

Waste management country profile

with a focus on municipal and packaging waste

Slovakia

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Key messages

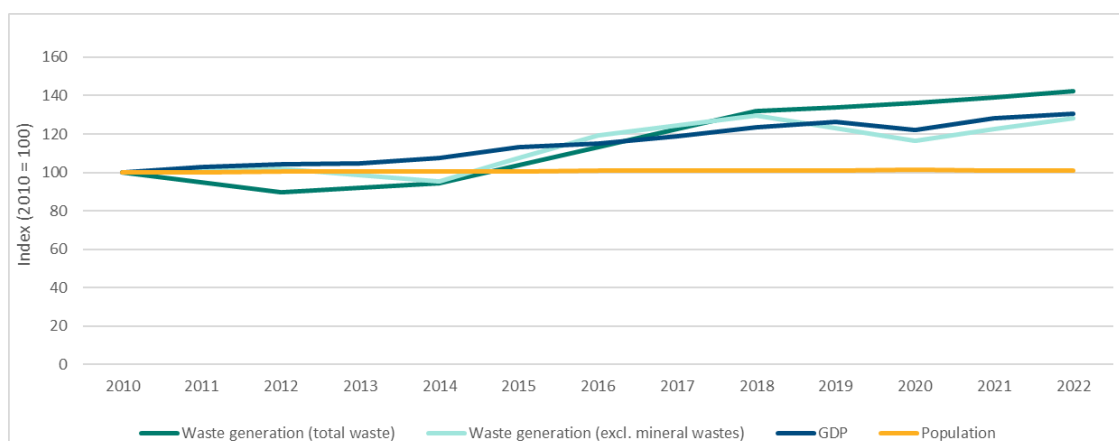
- In Slovakia total waste generation has increased, and there is no decoupling of waste generation from economic growth.
- Slovakia has to speed up its progress towards reaching the EU targets, especially regarding the landfill and recycling of municipal waste targets.
- There is a need to further increase the recycling of municipal waste and to reduce landfilling, for example through further improving the system of separate collection, incentivising sorting at source through economic incentives, and disincentivising landfilling.
- The quality of data on packaging waste needs to be improved.
- Recently introduced changes to the waste collection and management system are not yet visible in the reported data.

Trends in waste generation and treatment

Total waste generation

The total amount of waste generated in Slovakia has increased over the last 12 years by more than a third (Figure 1). This trend is mainly driven by the mineral and solidified wastes category. Excluding these wastes, waste generation has largely stagnated since 2018, apart from a notable drop in 2020. The increasing trend in waste generation, excluding major mineral wastes, is primarily driven by a significant increase in recyclable wastes, which have more than doubled over the last 12 years. Slovakia's GDP shows a limited break in its increasing trend in 2020, most likely due to the Covid-19 outbreak. In general, it appears there is no decoupling between waste generation and economic growth.

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



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

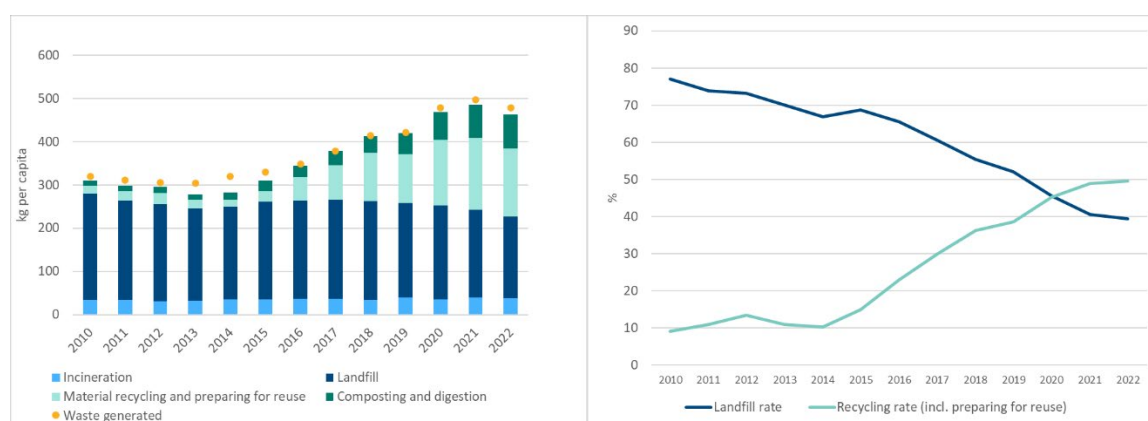
Note: Waste generation data for odd years are interpolated.

Municipal waste

Slovakia generated 478 kg/cap of municipal waste in 2022, which is a significant increase since 2015 (Figure 2, left) but still slightly below the (estimated) EU-27 average of 513 kg/cap. This increase is mainly due to a significant increase in reported amounts going to material recycling and, to a lesser extent, to composting and digestion. The increment observed is mainly due to

changes in statistical reporting rather than a consequence of an improvement of Slovakian recycling performance (ETC/CE, 2022). Several factors contributed to the strong increase since 2016, including a change in the registration of reporting of metals from households, the introduction of Extended Producer Responsibility (EPR), and the introduction of a sorting rate target for municipalities. As of 2020, the definition of municipal waste in Slovakia has been expanded, now also accounting for waste from restaurants and catering establishments, and waste from other sources that is similar in nature and composition to household waste. This change has resulted in an increase in the reported production of municipal waste per capita of approximately 9%. (Slovak Environment Agency, 2023)

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 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. However, it is unclear based on the information available whether these new reporting rules have been implemented in Slovakia yet.

The preparing for reuse and recycling rate in Slovakia significantly increased, from 23% in 2016 to 50% in 2022, which is very close to the (estimated) EU-27 average of 49% in the same year (Figure 2, right). Both material recycling and composting and digestion contributed to this increase. The development is also heavily influenced by changes in reporting.

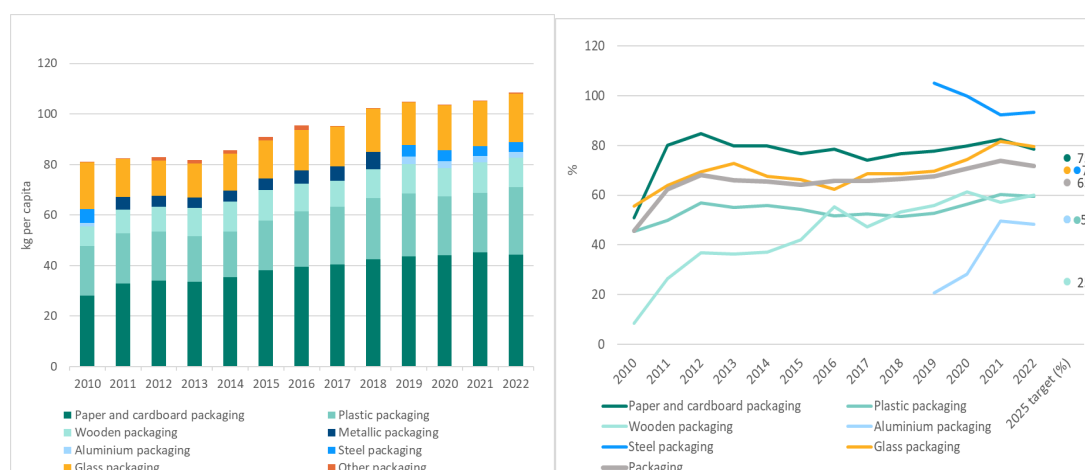
Slovakia has also reported data to show compliance with the preparing for reuse and recycling target of 55% for 2025, as laid down in the Waste Framework Directive. The difference between these data, following the reporting obligation of the Waste Framework Directive, and the data shown in Figure 2 (voluntary reporting) is below 1 percentage point for the preparing for reuse and recycling rate, both in 2021 and in 2022. The 2022 data according to this reporting obligation are provisional and still awaiting validation by Eurostat (Eurostat, 2024c).

The incineration rate remained stable during this timeframe, standing at 8% in 2022 (Figure 2, left). The landfill rate dropped significantly since 2010, from 77% to 39% in 2022 (Figure 2, right), and most recently, the absolute amounts of landfilled waste also decreased slightly.

Packaging waste

Slovakia's total packaging waste generation significantly increased since 2010 (Figure 3, left). The country generated 108 kg/cap in 2022, which is significantly below the (estimated) EU-27 average of 186 kg/cap in the same year ⁽¹⁾.

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



Source: Eurostat (2024e)

Note: As of 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 implemented in Slovakia. Packaging waste data for 2020-2022 is flagged as 'definition differs'.

Slovakia's overall packaging waste recycling rate increased in the period 2010-2012, but has nearly stagnated since 2012, reaching 72% in 2022 (Figure 3, right). The overall packaging waste recycling rate is mainly driven by paper and cardboard, along with glass packaging waste. This is because these fractions represent a high share of the packaging waste generation, along with a high recycling rate. A trend similar to the overall packaging waste recycling rate can be seen for the separate packaging waste fractions, except for wooden and glass packaging, which show a more significant increase between 2012 and 2022 (Figure 3, right). For the reference year 2020 and onwards, it is mandatory to report steel and aluminium packaging separately. The recycling rate of steel packaging waste exceeds the 2025 target while aluminium packaging waste is close to the target in 2022.

Nevertheless, the recycling rates presented are not yet based on the new calculation rules. A key difference with the old rules is that according to the new rules, 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. In addition, the amounts of packaging placed on the market for Slovakia might be underreported as no estimates are made to account for lack of coverage due to free riding (except for plastic packaging since the reference year 2022), and no third-party auditing of the Producer Responsibility Organisations' (PRO) data has taken place yet (ETC/CE, 2022). However, an analysis of free riding for the reference year 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.

estimated that free riders could have been responsible for 13% of plastic packaging placed on the market in Slovakia (Slovak Environment Agency, 2024).

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

Legislative framework and waste management plans

In Slovakia, the Waste Act (No. 79/2015) came into force in 2016 and has been amended several times since. The Environmental Strategy recognises waste as a key policy area and sets out targets and measures for improvement (ETC/CE, 2022).

Slovakia adopted the National Waste Management Plan (NWMP) for 2021-2025 in 2021 (Ministry of the Environment of the Slovak Republic, 2021). The plan covers all waste streams with dedicated sections. The main objective of the plan is to divert waste away from landfilling, especially municipal waste, by switching to more waste prevention, reuse, preparing for reuse, recycling, and supplementing with energy recovery. Specific measures include the increase of landfill taxes, as well as a deposit-return system for single-use beverage packaging which has entered into force in January 2022 (ETC/CE, 2022). This national plan should be complemented by regional waste management plans, which are under development.

Waste prevention policies

Slovakia's current National Waste Prevention Programme (NWPP) for 2019-2025 is a stand-alone programme, but additional waste prevention elements have been integrated in 2021 in the National Waste Management Plan (NWMP) as part of chapter VI. The objective of the NWPP is to focus on waste prevention instead of on material recovery. The priority waste streams for prevention are food waste, construction and demolition waste, hazardous waste, municipal waste, packaging waste, bulky waste, and other miscellaneous wastes such as paper waste and waste from extractive industries (Ministry of the Environment of the Slovak Republic, 2019, 2021; EEA, 2023c). There is no information about a specific budget for the implementation of the NWPP. However, in each section of the special waste flows, sources for financing those activities and measures are provided.

For each priority waste stream, objectives are specified along with indicators for follow-up. Quantitative targets are the reduction of mixed municipal waste by 50% and the reduction of biodegradable waste in mixed municipal waste by 60% by 2025, compared to 2016. However, these targets are more related to waste management than to waste prevention, as they can be achieved by diverting waste materials to recycling. (EEA, 2023a)

The NWPP defines prevention measures in the following areas, with specific measures aimed at achieving the objectives (EEA, 2023a):

- Sustainable consumption models;
- Design, manufacturing and use of products;
- Reuse of products and the setting up of systems promoting repair and reuse activities;
- Reduction of waste generation in processes;
- Reduction of the generation of food waste;
- Reduction of the generation of waste, in particular, waste that is not suitable for preparing for reuse or recycling;

- Identification of products that are the main sources of littering; and
- Information campaigns to raise awareness.

To increase the reuse of bulky waste, information support was implemented through the National Project 'Improving Awareness and Providing Advice on Improving Quality of the Environment in Slovakia', which included TV spots, conferences and social media posts.

Financial support is provided through the Operational Programme Slovakia and through the subsidy scheme of the Environmental Fund, which enables to apply for support in the form of a subsidy for the development of waste management and circular economy activities and for the establishment of reuse centres every year from 2019 onwards. Through the Environment Fund, there is the possibility of subsidies to support the creation of space in the collection yards for the storage of waste intended to be prepared for reuse.

Food waste has been addressed by Slovakia's waste policy since 2016, and an action plan, incorporated in the current NWPP, is set to prevent food waste and losses in the food chain (Ministry of the Environment of the Slovak Republic, 2019). The goal is to support the reduction of food waste generated in retail and at the consumer level, and to reduce food losses in the entire chain of food production and distribution.

The current NWPP includes a section on how Slovakia evaluated the previous NWPP (Ministry of the Environment of the Slovak Republic, 2019). The evaluation indicated that changing behaviour within production and consumption requires a change in several legal regulations, coupled with the challenge associated with limited financial resources. How the result of the evaluation is incorporated in the current NWPP is not clear, but several large changes were made compared to the previous NWPP, such as incorporating waste prevention measures to align with the 2015 EU Action Plan for the Circular Economy and the EU's plastics strategy of 2018, aiming to transform the way plastic products are designed, produced, used and recycled. (EEA, 2023c))

Slovakia has not reported any data for reuse of textiles, furniture, electrical and electronic equipment, and construction and building materials, according to the Commission Implementing Decision (EU) 2021/19 for the year 2021 by the reporting deadline (EEA, 2024).

Policies to encourage separate collection and recycling

Residual waste, bio-waste and fractions falling under the Extended Producer Responsibility (EPR) for packaging (paper, cardboard, metals, composite materials and plastics) are usually collected via bring points from housing properties with multiple apartments, and door-to-door from individual properties. Glass waste is collected mostly via bring points (Ministry of the Environment of the Slovak Republic & Slovak Environment Agency, 2021). There is no distinction made between packaging and non-packaging waste for the plastics, paper, and glass fractions. EPR systems cover packaging waste from both households and non-household sources, but there is no system of advanced fee modulation in place (ETC/CE, 2022). Previously, municipalities could make use of exemptions from mandatory bio-waste collection, but these were phased out by the 1 January 2023. Since 2023, all municipalities were providing separate collection of bio-waste, i.e. bio-waste is currently collected separately and is not mixed with other types of waste, or it can be sorted and recycled at source.

In Slovakia, pay-as-you-throw systems are in use, but only by 10% of the municipalities. Another 5% apply a combined method of flat-rate fees and variable setting of fees (Ministry of

the Environment of the Slovak Republic, 2024a). The design of the systems is decided by the municipalities, however, the most common system in use is based on collection frequency and the volume of the container. An amendment to the Waste Act to unify and extend the pay-as-you-throw system to the whole country was submitted to the National Council of the Slovak Republic but was not approved (Ministry of the Environment of the Slovak Republic, 2024a).

There are mandatory deposit-return schemes (DRS) for beverage aluminium cans, for plastic drink bottles, and for some glass drink bottles. In addition, there is a voluntary scheme covering nearly all plastic crates. For wooden packaging, there is a voluntary DRS. Slovakia does not use packaging taxes except for plastic carrier bags (ETC/CE, 2022).

Policies and instruments to discourage landfilling or incineration

Slovakia has a landfill ban on sorted biodegradable waste from households and restaurants, and municipal garden waste. Applying from 2023, there are bans on landfilling of untreated mixed municipal waste (with exceptions), as well as biodegradable waste from retail wholesale and distribution. However, according to a 2023 analysis aimed at assessing the available capacity for the treatment of mixed municipal waste, mixed municipal waste was allowed to continue to be landfilled without treatment (Ministry of the Environment of the Slovak Republic, 2024a). Since 2016, Slovakia has applied a landfill tax (called fee) between EUR 11 and 30 per tonne of landfilled waste depending on the sorting level in the municipality, which is below the EU-27 average of EUR 39-46 per tonne (EEA, 2023a). A revision of the landfill tax/fee has been proposed by the Ministry of Environment and is currently in inter-ministerial comment procedure (Ministry of the Environment of the Slovak Republic, 2024b).

Slovakia has no tax on waste incineration and has no plans to introduce such a tax. However, a ban on energy recovery of waste that can be recovered as material or recycled, has been proposed in the draft law amending the Waste Act, which would have an effect on waste incineration (EEA, 2023b).

Prospects for meeting the targets on recycling and landfilling

Slovakia has moved in the right direction as the (preparing for reuse and) recycling rates of municipal waste and total packaging waste have increased, and the landfill rate of municipal waste decreased. Despite this progress, improvements are needed regarding its performance to reach the 2025 target of 55% preparing for reuse and recycling of municipal waste and the 2035 target to reduce landfill to 10% of the generated municipal waste. On the other hand, Slovakia already reports a recycling rate of total packaging waste close to the 2025 target, and recycling rates of packaging waste materials above the 2025 targets except for aluminium packaging. However, the recycling rates presented are not yet based on the new calculation rules and are likely to be overestimated (ETC/CE, 2022).

Consequently, the European Commission issued a number of policy recommendations and priority actions to improve Slovakia's waste management performance (EC, 2022, 2023):

- Support preparing for reuse of municipal waste and reuse systems for packaging.
- Further reduce dependency on landfilling by increasing landfill tax levels, as well as tackling illegal landfilling.

- Make municipal waste collection and treatment more uniform across municipalities and support the treatment of separately collected bio-waste.
- Further implement and expand the pay-as-you-throw system for businesses and households.
- Improve the system for managing the quality of data on packaging waste, in order to build coherent and verifiable datasets.

Meanwhile, Slovakia has notified the European Commission to postpone the deadline for meeting the 2025 target for the recycling of municipal waste by five years, making use of the postponement option in the Waste Framework Directive. (EC, 2024)

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