Country profile

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

Denmark

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 Danish Environmental Protection Agency in April 2021 to a questionnaire developed by the EEA and ETC/WMGE. The EEA and ETC/CE would like to thank the Danish authorities for the provided information and for the kind review of drafts of this assessment report 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 Denmark. 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 Denmark 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 Denmark 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 Denmark to achieve the overall packaging waste and specific packaging materials' recycling targets for 2025. Chapter 2.3 examines the prospects for Denmark 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.

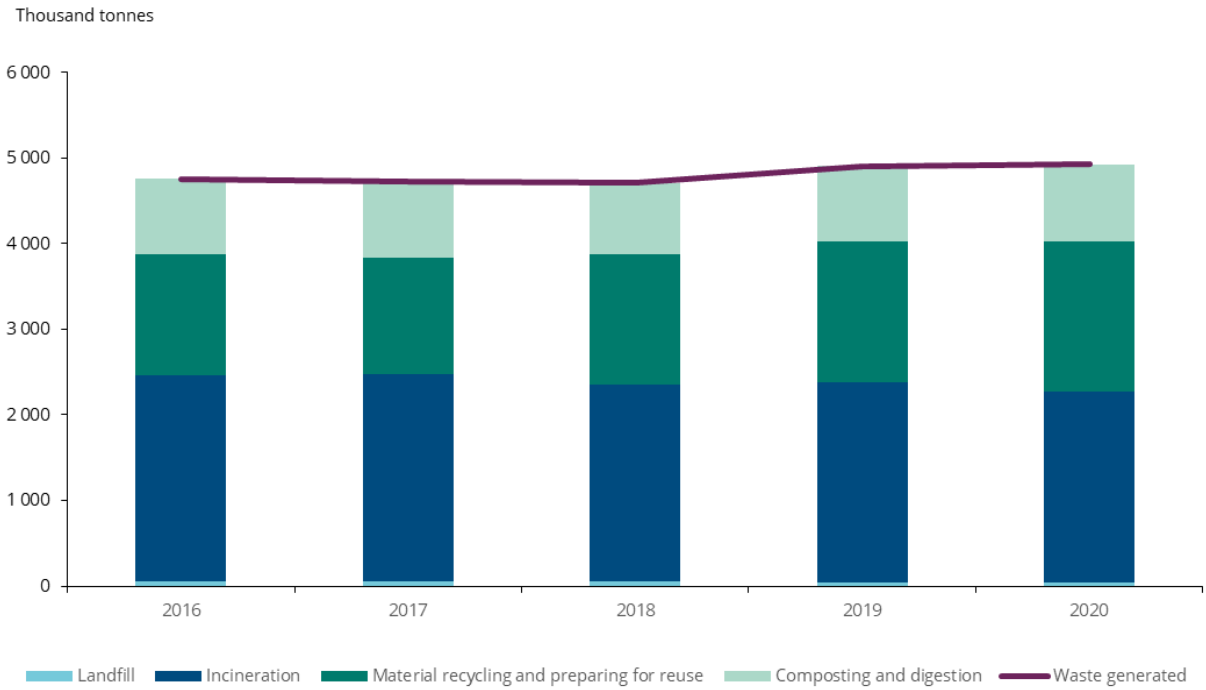
1.3 Member State profile – context parameters

Municipal waste generation and treatment

The annual municipal waste generation and treatment has remained rather stable in Denmark between 2016 and 2020. The municipal waste generation was around 5 million tonnes in 2020. Waste generation per capita is very high, with 845 kg/cap in 2020, which is significantly higher than the (estimated) EU average of 505 kg/cap in 2020. The country has a quite even division between waste collected for recycling and waste incineration, being 53.9 % and 45.2 % respectively in 2020. Less than 1 % is being landfilled. Waste collected for material recycling increased between 2016 and 2020 from 29.9 % to 35.5 %, while composting and digestion stagnated around 18.4 %. The recycling rate (collected for material recycling and composting and digestion) has increased from 48.3 % in 2016 to 53.9 % in 2020 (Eurostat, 2022a).

Denmark has a very high incineration capacity, roughly double the amount of residual municipal waste sent to incineration in 2019. On 16 June 2020, the Danish Government and Parties representing a broad majority in the Danish Parliament agreed on a *Climate plan for a green waste sector and a circular economy*. The climate plan includes initiatives – amongst others – towards reducing waste and reducing the capacity for waste incineration. In order to adjust the capacity, a tender-based model is foreseen and the waste incineration plants will have to compete for the waste. Environmental requirements for the incineration plants will be tightened so that plants that lag behind environmentally either invest in technological improvements or close.

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



Notes: Provisional data for 2020

Source: Eurostat (2022a)

Legal Framework

The main national regulations in the area of waste are the Environmental Protection Act (Miljø- og Fødevareministeriet, 2022) and the Statutory Order on Waste (Miljøministeriet, 2020b), defining principles, responsibilities and requirements on waste prevention and management in Denmark. The Statutory Order on waste regulations, fees and actors (Klima-, Energi- og Forsyningsministeriet, 2020) covers the treatment of waste that is not regulated by other legislation, the municipalities' regulations on waste, schemes for waste, fees for waste, assignment of waste benchmarking of waste incineration plants. In addition, the Environmental Protection Agency has issued guidelines for the sorting and collection of municipal waste from households (Miljøministeriet, 2020c, 2020d).

Waste management plan(s)

Denmark's National Waste Management Plan (NWMP) *Action plan for circular economy - National plan for prevention and management of waste 2020-2032* (Handlingsplan for cirkulær økonomi - National plan for forebyggelse og håndtering af affald 2020-2032) was adopted by the Danish Ministry of Environment (Miljøministeriet) in 2021 (Miljøministeriet, 2021a).

The plan was drawn up largely based on previous strategies, agreements, plans and revised ordinances and can thus be seen as a consolidation of these. It will be reviewed at the latest after six years from its adoption. The NWMP covers all types of waste generated in Denmark also including commercial waste, sewage sludge, soil waste. The only exception is nuclear/radioactive waste. The NWMP covers the entire territory and is supplemented by municipal WMPs.

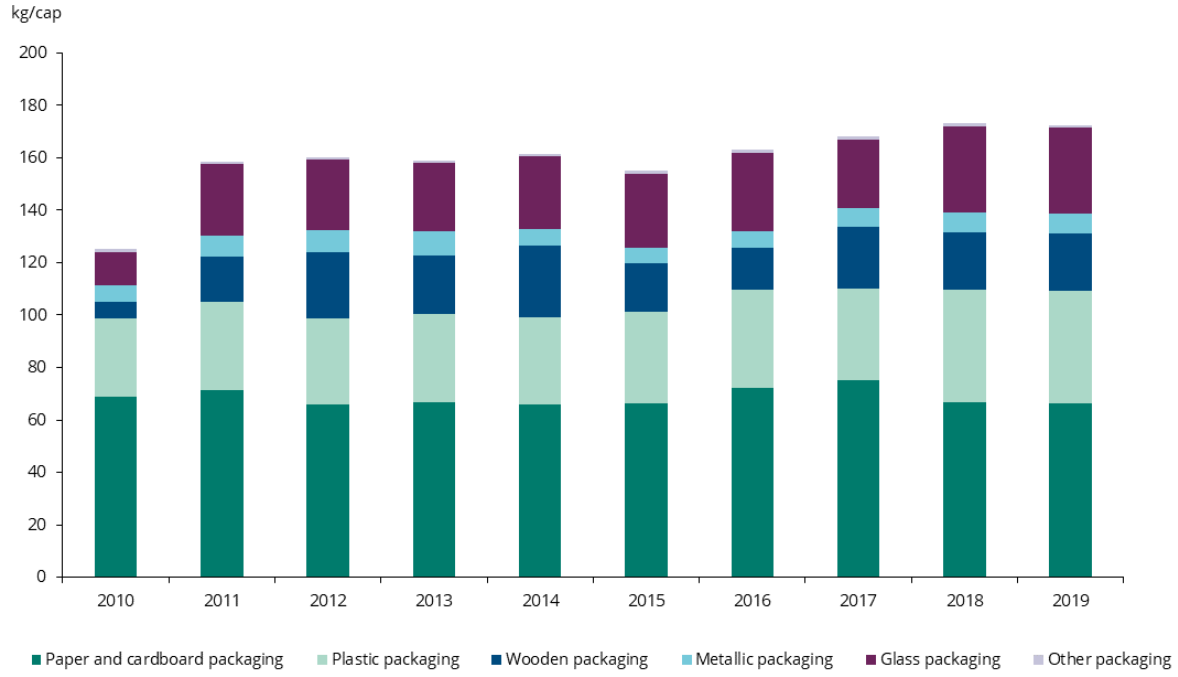
According to the NWMP sorting and collection of household waste must be streamlined for ten types of household waste (food, paper, cardboard, metal, glass, plastic, textile and hazardous waste as well as food and beverage cartons and residual waste). These waste streams must be collected from households and common national sorting criteria for household waste must be used to create a basis for increased recycling with higher quality.

The NWMP states that the Danish government expects to meet the 2025 and 2030 packaging waste recycling targets by implementing all measures included in the plan, with the exception of plastic. To increase plastics recycling, Denmark is launching a number of initiatives such as the ban of the marketing of certain disposable plastic products; a requirement to use 25 % recycled plastic in plastic bottles in 2025 and 30 % in 2030; a requirement of a minimum of 60 % real recycling of collected plastic waste from households by 2022 (Miljøministeriet, 2020b).

Packaging waste generation and treatment

In Denmark, 983 000 tonnes (169kg/cap) of packaging waste were generated in 2019, which is slightly below the EU average of 178 kg/cap. Packaging waste generation has been increasing, especially plastics packaging (Figure 1.2). Paper and cardboard packaging waste generation fluctuates at the level of approximately 67 kg/cap since 2010 (Eurostat, 2022b).

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



Note: Data for 2010 are estimated values for all packaging waste, and in 2011 there is a break in time series for metallic and glass packaging. Values for 2011 and 2012 are flagged as estimates for metallic and glass packaging.

Source: Eurostat (2022b)

Capture rates for recyclables

The capture rate is a good performance indicator of the effectiveness of the separate collection system. The capture rate has been calculated for this report by dividing the separately collected weight of a certain municipal waste material by the estimated weight of the total amount of material in the municipal waste. The Danish EPA has provided calculations for the residual waste composition for municipal waste. Due to an expected difference in composition for recycling stations and households/non-households residual waste, amounts of materials present in the residual waste from these two sources were calculated separately. For Denmark the separate collection capture rates are presented in Table 1.1.

Table 1.1 Capture rates for different waste fractions in Denmark

	Residual waste compo-sition (%)([a])	Residual waste composition (tonnes)([b])	Residual waste composition for recycling stations (%)([c])	Residual waste composition for recycling stations (tonnes)([d])	Separately collected amounts (tonnes) ([e])	Materials in total MSW (tonnes)	Capture rates (%)
Mixed municipal waste, total		1 858 138		136 709			
Paper and cardboard	18	343 220	18	25 252	555 614	924 086	60
Metals	2	36 341	2	2 674	166 562	205 577	81
Glass	2	28 265	2	2 080	148 420	178 765	83
Plastic	10	193 298	10	14 222	75 331	282 851	27
Garden waste	1	13 612	1	1 367	948 750	963 730	98
Food waste	44	820 921	1	1 367	115 188	937 476	12
Textiles	2	40 379	5	6 835	1 203	48 418	2
Wood	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Source: Miljøministeriet (2022)

Notes: ([a]) Analysis of household residual waste and source-separated organic waste, 2018, the Danish EPA (Miljø- og Fødevareministeriet, 2017). The composition is calculated based on data from the report.

([b]) The composition of household and non-household municipal residual waste is assumed to be the same. The amount of mixed municipal waste is from Affaldsstatistik 2019 (Miljø- og Fødevareministeriet, 2020), excl. the amount from recycling stations.

([c]) For residual waste from recycling stations, the same composition from household residual waste was applied except for the share of food and textile waste. The composition is an estimate.

([d]) Provided by the Danish EPA

([e]) As reported in Affaldsstatistik 2019, Miljø- og Fødevareministeriet (2020)

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

Since 2017 more municipalities have increased the number of separately collected material which is expected to affect the composition of municipal residual waste, especially for food waste (Miljøministeriet, 2022). While a capture rate for WEEE can be calculated with the same method, it delivers unreliable outcomes as there are considerable invisible flows (Miljøministeriet, 2021b) that are not captured in the data.

2 Success and risk factors likely to influence future performance

2.1 Target for preparing for reuse and recycling of municipal waste

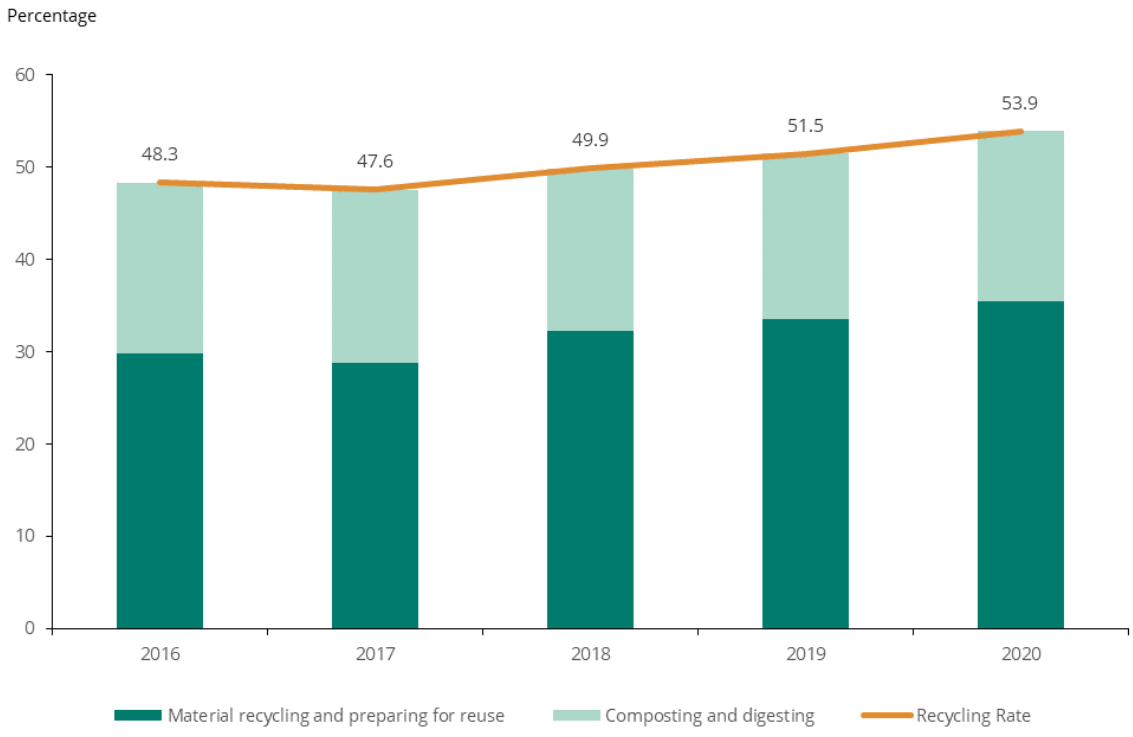
This chapter aims at assessing the prospects of Denmark to achieve the **55 % preparing for reuse and recycling target** for municipal waste in 2025. For a detailed description of the methodology followed, the development of success/risk factors and their impact on recycling, please consult the methodology 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 Denmark shows a steady increase mainly driven by increasing material recycling (Figure 2.1). In this analysis the recycling rate is calculated by dividing the summed amounts of recycling of materials and of composting and digestion by the total generated amounts. The data source used is the Eurostat data set *Municipal waste by waste management operations [env_wasmun]* (following the OECD/Eurostat Joint Questionnaire); Data reported by Member States according to Article 10.2(a) of the Waste Framework Directive are not used for this assessment as the reporting methods differ by Member State, resulting in a lack of comparability between Member States. The data source used here is assumed to be the best available proxy, given that data in accordance with the rules on the calculation of the attainment of the targets as defined in Article 11a are not yet available.

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



Source: Eurostat (2022a)

The actual distance to the target for the most recent data point is a key factor determining the likelihood of meeting/not meeting the target. The closer the Member State is to the target already, the more likely it becomes that the target will be met. For Denmark, the rate of municipal waste collected for recycling is 53.9 % in 2020, which is close to the 55 % target for 2025 (Miljø- og Fødevareministeriet, 2020).

However, the data used for this analysis is based on a different methodology than the calculation rules for the target. The Danish government has provisionally estimated the impact of the application of the new calculation rules on the recycling rates by accounting for average loss rates per waste type. The expected impact on the recycling rate for municipal waste is that the recycling rate would drop from 52 % to 44 % for 2019 (Danish Environmental Protection Agency, 2020). The same 8 percentage point decrease is applied to the latest available data (2020) in this assessment to calculate the actual distance to the target. The Danish government is working on a more precise way of calculating the recycling rate according to the new rules (Miljøministeriet, 2022).

Summary result

Distance to target 5 - 15 percentage points	Based on the currently available data, Denmark's recycling rate was 53.9 % in 2020, 1.1 percentage points below the 2025 target. Considering however, the application of the new calculation rules, an estimated decrease of the recycling rate by 8 percentage points is assumed, leading to an approximate recycling rate of 45.9 % or 9.1 percentage points below the target.
Robustness of the underlying information	The new calculation rules are likely to lead to lower calculated recycling levels. Based on calculations done by the Danish authorities, the recycling rate would drop by 8 percentage points.

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

The recycling rate over the last five years shows a steady increase of 5.6 percentage points from 2016 to 2020, mainly driven by increasing material recycling (Figure 2.1). This indicates that efforts have to be intensified compared to progress of the past few years.

Summary result

RR > 45%, and increase in last 5 years < 10 percentage points	The recycling rate has increased with 5.6 percentage points. For Denmark the application of the new calculation rules would result in an estimated recycling rate of 45.9 %, based on estimates done by the Danish Environmental Protection Agency that the recycling rate would decrease by 8 percentage points. The pace of improvement needs to be speeded up to obtain the target.
Robustness of the underlying information	There are no breaks in the time series data. For 2019 the Danish Environmental Protection Agency estimated that the recycling rate would drop by 8 percentage points if the new calculation rules would be applied, this same rate is used for 2020 in this assessment.

2.1.2 Legal instruments

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

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

Denmark has transposed the amended Waste Framework Directive in its Act No 807 of 9 June 2020 and Act No 645 of 19 May 2020 amending the Environmental Protection Act. Furthermore, the requirements for separate collection and waste management are transposed in Order No 2159 of 9 December 2020, which has since been repealed and replaced by Order No 2512 of 10 December 2021.

Summary result

Transposition without delay	Denmark 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 the accountability for failing the targets are, the higher the chance that the targets will be met.

The Ministry of Environment is responsible for preparing the national legislation related to waste management, including setting targets for preparation for re-use, recycling, or material recovery of municipal waste, as well as stating minimum requirements for the management of waste.

The Danish *Climate action plan for a green waste sector and a circular economy* was adopted in June 2020, which agreed to streamline the collection of municipal waste, as well as changing the framework for the waste sector so that it supports less waste incineration and more recycling. Further, it was agreed in the same Plan to reduce the incineration capacity. Capacity must be reduced and adapted to the Danish waste volumes so that the available capacity is not filled up with imported waste. In order to address plastic waste, the Plan foresees setting up a system for collecting plastic waste in the public space by January 2025 at the latest, as part of the extended producer responsibility for packaging to be introduced in Denmark.

The municipalities are responsible for collecting household waste and packaging waste as a part of household waste and have to ensure proper municipal waste management. It is defined in the Danish legislation, which types of waste the municipalities are obliged to collect separately and how the municipalities are to ensure proper waste management. The municipalities have to define minimum requirements for the collection of different waste fractions (Danish Environmental Protection Agency, 2021; Miljø- og Fødevareministeriet, 2019; Miljøministeriet, 2020b). The municipalities are required to separately collect ten different types of waste using high convenience collection systems (door-to-door or, for apartment blocks, in short walking distance): food, paper, cardboard, metal, glass, plastic, textile waste as well as beverage and food cartons, residual waste and hazardous waste. This requirement is implemented in national legislation and applies from 1 July 2021. However, a majority of municipalities have been granted an extension of the deadline until end of 2022 (Miljøministeriet, 2021a); for textile waste the deadline still has to be decided but will lie between 1 July 2023 and 1 January 2025. If the municipalities offer bulky waste schemes they are also required to sort the waste after collection in order to achieve a high recycling and reuse rate.

Commercial producers of waste, including of municipal waste similar to household waste, are obliged to sort their waste at source into recyclable fractions, and to make sure that the recyclable fractions are used for material recovery (Miljøministeriet, 2020b). Municipalities can decide to organise

collection of residual waste from commercial waste producers or oblige them to deliver the waste to certain waste facilities (Energistyrelsen, 2021). Municipalities are obliged to control the correct management of commercial waste via inspections (Danish Environmental Protection Agency, 2021).

Measures to achieve the targets are defined in the Circular Economy Action Plan – National plan for prevention and management of waste (Handlingsplan for cirkulær økonomi – National plan for forebyggelse og håndtering af affald 2020-2032). In addition, the municipalities are required by 1 January 2022 to set requirements for minimum 60 % recycling of the collected household plastic waste in their contracts with the waste collectors. The municipalities must furthermore ensure a high recycling rate of all separately collected recyclable types of waste, however, national legislation does not set quantitative targets for recycling for the municipalities to meet.

The Danish deposit and return system (DRS) for beverage packaging is responsible for collection and recycling of disposable beverage packaging, not for the handling of refillable bottles. The DRS is regulated in the Order on Deposits (Danish Environmental Protection Agency, 2021; Miljøministeriet, 2020a).

The Danish EPA supports the implementation of proper waste management in Denmark via communication and cooperation with municipalities. The EPA has published guidelines for waste management, aiming to streamline and improve waste collection and ensure increasing capture rates of recyclables in Denmark for both municipal waste and packaging waste (Danish Environmental Protection Agency, 2021).

Related to enforcement mechanisms, the National Board of Appeal is the supervising authority for the municipalities, supervising the compliance with national law. In the case of non-compliance, the Board can assign daily fines to the members of the municipal council as enforcement mechanism. (Danish Environmental Protection Agency, 2021)

Summary result

Clearly defined responsibilities, enforcement and good set of support mechanisms for meeting the recycling targets	Denmark reports clearly defined responsibilities, as well as clearly defined enforcement mechanisms for meeting the targets on recycling of municipal waste, in addition Denmark also presents support mechanisms to improve the implementation of the responsible entities.
Robustness of the underlying information	Credible information received from the Danish 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.

Denmark has a landfill tax in place since 1987 of 475 DKK/t (about 63.3 EUR/t) before VAT (about 79 EUR/t VAT incl.). Since 1997, there is also a landfill ban on recyclable and combustible waste (Danish Environmental Protection Agency, 2021; Skatteministeriet, 2020).

Summary result

Ban in place for landfilling residual or biodegradable waste	Denmark has a landfill ban, and a landfill tax of 79 EUR/t (corresponding to 56 EUR/t rescaled based on purchasing power parities([a]))
Robustness of the underlying information	Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire.

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

SRF MSWR-3.2: Taxes on municipal waste incineration

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

Denmark has taxes on waste incineration via three different elements (Danish Environmental Protection Agency, 2021; SKAT (Danish Tax Authority), 2022; Miljøministeriet, 2022):

- An incineration tax since 1999 that totals 52.5 DKK/GJ in 2022, consisting of:
  - A tax on heat generated from waste incineration (20.7 DKK/GJ), which is indexed annually with the net price index
  - An additional incineration tax (31.8 DKK/GJ), which is not indexed.
- A CO_2-tax since 2010 which is levied on incinerated non-biodegradable waste (179.2 DKK/tonne of CO_2 emitted), which is indexed annually with the net price index.

Due to the different tax bases for the three taxation elements, the taxes cannot easily be translated into a tax per tonne of waste. If an energy content of 10.6 GJ/tonne is assumed (Danish Ministry of the Environment, 2013), the incineration tax alone would be around 557 DKK/tonne, corresponding to 75 EUR/t.

Summary result

Taxes > 18 EUR/t([a])	If an energy content of 10.6 GJ/tonne is assumed, the incineration tax alone would be about 75 EUR/t (corresponding to 53 EUR/t rescaled based on purchasing power parities). Furthermore, a CO_2-tax is levied on incinerated non-biodegradable waste.
Robustness of the underlying information	The underlying information provided by the Danish authorities can be considered robust. The calculation of the total incineration tax rate is based on assumptions.

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

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

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

Denmark has a policy of full cost recovery for municipal waste collection which allows for the possibility of PAYT-schemes. As a principle, the fees for municipal waste management shall cover all costs related to the service. It is not allowed to cover cost for the service of collecting recyclables through the residual waste fee. The legal framework permits the use of PAYT by municipalities. Municipalities still often charge a flat rate for collection of both recyclables and residual waste, with

some municipalities granting citizens a choice of the size of container, the larger container having a higher fee (Danish Environmental Protection Agency, 2021; Klima-, Energi- og Forsyningsministeriet, 2020). Recent information about the shares of the different systems is not available. A survey of Danish municipalities performed in 2015 indicated that container volume based fees and fees based on a combination of factors were dominant while there was very little use of weight based systems (Deloitte and Incentive, 2015).

Summary result

PAYT scheme implemented in some regions/ municipalities (50-80% of population covered)	Denmark has a policy for municipal waste collection which allows for the possibility of PAYT-schemes but municipalities often do not implement PAYT.
Robustness of the underlying information	It is unclear how strong the economic incentive is for citizens to place waste in the bins for recyclables instead of in the bin for residual waste. Recent information about the shares of the different systems (volume based, frequency of collection, weight based) is not available.

2.1.4 Separate collection system

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

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

For Denmark, according to the most recent data, the percentage of households living in cities is 32 %, in towns and suburbs 35 % and in rural areas 33 % (Eurostat, 2021a).

In Denmark, there have been a large number of different waste sorting and collection schemes across the municipalities, resulting in a high variance in the collection schemes between municipalities. This changed in July 2021 with the implementation of *the Climate action plan for a green waste sector and a circular economy* (see next section), however, the majority of Danish municipalities have been granted an extension of the deadline to fully implement the new requirements until end of 2022. The use of co-mingled collection has been increasing (Eurostat, 2020b). The separate collection of food waste is today not covered by all municipalities (56 %) (Danish Environmental Protection Agency, 2021).

The municipalities are required to separately collect ten different types of waste through high convenience collection systems: food, paper, cardboard, metal, glass, plastic, textile waste as well as beverage and food cartons, residual waste and hazardous waste. The collection should be door-to-door if possible, with respect to the types of buildings/housing area. Depending on the type of areas a bring point can be used, that is located so it can be reached by foot. Thus, the type of schemes used

will change over the next two years – since the deadline has been postponed for a number of municipalities.

Both households and companies are obliged to sort their waste for separate collection. Municipalities can decide if companies can use the collection system organised by the municipality or if they should organise collection themselves or through contractors. However, municipalities are responsible for the inspection of commercial waste management (Danish Environmental Protection Agency, 2021; Miljøministeriet, 2020c).

Table 2.1 gives an overview of the collection system in Denmark. The collection in Demark is material based and the collection systems do not distinguish between packaging and non-packaging waste. The Danish EPA publishes data about municipalities' implementation of the requirements to collect ten different fractions separately (Miljøministeriet, 2021c).

Table 2.1 Characterisation of the collection system in Denmark

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

Note: xx: dominant system; x: other significant systems. Grey cells indicate high convenience collection systems. (a) Primo 2022, about 1.25 million people (23 % of the population) covered by separate collection of food and drink cartons

Source: Danish Environmental Protection Agency (2021), Miljøministeriet (2021c)

Taking this into account, Denmark uses a range of options for separate collection, with different services offered in different municipalities.

Summary result

Paper and cardboard	A high share of the population is covered by high convenience collection services	For paper and cardboard waste, different types of separate collection systems are used by the Danish municipalities but door-to-door separate collection and high-density bring points dominate.
Metals	A high share of the population is covered by high convenience collection services	For metals waste, a large range of different types of separate collection systems are used by the Danish municipalities, except low-density bring points in urban areas and civic amenity sites in rural areas.
Plastics	A high share of the population is covered by high convenience collection services	For plastic waste, a large range of different types of separate collection systems are used by the Danish municipalities, except low-density bring points in urban areas and civic amenity sites in rural areas.
Glass	A high share of the population is covered by high convenience collection services	Denmark conducts all separate collection alternatives for the collection of glass waste. More than 70 % of the municipalities collect glass waste either by door-to-door collection or high-convenience bring points.
Bio-waste	A medium share of the population is covered by high convenience collection services	Denmark conducts door-to-door and high density bring point collection for food and garden waste, but not yet in all municipalities. Garden waste is additionally collected at civic amenity sites. Improvements are expected by the end of 2022.
Wood	A high share of the population is covered by high convenience collection services	Denmark conducts door-to-door and high density bring point collection for wood waste. This collection mainly refers to picking up bulky waste from households. Wood waste is additionally collected at civic amenity sites.
Textiles	A low share of the population is covered by high convenience collection services	Denmark conducts bring point and civic amenity site collection with a small addition of co-mingled collection for textile waste. Reusable textiles are also collected by charities.
WEEE	High to medium convenience collection services dominate	Denmark conducts door-to-door and high-density bring point collection for WEEE and additionally civic amenity site collection in urban areas. Many municipalities have introduced collection schemes for battery waste and small electronic waste, e.g. so that it is collected together with hazardous waste.
Robustness of the underlying information		Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire. Danish 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

In the waste Law it is stated , that as of July 2021, with the option to apply for a derogation until 31 December 2022, all municipalities are obliged to arrange high convenience separate collection schemes for the following waste fractions (Danish Environmental Protection Agency, 2021; Miljøministeriet, 2020b): residual waste, paper, cardboard, metal, glass, plastic, food waste, textiles (between mid-2023 and 1 January 2025), composite packaging (food- and drink cartons) and hazardous waste.

The municipalities can choose between door-to-door-separate collection or door-to-door-co-mingled collection (for certain combinations of materials). For glass as well as for all fractions in densely populated areas and from holiday cottages a bring point system in walking distance from the house is accepted. For the following fractions co-mingled collection will be allowed (Danish Environmental Protection Agency, 2021; Miljøministeriet, 2020d): paper/cardboard, metal/plastic, plastic/ composite packaging, metal/plastic/composite packaging and metal/glass.

Today, reusable textiles are collected via charity organisations. The separate collection scheme for textile waste will be limited to textiles waste not suitable for reuse (Danish Environmental Protection Agency, 2021).

Together with the national harmonisation of the separate collection system, a harmonised pictogram and colour scheme is rolled out in order to improve the citizen's understanding of the waste collection system across the country. It has been developed by the Danish Environmental Protection Agency, the Association of municipalities and the Danish Waste Association and is used or underway to be used by nearly all Danish municipalities (Danish Waste Association, 2021).

As of 2023, non-household waste generators are obliged to sort their waste for separate collection similar to household waste for the same fractions as households with the same options regarding co-mingled fractions (Danish Environmental Protection Agency, 2021; Miljøministeriet, 2020c). It is important to note that non-household waste generators already are obliged to sort their waste and ensure proper waste management. But from 2023 they are obliged to sort municipal waste in the same way and use the same pictograms on the collection containers as municipalities shall for collection containers for household waste. Non-household waste generators are allowed to sort in more detailed fractions if it is suitable with regard to the specific waste generated.

Summary result

Paper and cardboard	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	As of July 2021, but with the option to apply for a derogation until end 2022, all municipalities in Denmark are obliged to arrange separate collection schemes (door-to-door or high convenience bring points)
Metals	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	As of July 2021, but with the option to apply for a derogation until end 2022, all municipalities in Denmark are obliged to arrange separate collection schemes (door-to-door or high convenience bring points)

Plastics	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	As of July 2021, but with the option to apply for a derogation until end 2022, all municipalities in Denmark are obliged to arrange separate collection schemes (door-to-door or high convenience bring points)
Glass	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	As of July 2021, but with the option to apply for a derogation until end 2022, all municipalities in Denmark are obliged to arrange separate collection schemes (door-to-door or high convenience bring points)
Bio-waste	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	As of July 2021, but with the option to apply for a derogation until end 2022, all municipalities in Denmark are obliged to arrange separate collection schemes (door-to-door or high convenience bring points)
Wood	N/A (for countries already covering > 80% of the population by high convenience collection services)	No changes planned.
Textiles	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	Between 2023 and 2025, it will be required that all municipalities in Denmark are obliged to arrange separate collection schemes (door-to-door or high convenience bring points)
WEEE	N/A (for countries already covering > 80% of the population by high convenience collection services)	No changes planned.
Robustness of the underlying information		Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire. The obligations for municipalities are set in the Danish legislation and explained in recommendations issued by the Danish EPA.

2.1.5 Extended producer responsibility (EPR) and similar schemes

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

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

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

Denmark has no general EPR scheme for packaging yet, instead Denmark has a comprehensive deposit return system for beverage packaging, also aiming at preventing free riding in relation to beverage

packaging. The deposit return system is planned to continue and to operate in parallel with a new general EPR scheme for all other packaging, which is not covered by the deposit return system. The implementation process for setting up a general EPR scheme has started. A law that establishes the legal basis for a general EPR system for packaging in Denmark was passed by the Danish Government in June 2020. In March 2022, the organisation and administrative setup for the EPR system is still under discussion with political parties (Miljøministeriet, 2022). The EPR scheme for packaging will be introduced no later than 31 December 2024 and will include all types of packaging in all types of materials.

While no EPR system and thus no fee modulation within EPR is currently in place for packaging, the Danish deposit return system (Dansk Retursystem) requires producers and importers of bottled and canned beverages to pay a quarterly fee for marketing beverages on which deposits are payable. The fees vary for each type of bottle or can, depending on the volume of the bottle or can and their recyclability. The fees are calculated each year based on the expenditure of Dansk Retursystem versus the income. The fees are required to solely reflect the exact costs of operating and administering an efficient deposit and return system (Danish Environmental Protection Agency, 2021).

Summary result

No EPR scheme and no advanced fee modulation	Denmark has no EPR scheme for packaging yet.
Robustness of the underlying information	Credible information received from the Danish 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 material fraction in municipal waste, and adequate treatment capacity needs to be made available.

As reported by the Danish authorities, the country's separately collected bio-waste amounted to 1 336 000 tonnes in 2019, comprising of 353 000 tonnes of food waste collected from households, restaurants, catering, retail and food industry, and 983 000 tonnes of garden waste. 93 % of garden waste from households was collected for recycling (Miljø- og Fødevareministeriet, 2020). In 2019 882 000 tonnes municipal waste was collected for composting and digestion (Eurostat, 2021b). The Danish authorities estimate, based on current knowledge, that 75 % of garden waste collected for recycling undergoes recycling treatment, if accounting for average loss rates per waste type according to the new calculation rules. For food waste the estimate is 85 %. The Danish authorities do not report a specific available capacity for the treatment of bio-waste. The total generation of bio-waste within total municipal waste, including separately collected bio-waste and bio-waste present in the residual waste fraction, is estimated at 1 901 206 tonnes in 2017 (this is the sum of food waste and garden waste) (Table 1.1).

As of July 2021 and by end of 2022 at the latest, all households should have collection of food waste, and from 31 December 2023 the municipalities are required to establish a separate collection scheme for garden waste from households. Bio-waste treatment will be privately organised and municipalities must tender the treatment of bio-waste. Municipalities unable to cover the capacity demand from the private sector may be granted exemption from the legal requirement to tender the treatment of bio-waste and allowed to arrange for treatment capacity themselves (Danish Environmental Protection Agency, 2021; Government of Denmark, 2020).

Based on a survey of treatment installations and a calculation on the potential of food waste in Denmark, the Waste and Resource Network Denmark (DAKOFA, 2021) estimates that the current capacity for anaerobic digestion of food waste covers 72-87 % of the food waste potential (related to both food waste from households and the service sector).

Based on the presented information, it is likely that the currently available capacity for the treatment of bio-waste is slightly below 80 % of the generated bio-waste, however, the municipalities have a clear mandate to either tender or create the additional capacity needed to close any capacity gap.

Summary result

Bio-waste capacity below 80% of generated municipal bio-waste but firm plans to close the gap	The Danish authorities report that the required additional capacity demand for the treatment of bio-waste will be covered by the private sector or the municipalities.
Robustness of the underlying information	The information regarding available capacities is limited, and information is lacking on how the future capacity building will be implemented in practice.

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.

Denmark has national standards for compost quality (EEA, 2020; Miljø- og Fødevareministeriet, 2018, 2008). Before the composting and/or biogas process, the bio-waste needs to comply with the limit values laid down in statutory order no. 1001 of the 27 June 2018 regarding the use of waste for agricultural purposes (Miljøministeriet, 2022).

The Danish Agricultural Agency is in the process of implementing Regulation (EU) 2019/1009 of the 5 June 2019 regarding laying down rules on the making available on the market of EU fertilising products. This regulation includes quality management systems and standards for compost quality (Miljøministeriet, 2022).

Summary result

Legally binding national standards for compost/digestate quality but no quality management system	Denmark has legally binding national standards for compost quality. The bio- waste needs to comply with certain limit values before being used in a composting and/or biogas process.
Robustness of the underlying information	The information is based on legal standards.

2.2 Target for the recycling of packaging waste

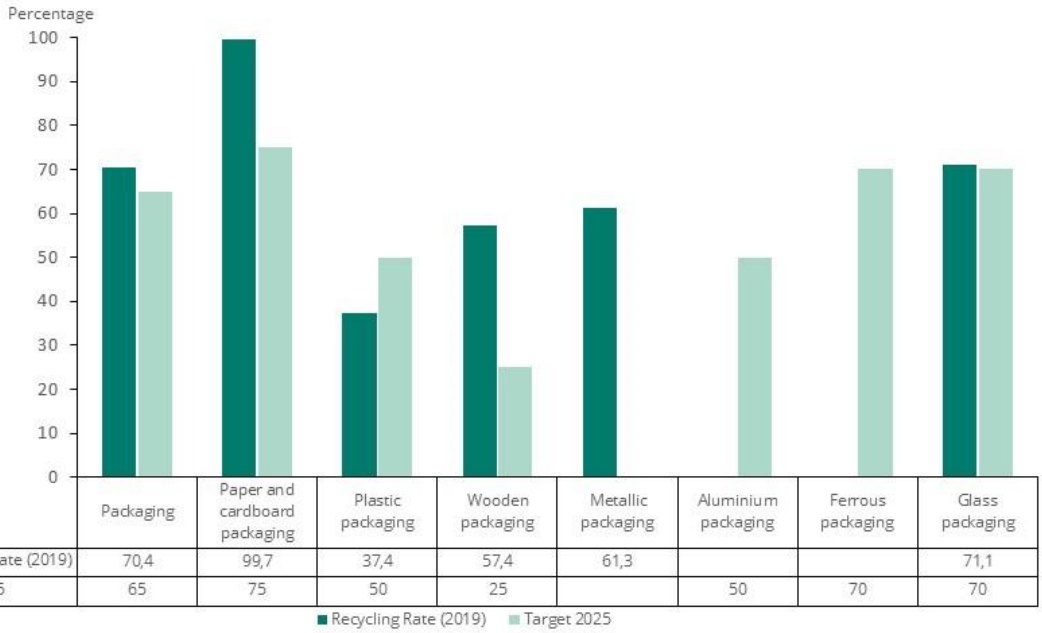
This chapter aims at assessing the prospects of Denmark to achieve the **65 % recycling target for packaging waste** in 2025 as well as the **material specific packaging waste recycling targets** (50 % of plastic; 25 % of wood; 70 % of ferrous metals; 50 % of aluminium; 70 % of glass; 75 % of paper and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

2.2.1 Current situation and past trends

SRF P-1.1 Distance to target

The actual distance to the target for the most recent data point is a key factor determining the likelihood of meeting or not meeting the target. This analysis is based on data reported by Denmark 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 refers to 2019. The performance of Denmark for 2019 is illustrated in Figure 2.2.

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



	Packaging	Paper and cardboard packaging	Plastic packaging	Wooden packaging	Metallic packaging	Aluminium packaging	Ferrous packaging	Glass packaging
Recycling Rate (2019)	70,4	99,7	37,4	57,4	61,3			71,1
Target 2025	65	75	50	25		50	70	70

Note: No data available for ferrous and aluminium packaging, only for metallic packaging.
Source: Eurostat (2022c), EU (2018)

For Denmark the reported recycling rates exceed the targets for all packaging materials except of plastics packaging. For total packaging, the recycling exceeds the target by 5.4 percentage points, for paper and cardboard packaging by 22.7 percentage points, for glass by 1.1 percentage points, and for wooden packaging by 32.4 percentage points. For metals, the reported rates do not make a distinction between ferrous metals and aluminium, but the total recycling rate for metals (61.3 %) still exceeds

the recycling target for aluminium, but not for ferrous metals. For plastics packaging, the reported recycling rate is 12.6 percentage points below the target (Eurostat, 2022c).

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.

Denmark has carried out a preliminary assessment of the impact of the new calculation rules. Currently, the reported data refer to packaging waste collected for recycling and the final recycling rate will refer to the output of recycling. The Danish government has estimated final recycling rates for the year 2018 by accounting for average loss rates per waste type (Danish Environmental Protection Agency, 2021). If the same reduction in the rates (in percentage points) are used to calculate the impact of the new calculation rules to the reported data for the year 2019, the recycling rates would decrease as follows:

- Paper and cardboard packaging waste by 3 per cent points from 99.7 % to 96.7 %
- Metal packaging waste by 10 per cent points from 61.3 % to 51.3 %
- Glass packaging waste by 3 per cent points from 71.1 % to 68.1 %
- Plastic packaging waste by 17 per cent points from 37.4 % to 20.4 %
- Wood packaging waste by 4 per cent points from 57.4 % to 53.4 %
- Total packaging: Calculated based on the amounts of each packaging material generated and recycled in 2019, the recycling rate would drop from 70.4 % to 64.1 %.

The waste generation data includes also privately imported packaging, and for plastics and paper/cardboard also estimates for online sales (Eurostat, 2020b).

It is likely that the currently reported recycling rate of 99.7 % is overestimated for paper and cardboard packaging. The latest Danish composition analysis of mixed household waste (Miljøstyrelsen, 2018) found that 3.1 % of this waste was cardboard, corresponding to around 31 000 tonnes in 2017 (the same study reports the amount of mixed household waste to be 995 000 tonnes). If it is assumed that most of this cardboard is packaging, around 8 % of the generated paper and cardboard packaging would end up in mixed municipal waste. This estimate does not take into account municipal waste from non-households and paper packaging.

Summary result

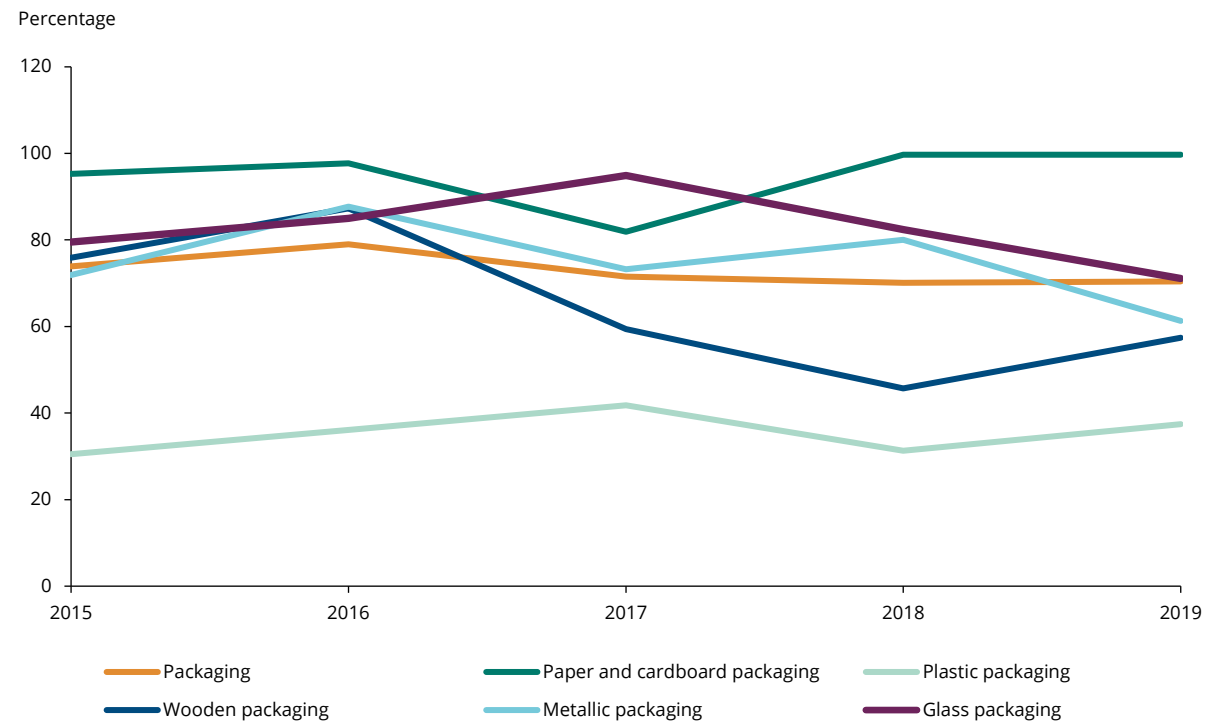
Total packaging	< 5 percentage points below target	Denmark reports a recycling rate of 70.4 %. If the estimated loss rate provided by Denmark is applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 64.1 %, 0.9 percentage points below the 2025 target.
Paper and cardboard packaging	Target exceeded	Denmark reports a recycling rate of 99.7 %. If the estimated loss rate provided by Denmark is applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 96.7 %, 21.7 percentage points above the 2025 target.

Ferrous metals packaging	> 15 percentage points below target	Denmark reports a recycling rate of 61.3 % for total metals packaging. If the estimated loss rate provided by Denmark is applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 51.3 %, 18.7 percentage points below the target for steel and 1.3 percentage points above the target for aluminium.
Aluminium packaging	Target exceeded	
Glass packaging	< 5 percentage points below targe	Denmark reports a recycling rate of 71.1 %. If the estimated loss rate provided by Denmark is applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 68.1%, 1.9 percentage points below the 2025 target.
Plastics packaging	> 15 percentage points below target	Denmark reports a recycling rate of 37.4 %. If the estimated loss rate provided by Denmark is applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 20.4 %, 29.6 percentage points below the 2025 target.
Wooden packaging	Target exceeded	Denmark reports a recycling rate of 57.4 %. If the estimated loss rate provided by Denmark is applied (taking into account losses in the recycling plants), the estimated recycling rate would drop to 53.4 %, 28.4 percentage points above the 2025 target.
Robustness of the underlying information		The recycling rates used for the assessment referring to 2019 data are estimated, by applying the same reduction (in percentage points) as calculated by the Danish authorities for losses during sorting and recycling for the 2018 data in order to assess the impact of the new calculation rules on the currently reported recycling rates. Separate data for aluminium and ferrous metals packaging are not yet available. The 99.7 % recycling rate for paper and cardboard packaging is very high, indicating that not all generated paper and cardboard waste may be included in the waste generation data. Danish authorities indicate that the methodology for the data on amounts put on the market underestimates the amounts for paper and cardboard and overestimates the amounts for plastics packaging.

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 Denmark are illustrated in Figure 2.3.

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



Source: Eurostat (2022c)

The overall packaging recycling rate for the past five years started at 73.9 % in 2015, peaked at 79 % in 2016 and dropped to 70.4 % in 2019. The recycling rate of paper and cardboard packaging increased from 95.3 % in 2015 to 99.7 % in 2019. Plastic packaging increased from 30.5 % in 2015 to 37.4 % in 2019, while it peaked in 2017 at 41.8 %. The recycling rate of wooden packaging has plummeted; starting at 75.9 % in 2015 and peaking at 87.3 % in 2016, the recycling rate was 57.4% in 2019. The strong rise and drop in recycling of wooden packaging is influenced by the supply of and replacement of re-used wooden pallets and recycling activities may not take place the same year as waste generation (Eurostat, 2020b). The recycling rate of metallic packaging showed a decrease of 10.6 percentage points during the five years, and for glass packaging a decrease with 8.4 percentage points. (Eurostat, 2022c)

The Danish calculation methodology for packaging waste generation is to be updated (Eurostat, 2020b), which may improve the data also on recycling rates.

Summary result

Total packaging	RR > 60% and increase in last 5 years < 5 percentage points	The recycling rate decreased by 3.5 percentage points over the past five years, and is estimated to be 64.1 % in 2019 applying the estimated loss rate provided by Denmark.
Paper and cardboard packaging	RR > 75%	The recycling rate increased by 4.4 percentage points over the past five years, and is estimated to be 96.7 % in 2019 applying the estimated loss rate provided by Denmark.
Ferrous metals packaging	RR < 60% and increase in last 5 years < 10 percentage points	The recycling rate decreased by 10.6 percentage points over the past five years, and is estimated to be 51.3 % in

Aluminium packaging	RR > 50%	2019 applying the estimated loss rate provided by Denmark.
Glass packaging	RR > 65% and increase in last 5 years < 5 percentage points	The recycling rate decreased by 8.4 percentage points over the past five years, and is estimated to be 68.1 % in 2019 applying the estimated loss rate provided by Denmark.
Plastics packaging	RR < 40% and increase in last 5 years < 10 percentage points	The recycling rate increased by 6.9 percentage points over the past five years, and is estimated to be 20.4 % in 2019 applying the estimated loss rate provided by Denmark.
Wooden packaging	RR > 25%	The recycling rate decreased by 18.5 percentage points over the past five years, and is estimated to be 53.4 % in 2019 applying the estimated loss rate provided by Denmark.
Robustness of the underlying information		There are no breaks in the time series for 2015-2019 indicated in the dataset. The estimated recycling rates used for the assessment referring to 2019 data are estimated by applying the same reduction (in percentage points) as calculated by the Danish authorities for losses during sorting and recycling for the 2018 data in order to assess the impact of the new calculation rules on the currently reported recycling rates. Separate data for aluminium and ferrous metals packaging are not yet available.

2.2.2 Legal instruments

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

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

Summary result

Transposition without delay	Denmark has transposed the amended Packaging and Packaging Waste Directive 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 P-2.2: Responsibilities for meeting the targets, and enforcement mechanisms, e.g. fines etc.

As described in Section 2.1.2, the current responsibilities, enforcement mechanisms and support tools for meeting the targets are well defined. Packaging waste is under the same administration as municipal waste. However, the implementation process for setting up a general EPR scheme has started (see Section 2.1.5), with the aim to transfer the responsibility for packaging recycling to the producers. The EPR scheme for packaging will be introduced no later than 31 December 2024 and will include all types of packaging in all types of materials. Decisions about the organisation and administrative setup for the EPR system have not yet been made and thus forthcoming responsibilities for meeting the packaging waste targets in Denmark are not fully defined.

Summary result

Unclear responsibilities, weak/no enforcement mechanisms and lack of support tools for meeting the recycling targets	Denmark has planned to implement an EPR scheme for packaging waste by the end of 2024, but the configuration of the scheme, enforcement and support mechanisms are not yet defined.
Robustness of the underlying information	Reliable information provided by the Danish authorities in the EEA-ETC/WMGE questionnaire. The implementation process for setting up an EPR scheme for packaging in Denmark has started but decisions about the organisation and administrative setup for the EPR system have not yet been made and thus forthcoming responsibilities are not fully defined.

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, Denmark has a landfill tax and a landfill ban in place.

Summary result

Ban in place for landfilling residual or biodegradable waste	Denmark has a landfill ban in place
Robustness of the underlying information	Credible information received from the Danish 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, Denmark has an incineration tax in place annually adjusted by the net price index.

Summary result

Taxes > 18 EUR/t([a])	If an energy content of 10.6 GJ/tonne is assumed, the incineration tax alone would be about 75 EUR/t (corresponding to 53 EUR/t rescaled based on purchasing power parities). Furthermore, a CO_2-tax is levied on incinerated of non-biodegradable waste.
Robustness of the underlying information	The underlying information provided by the Danish authorities can be considered robust. The calculation of the total incineration tax rate is based on assumptions.

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

SRF P-3.3: Packaging taxes

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

According to the information available, Denmark implements packaging taxes with an escalator (taxes on packaging, bags and disposable tableware are indexed with 5.5 % in 2024), as presented in Table 2.2. The packaging taxes focus on beverage packaging (excl. dairy), PVC films for food, bags and disposable tableware. Packaging that is included in the deposit return scheme is exempted from the packaging taxes.

Table 2.2 Packaging taxes in Denmark in 2021; DKK per kg and DKK per item. Taxes on packaging, bags and disposable tableware are indexed with 5.5 percent in 2024

Containers in all materials to use for beer, mineral water, lemonade, alcopops or cider etc. Smaller than 10 cl	0.05 DKK/item
Containers in all materials to use for beer, mineral water, lemonade, alcopops or cider etc. Between 10 and 40 cl	0.11 DKK/item
Containers in all materials to use for beer, mineral water, lemonade, alcopops or cider etc. Between 40 and 60 cl	0.17 DKK/item
Containers in all materials to use for beer, mineral water, lemonade, alcopops or cider etc. Between 60 and 110 cl	0.34 DKK/item
Containers in all materials to use for beer, mineral water, lemonade, alcopops or cider etc. Between 110 and 160 cl	0.51 DKK/item
Containers in all materials to use for beer, mineral water, lemonade, alcopops or cider etc. Larger than 160 cl.	0.68 DKK/item
Containers made of cardboard or laminate to use for wine or spirits. Smaller than 10 cl	0.08 DKK/item
Containers made of cardboard or laminate to use for wine or spirits. Between 10 and 40 cl	0.16 DKK/item
Containers made of cardboard or laminate to use for wine or spirits. Between 40 and 60 cl	0.26 DKK/item
Containers made of cardboard or laminate to use for wine or spirits. Between 60 and 110 cl	0.53 DKK/item
Containers made of cardboard or laminate to use for wine or spirits. Between 110 and 160 cl	0.79 DKK/item
Containers made of cardboard or laminate to use for wine or spirits. Larger than 160 cl.	1.05 DKK/item
Containers made of glass, plastic or metal to use for wine or spirits. Smaller than 10 cl	0.14 DKK/item
Containers made of glass, plastic or metal to use for wine or spirits. Between 10 and 40 cl	0.26 DKK/item
Containers made of glass, plastic or metal to use for wine or spirits. Between 40 and 60 cl	0.42 DKK/item
Containers made of glass, plastic or metal to use for wine or spirits. Between 60 and 110 cl	0.84 DKK/item
Containers made of glass, plastic or metal to use for wine or spirits. Between 110 and 160 cl	1.27 DKK/item
Containers made of glass, plastic or metal to use for wine or spirits. Larger than 160 cl.	1.69 DKK/item
PVC films for food packaging	40.70 DKK/kg
Tax on bags of paper	31.65 DKK/kg
Tax on bags of plastic	69.63 DKK/kg
Tax on disposable tableware	60.77 DKK/kg

Source: Danish Environmental Protection Agency (2021)

Summary result

Packaging taxes in place	Denmark has packaging taxes in place with the aim to reduce the use of packaging material.
Robustness of the underlying information	Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire.

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

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

As described in Section 2.1.3 in more detail, Denmark has a policy for municipal waste collection which allows for the possibility of PAYT-schemes but municipalities often do not implement PAYT.

Summary result

PAYT scheme implemented in some regions/ municipalities (50-80% of population covered)	Denmark has a policy for municipal waste collection which allows for the possibility of PAYT-schemes but municipalities often do not implement PAYT
Robustness of the underlying information	It is unclear how strong the economic incentive is for citizens to place waste in the bins for recyclables instead of in the bin for residual waste. Recent information about the shares of the different systems (volume based, frequency of collection, weight based) is not available.

SRF P-3.5: Deposit return systems

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

The Danish Deposit and return scheme is regulated in the Statutory Order on Deposits. Dansk Retursystem A/S runs the deposit and return scheme in Denmark. Requirements on the targeted return percentage is agreed between the Danish Ministry of Environment and DRS. The Danish DRS covers the following packaging (Danish Environmental Protection Agency, 2021; Miljøministeriet, 2020a):

- Beer;
- Carbonated beverages (such as soft drinks with an alcohol content of 0–0.5 %);
- Other fermented drink products (such as cider with an alcohol content of less than 10 %);
- Mixer products in which spirits, wine or other fermented products are mixed with other beverages such as soft drinks, cider or juice (such as alcoholic soft drinks with alcohol content exceeding 0.5 % but not exceeding 10 %);
- Mineral water, water, lemonade, iced tea and similar products that are non-carbonated and ready to drink;
- Concentrated cordial intended to be diluted before it is consumed;
- Pure juice of fruits and vegetables;
- Smoothies (without milk).

Summary result

Aluminium drink cans	Mandatory DRS for nearly all drink cans	The mandatory system covers nearly all drink cans (see above list)
Glass drink bottles	Mandatory DRS for nearly all drink bottles	The mandatory system covers nearly all drink glass bottles (see above list)
Plastic drink bottles	Mandatory DRS for nearly all drink bottles	The mandatory system covers nearly all plastic bottles (see above list)
Plastic crates	Voluntary DRS for some specific plastic crates	The voluntary system covers some specific plastic crates for beers and sodas
Wooden packaging	No DRS for wooden packaging	
Robustness of the underlying information		Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire.

2.2.4 Separate collection system

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

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

As described in Section 2.1.4 in more detail, separate collection is mandatory in Denmark for both households and companies (non-households).

Summary result

Paper and cardboard packaging	**1. Packaging waste from households** A high share of the population is covered by high convenience collection services	Danish municipalities apply different separate collection schemes for the collection of paper and cardboard waste, but door-to-door separate collection and high-density bring points dominate.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household paper and cardboard packaging waste	Separation at source is mandatory in Denmark for companies
Ferrous metals packaging	**1. Packaging waste from households** A high share of population is covered by high convenience collection services	Denmark applies all separate collection alternatives for the collection of metals, except low-density bring points in urban areas and civic amenity sites in rural areas.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household ferrous metals packaging waste	Separation at source is mandatory in Denmark for companies

Aluminium packaging	**Packaging waste from households** A high share of population is covered by high convenience collection services	Denmark applies all separate collection alternatives for the collection of metals, except low-density bring points in urban areas and civic amenity sites in rural areas.
Plastics packaging	**1. Packaging waste from households** A high share of population is covered by high convenience collection services	Denmark applies all separate collection alternatives for the collection of plastics, except low-density bring points in urban areas and civic amenity sites in rural areas.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household plastic packaging waste	Separation at source is mandatory in Denmark for companies
Glass packaging	**1. Packaging waste from households** A high share of the population is covered by high convenience collection services	Denmark applies all separate collection alternatives for the collection of glass waste. More than 70 % of the municipalities either have door-to-door collection services or collect glass in cubes within walking distance of the household.
	2. Packaging waste from non-household sources Separation at source is mandatory for non-household glass packaging waste	Separation at source is mandatory in Denmark for companies
Wooden packaging	**Packaging waste from non-household sources** Separation at source is mandatory for non-household wooden packaging waste	Separation at source is mandatory in Denmark for companies
Robustness of the underlying information	Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire. Quantitative information on the shares of the population covered by the different systems is not available.	

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 of separate collection for the different packaging waste fractions

Concrete plans are needed to improve the convenience and coverage of separate collection. This SRF is 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[1]. Again, the material specific assessment considers packaging waste from both household and non-household sources.

As described in Section 2.1.4 in more detail, as of July 2021 all municipalities in Denmark are obliged to arrange unified separate collection schemes. The collection should be door-to-door if possible with respect to the types of buildings/housing area. Depending on the population density, also high-density bring points can be used.

[1] 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** Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	By end of 2022 at the latest, all municipalities in Denmark are obliged to arrange separate collection schemes with a high service level.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory sorting at source for non-household ferrous metals packaging waste)	
Ferrous metals packaging	**1. Packaging waste from households** Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	By end of 2022 at the latest, all municipalities in Denmark are obliged to arrange separate collection schemes with a high service level.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory sorting at source for non-household paper and cardboard packaging waste)	
Aluminium packaging	**Packaging waste from household sources** N/A (for countries already covering > 80% of the population by high convenience points)	
Glass packaging	**1. Packaging waste from households** Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	By the end of 2022 at the latest, all municipalities in Denmark are obliged to arrange separate collection schemes with a high service level.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory sorting at source for non-household glass packaging waste)	
Plastics packaging	**1. Packaging waste from households** Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline.	By end of 2022 at the latest, all municipalities in Denmark are obliged to arrange separate collection schemes with a high service level.
	2. Packaging waste from non-household sources N/A (for countries already implementing mandatory sorting at source for non-household plastic packaging waste)	
Wooden packaging	**Packaging waste from non-household sources** N/A (for countries already implementing mandatory sorting at source for non-household wooden packaging waste)	
Robustness of the underlying information		Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire.

2.2.5 Extended producer responsibility (EPR) and similar schemes

SRF P-5.1: Coverage of EPR schemes

As described in Section 2.1.5 in more detail, Denmark has no general EPR schemes for packaging yet but only a deposit-return system for beverage packaging as described in section 2.1.5.

Summary result

Not all main packaging fractions([a]) are covered by EPR schemes	Denmark has no EPR scheme for all packaging yet.
Robustness of the underlying information	Credible information received from the Danish authorities through the EEA-ETC/WMGE questionnaire.

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

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

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

Summary result

No EPR scheme and no advanced fee modulation.	Denmark has no EPR scheme for all packaging yet, and thus no fee modulation.
Robustness of the underlying information	Credible information received from the Danish 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 in more detail, Denmark has no EPR schemes for packaging waste yet. Denmark has a deposit return system for beverage packaging made of plastic, glass or aluminium which operates similar to an EPR scheme as described above.

Summary result

SRF P-5.3.1 EPR scheme for Paper and cardboard packaging waste	No EPR scheme	Denmark has no EPR schemes yet.
SRF P-5.3.2 EPR scheme for Ferrous metals packaging waste	No EPR scheme	Denmark has no EPR schemes yet.
SRF P-5.3.3 EPR scheme for Aluminium packaging waste	No EPR scheme	Denmark has no EPR schemes yet.
SRF P-5.3.4 EPR scheme for Glass packaging waste	No EPR scheme	Denmark has no EPR schemes yet.
SRF P-5.3.5 EPR scheme for Plastic packaging waste	No EPR scheme	Denmark has no EPR schemes yet.
SRF P-5.3.6 EPR scheme for Wooden packaging waste	No EPR scheme	Denmark has no EPR schemes yet.
Robustness of the underlying information		Credible information received from the Danish 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 Denmark was 0.9 % in 2020 (Eurostat, 2022a) . Denmark has a very high incineration capacity, roughly double the amount of municipal waste sent to incineration, and thus landfill rates are expected to stay at a low level also in the future (Danish Environmental Protection Agency, 2021).

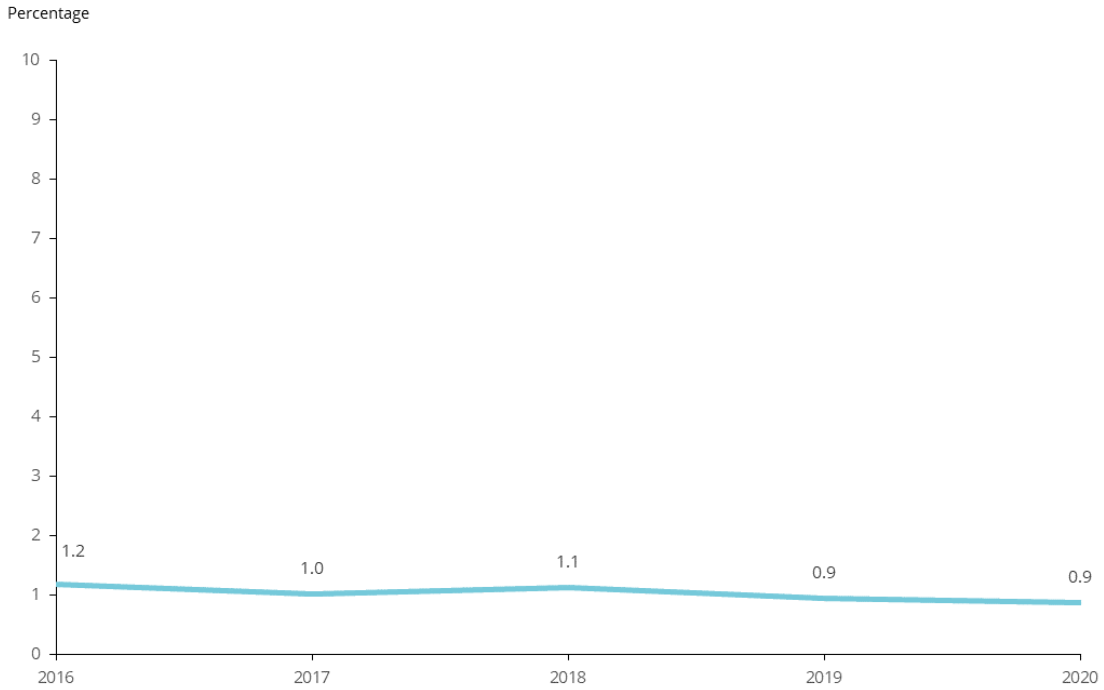
Summary result

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

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

Over the past five years, the overall landfilling rate of Denmark has remained steady at about 1 % (Figure 2.4).

Figure 2.4 Landfilling in Denmark between 2015 and 2020, in percentage



Source: Eurostat (2022a)

Summary result

Landfill rate < 10%	The landfill rate of Denmark was about 1 % throughout the period 2016 to 2020.
Robustness of the underlying information	The data is derived from Eurostat and is considered to be rather robust. There is no break in the time series data.

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

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

Denmark reported 0 % biodegradable waste landfilled in 2019 as share of the biodegradable waste generated in 1995, and performs therefore well within the target (EC, 2021).

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	Denmark has reported 0 % biodegradable waste landfilled in 2019 as share of the biodegradable waste generated 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 Denmark 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 Denmark, only the SRFs relevant to Denmark are taken into account to define the maximum score. Denmark 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

65 % **of maximum score**	Based on the provided information and the analysis done, it is concluded that Denmark is **not at risk for not meeting the municipal waste recycling target in 2025**.
Current situation and past trends:	The recycling rate was at 53.9 % in 2020, which is 1.1 percentage points below the 2025 target. Considering, however, the impact of the new calculation rules, Denmark has estimated the impact of the application of the new calculation rules on the recycling rate, with the result that the recycling rate would drop by 8 percentage points, to 45.9 %, or 9.1 percentage points below the target. Denmark has an increasing trend in recycling; the recycling rate has increased with 5.6 percentage points during the past five years.
Legal instruments:	The amended WFD has been transposed into national law in Denmark by the transposition deadline. Denmark reports clearly defined responsibilities, as well as clearly defined enforcement mechanisms for meeting the targets on recycling of municipal waste, in addition Denmark also presents support mechanisms to improve the implementation of the responsible entities.
Economic instruments:	There is a landfill ban for biodegradable waste and high taxes on both landfilling and incineration. Denmark has a policy for municipal waste collection which allows for the possibility of PAYT-schemes but municipalities often do not implement PAYT.

Separate collection systems:	A high share of population is covered by high convenience collection services for paper and cardboard, metals, wood, glass, plastics and WEEE. A medium share of population is covered by high convenience collection services for bio-waste. A low share of population is covered by high convenience collection services for textiles. By the end of 2022 at the latest, high convenience separate collection of all examined fractions except wood waste and WEEE will be mandatory in all municipalities in Denmark, which will improve the service level and can be expected to increase the capture rates of recyclables and recycling rates.
Extended producer responsibility:	The implementation process for setting up an EPR scheme has started. The implementation of an EPR scheme, covering all main packaging materials, is expected to have a positive impact on the separate collection of packaging waste which will, in turn, also impact the capture rates and recycling of municipal waste.
Bio-waste treatment capacity and quality management:	Increasing the bio-waste treatment capacity is required in order to meet the increasing volumes of separately collected bio-waste. The Danish authorities report the required capacity demand for the treatment of biowaste will be covered by the private sector or the municipalities. Denmark has legally binding national standards for compost quality, but no quality management system yet.

3.2 Prospects for meeting the recycling targets for packaging waste

76 % **of maximum score**	Based on the provided information and the analysis done, it is concluded that Denmark is **not at risk for not meeting the 65 % recycling target for packaging waste in 2025**	
84 % of maximum score	Paper and cardboard	Not at risk
45 % of maximum score	Ferrous metals packaging	At risk
84 % of maximum score	Aluminium packaging	Not at risk
82 % of maximum score	Glass packaging	Not at risk
46 % of maximum score	Plastics packaging	At risk
78 % of maximum score	Wooden packaging	Not at risk
Current situation and past trends:	The total packaging recycling rate (applying the new calculation rules) in 2019 was 64.1 %, 0.9 percentage points below the 2025 target. There was a small trend of decreasing recycling rates for the period 2015-2019, and the recycling rate in 2019 was lower than in 2015. Plastics and ferrous packaging waste is more than 15 percentage points below the target, once losses during sorting and recycling are taken into account. One of the main reasons for the poor performance on plastics packaging might be that plastics sorting at source is still new to Danish citizens.	
Legal instruments:	The amended Packaging and Packaging Waste Directive has been transposed into national law. Responsibilities for meeting the packaging waste targets are planned to change with the introduction of EPR for packaging, however the organisational set-up for the EPR scheme for packaging is to be decided, and enforcement and support mechanisms are therefore not yet clear.	
Economic instruments:	There is a landfill ban for biodegradable waste and a high tax on incineration. Denmark applies taxes on packaging. There is a policy for municipal waste collection which allows for the possibility of PAYT-schemes but municipalities often do not implement PAYT. Denmark has a mandatory DRS is in place for all aluminium cans, plastic and glass bottles and a voluntary DRS for some specific plastic crates. There is no DRS for wooden packaging.	

Separate collection systems:	As of July 2021 and by end of 2022 at the latest, door-to-door or high convenience bring point separate collection of all packaging materials except wood waste will be mandatory in all municipalities in Denmark, aiming to further improve the service level and increase the collection rates for packaging waste. The need for improvement and introduction of additional mandatory separate collection requirements are a sign of the data on rate of collection for recycling for paper and cardboard not being accurate, indicating also that the data for other packaging waste recycling may not be robust. Separation at source is mandatory in Denmark for both households and also for companies.
Extended producer responsibility:	Denmark does not have an EPR scheme for packaging yet. Denmark has a deposit return system covering beverage packaging, which operates similar to an EPR-scheme. The process for setting up an EPR scheme for all packaging has started and it is intended to be introduced no later than 31 December 2024. It will cover all types of packaging in all types of materials.

3.3 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 Denmark 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:	The landfilling rate in 2020 was 0.9 %. Over the past five years, the overall landfilling rate of Denmark was about 1 %. Keeping the low landfilling rate should be no problem due to the high incineration capacity in Denmark.
Diversion of biodegradable municipal waste from landfill:	Denmark reported 0 % biodegradable waste landfilled in 2019 in as share of the biodegradable waste generated 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
POM	Put on the market
PPWD	Packaging and Packaging Waste Directive
PRO	Producer Responsibility Organisation
PVC	Polyvinyl chloride
RR	Recycling rate
SRF	Success and risk factor
SUP	Single Use Plastic
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 Denmark

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
MSWR-1.1	Distance to target	Distance to target 5 - 15 percentage points	5	5
MSWR-1.2	Past trends in municipal solid waste recycling rate	RR > 50% and increase in last 5 years < 5 percentage points, or RR > 45%, and increase in last 5 years < 10 percentage points, or RR < 45% and increase in last 5 years > 10 percentage points	1	1
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, enforcement and good set of support mechanisms for meeting the recycling targets	1	2
Economic instruments				
MSWR-3.1	Taxes and/or ban for landfilling residual or biodegradable waste	Ban, or landfill tax > 30 EUR/t* with escalator, or landfill tax > 45 EUR/t	1	2
MSWR-3.2	Taxes on municipal waste incineration	Taxes > 7 EUR/t* with escalator, or tax > 18 EUR/t	1	2
MSWR-3.3	Pay-as-you-throw (PAYT) system	PAYT scheme implemented in some regions/ municipalities (50-80% of population covered) OR No or less than 50% of the population covered by PAYT but firm plans for rolling out	1	1

Separate collection systems				
MSWR-4.1	Convenience and coverage of separate collection systems for the different household waste fractions			
	Paper and cardboard	A high share of the population is covered by high convenience collection services	0.46	0.92
	Metals	A high share of the population is covered by high convenience collection services	0.08	0.16
	Plastics	A high share of the population is covered by high convenience collection services	0.28	0.56
	Glass	A high share of the population is covered by high convenience collection services	0.18	0.36
	Bio-waste	A medium share of the population is covered by high convenience collection services	0.84	0.84
	Wood	A high share of the population is covered by high convenience collection services	0.06	0.12
	Textiles	A low share of the population is covered by high convenience collection services	0.06	0
	WEEE	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	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.23	0.46
	Metals	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.04	0.08
	Plastics	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.14	0.28
	Glass	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.09	0.18
	Bio-waste	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.42	0.84
	Wood	N/A (for countries in which a very high share of the population is already covered by high convenience collection services)	0.03	0
	Textiles	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.03	0.06
	WEEE	N/A (for countries where high to medium convenience collection services dominate already)	0.02	0

Extended producer responsibility (EPR) and similar schemes				
MSWR-5.1	Fee modulation in EPR schemes for packaging	No advanced fee modulation OR fee modulation meets less than two assessment criteria	1	0
Bio-waste treatment capacity and quality management				
MSWR-6.1	Capacity for the treatment of bio-waste	Bio-waste capacity below 80% of generated municipal bio-waste but firm plans to close the gap	1	1
MSWR-6.2	Legally binding national standards and Quality Management System for compost/digistate	Legally binding national standards for compost/digestate quality but no quality management system	1	1
			Total score	**21.94**
			Maximum score	33.90
				65%

Assessment sheet - Recycling target for packaging waste

MS Denmark

Date Jun-22

SRF		Assessment result	Weight	Score
Current situation and past trends				
P-1.1	Distance to target - Overall packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Paper and cardboard packaging	< 5 percentage points below target, or target exceeded	5	10
	Distance to target - Ferrous metals packaging	> 15 percentage points below target, or no data reported	5	0
	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	> 15 percentage points below target, or no data reported	5	0
	Distance to target - Wooden packaging	< 5 percentage points below target, or target exceeded	5	10
P-1.2	Past trends in packaging waste recycling rate	RR > 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 %, or RR > 75%	1	2
	Past trends in ferrous metals packaging recycling	RR < 60% and increase in last 5 years < 10 percentage points	1	0
	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 percentage points, or RR < 60% and increase in last 5 years > 10 percentage points	1	1

	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	Unclear responsibilities and weak/no enforcement mechanisms for meeting the recycling targets, but good set of support tools. OR Unclear responsibilities and no/weak support tools for meeting the recycling targets, but clearly defined enforcement mechanisms. OR Clearly defined responsibilities but weak/no enforcement mechanisms for meeting the recycling targets, and no/weak support tools. OR Unclear responsibilities, weak/no enforcement mechanisms and lack of support tools for meeting the recycling targets.	1	0
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* with escalator, or tax > 18 EUR/t	1	2
P-3.3	Packaging taxes	Packaging taxes in place	1	2
P-3.4	Pay-as-you-throw (PAYT) system	PAYT scheme implemented in some regions/ municipalities (50-80% of population covered) OR No or less than 50% of the population covered by PAYT but firm plans for rolling out	1	1
P-3.5	Deposit-return systems for aluminium drink cans	Mandatory DRS for nearly all drink cans	1	2
	Deposit-return systems for glass drink bottles	Mandatory DRS for nearly all drink bottles	1	2
	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 high share of the population is covered by high convenience collection services	1	2
	Paper and cardboard packaging (non-household)	Separation at source is mandatory for non-household paper and cardboard packaging waste	1	2
	Ferrous metals packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Ferrous metals packaging (non-household)	Separation at source is mandatory for non-household ferrous metals packaging waste	1	2
	Aluminium packaging	A high share of the population is covered by high convenience collection services	2	4
	Glass packaging (household)	A high share of population is covered by high convenience collection services	1	2
	Glass packaging (non-household)	Separation at source is mandatory for non-household glass packaging waste	1	2
	Plastics packaging (household)	A high share of the population is covered by high convenience collection services	1	2
	Plastics packaging (non-household)	Separation at source is mandatory for non-household plastic packaging waste	1	2
	Wooden packaging	Separation at source is mandatory for non-household wooden packaging waste	2	4
P-4.2	Firm plans to improve the convenience and coverage of separate collection systems for the different packaging waste fractions			
	Paper and cardboard (household)	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.5	1
	Paper and cardboard (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Ferrous metals packaging (household)	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.5	1
	Ferrous metals packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Aluminium packaging	N/A (for countries in which a high share of the population is already covered by high convenience collection services)	1	0
	Glass packaging (household)	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.5	1
	Glass packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0

	Plastics packaging (household)	Firm plans to improve the separate collection system, with clear responsible entities and defined targets and timeline	0.5	1
	Plastics packaging (non-household)	N/A (for countries already having mandatory sorting at source)	0.5	0
	Wooden packaging	N/A (for countries already having mandatory sorting at source)	1	0
Extended producer responsibility (EPR) and similar schemes				
P-5.1	Coverage of EPR schemes	Not all main packaging fractions* are covered by EPR schemes OR All main packaging fractions are covered by EPR schemes but none or only one covers household and non-household packaging	1	0
P-5.2	Fee modulation in EPR schemes for packaging	No fee modulation OR fee modulation meets less than two assessment criteria	1	0
P-5.3	Material specific EPR assessment - Paper and cardboard packaging waste	No EPR scheme or EPR scheme covering only household, industrial OR commercial packaging	1	0
	Material specific EPR assessment - Ferrous metals packaging waste	No EPR scheme or EPR scheme covering only household OR non-household packaging	1	0
	Material specific EPR assessment - Aluminium packaging waste	No EPR scheme or EPR scheme covering only household OR non-household packaging	1	0
	Material specific EPR assessment - Glass packaging waste	No EPR scheme or EPR scheme covering only household OR non-household packaging	1	0
	Material specific EPR assessment - Plastics packaging waste	No EPR scheme or EPR scheme covering only household, industrial OR commercial packaging OR EPR scheme but without fee modulation	1	0
	Material specific EPR assessment - Wooden packaging waste	No EPR scheme or EPR scheme covering only industrial OR commercial packaging	1	0
Total packaging recycling target				**24.82**
			Maximum score	32.82
				76%

Paper and cardboard recycling target

Total score	**26.00**
Maximum score	31.00
	84%

Ferrous metals packaging recycling target

Total score	**14.00**
Maximum score	31.00
	45%

Aluminium packaging recycling target

Total score	**27.00**
Maximum score	32.00
	84%

Glass packaging recycling target

Total score	**27.00**
Maximum score	33.00
	82%

Plastics packaging recycling target

Total score	**16.00**
Maximum score	35.00
	46%

Wooden packaging recycling target

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

Assessment sheet - Target for landfilling of municipal waste

MS Denmark

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%