Municipal waste management

Despite gradual improvement, challenges remain for the EU's progress towards circularity



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Why this area is important

Waste from households, and similarly composed waste from offices, shops and other sources – 'municipal waste' – accounts for 27 % of the total waste generated in the EU. Managing municipal waste is challenging due to its diverse composition, physical proximity to people, and environmental and health impacts. Packaging materials account for a significant proportion of municipal waste, along with bio-waste, such as biodegradable garden and park waste, food and kitchen waste. For details, see Figure 1.

Bio-waste and paper/cardboard account for more than half (55 %) of total municipal waste 18 % 37 % Paper and cardboard Metals **Textiles** Glass Waste from 10% **Electrical and Plastic** 11% Electronic 8 % Other Equipment

Figure 1 | Types of municipal waste, by weight

Note: Percentages are based on total waste generated, excluding mineral waste.

Source: ECA, based on Briefing 02/2022 and datasets of the European Environment Agency.

- **02** Effective municipal waste management requires well organised separate collection of various materials (e.g. glass and paper/cardboard go into separate bins), appropriate infrastructure for sorting, treatment, incineration and/or landfill, and a viable market for the recycled output. Active participation in waste separation by citizens and businesses is crucial for obtaining high-quality recyclable materials.
- O3 The EU's long-term goal is to transition to a circular economy, where waste is kept to a minimum, and unavoidable waste is as far as possible used as a resource. To this end, the EU sets targets for member states to ensure that a certain share of municipal waste is prepared for re-use and recycled and packaging waste is recycled. It also sets a target limit for the amount of municipal waste that can be sent to landfill.
- We expect our observations to be useful for the Commission in its review of some of the municipal waste targets. The objective of the audit was to assess the action taken by the Commission and the member states to achieve the EU's objectives for municipal waste. We assessed whether: (i) the Commission's legal initiatives and enforcement were fit for purpose; (ii) the four sampled member states (Greece, Poland, Portugal, and Romania) have made good progress in achieving EU waste targets and objectives; and (iii) whether the 16 sampled projects in these four member states co-financed with EU funds were implemented well in terms of time, cost and capacity. Our audit covered the period from 2014 to 2024. For more background information and details on the audit scope and approach, see *Annex I*.

What we found and recommend

Overall, we conclude that the Commission has strengthened the targets and other legal requirements for municipal waste management; however, many member states face challenges in their progress towards circularity, mainly due to financial constraints and weaknesses in planning and implementation.

The Commission strengthened targets and other legal requirements, but was late in initiating infringement proceedings regarding missed waste targets

O6 Since 1975, when the EU first established its waste policy, the legislative focus has gradually shifted from landfill to incineration, recovery and then preparation for re-use and recycling. The targets for municipal waste management were strengthened and increased in number, particularly through the 2018 amendments to three key directives: the Waste

Framework Directive, the Packaging and Packaging Waste Directive, and the Landfill Directive (paragraphs 25 and 26).

- 07 Although some member states have made significant progress towards meeting the targets, others have shown only moderate progress, and a few have made little to no progress. We also note that waste generation is mostly still growing as gross domestic product increases, albeit to a lesser extent; decoupling the two is the ultimate aim of the waste prevention measures that member states have to implement (paragraphs 27-28 and 40).
- 08 It is difficult to establish whether certain member states' struggles in meeting the targets are due to the number and/or ambition of the targets, a lack of effective action by member states, or possibly a combination of both (paragraph 29).
- O9 The aforementioned shift in policy focus (paragraph *06*) was also reflected in the rules governing cohesion policy funds, which have long been a major source of funding for less developed member states and regions. The funding rules for the 2021-2027 period exclude most investments in landfills and residual waste treatment facilities, reflecting the waste hierarchy's emphasis on higher steps such as re-use and recycling (paragraph *36*).
- 10 Alongside the targets, EU law has gradually strengthened other legal requirements for member states in the area of municipal waste (paragraphs *37-39* and *41-48*), the most significant of which are:
 - increasing the content of national and/or regional waste management plans (e.g. it should include an assessment of existing waste collection schemes);
 - introducing a condition to be fulfilled before receiving reimbursement from the Commission for expenditure incurred on projects that have been co-financed by cohesion policy funds. Member states have to demonstrate that they have updated waste management plans which comply with the Waste Framework Directive;
 - requiring the use of economic instruments, such as financial instruments to incentivise or disincentivise certain behaviour (e.g. landfill taxes or deposit-return schemes);
 - increasing waste streams for which separate collection is required.
- 11 Over the last five years, the Commission has also issued legislative proposals to address the waste problem from a production perspective, i.e. focusing on product design. However, it will take time before substantial results can be observed (paragraph 49).

12 A key challenge on the way towards a circular economy is the viability of the recycling industry. Recycling targets can only be met if recycling infrastructure exists and there is a use and market for recycled output. However, recycling facilities are scarce in some member states, while in others, some existing facilities – in particular those dealing with plastics – are at risk of closure due to rising costs, a lack of demand in the EU for their output, and imports of cheaper recycled and virgin plastic from outside the EU. We note that the Commission has announced a new Circular Economy Act to be adopted in 2026 with the aim of addressing market and demand issues (paragraphs 50-53).



Recommendation 1

Address challenges in the recycling market

The Commission should take measures to make circular economy practices in the EU (such as the recycling of materials) more economically viable, which includes providing a business case for recyclers. To do so, it should identify the demand- and supply-side challenges that affect the single market for circular products and secondary raw materials.

Target implementation date: Q4 2026.

- 13 In order to monitor and assess member states' progress, the Commission used different tools, such as early warning reports, impact assessments, and "compliance promotion" procedures. These allowed the Commission to gain a thorough understanding of the issues at stake, and to send pertinent recommendations to member states. However, due to staffing issues, the Commission:
 - has not carried out any visits to member states for over a decade in order to encourage member states towards faster compliance with EU law ('compliance promotion'); and
 - missed the opportunity to request adjustments to the revised implementation plans submitted by member states that provided notification of their intention to postpone the deadlines for achieving certain targets. This was because the Commission did not manage to review the revised plans by the requisite deadlines (paragraphs 56-58).
- 14 Moreover, the Commission initiated certain infringement proceedings with significant delays: for targets to be met in 2008, it initiated the proceedings only in July 2024. By means of the same proceedings, it also addressed targets to be met in 2020 (paragraphs *59-63*).



Recommendation 2

Make better use of monitoring and enforcement tools

The Commission should allocate sufficient resources with a view to:

- (a) starting infringement proceedings in a timely manner, thus ensuring deterrence and encouraging progress. While acknowledging the Commission's power of discretion in deciding whether and when to start an infringement procedure, such decisions should be based on substantive, content-based criteria;
- (b) carrying out visits to member states, based on the conclusions of the early warning reports and/or the state of implementation of the waste management plans and waste prevention programmes, to encourage them to make further progress in complying with EU law;
- (c) undertaking assessments in line with deadlines set by EU law.

Target implementation date: (a) from Q1 2028 for the 2025 targets; (b) and (c) Q4 2026.

The sampled member states are progressing slowly because of insufficient public funding and an inability to fully utilise economic instruments

- 15 While municipal waste targets have to be met at national level, waste policy is implemented at local level mostly by individual municipalities. This poses an additional challenge to achieving the targets, especially for member states facing administrative capacity issues (paragraph 67).
- 16 The Commission's 2023 early warning report assessing member states' progress towards attaining municipal waste targets noted that many member states are at risk of not meeting one or more of the 2025 and 2035 targets. In the case of the municipal waste recycling target, the requirement to use a stricter method to report on the degree of achievement will make it even harder for some member states to meet this target (paragraphs 64-66).
- 17 The four member states we audited are among those at risk of not meeting the 2025 municipal waste recycling target and the 2025 packaging waste recycling target, with the exception of Portugal in the latter case. The reasons for this are as follows:

- national waste management plans underestimated the investment needed in infrastructure (paragraphs 71-72);
- it was not made clear how and when the required funding would be made available (paragraphs 73-75);
- two out of the four member states had not fully utilised the resources available to them from EU cohesion policy funds (paragraph 78);
- despite some progress in organising separate waste collection, it remained at a very low level in three out of the four member states (paragraphs 82-85);
- there had been some, albeit uneven, progress with economic instruments, such as implementing deposit-return schemes, increasing the landfill tax, and applying a waste tariff in line with the pay-as-you-throw principle (paragraphs 86-100):
 - the amount of the landfill tax varies significantly between member states, which can result in waste being shipped from country to country for economic reasons;
 - waste tariffs charged to citizens did not cover all waste management costs, and were rarely calculated by the weight or volume of waste generated.
- 18 For many of these issues, the Commission had made recommendations to member states, either as a result of the 2018 or 2023 early warning procedure or both (paragraphs 82, 86, 97, 98 and 100).



Recommendation 3

Assess the feasibility of harmonising landfill and incineration taxes at EU level

The Commission should assess the costs, benefits and feasibility of introducing and/or harmonising appropriate landfill and incineration taxes across the EU.

Target implementation date: Q4 2026.

Most projects we sampled were delayed and some experienced cost and capacity issues

- **19** With regard to our sample of 16 projects co-financed under cohesion policy, we found that:
 - 13 (80%) faced significant delays, resulting in the deterioration of facilities and unused equipment in some cases;
 - four (25 %) incurred cost increases of more than 20 %;
 - three out of the ten projects (30 %) that had been in operation long enough to make an assessment of capacity usage operated below capacity, while two out of the ten (20 %) did not have sufficient capacity;
 - five out of the eight projects (63 %) that included investments for a landfill site had made sufficient provisions to cover closure and after-care costs of the site for a period of at least 30 years (paragraphs 102-107).

A closer look at our observations

The Commission strengthened targets and other legal requirements, but was late in initiating infringement proceedings regarding missed waste targets

- 20 Since 1975, the Commission has taken action to address how national and municipal authorities collect and process waste. It has made EU funding available, in particular to less developed member states and regions, and introduced legislation on the issue. Among other things, the Commission set the course at EU level by establishing targets. Targets should be based on an evidence-based assessment including robust assumptions, and should be ambitious but realistic.
- 21 The current targets set by the Waste Framework Directive¹ ("Waste Directive") and the Packaging and Packaging Waste Directive² ("Packaging Directive") have both been amended several times (*Figure 2*).

¹ Directive 2008/98/EC.

² Directive 94/62/EC.

Figure 2 | Targets set by the Waste Directive and the Packaging Directive

	Packaging Directives of 1994 and 2004	Packaging Directive of 2004	Waste Directive of 2008	Waste Dire Packaging of 2	Directive	Waste Directive of 2018
	No later than the end of June 2001	No later than the end of 2008	By the end of 2020	By the end of 2025	By the end of 2030	By the end of 2035
Packaging recovered or incinerated with energy recovery (by weight)	50 % (minimum) to 65 % (maximum)	60 % (minimum)				
Municipal waste prepared for re-use and recycled (by weight)		_	50 %* (minimum)	55 % (minimum)	60 % (minimum)	65 % (minimum)
All packaging waste recycled (by weight)	25 % (minimum) to 45 % (maximum)	55 % (minimum) to 80 % (maximum)		65 % (minimum)	70 % (minimum)	
Material-specific recycling t	argets (by weight)	:				
Plastic		22.5 % (minimum)		50 % (minimum)	55 % (minimum)	
Wood		15 % (minimum)		25 %	30 %	
Ferrous metals		50 %** (minimum)		(minimum) 70 % (minimum)	(minimum) 80 % (minimum)	
Aluminium (non-ferrous metal)		(IIIIIIIII)		50 % (minimum)	60 % (minimum)	
Glass		60 % (minimum)		70 % (minimum)	75 % (minimum)	
Paper and cardboard		60 % (minimum)		75 % (minimum)	85 % (minimum)	

^{*} The 2020 target concerned only the recycling rate for paper, metal, plastic and glass, while later targets (for 2025, 2030, 2035) refer to all municipal waste.

Source: ECA, based on the Waste Directive and the Packaging Directive.

^{**} The 2008 target concerned all metals, while later targets (for 2025 and 2030) refer to ferrous metals and aluminium as separate targets.

22 The targets set by the Landfill Directive³ are detailed in *Figure 3*.

Figure 3 | Targets set by the Landfill Directive

	Landfill Directive of 1999			Landfill Directive of 2018
	By 16 July 2006	By 16 July 2009	By 16 July 2016	By 2035
Share of biodegradable municipal waste going to landfill (of the total amount (by weight) of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data are available)	75 %	50 %	35 %	
Landfill (as % of all municipal waste generated, by weight)				10 % (maximum)

Source: ECA, based on the Landfill Directive.

- 23 The Commission is responsible for applying, implementing and enforcing EU law effectively⁴. To do so successfully, the Commission should closely monitor how these laws are enacted and applied by member states, address any issues that arise to remedy possible legal breaches, and initiate appropriate infringement proceedings where necessary.
- **24** We assessed whether the Commission's legal initiatives and enforcement were fit for purpose, in particular whether:
 - the Commission proposed targets based on a robust rationale;
 - the legal acts included appropriate provisions to encourage member states to comply with the EU targets and objectives;
 - the Commission had an effective enforcement system.

The Commission proposed targets based on a robust rationale

25 The EU initially set packaging waste targets in 1994 with the Packaging Directive. This was followed in 1999 by the Landfill Directive, which set targets for reducing the amount of

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³ Directive 1999/31/EC.

⁴ Commission Communication 2017/C 18/02.

biodegradable waste in landfill. Over time, EU legislation has progressively shifted focus from placing waste in landfill to incineration and recovery, and then to preparation for re-use, and recycling. Moreover, EU legislation expanded from packaging waste to cover other waste streams, including municipal waste (i.e. waste from households and similar sources). The Commission based its actions on robust analyses as outlined in this section.

- 26 In particular, significant enhancements were introduced with the 2018 revisions of the Waste Directive, Packaging Directive and Landfill Directive (see last three columns of *Figure 2*, and last column of *Figure 3*).
 - The Commission initiated the revision process in 2014 by issuing legislative proposals
 to amend these three directives. Its proposals largely aligned with the impact
 assessment based on a study it had commissioned. The impact assessment concluded
 that the targets set out in the proposals were realistic.
 - However, following initial discussions about the Commission proposals, the Council⁵
 called for realistic and achievable targets, taking into account the specific
 characteristics of each member state, particularly their varying levels of performance.
 - As a result, the Commission withdrew its initial proposals and presented revised proposals at the end of 2015, based on an updated impact assessment. Overall, the proposed targets were softer and had longer timelines. As a result of the legislative process, the targets softened further but still remained more demanding than those of the Directives in force before 2018 (*Table 1*).

Table 1 | Targets proposed and adopted (in %)

Targets	Deadline	1st Commission proposal	2nd Commission proposal	Directives adopted in 2018
Landfill : softer target and longer timeline	2020 2025 2030 2035	25 5	10	10
Municipal waste prepared for re-use and recycled: softer target and longer timeline	2020 2025 2030 2035	50 70	60 65	55 60 65
Packaging waste recycled: softer target	2020 2025 2030	60 70 80	65 70	50 65 70

⁵ Press release, 14510/14.

- 27 In 2014, when the first impact assessment was presented, the majority (79 %) of member states complied with the 2008 target of the Packaging Directive ("packaging waste recycled"). The Committee of the Regions commented on the 2014 Commission proposal that "the positive results in some member states also show that it is possible to meet or approach ambitious targets if the underlying conditions are right and if the necessary administrative capacity is developed where it does not exist so far"⁶. Indeed, given the number of targets, it is necessary for member states to have effective organisational structures and sufficient financial resources. Our analysis of the progress made from 2010 to 2022 (Annex II) confirms the statement of the Committee of the Regions that it is possible to meet or approach ambitious targets.
 - Some member states had made significant advances, while others had made moderate progress, and a few had shown little to no progress.
 - Among those lagging behind were Greece, Cyprus, Malta, and Romania for most of the targets (i.e. for 'landfill', 'municipal waste prepared for re-use and recycled', and 'packaging waste recycled'). For Greece and Romania, we found that there were delays in implementing projects and generally in implementing measures to deal with waste (paragraphs 70-78 and 102-107).
- 28 The impact assessment⁷ issued by the Commission as part of its 2022 proposal to amend the Packaging Directive concluded that the measures taken by the member states based on various directives were not "sufficient to ensure that they meet all the specific targets for the recycling rates set out in the Packaging Directive. Moreover, there is significant potential to improve the packaging waste recycling even in member states which will meet at least some of the established recycling targets". The Commission therefore proposed converting the directive into a regulation. The Packaging and Packaging Waste Regulation⁸ ("Packaging Regulation") was adopted in 2025.
- 29 It remains difficult to establish whether certain member states' struggles in meeting the targets are due to the number and/or ambition of the targets, a lack of effective action by member states, or possibly a combination of both.

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⁶ Opinion 2015/C 140/08.

⁷ SWD(2022) 384.

⁸ Regulation (EU) 2025/40.

30 EU law also made concessions to facilitate achievement of the targets. A first concession is linked to the method used for calculating the targets. A Commission Decision⁹ allowed member states to choose from four different methods to calculate the 2020 target for 'municipal waste prepared for re-use and recycled' (hereafter referred to as the 'municipal waste recycling target'). This changed with the 2025 target, for which all member states must use the same method (number 4¹⁰) – the least advantageous. The Commission's assessment of the achievement of the 2020 target is based on the method chosen by the member states. The impact on the degree of achievement of the target is detailed in *Box 1* and *Figure 4*. Further factors affecting the comparability of data are outlined in *Annex III*.

Box 1

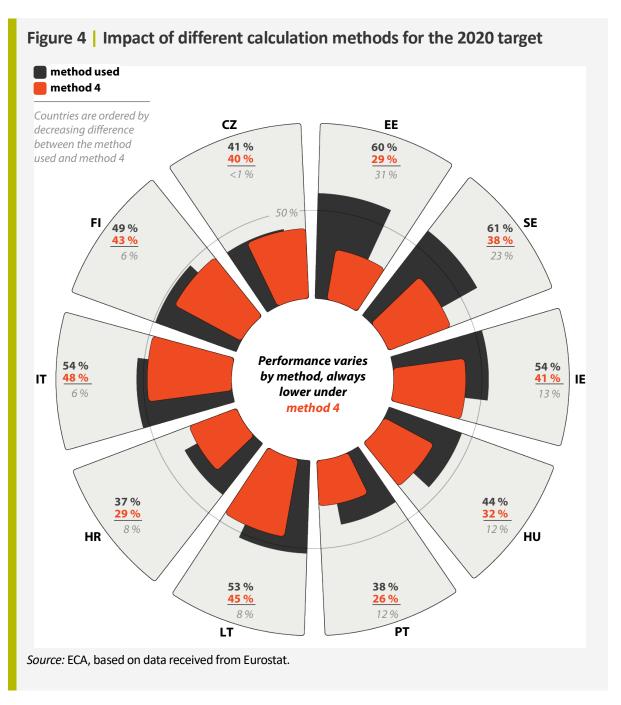
Different methods for calculating the 2020 municipal waste recycling target

For the 2020 municipal waste recycling target, a majority of member states (15) already chose to be assessed based on method 4, while nine used method 2, and two used method 1. Greece did not report any data for 2020 (until end-2024). Also, 10 of these 11 member states had reported data using both the old and the new method. This allowed us to compare the data: we found that method 4 data were on average 12 percentage points lower (with a range between -0.5 to -30.9 percentage points), as shown in *Figure 4*.

While using a method other than 4 made reaching the target easier, it also means that these member states will need to make more effort to reach the new municipal waste recycling target of 55 % by 2025. Although the new target is only five percentage points higher than the 2020 target, these member states must first compensate for the difference between the two methods, then achieve the additional five percentage points.

⁹ Decision 2011/753/EU.

¹⁰ Implementing decision (EU) 2019/1004.



A second concession relates to the deadlines for achieving the targets. Based on the Commission proposals that were refined during the legislative process, the Waste Directive and Landfill Directive stipulated that member states can, under certain conditions, choose to postpone these deadlines. Similarly, a five-year postponement is possible for the material-specific targets of the Packaging Directive; this provision was not part of the Commission's original proposal, but was included during the legislative process. As a result, 8¹¹ member states (out of 11 fulfilling the conditions) provided notification of their

¹¹ Greece, Croatia, Lithuania, Hungary, Malta, Poland, Romania, and Slovakia.

intention to postpone meeting the 2025 municipal waste recycling target, and 7¹² (out of the 27 fulfilling the conditions) did so for the 2025 material-specific packaging targets. Since some member states intend to postpone multiple targets, a total of 12 member states are concerned. However, the Commission's 2023 early warning report on member states' progress towards the attainment of the targets deemed 23 at risk of not meeting one or more of them (*Figure 7*). This means that not all member states that were deemed at risk but could ask for postponement actually made use of this option.

- **32** We also assessed the rationale for not setting targets for certain aspects, namely waste prevention and incineration.
- The possibility of introducing targets for **waste prevention** was first mentioned in a Commission communication in 2003. The 2008 Waste Directive did not set targets, but required member states to prepare waste prevention programmes by the end of 2013. Similarly, the Commission did not propose such targets in its 2014 and 2015 proposals to amend the Waste Directive. According to the Commission's impact assessments, the main reasons for not doing so were as follows:
 - as the concept of 'municipal waste' is not clearly defined, the data reported by member states could not be compared. This also made it difficult to set targets that could be commonly applied;
 - the effectiveness of the waste prevention programmes needed to be assessed before targets were introduced.
- 34 Nevertheless, the Commission started introducing measures to reduce waste generation from specific streams.
 - Based on Commission proposals that were further amended in the legislative process, a 2015 directive¹³ introduced restrictions on the use of lightweight plastic carrier bags, while in 2019 another directive¹⁴ banned certain plastic products (such as cutlery, plates, and straws).

¹⁴ Directive (EU) 2019/904.

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¹² Czechia, Greece, Croatia, Luxembourg, Malta, Portugal, and Sweden.

¹³ Directive (EU) 2015/720.

- The Commission proposals of 2022¹⁵ for amending the Packaging Directive (reflected in the adopted Packaging Regulation) and of 2023¹⁶ for amending the Waste Directive (adopted in autumn 2025) introduced reduction targets for the first time. The targets concern specific waste streams: food waste and packaging waste. Further details are included in *Annex IV*.
- The EU legal base does not set targets for **incineration**. In the past, many member states invested in incinerators and some are still doing so, for example Italy (e.g. in Rome, *Box 3*). Such investments are costly, and the facilities have a working life of 20 years or more. As a result, incineration remains the main method of waste disposal for many member states (*Annex I* (*Figure 4*)). Moreover, most incinerators recover energy, which can be sold to raise revenue. However, EU law includes some restrictive measures on using incineration, which may be enhanced in the future.
 - The European Parliament had called for incineration to be strictly limited by 2020 to non-recyclable and non-biodegradable waste. The latter aspect has been largely implemented, as the 2018 Waste Directive requires bio-waste either to be recycled at source, or collected separately. It also states that separately collected waste must not be incinerated.
 - In 2026, the Commission is due to assess the feasibility of including municipal waste incinerators in the EU Emissions Trading System from 2028¹⁷. Under this system, these facilities would have to surrender emission allowances purchased at auction to account for their greenhouse gas emissions. This would increase the cost of incineration and so disincentivise this method.

The Commission gradually strengthened the legal requirements for municipal waste, but challenges remain in the recycling market

36 EU targets and objectives can only be achieved if member states take initiative to meet them. We therefore assessed the extent to which the Commission strengthened legal requirements to encourage this.

¹⁶ COM(2023) 420.

¹⁷ Directive 2003/87/EC, Article 30(7).

¹⁵ COM(2022) 677.

- 37 The first waste directive of 1975 already required member states to prepare waste management plans, primarily focusing on waste types, quantities and disposal sites. Based on the Commission's proposals, the EU legal framework has gradually strengthened the requirements on the content of the plans (e.g. they should include an assessment of existing waste collection schemes). This means that waste management plans should now comprehensively reflect each country's waste policy. Although the requirement for plans to be aligned with EU targets was included in the legal base only in 2018, it was a positive development. Member states are required to evaluate the plans at least every six years and revise them, where appropriate ¹⁸. The Waste Directive grants member states discretion to decide on the need for an update, thereby limiting the Commission's enforcement powers.
- While the legal base does not explicitly require the Commission to assess the plans, the Commission analysed national and regional plans in all member states between 2015 and 2018 with the help of a contractor. It concluded that a significant number of the plans were not satisfactory. Recently, the Commission has tasked an external company with assessing the latest waste management plans (national, regional and local). The assessment is expected to be completed by mid-2026.
- 39 In 2005, the Commission proposed requiring member states to prepare waste prevention programmes; this was then enshrined in the 2008 Waste Directive. The European Environment Agency (EEA) was tasked with publishing reports reviewing the progress made on completing and implementing waste prevention programmes. The 2025 report concluded, among other things, that:
 - despite the importance of waste prevention, current programmes continue to rely predominantly on voluntary initiatives, agreements and information campaigns, which account for 81 % of all identified measures included in the programmes;
 - despite the link between waste generation and economic growth, economic instruments (such as financial incentives) remain underused;
 - there is limited information on the actual implementation of these programmes.
 While member states are required to evaluate their programmes at least every six years, this requirement is often not met, evaluations are not always publicly available, and the effectiveness of policy instruments is not sufficiently assessed.

¹⁸ Directive 2008/98/EC, Article 30(1).

¹⁹ EEA report 02/2025.

Waste prevention should eventually lead to decoupling waste generation from economic growth, measured by the gross domestic product (GDP). Over the last 23 years, decoupling has been achieved in specific periods of time, meaning that municipal waste generation is still mostly growing when GDP grows, albeit to a lesser extent, as shown in *Figure 5*.

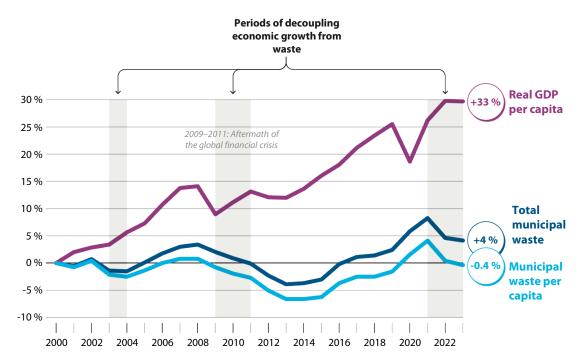


Figure 5 | Fluctuation of GDP and municipal waste (2000-2023)

Source: ECA, based on the Eurostat's datasets sdg_08_10 for the real GDP per capita and env_wasmun for total municipal waste and municipal waste per capita.

- 41 Other requirements concern the **funding rules under cohesion policy**, a main source of funding for less-developed member states and regions. We found that these rules progressively reflect the waste hierarchy (*Annex I* (paragraph *04*)).
 - For the 2014-2020 programme period, the legal texts governing cohesion policy did not impose any restrictions on the types of projects that were eligible for co-financing. However, the Commission's waste management guidance emphasised that measures in the lower steps of the hierarchy were "less desired" and "should only be resorted to if measures higher in the waste hierarchy were not possible".
 Investments in the lower steps refer to landfills, incineration or mechanical biological treatment facilities.

- For the 2021-2027 programme period, the legal text went a step further, excluding from the scope of support (i) investments in landfills, and (ii) investments increasing the capacity of facilities that treat residual waste (i.e. mechanical biological treatment facilities or incineration facilities), albeit with limited exceptions²⁰. Moreover, investments supported should be in line with the do-no-significant-harm principle to avoid harm to the environmental objective of the transition to a circular economy²¹.
- 42 For the 2014-2020 programme period for cohesion policy funding, the Commission also introduced **conditions** to be met by member states by the end of 2016. If a member state did not meet these conditions, the Commission could suspend payments. Similar conditions apply for the 2021-2027 programme period. Unlike in 2014-2020, member states are required to apply the conditions throughout the 2021-2027 period. Moreover, the Commission will not reimburse declared expenditure if member states do not fulfil or do not continue to fulfil the conditions throughout the entire period.
- 43 One such condition was that member states had to develop waste management plans in compliance with the Waste Directive. Although the Waste Directive has required preparation of such plans since 1975, a significant number of member states needed time to fulfil the condition. As the programmes that implement cohesion policy are mostly drawn up and managed at regional level, the regions mostly submitted regional waste management plans.
 - 2014-2020 period: 13 member states did not fulfil the condition when their regional and national programmes implementing cohesion policy were approved by the Commission. As a result, they had to submit specific action plans. The Commission later deemed the condition to have been fulfilled.
 - 2021-2027 period: as at mid-June 2025, 29 out of 115 programmes to which the condition applied had not yet met this condition. These 29 programmes concerned five member states.
- 44 Meeting the condition does not mean that the plans are of good quality, realistic and feasible, as shown by our analysis of the four examined member states (paragraphs 70-75).
- 45 In 2020, the Council Decision on the system of EU own resources²² incentivised member states to reduce the consumption of single-use plastics, foster recycling, and boost the circular economy. This was achieved by requiring each member state to pay a **national**

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²⁰ Regulation (EU) 2021/1058, Article 7(1)(f) and (g).

Regulation (EU) 2021/1060, Recital 10 and Article 9(4).

²² Decision (EU, Euratom) 2020/2053.

contribution to the EU in proportion to the quantity of plastic packaging waste they do not recycle.

46 The Commission has gradually strengthened the requirements for member states in the area of **economic instruments**. These can play a crucial role in achieving municipal waste management and waste prevention objectives. The main types of instrument are described in *Figure 6*.

Figure 6 | Economic instruments

Type of economic instrument	Purpose
Landfill tax	Tax to be paid on the amount of waste discharged at a landfill site. The tax should make landfill more expensive and therefore less attractive.
Incineration tax	Tax to be paid on the amount of waste discharged for incineration. The tax should make incineration more expensive and therefore less attractive.
Pay-as-you-throw principle	Waste producers pay a tariff on the basis of the actual amount of waste generated (i.e. weight or volume). It should serve as an incentive to generate less waste and sort waste better.
Deposit-return schemes	The consumer pays a deposit when buying, for example, a beverage in a bottle. The deposit is refunded upon return of the bottle. The schemes should serve as an incentive for the efficient collection of used products and materials.
Extended producer responsibility schemes	Producers of products bear financial responsibility or financial and organisational responsibility for managing the waste stage of a product's life cycle. Producers should, in particular, cover the cost of separate collection of waste, its subsequent transport and treatment. The schemes should serve as an incentive for designing environmentally friendly products.

Source: ECA, based, among other things, on the Waste Directive and EEA Briefing 29/2022.

- While the 2008 Waste Directive encouraged the use of economic instruments, the 2018 Waste Directive made their use compulsory. The Commission's 2014 impact assessment concluded that imposing full harmonisation of these instruments would be excessive. EU law therefore grants member states the flexibility to choose which instruments to implement, with the following main exceptions.
 - A deposit-return scheme will be mandatory from January 2029 for defined packaging formats. This provision was based on a Commission proposal and included in the 2025 Packaging Regulation.
 - Extended producer responsibility schemes have been mandatory for all packaging since January 2025. This provision was introduced in the Packaging Directive by the co-legislators (the European Parliament and the Council).
- 48 The Commission has also gradually strengthened the requirements for member states in the area of **separate collection systems** (*Annex IV* (*Table 2*)). Effective collection systems are essential for collecting high-quality recyclable materials and achieving elevated recycling rates.
 - While the 2008 Waste Directive mandated separate collection at least for paper, metal, plastic and glass by 2015, the 2018 Waste Directive also required it for textiles from January 2025.
 - While the 2008 Waste Directive encouraged separate collection for bio-waste, the 2018 Waste Directive requires member states to ensure that, by 31 December 2023, bio-waste is either separated and recycled at source, or is collected separately and not mixed with other types of waste.

- More recently, the Commission has also started to address the waste problem from the production side. The issue of waste should already be considered at the **product design** stage. This is a further major step towards waste reduction but it will take time before substantial results can be observed. The three main legal acts are the 2019 Directive on the reduction of the impact of certain plastic products²³ (paragraph *34* and *Annex IV* (*Table 1*)), the 2025 Packaging Regulation (*Annex IV* (*Table 1*)) as well as the 2024 Ecodesign Regulation²⁴. The latter is a type of framework legislation and lays the foundation for the subsequent adoption of specific rules, either on a product-by-product basis or horizontally. To this end, the Commission will prioritise products and then start developing product rules. A first list of priorities²⁵ was adopted in spring 2025 and includes textiles, for example.
- We found challenges regarding the recycling industry, particularly for plastics, and the demand for secondary (i.e. recycled) materials. Without an effective recycling industry and market, recycling targets are at risk. The EEA concluded that (i) value chains for plastic are unsustainable, generating emissions and increasing waste and pollution; and (ii) reducing such impacts demands moving towards a circular and sustainable plastics system.
- 51 Recyclers are economic operators who require a viable business case. Recently, the organisation representing the interests of European plastic recyclers in the EU have warned²⁷ of a crisis in their industry, citing various reasons such as: (i) rising operational costs, partially due to high energy prices; (ii) low-cost, unverified imports of virgin and recycled plastic; and (iii) a lack of demand for EU-virgin and recycled plastics.
- Operators of waste treatment plants in Poland and the national waste management plan in Romania reported a scarcity of recycling facilities purchasing recovered materials. In addition, operators pointed out that a number of recycling facilities were either cutting back capacity or ceasing operations altogether. This scarcity (i.e. low demand) contributes to low prices and means recyclables have to be transported over larger distances, generating transport-related emissions. For example, one facility operator in our sample sold glass to a facility 590 km away, while another sold paper to a facility over 570 km away

²³ Directive (EU) 2019/904.

²⁴ Regulation (EU) 2024/1781.

²⁵ COM(2025) 187.

²⁶ Briefing 05/2024.

Plastic Recyclers Europe, "Safeguarding Europe's Plastics Recycling Future", 2025; "Crisis in EU Plastic Recycling Demands Immediate Action", 2025; "EU's competitiveness under severe threat: plastics sector at crossroads", 2024.

and aluminium to a plant over 910 km away. *Annex V* provides further details on how the sale prices of recyclables vary by material.

53 In terms of demand, we note that the 2022 Regulation²⁸ on recycled plastic materials specifies that recycled plastic materials that come into contact with food must come from separately collected plastic waste, or be collected by a system ensuring there is no contamination. This reduces the scope for using recycled plastics. On the other hand, the Commission announced²⁹ that a new Circular Economy Act, set to be adopted in 2026, intends to include measures to facilitate a single market for secondary raw materials, foster a higher supply of high-quality recyclates (i.e. materials resulting from the recycling process), and stimulate demand for secondary materials and circular products.

The Commission issued pertinent recommendations to member states, but its enforcement regarding missed waste targets was affected by staffing issues and delays

- The Commission is responsible for monitoring member states' compliance with EU law, including their progress towards meeting the EU targets. The Waste Directive tasked the Commission to issue recommendations to member states deemed at risk of not meeting the targets. Where member states fail to comply with EU law, the Commission has the power to initiate infringement proceedings, and ultimately to refer the case to the Court of Justice of the European Union. The Commission has the discretion to decide whether and when to initiate infringement proceedings.
- 55 We therefore assessed the Commission's process for evaluating member states' progress concerning municipal waste management and initiating infringement proceedings.
- 56 The Commission has gained a thorough understanding of municipal waste management in member states through various assessments.
 - Several impact assessments, such as those conducted in preparation for the amendments of the Waste Directive, Packaging Directive and Landfill Directive, and for the Packaging Regulation.

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²⁸ Regulation (EU) 2022/1616.

²⁹ COM(2025) 85.

- Two "compliance promotion procedures" to contribute to the improvement of national municipal waste management practices. One was conducted in 2012-2013 (covering 10 member states) and another in 2014-2015 (covering eight member states). Alongside the overall reports³⁰ and country-specific factsheets, the Commission also published roadmaps outlining the challenges faced and providing recommendations for improvement.
- Early warning reports: based on the 2018 Waste Directive, these reports are due no later than three years before each target deadline. While the first report was due by 2022, the Commission had already prepared one in 2018³¹. It included a general part, as well as country-specific reports for 14 member states³² deemed at risk of not meeting the 2020 target for municipal waste recycling. The Commission had planned follow-up visits on the spot, but these did not take place due to staffing shortages. In 2023³³, the Commission published a second report based on detailed work done by the EEA. The report provided an assessment not only of the 2025 targets (Figure 2), but also of the 2035 target for landfill (Figure 3). It included country-specific reports for 18 member states deemed at risk of not meeting the targets (Figure 7).
- Country profiles³⁴ published in April 2025 by the EEA, at the Commission's request. The assessments include updated prospects for meeting the targets on recycling and landfill.
- 57 Over the past decade, the Commission has not conducted any on-site compliance promotion visits to member states, although such visits can support member states in their implementation efforts and contribute to keeping municipal waste on national political agendas. Nevertheless, its recommendations to member states (paragraph 56) were pertinent as they directly addressed key issues identified.

³⁰ Report published in 2013, and report published in 2016.

³¹ COM(2018) 656.

³² Bulgaria, Estonia, Greece, Spain, Croatia, Cyprus, Latvia, Hungary, Malta, Poland, Portugal, Romania, Slovakia, and Finland.

³³ COM(2023) 304.

³⁴ EEA, country profiles 2025.

- However, the Commission missed an opportunity to request adjustments to the implementation plans required from member states that postponed their deadlines for achieving certain targets (paragraph 31). As none of the implementation plans that were submitted complied with the Directives, the Commission asked for them to be revised. Unfortunately, the Commission could not complete its assessment of the revised plans within the three-month period implied by the Directives, and so the plans were deemed to be compliant.
- Moreover, the Commission was very late in initiating infringement proceedings for failing to meet the 2008 targets set by the 2004 Packaging Directive. It was not until July 2024 that proceedings were finally initiated against eight member states ³⁵. At the same time, it also initiated proceedings for failing to meet the 2020 targets of the 2008 Waste Directive. As member states are required to report data 18 months after the reference year (July 2022 for 2020 data), it took the Commission two years to initiate these proceedings against 17 member states.
- 60 As regards the three Directives amended in 2018, the Commission had to check whether member states had:
 - provided notification of their national implementing measures by the transposition deadline (i.e. July 2020) (communication and transposition);
 - accurately reflected all the provisions of the directive in national law (conformity).
- 61 For the Packaging Directive, the Commission did not carry out any checks, as the Directive was due to be repealed by a regulation. The proposal for the Packaging Regulation was published in November 2022, and the Regulation was adopted in January 2025 with effect from August 2026.
- 62 For the other two Directives, the Commission carried out both 'communication and transposition' and 'conformity' checks, although the latter were still ongoing in September 2025. We found that the Commission did not always adhere to its internal deadlines for the checks, as detailed in *Table 2*. Our 2024 special report on EU law enforcement came to similar conclusions.

³⁵ Ireland, Greece, Croatia, Cyprus, Hungary, Malta, Romania, and Portugal.

Table 2 | Infringement proceedings initiated by the Commission on the 2018 Waste Directive and Landfill Directive (up to September 2025)

Number of proceedings	Commission's checks and deadlines	Findings				
	Communication/transposition					
42 cases against 23 member states concerning the 2018 Waste Directive and Landfill Directive	No more than 12 months elapse between the letter of formal notice being sent and the case being resolved or brought before the Court of Justice ³⁶ .	All cases were initiated swiftly, within three months of the transposition deadline. Deadline missed in 68 % of cases.				
	Conformity					
17 cases against 13 member states, including 13 cases concerning the 2018 Waste Directive and four cases concerning the 2018 Landfill Directive	complete the conformity check within 16 to 24 months of notification being received of the national transposition measures. [] As a rule, the conformity check should start only once the previous phase of the transposition check — including possible infringement proceedings for failing to report transposition measures — has been completed ³⁷ .					

63 The Commission also detects potential bad application of directives by member states either as a result of complaints, or its own investigations. For waste-related directives applicable before 2018, it initiated 56 proceedings from July 2003 to September 2025, including those mentioned in paragraph 59. Box 2 presents an example.

³⁶ COM(2007) 502, section 3.

³⁷ Better Regulation Toolbox 2023.

Box 2

Infringement proceedings against Italy for failures in the collection and disposal of municipal waste

Following a crisis in the disposal of municipal waste in the region of Campania in 2007, the Commission initiated infringement proceedings against Italy, which resulted in a judgment by the Court of Justice in 2010. In December 2013, the Commission brought a further case against Italy for failing to adopt all the measures needed to comply with the judgment of the Court of Justice. In fact, the Commission reported that between 2010 and 2011, numerous problems in waste collection were notified in Campania, resulting in tonnes of waste accumulating over a period of several days in the streets of Naples and other towns in Campania. In addition, a large quantity of historical waste (6 million tonnes) had accumulated in the region.

In 2015, the Court of Justice ordered Italy to pay a daily penalty of €120 000 and a lump sum of €20 million. In 2021, the daily penalty was reduced by €40 000, as the Commission found that progress had been made on incineration capacity.

Source: Case C-653/13, press release 86/15 of the Court of Justice and answer to a parliamentary question.

The sampled member states are progressing slowly because of insufficient public funding and an inability to fully utilise economic instruments

64 The 2023 early warning report (paragraph *56*) concluded, based on 2020 data and other factors³⁸, that 23 member states were at risk of not meeting one or more of the 2025 targets, and 13 were well behind the 2035 landfill target (*Figure 7*).

EEA, 'Methodology for the Early warning assessment related to certain waste targets', 2.1.2022.

Target Target name Member states value Member states at risk of not meeting the 2025 targets **Overall targets** BE BG CZ DK DE EE IE EL ES FR HR IT CY LV LT LU HU MT NL AT PL PT RO SI SK FI SE Municipal waste prepared for re-use and recycled (minimum, by weight) Packaging waste recycled (minimum, by weight) Material-specific targets (minimum, by weight) Paper/cardboard Plastic Glass Wood Ferrous metals Aluminium Member states needing significant progress to meet the 2035 target Landfill (maximum, as % of all municipal waste 10 % generated, by weight)

Figure 7 | Status of member states at the end of 2020 in relation to targets

Source: ECA, based on COM(2023) 304.

- Meeting these targets requires, among other things, adequate infrastructure for sorting and treating waste, effective economic instruments (*Figure 6*), and citizens' participation in separating waste at source. Reflecting all costs from waste management services in the tariffs that citizens are charged fosters their engagement in the process. In addition, it is crucial to emphasise waste prevention, as waste that is not generated does not need to be managed.
- 66 The 18 country-specific reports attached to the 2023 early warning report included recommendations for each member state, addressing the municipal waste issues identified. Those for the four member states we audited are summarised in *Figure 8*.

Figure 8 | Recommendations of the 2023 early warning reports

GREECE POLAND PORTUGAL ROMANIA

Further develop waste treatment infrastructure



- Increase treatment capacity for bio-waste
- Support home composting
- Establish a quality management system for compost/digestate from bio-waste
- Strengthen investment in waste treatment infrastructure, including facilities for treatment of separately collected

bio-waste

- Step up treatment capacity for bio-waste
- Support home composting
- Ensure pre-treatment of waste going to landfill
- Step up treatment capacity for bio-waste
- Support home composting
- Ensure bio-waste utilisation as fertiliser by setting national quality standards

Separate collection



- Extend it to all parts of the population, especially for bio-waste
- Improve citizen awareness of waste segregation and prevention
- Increase its
 efficiency for
 packaging material
- Roll it out for **bio-waste**
- Promote **multi-use systems** among local bottlers
- Improve it for **recyclables**, i.e. packaging waste
- Improve the convenience of separate collection of

bio-waste

- Extend separate collection at source
- Improve citizen awareness of waste segregation and prevention

Support preparing for re-use of municipal waste and re-use systems for packaging







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Implement economic instruments



- Pay-as-you-throw
- Increase landfill tax
- Pay-as-you-throw system for
- Deposit-return scheme

households

- Extended producer responsibility scheme for packaging from households
- Pay-as-you-throw
- Deposit-return scheme
- Extended producer responsibility for non-household waste
- Increase landfill tax
- Pay-as-you-throw
- Increase landfill tax

Improve data management system



Present coherent and verifiable data sets, especially for packaging waste Present coherent and verifiable data sets

Source: ECA, based on the 2023 country-specific reports, accompanying the early warning report.

- 67 The 2023 early warning report was based on 2020 data. In the course of our audit, data for 2022 became available. Using the data reported under the relevant directives and using calculation method 4 (paragraph 30 and Annex III), we reach the following conclusions about the status of member states in relation to EU targets³⁹.
 - For the 2025 municipal waste recycling target (minimum 55 %): 6 member states either met the target or were less than 5 percentage points away; 11 were more than 15 points away, thus far from meeting the target; and the other 9 were in between (data for Greece for method 4 were not available).
 - For the 2025 packaging and packaging waste target (minimum 65 %): 19 member states either met the target or were less than 5 percentage points away; 4 were more than 15 points away, and thus far from meeting this target; and the other 4 were in between.
 - For the 2035 landfill target (maximum 10 %): 9 member states already met the target, 4 were between 10 and 20 percentage points away; 3 were between 20 and 40 points away; and the remaining 11 were more than 40 points away, requiring significant progress in the next 10 years.
- We also note that meeting a target at national level does not mean that all local authorities comply with the objectives of the directives. This is partially due to the fact that waste management is mostly organised at local level (often by municipalities). Challenges also differ between small municipalities and big cities, as illustrated by the example of Rome in Box 3. This adds to the complexity of waste management overall.

Decision (EU) 2019/665 for the packaging and packaging waste target.

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The data used are the data reported under Annex IV of the Commission Implementing Decision (EU) 2019/1004 for the municipal waste recycling rate, under Annex II of Commission Implementing Decision (EU) 2019/1885 for the landfill target and Commission Implementing

Box 3

Challenges faced by the city of Rome

While the Commission did not deem Italy (national level) at risk of missing the targets, with the exception of one (*Figure 7*), the city of Rome has been facing several challenges regarding municipal waste, such as the following.

- Insufficient treatment capacity. From 2018 to 2023, Rome's treatment capacity decreased from 900 000 to 140 000 tonnes, primarily due to fires which destroyed mechanical biological treatment plants. Consequently, waste must be transported elsewhere for treatment.
- Separate collection levels below the national average.
- Higher landfill rates compared to the national average.
- Ageing and insufficient fleet for waste collection.
- Staffing issues.

Nevertheless, investments have been planned to address these issues, e.g.: construction of four new treatment plants expected to start in mid-2025, works to build a new incinerator expected to start in September 2025, and renewal of the waste collection fleet to improve service regularity. The effectiveness of these investments will be seen in the years to come.

Source: Camera dei Deputati, Senato della Repubblica, XIX legislatura, Doc. XXIII, n. 5, and information received from the relevant department of the city of Rome.

69 For the four member states we audited, we therefore assessed whether:

- national waste management plans provided a clear view of infrastructure needs and funding availability;
- there had been progress in organising separate collection of waste;
- there had been progress in implementing economic instruments.

National waste management plans of the sampled member states underestimate infrastructure needs and lack details on the expected availability of funding

- Waste management plans are a key tool for enabling authorities to apply the principles of EU waste legislation at national, regional and local level. We therefore assessed whether the plans currently in force for the four member states we audited actually identified future infrastructure needs, and included meaningful information on the sources and availability of funding for municipal waste management. As sufficient funding is essential for the success of national waste management plans, we also assessed the extent to which available EU funding was used for their implementation.
- 71 The strengthened targets of the 2018 directives (*Figure 2* and *Figure 3*) meant that member states had to address new infrastructure requirements. We found that three out of the four sampled member states had updated their national plans after 2018 and referred to the new targets. The only exception was Romania, where the national plan had not yet been updated, although the regional plans had been and so reflected the new targets. There was also a gap in Romania's planning, as no plan was in force between 2013 and 2018.
- As regards infrastructure needs and the respective investments, we found that the current plans provided more and better information than the previous ones. Nevertheless, the needs and respective amounts were underestimated in all four member states for one or more of the following reasons:
 - incorrect projections of waste generation. If the actual amount of waste generated per capita exceeds projections, the corresponding infrastructure requirements are likely to be underestimated;
 - omission/underestimation of certain infrastructure needs (Box 4);
 - delays in implementing projects that were supposed to be finished when the estimates for the current plans were made (Box 4);
 - sharp rises in construction costs, in particular since 2021, which the plans or estimates drawn up before that date could not take into account.

Box 4

Examples of delays in implementation and shortcomings in estimates of infrastructure needs

Greece: Over a period of 13 years (2011-2024), only 8 out of 33 planned waste management centres were built and began operating, in addition to the four existing ones. The remaining 25 are at various stages of implementation. Also, only 3 of 28 facilities for separately collected bio-waste began operating.

Poland: The current national plan aims to have incineration capacity of no more than 27 % of the waste generated by 2034. However, this target is not aligned with the regional plans (as they stood in mid-June 2025), where the combined planned incineration capacity of the municipal waste expected to be generated in 2035 is at least as high as 49 %.

Portugal: Each of the 23 integrated waste management centres has targets for several aspects, including landfill. If the targets are met, Portugal will be putting 26 % of its mixed municipal waste in landfill by 2030. The current plan aims for a share of 14 %. The national authority representatives we met expressed doubts about achieving the 26 %, let alone 14 %. More capacity is therefore likely to be needed. According to a study by the country's waste managing bodies, by mid-2024 mainland Portugal only had sufficient landfill capacity for another 4.5 years. In response to this urgency, an action plan was adopted in March 2025.

Romania: The plan aimed for all integrated waste management centres to be operational by 2019. However, delays have continued, as is clear from our sample of projects (*Box 6* and *Figure 11*).

- 73 The investment amounts for two member states were presented in the national plans as aggregate figures, and were not categorised by type of investment or broken down by individual project.
- 74 Moreover, none of the four national plans indicated amounts by funding source, whether public (EU, national, local) or private. In some member states, plans at regional or local level provided more information on sources of funding, but were not necessarily complete, either. Unless such information (i.e. about who will provide which funding and when) is aggregated at national level, there is no assurance that the plans can actually be implemented as envisaged.
- **75** Table 3 summarises the issues identified in each member state.

Table 3 | Different aspects of national waste management plans

Member state	Period of plan in force	Projection of waste generation	Infrastructure needs: omissions/ underestimates	Investment amounts	Funding sources
Greece	2020- 2030	Underestimated by around 10 %	Repair centres, waste recycling points	Aggregate amount only, not categorised by project or type of investment	Sources named, but amounts per source not disclosed
Poland	2023- 2028	Aligned with actual change	Infrastructure for incineration	Underestimated for incineration Amounts provided by type of investment	Sources named, but amounts per source not disclosed
Portugal	2023- 2030	Aligned with actual change	Infrastructure for incineration, landfill and for collecting waste separately at local level	Aggregate amounts by region and three investment areas (bio-waste, treatment of paper and cardboard, treatment of plastic and metal)	No information on the sources
Romania	2018- 2025	Underestimated	Needs do not take new targets of the 2018 Waste Directive into account	Underestimated Amounts provided by county, type of investment area and 10 sub-activities	Sources named, but amounts per source not disclosed

76 EU funding (mostly under cohesion policy and the Recovery and Resilience Facility) is a major source of funding for the member states in our sample (*Annex I* (*Figure 8*)). We therefore assessed the extent to which member states used the funding available. For cohesion policy, we also assessed whether priority was given to lower steps in the waste hierarchy (i.e. investments in landfills, incineration and mechanical biological treatment facilities) or upper steps (i.e. prevention, preparing for re-use and recycling).

- 77 We compared the funding allocations for municipal waste between the 2014-2020 and 2021-2027 periods for cohesion policy funds:
 - at EU level, the share of funding allocated to projects for the upper steps of the waste hierarchy increased from 59 % to 80 %;
 - for three of the four member states, there is a notable shift from the lower to the upper steps of the waste hierarchy. By contrast, for the 2021-2027 period Greece prioritises projects relevant to the lower steps, but these figures should be interpreted with caution. Although Greece intends to invest in integrated projects comprising both lower and upper step components, it has reported such projects mainly as lower step investments. For further details, see *Annex VI*.
- 78 In terms of absorption of the cohesion policy funds in the 2014-2020 period (*Annex VI* (*Table 2*)), we found that:
 - at EU level, 91 % of the available funds had been used at the end of 2023, which is the final date of eligibility for expenditure;
 - two of the four member states did not fully use the funds available (Greece used 76 % and Romania 57 %). If Greece had not reduced its initially planned waste expenditure by approximately 30 %, the absorption rate would have been even lower.
- 79 Under the Recovery and Resilience Facility, two of the four member states (Portugal and Romania) earmarked funding for investments in waste infrastructure projects⁴⁰ regarding household, commercial and industrial waste. By September 2025, neither member state had requested disbursements from the Commission for fulfilling milestones and targets related to these investments. The final deadline for making such requests is the end of September 2026.

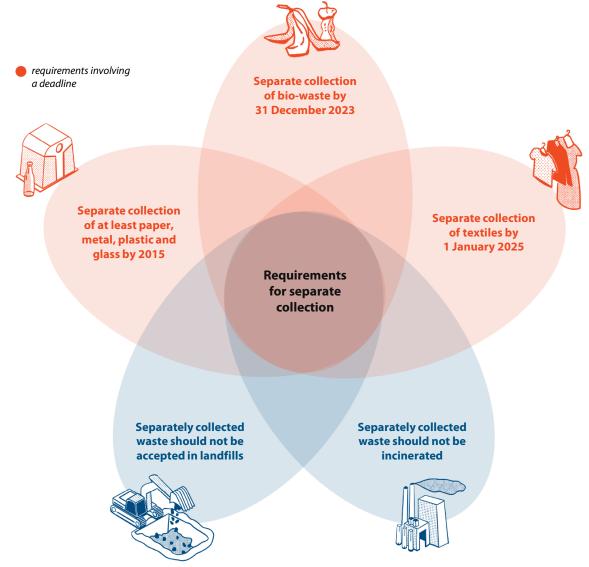
Despite progress in separate collection, it remains at a very low level in three out of the four sampled member states

80 Separating waste is a prerequisite for high-quality recycling. The EU requirements are shown in *Figure 9*.

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⁴⁰ Regulation (EU) 2021/241, Annex VI, intervention codes 042, 044 and 044bis.

Figure 9 | Separate collection – EU requirements



Source: ECA, based on the Waste Directive, the Packaging Directive and the Landfill Directive.

Separate collection requires well organised collection systems and infrastructure. Waste can be collected from households by providing the necessary bins ("door-to-door") and/or at recycling points and civic amenity sites; this is more challenging to organise in densely populated areas. Accurate sorting depends on citizens' cooperation, highlighting the importance of information and awareness-raising campaigns. Separate collection therefore comes at a cost. This underscores the importance of extended producer responsibility schemes (paragraph 47).

- 82 The 2023 country-specific early warning reports for nearly all 18 member states at risk of not meeting the 2025 municipal waste recycling target recommended that separate collection should be improved. For the four member states we audited, the 2018 early warning reports had already highlighted the ineffectiveness of separate collection. As the situation had not sufficiently improved, the 2023 reports recommended further improvements (*Figure 8*).
- In terms of awareness-raising campaigns, we found that all four waste management plans in force (*Table 3*) include measures to be taken at national and local levels. Poland had already implemented a national campaign over the years 2019-2021, i.e. before the current plan came into force. This was not the case for Greece and Portugal. In Romania, responsibility for such campaigns lies mostly with the operators of the integrated waste management centres, but not all have organised them. Based on our project visits, we found that some municipalities or regions organised local campaigns.
- 84 In terms of **progress on organising separate collection**, the situation varies by member state. Some member states progressed more than others, but the levels in 2022 and 2023, were still very low in three of the member states. We found that the reasons for this situation include financial constraints, weak administrative capacity, and an increase in waste per capita. *Table 4* provides a summary of the situation in the four member states concerned, based on our analysis.

Table 4 | Situation regarding separate collection

Member state	Compulsory by law	Which categories are collected separately and how	Progress
Greece	 Bio-waste since the end of 2022 Textiles since January 2024 Four categories (paper, metal, plastic, glass) since 2015 	One bin (paper, metal, plastic, glass) plus one for mixed waste.	Slow progress. Greek authorities expect an increase in separate collection from 18 % of total municipal waste in 2022 to 55 % in 2030.
Poland	o Textiles since January 2025	Four bins (paper, glass, bio-waste, metal/plastic/multimaterial) plus one for mixed waste.	Steady increase in separate collection from 2014 to 2023, reaching 41 % of total municipal waste in 2023. The current national plan highlights the need for more capacity to treat separately collected bio-waste.

Member state	Compulsory by law	Which categories are collected separately and how	Progress
	o Four categories (paper, glass, bio-waste, metals/plastic/multi-material packaging waste) since July 2017		
Portugal	 Bio-waste since the end of 2023 Textiles since January 2025 Four categories (paper/cardboard, glass, plastic, metal) since 1997 	Three bins (plastic/metal, glass, paper/card) plus one for mixed waste.	Steady increase in separate collection from 2017 to 2023, reaching 24 % of total municipal waste in 2023. The current waste management plan includes more investments in infrastructure for separate collection. However, the plan clearly states that there is not enough capacity to treat the different waste streams.
Romania	 Bio-waste since the end of 2023 Textiles since the end of 2023 Other categories since 2012 	Four categories (paper, metal, plastic, glass) and mixed waste. Depending on the county: o Two bins: one for mixed waste and one for other categories o Three bins: glass, metal/plastic/ paper and residual waste o Four bins: glass, plastic/metal, paper, and residual waste.	Slow progress. Separate collection has been mandatory since 2012, but only started in July 2019. It reached 15 % of total municipal waste in 2022. The implementation plan at the end of 2023 in support of the request to postpone the deadline for meeting the municipal waste recycling target (paragraph 58) recognised local authorities' failure to stipulate the right conditions for separate collection.

Note: This table does not include information on the following categories: batteries and electronic equipment. For textiles, the table does not include information on the implementation of the requirement (column 3).

85 Bio-waste, the largest category of municipal waste (at around 37 %), is not yet collected separately in three of the four member states (Greece, Portugal and Romania), with the exception of some municipalities in each of them. Collecting bio-waste separately lowers the level of contamination of other recyclable materials (such as paper or plastic), and so leads to higher-quality recyclables. By comparison, in the region of Flanders (Belgium)

separate collection of bio-waste (consisting of fruit, vegetable and garden waste) covers around 70 % of the population. Separate collection of garden waste alone covers the entire population ⁴¹. Separate collection of bio-waste was already initiated in 1990 and gradually increased which contributed to reaching the overall rate of 70 %. Another contributing factor is the degree of home composting: 42 % of households do so. According to the public waste agency of the region, separate collection of bio-waste should become mandatory by January 2026 for the remaining municipalities not yet covered.

The sampled member states made limited progress with economic instruments

- The 2023 country-specific early warning reports for nearly all 18 member states at risk of not meeting the 2025 municipal waste recycling target recommended that economic instruments (*Figure 6*) should be enhanced or implemented. According to a 2023 report by the EEA, a landfill tax was applicable in all but five member states, while an incineration tax was applicable only in nine member states. Moreover, it concluded that only eight member states had a pay-as-you-throw system that covered a high percentage of the population.
- 87 For the four member states we audited, the 2018 early warning reports had already highlighted that economic incentives were insufficient and/or that the extended producer responsibility schemes were not effective. We therefore assessed whether (i) the underlying environmental principles such as full cost recovery and pay-as-you-throw were appropriately applied; (ii) the landfill tax was increased; (iii) the extended producer responsibility schemes covered the full cost of waste management; and (iv) deposit-return schemes became operational.

Principles underlying EU environmental and waste management policies

- 88 EU environmental policy is based on the principle that the polluter should pay⁴³. Waste tariffs based on the **principle of full cost recovery** are a way to apply the 'polluter pays principle'. This means that waste tariffs should:
 - be calculated based on the cost of building the necessary infrastructure (capital cost),
 operational costs (i.e. of services provided, such as collection, treatment and disposal of waste), and administrative costs for managing the waste cycle. The capital cost

2.16.11.18 20/ 2022

⁴¹ Data from the public waste agency of Flanders, OVAM.

⁴² Briefing 29/2022.

⁴³ Treaty on the Functioning of the European Union, Article 191(2), and Waste Directive, Article 14.

- should reflect the full amount, including the proportion of the investment financed by grants, to facilitate long-term replacement without the need to rely on further grants;
- be paid by waste producers such as final consumers, i.e. households or citizens (both terms are used interchangeably in this report).
- Moreover, to apply the 'polluter pays principle' in full, the waste tariff should be based on the weight or volume of waste generated. In other words, the tariff should comply with the **pay-as-you-throw principle**. This approach also encourages waste producers to minimise their waste, in line with the overarching objectives of the EU's waste policy (see example in *Box 5*). However, it should be noted that excessively high costs may result in illegal waste disposal practices.

Box 5

Portugal – example of the positive impact of introducing the pay-as-you-throw principle

In one municipality, a pay-as-you-throw system was introduced in 2021, and has gradually been applied to cover the entire population in 2025. As a result:

- the share of mixed waste dropped from 72 % to 67 % in 2023;
- monthly collections of mixed waste became less frequent: by the end of 2023, 40 % of households required three or four mixed-waste collections per month compared to 70 % in May 2021, while 42 % of users opted for one or two collections per month compared to 28 % in 2021.
- The main stakeholders in the municipal waste cycle are the owner of the infrastructure, the operator of the infrastructure, waste collectors, and the municipality. The structure varies by member state: in some countries, for example, the infrastructure may be owned and operated by the same entity. Furthermore, some countries have intermunicipal entities that group municipalities together within a specific region. Financial flows between stakeholders also vary according to the chosen structure. In simple terms, citizens (or households) pay a tariff, while operators or owners of the infrastructure receive a 'gate fee' for treating waste, placing it in landfill and/or incinerating it. All four member states also levy a landfill tax. The tariff should reflect the costs incurred by the various stakeholders (paragraph 88).
- **91** Figure 10 illustrates the set up for Greece in simplified form. Annex VII provides illustrations for the other three member states we audited.

GREECE Households, citizens State Municipality Tariff - via Landfill tax electricity bill **Either FODSA or** contracted out (infrastructure operator) Contractor Payment for the Intermunicipal entities (FODSAs) collection service (infrastructure owner) provided (if contracted out) Payment for the collection service provided (if contracted out)

Figure 10 | Greece – main stakeholders and financial flows for municipal waste management

Note: For simplicity's sake, the figure does not show other user categories, i.e. non-profit organisations and businesses, which not only generate municipal waste but also have to pay a tariff.

Source: ECA.

- **92** For the four member states we audited, based on our sample of projects, we assessed whether:
 - all costs were reflected in the tariff applied. We also evaluated the effectiveness of the tariff system by considering the frequency of tariff updates to match evolving costs and the level of unpaid waste invoices. A tariff is only effective if it is regularly updated to reflect changing costs and if it is actually paid;
 - citizens were charged using the pay-as-you-throw principle.
- 93 Where the principle of full cost recovery is concerned, we found that for the areas we examined (three counties in Romania and one municipality per project for the three other member states), the principle was only partially applied. This is mainly due to the following factors (see *Table 5* for details):
 - costs are not fully included in the tariff, even though national law in all four member states requires full cost recovery;

- fee decisions are not regularly updated by local authorities. In all four member states, national law grants local authorities discretion to adjust the tariff level, i.e. to increase, decrease, or maintain it. Tariff decisions by local authorities often involve various considerations, including political ones;
- some invoices/fees remain unpaid by citizens.

Table 5 | Full cost recovery principle – situation by member state

Member state	Partial application of the full cost recovery principle: main reasons		
Greece	 Investment cost not considered in full in the tariff, but net of any grant received. 		
	o Landfill tax (paid since 2023) not reflected in the tariff.		
	o Three municipalities out of four showed losses for certain years between 2022 and 2024, i.e. income from tariffs was insufficient to cover all costs.		
	 Despite the losses, these three municipalities did not increase the tariffs as a result. 		
	o Level of unpaid invoices (2024) ranged from 1.4 % to 11 %.		
Poland	 Investment cost not considered in full in the tariff, but net of any grant received. 		
	 Three municipalities out of four showed losses in one or more years between 2021 and 2023, i.e. income from tariffs was insufficient to cover all costs. The Polish Supreme Audit Office reached a similar conclusion for a sample of 13 municipalities in a report issued in May 2025. 		
	O Despite the losses, one of the three municipalities did not increase the tariff after 2021.		
	o Level of unpaid waste management fees (2023) ranged from 1.7 % to 6.5 %.		
	 Investment cost not considered in full in the tariff, but net of any grant received. 		
Portugal	o In 2022 and 2023, average cost recovery in Portugal as a whole stood at 70 %, and 68 %, respectively.		
	 Despite the losses, one of the big municipalities had not increased the tariff since 2015. 		
	o Level of unpaid invoices (2023) ranged from 0.2 % to 4 %.		
Romania	See paragraph 94		

- 94 A key difference in Romania's waste management structure compared to the other three countries is how cost risks are handled. In Romania, infrastructure operators take on cost risks, while these risks are borne by the authorities in the other countries. The implications of this are as follows.
 - In Greece, Poland and Portugal, operators are entitled to cost coverage, plus a profit margin, whereas in Romania, the gate fee for operators is determined by public procurement procedures. For two of the three Romanian projects we examined that were already operational, the operators made losses in their first years. In specific circumstances, operators can request an increase in the fee. All three asked for such an increase, and all of them were granted at least one.
 - Infrastructure operators also have to pay royalties for using the infrastructure, roughly equivalent to the yearly depreciation amount. However, contracts were for 10 years or less, and so below the expected working life of the infrastructure. This means that the authorities can only recover the full investment cost if these contracts can be extended or new contracts can be signed.
 - The companies responsible for waste collection are required to enter into contracts with citizens (households) and collect the tariff amount, except in a few municipalities that have chosen to levy a tax on their citizens. The level of contracting ranged from 60 % to 100 %. Nevertheless, there is a legal obligation to collect waste from all citizens. The level of unpaid invoices (2024) ranged from 0.2 % to 40 %.
- 95 We found that the pay-as-you-throw principle is legally imposed in all four member states, but Poland exempts residential properties (i.e. households). In Portugal, the law requires implementation by 2030 for households and by 2025 for other users, such as businesses.
- 96 For households, we found that up until 2024, the pay-as-you-throw principle requiring invoicing to be based on the weight or volume of waste generated was mostly not yet applied in the four member states we audited, as summarised in *Table 6*.

Table 6 | The pay-as-you-throw principle – situation by member state

Member state	Partial application of the pay-as-you-throw principle: main reasons		
Greece	Basis for invoicing: m ² (i.e. tariff multiplied by the surface area (m ²) of the property).		
Poland	 Residential properties – basis for invoicing: m² or water consumption or per capita or per household. 		
	o Non-residential properties – basis for invoicing: by volume, in those municipalities for which we had the information.		
	o Partially residential properties – basis for invoicing: a combination of the previous two, in those municipalities for which we had information.		
Portugal	Basis for invoicing:		
	o Fixed component (linked to the number of houses in the municipality).		
	o Variable component based on water consumption.		
	However, 5 % of municipalities in Portugal already apply the pay-as-you-throw principle.		
Romania	Basis for invoicing: different for the three counties concerned.		
	o Two counties apply a tariff per person.		
	One county partially applies the pay-as-you-throw principle (basis: volume of the bin), but it does not yet apply to people living in apartment buildings.		
	o Not applied by the small number of municipalities which opted to levy a tax rather than to apply tariffs.		

Other economic instruments

97 As regards the landfill tax, the 2023 early warning reports for Greece, Portugal and Romania recommended increasing it. In all three, the tax has been gradually increased, but is still below the EU average⁴⁴ (ranging between €39 and €46 per tonne, in 2023). By comparison, the EEA states that Belgium has one of the highest tax rates in the EU, which together with landfill bans diverted waste from disposal to recycling. Big variations in the amount of the tax can result in waste being transferred between countries for economic reasons. *Table 7* provides a summary of the situation in the four member states, based on our analysis.

⁴⁴ Briefing 29/2022.

Table 7 | Landfill and incineration tax

Member state	Compulsory by law	Since	Increases in the tax	
	Landfill tax			
Greece	YES	2012 But applied only since 2022	The tax is expected to gradually increase by €5 per tonne, from €20 in 2022 to €35 in 2025. From 2026, the tax will range from €35 to €45 per tonne, depending on the number of waste management centres in operation in each region. Specific rules apply for regions where such centres are not yet in place. As the infrastructure for treating waste is limited, more than half of Greek municipalities (164) challenged the law as unconstitutional in the Council of State. The municipalities aim to withhold a part of the tax and invest it in waste infrastructure in their region. The final judgment was still pending in May 2025.	
Poland	YES	2001	Over 24 years (2001-2025), the tax per tonne increased by around 1 500 %, to reach 418 zlotys per tonne (around €97 per tonne).	
Portugal	YES	2006	Over 10 years (2015-2025), the tax increased by 536 % to reach €35 per tonne.	
Romania	YES	2019	From 2023 to 2024, the tax per tonne increased by 100 % to reach 160 lei (around €32 per tonne). According to the national authorities, although importing waste for landfill purposes is prohibited, Romania's low landfill tax contributes to the problem of illegal waste transfers from other countries.	
	Incineration tax			
Greece	n/a		Greece does not have any incineration facilities.	
Poland	NO		Poland does not intend to introduce an incineration tax despite the Commission's recommendation in the early warning report of 2023.	
Portugal	YES	2006	The tax has been increased several times over the last 10 years.	
Romania	n/a		Romania does not have any incineration facilities.	

98 Both the 2023 and 2018 country-specific early warning reports for Poland and Portugal also recommended implementing or strengthening extended producer responsibility schemes. The 2018 report for Romania also recommended extending the schemes.

99 Such schemes exist to some extent in all four member states, as shown in *Table 8*. Under the schemes, producers should cover the full cost of waste management, from separate collection to sorting, treatment, and disposal. However, in Poland and Portugal, where schemes are already operational, the fees paid by producers are currently insufficient to cover all these costs.

Table 8 | Extended producer responsibility schemes

Member state	Comments		
Greece	Due to delays in implementation, the schemes are not yet fully operational for all waste streams, as national law requires them to be.		
Poland	In 2023, the Commission initiated infringement proceedings against Poland for, among other things, the incomplete/incorrect transposition of the provisions regarding extended producer responsibility. Although some schemes do exist, the fees paid are insufficient to cover waste management costs.		
Portugal	Schemes exist, but despite an increase in 2024, the fees paid by producers do not fully cover waste management costs. Portugal increased the prices with effect from January 2025. The effects of this increase in terms of coverage of costs remain to be seen.		
Romania	Schemes exist and the contracts we have seen for three counties state that fees should cover actual costs. We have not assessed the implementation of these contracts.		

100 As regards deposit-return schemes, the 2023 country-specific early warning reports for Poland and Portugal and the 2018 reports for Portugal and Romania recommended introducing them. In Romania, such a system has been in place since the end of 2023, while in the other three member states, such schemes are expected to start in 2025 (Poland) or 2026 (Greece and Portugal).

Most projects we sampled were delayed and some experienced cost and capacity issues

101 For our sample of 16 projects (*Annex I* (*Figure 10*)), we assessed whether they were well implemented in terms of time and cost, and had appropriate treatment capacity. In the case of landfill projects, we assessed whether the operators made provisions to cover the closure and after-care costs required by the Landfill Directive.

102 Most projects (13 out of 16) experienced delays of more than 18 months after the initial completion date. For all but four of the projects we examined, cost increases stayed below 20 % compared to the initially approved cost or even decreased (*Figure 11*).

Figure 11 | Details of delays and cost increases

13 of 16 projects faced significant delays



Delays concern one project in Poland, and all the projects we examined in Portugal, Romania and Greece. Implementation delays ranged from three months to six years, and amounted on average to three years per project. They are mostly explained by one or more of the following: delays in procurement procedures, technical issues or unforeseen events, the COVID-19 pandemic, poor project management (e.g. a delay in completing the access road to the facility) and state aid issues.

5 projects kept cost increases under 20 % and 7 projects cost less than initially planned

For the four projects with increases above 20 %, these increases were linked to the outcomes of procurement procedures, extension of the project's scope, and additional works to address unforeseen events.



Source: ECA.

103 Delays can have an impact on effectiveness, as illustrated by the Romanian projects in *Box 6*. Moreover, any delay in project implementation risks delaying progress with regard to the targets set by EU law (*Figure 2* and *Figure 3*).

Box 6

Impact of delays in project implementation – four projects in Romania

- The initial project applications for the four projects we examined had been submitted between 2010 and 2012, i.e. more than 10 years before they were finalised (three projects) or became operational (one project). The works were carried out as initially planned, i.e. with a design that reflected the waste treatment technology available at the time. For example, mechanical treatment was mostly manual, with only a few automatic processes. This resulted in low recovery rates of materials.
- Delayed procedures for selecting infrastructure operators left the facilities and equipment unused for years, meaning that they deteriorated (three projects).
 For the fourth project, which was not yet operational, the beneficiary signed a maintenance contract to prevent deterioration.

Delays in one project led to non-compliant landfills being closed, even though a
new landfill that did comply with the Landfill Directive was not yet ready. To
manage the waste, local authorities opened a temporary landfill site that was
used until 2020. In May 2024, 300 tonnes of untreated municipal waste were still
at the temporary site as can be seen on the photo below.



Source: ECA (photo taken in May 2024).

- 104 Two out of 16 projects were not yet in operation at the end of 2024, even though the works for both of them had already been finished for several years. In one case, waste was not being collected until waste collection vehicles were purchased, while in the other case, the contract with the future operator had not yet been signed. One other project was only partially operational: the treatment infrastructure was in use, but a contract for waste collection and transport in one of the four project zones had not yet been signed.
- 105 In terms of capacity, we were able to analyse 10 out of 16 projects as two were not yet operational, another two had only come into operation shortly before our visit, and another two were of a type where capacity was not relevant. We found that:
 - three projects operated significantly below their stated capacity (ranging from 38 % to 54 %), at least for a certain period of time. The reasons for this were technical problems, or lower-than-expected volumes of separately collected waste to be treated;
 - two projects did not have sufficient capacity because the quantity of waste to be treated was underestimated. For example, in one case, separate collection significantly increased as a result of awareness-raising campaigns.

- 106 The potential impact on the environment of operating landfill sites is not limited to the operational period of the infrastructure, as potential leachate infiltrations and landfill gas emissions continue for decades after waste disposal has finished. For this reason, the Landfill Directive requires amounts to be set aside to cover closure and after-care costs for a period of at least 30 years. This can, for example, take the form of a financial security.
- 107 We found that national laws in all four member states require such provisions, and in one case (Portugal) the amount is also specified. For the eight projects in our sample which included investments for a landfill site, we found that the provisions were sufficient in five cases when compared with the amounts established in a dedicated study (*Table 9*).

Table 9 | Provisions for closure and aftercare of landfill sites

Member state	Requirement in national law	Basis for establishing the amount (by law)	Are provisions in the financial accounts sufficient?
Greece	YES Study		Sufficient in two projects out of four.
Poland	YES	Not indicated, but there is a legal obligation that the amount should be sufficient to cover the costs	No investments in landfill included in our sample.
Portugal	YES	20 % of the total investment in landfill	No investments in landfill included in our sample.
Romania	YES	Study	Sufficient in three projects out of four.

This report was adopted by Chamber II, headed by Mrs Annemie Turtelboom, Member of the Court of Auditors, in Luxembourg at its meeting of 15 October 2025.

For the Court of Auditors

Tony Murphy
President

Annexes

Annex I - About the audit

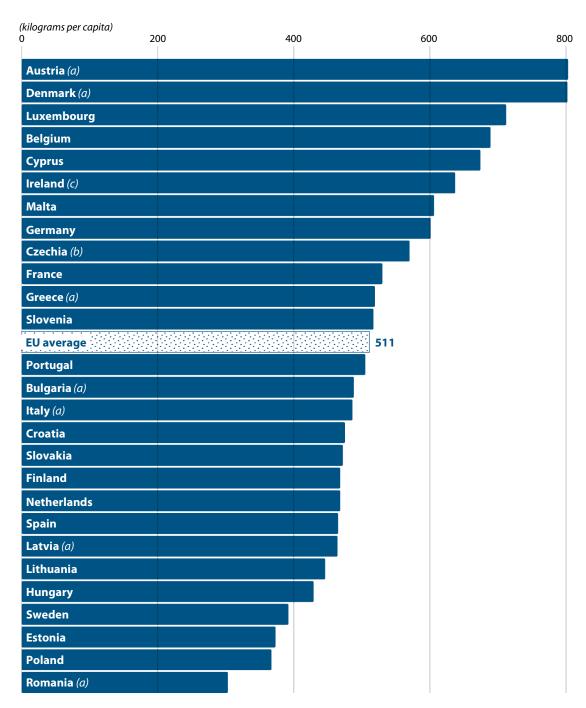
Municipal waste explained

- O1 Municipal waste refers to waste that is collected by or on behalf of municipal authorities and is processed and disposed of through waste management systems¹. It includes both mixed and separately collected waste (such as glass or paper) originating from households, as well as waste from other sources such as offices, shops and public institutions, provided that the waste shares similar characteristics and composition to that collected from households².
- **02** In 2023, municipal waste in the EU reached 511 kg per capita but the situation varies significantly by member state ranging from around 800 kg to around 300 kg per capita, as illustrated in *Figure 1*. Factors explaining the differences are for example economic wealth and the degree of urbanisation with greater reliance on packaged and convenience goods.

Eurostat, Glossary – Municipal waste.

Directive 2008/98/EC, Article 3(2b).

Figure 1 | Municipal waste generated in 2023 (in kg/capita)

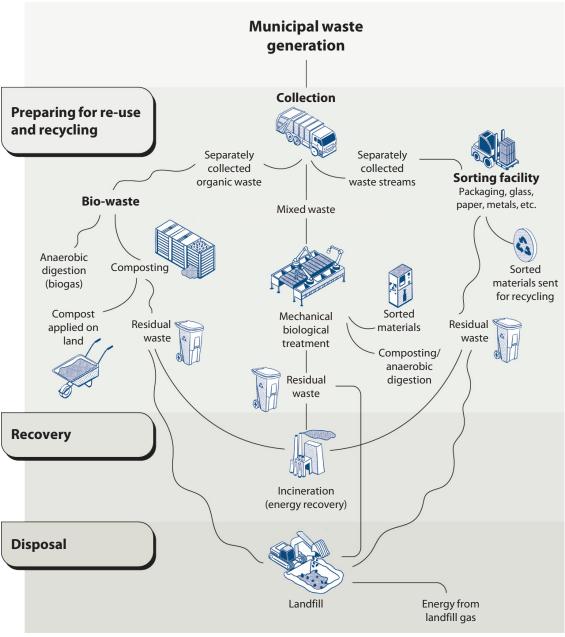


a: 2022 data; b: 2021 data; c: 2020 data

Source: ECA, based on the Eurostat dataset env_wasmun, extracted on 2 October 2025.

03 The treatment of waste includes operations such as composting bio-waste, recycling, incineration and landfill. The waste management process is illustrated in *Figure 2*.

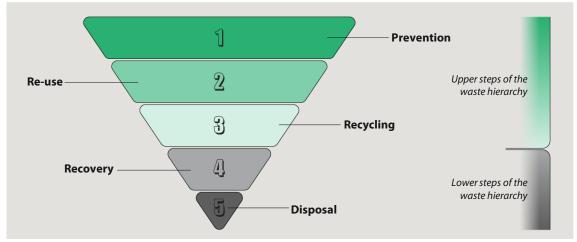
Figure 2 | The waste management process



Source: ECA.

04 In 2008, EU law adopted a five-step waste hierarchy pyramid where priority is given to waste prevention, with landfill being the least preferred option (*Figure 3*).

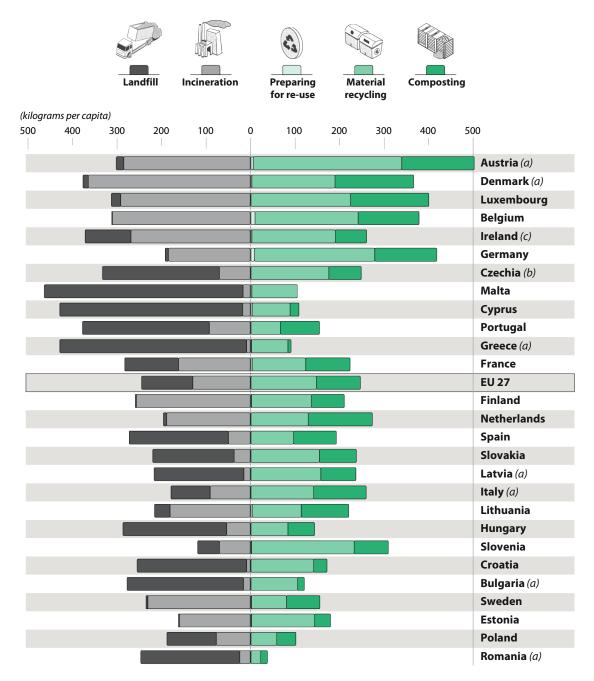
Figure 3 | Waste hierarchy



Source: ECA, based on the Waste Directive.

O5 *Figure 4* illustrates the share of the various treatment methods by member state. There are significant differences between member states, with some using landfill for more than 70 % of waste and others incinerating more than 50 %.

Figure 4 | Municipal waste per capita and treatment methods (2023, in kg)

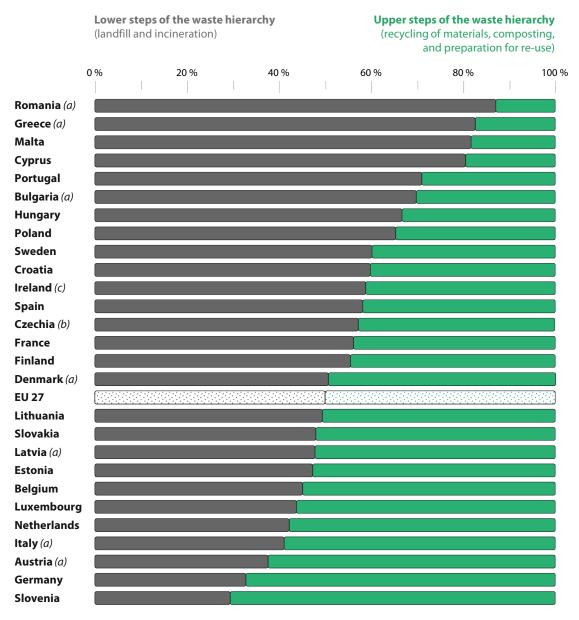


a: 2022 data; b: 2021 data; c: 2020 data

Source: ECA, based on the Eurostat dataset env_wasmun, extracted on 2 October 2025.

O6 Figure 5 illustrates the share between the lower and upper steps of the waste hierarchy. The frontrunners in recycling and composting (above 60 % of municipal waste) are Slovenia, Germany and Austria.

Figure 5 | Share of waste dealt with in the lower and upper steps of the waste hierarchy (2023, in %)



a: 2022 data; b: 2021 data; c: 2020 data

Source: ECA, based on the Eurostat dataset env_wasmun, extracted on 2 October 2025.

EU regulatory framework

- O7 The EU's framework for waste management was established in 1975 by the Directive on Waste, based on Articles 100 and 235 of the Treaty of Rome. Since then, the legal acts have been encouraging member states to prevent, recycle and process waste with the aim of recovering materials and energy, and implementing processes for the re-use of waste.
- O8 As of today, the main EU legislation relevant to municipal waste (*Figure 6*) includes three directives, all of which have been amended several times: the Waste Framework Directive ("Waste Directive"), the Packaging and Packaging Waste Directive ("Packaging Directive") and the Landfill Directive. In 2025, the Packaging Directive was repealed by the Packaging and Packaging Waste Regulation ("Packaging Regulation"), whereas a further amendment of the Waste Directive was adopted.

Figure 6 | Legal acts

Waste Framework Directive

Directive 2008/98/EC, as amended in 2014, 2015, 2017, 2018 and 2025

Lays down measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste. Introduced the waste hierarchy.

Sets targets to be met by member states.

Packaging and Packaging Waste Directive

Directive 94/62/EC, as amended in 2003, 2004, 2005, 2009, 2013, 2015 and 2018

Lays down measures aimed primarily at preventing the production of packaging waste and, as additional fundamental principles, at re-using packaging, recycling and other forms of recovering packaging waste, the aim being to reduce the final disposal of such waste in order to contribute to the transition towards a circular economy.

Sets targets to be met by member states.

Packaging and Packaging Waste Regulation

Regulation (EU) 2025/40, repealing the Packaging and Packaging Waste Directive

Establishes requirements for the entire life-cycle of packaging as regards environmental sustainability and labelling, allowing it to be placed on the market. Also establishes requirements for extended producer responsibility and packaging waste prevention, such as reducing unnecessary packaging and re-using or refilling of packaging, as well as the collection and treatment – including recycling – of packaging waste. Sets targets to be met by member states.

Landfill Directive

Directive 1999/31/EC, as amended in 2018

Aims to ensure a progressive reduction in the use of landfill, in particular for waste that is suitable for recycling or other recovery. Also, by way of stringent operational and technical requirements for waste and landfill, provides for measures, procedures and guidance to prevent or reduce negative effects on the environment as far as possible, in particular the pollution of surface water, groundwater, soil and air, and effects on the global environment, including the greenhouse effect, as well as any resulting risk to human health, from waste being placed in landfill, during the whole life-cycle of the landfill.

Sets targets to be met by member states.

Source: ECA.

Roles and responsibilities

O9 The roles and responsibilities of the Commission and the member states are listed in Figure 7.

Figure 7 | Roles and responsibilities



Commission

Directorate-General (DG) ENV is responsible for the policy on environment, which includes waste. DG REGIO is responsible for cohesion policy under which significant funding is provided to member states for implementing waste projects. DG ECFIN and SG RECOVER (task force under the Secretariat-General) are responsible for implementing the Recovery and Resilience Facility.

The European Environmental Agency (EEA) is an agency of the European Union and provides insights into the state of the European environment, including waste. It issues reports and data, for example on member states' progress towards attaining waste targets.



- Member states

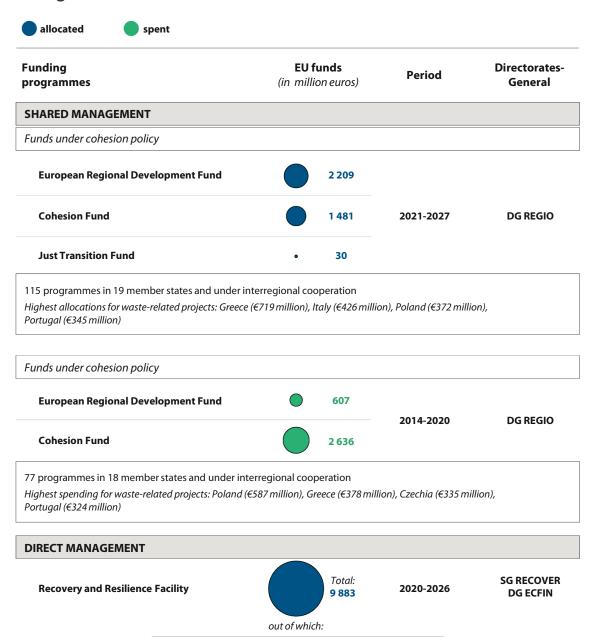
- Decide on national municipal waste policy. Implementation of the waste management policy (including the collection, treatment and disposal of waste) is generally delegated to regional and/or local authorities (i.e. municipalities).
- Prepare waste management plans and waste prevention programmes.
- Decide on their level of public support.
- Implement some of the EU funds (such as those under cohesion policy).

Source: ECA.

The main sources of EU funding

10 The main sources of EU funding for municipal waste projects are the funds implemented under cohesion policy and the Recovery and Resilience Facility (Figure 8). They are managed by different Commission directorates-general (DGs), and involve different management modes.

Figure 8 | EU funding programmes – investments in municipal waste management



In total, 11 member states have planned investments and 14 have planned reforms regarding waste management including household, commercial and industrial waste (intervention codes 042, 044 and 044bis) in their national recovery and resilience plans. However, similar investments might also be reported under other codes.

Romania:

1 114

Greece:

801

Italy:

2 110

Costs for investments: Spain (€4 950 million), Italy (€2 110 million), Romania (€1 114 million), Greece (€ 801 million),
 Austria (€300 million), France (€245 million), Croatia (€189 million), Belgium (€ 80 million), Hungary (€60 million),
 Portugal (€ 30 million) and Cyprus (€3 million).

Spain:

4 950

 Reforms with zero estimated costs: Czechia, Greece, Spain, France, Croatia, Italy, Cyprus, Lithuania, Hungary, Malta, Austria, Portugal, Romania and Finland.

Source: ECA, based on the Cohesion open data platform (update of 5 April 2024 for the 2014-2020 period and update of 10 April 2025 for the 2021-2027 period), and the Commission databases for the Recovery and Resilience Facility.

Audit scope and approach

- 11 This report assesses the action taken by the Commission and member states to achieve the EU's municipal waste objectives. To this end, we assessed the extent to which:
 - the Commission's legal initiatives and enforcement were fit for purpose;
 - the four member states we sampled have made good progress in achieving EU waste targets and objectives;
 - projects co-financed with EU funds were implemented well in terms of time, cost and capacity.
- 12 Our audit covered municipal waste as regulated by the Waste Directive, the Packaging Directive, the Landfill Directive and the Packaging Regulation. We did not analyse municipal waste streams for which there are no targets (e.g. bulky waste) or waste streams governed by other legal acts (e.g. electrical and electronic equipment and end-of-life vehicles). In addition, we excluded the following two aspects from our scope: (i) waste imports and exports; and (ii) the reliability of waste data reported to Eurostat. Our audit covered the period from 2014 until the end of 2024.

13 We analysed evidence from a range of sources, as listed in *Figure 9*.

Figure 9 | Evidence sources

Documents



EU policy documents on waste, the regulatory framework, national documentation on waste, and reports and studies published by the European Environmental Agency (EEA), research bodies, associations and academics.

Data



Data from different sources, mainly from the Commission, Eurostat, the EEA, the Cohesion Open Data Platform, and national authorities. For example, waste statistics reported by the member states or data regarding projects.

Audit visits to four member states



For a sample of four member states (Greece, Poland, Portugal, and Romania) we examined: national waste management plans, legislative and policy documents, funding support, implementation plans, etc.

We judgementally selected member states from the population of those that were at risk of not meeting the EU targets for municipal and packaging waste. Our selection was based on materiality and geographical coverage. The spending of these four member states represents 47 % of the total spending on waste projects under cohesion policy in the 2014-2020 period.

16 projects



For a sample of 16 projects (in the same four member states), we examined project applications, grant approvals, completion reports on the building of facilities, permits, awareness-raising activities, and all material needed to establish the level of application of the polluter-pays-principle in the sampled municipalities.

We judgementally selected projects co-financed under cohesion policy during the 2014-2020 period in the four member states. We selected projects from the population of projects for which we had received information confirming that they were operational. We only included projects that had received EU funding of more than \in 1 million.

Interviews



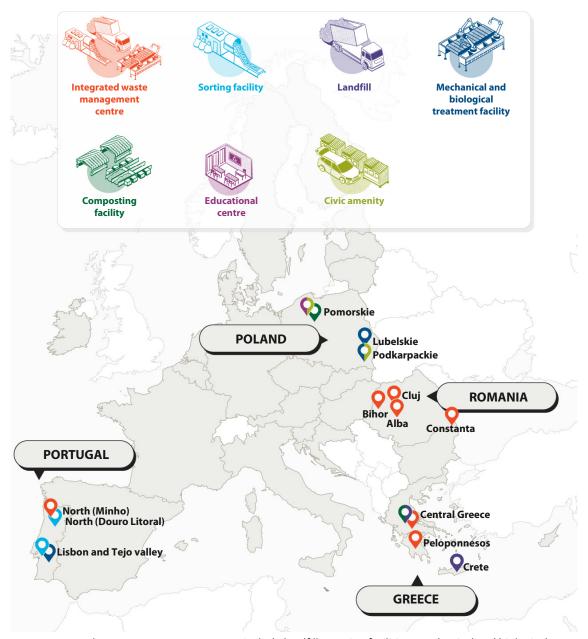
Interviews with staff from Commission directorates-general, and the EEA, and representatives from ministries, national waste agencies, the beneficiaries of EU funding, and regional and local authorities.

Information meetings with authorities in two member states (Belgium and Italy). Interviews with associations active in waste at EU and national level.

Source: ECA.

14 Figure 10 shows the location of the projects examined and the type of investment.

Figure 10 | Location and type of projects examined



Note: Integrated waste management centres include landfills, sorting facilities, mechanical and biological treatment facilities, and composting facilities.

Source: ECA.

This report is part of a series of publications that we have released on various aspects of waste and circularity. These include special report 16/2024 on the new EU revenue based on non-recycled plastic packaging waste, special report 17/2023 on the circular economy, review 2/2023 on hazardous waste, and review 4/2020 on plastic waste.

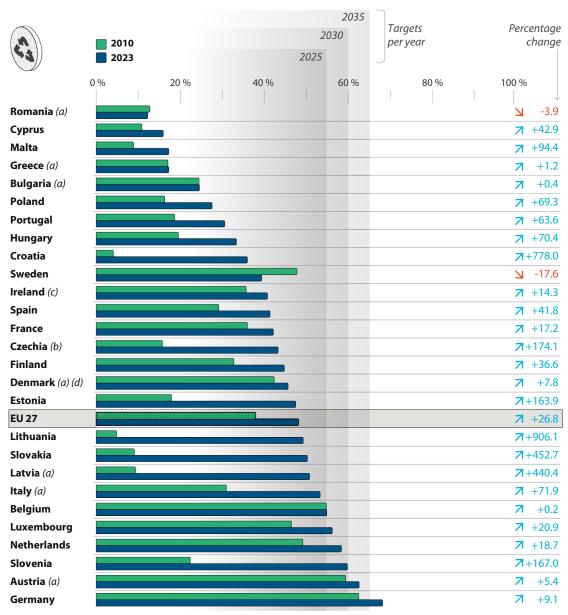
16 We decided to carry out this audit to provide valuable insights that could inform the Commission's upcoming review of certain targets. According to the directives (Waste Directive, Packaging Directive, and Landfill Directive) and the Packaging Regulation, these reviews are due in 2024, 2028 and 2032, depending on the targets. The Commission's review work due in 2024 (landfill target) was ongoing at the time this report was drafted.

Annex II – Member states' progress towards the three main municipal waste targets

- **01** Using Eurostat's databases, we analysed the progress of member states for the three main municipal waste targets:
 - 'municipal waste prepared for re-use and recycled', from 2010 to 2023 (Figure 1);
 - 'packaging waste prepared for re-use and recycled', from 2010 to 2022 (Figure 2); and
 - 'landfill as % of all municipal waste generated', from 2010 to 2023 (Figure 3).

We used the data that Eurostat receives from member states' voluntary reporting, as it allows to see progress over time. This data can be different from the data which member states report in line with relevant Commission implementing decisions related to recycling of municipal waste and landfill waste and which the Commission uses for assessing the achievements of the targets (*Annex III*).

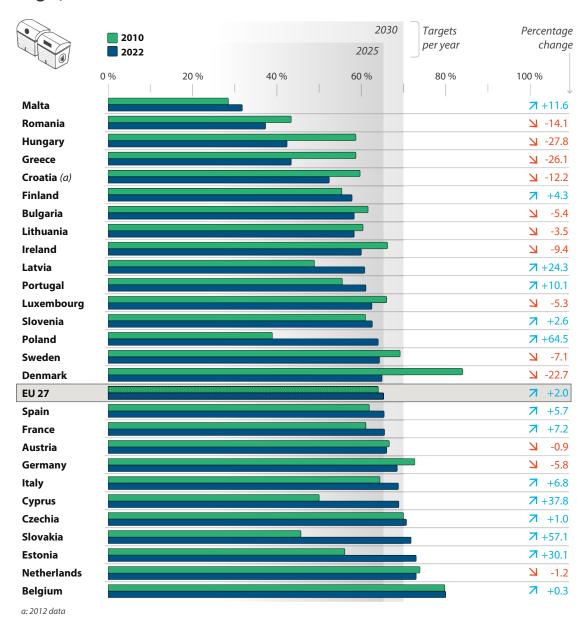
Figure 1 | Member states' progress towards the 'municipal waste prepared for re-use and recycled' target, from 2010 to 2023



a: 2022 data; b: 2021 data; c: 2020 data; d: 2011 data

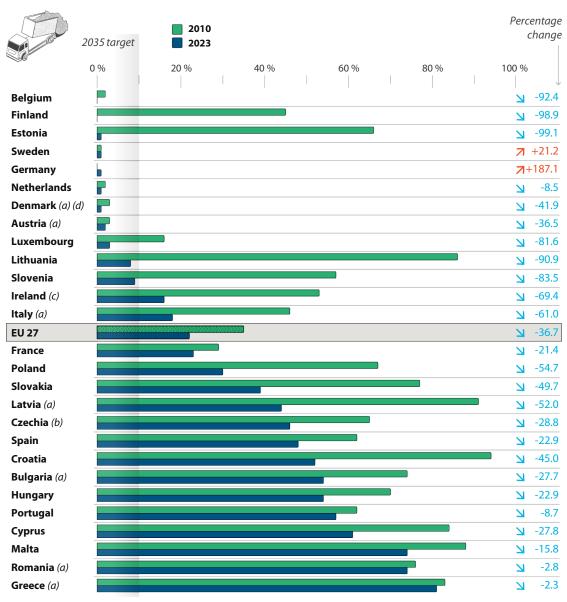
Source: ECA, based on Eurostat dataset sdg_11_60, extracted on 2 October 2025.

Figure 2 | Member states' progress towards the 'packaging waste recycled' target, from 2010 to 2022



Source: ECA, based on Eurostat dataset env_waspac, extracted on 2 October 2025.

Figure 3 | Member states' progress towards the 'landfill, as % of all municipal waste generated' target, from 2010 to 2023



a: 2022 data; b: 2021 data; c: 2020 data; d: 2011 data

Source: ECA, based on Eurostat dataset env_wasmun, extracted on 2 October 2025.

Annex III - Comparability of waste-related data

- Member states provide data based on various EU legal texts. The relevant legal texts for the data referenced in this report are the Waste Directive, the Packaging Directive, the Landfill Directive and relevant Commission Implementing Decisions¹ as well as the Waste Statistics Regulation. In addition, since the 1980s, member states have voluntarily reported data based on a joint questionnaire developed by Eurostat and the Organisation for Economic Co-operation and Development (OECD). This results in different datasets for indicators such as municipal waste generated, municipal waste placed in landfill, and municipal waste recycled. The reporting under the Waste Directive, the Packaging Directive and the Landfill Directive is due 18 months after the reference year, while voluntary reporting occurs earlier.
- **02** The first factor affecting the comparability of the 2020 reported results for the 'municipal waste prepared for re-use and recycled' target across member states was the flexibility member states were given to choose the **calculation method**. Member states could choose between four calculation methods²:
 - Method 1: Recycling rate of paper, metal, plastic and glass household waste (in %).
 Numerator: recycled amount of paper, metal, plastic and glass household waste;
 denominator: total generated amount for the same categories of household waste;
 - Method 2: Recycling rate of household and similar waste (in %).
 Numerator: recycled amount of paper, metal, plastic, glass waste and other single waste streams from households or similar waste streams;
 denominator: total generated amount for the same categories of household or similar waste;
 - Method 3: Recycling rate of household waste (in %).
 Numerator: recycled amount of household waste;
 denominator: total household waste amounts excluding certain waste categories; or
 - Method 4: Recycling rate of municipal waste (in %).

Numerator: municipal waste recycled; denominator: municipal waste generated.

Commission Implementing Decision (EU) 2019/1004 for the municipal waste recycling rate, Commission Implementing Decision (EU) 2019/665 for the packaging and packaging waste target and Commission Implementing Decision (EU) 2019/1885 for the landfill target.

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² Decision 2011/753/EU, Annex I.

- O3 A second factor that adversely affected the comparability of recycling rates was a lack of precision in **defining municipal waste**. Municipal waste was defined in a 2011 Commission Decision³ as household waste plus similar waste. Interpretation issues arose from the term 'similar waste', which had to be counted towards the target. These interpretation problems were acknowledged in the Commission's impact assessment⁴ accompanying its 2014 proposals for amending the Waste Directive, the Packaging Directive and the Landfill Directive. In 2019, the Commission⁵ clarified the terms.
- O4 The impact of the differing interpretations of municipal waste between member states is difficult to quantify but can be significant, as shown by the example of Belgium. As noted by the EEA⁶, Belgium's reporting was based solely on household waste until 2019. From 2020 onwards, it also includes similar waste from businesses. This led to a sudden increase of 76 % in the indicator for 'municipal waste generated'⁷.
- A third factor affecting the comparability of data reported for measuring compliance with the 2025 recycling targets is the 'calculation point'. Under the 2018 directives, waste is counted as recycled when it enters the recycling operation, and not when exiting the sorting process, as was previously the case. However, member states may use an exemption and still base their reporting on the amounts weighed at the end of the sorting process, provided that the waste is subsequently recycled and the weight of materials or substances removed by operations preceding the recycling is deducted.

³ Decision 2011/753/EU.

⁴ SWD(2014) 207, section 2.5.2.

⁵ Implementing decision (EU) 2019/1004.

Waste management country profile with a focus on municipal and packaging waste – Belgium, EEA, March 2025.

⁷ Eurostat, dataset env_wasmun, data extracted on 2.4.2025.

- O6 To estimate this deduction, member states may use average loss rates to assess the weight of materials or substances removed after sorting but before recycling. Average loss rates may be used only where reliable data cannot be otherwise obtained, and must be calculated using the rules to be established by the Commission in a delegated act. The 2018 Waste Directive required the Commission to adopt a delegated act on average loss rates by 31 March 2019, but this act has not yet been adopted. In our 2024 special report on the new EU revenue based on non-recycled plastic packaging waste, we found that the practice of measuring the amount of waste exiting the sorting process (as in a majority of member states), together with the absence of clear EU rules on average loss rates, makes member state estimates of recycled amounts less comparable and less reliable.
- **07** The use of the new 'calculation point' lowers the recycling rate. The Commission's impact assessment accompanying its proposal for the Packaging Regulation estimates that the application of the new methodology will result in a reduction of reported recycling rates of 5-20 %.

Annex IV – EU legal base: measures addressing generation and separate collection of waste

01 Several legal acts introduced measures to prevent waste, restrict waste generation or reduce its environmental impact. They are listed in *Table 1*.

Table 1 | EU legal base: measures to prevent waste, restrict waste generation or reduce its environmental impact

Legal basis	Measures
Restrictions on the use of	By December 2018, light bags should no longer be free; and/or
light bags Directive (EU) 2015/720	 By December 2019, no more than 90 bags and by December 2025 no more than 40 bags to be consumed per capita.
Reduction of the impact of certain plastic products on	 By 2021 ban of (i) the following plastic items: cotton-bud sticks, cutlery, plates, straws, beverage stirrers, balloon sticks, (ii) products made of oxo-degradable plastic, and (iii) food and beverage containers made of expanded polystyrene.
the environment Directive (EU) 2019/904	 From 1 July 2024: beverage containers of up to three litres must have tethered caps.
	 By 2026: reduction in the consumption of cups and food containers to achieve a measurable quantitative reduction compared to 2022.
	 Introduction of targets for reducing packaging waste per capita by 5 % by 2030, 10 % by 2035, and 15 % by 2040.
	 From January 2030 ban of some single-use plastic packaging formats, such as those currently used for fresh fruits and vegetables, miniature hotel toiletries, individual portions of condiments (e.g. sauces, cream, sugar).
	Requirements for recycled content in packaging, applicable from 2030:
Packaging and packaging waste Regulation (EU) 2025/40	 30 % for contact-sensitive packaging made from polyethylene terephthalate (PET), except single-use plastic beverage bottles;
	 — 10 % for contact-sensitive packaging made from plastic materials other than PET, except single-use plastic beverage bottles;
	 30 % for single-use plastic beverage bottles;
	 35 % for other plastic packaging.
	By 2030: at least 10 $\%$ of beverages and take-away food is to be sold in reusable packaging.
	Also, by 2030 all packaging should be recyclable.

Several legal acts introduced measures to promote the separate collection of waste. They are detailed in *Table 2*.

Table 2 | EU legal base: measures on separate collection

Legal basis	Measures		
Reduction of the impact of certain plastic products on the environment Directive (EU) 2019/904	 By 2025: 77 % of plastic bottles to be collected separately. By 2029: 90 % of plastic bottles to be collected separately. 		
Packaging and packaging waste Regulation (EU) 2025/40	 By 2029: 90 % of single-use plastic and metal beverage containers to be collected separately (deposit-return schemes become compulsory). 		

Annex V – Recovered recyclables and their sale prices

- O1 The aim of waste management centres is to sort and treat waste in order to reduce the amount of waste that ends up in landfill, channel economically valuable material back to the economy (circularity), and reduce waste disposal costs by selling the recyclable material.
- **02** Outputs of recyclable material vary by type of waste.
 - For mechanical-biological treatment facilities that handle mixed waste, outputs are generally low, below 6 % in our sample (for projects where we obtained information).
 Outputs are expected to increase because, by the end of 2023, an important category of municipal waste i.e. bio-waste must be separated and recycled at source, or collected separately.
 - Sorting facilities for separately collected waste have higher outputs, ranging from 20 % to 75 % in our sample (for projects where we obtained information).
 Better-quality collected waste means higher outputs. For instance, contamination of waste can occur if households do not follow the rules, such as throwing mixed waste into paper-only containers.
- **03** The prices that operators received from the sale of recyclables vary by material (for projects where we obtained information).
 - For certain materials such as aluminium and polyethylene terephthalate (PET), facility operators received high prices from recyclers (e.g. more than €1 000 per tonne for aluminium).
 - However, prices for other materials, such as glass and sometimes paper, were low or even close to zero, and were often below the EU average (see Eurostat¹ data on prices). Eurostat refers to the fact that glass is a heavy and low-cost material, where transport costs account for a considerable share of total costs when trading in waste glass.
 - Moreover, operators noted that selling plastic foil was challenging. Recyclers sometimes demanded payment for taking it off their hands, or operators paid cement factories to use it as fuel.

¹ Eurostat, Recycling – secondary material price indicator.

Annex VI – Cohesion policy funding

- **01** Member states report on the use of cohesion funding by using pre-defined intervention codes. For municipal waste management, the applicable codes concerned the lower and upper steps of the waste hierarchy:
 - lower steps: for the 2014-2020 period, the code includes landfill, incineration and mechanical biological treatment (code 018), and for the 2021-2027 period it concerned the treatment of residual waste and, exceptionally, landfill (codes 068 and 183);
 - upper steps: for the 2014-2020 period, the code includes minimising, sorting and recycling measures (code 017), and for the 2021-2027 period, it includes prevention, minimising, sorting, re-using and recycling measures (code 067).
- **02** The allocation of cohesion funding between the upper and lower parts of the waste hierarchy for the 2014-2020 and 2021-2027 periods is outlined in *Table 1*. These data encompass the entire EU and the four member states we audited.

Table 1 | Share of cohesion funding allocated to the upper and lower steps of the waste hierarchy (end of 2023) (%)

Member state	Lower steps of the waste hierarchy		Upper steps of the waste hierarch	
	2014-2020	2021-2027	2014-2020	2021-2027
EU	40 %	20 %	59 %	80 %
Greece	79 %	71 %	21 %	29 %
Poland	63 %	1%	37 %	99 %
Portugal	46 %	0 %	54 %	100 %
Romania	56 %	0 %	44 %	100 %

Source: ECA, based on the Cohesion open data platform (update of 5 April 2024 for the 2014-2020 period, and update of 10 April 2025 for the 2021-2027 period).

O3 *Table 2* provides data showing the level of absorption of cohesion funding for the 2014-2020 period. For the 2021-2027 period, meaningful data cannot yet be provided as implementation started late and slowly.

Table 2 | Cohesion funding (2014-2020 period) – absorption (end of 2023), (amounts in million €)

Member state	Initially planned (1)	Finally planned (2)	Amount spent (3)	Absorption (3)/(2)
Lower steps of the waste hierarchy				
EU	2 775	1 514	1 326	88 %
Greece	593	317	299	94 %
Poland	628	109	368	336 %
Portugal	190	145	148	102 %
Romania	248	248	101	41 %
Upper steps of the waste hierarchy				
EU	2 123	2 041	1917	94 %
Greece	148	178	79	44 %
Poland	637	368	219	60 %
Portugal	123	165	176	107 %
Romania	70	70	79	113 %

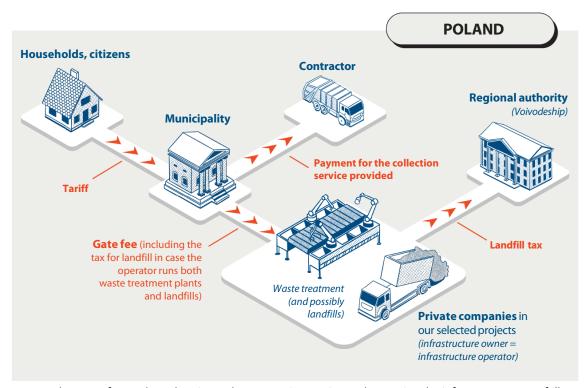
Romania /0 /0 /9 113 %

Source: ECA, based on the Cohesion open data platform (update of 5 April 2024 for the 2014-2020 period, and update of 10 April 2025 for the 2021-2027 period).

Annex VII – Waste management: main stakeholders and financial flows

Figure 1, Figure 2, and *Figure 3* illustrate the main stakeholders and financial flows for waste management in Poland, Portugal and Romania.

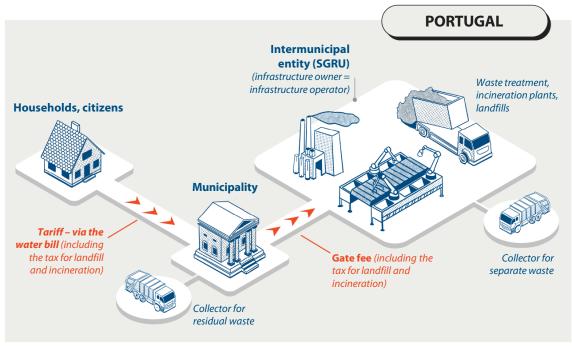
Figure 1 | Poland – main stakeholders and financial flows for municipal waste management



Note: In the case of our selected projects, the companies owning and operating the infrastructure were fully owned by the relevant municipality.

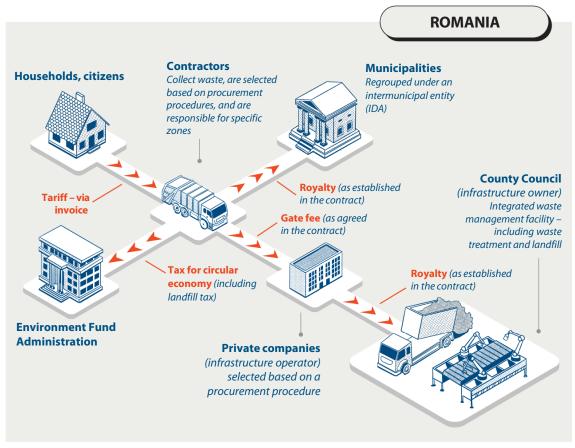
Source: ECA.

Figure 2 | Portugal – main stakeholders and financial flows for municipal waste management



Source: ECA.

Figure 3 | Romania – main stakeholders and financial flows for municipal waste management



Source: ECA.

Abbreviations

EEA	European Environment Agency
GDP	Gross Domestic Product
PET	Polyethylene Terephthalate

Glossary

Circular economy	Economic system based on re-using, sharing, repairing, refurbishing, remanufacturing and recycling materials in order to minimise resource use, waste and emissions.
Economic instruments	Fiscal or other financial instruments to incentivise or disincentivise certain behaviours, e.g. landfill taxes or deposit-return schemes.
European Semester	Annual cycle which provides a framework for coordinating the economic policies of EU member states and monitoring progress.
Less-developed region	EU region where GDP per capita is below 75 % that of the EU as a whole.
Mechanical biological treatment	Mixed-waste sorting followed by anaerobic digestion or composting of the leftover biodegradable matter.
Pay-as-you-throw	Waste producers pay a tariff on the basis of the actual amount of waste generated, i.e. weight or volume.
Polluter pays principle	Principle requiring those causing, or likely to cause, pollution to bear the cost of measures to prevent, control or remedy it.
Preparation for re-use	Checking, cleaning or repair of products or components that have become waste so they can be re-used without any other pre-processing.
Programme (under cohesion policy)	Framework for implementing EU-funded cohesion projects in line with the priorities and objectives laid down in a partnership agreement between the Commission and the member state concerned.
Recovery	Processing resulting in waste that can be used to replace other materials, or waste being prepared to serve a particular purpose, either in a waste plant or in the wider economy.
Recovery and Resilience Facility	The EU's financial support mechanism to mitigate the economic and social impact of the COVID-19 pandemic and stimulate recovery, and meet the challenges of a greener and more digital future.
Recovery and resilience plan	Document setting out a member state's intended reforms and investments under the Recovery and Resilience Facility.
Recycling	Reprocessing of waste materials into products, materials or substances for their original or other purposes.
Treatment (of waste)	Processing that alters the physical, chemical, or biological composition of waste before recovery or disposal.

Replies of the Commission

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Timeline

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Audit team

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This performance audit was carried out by Audit Chamber II – Investment for cohesion, growth and inclusion, headed by ECA Member Annemie Turtelboom. The audit was led by ECA Member Stef Blok, supported by Johan Adriaan Lok, Head of Private Office and Laurence Szwajkajzer, Private Office Attaché; Marion Colonerus, Principal Manager; Chrysoula Latopoulou, Head of Task; Katarzyna Solarek, Deputy Head of Task; Juan Antonio Vazquez Rivera, Alfredo Ladeira, Marilena Elena Friguras and Amelia Padurariu, Auditors. Alexandra-Elena Mazilu provided graphical support.



From left to right: Juan Antonio Vazquez Rivera, Laurence Szwajkajzer, Stef Blok, Johan Adriaan Lok, Marion Colonerus, Marilena Elena Friguras.

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The aim of EU waste policy is to transition to a circular economy. For municipal waste we concluded that the EU strengthened legal requirements. It set targets for preparing for re-use and recycling and for limiting landfill. However, many member states struggle with financial constraints, planning weaknesses and problem in implementing their waste management plans, including building new infrastructure. Separate waste collection mostly remains at a very low level, and the waste tariffs that citizens are charged do not cover all waste management costs. We recommend that the Commission should address challenges in the recycling market (making circular economy practices more viable), make better use of monitoring and enforcement tools, and assess the feasibility of harmonising landfill and incineration taxes.

ECA special report pursuant to Article 287(4), second subparagraph, TFEU.







EUROPEAN COURT OF AUDITORS 12, rue Alcide De Gasperi 1615 Luxembourg LUXEMBOURG

Tel. +352 4398-1

Enquiries: eca.europa.eu/en/contact Website: eca.europa.eu Social media: @EUauditors