Waste management country profile

with a focus on municipal and packaging waste

Finland

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European Environment Agency

Key messages

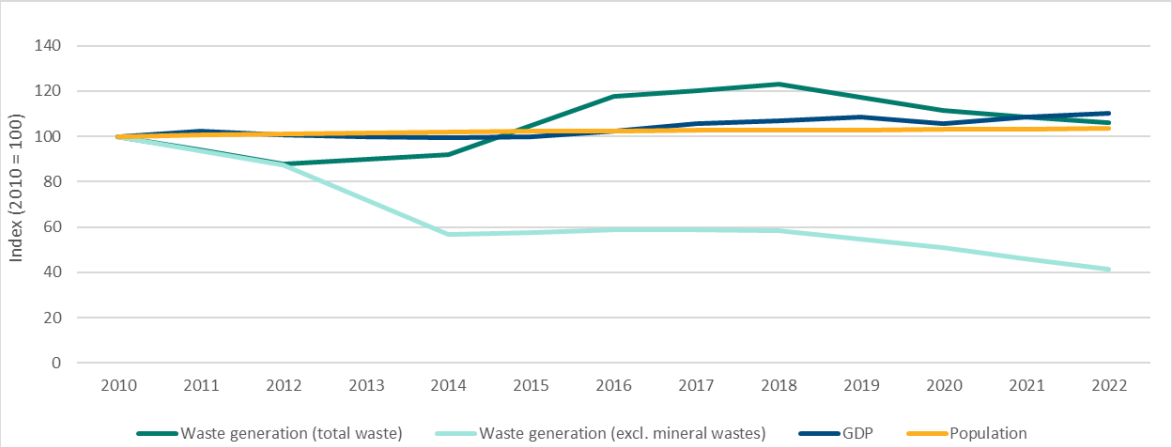
- Waste generation in Finland has shown strong variations during the last 10 years, thus no clear indications of decoupling of waste generation from economic growth can be identified.
- Finland is considered to be at risk of missing the 2025 target of 55% for the preparing for reuse and the recycling of its municipal waste but was assessed to be on track to meet the 2025 target for total packaging waste and the 2035 target to limit landfilling to 10% of the generated municipal waste.
- Finland has only made minor progress in improving its municipal waste recycling rate. During the last decade, Finland has made considerable progress in diverting waste from landfilling, although this has resulted in a significant increase in the incineration rate whereas recycling has increased less.
- Data for the reference year 2022 also indicate that Finland needs to step up its efforts to meet the 2025 recycling targets for plastic packaging, and to a lesser extent for total, steel and wooden packaging.
- Waste recycling needs to be more economically attractive and energy recovery should be limited to non-recyclable materials. Especially bio-waste collection needs more attention.

Trends in waste generation and treatment

Total waste generation

The total amount of waste generated in Finland increased between 2012–2018 and has decreased since (Figure 1). This trend is primarily driven by the largest waste category, 'other mineral wastes', which is part of the mineral waste category and is mainly generated in the mining and quarrying sector. When excluding mineral wastes, waste generation shows a strongly decreasing trend, mainly driven by the drop in the recyclable waste fraction 'wood wastes'. This fraction has been redefined since 2014 as a by-product. Now, a majority of this material is excluded from the waste statistics (Statistics Finland, 2024). Finland's GDP is quite steady with a small increasing trend but dropped slightly in 2020, most likely due to the Covid-19 outbreak. Due to the strong variations in waste generation, no clear indications of decoupling between economic growth and waste generation can be seen.

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



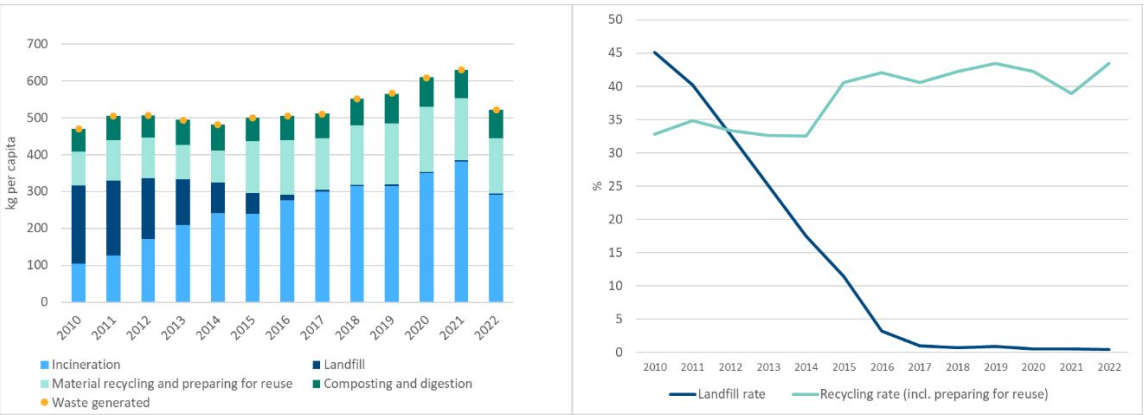
Source: Eurostat (2024a, 2024b, 2024f)

Note: Waste generation data for odd years are interpolated.

Municipal waste

Finland's municipal waste generation has significantly increased over the past decade but dropped in 2022. In 2022, the country generated 522 kg/cap of municipal waste, which is very close to the (estimated) EU-27 average of 513 kg/cap (Figure 2, left). The recycling rate increased from 33% in 2010 to 43% in 2022, which is slightly below the (estimated) EU-27 average of 49% (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. The new reporting rules have been implemented in Finland (SYKE, 2024).

([1]) However, while the 2020 recycling target according to Art. 11.(2a) Waste Framework Directive is not assessed here, Finland has reported the municipal waste recycling rate in response to that target according to calculation method 2 (Commission Decision 2011/753/EU), according to which the recycling rate in 2021 was 45.4%. In addition, in 2020 and 2021 the recycling rate decreased probably due to the Covid-19 pandemic and increased again in 2022 (recycling rate based on calculation method 2 was 50.6% in 2019 and 50.4% in 2022). (SYKE, 2024)

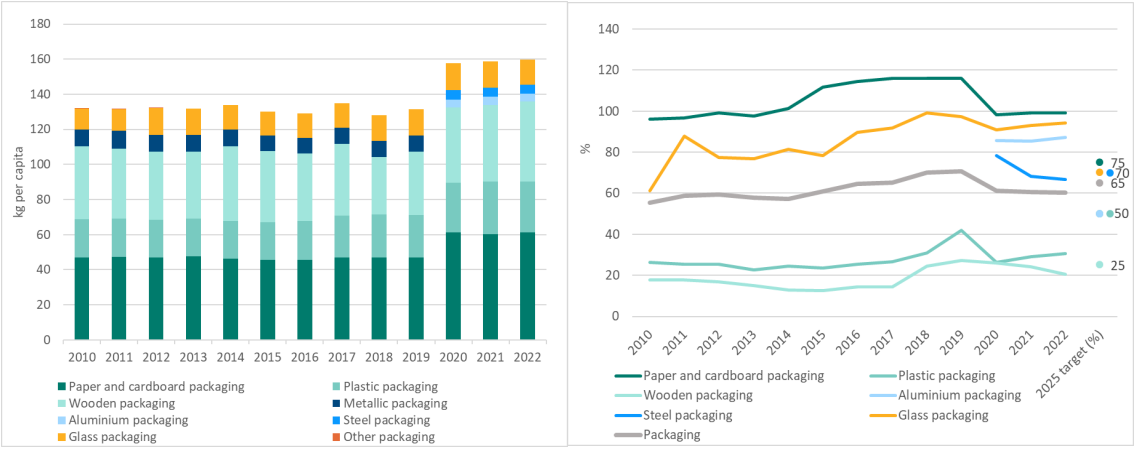
In Finland, incineration with energy recovery is the main waste treatment type. The share of incineration significantly increased since 2010 and stands at 56% in 2022. Landfilling accounts for less than 1% of waste treatment (Figure 2, right). Finland has made considerable progress in diverting waste from landfilling, although this has resulted in a significant increase in the incineration rate while recycling has increased less.

Finland 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, 2024c).

Packaging waste

Finland's packaging waste generation per capita stagnated between 2010 and 2019 but increased significantly in 2020, reaching 160 kg/cap in 2022 ([2]). The increase is partly due to the shift in the reporting rules explained below, but most probably some changes in the consumption habits due to the Covid-19 outbreak have also taken place. This is significantly below the (estimated) EU-27 average of 186 kg/cap in 2022 ([3]). Finland also reported generation and recycling of packaging waste according to the old rules (148 and 149 kg/cap in 2020 and 2021, respectively). (SYKE, 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. Finland has reported packaging and packaging waste using the new calculation rules from the reference year 2020, which affected all materials' recycling rates except for metals.

([2]) If repaired wooden packaging is added to the generated waste, waste generation was 169/170/x kg/cap in 2020, 2021 and 2022, respectively (SYKE, 2024)

([3]) 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.

Finland's overall packaging waste recycling rate as well as the recycling rates for all materials has steadily increased until 2019. The change to the new reporting rules led to a drop in 2020. In 2022, the recycling rate for total packaging waste was 60%. It is mainly driven by paper and cardboard and plastic packaging, as these are the largest packaging waste fractions. The reported recycling rate for paper and cardboard packaging is very likely overestimated since it has been exceeding 100% for several years. The recycling rate for plastic packaging is still rather low but has been increasing again since the introduction of the new reporting rules in 2020. As of the reference year 2020, it is mandatory to report steel and aluminium packaging separately. The recycling rate of aluminium packaging is above the 2025 target, while the recycling rate of steel packaging needs to increase to meet the target.

According to the new reporting rules the total packaging waste recycling rate for both reference years 2020 and 2022 was around 61%. The decrease compared to the old calculation rules was due to two main factors. Firstly, estimates of missing data were added to waste generation (free riders, below de minimis, private imports, and distance selling). Secondly, rejects in the recycling process were deducted from the amount of recycled packaging waste. For plastic packaging, the shift from the old to the new calculation rules dropped the recycling rate to 26% for the reference year 2020, while it would have been 45% under the old rules. (SYKE, 2024)

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

Legislative framework and waste management plans

Generally, the Finnish waste legislation follows the EU waste legislation but is partly stricter and more comprehensive (ETC/CE, 2022). The main acts and regulations regarding municipal waste and packaging waste include the Waste Act, Environmental Protection Act and Waste Tax Act. A National Waste Management Plan (NWMP), including the waste prevention programme, has been approved by the government and published in 2022 (Ministry of the Environment, 2022). Finland only has a national waste management plan and no regional plans, in addition, Åland has its own waste plan (ETC/CE, 2022). However, according to the Waste Act (2021/714), the Centres for Economic Affairs, Transport and the Environment must set up regional cooperation groups to support the preparation, implementation and monitoring of the NWMP. In addition, there is a strategic programme for the circular economy, which contains goals of the same content. (SYKE, 2024)

Waste prevention policies

Finland's National Waste Prevention Programme (NWPP) is integrated into the National Waste Management Programme (NWMP) 2022-2027, 'From recycling to Circular Economy', and the waste prevention targets are linked to the general waste management targets (Miljöministeriet Helsingfors, 2022; EEA, 2023c). In addition to the NWMP, a specific roadmap to reduce food waste in the food supply chain was established in 2020 (Natural Resources Center, 2020). The NWMP and NWPP are complemented by Finland's Plastics Roadmap, one of the main objectives of which is to avoid unnecessary consumption of plastics and promote the reuse of plastics (SYKE, 2024).

In the NWPP, the priority waste streams are electrical and electronic waste, construction waste, municipal waste, biodegradable waste, packaging waste and single-use plastics

(Miljöministeriet Helsingfors, 2022). Each priority stream has its own quantitative targets, however, most targets relate to waste management. The quantitative waste prevention target is to halve food waste generation by 2030. A set of indicators is proposed to monitor the waste prevention programme, mainly indicators on waste generation for different waste streams and for preparation for reuse. There is no budget specified for the implementation of the NWPP. (EEA, 2023c) However, the NWMP with its measures is binding on the administrative branches. In addition, a separate budget has been set aside for the circular economy programme that sidelines the waste plan. (SYKE, 2024)

Finland intends to evaluate the NWMP, including the NWPP, at midpoint, by providing an extensive interim report in 2024-2025, and at the end in 2027. Regional cooperation groups are asked annually about the progress of the NWMP's and NWPP's measures. The information of the interim report will be made public (Miljöministeriet Helsingfors, 2022; EEA, 2023c; SYKE, 2024)

Finland has reported data for reuse (2021) in compliance with Commission Implementing Decision (EU) 2021/19 (EEA, 2024):

- 16110 tonnes of textiles,
- 3064 tonnes of electrical and electronic devices,
- 15537 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

Finland has a mandatory door-to-door separate collection system for packaging waste at household properties with at least five apartments located in built-up areas with more than 200 inhabitants, and bring points in rural areas. The system does not cover non-packaging fractions (except small metal items). There is a mandatory door-to-door separate collection system for bio-waste for townhouses or apartment buildings with at least 5 apartments. Also, mandatory door-to-door collection of bio-waste at household properties located in population centres with more than 10000 inhabitants starts in 2024. Home composting is incentivised by allowing longer emptying frequencies for residual waste, which would reduce waste management fees for households when registering for home composting and ensuring it fulfils specific requirements. Separate collection is supported by regular campaigns for sorting bio-waste and home composting (https://www.xn--biojte-eua.info/). Textile waste and reusable clothes are collected at civic amenity sites and bring points. In addition, Finland has a wide coverage of separate collection systems for non-packaging paper waste, covered by the Extended Producer Responsibility (EPR) scheme for printed paper. (ETC/CE, 2022; SYKE, 2024)

Businesses and public administration located in urban areas must organise separate collection of bio-waste if the operation generates at least 10 kg per week. Sorting at source of packaging waste originating from companies became mandatory in 2022. Producers are obliged to organise the reception of separately collected non-household packaging waste. (ETC/CE, 2022) Producer responsibility for packaging has been implemented in 1998. Separate collection of non-household packaging waste has been mandatory in urban areas since 2022. (SYKE, 2024)

In Finland, EPR applies to all packaging. Advanced fee modulation has been required by law since 2023. Fees have to be determined based on the recyclability and reusability of the packaging, also taking into account the presence of harmful substances or other properties that may harm the recycling system (SYKE, 2024). For beverage packaging, Finland uses a voluntary deposit-return system, covering nearly all aluminium cans, glass bottles and plastic bottles. This system achieves very high return rates (87-94%). Producers are incentivised to participate in this system through a tax exemption, an exemption from some of their EPR obligations, and an excise duty for beverage containers outside the deposit-based return system. (ETC/CE, 2022)

Recent legislative changes require that Finland's existing door-to-door separate collection system be extended to a larger part of the population and that the EPR scheme for packaging also cover online sales and imports. In addition, the number of bring points for plastic packaging had to be doubled compared to the requirements set in 2014, i.e., at the same level as other packaging materials bring points. These bring points serve residents in sparsely populated areas, who do not have door-to-door collection (SYKE, 2024). This is in line with one of the priority actions recommended by the European Commission's Environmental Implementation Review (EIR) 2022, to make waste recycling more economically attractive (EC, 2022).

Finland has implemented a pay-as-you-throw (PAYT) scheme throughout the country based on waste type, container emptying frequency, and container volume. For municipal wastes from non-household sources, both weight-based systems and a system based on collection frequency and the size of the container are used (ETC/CE, 2022). The fees for mixed waste are commonly higher compared to the fees for recyclables, among both public and private service providers (SYKE, 2024).

Policies and instruments to discourage landfilling or incineration

Finland has a landfill tax in place and a landfill ban on biodegradable and other organic waste, limited to a total organic carbon (TOC) content above 10%. The landfill tax is 70 EUR per tonne, which is considerably higher than the EU-27 average of EUR 39-46/tonne (EEA, 2023a). The landfill tax has been unchanged since 2016. Finland has no tax on waste incineration (ETC/CE, 2022; EEA, 2023b) and the previous investigations have not supported the introduction of the tax. The assessment was also affected by the fact that incineration of municipal waste is likely to be included in the amendment of the ETS Directive around 2030. (SYKE, 2024)

Prospects for meeting the targets on recycling and landfilling

According to the EEA's early warning assessment (ETC/CE, 2022), Finland was considered to be at risk of missing the 2025 target of 55% for the preparing for reuse and the recycling of its municipal waste. However, it is assessed to be on track to meet the 2025 target for total packaging waste and the 2035 target to limit landfilling to 10% of the generated municipal waste. Consequently, the European Commission issued a number of policy recommendations to improve Finland's waste management performance (EC, 2023):

- Support preparing for reuse of municipal waste and reuse systems for packaging.
- Raise the frequency and/or convenience of separate collection, notably of plastic packaging and bio-waste.

- Maintain and extend awareness-raising programmes that target waste prevention and greater separation of waste at source, in particular for plastic packaging and bio-waste.
- Implement economic instruments to direct recyclables away from waste incineration towards the higher steps of the waste hierarchy.

During the last decade, Finland has made considerable progress in diverting waste from landfilling although this has resulted in a significant increase in the incineration rate, while recycling has increased less. Significantly more efforts are required to meet the 2025 targets. The EIR 2022 recommended priority actions to make waste recycling more economically attractive and to limit energy recovery to non-recyclable materials. To improve recycling rates, Finland has revised the separate collection system for packaging waste and bio-waste.

In addition, along with the Early Warning Report of the Commission, the Ministry of the Environment launched a process with stakeholders to identify the best ways to promote recycling. In the summer of 2024, the Ministry of the Environment also launched a comprehensive reform of waste legislation (Circular Economy Act). The aim of the reform is to make the circular economy more efficient. Additional measures to promote recycling will be assessed and implemented in connection with the project. The efficiency of the circular economy also has a positive impact on the recycling rate of municipal waste. (SYKE, 2024)

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