

Waste management country profile

with a focus on municipal and packaging waste

Czechia

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Key messages

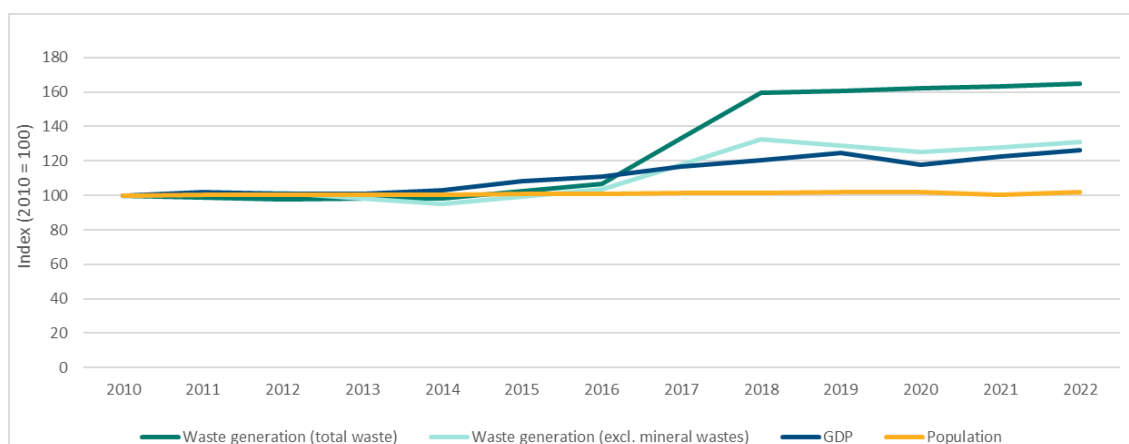
- Looking at the periods 2010-2016 and 2018-2022 separately (before and after the break in time series in waste statistics), it seems that waste generation did not decouple from economic growth.
- Czechia increased its preparing for reuse and recycling rate of municipal waste from 32% in 2017 to 44% in 2021.
- Czechia has to speed up its progress to reduce landfilling. The effect of the recent policies – especially of the increase in the Czech landfill tax – is not yet visible in the data.
- There is a need to further reduce the distance to the preparing for reuse and recycling target for municipal waste, for example, by further improving and incentivising the separate collection of waste, including bio-waste, which will also contribute to reducing the amount of waste going to landfills.

Trends in waste generation and treatment

Total waste generation

The total amount of waste generated in Czechia has increased considerably over the last 12 years, especially since 2016 (Figure 1). This trend is mainly driven by a change in data collection methodology in 2018 when the range of entities covered by the Czech waste statistics widened. The coverage of businesses improved, leading to higher recorded waste amounts (Eurostat, 2020). The slight increase in total waste from 2018 to 2020 is mainly driven by the mineral and solidified waste category, and within this especially excavated soils. The amount of total waste excluding major mineral waste followed a decrease in the period 2018-2020, mainly driven by recyclable wastes. Czechia's GDP has been continuously growing, except for a decrease in 2020, which is most likely due to the Covid-19 outbreak. Looking at the periods 2010-2016 and 2018-2022 separately due to the break in time series, it seems that waste generation did not decouple from economic growth.

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



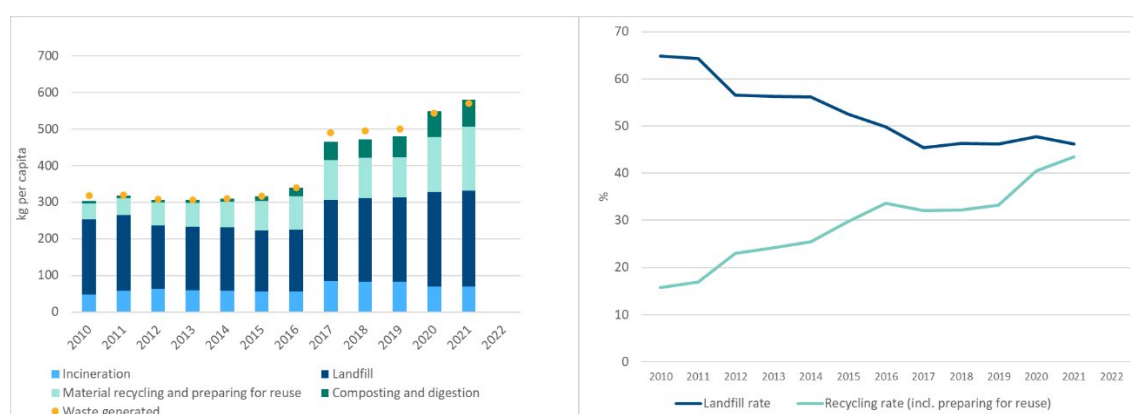
Source: Eurostat (2024b, 2024c, 2024g)

Note: The break in time series in 2018 is due to a change in methodology. Waste generation data for odd years are interpolated.

Municipal waste

Czechia's municipal waste generation has shown a significant increase over the last 11 years, especially since 2017 (Figure 2, left), due to changes in the reporting methodology. In 2021, Czechia generated 570 kg/cap of municipal waste, which is slightly above the (estimated) EU-27 average of 527 kg/cap in the same year. Figure 2 (left) shows a break in the time series of data in 2017, due to a change in the municipal waste definition being extended to also include waste from companies similar to household waste. This change has been applied since 2017 to be in line with the Waste Framework Directive (ETC/CE, 2022).

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



Source: Eurostat (2024e)

Note: No data are available for 2022. There is a break in the time series of data in 2017 and 2020. 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. The Czech authorities indicate that the data reported for the reference year 2020 and later already correspond to the new reporting rules (ETC/CE, 2022).

The preparing for reuse and recycling rate of municipal waste shows an increase from 32% in 2017 to 44% in 2021 (Figure 2, right), which is slightly below the (estimated) EU-27 average of 49%. Material recycling, as well as composting and digestion, have contributed to the increasing trend.

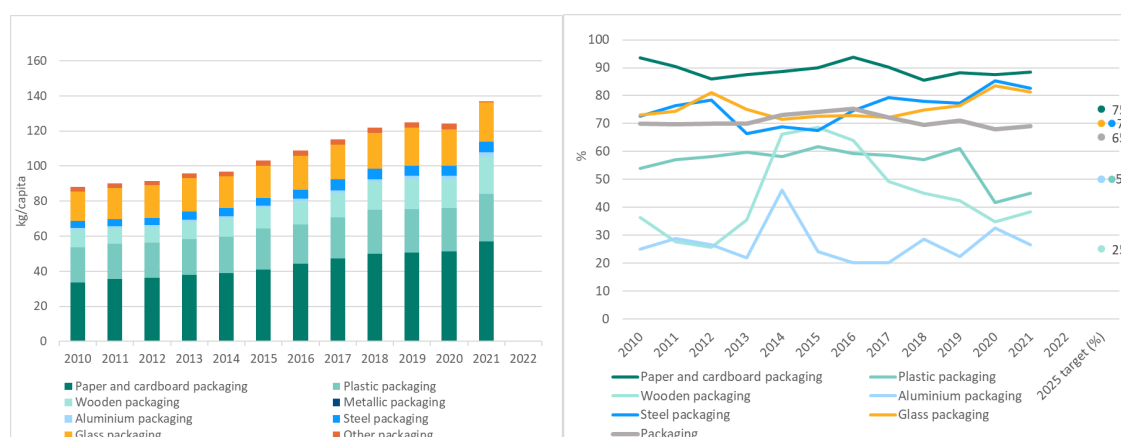
Czechia has also reported data to show compliance with the preparing for reuse and recycling target of 55% for 2025, as laid down in the Waste Framework Directive. The difference between these (provisional) data, following the reporting obligation of the Waste Framework Directive, and the data shown in Figure 2 (voluntary reporting) is below 1 percentage point for the preparing for reuse and recycling rate in 2021, while 2022 data according to this reporting obligation are not yet available (Eurostat, 2024d).

Despite a significant decrease since 2010, the landfill rate was still 46% in 2021 (Figure 2, right) but has stagnated since 2017, while 12% was incinerated in 2021. Additional efforts are needed to further reduce landfilling.

Packaging waste

Packaging waste generation in Czechia has continuously and significantly increased since 2010 (Figure 3, left). The country generated 137 kg/cap in 2021, which is significantly below the (estimated) EU-27 average of 189 kg/cap in the same year ⁽¹⁾.

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



Source: Eurostat (2024f)

Note: Data for 2022 are not available. As of the reference year 2020, the rules for calculating recycled packaging waste have changed, pursuant to Article 6a of Directive 94/62/EC. These new reporting rules have been implemented in Czechia since the reference year 2020 (Eurostat, 2024a).

Czechia's overall packaging waste recycling rate stagnated in the period 2010-2021, reaching 69% in 2021 (Figure 3), which is above the (estimated) EU-27 average of 64% in the same year. The overall packaging waste recycling rate is mainly driven by paper and cardboard as this is the largest packaging fraction. The recycling rates of paper and cardboard, glass and steel packaging waste are all above 80%. The plastics packaging recycling rate shows a significant decrease between 2019 and 2020 which can be attributed to the application of the new calculation rules since the reference year 2020. The recycling rate of aluminium packaging is the lowest and needs to nearly double in order to meet the 2025 recycling target.

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

Legislative framework and waste management plans

In Czechia, the main legislation on waste comprises the Waste Act (No. 541/2020 Coll.) and the Act on End-of-life Products (No. 542/2020 Coll.). Both acts took effect on 1 January 2021 (ETC/CE, 2022). For packaging, the main legislation is the Act on Packaging (Act No. 477/2001). For single-use plastics, the Act on the Reduction of the Impact of Certain Plastic Products on the Environment (Act No. 243/2022) was adopted in 2022 (MoE, 2024). These acts are

⁽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.

complemented by the Waste Management Plan (WMP) 2015-2024. In addition, every region has its own Regional Waste Management Plan (MoE, 2024).

In May 2022, the Czech Government revised the WMP and updated it with the aims of implementing the provisions of the revised EU waste directives adopted in 2018 and adjusting it to the EU's 2020 Circular Economy Action Plan. The national plan sets goals and targets for different types of waste treatment, as well as the most efficient ways of reaching them. (ETC/CE, 2022)

Waste prevention policies

Czechia's current National Waste Prevention Programme (NWPP) addresses the period 2015-2024 (EEA, 2023c). In 2022 the National Waste Management Plan (NWMP) was updated, and the prevention programme was integrated into this Plan. The main objective of the NWPP is to maximise waste prevention and reduce the amount of waste and the consumption of primary resources. Besides this main objective, the NWPP includes 12 sub-objectives, such as:

- the promotion of sustainable production and consumption patterns, focusing on products containing critical raw materials,
- the creation of conditions for reducing raw material and energy resources in manufacturing sectors, and for the use of secondary raw materials, and
- the stabilisation of the production of hazardous waste, construction and demolition waste and the reduction of the content of hazardous substances in materials and products.

In addition to general waste prevention objectives, the NWPP includes reuse measures for certain priority product categories, including products from construction and demolition, electrical and electronic equipment (EEE), textiles and furniture. Moreover, the NWPP aims to prevent the generation of single-use plastic waste, and related measures focus on education and providing information on the availability of reusable alternatives to single-use plastic products and fishing gear. (EEA, 2023c)

Food waste is one of the priority waste streams in the updated NWMP, with prevention measures addressing all stages of the food chain. The NWMP includes a target for the reduction of single-use plastic beverage cups and food containers (the consumption in kg/cap in 2026 should be lower than in 2022) (EEA, 2023c).

Further measures for waste prevention with specific tasks supplementing the NWPP are set in the Action Plan for a Circular Czechia 2020 for the period 2022-2027. (MoE, 2024)

Many waste prevention activities have been implemented in Czechia. One example is a portal called *"Don't throw it away"*, where citizens can donate items they no longer require but which may serve someone else's need. (EEA, 2023c)

Czechia is very active in support of food banks and food donations. Several mobile and web applications offer food leftovers from restaurants. In 2023, there was also a change in food legislation that enabled the donation of uneaten meals from canteens and catering services. In the past few years, many projects have been created all over the Czech Republic such as reuse

centres, furniture banks, and makerspaces. An online portal 'Let's repair Czechia' ('Opravme Česko – Opravárna') helps citizens to find repair services for electrical and electronic equipment, furniture, textiles, sports equipment, and other products in their neighbourhood. (MoE, 2024) An evaluation report of the NWPP has been produced and the results of the evaluation were used to update the programme in 2022. (EEA, 2023c) The evaluation of measures to strengthen waste prevention is part of the Report on the Evaluation of the WMP CZ including the evaluation of the Waste Prevention Programme (Report for 2020), which is published on the website of the Ministry of Environment (MoE, 2022).

According to 2021 data reported to the EEA according to Commission Implementing Decision (EU) 2021/19 (EEA, 2024), Czechia reused:

- 3942 tonnes of textiles,
- 252 tonnes of electrical and electronic devices,
- 2229 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 Czechia, plastics, paper and cardboard, ferrous metals, aluminium, composite packaging, glass and edible oils and fats are mainly collected via high convenience bring points and civic amenity sites and in less densely populated areas to some extent also via door-to-door collection. Hazardous waste from citizens is mainly collected via civic amenity sites or mobile collection organised by the municipalities (MoE, 2024). Bio-waste collection is focused on garden waste, mainly collected at civic amenity sites. In towns, suburbs and rural areas there are also bring points and door-to-door collection for bio-waste. There are plans to expand the separate collection of food, wood and textiles waste, and the plan for implementation is set out in the updated National Waste Management Plan (NWMP). The obligation for the separate collection of textile waste will start in 2025. The Ministry of Environment has prepared a guidance document for municipalities to help them set up a separate collection of textile waste. The separate collection of food waste (kitchen animal-based waste) will start in 2026. (MoE, 2024)

Czechia has an Extended Producer Responsibility (EPR) scheme in place for packaging waste from households and non-households. EPR fees are applied to single-use packaging but not to reusable packaging. EPR fees are set depending on the broad material categories except for plastic packaging, for which fees differ depending on the recyclability of the plastic packaging design since 2021 (ETC/CE, 2022). The EPR systems could be improved by aligning them with the general minimum requirements of EPR, according to the priority actions recommended by the European Commission's 2022 Environmental Implementation Review (EIR) for Czechia (EC, 2022).

Czechia is planning to introduce EPR schemes for textiles (in line with the amendment of the Waste Framework Directive proposed in 2023), furniture, sports equipment, plastic toys and some other product groups. (MoE, 2024)

In order to incentivise sorting at source, a pay-as-you-throw system is in place, but it currently only covers about 20% of the population. This system is mainly based on container size, weight or volume of waste, frequency of collection, or a combination of those elements. The type of pay-as-you-throw system applied is decided by each municipality (EEA, 2023b). The EIR 2022 recommended the use of instruments such as pay-as-you-throw systems (EC, 2022).

Currently, Czechia has no mandatory deposit-return systems (DRS) in place. However, there are voluntary systems for refillable glass beer bottles, plastic crates and wooden packaging (ETC/CE, 2022). The Czech Ministry of the Environment is planning to start a deposit-return system for plastic bottles and cans in 2026.

Policies and instruments to discourage landfilling or incineration

Since 2021, Czechia has had a landfill tax which increases annually. The landfill tax increases from EUR 32 per tonne in 2021 to EUR 73 per tonne in 2029 for recoverable waste and will become considerably higher than the average of EUR 39-46 per tonne applied across EU-27 Member States applying such taxes (EEA, 2023a). Moreover, the Czech Waste Act also establishes landfill taxes for residual waste, hazardous waste, technological waste, and remediation waste. (EEA, 2023b)

Municipalities which landfill less than a specific amount of recoverable waste (190 kg per inhabitant in 2022, 180 kg per inhabitant in 2023 and 170 kg per inhabitant in 2024) are exempted from the landfill tax, but this threshold is decreasing over the years (MoE, 2024). The exemption aims to prepare the municipalities for a landfill ban to be introduced in 2030, according to the Waste Act for waste that exceeds 6.5 MJ/kg in dry matter, waste which exceeds a threshold value for the biological stability parameter AT4, and waste that can be recycled efficiently. Additionally, since 2021, separately collected municipal waste suitable for reuse or recycling is not allowed to be landfilled or incinerated anymore (EEA, 2023b). Czechia does not apply incineration taxes, and has currently no intention to introduce such taxes (EEA, 2023b). This is due to the fact that the energy recovery rate of municipal waste is very low in Czechia and the main aim is to divert municipal waste from landfilling, not from incineration (MoE, 2024).

Prospects for meeting the targets on recycling and landfilling

Czechia is considered to be on track to meet the 2025 targets for the preparation for reuse and recycling of municipal waste, recycling of total packaging waste and material-based recycling targets, except aluminium packaging (ETC/CE, 2022). However, in 2021, Czechia was still 11 percentage points below the 2025 target for municipal waste, so it needs to speed up its progress.

On the other hand, Czechia is still landfilling 46% of its municipal waste (Figure 2) and is considered to be at risk of missing the 2035 target to reduce the amount of municipal waste landfilled to 10% or less of the total amount of municipal waste generated (ETC/CE, 2022). In response, Czechia recently increased the landfill tax, which is set to increase further by 2029, with exemptions however. The impact of these recent measures remains to be seen.

In order to move towards more recycling, the NWMP includes a plan for expanding the collection of food waste, with a focus on kitchen animal waste from households going to biogas plants. Furthermore, the Ministry of the Environment supports municipalities to improve their network

of separate collection systems for households, but municipalities decide on their territories. (ETC/CE, 2022) This responds (partly) to the recommendation in the EIR 2022 that priority actions should be focused on improving and extending the separate collection of waste including bio-waste, using economic instruments such as pay-as-you-throw, and improving the functioning of Extended Producer Responsibility (EPR) systems (EC, 2022).

Meanwhile, Czechia has decided to postpone the deadline for meeting the 2025 and 2030 targets for aluminium packaging by five years each, making use of the postponement option in the Packaging and Packaging Waste Directive. (EC, 2024)

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