European Environment Agency

8th Environment Action Programme

Circular material use rate in Europe

8TH EAP HEADLINE INDICATOR, 2025

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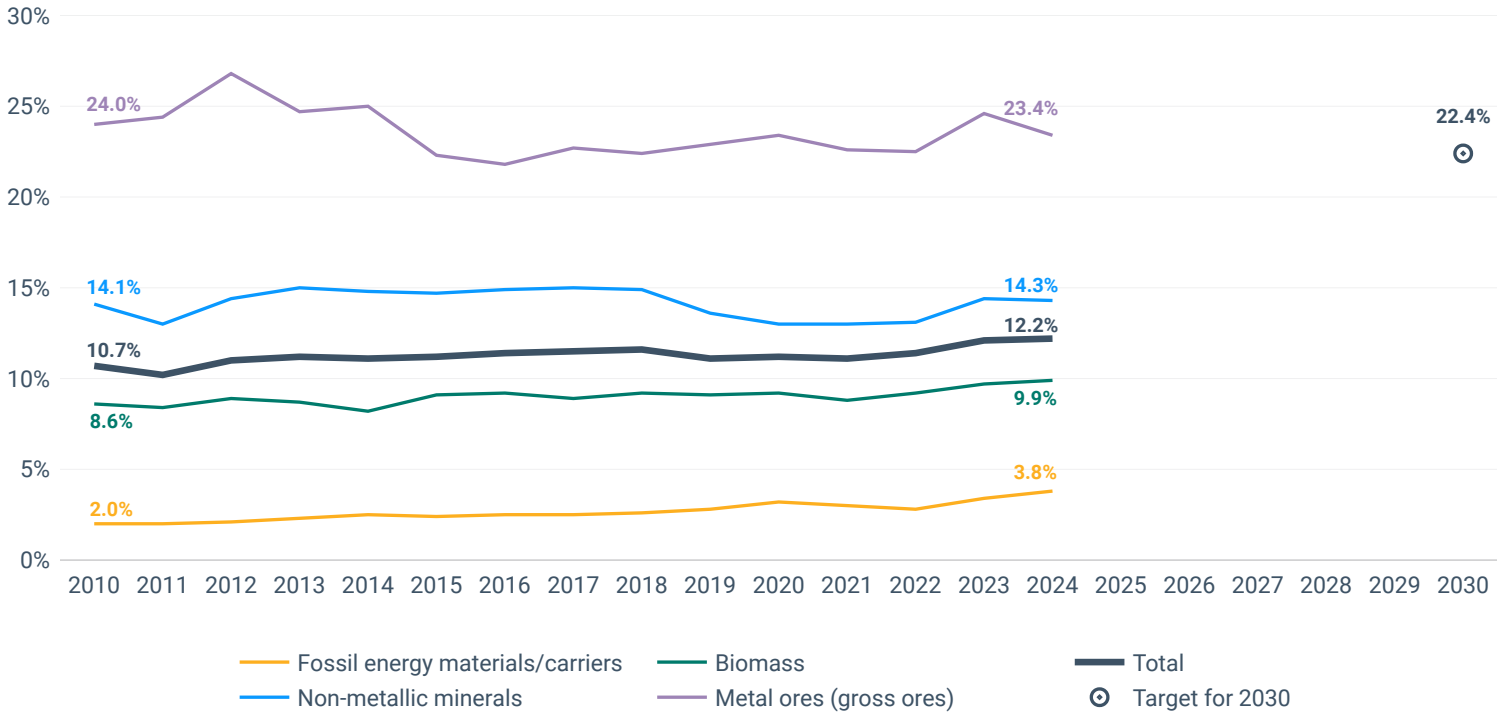
The EU aims to double recycled material use, in terms of its share of the economy's total material use, between 2020 and 2030 to reach 22.4% by 2030. A goal set in the 8th Environmental Action Programme, an ambition confirmed and even slightly increased to 24% in the Clean Industrial Deal. Increasing the use of secondary materials relatively reduces the demand for primary raw materials and their associated environmental impacts. Secondary materials accounted for 12.2% of total material use in 2024, an increase of 1.5 percentage points compared with 2010. This slow progress, along with projected increased material demand by 2030, implies that the EU is currently not on track to double the circular material use rate by 2030.

Figure 1. Circular material use rate in the EU and breakdown by material group between 2010 and 2023



The EU's circular economy action plan aims to reduce pressure on natural resources and double its **circular material use rate** (CMUR) between 2020 and 2030[1]. Recent initiatives, like the **EU Clean Industrial Deal**, reinforce this commitment by slightly increasing the target to 24% in 2030

The CMUR measures the circularity of materials in the economy and refers to the share of the total amount of material used in the economy that comes from recycled waste. Improving the CMUR, either by increasing the use of recycled materials and/or decreasing the amount of primary materials used mitigates the adverse impacts on the environment and climate of primary material extraction and processing. A reduction in the EU's reliance on primary resources, particularly imported materials, would in turn lead to an increased EU economic security. This means the EU would increase its ability to meet its own needs, without **relying excessively on third countries**.

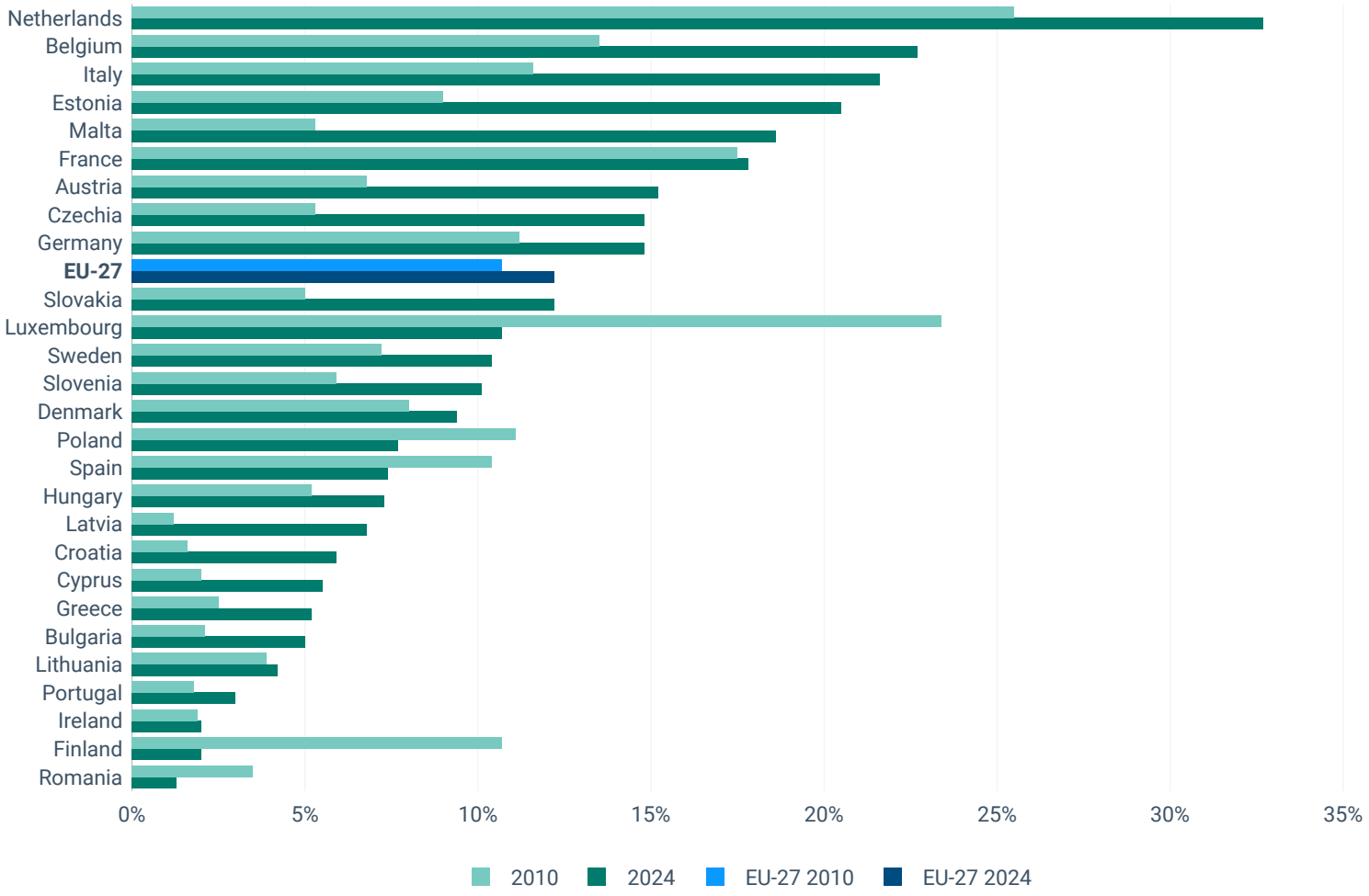
Although the EU's CMUR has increased slightly in the last 14 years, from 10.7% in 2010 to 12.2% in 2024, it is still considered low compared to the frontrunner EU Member States that achieve a higher share, indicating the economy is mostly linear. The positive trend until 2022 is mainly due to **increases** in waste recycling efforts (almost 9% increase between 2010 and 2022 with domestic material consumption stable in the same period), driven by many factors, including EU recycling targets, improved technologies and an improving economic viability of circular solutions. Meanwhile, domestic material consumption has dropped sharply between 2022 and 2024 (9% decrease, explained mainly by a drop in consumption of metals) which increases the CMUR.

Non-metallic minerals account for more than 50% of total material consumption and their CMUR has increased slightly since 2010. The CMURs increased also for biomass and fossil-based materials between 2010 and 2024. The CMURs for the various material groups differ significantly with 23.4% for metal ores in 2024 and only 3.8% for fossil materials. This reflects the different nature of materials and their use. Metals are technically easier and more economical to recycle, feeding back into the economy. Fossil fuels are mostly burned and thus cannot be recycled.

Circular economy measures aim to retain the value and prolong the lifespan of products helping to reduce resource consumption and, in turn, lower environmental and climate impacts. Meeting the **target** of doubling the CMUR would mean an increase from 12.2% (2024) to 22.4% by 2030. This requires the CMUR to grow annually by more than 1.7 percentage points, which is more than the total increase achieved over the period 2010-2024. Therefore, the EU is not on track to double the CMUR by 2030, nor to achieve the 24% target stated in the Clean Industrial Deal, also considering OECD projections of increased future materials demand. The latter is important as increasing recycling alone will not allow the EU to achieve the target.

Increased recycling and/or reduced material use is required. Increasing the re-use and recycling of heavier material groups like non-metallic minerals and metals has a greater potential for increasing the CMUR. Since material extraction has different **environmental impacts**, measures should also focus on reducing the consumption of fossil energy materials and increasing the sustainability of biomass production in view of reducing environmental pressures.

Figure 2. Circular material use rate by EU country



Considerable differences in CMURs are observed between countries, ranging from 32.7% (in the Netherlands) to 1.3% (in Romania) in 2024. This reflects significant structural difference in countries' recycling systems and in their levels of material use [2]. In the Netherlands, Belgium, Italy and Estonia, more than 20% (one of five tonnes) of material used was recycled material. The CMUR level for the Netherlands and Belgium is already higher than the EU target for 2030, suggesting that such rates are achievable.

Most (22 out of 27) countries' CMURs have increased since 2010. The largest absolute CMUR increases (more than ten percentage points) were seen in Malta, Estonia and Italy. Some countries show impressive relative increases in their CMURs, with Latvia, Croatia and Matla more than tripling their CMURs between 2010 and 2024. On the other hand, significant decreases (more than 50%) in CMURs were seen in Finland, Romania and Luxembourg.

Supporting information

Definition

The CMUR measures an economy's circularity. This is defined by the circular use of materials, which is approximated by the amount of waste recycled in domestic recovery plants minus imported waste destined for recovery plus exported waste destined for recovery abroad, divided by the material use. The material use is the sum of domestic material consumption and the aforementioned circular use of materials [3].

Methodology

This indicator is directly based on data published by Eurostat and the underpinning methodology can be found in Eurostat (2021)[4].

Policy/environmental relevance

The EU's circular economy action plan calls for a doubling of the Union's CMUR in the coming decade up to 2030[1]. This policy objective aims to increase the EU economy's circularity and thus benefit the environmental and climate. These benefits would mainly stem from the reduced need for natural resource extraction. The 2025 Clean Industrial Deal includes a KPI for 2030 to increase the CMUR to 24%.

This indicator is a headline indicator for monitoring progress towards achieving the aims of the 8th Environment Action Programme[5]. By measuring the use of secondary materials in the economy, it is used to evaluate the sustainability of the industrial sector towards the 8th EAP priority objective for 2030 set out in Article 2.f which requires: 'promoting environmental aspects of sustainability and significantly reducing key environmental and climate pressures related to the Union's production and consumption, in particular in the areas of energy, industry, buildings and infrastructure, mobility, tourism, international trade and the food system'. The European Commission Communication on the 8th EAP monitoring framework specifies that this indicator should monitor the 'doubling of the ratio of circular material use by 2030 compared to 2020'. The CMUR is also a performance indicator in the Long-Term Competitiveness Strategy recently adopted by the Commission to set the direction for industry beyond 2030.

Accuracy and uncertainties

No uncertainties have been specified.

Data sources and providers

- Circular material use rate by material type, Eurostat - European statistics
- Circular material use rate, Eurostat - European statistics

Metadata

DPSIR

Impact

Topics

Circular economy # Resource use and materials # Waste and recycling

Tags

8th EAP # Material use # waste # WST009 # Circular economy

Temporal coverage

2010-2024

Geographic coverage

Austria
Belgium
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden

Typology

Performance indicator (Type B - Does it matter?)

UN SDGs

SDG12: Responsible consumption and production

Unit of measure

Percentage

Frequency of dissemination

Once a year

References and footnotes

1. EC, 2020, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'A new circular economy action plan for a cleaner and more competitive Europe', COM(2020) 98 final.
a b
2. Eurostat, 2018, *Circular material use rate — calculation method*, Manuals and Guidelines, Publications Office of the European Union, Luxembourg.
↵
3. Eurostat, 2020, 'Circular material use rate', *Product Datasets* (https://ec.europa.eu/eurostat/web/products-datasets/-/cei_srm030) accessed June 30, 2022.
↵
4. Eurostat, 2021, 'Circular economy — material flows', *Statistics Explained* (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Circular_economy_-_material_flows#Circularity_rate_.E2.80.93_methodology) accessed June 30, 2022.
↵
5. EC, 2022, 'Environment action programme to 2030', *European Commission* (https://environment.ec.europa.eu/strategy/environment-action-programme-2030_en) accessed June 24, 2022.
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