cardboard packaging recycling	RR > 70% and increase in last 5 years < 5 percentage points, or RR > 65%, and increase in last 5 years < 10 percentage points, or RR < 65% and increase in last 5 years > 10 percentage points	1	1
	Past trends in ferrous metals packaging recycling	RR > 65% and increase in last 5 years > 5 percentage points, or RR > 60% and increase in last 5 years > 10 %, or RR > 70%	1	2
	Past trends in aluminium packaging recycling	RR > 45% and increase in last 5 years > 5 percentage points, or RR > 40% and increase in last 5 years > 10 %, or RR > 50%	1	2
	Past trends in glass packaging recycling	RR > 65% and increase in last 5 years > 5 percentage points, or RR > 60% and increase in last 5 years > 10 %, or RR > 70%	1	2

	Past trends in plastic packaging recycling	RR < 40% and increase in last 5 years < 10 percentage points	1	0
	Past trends in wooden packaging recycling	RR > 20% and increase in last 5 years > 5 percentage points, or RR > 15% and increase in last 5 years > 10 %, or RR > 25%	1	2
Legal instruments				
P-2.1	Timely transposition of the revised Packaging and Packaging Waste Directive into national law	Transposition without delay	1	2
P-2.2	Clearly defined responsibilities for meeting the targets and support and enforcement mechanisms	Clearly defined responsibilities and good set of support tools but weak/no enforcement mechanisms for meeting the recycling targets OR Unclear responsibilities but clearly defined enforcement mechanisms and a good set of support tools for meeting the recycling targets OR Clearly defined responsibilities and enforcement mechanisms but no/weak support tools for meeting the recycling targets	1	1
Economic instruments				
P-3.1	Taxes and/or ban for landfilling residual or biodegradable waste	Ban, or landfill tax > 30 EUR/t* with escalator	1	2
P-3.2	Taxes on municipal waste incineration	Taxes > 7 EUR/t*	1	1
P-3.3	Packaging taxes	No packaging taxes	1	0
P-3.4	Pay-as-you-throw (PAYT) system	PAYT scheme fully rolled out (to at least 80% of the population) OR Implemented in some regions / municipalities (50-80% covered) and firm plans for rolling out to at least 80% of the population	1	2
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	No or voluntary DRS for some drink bottles	1	0
	Deposit-return systems plastic drink bottles	Mandatory DRS for nearly all drink bottles	1	2
	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 medium share of the population is covered by high convenience collection services	1	1
	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 medium share of the population is covered by high convenience collection services	1	1
	Ferrous metals packaging (non-household)	Separation at source is mandatory for non-household ferrous metals packaging waste	1	2
	Aluminium packaging	A medium share of the population is covered by high convenience collection services	2	2
	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 medium share of the population is covered by high convenience collection services	1	1
	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)	There are plans to improve the collection service but unclear plan for implementation	0.5	0.5
	Paper and cardboard (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Ferrous metals packaging (household)	There are plans to improve the collection service but unclear plan for implementation	0.5	0.5
	Ferrous metals packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Aluminium packaging	There are plans to improve the collection service but unclear plan for implementation	1	1
	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)	There are plans to improve the collection service but unclear plan for implementation	0.5	0.5
	Plastics packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Wooden packaging	N/A (for countries already having mandatory sorting at source)	1	0
Extended producer responsibility (EPR) and similar schemes				
P-5.1	Coverage of EPR schemes	All main packaging fractions* are covered by EPR schemes, covering household and non-household packaging	1	2
P-5.2	Fee modulation in EPR schemes for packaging	No fee modulation OR fee modulation meets less than two assessment criteria	1	0
P-5.3	Material specific EPR assessment - Paper and cardboard packaging waste	EPR scheme covering household and non-household packaging	1	1
	Material specific EPR assessment - Ferrous metals packaging waste	EPR scheme covering household and non-household packaging	1	1
	Material specific EPR assessment - Aluminium packaging waste	EPR scheme covering household and non-household packaging	1	1
	Material specific EPR assessment - Glass packaging waste	EPR scheme covering household and non-household packaging	1	1
	Material specific EPR assessment - Plastics packaging waste	No EPR scheme or EPR scheme covering only household, industrial OR commercial packaging OR EPR scheme but without fee modulation	1	0
	Material specific EPR assessment - Wooden packaging waste	EPR scheme covering all non-household packaging	1	2
Total packaging recycling target				**19.67**
			Maximum score	32.67
				60%

Paper and cardboard recycling target

Total score	**18.50**
Maximum score	31.00
	60%

Ferrous metals packaging recycling target

Total score	**24.50**
Maximum score	31.00
	79%

Aluminium packaging recycling target

Total score	**26.00**
Maximum score	34.00
	76%

Glass packaging recycling target

Total score	**25.00**
Maximum score	32.00
	78%

Plastics packaging recycling target

Total score	**18.50**
Maximum score	35.00
	53%

Wooden packaging recycling target

Total score	**26.00**
Maximum score	32.00
	81%

Assessment sheet - Target for landfilling of municipal waste

MS Sweden

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
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
			Total score	**14.00**
			Maximum score	14.00
				100%