

Waste management country profile

with a focus on municipal and packaging waste

Slovenia

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Key messages

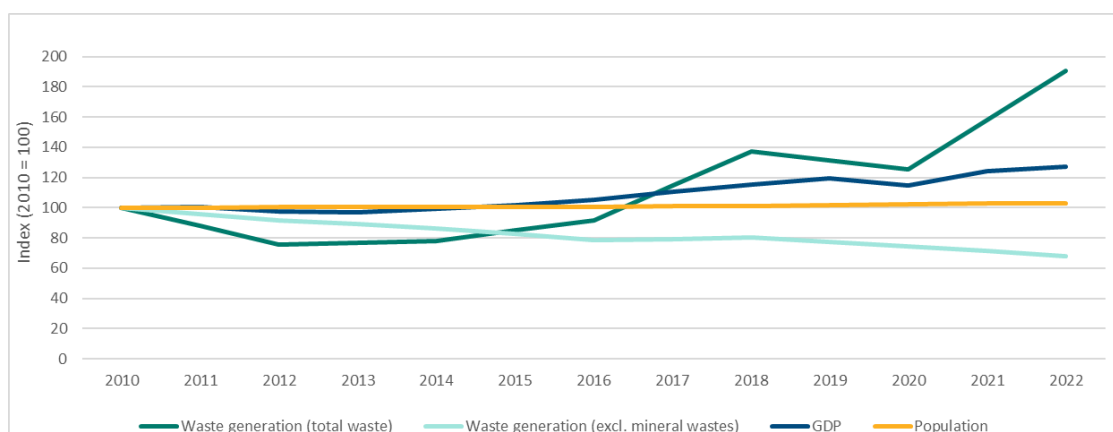
- The total amount of waste generated in Slovenia increased over the last 12 years and there are no clear indications of decoupling of total waste generation from economic growth.
- Slovenia is considered to be on track to meet the 2025 targets for the recycling of municipal waste and packaging waste, as well as the 2035 landfill target for municipal waste.
- Since the last early warning report was published, Slovenia's landfill rate for municipal waste has remained low and the recycling rate has remained at a high level. However, the provisional data, reported to show compliance with the 2025 preparing for reuse and recycling target, indicate a lower recycling level.
- Slovenia could further improve its waste management, especially of packaging waste by employing economic instruments to make reuse and recycling more economically attractive.

Trends in waste generation and treatment

Total waste generation

The total amount of waste generated in Slovenia increased over the last 12 years (Figure 1). This trend is primarily driven by the largest waste categories, namely soils and mineral waste from construction and demolition (which are part of major mineral wastes). Excluding major mineral wastes results in an overall reduction trend in generated waste, primarily driven by decreases in mixed and combustion wastes, while recyclable wastes, the largest category, showed a slight increase. Slovenia's GDP has shown steady growth from 2014, but dropped in 2020, most likely due to the Covid-19 outbreak. Waste generation followed a similar trend. There are no clear signs of decoupling between total waste generation and economic development. However, when excluding major mineral waste, decoupling can be observed.

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



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

Note: Waste generation data for odd years are interpolated.

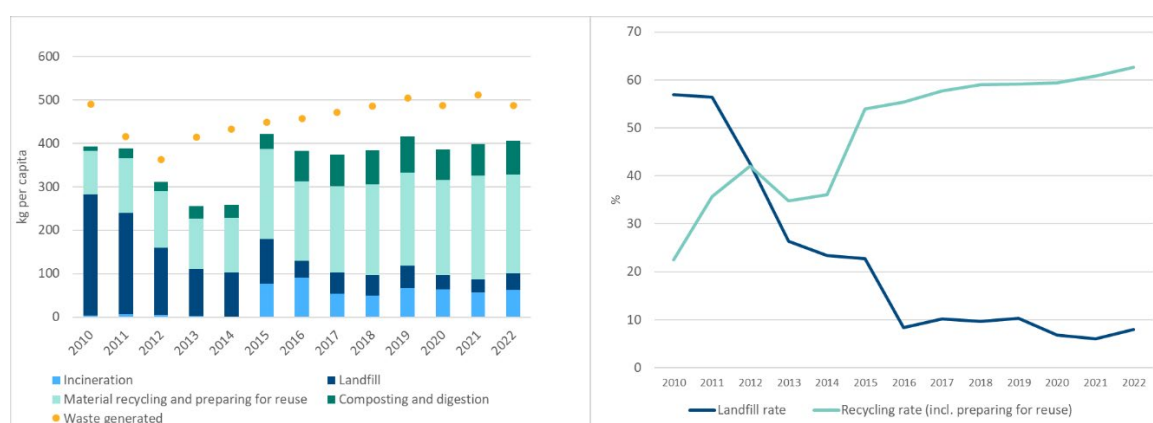
Municipal waste

Municipal waste generation in Slovenia has increased between 2010 and 2022 (Figure 2, left). In 2022, the country generated 487 kg/cap of municipal waste, which is slightly below the (estimated) EU-27 average of 513 kg/cap in the same year.

Slovenia's municipal waste preparing for reuse and recycling rate has significantly increased over the past years (Figure 2, right). In 2022, it was 63%, which is significantly above the (estimated) EU-27 average of 49% in the same year. This increase is mainly due to increased material recycling.

The municipal waste incineration started in 2015 and was at the level of 13% of the generated municipal waste in 2022. During the last 10 years, the landfill rate significantly decreased to 8% in 2022 (Figure 2, right).

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



Source: Eurostat (2024d)

Note: There is a break in the time series in 2013. 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. Slovenia has implemented the new reporting rules since the reference year 2021 (ARSO/MOPE, 2024).

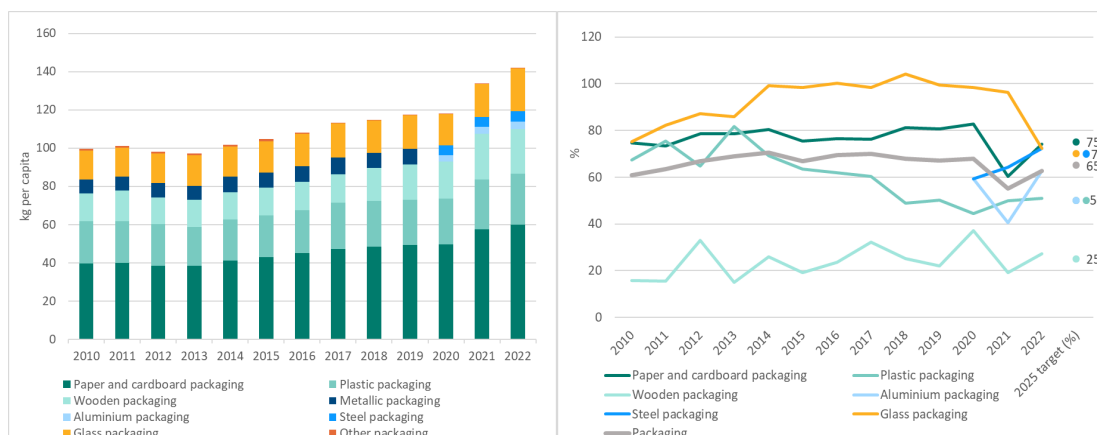
The data shown in Figure 2 differ from the data reported by the Slovenian authorities to show compliance with the preparing for reuse and recycling target of 55% for 2025, as laid down in the Waste Framework Directive. Slovenia reported a preparing for reuse and recycling rate in response to the target that was in the range of 10-20 percentage points below the recycling rate shown in Figure 2 for the reference year 2022. These data are provisional as they are still awaiting validation by Eurostat (Eurostat, 2024c).

Packaging waste

Slovenia's packaging waste generation has continuously increased since 2010 (Figure 3, left). In 2022, the country generated 142 kg/cap of packaging waste, which is significantly below the

(estimated) EU-27 average of 186 kg/cap in the same year ⁽¹⁾. Since 2021, all packaging placed on the market has been included in the reported waste generation data (ARSO/MOPE, 2024).

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



Source: Eurostat (2024e)

Note: As of the reference year 2020, the rules for calculating recycled packaging waste have changed, pursuant to Article 6a of Directive 94/62/EC. Slovenia has implemented the new reporting rules since the reference year 2021 (ARSO/MOPE, 2024).

Slovenia's overall packaging waste recycling rate showed an increasing trend between 2010 and 2017 (Figure 3, left). However, in 2021, it decreased to 55%, which is below the 2010 level but increased to 63% again in 2022. This can be attributed to a switch towards using the reports of waste treatment operators as the primary data source, and improvements in ensuring the quality, correctness, and accuracy of data by introducing controls in the application for reporting. (ARSO/MOPE, 2024)

The overall packaging waste recycling rate is mainly driven by paper and cardboard packaging waste recycling, as this fraction constitutes the largest fraction of all packaging waste generated. For the reference year 2020 and onwards, it is mandatory to report steel and aluminium packaging separately. The reported recycling rates of both fractions were above the 2025 target in 2022.

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

Legislative framework and waste management plans

The main legislations in Slovenia, that are related to municipal and packaging waste and where general requirements regarding the management of waste are set, include the Decree on Waste and the Decree on Packaging and Packaging Waste. The mandatory management of biodegradable waste is described in the Decree on Biodegradable Kitchen Waste and Green Garden Waste Management. (ETC/CE, 2022)

⁽¹⁾ 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.

The National Waste Management Plan (NWMP) of Slovenia, including the new waste prevention programme, was published in 2022 (Government of the Republic of Slovenia, 2022).

Waste prevention policies

Slovenia's current National Waste Prevention Programme (NWPP) for 2022 and onwards is integrated into the NWMP and will be reviewed every fourth year (EEA, 2023c). In this programme, the measures are assessed annually against the 2020-2035 goals (EEA, 2023b). An analysis of data on waste management for the reference year 2021 was carried out, and compliance with the NWMP (2022) was assessed. The analysis is not made public. (ARSO/MOPE, 2024)

The NWPP highlights several objectives connected to waste prevention, such as reducing material consumption, creating closed material loops, supporting the usage of fewer resources, and reusing materials and products. The priority waste streams for prevention are construction and demolition waste, food waste, household and municipal waste, waste electrical and electronic equipment, bulky waste, waste textiles, and waste lightweight plastic carrier bags. Proposed indicators are the amount of municipal waste generated in households, the amount of food waste, the amount of WEEE prepared for reuse and reused, the amount of single-use plastic products put on the market and their waste, the amount of bulky waste and its reuse, the amount of waste textiles and clothing, and the amount of waste from the public sector. The programme refers to the quantitative targets set in EU legislation and does not establish additional national targets beyond these. No financial budget for waste prevention measures is mentioned in the NWPP (EEA, 2023b).

Besides the NWPP, the Ministry of Agriculture, Forestry and Food has adopted a strategy to reduce food losses and food waste in the food supply chain. In 2015, a pilot project was implemented with the aim to monitor and analyse data on food waste, focusing on individual waste streams and identifying the proportion of food waste in municipal waste, as well as an assessment, including information on home composting. At present, initiatives focus on five areas: primary production, processing and manufacturing, retail and other distribution of food, restaurants and food services, and households. The country focuses on education and awareness campaigns, promoting the use of local agricultural products to reduce transportation-related waste, and supporting sustainable, short food supply chains. (EEA, 2023b).

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

- 17 tonnes of textiles,
- 2000 tonnes of electrical and electronic devices,
- 5000 tonnes of furniture, and
- 40000 tonnes of construction materials.

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

A high share of the population is covered by a high-convenience collection service for paper and cardboard, metals, plastics, glass, and bio-waste. For these fractions, door-to-door collection is the dominant system, complemented by mainly low-density bring points and civic amenity sites. Packaging waste is mainly collected via door-to-door co-mingled collection. Glass packaging is mainly collected through low-density bring points. Bio-waste (food and green garden waste together) is either home-composted or/and collected through door-to-door separate collection, providing a convenient system for citizens, and households are obliged to compost their bio-waste themselves or hand it over to the public service provider (Government of the Republic of Slovenia, 2010). Textiles are collected at low-density bring points and civic amenity sites. The separate collection for all fractions is mandatory, also for non-households in Slovenia. (ETC/CE, 2022)

Separating waste at source is supported through a fully rolled out pay-as-you-throw system, covering 100% of the population. The system is mostly based on waste container volume and the frequency of collection. The public service operator must allow the user to choose the most appropriate container (in terms of volume) for his needs from the range of waste collection containers available (ARSO/MOPE, 2024). The system can be characterised as a weak pay-as-you-throw scheme as the economic incentive to sort waste at source is not very visible to citizens compared to weight-based or sack-based schemes. (EEA, 2023b)

The Slovenian Extended Producer Responsibility (EPR) system covers packaging waste from both household and non-household sources for all packaging materials. However, there is no advanced fee modulation in place, i.e. fee modulation within the broad material categories such as higher fees for difficult-to-recycle plastic types or combinations of materials (ETC/CE, 2022). Slovenia has a packaging tax that is based on the environmental burden unit as defined in the 'Regulation on an environmental levy on environmental pollution from packaging waste' (Government of the Republic of Slovenia, 2006).

There is a voluntary deposit-return system covering only reusable packaging (ETC/CE, 2022). However, the introduction of a mandatory deposit-return system for packaging could boost reuse and increase further capture of recyclable waste (European Commission, Directorate-General for Environment, 2023).

Policies and instruments to discourage landfilling or incineration

Slovenia has a landfill tax of EUR 11 per tonne of landfilled non-hazardous waste. The landfill tax is low compared to the average of the EU-27 Member States applying landfill taxes (EUR 39-46 per tonne (EEA, 2023a)). However, the landfill rate is already very low. A landfill ban for biodegradable waste was introduced in 2011. There is no tax on incineration of municipal waste and there is no plan to implement such a tax in the future. (EEA, 2023b)

Prospects for meeting the targets on recycling and landfilling

In the EEA's early warning assessment (ETC/CE, 2022), Slovenia was considered to be on track to meet the 2025 targets for the preparing for reuse and the recycling of municipal waste and for the recycling of packaging waste, as well as the 2035 target to reduce landfill to 10% of the generated municipal waste. However, in 2021, the packaging waste recycling rate decreased below the 2025 target, which can mainly be attributed to a change in the data collection

method and improvements in data quality. According to data for 2022, Slovenia reported recycling rates above the 2025 recycling targets for all packaging materials, except for paper and cardboard and total packaging waste.

The Slovenian preparing for reuse and recycling rate for municipal waste was 63% in 2022, but the provisional reported recycling rate in response to the 2025 target – still awaiting validation by Eurostat – was 10-20 percentage points lower.

Consequently, the European Commission did not issue any policy recommendations for waste management performance for Slovenia. Nevertheless, the Commission's Environmental Implementation Review 2022 (EIR) recommended the introduction and implementation of new policies to promote waste prevention, to make reuse and recycling more economically attractive, and to close and rehabilitate illegal landfills. (EC, 2022) There is currently one open infringement case concerning illegal landfills, and the Ministry of the Environment, Climate and Energy expects it to be closed in the coming months (ARSO/MOPE, 2024).

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