



European
Commission

Circular economy

New tool for measuring progress

15 May 2023
#EUGreenDeal

The revised monitoring framework measures progress towards the circular economy considering the interlinkages between circularity and the EU's climate neutrality goal, the zero-pollution ambition for a healthier and fairer planet, competitiveness, sustainability and securing materials supply.

Measuring what matters

In line with the objectives of the European Green Deal, the 2020 Circular Economy Action Plan **aims to decouple growth from resource use** and keep resource consumption within the planetary boundaries, while contributing to competitiveness, sustainability and resilience of the EU economy.

To assess the effectiveness of EU policies and measures, and to identify best practices, **measuring progress towards a circular economy is essential**. The Commission has revised the EU monitoring framework for circular economy, including new indicators and adding a new dimension on global sustainability and resilience.

Circular economy monitoring framework

1 A-B MATERIAL CONSUMPTION

Material footprint and resource productivity

2 GREEN PUBLIC PROCUREMENT

Share of major public procurement that includes environmental requirements

3 A-F WASTE GENERATION

Total waste generation, total waste generation (excluding major mineral waste) per GDP unit, municipal waste generation, food waste, generation of packaging waste and of plastic packaging waste

6 A-B CONTRIBUTION OF RECYCLED MATERIALS TO RAW MATERIAL DEMAND

Secondary raw materials share of overall materials demand – for the whole economy and for specific materials

7 A-C TRADE IN RECYCLABLE RAW MATERIALS

Imports, exports and intra EU trade of selected recyclable raw materials



4 A-B OVERALL RECYCLING RATES

Recycling rate of municipal waste and of all waste except major mineral waste

5 A-C RECYCLING RATES FOR SPECIFIC WASTE STREAMS

Recycling rate of overall packaging waste, of plastic packaging waste and of WEEE separately collected

8 A-C PRIVATE INVESTMENTS, JOBS AND VALUE ADDED RELATED TO CIRCULAR ECONOMY SECTORS

Private investments, number of persons employed and gross value added related to the circular economy

9 INNOVATION

Patents on waste and recycling

10 A-B GLOBAL SUSTAINABILITY

Consumption footprint and GHG emissions from production activities

11 A-B RESILIENCE

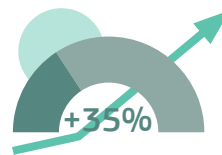
Material import dependency and EU self-sufficiency for raw materials

Decreasing pressures from resources and pollution from waste

Reducing material use in both consumption and production is a key objective of circularity.



In 2020 the **EU's estimated material footprint**, also referred to as raw material consumption **was 13.7 tonnes per capita**, 2% decrease since 2014.



Since 2000, the **resource productivity** of the EU economy **increased by about 35%**, indicating progress in decoupling economic growth from resource use.

4.8 tonnes of waste were generated per EU inhabitant in 2020. Overall waste generation decreased by almost 3% between 2010 and 2020.



In 2020 the EU generated **59 million tonnes of food waste**, equivalent to **131 kg per capita**. Halving global food waste per capita by 2030 is a target of the Sustainable Development Goals.



Packaging waste generated in the EU: **178 kg** was generated per capita in 2020, **up 17%** since 2010. In 2020, **35kg per capita (19%)** was plastic packaging.



Between 2010 and 2020 **plastic packaging waste** has **increased by 25%**, the greatest increase of all packaging waste streams.

EC action: The 8th Environment Action Programme and Circular Economy Action Plan set an objective of significantly decreasing the EU's material footprint and total waste generation.

Ensuring sustainable waste management

Boosting waste recycling and materials reuse is essential to keep the value of materials in the economy and decrease environmental pressures.



In 2021 **49% of municipal waste was recycled** in the EU against 60% target by 2030.



In 2020 **64% of packaging waste was recycled** in the EU against 70% target by 2030.



In 2020 **38% of plastic packaging waste was recycled** in the EU against 55% target by 2030.

EC action: In November 2022, the European Commission proposed new rules on Packaging and Packaging Waste.

Keeping materials value and boosting secondary materials

Currently, **less than 12% of all materials used in the EU** comes from **recycled waste**. While this share has increased from 8.3% in 2004, **there is significant potential for improvement**.



For many **specialty metals and rare-earth elements**, such as lithium, gallium and neodymium, the end-of-life recycling input rate is only **around 1%**.



End-of-life **recycling rates** for raw materials used in batteries are **16% for nickel** and **22% for cobalt**.



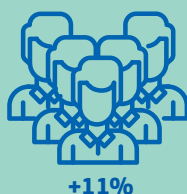
EC action: In March 2023, the European Commission proposed the Critical Raw Material Act to ensure a secure and sustainable supply of critical raw materials, which proposes setting a capacity target of at least 15% of the EU's annual consumption of critical raw material comes from recycling.

Boosting competitiveness

Circular economy sectors have become more innovative and grown in terms of investments, value added, and jobs.



In the EU, private investments in specific economic sectors relevant to the circular economy amounted to **EUR 121.6 billion** in 2021, equivalent to **0.8%** of the **EU's GDP**.



The circular economy employed **4.3 million people** (full time equivalent), an **increase of 11%** compared to 2015.



The **added value** in the circular economy sectors **increased by 27%** compared to 2015 to reach around **EUR 299 billion**.

EC action: Circularity is one driver of the long term competitiveness strategy, adopted by the European Commission in March 2023.



Contributing to resilience and sustainability

The EU is acting to reduce its dependency on material imports that are essential for the green and digital transition. The 8th Environment Action Programme and the Circular Economy Action Plan aim to reduce EU consumption footprint and keep it within the planetary boundaries.



In 2021 the EU's material import dependency was **22.9%**. The EU is dependent on **52%** of metal ores and **71%** of fossil-energy from outside the EU.



The EU is dependent **100%** on imports from China for refined rare earth elements and refined magnesium.



EU consumption footprint increased by **4%** between 2010 and 2021. Its impacts have transgressed certain planetary boundaries.



EC action: In March 2023, the European Commission proposed the **Critical Raw Materials Act** to ensure the EU's access to a secure and diversified supply of critical raw materials, which sets that **not more than 65% of the Union's annual consumption** of each strategic raw material at any relevant stage of processing should come from a single non EU country.

For more information:

- Communication on a revised monitoring framework for the circular economy, COM(2023) 306
- Staff Working Document on Measuring progress towards circular economy in the European Union – Key indicators for a revised monitoring framework, SWD (2023) 306
- Monitoring framework for the circular economy, Eurostat website
- Eurostat data on circular economy
- JRC Raw Material Information System
- JRC Consumption Footprint Platform
- Circular Economy Action Plan 2020



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PDF ISBN 978-92-68-03252-7 doi:10.2779/1618 KH-05-23-171-EN-N