



Circular Economy Action Plan

For a cleaner and
more competitive
Europe

Monitoring progress towards the circular economy in the EU

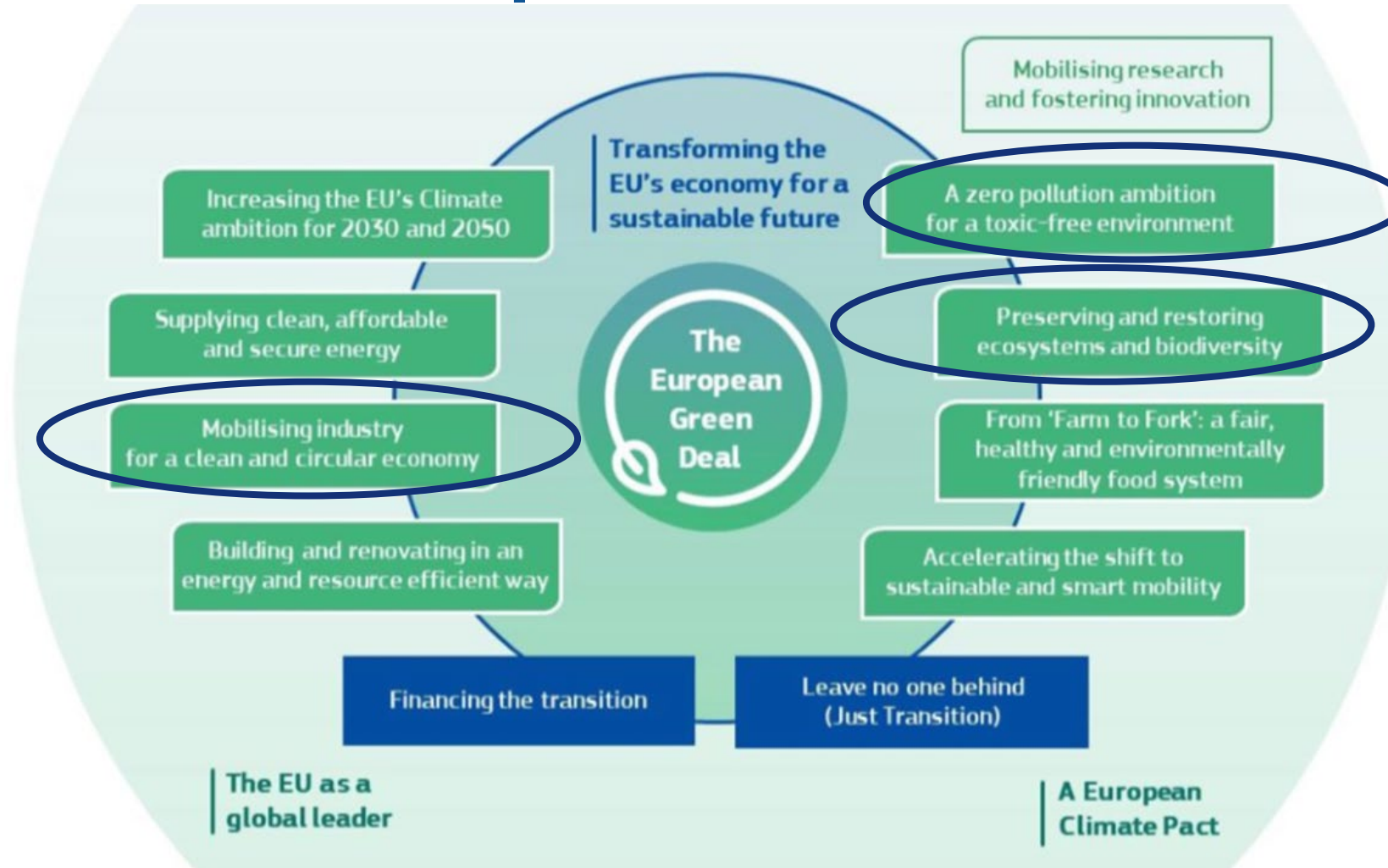
**UNECE Second Regional Conference:
Measuring and monitoring the circular economy and the
use of data for policymaking**

10 November 2021

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European Commission, Directorate General for

European Green Deal



Monitoring progress on Circular economy in the EU

Policy context

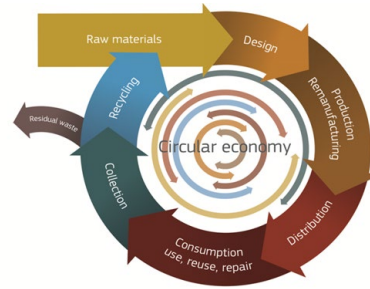


- EUROPEAN PARLIAMENT: (...) calling upon the Commission to develop indicators on resource efficiency to track progress towards circular economy (...)(EP Resolution of 9 July 2015)
- EUROPEAN COMMISSION: (...) the Commission will (...) propose a simple and effective monitoring framework for the circular economy (...) (Circular Economy Action Plan, 2 December 2015) : *“In order to assess progress towards a more circular economy and the effectiveness of action at EU and national level, it is important to have a set of reliable indicators. (...). On this basis, the Commission will work in close cooperation with the European Environment Agency (EEA) and in consultation with Member States to propose a simple and effective monitoring framework for the circular economy”*
- EU COUNCIL: (...) the need for a monitoring framework to strengthen and assess the progress towards CE, while minimising the administrative burden (...)

Monitoring progress on Circular economy in the EU

Principles

- Systemic Change [entire economy, all products & services]
- One, universal "circularity" indicator does not exist
- Need to cover all stages of the lifecycle [of resources, products & services] and overall economic aspects



Approach

- **10** individual indicators
- In **4** main groups
 - production/consumption;
 - waste management;
 - secondary raw materials,
 - competitiveness/innovation
- Covering the **entire loop**
- Capturing **main** CE elements
- Also presented on a **website**, continuously updated

EU Monitoring framework for the Circular economy

WHEN? 16 January 2018

HOW? within the mini-package on Circular Economy

WHO? Commissioners Bieńkowska, Vella and Thyssen
in agreement with FVP Timmermans and VP

Katainen

WHAT?

- Communication – [COM \(2018\) 29](#)
- Staff Working Document – [SWD \(2018\) 17](#)
- Website – [Eurostat dedicated section](#)

EU Monitoring framework for the Circular economy

Overview of the 10 indicators

1 EU self-sufficiency for raw materials

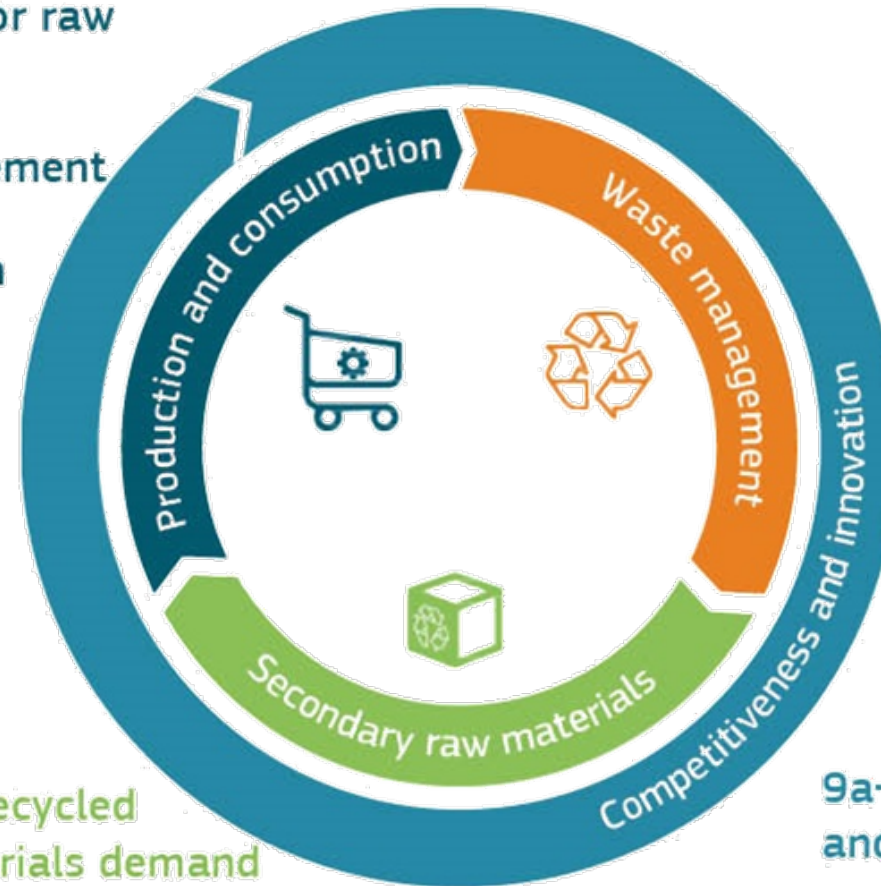
2 Green public procurement

3a-c Waste generation

4 Food waste

7a-b Contribution of recycled materials to raw materials demand

8 Trade in recyclable raw materials



5a-b Overall recycling rates

6a-f Recycling rates for specific waste streams

9a-c Private investments, jobs and gross value added

10 Patents

EU Monitoring framework for the Circular economy

What the indicators measure

1 EU self-sufficiency for raw materials

The share of a selection of key materials (including critical raw materials) used in the EU that are produced within the EU

2 Green public procurement

The share of major public procurements in the EU that include environmental requirements

3 a-c Waste generation

Generation of municipal waste per capita; total waste generation (excluding major mineral waste) per GDP unit and in relation to domestic material consumption

4 Food waste

Amount of food waste generated

5a-b Overall recycling rates

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

6 a-f Recycling rates for specific waste streams

Recycling rate of overall packaging waste, plastic packaging, wood packaging, waste electrical and electronic equipment, recycled biowaste per capita and recovery rate of construction and demolition waste

7 a-b Contribution of recycled materials to raw materials demand

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

8 Trade in recyclable raw materials

Imports and exports of selected recyclable raw materials

9 a-c Private investments, jobs and gross value added

Private investments, number of persons employed and gross added value in the circular economy sectors

10 Patents

Number of patents related to waste management and recycling



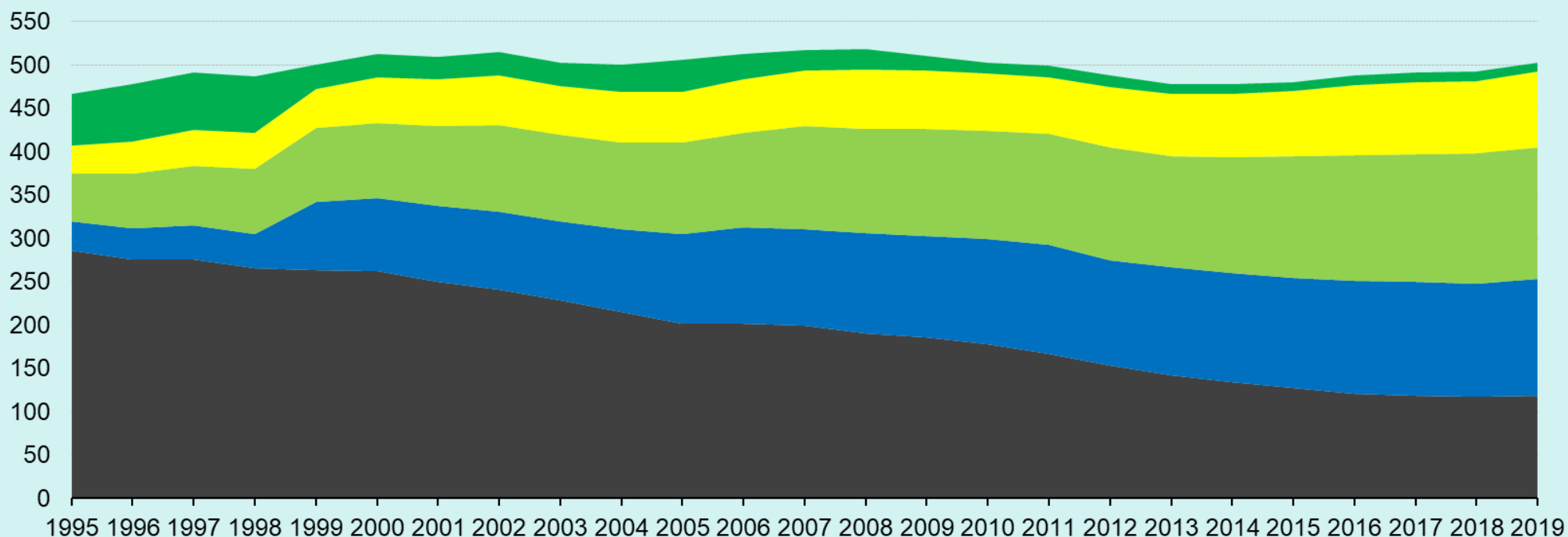
EU Monitoring framework for the Circular economy

Waste management



© istockphoto/Jaroslav Frank

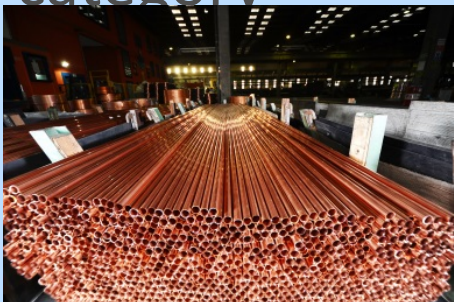
MUNICIPAL WASTE TREATMENT, EU-27 (KG PER CAPITA)



EU Monitoring framework for the Circular economy

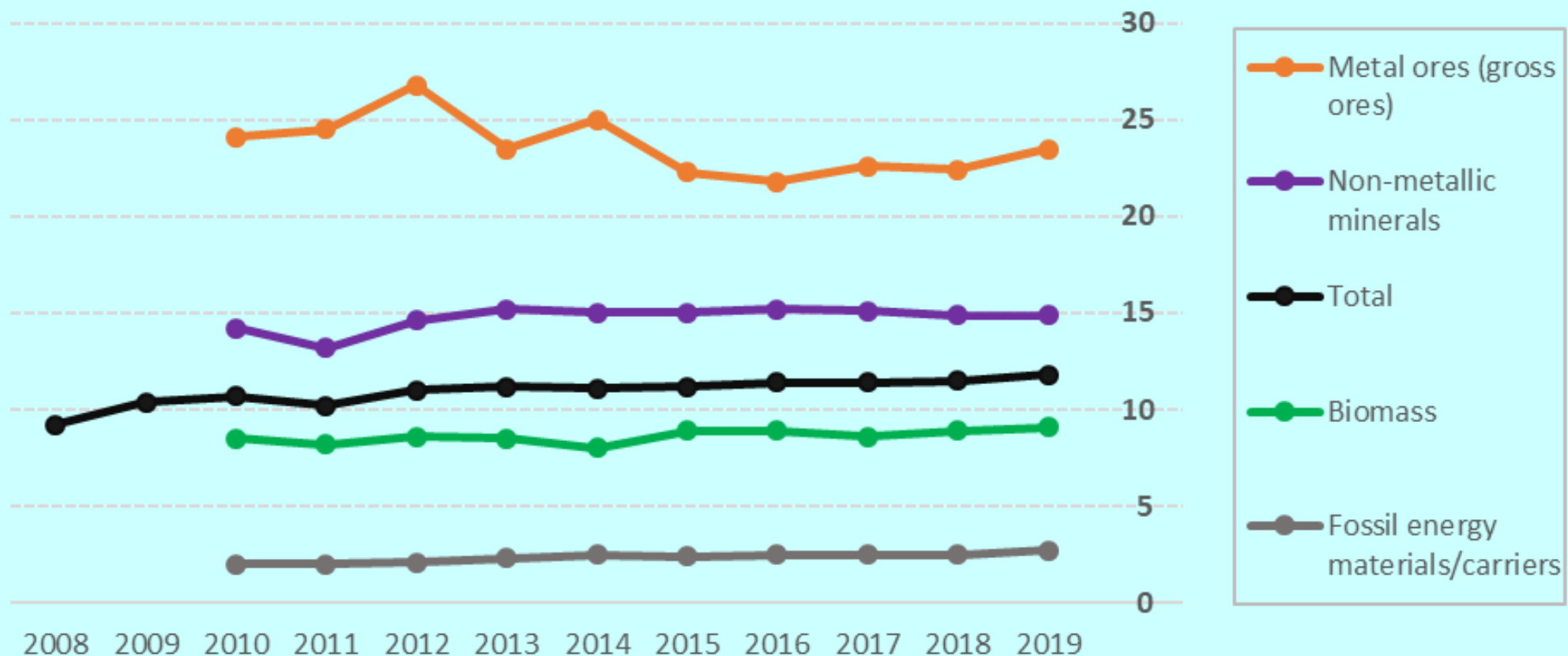
Secondary Raw Materials

Circular material use rate in the EU by material category



© istockphoto/skyono

CIRCULAR MATERIAL USE RATE, EU-27 (%)



EU Monitoring framework for the Circular economy

Web pages eurostat

MONITORING FRAMEWORK

Access the profile for every EU Member States by choosing a country from the dropdown list. Click on each dimension (or on the arrow) to expand/collapse the list of all indicators belonging to this dimension.

Choose a country: European Union

CIRCULAR ECONOMY INDICATORS Expand All Collapse All

Production and consumption

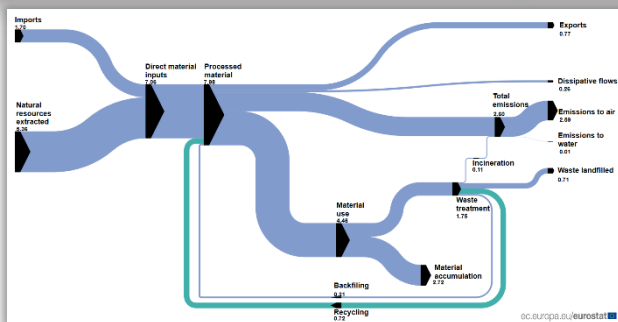
Indicator	Value	Trend
EU self-sufficiency for raw materials (percentage)	36.4 [2016]	N/A
Green public procurement	N/A	N/A
Waste generation		
Generation of municipal waste (per capita)	476 [2015]	
Generation of waste excluding major mineral wastes, per GDP unit	66 [2014]	
Generation of waste excluding major mineral wastes, per domestic material consumption	12.9 [2014]	

Recycling rate of municipal waste
Code: cei_wm011

The recycling rate, expressed in percentage, is the tonnage recycled from municipal waste ... [more](#)

geo	time	2011	2012	2013	2014	2015
EU (28 countries)		39.6 ⁹	41.5 ⁹	42.2 ⁹	43.7 ⁹	45.0 ⁹
EU (27 countries)		39.8 ⁹	41.7 ⁹	42.4 ⁹	43.9 ⁹	45.2 ⁹
Belgium		54.3	53.1	52.7	53.2	53.4
Bulgaria		26.2	25.0	28.5	23.1	29.4
Czech Republic		17.0 ⁹	23.2 ⁹	24.2 ⁹	25.4 ⁹	29.7 ⁹
		43.2	45.1	46.3	63.8	66.1 ⁹
		17.9	31.3	28.3		

Source of Data: Eurostat



Circular material use rate (cei_srm030)
Indicator Profile (ESMS)
Data tables: cei_srm030
Compiling agency: Eurostat, the statistical office of the European Union

Eurostat metadata		Eurostat Quality Profile	
Reference metadata		4.5. Source data	
1. Contact		ESS	
2. Metadata update		5.1. Frequency of dissemination	
3. Relevance		Every 2 years	
4. Statistical Indicator		5.2. Timeliness	
5. Frequency and Timeliness of dissemination		T-2 years	
6. Coverage and comparability		6.1. Reference area	
7. Accessibility and clarity		All EU MS	
8. Comment		6.2. Comparability - geographical	
Related Metadata		All EU MS	
Annexes (including footnotes)		6.3. Coverage - Time	
		> 10 years	
		6.4. Comparability - over time	
		> 4 data points	

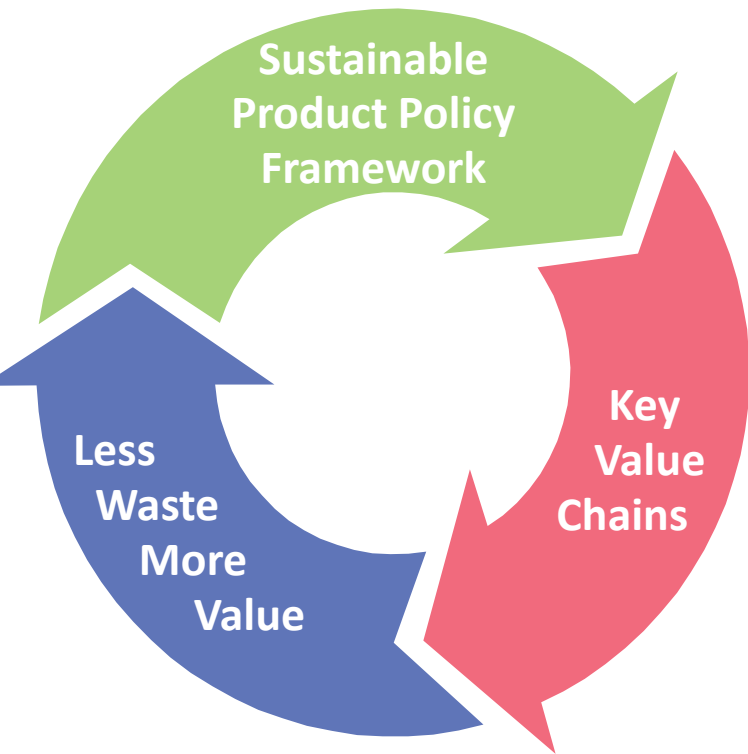
Description of Eurostat quality grading system under the following link: [link](#)

For any question on data and metadata, please contact: [EUROPEAN STATISTICAL DATA SUPPORT](#) [Download](#)

1. Contact	
1.1. Contact organisation	Eurostat, the statistical office of the European Union
1.2. Contact organisation unit	E2: Environmental statistics and accounts; sustainable development
1.5. Contact mail address	2920 Luxembourg LUXEMBOURG

2. Metadata update	
2.1. Metadata last certified	28/11/2017
2.2. Metadata last posted	28/11/2017
2.3. Metadata last update	28/11/2017

A new Circular Economy Action Plan – March 2020



Make sustainable products the norm in the EU
Empower consumers and public buyers
Sustainable production processes

Electronics and ICT
Batteries and vehicles
Packaging
Plastics
Textiles
Construction and buildings
Food, water and nutrients

Reduce Waste
Reduce Waste Exports
Boost market for high quality and safe secondary raw materials

Making circular economy work for people, regions and cities

Circular economy as a requisite for climate neutrality

Getting the Economics Right

Financial Markets

Investments and R&I

Global Level Playing Field

Monitoring

Actions on Monitoring progress



Monitoring
Framework for the
Circular Economy

“ revision of the monitoring framework for a circular economy to add new indicators (interlinkages between circularity, climate neutrality and the zero pollution ambition)”



Indicators on
resource use

“ development of indicators on resource use, including consumption and material footprints to account for material consumption and environmental impacts associated to our production and consumption”

Monitoring progress on Circular economy 2.0

Current approach

- **10** individual indicators
- In **4** main groups
 - production/consumption;
 - waste management;
 - secondary raw materials,
 - competitiveness/innovation
- Covering the **entire loop**
- Capturing **main** CE elements
- Also presented on a **website**, continuously updated



New approach

- **12** individual indicators
- In **5** main groups
 - production/consumption;
 - waste management;
 - secondary raw materials;
 - competitiveness and innovation;
- Covering the **entire loop**, more balance
- **Holistic view**
- **Website**

EU Monitoring framework for the Circular economy 2.0

What the newly proposed indicators measure

1 Material consumption

- 1a Domestic material consumption (DMC)
- 1b Material Footprint (Raw Material Consumption - RMC)
- 1c Resource productivity (GDP/DMC or RMC)
- 1d Consumption of toxic chemicals

3 d-e Waste generation

- 3d Total waste generation per capita
- 3e Packaging waste generation per capita

6 g Recycling rates for specific waste streams

- 6g Recycling rate for key product value chains (e.g. textile, batteries)*

10 Innovation

- 10b Eco-innovation index

Global sustainability and resilience

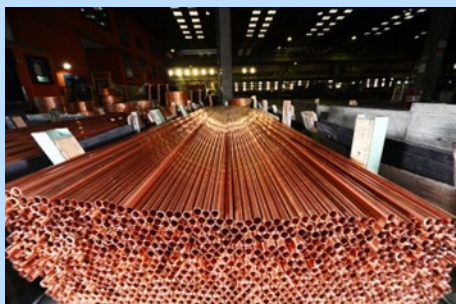
- 11a Consumption footprint
- 11b Contribution to climate neutrality and zero pollution *
- 12b Material import dependency

* Placeholder: data availability to be confirmed

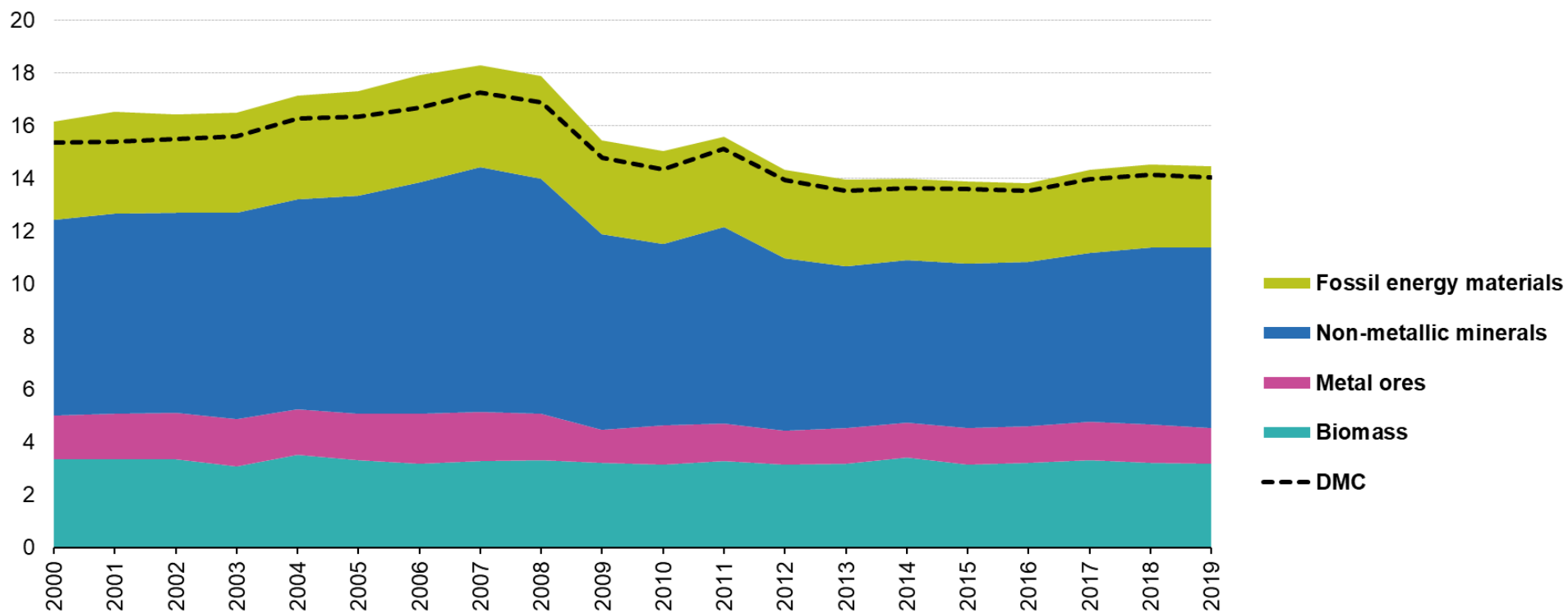
Possible new indicators for the Circular economy

Production and consumption

Material footprint by material category



Raw material consumption (RMC) by main material categories, EU, 2000-2019
(tonnes per capita)



Source: Eurostat (online data codes: env_ac_mfa, env_ac_rme)

Possible new indicators for the Circular economy

Production and consumption

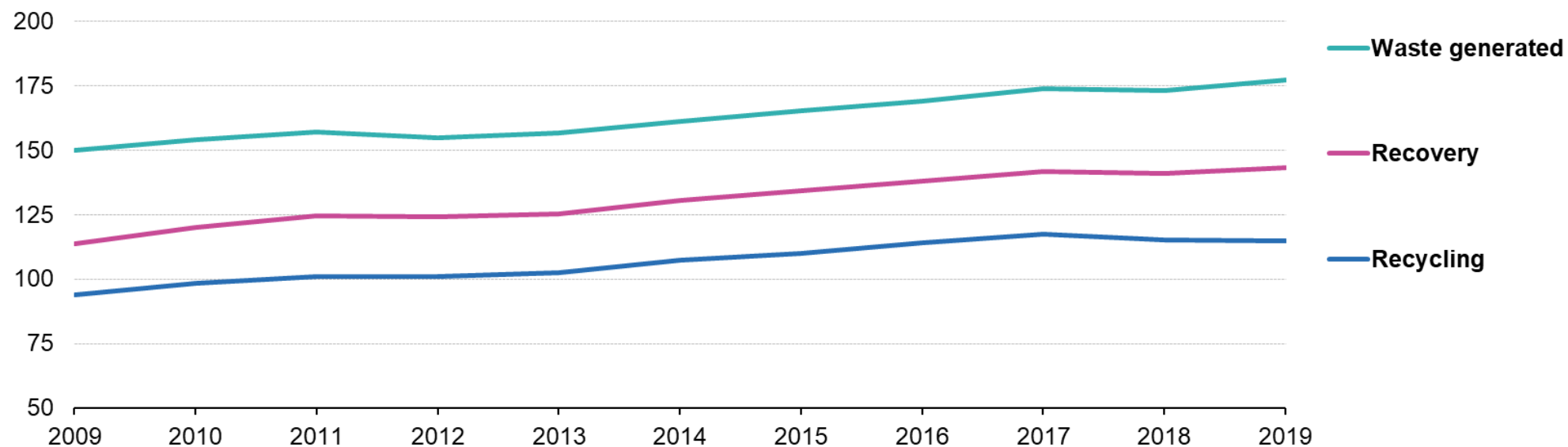
Generation of packaging waste



© istockphoto/Jaroslav Frank

Packaging waste generated, recovered and recycled, EU, 2009-2019

(kg per capita)



Note: Eurostat estimates between 2009 and 2011 as well as in 2019. The y-axis is cut.

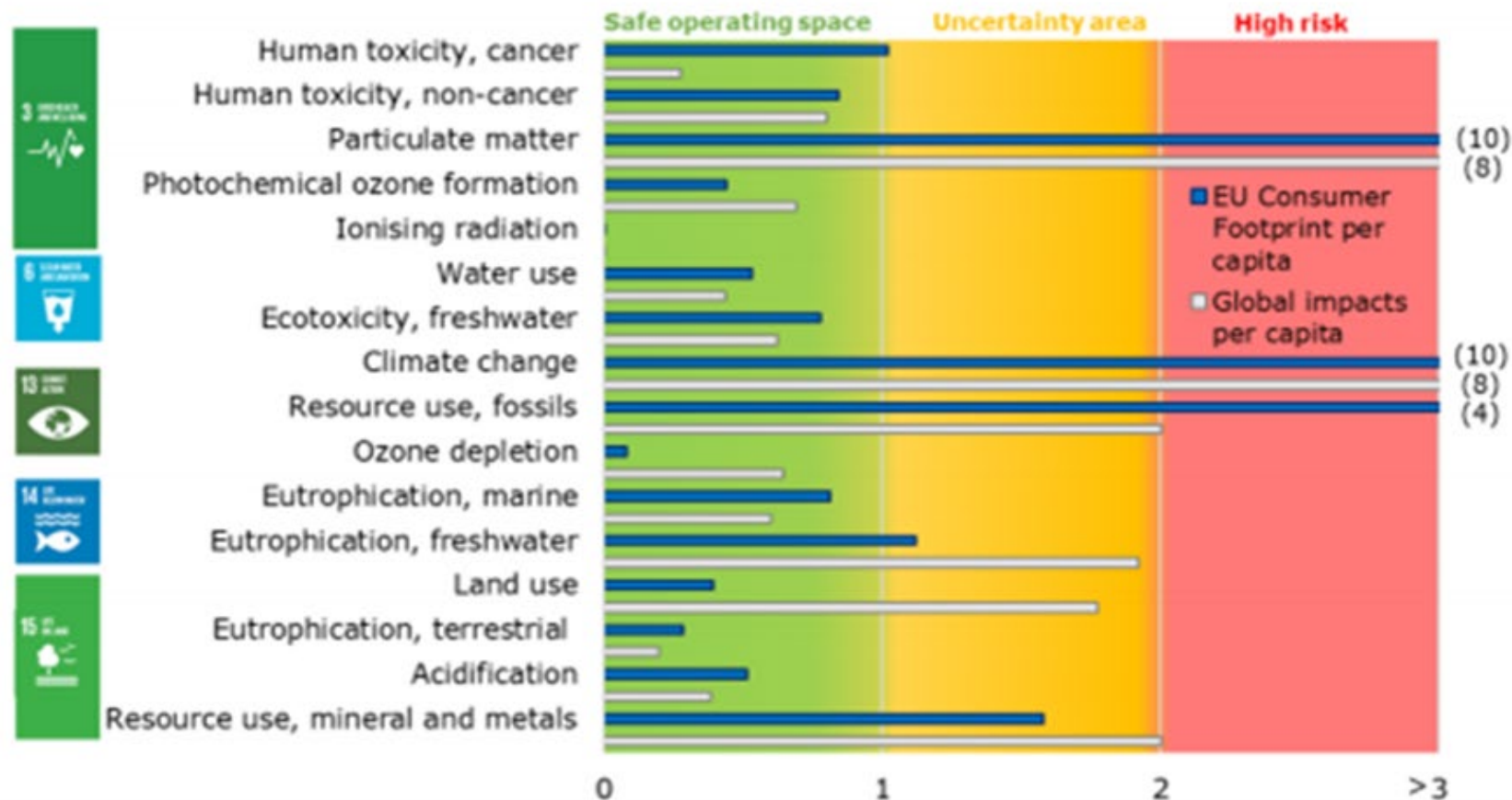
Source: Eurostat (online data code: env_waspac)

Possible new indicators for the Circular economy

Global sustainability and resilience

Consumption footprint

Figure 40. EU Consumer Footprint per capita, compared to global (whole world) impact per capita and Planetary Boundaries



Number in brackets refer to the extent to which impacts are overcoming Planetary Boundaries

Better monitoring circular economy

Improving the EU monitoring framework by 2021

1. Linking to priorities of the new circular economy action plan
2. Considering the opinions from other EU institutions and stakeholders
3. Bellagio declaration on principles for monitoring CE
4. Contribution to monitor the 8th Environment Action Programme

Supporting other initiatives on circular economy metrics

- For cities (EU Urban partnership on circular economy, OECD)
- For regions (SCREEN)
- For nations - in the EU and beyond (EC-UNEP GPGC programme)
- For business
- For SDGs (global and EU indicators)
- PACE, G7 alliance on RE: initiatives on CE metrics



Circular economy in the EU

To know more

European Commission priority European Green Deal:
https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

DG Environment:
https://ec.europa.eu/environment/circular-economy/index_en.htm

DG Internal Market, Industry, Entrepreneurship and SMEs:
https://ec.europa.eu/growth/industry/sustainability_en

Eurostat:
<http://ec.europa.eu/eurostat/web/circular-economy>

The screenshot shows a dashboard titled "CIRCULAR ECONOMY". It features a circular arrow icon with a globe in the center. The main text explains the circular economy's goal: to maintain the value of products, materials, and resources for as long as possible by returning them to the product cycle at the end of their use, while minimizing waste. It notes that fewer products discarded mean less material extraction, which is better for the environment. The process starts at the beginning of a product's lifecycle, involving smart design and production to save resources and create business opportunities. A "read more" link is provided.

HIGHLIGHTS

- Monitor the progress of your country**: Explore a monitoring framework tool to evaluate progress towards a circular economy by displaying all relevant indicators.
- Discover the circular economy**: A visualisation tool to learn more about the circular economy in an easily-understandable and fun way.
- Visualise flows of material resources**: Explore the simplified life cycle of materials in the EU - from the beginning through to material processing to their different uses and final stages, such as waste or recycling.

DIRECT ACCESS TO...

- Indicators
- Main tables
- Policy context
- Links

EXPLORE FURTHER

- Statistical articles on environment**: Have a look at our Statistics Explained articles on environment covering a range of topics, such as climate change, material flows,...
- Waste statistics**: Find here all information and easy access to our data on waste, including topics such as generation and treatment of waste,...

Thank you

More here:

https://ec.europa.eu/environment/circular-economy/index_en.htm



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