Waste management country profile

with a focus on municipal and packaging waste











Key messages

- Waste generation in Cyprus follows a fluctuating trend with a marked increase in 2022. This increase was largely driven by a steep increase in animal and vegetal waste, as well as in sorting residues. Overall waste generation appears not to have decoupled from economic growth.
- Cyprus has to speed up its progress towards meeting the 2025 targets for the preparing for reuse and recycling of municipal waste and packaging waste recycling. Similar concerns are raised related to the 2035 landfill target.
- Cyprus has made progress in improving its landfill rate and in terms of packaging waste recycling. However, progress on improving the preparing for reuse and recycling rate of municipal waste has stagnated.
- Cyprus would benefit from an improved separate collection system and the introduction of economic incentives.
- The country has recently introduced legislation to improve separate collection and a pay-as-you-throw system for households which is planned to be fully rolled out throughout 2025. The effect of this new system remains to be seen.

Trends in waste generation and treatment

Total waste generation

The total amount of waste generated in Cyprus follows a slightly fluctuating trend with an increase in 2022, which becomes more pronounced when excluding major mineral wastes (Figure 1). Within wastes excluding major mineral wastes, mixed wastes and animal and vegetal wastes are the largest waste categories. For mixed wastes, a steady increase in the generated amounts could be observed and this category more than doubled since 2010. Animal and vegetable wastes strongly increased in 2022, being the main driver for the steep increase observed for the generation of waste excluding major mineral wastes. Cyprus' GDP showed steady growth throughout the considered time frame, with a drop in 2020, most likely due to the Covid-19 outbreak. Waste generation appears not to have decoupled from economic growth.

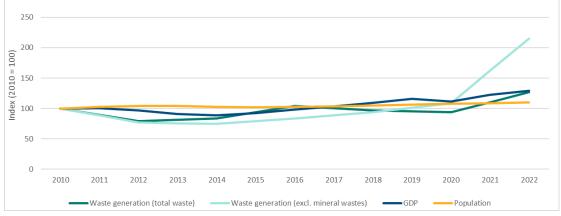


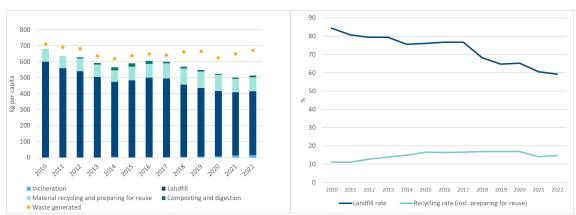
Figure 1 Generation of waste (total and excluding major mineral wastes), population and economic development, 2010-2022

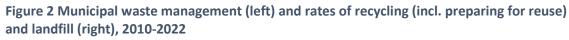
Note: Waste generation data for odd years are interpolated.

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

Municipal waste

Municipal waste generation per capita in Cyprus slightly decreased between 2010 and 2022 (Figure 2, left). In 2022, the country generated 673 kg/cap of municipal waste, which is significantly above the (estimated) EU-27 average of 513 kg/cap. The high per capita values might be influenced by the high tourist activity (EC, 2023).





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

Cyprus' landfill rate decreased significantly during the considered time period, while the recycling rate stagnated. In 2022, the landfill rate was still 59%. Only 15% of the municipal waste was prepared for reuse or recycled, which is significantly below the (estimated) EU-27 average of 49% in the same year. The amounts of waste going to incineration are very low, and slightly increasing the past few years. Cyprus does not have dedicated capacity for the incineration of municipal waste but uses mechanical-biological treatment (MBT) for mixed waste. Outputs are landfilled or exported for recycling. (ETC/CE, 2022).

The amount of generated municipal waste was more than 20% higher than the final treated amount in 2021 and 2022, likely due to storage and losses during treatment processes. Nonetheless, this may also indicate improper landfilling practices (EC, 2022, 2023).

Cyprus has also reported provisional 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 still awaiting validation by Eurostat (Eurostat, 2024d).

Packaging waste

Packaging waste generation in Cyprus is roughly at the same level as in 2010 (Figure 3a). The country generated 99 kg/cap in 2022, which is significantly below the (estimated) EU-27

average of 186 kg/cap for the same year (¹). This seemingly low figure could originate from underreported packaging placed on the market (EC, 2023).

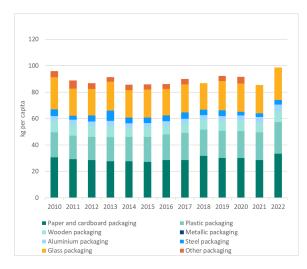
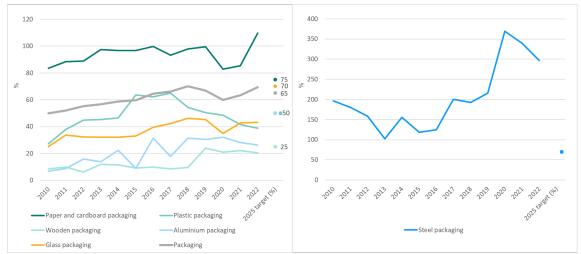


Figure 3a Packaging waste generation, 2010-2022





Source: Eurostat (2024f)

Note: Packaging waste generation data for the period 2018-2022 are flagged as estimated in Eurostat's data base. As of the reference year 2020, the rules for calculating recycled packaging waste have changed, pursuant to Article 6a of Directive 94/62/EC. Cyprus has applied the new calculation rules since the reference year 2020. However, a significant proportion of its sorted packaging waste is exported for recycling and information about how much of the exported waste is actually recycled is lacking (Eurostat, 2024a).

The country's overall packaging waste recycling rate significantly increased throughout the considered time frame, reaching 70% in 2022 (Figure 3b, left). The overall packaging recycling rate is mainly influenced by paper and cardboard as this constitutes the largest fraction and has the highest recycling rate. The reported recycling rates for paper and cardboard have

^{(&}lt;sup>1</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.

continuously been above the 2025 recycling targets, while the recycling rates for all other materials have stayed below the 2025 targets in 2021 and 2022. However, there are data quality issues regarding packaging, reflected by the disparity between low municipal waste recycling rates and high packaging waste recycling rates (EC, 2023), and the recycling rates might be overestimated (ETC/CE, 2022).

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

Legislative framework and waste management plans

Waste management in Cyprus follows the Waste Law of 2011 (Law No. 185(I)/2011) and the Packaging and Packaging Waste Law of 2002 (Law No. 32(I)/2002), along with their amendments and related regulations (The Cyprus Legal Information Institute, 2002, 2011).

The Municipal Waste Management Plan for 2022-2028 outlines measures, actions, and procedures required for sustainable waste management and Cyprus' transition to a zero-waste economy (Department for Environment, 2022). It aims to fulfil Cyprus' obligations under Article 28 of the Waste Directive 98/2008/EC, specifically the compliance with European Directives aiming to achieve reuse, recycling, and waste reduction goals. The plan includes an analysis of the current situation regarding waste management and existing infrastructure. It also outlines measures to improve environmentally sound preparation for reuse, recycling, recovery, and disposal of waste (Department for Environment, 2022).

Waste prevention policies

Cyprus' National Waste Prevention Programme (NWPP) covered the years 2015 to 2021 and was a stand-alone programme. Its objective was to decouple the generation of waste from its environmental impacts. The programme targeted behavioural change of consumers as well as a decrease of waste generated within certain waste streams, and promoted reuse (Department of Environment Cyprus, 2015). The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is currently revising a new NWPP with technical assistance from the Structural Reform Support Service (SRSS) (EEA, 2023). The revised National Waste Prevention Plan 2024-2030 defines the framework of actions and measures to be implemented in the next six years to prevent and reduce the generation of waste.

The Plan includes horizontal measures targeting prevention, reuse, improvements in the design of products and services, as well as measures that focus on priority waste streams, specifically food waste, construction and demolition waste, textile waste, plastic waste, waste electrical and electronic equipment (WEEE), and waste batteries and accumulators. The Programme has been finalised and is expected to be adopted by the Council of Ministers by the end of 2024. Cyprus' NWPP will be evaluated every two years using specific indicators, such as the generated amounts of biodegradable waste and of compostable biodegradable industrial waste, and the number of products reintroduced into the market (WEEE, clothes and furniture). There is a detailed plan for both implementing measures and for evaluating them, and for the programme itself (EEA, 2023).

Beyond the NWPP, several projects have been implemented to address the reduction of food waste (EEA, 2023). One such initiative is the 'LIFE – FOODPRINT' project, which tackles

environmental issues associated with food waste. Between 2020 and 2023, an awareness campaign was launched, focusing on food waste prevention and management among consumers, the food industry, and the hospitality sector. Additionally, a non-governmental, non-profit organisation named 'Sincerely, Food Cyprus' has published guidelines for reducing food waste. The volunteer initiative 'Zero Food Waste Cyprus' works to redistribute food waste, while the 'Waste Mapping Guide for Hotels' supports hotels and other tourism-related companies in measuring and preventing their food waste. Moreover, 'Let's Make Cyprus Green', led by a non-governmental organisation, aims to raise awareness about the issues surrounding plastics and single-use plastics. Their focus is on replacing single-use products with reusable alternatives (Department of Environment Cyprus, 2015).

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

Policies to encourage separate collection and recycling

Residual waste is collected door-to-door. Cardboard and paper waste, both non-packaging and packaging, and PMD (Plastic, Metal and Drink cartons) are collected door-to-door for 94% of the population covered. The remaining 6% are served via bring points complemented with collection at civic amenity sites. Non-packaging plastic waste and metal waste are not collected separately. Glass packaging waste is collected at bring points and civic amenity sites. Food waste is currently not collected separately, while garden waste is collected at bring points. (ETC/CE, 2022) Currently, only one municipality has implemented a pay-as-you-throw system in Cyprus.

The implementation of a nationwide system for the separate collection of municipal waste, including recyclable and organic waste, in conjunction with a pay-as-you-throw scheme, will provide the necessary financial incentives to citizens, in order to reduce waste. Furthermore, it will ensure proper separation at source, which will facilitate reuse and recycling. It is expected to significantly contribute to the reduction and appropriate management of municipal waste. To this end, in July 2022, Regulations were adopted setting out obligations for local authorities for municipal waste management. The Regulations require that by 31 December 2023, local authorities must prepare local waste management plans and waste prevention programmes, and that by 30 June 2024, they must establish separate collection systems for municipal waste, together with pay-as-you-throw schemes, as a financial incentive for separate collection. (Ministry of Agriculture, Rural Development and Environment, 2024)

A programme is currently implemented under the EU Structural and Investment Funds to support local authorities in implementing their obligations to establish systems for the sorting at source and separate collection of municipal waste, particularly organic waste, as well as to establish pay-as-you-throw (PAYT) schemes within their administrative boundaries. This includes the creation of the appropriate infrastructure, implementation, monitoring, training and awareness raising. According to the programme, residents will be charged based on the volume or weight of their waste through the use of prepaid bags (EC, 2023). Local authorities are currently carrying out their feasibility studies under the programme. Implementation of the separate collection and PAYT will begin by the end of 2024 and is expected to be completed by the end of 2025. Similarly, regulations for the introduction of a deposit-return system have been finalised, following extensive public consultation, and are expected to be

adopted by the end of 2025. The responsibility is to be shared mainly by the producers or importers of beverages. (Ministry of Agriculture, Rural Development and Environment, 2024)

Further support is provided through a number of additional programmes, currently being implemented under the Cohesion Funds and the EU Recovery and Resilience Facility, aiming to promote the separate collection of municipal waste, to expand infrastructure for the collection and treatment of waste, and to support local authorities in the implementation of separate collection systems. Programmes are included for the prevention, separate collection and recovery of municipal waste in the mountainous areas of Cyprus, for the establishment of a network of green recycling kiosks in remote and semi-remote communities and the expansion of the Green Points network, for the installation of 50 community composting units and 2000 household composters in rural and semi-rural communities, for the construction and operation of Reuse and Repair Centres, and for the establishment of a system for separate collection of recyclable and organic waste from large waste producers along the coastal fronts. Implementation of these projects is coordinated through the LIFE IP CY ZeroWaste Project. (Ministry of Agriculture, Rural Development and Environment, 2024)

There is no obligation for the separate collection of non-marketed recyclables from companies arising during industrial or business activities. This type of waste is collected by private licensed collectors of recyclables. Green Dot Cyprus, the primary waste management operator for packaging waste gives an economic incentive to the private collectors to collect this particular type of waste, buying this service and reporting it as its own.

In Cyprus, Extended Producer Responsibility (EPR) systems are used for packaging. Packaging producers meet their obligations by either joining the collective compliance system scheme operated by Green Dot Cyprus, or by establishing an individual packaging recovery system. This scheme encompasses both household and non-household sources across all packaging material categories. Producers pay for the total packaging quantities placed on the market. (ETC/CE, 2022) Green Dot Cyprus manages PMD, paper and cardboard, and glass fractions (Green Dot Cyprus, 2024). EPR fees are modulated by broad material category, with the highest fees applying to non-recyclable packaging materials, however, Green Dot Cyprus does not use more advanced fee modulation (Green Dot Cyprus, 2024). The system includes collection from households and commercial establishments within covered areas. While the system covers all packaging waste from marketed products, commercial and industrial packaging waste not originating from market-placed products must be delivered to licensed treatment facilities, as it falls outside the system's scope. (ETC/CE, 2022)

EPR systems are also in place for WEEE, batteries and accumulators, non-packaging paper, household medical wastes and waste tyres, while regulations are currently promoted for the creation of EPR systems for plastic waste from agriculture and furniture. (Ministry of Agriculture, Rural Development and Environment, 2024)

Cyprus does not apply packaging taxes, but the Ministry of Finance is considering the implementation of a plastic packaging tax. No decision has been taken yet. (ETC/CE, 2022)

Policies and instruments to discourage landfilling or incineration

Cyprus currently has no landfill tax in place, but plans to introduce a tax that should be enforced by 2026. Preceding this implementation, alternative waste treatment methods, mainly mechanical-biological treatment, were to be initiated to divert municipal waste from

landfills. In addition, a landfill ban is applied to waste that has been separately collected to prepare for reuse and recycling. The waste from the subsequent treatment, for which landfilling is considered the best environmental option, is exempt from this prohibition (ETC/CE, 2022). As of 2019, all uncontrolled dumping areas were closed as requested by the EU regulations.

As Cyprus does not have any waste incineration plants, there is no incineration tax levied (ETC/CE, 2022).

Prospects for meeting the targets on recycling and landfilling

Cyprus is considered to be at risk of not meeting the 2025 targets of preparing for reuse and recycling of 55% of its municipal waste and of recycling 65% of its packaging waste, as well as for the material-specific recycling targets for packaging of aluminium, glass and plastics (ETC/CE, 2022).

While Cyprus has reported 70% of the packaging waste to be recycled in 2022, data quality issues are likely to result in overestimating the recycling rate. Additionally, there are concerns about achieving the 2035 target of landfilling not more than 10% of municipal waste (ETC/CE, 2022). For municipal waste, little progress has been made recently: in 2022, only 15% of the municipal waste was prepared for reuse or recycled, and the landfill rate was still 59%.

Bio-waste, which constitutes about 42% of mixed municipal waste, is the key reason for the low performance in municipal waste recycling. Cyprus lacks adequate separate collection and treatment capacity for bio-waste, which results in an inability to manage the total volume generated (EC, 2023, 2022). Moreover, the proportion of municipal waste being sent to landfills remains excessively high. Consequently, the European Commission issued several policy recommendations (EC, 2023), including:

- improvement of waste management by promoting reuse of municipal waste and packaging materials,
- implementing separate collection nationwide, particularly for bio-waste, and improving public awareness,
- introduction of economic incentives like pay-as-you-throw systems and a landfill tax to boost participation in waste separation and to minimise landfilling,
- investing in infrastructure for treating bio-waste and setting quality standards for compost, and
- improvement of data management which is essential for effective planning and monitoring progress.

As Cyprus still heavily relies on landfilling of municipal waste, the European Commission's Environmental Implementation Review 2022 recommended the introduction of a landfill tax with a planned increase over time (EC, 2022).

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