From cost to value

How EU funds can boost biowaste circularity in central and eastern Europe from 2027

CEE Bankwatch Network

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Introduction

The EU's next Multiannual Financial Framework (2028–2034) cannot afford to repeat past policy failures. The EU's strategic goals for the circular economy, climate action and zero pollution cannot be achieved without a rapid transformation of biowaste management. This briefing outlines how EU funds must be strategically redirected away from resource-destroying infrastructure towards circular management of biowaste.

Boosting biowaste circularity in central and eastern Europe is imperative. Current practices that rely on mixed collection, landfills and incineration violate EU obligations, incur high economic and environmental costs, and render key recycling targets unattainable. Making the shift to a circular economy requires divesting from 'end-of-pipe' infrastructure, such as landfills and incinerators, and prioritising low-cost, flexible and scalable solutions like food-waste prevention and decentralised composting.

Ultimately, the transition to circular resource management requires targeted investments, supported by stringent governance and robust economic instruments – such as incineration taxes and performance-based payments – to make high-quality separate collection more cost-competitive than mixed-waste disposal.

Why methane from waste matters

Methane, a gas that warms the planet 80 times more than carbon dioxide over a 20-year period, is a major contributor to climate change.[1] Municipal solid waste accounts for around 27 per cent of EU-wide anthropogenic methane emissions, second only to agriculture.[2] Cutting methane emissions from waste is paramount to keeping global warming to 1.5 °C over the next two decades.[3,4]

Despite significant EU investment in improving municipal waste management over the last decade, landfills remain the main cause of methane emissions from waste.[5] This is primarily due to decaying biowaste (food and garden scraps) – the largest component of municipal solid waste at 34 per cent by weight.[6]

The EU generates about 60 million tonnes of food waste annually, yet only a quarter is currently collected separately.[7] Collecting biowaste together with mixed waste inevitably results in greenhouse gas and toxic emissions from subsequent incineration or landfilling. This approach misses a vital opportunity to

[1] Directorate-General for Energy, Methane emissions, *European Commission*, accessed 30 September 2025

[2] European Commission, European Union Methane Action Plan, *European Commission*, 2, November 2022.

[3] Waste Methane Assessment Platform, Data & Methodology, *Waste Methane Assessment Platform*, accessed 30 September 2025.

[4] International Energy Agency, Global Methane Tracker 2024 | Understanding methane emissions, *International Energy Agency*, accessed 30 September 2025.

[5] European Environment Agency, Methane, climate change and air quality in Europe: exploring the connections, *European Environment Agency*, 27 February 2025.

[6] Ann van der Linden, Almut Reichel, Bio-waste in Europe — turning challenges into opportunities, *European Environment Agency*, 11, 17 June 2020.

[7] Enzo Favoino, Michele Giavini, Bio-waste generation in the EU: Current capture levels and future potential, *Bio-based Industries Consortium*, 15, 2024.

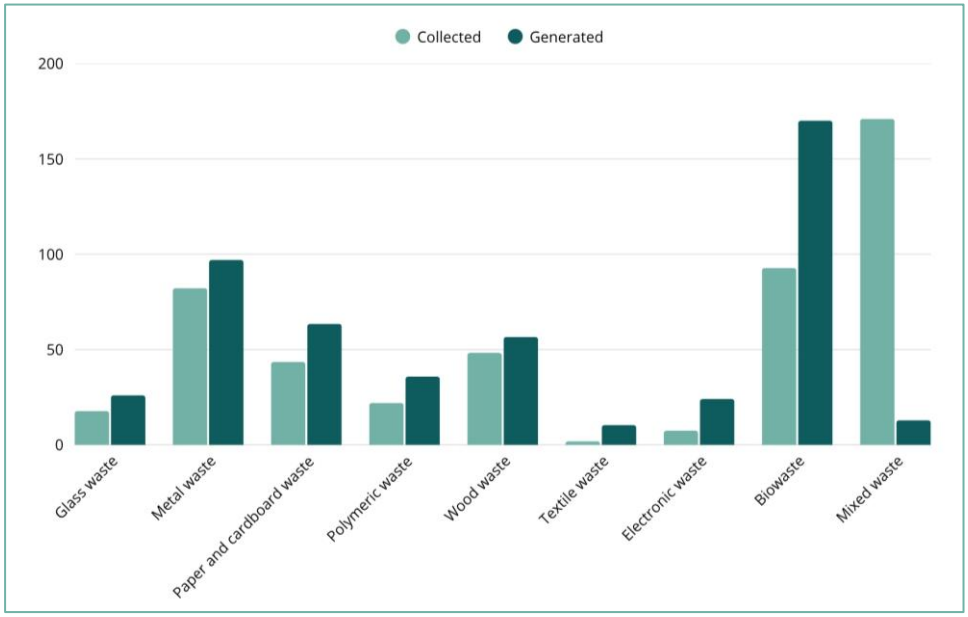
regenerate Europe's rapidly deteriorating soils with nutrients from compost, recover clean energy through anaerobic digestion, and increase recycling rates across all material streams.

In addition to the negative climate impacts of methane emissions, both landfilling and burning biowaste deviate from the EU waste hierarchy, which prioritises prevention, reuse and recycling. This clearly undermines the achievement of key EU targets for the circular economy, such as increasing the circular-material use rate,[8] and zero-pollution targets like halving residual municipal waste by 2030. In June 2023, the European Environment Agency reported that 9 out of 11 Member States in central and eastern Europe are unlikely to meet the 2025 waste recycling targets.[9]

Mismanaged biowaste: A climate, soil and resource crisis

Managing biowaste commingled with mixed waste is highly ineffective and increasingly costly. Of the 171 million tonnes collected as 'mixed waste' in the EU in 2020, just 6 per cent (10.1 million tonnes) were in fact truly residual (non-recyclable).[10] This means that considerable amounts of reusable and recyclable materials are misallocated to residual waste treatment due to a lack of source separation. Notably, biowaste is the single largest fraction of mixed waste – around 43 per cent, or over 73 million tonnes – that could instead be collected separately and composted (Figure 1).[11]

Figure 1. Composition of collected and generated waste (million tonnes/year).[12]



[8] European Environment Agency, Circular material use rate in Europe, *European Environment Agency*, 6 January 2025.

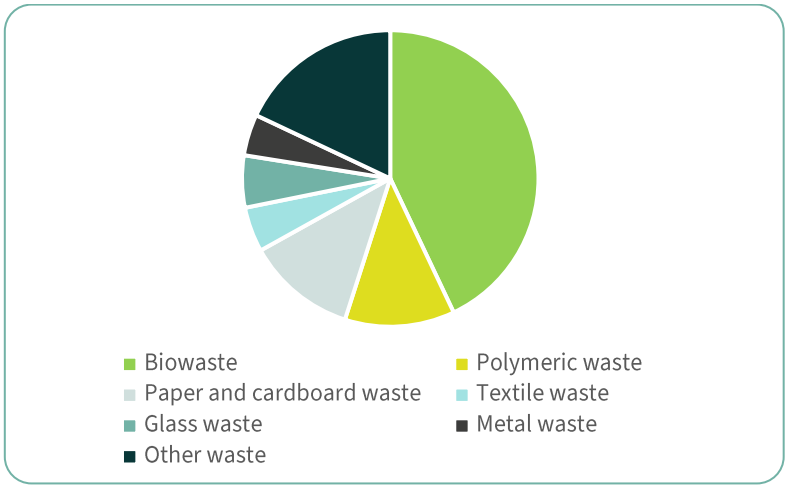
[9] European Environment Agency, Many EU Member States not on track to meet recycling targets for municipal waste and packaging waste, *European Environment Agency*, 8 June 2023.

[10] Josefine Hededam Sund, Paola Federica Albizzati, Charlotte Scheutz, et al., Comprehensive assessment of environmental and economic impacts of the entire EU waste management system, *Waste Management*, 204, 7, 1 August 2025.

[11] Josefine Hededam Sund, Paola Federica Albizzati, Charlotte Scheutz, et al., Comprehensive assessment of environmental and economic impacts of the entire EU waste management system | Supporting information, *Waste Management*, 204, 14, 1 August 2025.

[12] Josefine Hededam Sund, Paola Federica Albizzati, Charlotte Scheutz, et al., Comprehensive assessment of environmental and economic impacts of the entire EU waste management system, *Waste Management*, 204, 7, 1 August 2025.

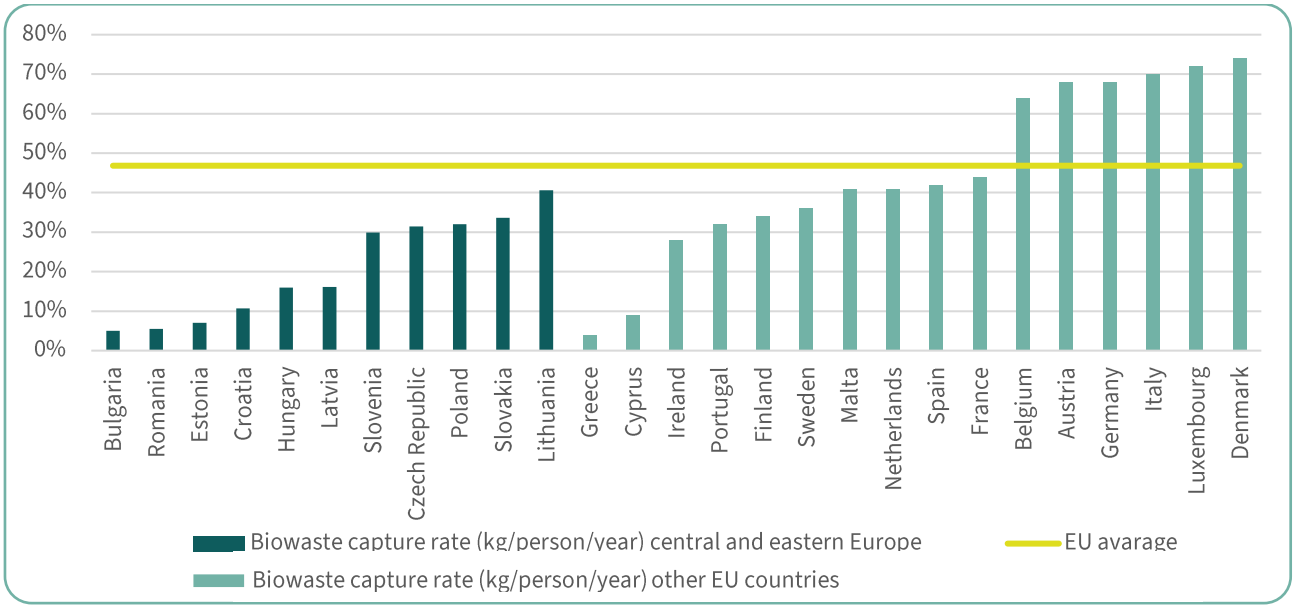
Figure 2. Composition of collected mixed waste[13]



Mixed waste: Costly and polluting

The predominantly mixed collection, treatment and disposal of biowaste across central and eastern Europe not only creates environmental and public health burdens, but also increases pressure on local waste management budgets. Every tonne of biowaste that is not separately collected, treated and returned to the economy as nutrients or energy results in both environmental and economic liabilities.[14] The most recent comprehensive environmental life-cycle cost analysis of the EU's entire waste management system confirms that biowaste, alongside mineral waste, is the most climate-damaging waste stream, incurring the highest combined internal and external costs, mainly due to collection and incineration.[15]

Figure 3. Reported capture of biowaste in EU Member States for the years 2021 and 2022.[16]



[13] Ibid.

[14] Ibid., 10–11.

[15] Ibid., 8.

[16] Enzo Favoino, Michele Giavini, Bio-waste generation in the EU: Current capture levels and future potential, *Bio-based Industries Consortium*, 15, 2024.

In 2024, the waste sector absorbed nearly a quarter of all EU environmental protection investments (nearly EUR 19 billion), second only to wastewater.[17] However, this has not led to a significant improvement in the separate collection and treatment of biowaste. This is particularly evident in most central and eastern European countries, where biowaste capture rates remain consistently low (Figure 3)[18] and reliance on EU public funds for waste infrastructure is traditionally high.[19]

Underperforming extended producer responsibility schemes

Despite significant EU investment in waste infrastructure over the past decade, local authorities in central and eastern Europe are facing increasing operational costs for mixed waste management. The main cause is often under-resourced and underperforming separate collection systems, including extended producer responsibility schemes intended to manage ubiquitous waste streams like packaging,[20] textile, batteries and electronic waste.

The inefficient and insufficient capture of recyclable materials increases the costs of mixed waste treatment, undermining high-quality biowaste management. As a result, potentially recoverable materials continue to be lost to the mixed waste stream, ending up at the bottom of the waste hierarchy through burning or landfilling. This represents a major setback to the advancement of the circular economy in the region.

Failure to meet targets

Experts estimate that the amount of separately collected biowaste across the EU ought to double or even triple in order to reach the operational potential and meet circular economy targets.[21, 22] Remarkably, the key municipal waste targets for maximised recycling and minimised landfilling are unattainable for 'almost every EU Member State',[23] unless convenient separate biowaste collection is made widely available to the majority of the population.[24] Evident from the findings of the European Commission's 2023 early warning

[17] Eurostat, Environmental protection expenditure accounts, *Eurostat*, June 2025.

[18] Enzo Favoino, Michele Giavini, Bio-waste generation in the EU: Current capture levels and future potential, *Bio-based Industries Consortium*, 15, 2024.

[19] Marijan Galović, Waste management and the circular economy in central and eastern Europe: An analysis of EU cohesion policy funding, *CEE Bankwatch Network*, 5, 10 March 2025.

[20] Evgenia Tasheva, Parallel realities: Managing plastic packaging waste in Bulgaria beyond official statistics, *Za Zemiata*, 15–17, March 2025.

[21] Enzo Favoino, Michele Giavini, Bio-waste generation in the EU: Current capture levels and future potential, *Bio-based Industries Consortium*, 17–18, 2024.

[22] Jane Gilbert, Stefanie Siebert, ECN DATA Report 2022 | Compost and Digestate for a Circular Bioeconomy: Overview of Bio-Waste Collection, Treatment & Markets Across Europe, *European Compost Network*, 11, July 2022.

[23] European Environment Agency, Many EU Member States not on track to meet recycling targets for municipal waste and packaging waste, *European Environment Agency*, 8 June 2023.

[24] European Environment Agency, Economic instruments and separate collection systems — key strategies to increase recycling, *European Environment Agency*, 8 June 2023.

reports (Figure 4)[25] and 2025 zero-pollution monitoring and outlook,[26] current legislation and public funding for improving biowaste management have failed to stimulate the 'great leap' that most countries in central and eastern Europe must make in order to achieve EU waste targets.

Figure 3. Map showing the status of EU Member States status in achieving waste-recycling targets.[27]

These data show that, despite absorbing an entire decade's worth of cohesion policy funding for waste management – and in violation of their obligation to do so – most Member States in central and eastern Europe are still not providing separate collection of biowaste, including food waste, to the majority of their residents (Table 1).[28]

[25] European Commission, Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions identifying Member States at risk of not meeting the 2025 preparing for re-use and recycling target for municipal waste, the 2025 recycling target for packaging waste and the 2035 municipal waste landfilling reduction target, *EUR-Lex*, 8 June 2023.

[26] EU targets of reducing nutrient losses and total waste generation by 2030 are currently 'unlikely', while halving residual municipal waste by 2030 is 'off track'. See: Joint Research Centre, European Environment Agency, Zero pollution monitoring and outlook 2025, *Publications Office of the European Union*, 18, 20–21, 3 March 2025.

[27] European Environment Agency, Many EU Member States not on track to meet recycling targets for municipal waste and packaging waste, *European Environment Agency*, 8 June 2023.

[28] European Environment Agency, Coverage of the population with high convenience collection systems in EU Member States by waste stream in municipal waste, and average share of each material in municipal waste, *European Environment Agency*, 23 October 2024.

Table 1. Coverage of the population with high-convenience, separate biowaste collection systems in central and eastern European Member States (2023).[29]

Note: Separate collection is graded from 0 to 2 according to the share of the population with access to a high-convenience collection system. Data compiled by the European Topic Centre on Circular Economy and Resource Use based on the European Environment Agency's early warning assessments for the 2025 municipal and packaging waste targets.

Member State	Bulgaria	Croatia	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Slovakia	Slovenia
Separate collection of biowaste	0	0	0	0	0	1	0	2	0	0	2

High share of the population covered by high-convenience collection	2
Medium share of the population covered by high-convenience collection	1
Low share of the population covered by high-convenience collection or no information	0

No compliance without biowaste

Numerous EU strategic documents and authoritative sources – including the European Court of Auditors, the European Environment Agency, the European Compost Network, the European Commission's Joint Research Centre, Municipal Waste Europe and Zero Waste Europe – have emphasised that collecting and treating biowaste, and especially food waste, separately from other streams, is the single most important driver for meeting all EU waste-related targets. The infringement procedure against all 27 EU Member States for missing one or both of the key 2020 targets for recycling municipal solid waste and packaging is largely a result of the stagnant recycling rates and underdeveloped separate biowaste collection across Europe.[30]

Therefore, the most pressing waste management priority for local authorities in central and eastern Europe – and across the EU – is to collect most of the generated biowaste separately and with high purity.[31] Source-separating organics from the residual waste stream can unlock multiple benefits across EU strategic priority areas, including rapid reductions in methane emissions, higher-quality recycling, soil regeneration, and avoidance of the costs, pollution and health impacts associated with landfilling and incineration.

Waste of energy: Financing non-circular solutions

Despite the EU's clear circular economy goals and legally binding targets, most countries in central and eastern Europe still struggle with high rates of mixed-waste collection and landfilling, which yield low-quality outputs and preclude quality composting and recycling. Although EU cohesion policy funds have

[29] Ibid.

[30] European Environment Agency, Many EU Member States not on track to meet recycling targets for municipal waste and packaging waste, *European Environment Agency*, 8 June 2023.

[31] Piotr Manczarski, Anna Rolewicz-Kalińska, Krystyna Lelicińska-Serafin, Quantitative Analysis of Household Food Waste Collection in Warsaw: Assessing Efficiency and Waste Minimization, *Sustainability*, 15(24), 8, 14 December 2023.

supported biowaste infrastructure, overinvestment in incineration continues to block the transition to circularity.

Waste incineration: A dead end for the circular economy

Waste incineration is a capital-intensive process that destroys material resources for the one-time extraction of a negligible fraction of the 'embodied energy' of discarded material – the energy used to extract, process, manufacture and transport a product. Incineration undermines the far greater energy and resource savings achieved through higher-tier practices like recycling and composting.

EU Emissions Trading System: Putting a price on waste destruction

The EU's Waste Framework Directive places incineration on the lowest tier of the waste hierarchy, formally classifying it as an action of last resort because it ultimately destroys material resources that could otherwise re-enter the circular economy. This position is reinforced by the exclusion of new incineration plants from cohesion policy funding and by the proposed inclusion of incineration in the next EU Emissions Trading System (EU ETS).[32] This stance acknowledges the detrimental long-term effect of waste incineration on resource efficiency and aims to make it financially less attractive than material recovery pathways. Adding incineration to the EU ETS from 2028 is projected to decrease carbon emissions by 4.3 million tonnes per year and create 11,200 additional jobs by 2030 due to the higher labour intensity of recycling activities.[33]

Investing in failure: The incineration trap

Local authorities in central and eastern Europe urgently need extra resources to expand separate collection systems and biowaste treatment capacity. However, disproportionate amounts of EU funding have been allocated to the non-circular levels of the waste hierarchy in the form of projects involving waste burning and mixed-waste treatment.[34,35] For example, between 2021 and 2024, the Modernisation Fund allocated some EUR 2 billion to 24 waste incineration projects in Poland and the Czech Republic.[36] Investing in end-

[32] European Parliament, Council of the European Union, Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system, *EUR-Lex*, 10 May 2023.

[33] Geert Warringa, Waste Incineration under the EU ETS: An assessment of climate benefits, *CE Delft*, 4, October 2021.

[34] Marijan Galović, Waste management and the circular economy in central and eastern Europe: An analysis of EU cohesion policy funding, *CEE Bankwatch Network*, 10 March 2025.

[35] Gligor Radečić, Keeping the flame alive with emission revenues: How the EU Modernisation Fund props up fossil gas and waste incineration, *CEE Bankwatch Network*, 17, April 2025.

[36] Ibid., 12.

of-pipe facilities confines waste management in central and eastern Europe to a trajectory far removed from the circularity pathway for at least the next two to three decades – the typical incinerator lifetime.[37] Given the current underutilised 60 million tonnes of incineration capacity in the EU, a moratorium on new incinerators is long overdue.[38]

Case study: Sofia's 'integrated waste management system'

The lock-in effect of incineration is evident even when a facility is never built, as illustrated by the following case in Sofia. Since 2010, the Bulgarian capital has repeatedly sought EU funding for its proposed integrated waste management system, comprising a modern landfill, composting and anaerobic digestion plants, a material and biological treatment system, and an additional refused-derived fuel incineration unit at the Toplofikacia Sofia district heating plant.

Although the composting and anaerobic digesting facilities have been operational since 2014, at least 56 per cent of their combined annual capacity of 44,000 tonnes remains unused.[39] The main reason for this chronic underutilisation is the local authority's decade-long refusal to invest in the additional specialised trucks, bins and public-awareness campaigns needed to roll out separate biowaste collection. Instead, it prioritised securing EU funding for the planned 180,000-tonne incinerator – one that would require biowaste to be added to the input waste mix to function efficiently.

[37] Morgan Henley, Closing the door on waste incineration for district heating in central and eastern Europe, *CEE Bankwatch Network*, 4, 2 December 2024.

[38] Zero Waste Europe, Call for a moratorium on new waste incineration in the EU, *Zero Waste Europe*, 30 September 2025.

[39] Calculation based on Sofia Waste Treatment Enterprise's annual compliance assessment report (2024). See: Sofia Waste Treatment Enterprise, Годишен доклад | за изпълнение на дейностите, за които е предоставено комплексно разрешително № 481-НО/2013 г., актуализирано с решение № 481-НО-ИО-А1/2020 г. на изпълнителния директор на ИАОС | Промишлена инсталация за биологично третиране „Хан Богров", *Sofia Waste Treatment Enterprise*, 6, 2025.

In 2023, the incinerator plan – long opposed by the general public – was finally abandoned following a court decision to annul the environmental impact assessment due to the inadequate consideration of health hazards and a lack of citizen participation.[40] Cut to 2025, and Sofia's municipality is now struggling to comply with the EU's requirement for separate household collection of biowaste, despite having had a considerable head start in 2014.

This case should serve as a warning against investing EU funds in so-called 'integrated waste management systems' that feed waste into large-scale, end-of-pipe infrastructure without first requiring the systemic changes required to optimise separate collection of recyclable and compostable waste. To avoid over-capacity and the misuse of EU funds, safeguards must be applied to ensure all such planned facilities are informed by robust and up-to-date waste composition analysis. Integrated waste management plans should be financed only in exceptional cases and upon achieving interim and final targets.[41]

[40] CEE Bankwatch Network, Bulgarian court rules out Sofia waste incinerator plant due to unassessed health risks and lack of public consultation, *CEE Bankwatch Network*, 26 September 2023.

[41] European Commission, Integrated waste management strategies, *Green Best Practice Community*, accessed 24 September 2025.

Examples of high-quality biowaste management

Local authorities in central and eastern Europe can benefit from sharing experiences and valuable insights on good practices to drive the development of biowaste management systems. To this end, EU funds should support exchange visits involving local experts that showcase successful examples, particularly low-cost, scalable interventions. A few of the best-known examples are listed in Table 2.

Composting operation on Krk Island (photo: Ponikve eko otok Krk d.o.o.).

Table 2. Examples of effective biowaste management in the EU.

Location	Results	Key system details
Milan, Italy	Food waste captured: 95 kg/capita/year; exceptionally low contamination rate (<5%); total recycling rate of 62%.	Door-to-door collection with compostable bags and kitchen bins. Processing costs of EUR 40 to 50 per tonne, significantly lower than incineration.
Ljubljana, Slovenia	Separate collection rate: 70% biowaste left in mixed waste; 15 kg/capita landfilled waste, only 4.9% of residual waste sent to landfill.	Zero-waste strategy, with door-to-door and underground smart public bins for residual waste and biowaste. Ljubljana's regional centre processes biowaste through anaerobic digestion and composting, supplying locally certified compost.
Krk Island, Croatia	Separate collection rate of 61%, with 100 kg/capita/year of biowaste collected; contamination below 5%.	Door-to-door separate collection model tailored for a tourism-heavy area with high seasonal waste fluctuation, supported by extensive multilingual communication campaigns and economic incentives such as 'pay as you throw'.
Bratislava, Slovakia	National biowaste capture rate of 34%.	Door-to-door collection for family houses; multi-family apartment buildings also included; 10-litre kitchen bins and compostable bags provided to all households, producing certified compost.

Clearly, a mix of enabling policies and measures spanning several governance levels and policy sectors are needed to help close the gap between current practices in central and eastern Europe and the EU's waste and climate targets.

Recommendations

Decision makers at EU, national and local levels are urged to take the following actions to unlock the full environmental, economic and climate potential of circular biowaste management.[42]

1. End support for waste incineration

- Apply the 'do no significant harm' principle strictly to all EU public funding programmes. With the pending inclusion of waste incineration in the EU –ETS 2, robust rules must be put in place for disbursements from the EU ETS-funded Modernisation Fund to avoid perverse subsidies for linear economy facilities, such as incinerators.
- Enforce a moratorium on expanding incinerator capacity in the EU.
- Introduce or increase incineration and landfill taxes to deter disposal and improve biowaste capture rates.[43,44]
- Ban the incineration and minimise the landfilling of biowaste that can be anaerobically digested or composted, and enforce mandatory pretreatment of biodegradable waste. Collectively, these measures can lead to significant emission reductions.[45,46]

2. Mandate mixed-waste sorting systems

- Require pre-treatment before disposal, preferably at facilities focused on resource recovery, such as material recovery and biological treatment plants, to maximise the recovery of biowaste and recyclables and minimise the end-of-life climate impacts of mixed waste.

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[42] This list of recommended actions draws on the consensus of EU authorities, as well as data and conclusions from a number of EU-funded reports published under the EU-funded LIFE BIOBEST project. For further details on these reports, including documents referenced in this briefing, see: Zero Waste Europe, The LIFE BIOBEST Project, *Zero Waste Europe*, accessed 30 September 2025.

[43] European Environment Agency, Diversion of waste from landfill in Europe, *European Environment Agency*, 17 December 2024.

[44] European Environment Agency, Economic instruments and separate collection systems — key strategies to increase recycling, *European Environment Agency*, 8 June 2023.

[45] Glenn Orveillon, Elena Garbarino, Hans Saveyn, Waste disposal: Main report | Assessment of the disposal operations listed in Annex I to Directive 2008/98/EC in the light of the duty of care obligation set out in Article 13 of the same Directive. Volume 1/2, *Publications Office of the European Union*, 19–21, October 2021.

[46] European Environment Agency, Capturing the climate change mitigation benefits of circular economy and waste sector policies and measures, *European Environment Agency*, 22 February 2024.

3. Implement pay-as-you-throw and door-to-door collection schemes

- Multiple studies demonstrate that door-to-door biowaste collection yields significantly better results than unmonitored public street bins.
- A recent study of Polish urban and rural areas found that biowaste separately collected from urban multi-family housing units contains over 16 per cent impurities (mostly plastics and paper) due to the use of large, unmonitored bulk bins that fail to ensure the individual accountability of door-to-door collection.
- Contamination over 3 per cent compromises the quality of the final compost or digestate, precluding its commercial use as a soil improver or fertiliser.[47]
- Replacing large open-access containers with smaller, individually assigned containers – combined with pay-as-you-throw waste charging – drastically improves both the quality and quantity of separately collected waste streams, even in high-rise residential buildings.[48]

4. Finance comprehensive, flexible solutions

- Allocate EU funds to projects that establish and expand effective, adequately scaled source-separation systems, including the necessary materials (kitchen bins, compostable bags) as well as decentralised and centralised windrow composting.
- Ensure that reliable, high-quality data on waste composition and quality is gathered before determining the capacity for capital-intensive anaerobic digestion facilities.
- Provide resources and replicate best practices for continuous and effective communication campaigns, as high participation rates improve both economic and environmental performance. Motivational awareness-raising campaigns are critical for achieving high source-separation purity and ensuring contamination remains below 3 per cent.[49]
- Provide technical assistance and capacity-building support to local authorities in central and eastern Europe, where technical expertise in circular systems is often lacking. Projects such as LIFE BIOBEST highlight the value of knowledge transfer and peer-to-peer learning between high-performing and transitioning regions.[50]

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[47] Wojciech Dronia, Jacek Połomka, Andrzej Jędrczak, Quantity and Material Composition of Foreign Bodies in Bio-Waste Collected in Towns from Single- and Multi-Family Housing and in Rural Areas, *Energies*, 17(17), 30 August 2024.

[48] Bin2Bean, Biowaste & waste charging systems in the EU: best practices, challenges and solutions, *Bin2Bean*, 3, 28 April 2025.

[49] European Commission, Awareness-raising, *Green Best Practice Community*, accessed 24 September 2025.

[50] Zero Waste Europe, The LIFE BIOBEST Project, *Zero Waste Europe*, accessed 30 September 2025.

- Use digital tools (smart bins, geographic information systems) that monitor collection performance and optimise logistics to ensure cost-effective service delivery. Smart systems reduce operational costs, prevent over-capacity, and enable pay-as-you-throw schemes that link performance to financial outcomes.
- Publish transparent data on waste composition, capture rates, and treatment performance to support benchmarking and peer learning across central and eastern Europe. For example, common EU quality standards for compost and digestate require transparent data on contamination levels, a practice already adopted by high-performing regions like Milan to maintain compost certification.
- Monitor key performance indicators on an ongoing basis, including residual waste composition and contamination levels, to ensure the implementation of efficient systems and continuous improvements. This would help shift the focus of EU cohesion policy away from funding infrastructure towards funding performance.
- Audit funding outcomes to ensure alignment with climate and circular economy objectives, rigorously applying the 'do no significant harm' principle to all EU financial instruments.[51]

5. Incentivise performance

- Build the capacity of local authorities to use performance-based contracts so that contractor revenues are directly linked to high biowaste capture rates and low contamination rather than to the volume of waste collected.[52]
- Ensure quality by mandating the following binding targets:
  - Cap the quantity of biowaste included in mixed or residual waste at 15 kg per capita by 2035.
  - Set a maximum of 5 per cent impurities in separately collected biowaste to ensure the high-value reuse of nutrients in line with EU quality standards for compost and digestate.
  - Avoid low-grade outputs from mixed waste sorting.[53] Bio-stabilised mixed waste or highly contaminated compost can only be used for remediation of industrially contaminated areas or landfill cover, as is still common in central and eastern Europe.[54]
- Harmonise EU criteria for convenient and effective separate collection.

[51] European Commission, Commission Notice | Technical guidance on the application of 'do no significant harm' under the Recovery and Resilience Facility Regulation, *EUR-Lex*, 11 October 2023.

[52] European Commission, Performance-based waste management contracting, *Green Best Practice Community*, accessed 24 September 2025.

[53] Municipal Waste Europe, A circular, regenerative and competitive bioeconomy strategy for biowaste: Top 6 recommendations to reduce dependencies and valorise biowaste, *Municipal Waste Europe*, 16, 27 May 2025.

[54] Christian Fischer, Emmanuel Gentil, Morten Ryberg, et al., Managing municipal solid waste — a review of achievements in 32 European countries, *European Environment Agency*, 16, 18 March 2013.

- Regular, standardised waste composition analyses, including of collected mixed waste, are needed to track capture and contamination rates and ensure policy decisions are based on accurate data.[55]

6. Update extended producer responsibility schemes to improve biowaste collection

- Extended producer responsibility schemes must cover life-cycle costs in full and observe high standards for convenient source separation to maximise the quantity and quality of recyclables diverted from the mixed-waste stream.
- The resulting savings generated by local authorities from reduced residual waste treatment should be reinvested in full-coverage biowaste separation infrastructure.

7. Prioritise separate collection

- Capturing the full potential value of biowaste is entirely dependent on high-quality separate collection, as commingling decaying organic matter with other streams prevents the recovery of valuable nutrients and recyclable materials.
- A combination of door-to-door separate collection and pay-as-you-throw waste charging yields the highest quality and quantity of biowaste.

8. Integrate biowaste management into other policies

- Incorporate circular biowaste management into EU strategies on climate, air quality, food and agriculture, the bioeconomy, resource self-sufficiency and other relevant frameworks.
- Synchronise environmental and agricultural policies by providing targeted incentives and a reliable market for compost, digestate and biogas.
- Ensure there is no competition for bioresources as a feedstock (typically used in activities like energy generation or bio-based products), which risks diluting the benefits of carbon storage and nutrient recycling provided by applying compost to land.

Conclusion

For a rapid transition to circular biowaste management, the EU must immediately cease public investments in large, capital-intensive infrastructure involving end-of-pipe waste treatment, including landfills, waste incineration and co-incineration, pyrolysis, gasification, and other high-temperature treatments.

To deliver real value for taxpayers, funding should prioritise low-cost, flexible and comprehensive solutions like food-waste prevention and decentralised composting. To maximise impact, these investments should

[55] Josefine Hededam Sund, Paola Federica Albizzati, Charlotte Scheutz, et al., Comprehensive assessment of environmental and economic impacts of the entire EU waste management system, *Waste Management*, 204, 12, 1 August 2025.

also be supported by a number of vital enabling technical, legal and economic measures at EU, national and local levels.

This strategic refocus is particularly critical for central and eastern Europe, where entrenched reliance on mixed-waste collection along with incineration and landfilling actively is preventing the region from meeting the EU's waste targets and overarching climate goals.

Beyond addressing a purely waste problem, optimising biowaste management can deliver benefits across key EU strategic areas like climate mitigation, soil health, public safety, and the circular economy. Given that municipal solid-waste systems must continuously evolve to meet new challenges and legal requirements, the above recommended actions for optimising biowaste management offer a viable pathway that all EU Member States should follow.


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