PLASTICS EUROPE
Enabling a sustainable future

The Circular Economy for Plastics

A European Analysis

MAY 2026

About the report

The 2026 edition of this report is a contribution towards a better understanding of the circular economy for plastics in Europe, and its evolution over the years. It provides an overview of European plastics production, conversion into products and components, consumption, and waste management. It also addresses the different recycling technologies and plastics production from non-fossil-based resources, i.e. bio-based and bio-attributed and carbon-captured plastics.

For the first time, the report includes World pre-consumer recycled plastics production data, plastics trade data and estimates on the reuse of selected plastic packaging items.

The report shows 2024 estimated data.

Disclaimer

About Plastics Europe

Plastics Europe is the pan-European association of plastics manufacturers with offices across Europe. For over 100 years, science and innovation have been the DNA that cuts across our industry. With members producing over 90% of all polymers across EU27+3 (Norway, Switzerland, UK) we are the catalyst for the industry with a responsibility to openly engage with stakeholders and deliver solutions which are safe, circular and sustainable. We are committed to implementing long-lasting positive change.

For more information, contact us at connect@plasticseurope.org or visit plasticseurope.org.

Reclaiming ownership of Europe's circular plastics future

The primary driver for circularity is no longer only environmental - it is now also economic, industrial and strategic.

In a world of increased geopolitical instability and supply chain disruptions, a circular European plastics system is no longer a "nice to have". It is fundamental to reducing dependence on imported fossil fuels, limiting exposure to feedstock price volatility, and strengthening industrial security and strategic autonomy. It will also ensure the security of supply for materials that remain critical to Europe's consumer and strategic industries – including automotive, health, electronics, net-zero technologies and defence.

The transition to a competitive, circular plastics system has never been more important to Europe's future.

"Fit for purpose" policymaking for the transition of the European plastics system

Europe is home to many of the world's most innovative and forward-thinking plastics manufacturers. "The Plastics Transition" roadmap sets out our industry's net zero and circularity trajectory and is designed to guide system transformation across the plastics system. It is the north star for our industry.

The purpose of this report, "The Circular Economy for Plastics – A European Analysis 2026", is to support our industry's transition by enabling evidence-based decision-making among our members, value chain partners, and policymakers.

Virginia Janssens, Managing Director Plastics Europe

Rapid slowdown in Europe's transition to a circular plastics economy

Painfully, the data confirm that the growth trend in circular plastics production has declined dramatically, including a drop in production from bio-based feedstock. This situation is mirrored by a slowdown in the growth of European converter demand for circular plastics, with a significant proportion of this demand being met through imports.

Although the quantity of waste recycled increased, over 70% is still sent to landfill and incineration. Meanwhile, exports of sorted plastics waste grew, and the quantity recycled abroad increased significantly. As the global transition accelerates, Europe's leadership in circular plastics risks being eclipsed by China and other Asian markets. On its current trajectory, Europe is undermining its climate ambitions and putting its economic future at risk.

Competitiveness crisis undermines transition

There are two fundamental reasons why Europe's transition is slowing down.

Firstly, high energy prices, rising emissions costs, and feedstock prices have weakened the industry's global competitiveness and undermined the investment case for circularity. The situation is compounded by the fact that European plastics manufacturers are particularly exposed to geopolitical risks due to their reliance on imported gas and oil as both feedstocks and energy sources, and the competitiveness challenges faced by the broader European plastics system, including recyclers and converters.

While plastics production continues to expand in other regions, Europe's global market share has fallen sharply - from 22% in 2006 to 12% in 2024 - and industry turnover declined from €457 billion in 2022 to €398 billion in 2024 alone.

As a result, Europe's plastics manufacturers are in survival mode. This means that existing European fossil-based plastics production, which is critical to financing the circularity transition, cannot generate the massive levels of investment required.

Secondly, while European policymakers have introduced important circularity initiatives and the European Commission has recognised the plastics sector as strategically important, the current policy and regulatory framework is not delivering. Despite some progress, measures to stimulate market demand and supply for circular plastics have lacked the ambition, scope and speed required to unlock the necessary investments. This is a massive source of frustration for our industry and the plastics system more broadly.

Reframing plastic waste as a strategic resource

To get the circular transition back on track, we need a competitive European plastics system. Bold and decisive leadership is required from all levels of government in Europe to achieve this.

We must address Europe's energy cost crisis and ensure a level playing field through fair and consistently enforced trade rules.

Fostering strong demand for circular plastics produced in Europe requires ambitious market pull measures and other robust enabling policies[1] to attract investment and strengthen the competitiveness of the European plastics system.

Europe has the potential to be a resource-rich and strategically autonomous continent, but only if we leverage the value of waste and biomass as future industrial feedstocks. We must stop incinerating and landfilling our recyclable plastic waste and make it economically attractive to keep and recycle it in Europe.

Policymakers must also support innovation through a technology-neutral approach, recognising that different solutions will be needed to achieve circularity across applications and materials, and that emerging technologies require time, scale and supportive conditions to become more cost-effective and reach maturity. All circular feedstocks, including waste for mechanical, physical and chemical recycling, bio-based and carbon-captured, need to be incentivised.

As the Draghi and Letta reports confirm, the single market is one of Europe's greatest assets, yet it is still failing to fully deliver on its intended purpose. By harmonising waste regulations and Extended Producer Responsibility schemes across Member States, for example, we can eliminate unnecessary fragmentation and unlock the economic power of a truly harmonised single market.

Restoring Europe's circularity leadership: From ambition to delivery

Achieving a circular economy requires the engagement of all value chain participants – converters, recyclers, waste collectors, brand owners and retailers. Coordinated action, ownership and a holistic policy approach across the entire value chain are essential to deliver this systemic change without delay.

At stake is a fundamental choice about the kind of Europe we want to build: one that leads in sustainable industry, innovation, talent and jobs, or one that increasingly depends on others.

Get this right, and Europe can create a thriving circular plastics system that underpins the next generation of industry in Europe and ensures its economic resilience and security.

Ultimately, this transition is not just about plastics, or scaling-up circularity to drive decarbonisation - it is about the kind of society we shape, the environment we protect, and Europe's industrial future and place in the world.

1. For more details on our policy recommendations, please see our Executive Summary or see our position on the Circular Economy Act.

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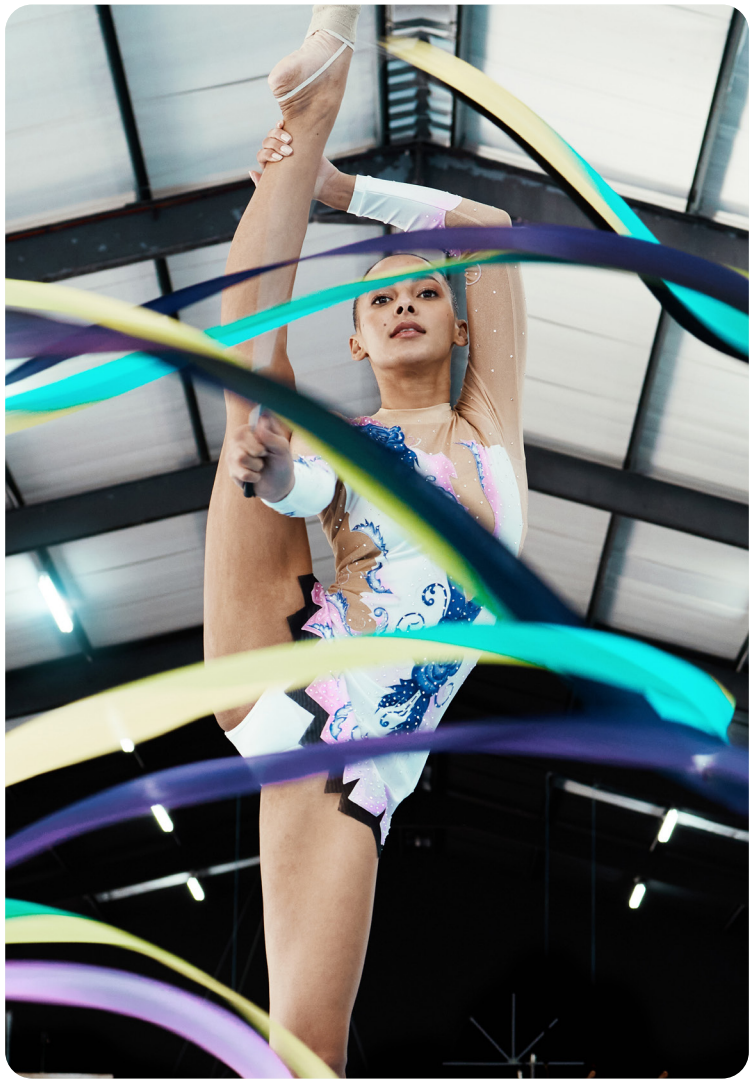


Executive summary

Introduction

"The Circular Economy for Plastics – A European Analysis" provides the most up-to-date, comprehensive and transparent pan-European dataset on the circular plastics transition in Europe (EU27+3). It is made freely available to help policymakers, plastics manufacturers, converters, recyclers and other value chain partners track progress, identify gaps, and make informed decisions about the enabling conditions required to accelerate circularity.

Published every two years, it provides a data-driven overview of the European plastics system, covering conventional and circular production, use and end-of-life management. This 2026 edition analyses trends for the period 2022–2024 and, for the first time, examines new data including trade flows of fossil-based and circular plastics to provide a more complete picture of material flows in Europe.

The industry's vision is for Europe to produce, use and recirculate high-quality circular plastics within a competitive, sustainable and net-zero system by 2050. This will ensure that Europe can reduce its dependence on oil and gas imports, while continuing to supply materials critical to many consumer and strategic industrial applications.

"The Circular Economy for Plastics – A European Analysis" forms part of a broader set of initiatives by Plastics Europe, including "The Plastics Transition" roadmap, to support this shift.

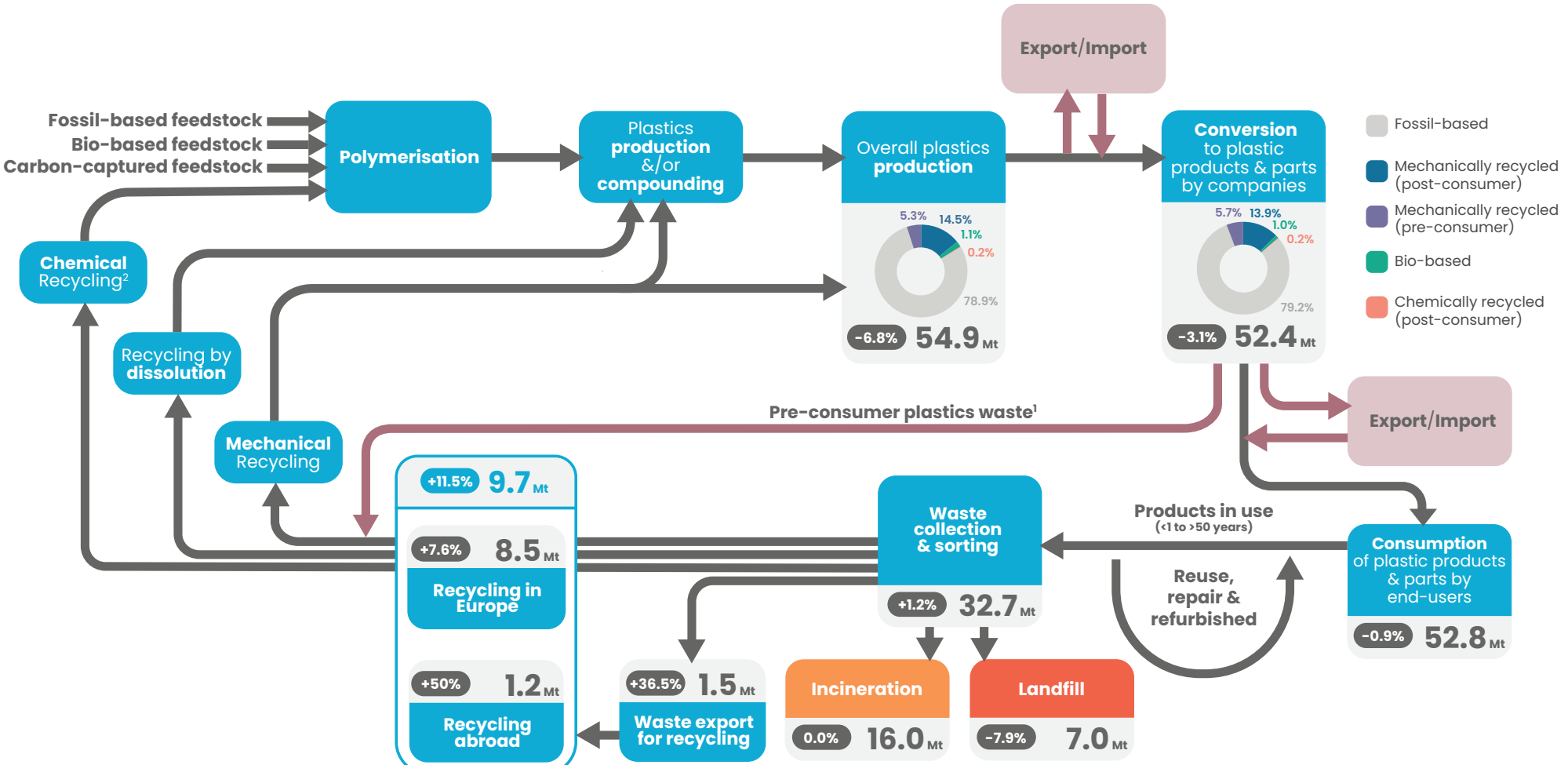
2022-2024 evolution

The 2022–2024 period was defined by the competitiveness crisis in Europe's industrial base following Russia's invasion of Ukraine. Total European plastics production declined sharply (-6.8%) alongside converters' demand (-3.1%) and end-users' consumption (-0.9%), mainly due to rising energy and feedstock costs.

Europe's circular production increased by 2.4%, and demand from converters rose by 8.2%. However, these gains mask a rapid and concerning slowdown in growth.

New data on trade flows show a significant dependence on non-European value chains. Almost a quarter of all plastics converted in the EU 27+3 were imported. Specifically, 19% of circular plastics, including 16% post-consumer recycled plastics, were imported.

Waste management trends remained uneven. Recycling of collected plastic waste increased (+11.5%), quantities of plastic waste landfilled decreased (-7.9%), and quantities incinerated remained unchanged. At the same time, exports of sorted plastic waste surged (+36.5%), with a growing share of EU waste being recycled outside Europe (12.4% in 2024).



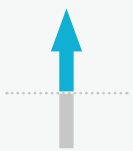
The above data are rounded estimations.
1. Pre-consumer plastics waste is mainly originating from the plastics conversion activities, and production to a lesser extent.
2. Several steps are needed between the input of plastics waste into chemical recycling and the input into polymerisation, also depending on the chemical recycling technology. A more detailed diagram is available on page 89.

Key report figures

Circular plastics production reached

8.7 Mt

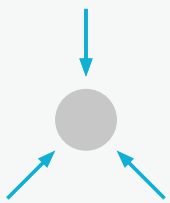
but growth has **slowed significantly** since 2022.



For the first time, circular plastics content in new products is

above 15%

reaching **7.9 Mt** in 2024.



19%

of circular plastics used in Europe rely on imports. And **24%** of the total demand.

Export of sorted plastic waste increased by

+36.5%

since 2022, reaching 1.5 Mt.

29.6%

(9.7 Mt)

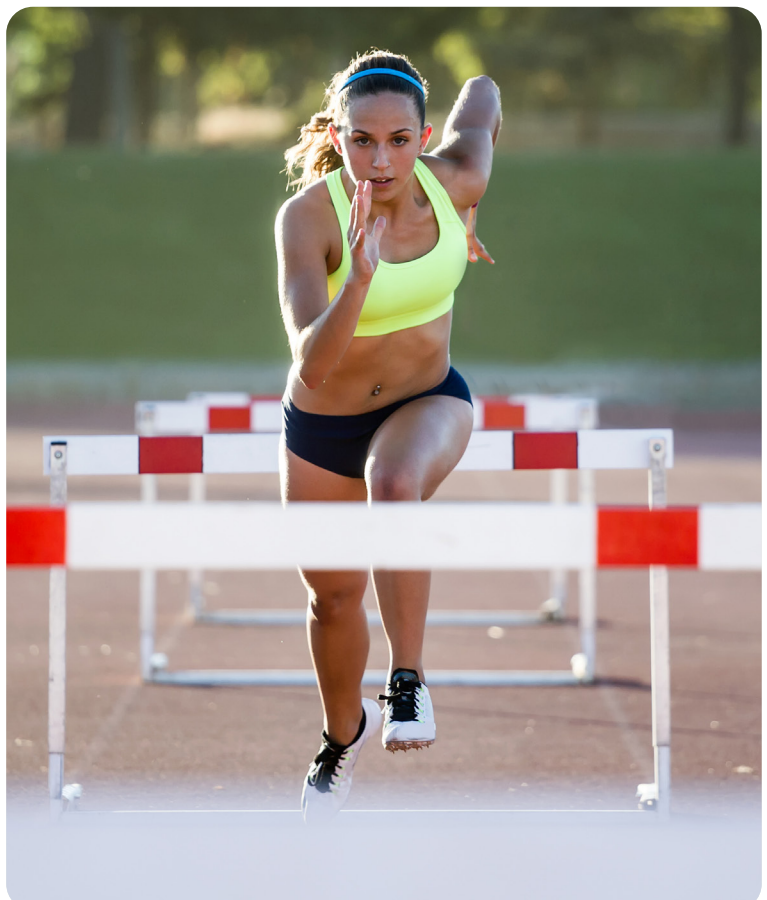
of plastic waste was recycled.

More than

70%

of plastic waste is still sent to incineration or landfill.

Key report findings



The report highlights a rapid slowdown in Europe's transition to a circular plastics system.

Although circular production increased by 2.4% and demand for circular plastics production by 8.2%, these figures mask a dramatic loss of momentum. The compound annual growth rate (CAGR) of circular plastics production declined from 13.6% between 2018-2022 to 1.2% from 2022-2024, while the equivalent figure for converter demand declined from 16.2% to 4% between the same two reporting periods.

Europe's plastics transition is slowing just as global competitors – particularly in China and the rest of Asia – **are accelerating output of circular plastics**. Postponed and cancelled investments in Europe's plastics recycling infrastructure resulted in over 70% of Europe's collected waste still being sent for incineration and landfill, and 12.2% of waste sorted for recycling being exported. Additionally, 19% (1.5 Mt.) of Europe's circular plastics demand relied on imports.

Urgent action is needed to strengthen policy frameworks, improve investment conditions and get the transition to a circular plastics system in Europe back on track.

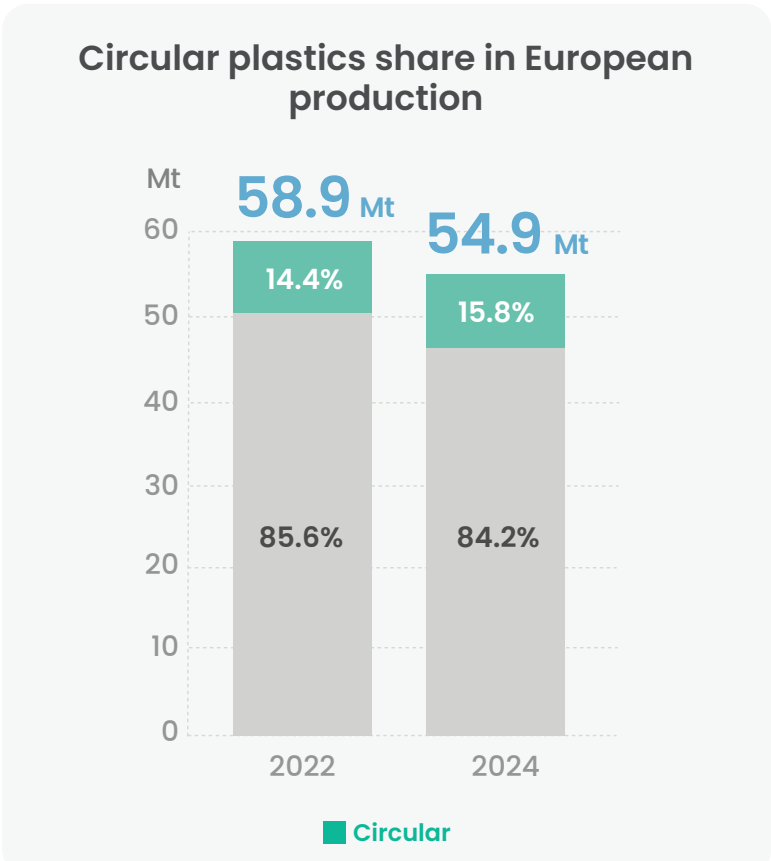
Circular plastics production

Circular plastics production – which includes mechanically, physically and chemically recycled plastics and plastics derived from bio-based feedstock – **represented 15.8% of total European plastics production in 2024**, an increase from 14.4% in 2022.

However, this increase does not reflect a meaningful expansion in circular output. Rather, it was primarily driven by a contraction in fossil-based plastics production, which fell by 8.3% to 43.3 Mt between 2022 and 2024. Over the same period, circular plastics production grew only marginally, rising by 2.4% to 8.7 Mt.

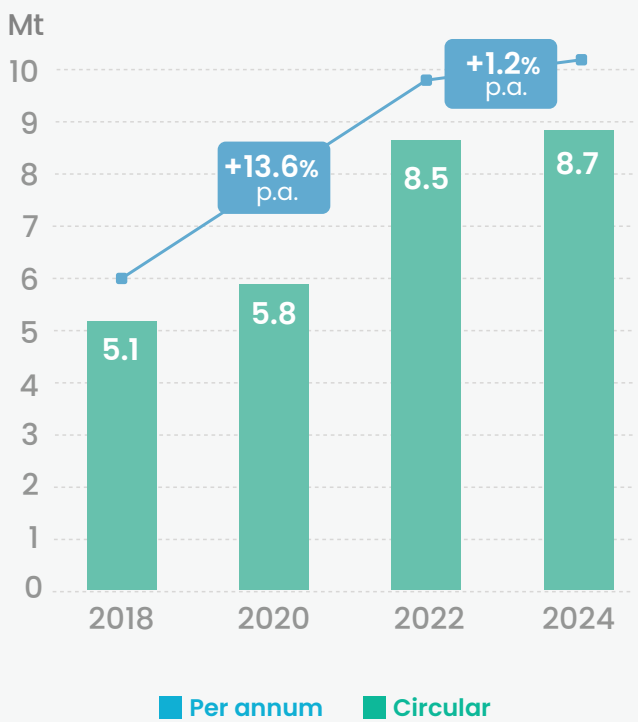
Growth in Europe's circular plastics sector has also slowed sharply compared to the previous period, even as global production accelerates. The CAGR[1] for European circular plastics production declined from 13.6% in 2018–2022 to 1.2% in 2022–2024. In contrast, global CAGR increased from 5.0% to 7.7% over the same periods, driving global circular plastics production to 44.2 Mt in 2024 (or 9.6% of total production[2]).

Europe currently maintains the highest share of circular output in its plastics production mix. However, accelerating global production – particularly in China and the rest of Asia – risks eroding this leadership and may increase Europe's dependence on circular plastics imports.



1. Compound annual growth rate
2. The scope of the global plastics production data in "The Circular Economy for Plastics - A European Analysis 2026" report includes data on pre-consumer recycled plastics.

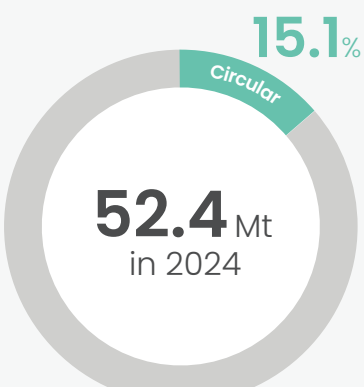
Circular plastics production evolution



Circularity in new plastic products

For the first time in 2024, circular plastics accounted for more than 15% (7.9 Mt.) of the total plastics converted into industrial and consumer products in Europe. **However, the market share and quantity of circular plastics converted** (rising from 7.3 to 7.9 Mt. between 2022-2024) **increased at a much slower rate than previously, dropping from a 16.2% CAGR[1] between 2018-2022 to 4% from 2022–2024.**

Plastics conversion

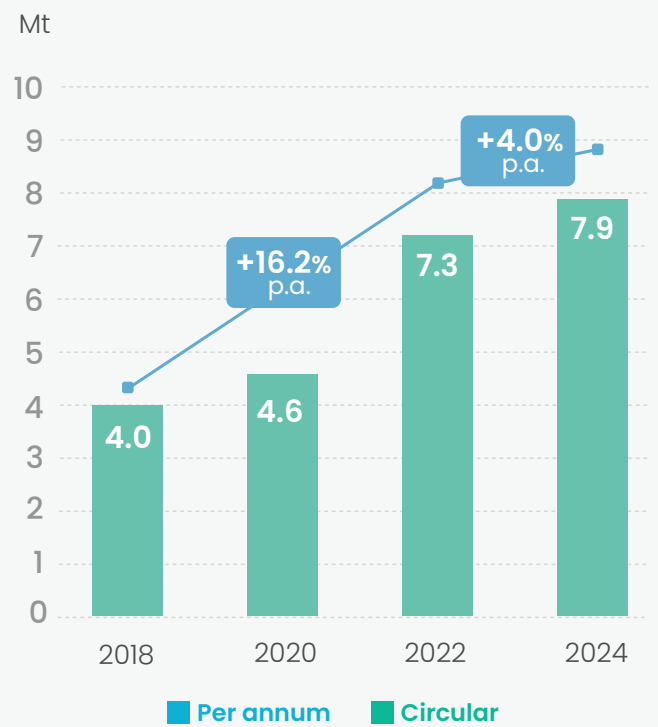


Additionally, amid bankruptcies, closures and delayed or cancelled investments in European recycling facilities, **1.5 Mt. (or 19%) of converters' demand for circular plastics was met through imports.**

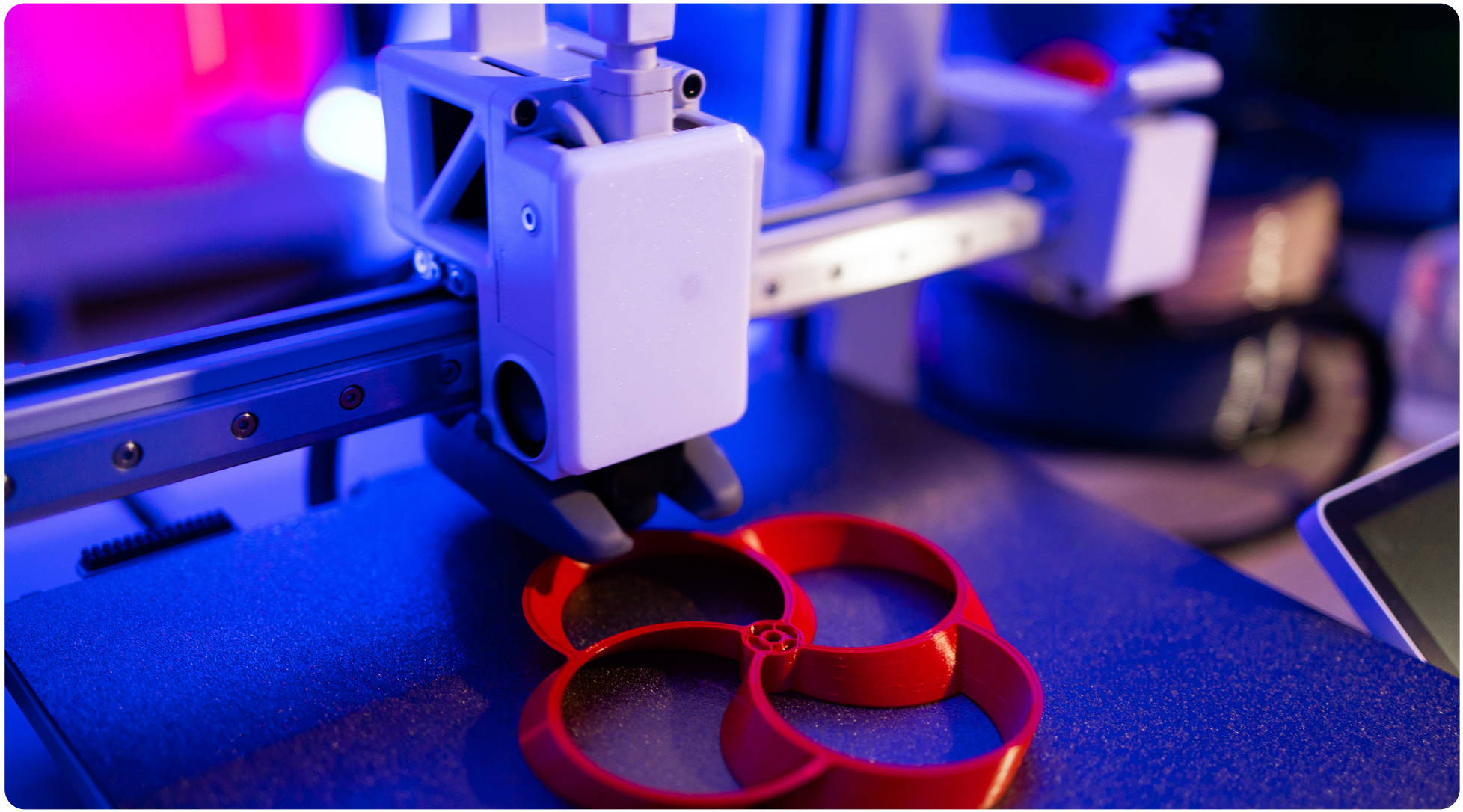
19% of the circular plastics used in Europe **rely on imports**.

This is mirrored in new data showing a broader and significant reliance by converters on imported plastics – both fossil-based and non-fossil – reaching 24% (13.4 Mt) of total demand in 2024.

Circular plastics conversion evolution

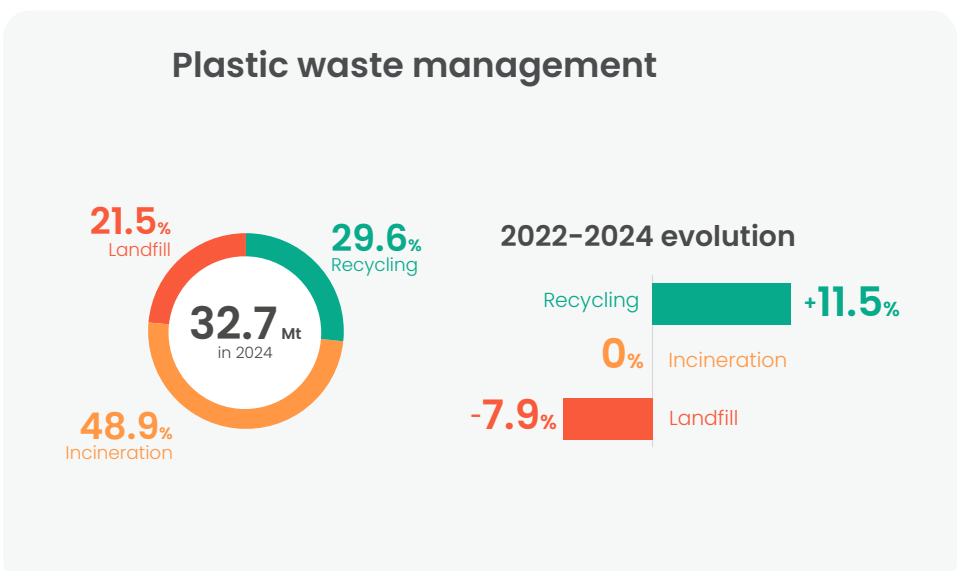


1. Compound annual growth rate



Plastic waste collection for recycling, incineration and landfill

Post-consumer waste collection rose, but at a much slower rate than in previous years. **A total of 32.7 Mt. was collected in 2024, with 12.3 Mt. (37.6%) sorted for recycling. Of the 9.7 Mt. that was of sufficient quality to be recycled (recorded at the "point of calculation for recycling"), only 8.5 Mt. was domestically recycled in the EU 27+3, yielding 8.1 Mt. of recycled output.**



Additionally, **1.5 Mt. of sorted European plastic waste was exported for recycling abroad due to competitiveness issues (e.g. energy costs) and lacking EU recycling capacity, with 1.2 Mt. recorded at the point of calculation for recycling.** Due to the lack of data traceability, Plastics Europe cannot track the final recycling yield of exported sorted waste.

While waste collection and sorting has improved, the scale and complexity of the task facing policymakers and the European plastics system is illustrated by the fact that **70.4% of Europe's collected plastic waste – a valuable circular feedstock that could reduce the European economy's dependence on imported oil and gas – continued to be sent to incineration (16.0 Mt, 48.9%) and landfill (7.0 Mt, 21.5%) in 2024.**

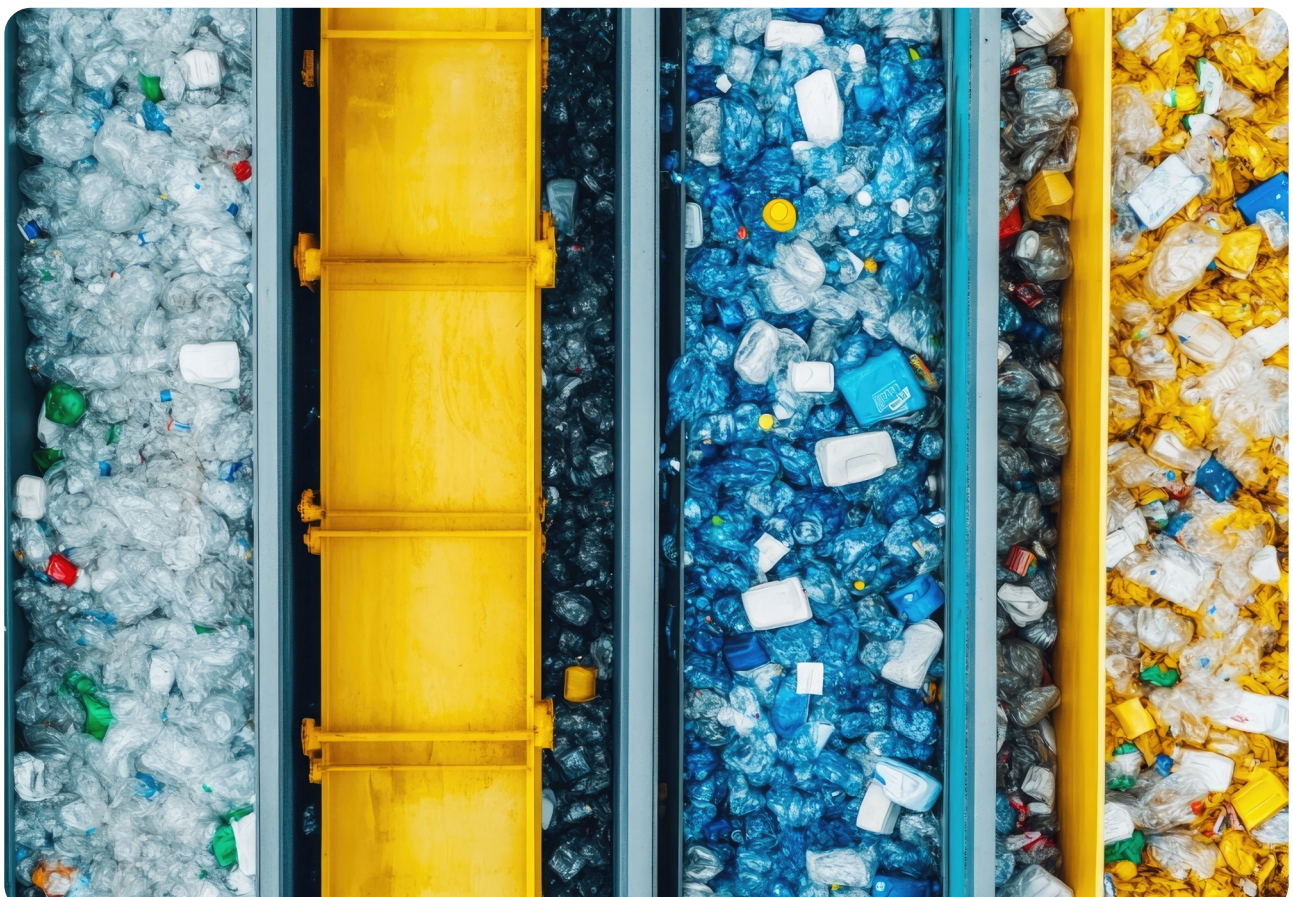
The EU's planned 2.5-year export ban on plastic waste to non-OECD countries, starting in November 2026, should increase the availability of plastic waste feedstock. However, ensuring adequate waste sorting and plastics recycling capacity in the EU27+3 will be essential to avoid spikes in landfill and incineration of collected waste, and export of sorted waste to other regions. Similarly, the EU's 2035 10% limit on municipal waste being sent to landfill should be used to maximise available feedstock for recycling.

It is concerning that, between 2022 and 2024, there was no reduction in the quantity of plastic waste incinerated, and the **share of sorted plastic waste exported rose sharply by 36.5% to 1.5 Mt.**

Export of sorted plastic waste increased by

+36.5%

since 2022, reaching 1.5 Mt.



Europe – a future secondary resource powerhouse

Europe's plastic waste is an underutilised resource that could reduce its fossil import dependence and strengthen its economic resilience. The 36.5% rise in exports of EU waste sorted for recycling between 2022 and 2024 is therefore concerning.

By transforming end-of-life plastics into a valuable commodity, for example, through ambitious market pull measures, the EU can stimulate private-sector investments in collection, sorting, reuse, and recycling at scale.

Expanded collection and sorting systems are essential to secure high-quality feedstocks. Separate collection delivers far higher recycling rates (53%). However, improved sorting of mixed waste in countries such as Germany, Poland, and Spain has increased recycling rates for this waste stream (from 3.8% to 5.6%).

Despite progress in sorting of mixed waste streams, separate collection remains significantly more effective. The gap is clearest in packaging: 2% of waste is recycled from mixed streams versus 62% recycling from separate collection.

Circular technology neutrality – the key to full transition

EU policy is currently heavily focused towards supporting the development of mechanical recycling. While it is a critical enabler of plastics circularity, mechanical recycling cannot address all waste streams or meet future demand for high-quality recycled material. **No single technology can deliver the transition alone.**

Achieving full circularity and climate neutrality requires a complementary portfolio of technologies, including chemical recycling to process mixed and contaminated waste, alongside alternative technologies such as bio-based materials and carbon capture and utilisation (CCU). Scaling these solutions in parallel will be essential to reduce reliance on fossil resources and close the remaining circularity gap.

A key finding from interviews conducted for this report is that the demand for financially attractive high quality recyclates currently appears to be higher than the production of these materials in Europe.

Policy recommendations for a competitive and circular European plastics system

Executive summary

A circular plastics system is essential to Europe's strategic autonomy, industrial resilience and sustainability transition. It will not, however, be possible to unlock the market drivers and investments required to build this system without a competitive European plastics industry. Significant advances in circularity cannot be achieved without restoring the competitiveness of European plastics manufacturers.

Competitiveness focused policy measures must be complemented by a more ambitious circularity agenda that is broader in scope and delivered with greater urgency. It should be focused on promoting circular plastics production and strengthening the business case for investing in circular technologies and infrastructure in Europe. Close engagement between policymakers and the plastics value chain is vital.

Creating a more competitive plastics industry

EU and national policymakers must urgently address Europe's higher energy and carbon costs, ensure a level playing field with international competitors, and capitalise on the potential of the EU single market to drive competitiveness. Trade rules and market transparency should be fair and consistently enforced to protect against global overcapacity and dumping.

Addressing the competitive issues facing the broader European plastics system, including converters and recyclers, is also crucial.

Strengthening demand for circular plastics

Ambitious market pull measures should be rapidly introduced to stimulate demand, and public procurement and Extended Producer Responsibility (EPR) bonuses should be used to reward producers that use circular plastics.

Securing availability of all circular feedstocks in Europe

Replacing fossil-based inputs with circular alternatives requires a secure and predictable supply of plastic waste. Too much collected plastic waste is still directed to landfills and incineration, and exported for recycling abroad. Landfilling and incineration of recyclable plastics must be banned, and municipal waste incineration included in the EU's Emission Trading Scheme (ETS). All circular feedstocks, including recycled, bio-based and carbon-captured, need to be supported, and the import and export of plastic waste closely monitored.

Promoting technology neutrality and innovation

Real world implementation of circular technologies at scale will drive innovation, efficiencies and productivity. Resisting the temptation to favour or dismiss solutions before they reach technological maturity and recognising that innovations need room to grow is critical.

More integrated circular plastics systems

Europe needs to support the development of integrated circularity hubs that combine mechanical and chemical recycling and bio-based production facilities. Waste streams unsuitable for mechanical recycling – such as mixed or complex plastics – need to be redirected to complementary recycling technologies to maximise overall resource utilisation.

Mobilising circular transition finance

Revenues from mechanisms like the EU plastics levy[1] should be reinvested into circularity solutions, and a dedicated circularity fund established within the Competitiveness Fund. In parallel, EPR schemes can be used to unleash investments in recycling infrastructure, promote the use of EU-sourced feedstock, and encourage the use of circular materials in products.

Breaking down barriers to a circular single market

The scale of the single market is a key advantage for circularity - but fragmentation and unnecessary complexity undermine its potential. Greater harmonisation of rules on end-of-waste, waste shipment, recycling processes, and EPR governance is essential to reducing administrative burdens, increasing investment incentives, enabling efficient cross-border flows and unlocking scale.

For more information on Plastics Europe's circular economy policy recommendations, please see here.

1. The EU plastics levy, introduced in 2021, requires each member state to pay a fee based on the amount of non-recycled plastic packaging waste it generates.

Plastics Europe

PLASTICS EUROPE
Enabling a sustainable future

Plastics Europe AISBL
Rue Belliard 40 • Box 16
1040 Brussels • Belgium
☏+32 (0)2 792 30 99
connect@plasticseurope.org
plasticseurope.org