

# Waste management country profile

with a focus on municipal and packaging waste

## Lithuania

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## Key messages

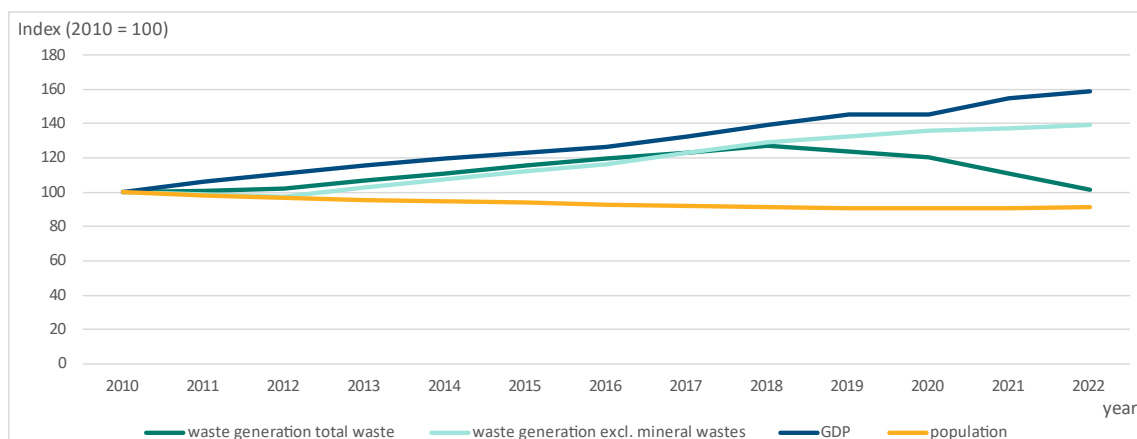
- Waste generation in Lithuania shows an increasing trend until 2018, followed by a decrease. Most recent data years indicate a potential decoupling between waste generation and economic growth, but additional data points are required to confirm this trend.
- Lithuania is considered to be at risk of not meeting the 2025 municipal waste recycling target and the 2025 total packaging waste recycling target. Nevertheless, the country seems to be on track to meet the 2035 landfill target. Data for 2022 indicate that Lithuania prepared for reuse and recycled 49% of its municipal waste and recycled 58% of its packaging waste. Therefore, some more efforts are required to meet the 2025 targets.
- During the last decade Lithuania has made considerable progress in reducing its landfill rate, mainly by investing in Mechanical biological treatment (MBT) and increasing energy recovery.
- The European Commission had recommended Lithuania to further work towards increasing recycling of both municipal and packaging waste, for example by improving separate collection, e.g. of food waste, and incentivising sorting at source.
- Lithuania has already implemented several relevant measures to increase the recycling of municipal and packaging waste, including the introduction of separate collection of food waste from households, increase of the landfill tax, higher taxes on non-recyclable packaging, and an obligation for producer responsibility organisations to finance collection infrastructure development. Several further measures are planned, including economic incentives and support to municipalities for improving their separate collection systems. The effects of these measures remain to be seen.

## Trends in waste generation and treatment

### *Total waste generation*

The total amount of waste generated in Lithuania increased until 2018 but has decreased since (Figure 1). This trend is primarily driven by the largest waste categories, namely mineral waste from construction and demolition, and other mineral wastes (mainly generated in manufacturing activities). When looking at wastes excluding major mineral wastes, recyclable ferrous metal wastes, sorting residues, and household and similar wastes dominate as the largest waste fractions. Especially the amount of sorting residues has increased steadily and influences the overall trend, indicating major changes in the waste management system. Lithuania's GDP increased throughout the considered time frame, with the exception of a drop in 2020, most likely due to the Covid-19 outbreak. While additional data points are required for confirmation, most recent data years indicate a potential decoupling between waste generation and economic growth.

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



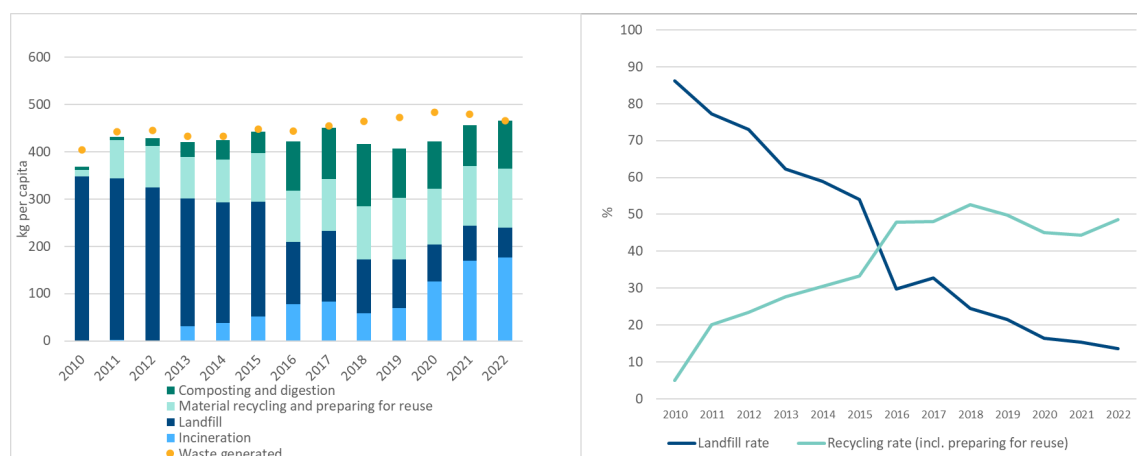
**Source:** Eurostat (2024c, 2024b, 2024g)

**Note:** Waste generation data for odd years are interpolated.

### Municipal waste

Lithuania's municipal waste generation has remained rather stable over the past decade (Figure 2, left). In 2022, the country generated 465 kg/cap of municipal waste, which is slightly below the (estimated) EU-27 average of 513 kg/cap.

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



**Source:** Eurostat (2024e)

**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. Lithuania has implemented the new reporting rules from the reference year 2020 onwards (MoE, 2024).

Lithuania has a preparing for reuse and recycling rate of 49%, which is the same as the (estimated) EU-27 average of 49%. The recycling rate showed a significant increase until 2018,

after which it stagnated. The data for 2020-2022 are not fully comparable with the data before 2020 due to the change of reporting method in 2020 <sup>(1)</sup>.

Lithuania 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 both in 2021 and 2022. The 2022 data according to this reporting obligation are still awaiting validation by Eurostat (Eurostat, 2024d).

The landfill rate in Lithuania was 14% in 2022 and has decreased significantly over the past decade (Figure 2, right). The reduction in landfilling is due to increased capacity for both Mechanical biological treatment (MBT) and incineration with energy recovery, which may further increase as new incineration facilities start operating (EC, 2022). The incineration rate has increased from 0% to 38% between 2010 and 2022. The share of material recycling shows a steady increase.

In 2016 Lithuania experienced a significant change in the waste management system, when 10 new MBT facilities started operating, significantly increasing not only rates for incineration but also composting (Eurostat, 2022). The amounts reported as composted and digested include outputs of Mechanical biological treatment (MBT) which will not be allowed to count towards the recycling target of the Waste Framework Directive from 2027 onwards, resulting in a need to improve and extend separate collection of bio-waste.

### ***Packaging waste***

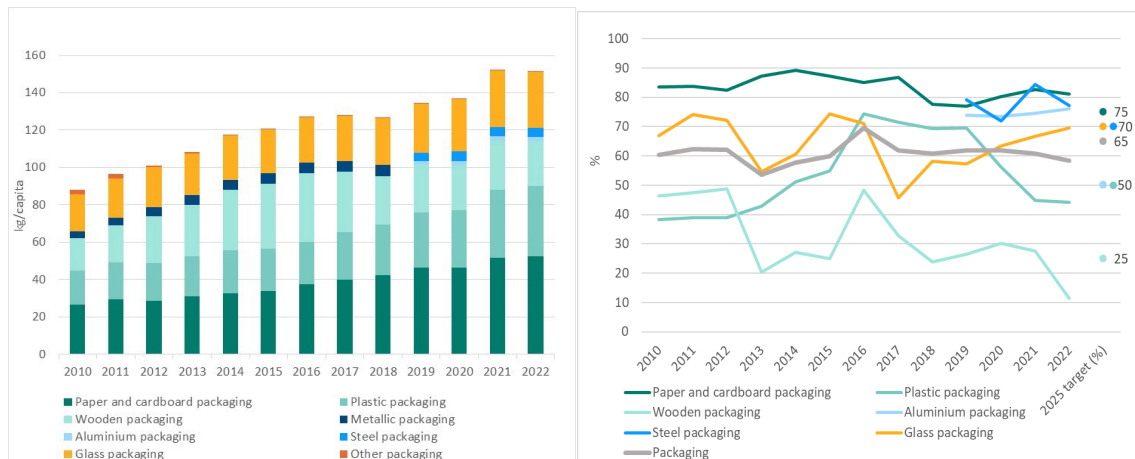
Lithuania's packaging waste generation has been increasing since 2010. The country generated 151 kg/cap in 2022, which is still significantly below the (estimated) EU-27 average of 186 kg/cap in the same year <sup>(2)</sup>.

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<sup>(1)</sup> While compliance with the 2020 recycling target of the WFD is not assessed here, it is noted that Lithuania uses calculation method 2 of Commission Implementing Decision 2011/753/EU to show compliance with the target to recycle 50% of household/municipal waste according to the Waste Framework Directive Art. 11(2a). According to calculation method 2, Lithuania achieved a recycling rate of 55.5% in 2021 (MoE, 2024).

<sup>(2)</sup> 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.

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



**Source:** Eurostat (2024f)

**Note:** There is a break in time series in 2020. As of the reference year 2020, the rules for calculating recycled packaging waste have changed, pursuant to Article 6a of Directive 94/62/EC. Lithuania is reporting data according to these new reporting rules for the reference year 2020 onwards (Eurostat, 2024a).

In 2022, the recycling rate for packaging waste was 58%, and the trend since 2010 has stagnated. The recycling rate is slightly below the (estimated) EU-27 average of 65%. Recycling rates for all packaging fractions fluctuate significantly over time, not indicating any clear trends. The recycling rate is mainly driven by paper and cardboard packaging, as it is the largest packaging waste fraction. The decrease in paper and cardboard packaging recycling rate from 2018 onwards can be explained by a decrease in demand for paper and cardboard packaging (ETC/CE, 2022). Plastics recycling increased significantly from 2015 to 2017 but has since dropped to 44%. The drop in glass packaging recycling in 2017 is related to a change in the waste management system (ETC/CE, 2022). For the reference year 2020 and onwards, it is mandatory to report steel and aluminium packaging separately. In 2022 the recycling rates of both fractions exceeded the 2025 target.

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

### *Legislative framework and waste management plans*

Overall, the Lithuanian waste legislation follows the EU waste legislation (ETC/CE, 2022). The main acts and regulations regarding municipal waste and packaging waste include the Law on Waste Management, Law on Taxes on Environmental Pollution, Law on Packaging and Packaging Waste, and Order - Minimum service requirements for municipal waste management (ETC/CE, 2022).

Lithuania's new waste management plan for 2021-2027 was adopted in 2022 (Ministry of the Environment of the Republic of Lithuania, 2023).

### ***Waste prevention policies***

Lithuania's National Waste Prevention Programme (NWPP) is integrated into the National Waste Prevention and Management Plan 2021-2027, in which it has its own chapter (Ministry of the Environment of the Republic of Lithuania, 2023). The long-term goal is to minimise waste generation, ensure safe waste management, promote the rational use of resources, reduce landfill waste, mitigate environmental pollution, and provide local raw materials to industry. Consequently, there is a considerable overlap in the aims of waste prevention and waste management (EEA, 2023).

Each prioritised waste stream for waste prevention has its own separate sub-section and includes food and food waste, packaging and packaging waste, electrical and electronic equipment, end-of-life vehicles, waste oils, waste batteries and car batteries, waste tyres, waste fishing gear containing plastic, waste textiles, waste furniture, hazardous waste, manufacturing waste, construction and demolition waste, healthcare waste, and sewage sludge (Ministry of the Environment of the Republic of Lithuania, 2023).

Waste prevention goals and objectives are (Ministry of the Environment of the Republic of Lithuania, 2023):

- to avoid the generation of waste and reduce the number of hazardous substances in raw materials and products,
- to encourage users to choose reusable products, products for repeated use, repair and/or repair services,
- to combat littering and manage existing litter,
- to promote and ensure the prevention of food waste, and
- to promote the ecological design of products and implement business models ensuring waste prevention.

Examples of waste prevention measures are to encourage eco-design for products and buildings, to support business models for waste prevention, to establish a platform for cooperation to find solutions for food waste prevention, to encourage users to choose reusable and second-hand products as well as repaired products, to increase reuse actions such as expanding the network of reception stations for waste that can be prepared for reuse, and to assess the possibility of returning unused material residues (construction materials, furniture, textiles and other materials) at trading points for others to purchase them (EEA, 2023).

Guidelines for the Lithuanian transition to a circular economy by 2035 have been approved by the Government resolution of 21 July 2023 (Government of the Republic of Lithuania, 2023). They will help to establish more sustainable resource use practices, protect the environment, reduce waste generation, and turn the resulting waste into a valuable secondary raw material to be used in new production processes.

The NWPP will be evaluated after six years, with several quantitative targets related to waste prevention, such as reducing the waste intensity of net waste volume per GDP to 100 tonnes/mEUR by 2025 and 90 tonnes/mEUR by 2027; ensuring that municipal waste per capita falls below the average of the EU-27 by 2025 and 2027 (Ministry of the Environment of the Republic of Lithuania, 2023). Moreover, achieving a circular material use rate no lower than the EU-27 average by 2025 and 2027 (which can be understood as a target combining both

waste prevention and management). To monitor the progress of implementation, a set of indicators is used. (EEA, 2023)

The current NWPP (Ministry of the Environment of the Republic of Lithuania, 2023) does not include any clear evaluation of the previous waste prevention programme or how the results were integrated into the current NWPP. A budget for the implementation of specific measures is included in the plan. (EEA, 2023)

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

- 15966 tonnes of textiles,
- 32623 tonnes of electrical and electronic devices, and
- 45444 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***

Separate collection of recyclable waste is mandatory for households and non-households. The collection from households covers all fractions, and the same fractions are collected from non-households if they are similar to household waste. To ensure separate collection, a warning or a fine of EUR 20 to 80 for non-compliance can be applied as an enforcement mechanism. (ETC/CE, 2022)

In cities, door-to-door collection is the dominant collection system for residual waste, paper and cardboard, ferrous metals, aluminium, glass, plastic, WEEE, composite packaging, and bio-waste. For multi-apartment buildings, door-to-door collection is done by using collective containers that are usually located very close to the building. In towns and suburbs, bring points are the dominant collection system for all fractions except for bio-waste and residual waste, which is collected door-to-door. In rural areas, door-to-door collection of either separate or co-mingled fractions is dominant. Garden waste is mainly collected at civic amenity sites (ETC/CE, 2022).

Collection even within the city differs depending on whether a resident lives in an individual housing area or an apartment building district. In individual properties, all waste streams are collected. In apartment building districts, there are containers (mixed municipal waste, plastic, metal, glass, paper and carton), but not for all waste streams. For those other waste streams, residents can find containers in other accessible locations (e.g., textile containers near shopping centres) or in specially designated areas (Civic Amenity Sites also known as Recycling Centres or Household Waste Recycling Centres and Green Waste Composting Sites). Residents of individual properties can also use these sites or containers located in accessible areas. There is also a specific collection service for certain waste streams (where residents do not need to go to Civic Amenity Sites or Green Waste Composting Sites), with collection being carried out at a scheduled time and picked up from the resident. Moreover, it is planned to provide EU grants for municipalities to expand and/or improve their collection systems for bio-waste, hazardous waste, and textile waste. (MoE, 2024)

Lithuania plans to improve the collection system for textiles and food waste (or combined food and garden waste), as bio-waste collection is currently not covering all waste holders (MoE, 2024). Textile waste has been collected in cities at bring points for several years. Requirements on collection point density and potential locations for the textile collection systems come into force in 2025. Similar collection requirements are set for other waste streams (MoE, 2024). From the beginning of 2024, Lithuania introduced a separate collection of food waste (or combined food and garden waste) from households. Furthermore, the Lithuanian Parliament will consider an amendment to the Waste Management Law, which includes provisions for applying discounts on the waste collection fee for residents who practice home composting. This way, biological waste will be processed at its source, and municipalities will have a clear understanding of the number of residents composting. Additionally, there are plans to incentivise municipalities through tax benefits to achieve set biological waste recycling targets (with a portion of the funds paid into the budget being returned to them upon reaching these targets). (MoE, 2024)

In Lithuania, Extended Producer Responsibility (EPR) systems apply to all packaging waste. Lithuania has no advanced EPR fee modulation, i.e. fee modulation beyond the broad material categories such as higher fees for difficult-to-recycle plastic types or combinations of materials. However, a packaging tax is levied on producers/importers that fail to meet the Lithuanian targets for packaging reuse or packaging waste management. Since 2022, the tax is set at a higher level for non-recyclable packaging than for recyclable packaging. The Government defines which packaging is considered recyclable or non-recyclable.

New legal regulations regarding packaging waste collection in municipalities are currently being implemented, granting them greater authority in dealing with packaging producer responsibility organisations (PROs). For instance, PROs have an obligation to finance collection infrastructure development carried out by municipalities. (MoE, 2024)

In order to support sorting at source, Lithuania has implemented a pay-as-you-throw scheme for mixed waste in some regions and municipalities for households served by door-to-door collection. Lithuania implements mandatory deposit-return systems for beverage cans and bottles and voluntary systems exist for reusable packaging such as cups, plastic crates and wooden packaging (ETC/CE, 2022).

### ***Policies and instruments to discourage landfilling or incineration***

Lithuania had a landfill tax of EUR 10 per tonne in 2021, EUR 15 per tonne in 2022, and as of 2023 the tax has increased to EUR 50 per tonne as a basic tariff, but the tax is regularly adjusted to the consumer price index. This adjustment led to an actual rate for the landfill tax of EUR 70.2 per tonne in 2023 (MoE, 2024). The tax covers also outputs of MBT plants that are landfilled, and it is among the highest landfill taxes applied in the EU. Lithuania has a ban in place for landfilling of untreated waste, of biodegradable waste from gardens, parks, and green areas, and of some other selected wastes. Lithuania has no tax on waste incineration (ETC/CE, 2022; MoE, 2024).

## Prospects for meeting the targets on recycling and landfilling

Lithuania seems to be on a trajectory to meet the 2035 target to reduce landfilling to 10% of the generated municipal waste if the pace of improvement since 2010 can be continued. Lithuania has to speed up its progress towards reaching the 2025 target for preparing for reuse and recycling 55% of municipal waste and the 2025 target for packaging recycling of 65% (ETC/CE, 2022). In 2022, Lithuania reached a preparing for reuse and recycling rate of 49%, and a recycling rate of 58% for total packaging waste. Progress since 2019 might be masked by the change to the new reporting rules in 2020.

In the Environmental Implementation Review 2022, the European Commission recommended introducing new policies for reuse and recycling, supporting municipalities in organising separate collection, and improving the functioning of Extended Producer Responsibility (EPR) systems (EC, 2022). The European Commission issued a number of policy recommendations to improve Lithuania's waste management performance in its early warning report for Lithuania (EC, 2023):

- Support preparing for reuse of municipal waste and reuse systems for packaging.
- Further develop waste treatment infrastructure associated with the higher steps of the waste hierarchy, in particular, to improve performance in separate collection, increase the treatment capacity for bio-waste and food waste, and set up a quality management system for compost and digestate from bio-waste.
- Consider making municipalities responsible for meeting specific mandatory targets on the separate collection of waste. This could be complemented with a system of financial awards and penalties dependent on the performance of such targets by the municipalities.
- Develop and promote awareness-raising campaigns specifically tailored to different target groups to increase participation in separate collection.

Lithuania has already implemented several relevant measures to increase the recycling of municipal and packaging waste, including the introduction of separate collection of food waste from households, the increase of the landfill tax, higher taxes on non-recyclable packaging, and an obligation for producer responsibility organisations (PROs) to finance collection infrastructure development. Several further measures are planned, including economic incentives and support to municipalities for improving their separate collection systems.

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