

Waste management country profile

with a focus on municipal and packaging waste

Sweden

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Key messages

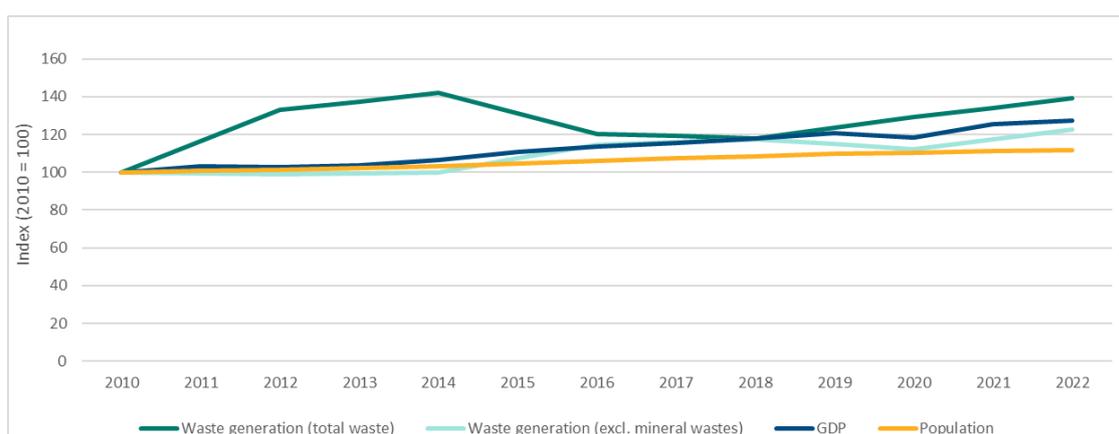
- Waste generation has fluctuated in the past 12 years. There are no signs of decoupling of waste generation from economic growth.
- Sweden is considered to be at risk of not meeting the 2025 target of preparing for reuse and the recycling of its municipal waste, and little progress has been made recently, although progress made after 2019 might be masked by the change to the new reporting rules related to the target. Significantly more efforts are required to meet the 2025 target.
- While the country was not considered to be at risk to meet the 2025 targets for packaging waste, recent data indicate a need to improve plastic packaging waste recycling.
- Reported landfill rates are already well below the 2035 target, but there is a need to divert more reusable and recyclable waste away from incineration.

Trends in waste generation and treatment

Total waste generation

The total amount of waste generated in Sweden increased from 2010 to 2014, then declined between 2016 and 2018, with 2022 levels returning to those observed in 2014 (Figure 1). This trend is primarily driven by the largest waste category, namely other mineral wastes (mainly from mining and quarrying activities). When excluding major mineral wastes, the trend is somewhat different, showing an increase throughout the considered time period with the exception of a slight drop in 2020. This trend is driven by the major waste category mixed wastes, while recyclable wastes only increased in 2018. Sweden's GDP showed an overall increase apart from a slight drop in 2020, most likely due to the Covid-19 outbreak. There is no clear indication that waste generation is decoupled from economic growth.

Figure 1 Generation of waste (total and excluding major mineral wastes), population and economic development, 2010-2022



Source: Eurostat (2024a, 2024b, 2024e)

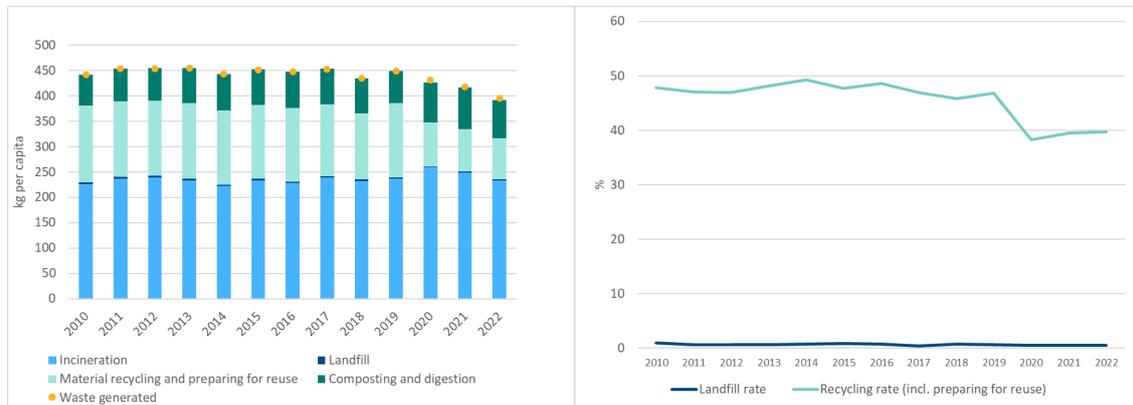
Note: Waste generation data for odd years are interpolated.

Municipal waste

Sweden's municipal waste generation has remained rather stable in the period 2010-2019 (Figure 2, left). The reported amounts in 2020 and 2021 were lower but this is likely due to a comprehensive change in reporting methodology in response to the implementation of the new reporting rules introduced in the Waste Framework Directive in 2018, and further adjustments are expected, especially with respect to the generation of municipal waste from other sources than households (SEPA, 2024a). In 2022, the country generated 395 kg/cap of municipal waste, which is significantly below the (estimated) EU-27 average of 513 kg/cap.

Sweden has a recycling rate of 40%, which is slightly below the (estimated) EU-27 average of 49%. The recycling rate has been rather stable since 2010, with a large drop in 2020 which is mainly caused by the change of reporting to the new calculation rules, especially the new calculation points that exclude rejects during sorting, applicable to showing compliance with the 2025 recycling target (Figure 2, right) ⁽¹⁾.

Figure 2 Municipal waste management (left) and rates of recycling (incl. preparing for reuse) and landfill (right), 2010-2022



Source: Eurostat (2024d)

Note: As of the reference year 2020, new reporting rules apply for calculating recycled municipal waste pursuant to the targets laid down in Article 11.2(c-e) of Directive 2008/98/EC. Sweden has applied the new calculation rules since the reference year 2020, which led to a break in series in 2020.

Incineration is the major type of waste treatment in Sweden, accounting for 59% of all waste treated, while landfilling accounts for less than 1%. The low preparing for reuse and recycling rates are mainly due to low capture rates of recyclables, and waste incineration continues to be the predominant waste treatment path (EC, 2023). In addition, the recycling efficiency of separately collected recyclables is influencing the recycling rate negatively when calculating according to the calculation points of actual recycling. (SEPA, 2023a)

Sweden has also reported data to show compliance with the preparing for reuse and recycling target of 55% for 2025, as laid down in the Waste Framework Directive. The difference

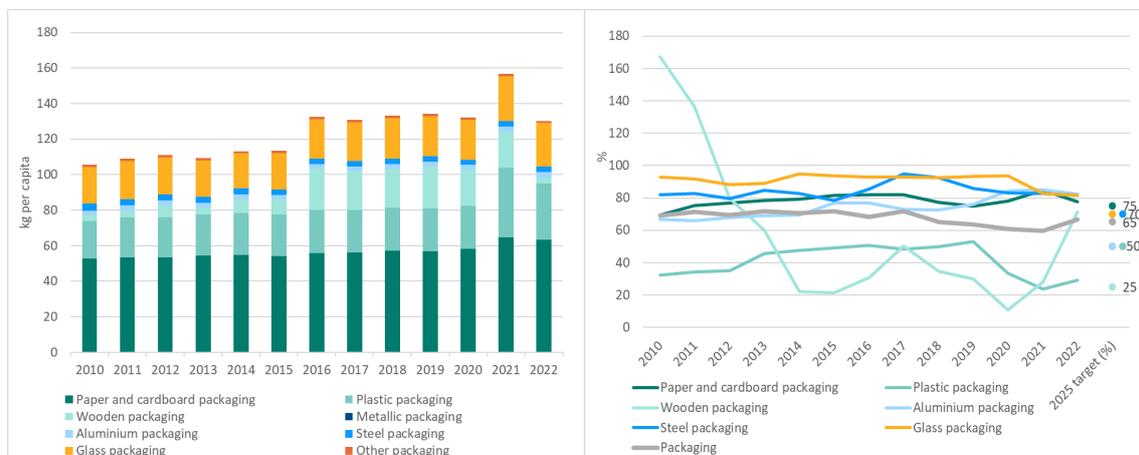
⁽¹⁾ While compliance with the 2020 recycling target of the Waste Framework Directive is not assessed here, it is noted that the drop in the recycling rate is even higher when compared to the reported recycling rate for the 2020 target. Sweden previously used 2011/753/EU method 2 towards the 2020 target and was only including some waste fractions, so this change in methodology led to a drop from 61% to 38% in 2020.

between these data, following the reporting obligation of the Waste Framework Directive, and the data shown in Figure 2 (voluntary reporting) is below 1 percentage point for the preparing for reuse and recycling rate both in 2021 and 2022. The 2022 data according to this reporting obligation are provisional and are still awaiting validation by Eurostat (Eurostat, 2024c).

Packaging waste

Sweden’s packaging waste generation significantly increased between 2010 and 2022 (Figure 3, left). In 2022, the country generated 130 kg/cap, which is still significantly below the (estimated) EU-27 average of 186 kg/cap in the same year ⁽²⁾. One reason might be that there are no estimates done for free riders which could lead to an underestimation of the packaging placed on the market (Eurostat, 2022).

Figure 3 Packaging waste generation (left) and recycling rates (right), 2010-2022



Source: Eurostat (2024e)

Note: There is a break in the time series for paper and cardboard and plastic in 2020 and 2021 and for plastic again in 2022; for glass in 2021; for wooden packaging in 2016, 2017, 2018, and 2020; and for metals in 2021. As of the reference year 2020, the rules for calculating recycled packaging waste have changed, pursuant to Article 6a of Directive 94/62/EC. However, it is unclear based on the information available whether these new reporting rules have been fully implemented in Sweden.

In 2022, the overall recycling rate for packaging waste was 67%, which is very close to the (estimated) EU-27 average of 65%. It is mostly driven by the two fractions with the highest share in total packaging, paper and cardboard and plastics, and it has stagnated compared to 2010 (Figure 3, right). The recycling rates for plastic and glass packaging show a decreasing trend. All other packaging waste fractions show an increasing trend. However, these changes are affected by methodological changes in the reporting, as indicated by several flagged breaks in the data series for all materials. The reported recycling rates for 2022 are above the 2025 targets for total packaging waste and for all materials except plastics.

⁽²⁾ The EU-27 average might be influenced by the situation that not all Member States already fully apply the reporting rules for packaging waste as defined in the Commission Implementing Decision 2019/665.

Policies in place to encourage waste prevention measures and to increase recycling

Legislative framework and waste management plans

The main acts and regulations regarding municipal waste and packaging waste in Sweden include the Environmental Code; the Waste Ordinance; the Landfill Ordinance; the Law on Waste Tax; the Swedish Environmental Protection Agency's regulations and general advice on the management of combustible waste and organic waste; the Law on the tax on waste incinerated; the regulation and recycling targets concerning packaging materials, electrical and electronic equipment and batteries; and the regulations and requirements concerning municipal waste management plans and waste prevention plans. (ETC/CE, 2022)

Sweden has a National Waste Management Plan (NWMP) covering the entire country and a Waste Prevention Programme for the period of 2018-2023, which was revised in 2020. (ETC/CE, 2022) A new Plan and Programme are scheduled to be published in the autumn of 2024 (SEPA, 2024a).

Waste prevention policies

Sweden's National Waste Prevention Programme (NWPP), 'To do more with less', is fully integrated into the National Waste Management Programme (NWMP) 2018-2024 (SEPA, 2023b). In 2023, the programme was extended until 31 October 2024. The programme was revised in 2020 to include new EU requirements for packaging waste adopted in 2018, updated measures for waste prevention, and an action plan to reduce food waste by 2030 (SEPA, 2023c). A new programme is planned to be published for the period after October 2024 (SEPA, 2024a).

The priority waste streams are textiles, food, construction and demolition materials, and electronics. No specific targets for waste prevention are set for the prioritised waste streams, except for food waste. The foreseen budget for the implementation of the programme is not specified. (EEA, 2023b)

The general objectives of the NWPP are to reduce waste volumes, minimise the presence of harmful substances in materials and products, promote the practical application of the waste hierarchy, and utilise resources within the waste. (EEA, 2023b) The NWMP sets quantitative targets related to waste prevention for food loss and waste and reusable packaging (SEPA, 2024b):

- The proportion of packaging, that is reusable and placed on the Swedish market for the first time, must increase by at least 20% from 2022 to 2026 and by at least 30% from 2022 to 2030.
- From 2020 to 2025, the total amount of food waste should be reduced by at least 20% by weight per capita.
- By 2025, an increased share of food production should reach retailers and consumers.

The National Waste Management Plan (NWMP) and the National Waste Prevention Programme (NWPP) are currently being reviewed and planned to be updated by 31 October 2024. A new Programme is scheduled for the period after October 2024 (SEPA, 2024a). An evaluation of the current NWMP and NWPP showed that the NWPP was less known than the

NWMP, and a dialogue with key actors has been started to identify challenges, opportunities and solutions. (EEA, 2023b; SEPA, 2024c)

From January 2024, municipalities in Sweden have an expanded responsibility for waste prevention initiatives and are also responsible for providing information to households (SEPA, 2023c).

To achieve the aspirational global Sustainable Development Goal 12.3 of halving food waste by 2030, Sweden launched its 'Action plan to reduce food waste by 2030' in 2018 (Swedish Food Agency, 2018). The action plan has identified four criteria for success: a national goal and development of monitoring methods, active collaboration between actors in the food supply chain, a change in consumer behaviour, and investigation, research, and innovation.

To establish a baseline for food losses occurring in the initial stages of the farm-to-fork chain, Sweden has developed a national method and the Swedish Board of Agriculture has started monitoring food losses. It is anticipated that this monitoring approach will enhance understanding of food loss and waste generated during food production (Jordbruksverket, 2024).

Based on the 2021 data submitted to the EEA in compliance with Commission Implementing Decision (EU) 2021/19 (EEA, 2024), Sweden reused:

- 4213 tonnes of textiles,
- 2695 tonnes of electrical and electronic devices, and
- 14631 tonnes of furniture.

It should be noted that these data have been reported for the first time. As the reporting process matures, it is expected that these data will strengthen but for now, caution is advised in drawing insights from the dataset. More information about the interpretation and limitations of the dataset is available (EEA, 2024).

Policies to encourage separate collection and recycling

In Sweden, separate collection is mandatory for both households and non-households. Sweden has started to move from the dominant system of bring points to door-to-door collection. Newly implemented provisions for separate collection, covering the whole country, require that food waste from households and non-households be collected separately door-to-door (applying from 2024). Paper and cardboard, metal, glass (coloured and uncoloured), and plastic packaging waste from households and non-households - in case their waste collection is located at the same site as households - will be collected separately door-to-door (applying from 2027). Bulky packaging waste made of paper and plastic should be collected at accessible public collection points. Garden, wood, ceramics and textile wastes are mainly collected at the **municipalities' recycling centres**. (SEPA, 2024a)

In Sweden, Extended Producer Responsibility (EPR) applies to packaging waste from both households and non-households for all packaging materials. Sweden applies some limited fee modulation based on recyclability criteria for paper and cardboard and plastic packaging. Sweden had a tax on plastic carrier bags (ETC/CE, 2022), but it will be removed from November 2024 (SEPA, 2024a).

In order to incentivise sorting at source, Sweden has fully rolled out pay-as-you-throw systems, mostly based on container volume and collection frequency. Some municipalities have introduced weight-based fees. In addition, the fee for bio-waste is free of charge or smaller than for residual waste. (ETC/CE, 2022) Since it is now mandatory to collect bio-waste separately, the Swedish government assesses that the need for these types of incentives for food waste will decrease. In 2027, when new collection rules for packaging will apply, many municipalities will change collection systems, as they need to collect more fractions from each household. Depending on the chosen collection systems the previous systems with pay-as-you-throw will probably be replaced to some extent. (SEPA, 2024a)

Sweden implements deposit-return systems that are mandatory for most aluminium drink cans and most plastic drink bottles. For glass drink bottles, plastic crates and wooden packaging, there is no deposit-return system. (ETC/CE, 2022)

Policies and instruments to discourage landfilling or incineration

Sweden has a landfill tax in place of SEK 725 per tonne (eq. EUR 60 per tonne) in 2024, which is yearly adjusted (Skatteverket, 2023). The landfill tax is higher than the average of the EU-27 Member States applying such taxes (EUR 39-46 per tonne (EEA, 2023a)). Sweden has a ban in place for landfilling residual or biodegradable waste, with exemptions for sorted combustible waste containing less than 18% total organic carbon (TOC) and waste containing less than 10% TOC (ETC/CE, 2022). The previous tax on incineration has been removed (SEPA, 2024a).

Prospects for meeting the targets on recycling and landfilling

In the EEA's early warning assessment (ETC/CE, 2022), Sweden was considered to be on track to meet the 2025 recycling targets for packaging waste, and the reported landfill rates are already well below the 2035 target. For packaging waste, the reported 2022 recycling rates are above the 2025 targets for total packaging waste and for all materials except plastics. However, Sweden has not made enough progress in the preparing for reuse and recycling of municipal waste, and therefore has to speed up its progress towards reaching the 2025 target for the preparing for reuse and recycling of municipal waste of 55%.

The Environmental Implementation Review (EIR) 2022 recommended to shift reusable and recyclable waste away from incineration (EC, 2022). In 2023, the European Commission issued a number of policy recommendations to improve Sweden's waste management performance (EC, 2023):

- Support preparing for reuse of municipal waste and reuse systems for packaging.
- Develop waste treatment infrastructure associated with the higher steps of the waste hierarchy to reduce reliance on incineration, including infrastructure for the recycling of plastic packaging.
- Improve separate collection services for waste fractions separated at source – in particular for packaging and bio-waste – to ensure high capture rates across the country.
- Introduce support mechanisms to ensure the separate collection of recyclable municipal waste from businesses.

Meanwhile, Sweden has decided to postpone the deadline for meeting the 2025 targets for glass packaging until 2028, making use of the postponement option in the Packaging and Packaging Waste Directive. (EC, 2024)

References

EC, 2022, *Environmental Implementation Review 2022 Country Report - SWEDEN*, COMMISSION STAFF WORKING DOCUMENT No SWD/2022/272 final (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022SC0272&qid=1711375553633>) accessed 25 March 2024.

EC, 2023, *The early warning report for Sweden*, COMMISSION STAFF WORKING DOCUMENT No SWD(2023) 200 final (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD%3A2023%3A200%3AFIN>) accessed 7 December 2023.

EC, 2024, *Postponement of the recycling targets of Directive 2008/98/EC and 94/62/EC as notified by EU Member States*, information provided by the European Commission to the EEA by email dated 16 May 2024.

EEA, 2023a, *Economic instruments and separate collection systems — key strategies to increase recycling*, EEA Briefing (<https://www.eea.europa.eu/publications/economic-instruments-and-separate-collection>) accessed 12 February 2025.

EEA, 2023b, *Waste Prevention Country Profile - Sweden*, EEA (https://www.eea.europa.eu/themes/waste/waste-prevention/countries/2023-waste-prevention-country-fact-sheets/sweden_waste_prevention_2023) accessed 15 December 2023.

EEA, 2024, *Reuse flows according to the implementing decision (EU) 2021/19 Information on the database structure and use*, No Database version 1, European Environment Agency (EEA) (<https://sdi.eea.europa.eu/catalogue/srv/api/records/50b2430b-8218-471c-86ea-65236a870a28/attachments/Reuse%20metadata%20annex%20Version%201.pdf>) accessed 5 March 2024.

ETC/CE, 2022, *Sweden — Early Warning Assessment Related to the 2025 Targets for Municipal and Packaging Waste*, File, European Environment Agency (EEA) (<https://www.eea.europa.eu/publications/many-eu-member-states/sweden/view>) accessed 25 March 2024.

Eurostat, 2022, *Country-specific notes referring to data on Packaging and Packaging Waste, 13/07/2022* (<https://ec.europa.eu/eurostat/documents/342366/13429143/Country+specific+notes+for+packaging+and+packaging+waste.pdf/59ea2d73-3416-b40b-1771-2eb33e0b8486?t=1648204996107>) accessed 24 May 2024.

Eurostat, 2024a, 'GDP and main components (output, expenditure and income) [nama_10_gdp]' (https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp__custom_9301905/default/table) accessed 15 October 2024.

Eurostat, 2024b, 'Generation of waste by waste category, hazardousness and NACE Rev. 2 activity (env_wasgen)' (https://ec.europa.eu/eurostat/databrowser/view/env_wasgen/default/table?lang=en) accessed 22 October 2024.

Eurostat, 2024c, Information provided by Eurostat on provisional data in response to the reporting obligation in Art. 37(1) Waste Framework Directive related to the target on the preparing for reuse and recycling for municipal waste (Art. 11(2c)).

Eurostat, 2024d, 'Municipal waste by waste operations [env_wasmun]' (https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table) accessed 22 October 2024.

Eurostat, 2024e, 'Packaging waste by waste management operations (env_waspac)' (https://ec.europa.eu/eurostat/databrowser/view/ENV_WASPAC__custom_842634/default/table?lang=en) accessed 28 October 2024.

Eurostat, 2024f, 'Population change - Demographic balance and crude rates at national level [demo_grind]' (https://ec.europa.eu/eurostat/databrowser/view/demo_gind__custom_9301558/default/table) accessed 15 October 2024.

Jordbruksverket, 2024, *Slutrapport om livsmedelsförluster (in Swedish)* (<https://webbutiken.jordbruksverket.se/sv/artiklar/ra241.html>) accessed 21 September 2021.

SEPA, 2023a, Kommunalt avfall, (<https://www.naturvardsverket.se/4b01c2/globalassets/data-och-statistik/avfall/kommunalt-avfall-statistikblad.pdf>) accessed 21 September 2024, Swedish Environmental Protection Agency.

SEPA, 2023b, *National Waste Management Plan and Prevention Programme 2018–2024, Doing more with less*, Swedish Environmental Protection Agency (<https://www.naturvardsverket.se/4afd66/globalassets/media/publikationer-pdf/7100/978-91-620-7132-5.pdf>) accessed 15 December 2023.

SEPA, 2023c, *Plan for reducing and preventing waste to 2024*, Swedish Environmental Protection Agency (<https://www.naturvardsverket.se/amnesomraden/avfall/pagaende-arbeten/planen-for-minska-och-forebygga-avfall/#:~:text=Planen%20och%20programmets%20syfte%20%C3%A4r%20att%20beskriva%20Sveriges,h%C3%A4lsop%C3%A5verkan%20som%20h%C3%A4nger%20samman%20med%20att%20avfall%20uppst%C3%A5r.>) accessed 15 December 2023.

SEPA, 2024a, Information provided during the Eionet review of the draft EEA country profile on waste management for Sweden, Swedish Environmental Protection Agency.

SEPA, 2024b, Milestone targets, (<https://www.naturvardsverket.se/en/om-miljoarbetet/swedish-environmental-objectives/milestone-targets/>) accessed 21 September 2021, Swedish Environmental Protection Agency.

SEPA, 2024c, 'Review of the national waste plan and waste prevention program (Översyn av nationell avfallsplan och avfallsförebyggande program)' (<https://www.naturvardsverket.se/amnesomraden/avfall/pagaende-arbeten/oversyn-av-nationell-avfallsplan-och-avfallsforebyggande-program/>) accessed 28 June 2024.

Skatteverket, 2023, 'Ändrad avfallsskatt från 1 januari 2024' (<https://www.skatteverket.se/foretag/skatterochavdrag/punktskatter/nyheterinompunktskatter/2023/nyheterinompunktskatter/andradavfallsskattfran1januari2024.5.7da1d2e118be03f8e4f2208.html>) accessed 21 September 2024.

Swedish Food Agency, 2018, *Action plan to reduce food waste in 2030*, Swedish Food Agency (<https://www.livsmedelsverket.se/globalassets/publikationsdatabas/rapporter/2018/fler-gor-mer-handlingsplan-for-minskat-matsvinn-2030.pdf>) accessed 12 January 2024.