



## Circular Economy Action Plan

For a cleaner and  
more competitive  
Europe

# Monitoring progress towards the circular economy in the EU

**EEA/Eionet/ETC Expert Workshop  
Co-creation process on CE monitoring**

**7 May 2021**

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DG Environment, European Commission**

# 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

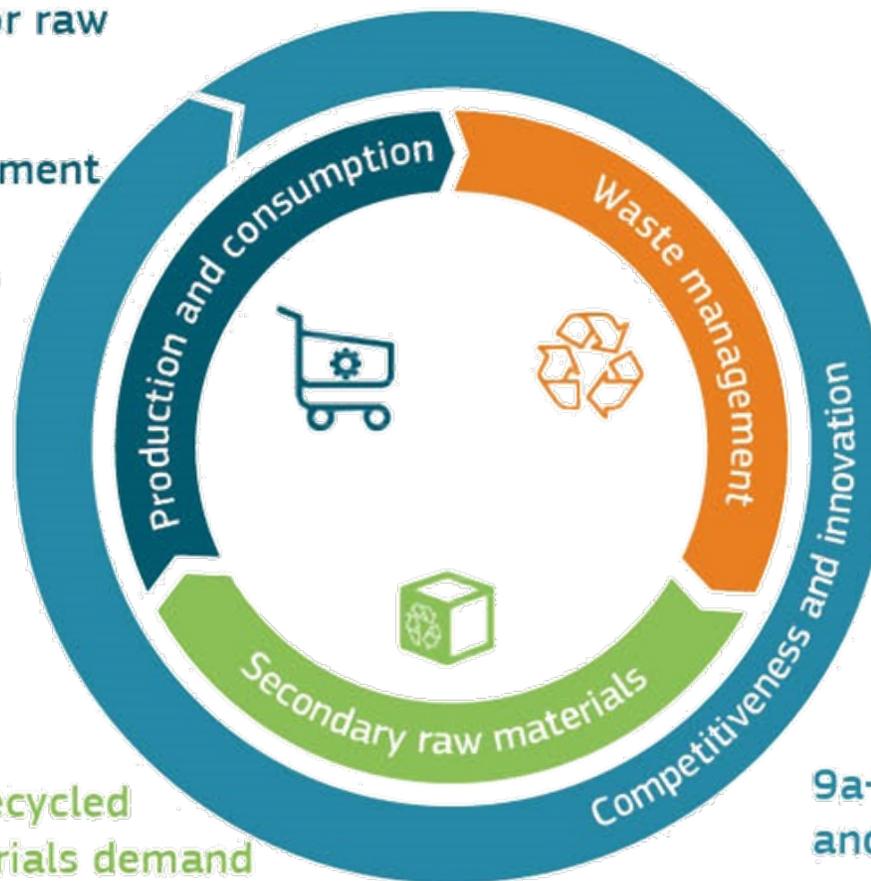
8 Trade in recyclable raw materials

5a-b Overall recycling rates

6a-f Recycling rates for specific waste streams

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

10 Patents



# Circular economy in the EU

## Communication

- ✓ Online database
- ✓ Indicators and trends
- ✓ Country Profiles
- ✓ Metadata
- ✓ Material flows diagram

Eurostat:

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

The screenshot shows the 'CIRCULAR ECONOMY' section of the Eurostat website. It features a header with the title and a gear icon. Below the header is a main article titled 'What is the circular economy about?' with a circular arrow icon. The article text explains the goal of a circular economy and provides a 'read more' link. Below the article are three main content blocks: 'HIGHLIGHTS' with a 'Monitor the progress of your country' card, 'DIRECT ACCESS TO...' with links to 'Indicators', 'Main tables', 'Policy context', and 'Links', and 'EXPLORE FURTHER' with 'Statistical articles on environment' and 'Waste statistics' cards. Each card includes an icon and a brief description. The interface is clean and modern, with a light blue and grey color scheme.

**CIRCULAR ECONOMY**

**What is the circular economy about?**

A circular economy aims to maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste.

The fewer products we discard, the less materials we extract, the better for our environment.

This process starts at the very beginning of a product's lifecycle: smart product design and production processes can help save resources, avoid inefficient waste management and create new business opportunities.

[> read more](#)

**HIGHLIGHTS**

**Monitor the progress of your country**

Explore our monitoring framework tool which will help you to easily evaluate your country's progress towards a circular economy by displaying all relevant indicators.

**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,...

# 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
<b>Waste generation</b>		
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]	

Eurostat - Tables, Graphs a... x +

http://ec.europa.eu/eurostat/tgm/table.do?tab=table

**eurostat**

Table Graph Map

2.4.2-r2159-2016-08-11 (PROD) Online support Legal Notice

**Recycling rate of municipal waste**

%

The recycling rate, expressed in percentage, is the tonnage recycled from municipal waste ... more

Code: cei\_wm011

geo	time	2011	2012	2013	2014	2015
<b>EU (28 countries)</b>		39.6 <sup>a</sup>	41.5 <sup>a</sup>	42.2 <sup>a</sup>	43.7 <sup>a</sup>	45.0 <sup>a</sup>
<b>EU (27 countries)</b>		39.8 <sup>a</sup>	41.7 <sup>a</sup>	42.4 <sup>a</sup>	43.9 <sup>a</sup>	45.2 <sup>a</sup>
<b>Belgium</b>		54.3	53.1	52.7	53.2	53.4
<b>Bulgaria</b>		26.2	25.0	28.5	23.1	29.4
<b>Czech Republic</b>		17.0 <sup>a</sup>	23.2 <sup>a</sup>	24.2 <sup>a</sup>	25.4 <sup>a</sup>	29.7 <sup>a</sup>
				43.2	45.1	46.3
				63.8	65.6	66.1 <sup>a</sup>
				17.9	31.3	28.3

Source of Data: Eurostat

**eurostat**

**Circular material use rate (cei\_srm030)**

Indicator Profile (ESMS)  
Data tables: cei\_srm030  
Compiling agency: Eurostat, the statistical office of the European Union

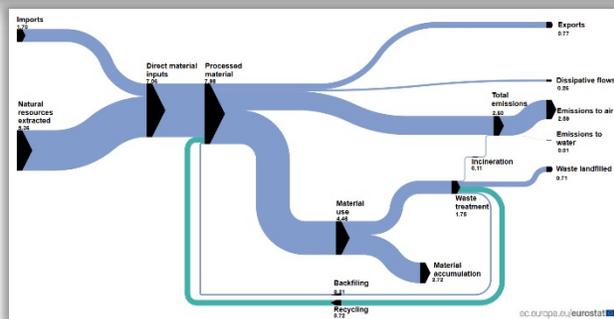
Eurostat metadata	Eurostat Quality Profile
<b>Reference metadata</b>	4.5. Source data: ESS
1. Contact	5.1. Frequency of dissemination: Every 2 years
2. Metadata update	5.2. Timeliness: T-2 years
3. Relevance	6.1. Reference area: All EU MS
4. Statistical Indicator	6.2. Comparability - geographical: All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

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



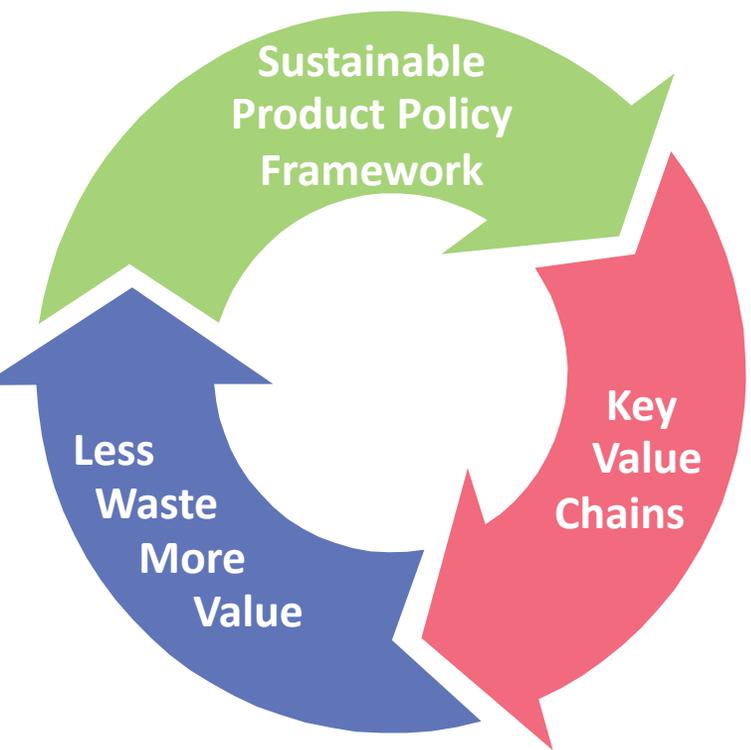
# Monitoring progress on Circular economy in the EU

## Policy context



- EU COUNCIL: (...) improve the proposed indicators or consider developing new ones in order to cover the full life cycle of products and services (...) (Environment Council conclusions of June 2018)
- ECONOMIC AND SOCIAL COMMITTEE: (...) missing a number of relevant indicators on eco-design, new business models, emissions data (...) (Opinion of July 2018)
- ENVI COMMITTEE OF EUROPEAN PARLIAMENT: (...) identified indicators focus primarily on waste generation (...); the introduction of indicators that measure the success in reducing harmful substances in the circular economy (...) (Draft Motion for Resolution of September 2018)
- EUROPEAN COMMISSION: (...) will update the monitoring framework for the circular economy (...) (Circular Economy Action Plan, 16 March 2020)

# 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”**



## Inter - Institutional debate

- ECONOMIC AND SOCIAL COMMITTEE: (...) move more quickly on the concept of measuring the wealth of an area, using new criteria, i.e. going beyond GDP (...) (Opinion of July 2020)
- COMMITTEE OF THE REGIONS: (...) imperative to decouple growth and resource use (...), reduction of CO2 along product life cycles (...) (Opinion of October 2020)
- EU COUNCIL: (...) improve the indicators or consider developing new ones in order to better cover, along the full value-chain, the life cycle of products and services, and the uptake of new and circular business models and approaches to manage resource consumption (...) (Environment Council conclusions of December 2020)
- EUROPEAN PARLIAMENT: (...) Urges the Commission to introduce by 2021 harmonised, comparable and uniform circularity indicators, consisting of material footprint and consumption footprint indicators, as well as a number of sub-indicators on resource efficiency and ecosystem services (...) (Own Initiative Report of February 2020)

# 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
4. Contribution to monitor the 8th Environment Action Programme



## Supporting other initiatives on circular economy metrics

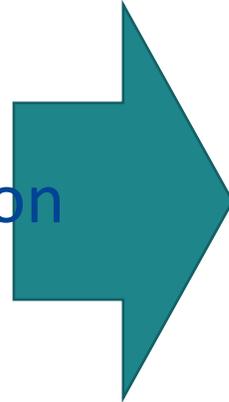
- For cities (EU Urban partnership on circular economy, OECD)
- For regions (SCREEN)
- For nations
- For business
- For SDGs (global and EU indicators)
- PACE initiative on CE metrics



# 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;
  - global sustainability and resilience
- Covering the **entire loop**, more balance
- **Holistic view**
- **Website**

# 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 g 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 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

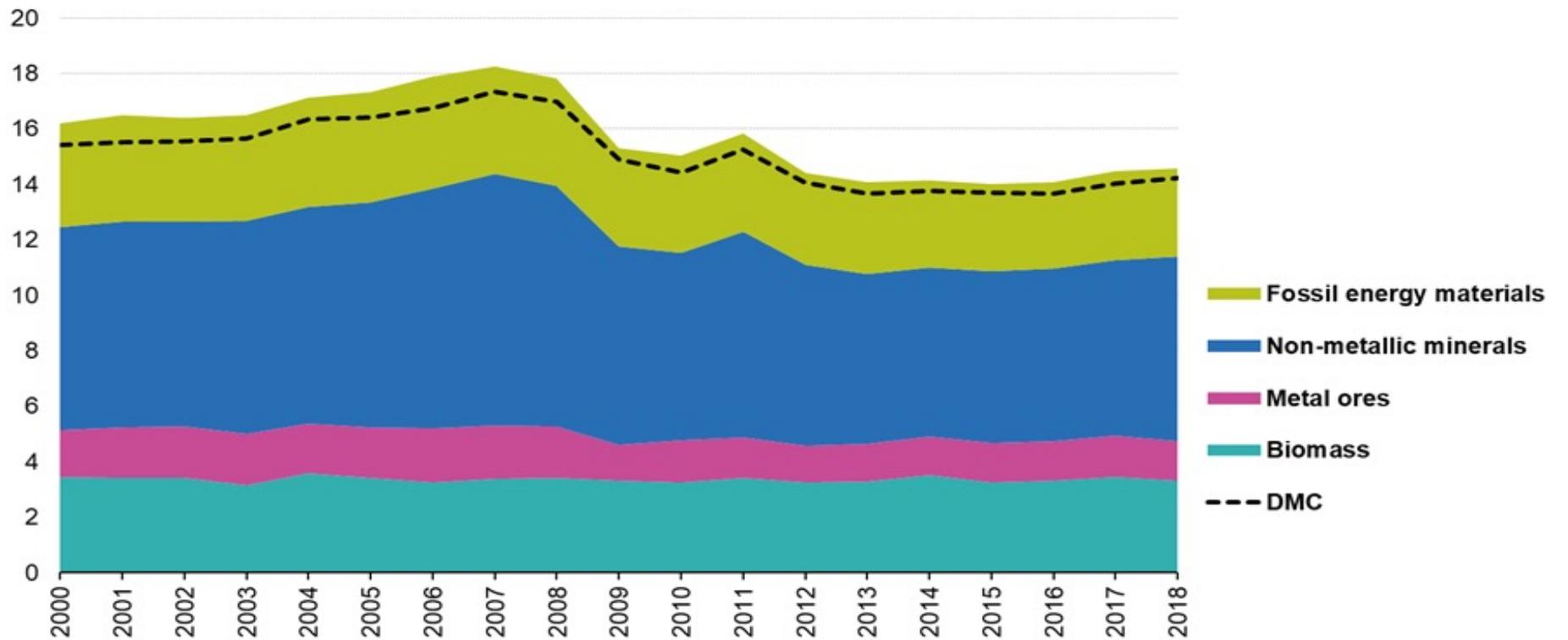
# Possible new indicators for the Circular economy

## Production and consumption

Material footprint by material category

**Raw material consumption (RMC) by main material categories, EU-27, 2000-2018**

(tonnes per capita)



Source: Eurostat (online data codes: env\_ac\_mfa, env\_ac\_rme)

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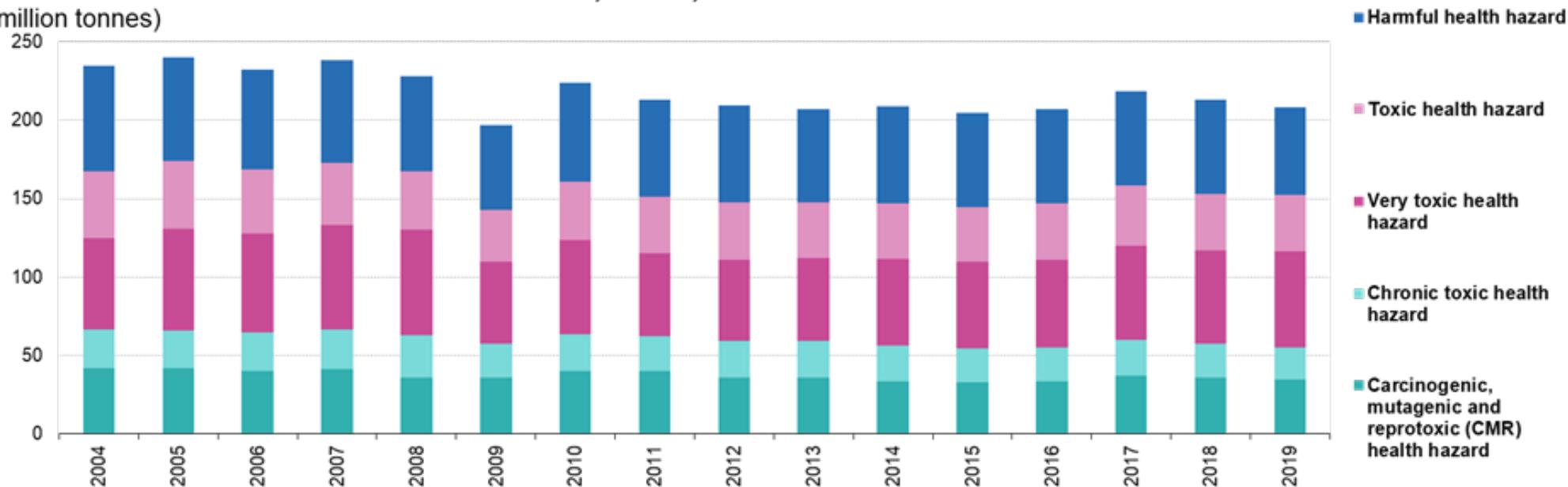
# Possible new indicators for the Circular economy

Production  
and  
consumption

Consumption  
of toxic  
chemicals

Production of chemicals hazardous to health, EU-27, 2004–19

(million tonnes)



Note: The different classes of chemicals are ranked according to their toxicity from the most dangerous (bottom class) up to the least dangerous (top class).

Source: Eurostat (online data code: env\_chmhaz)

eurostat 

# Possible new indicators for the Circular economy

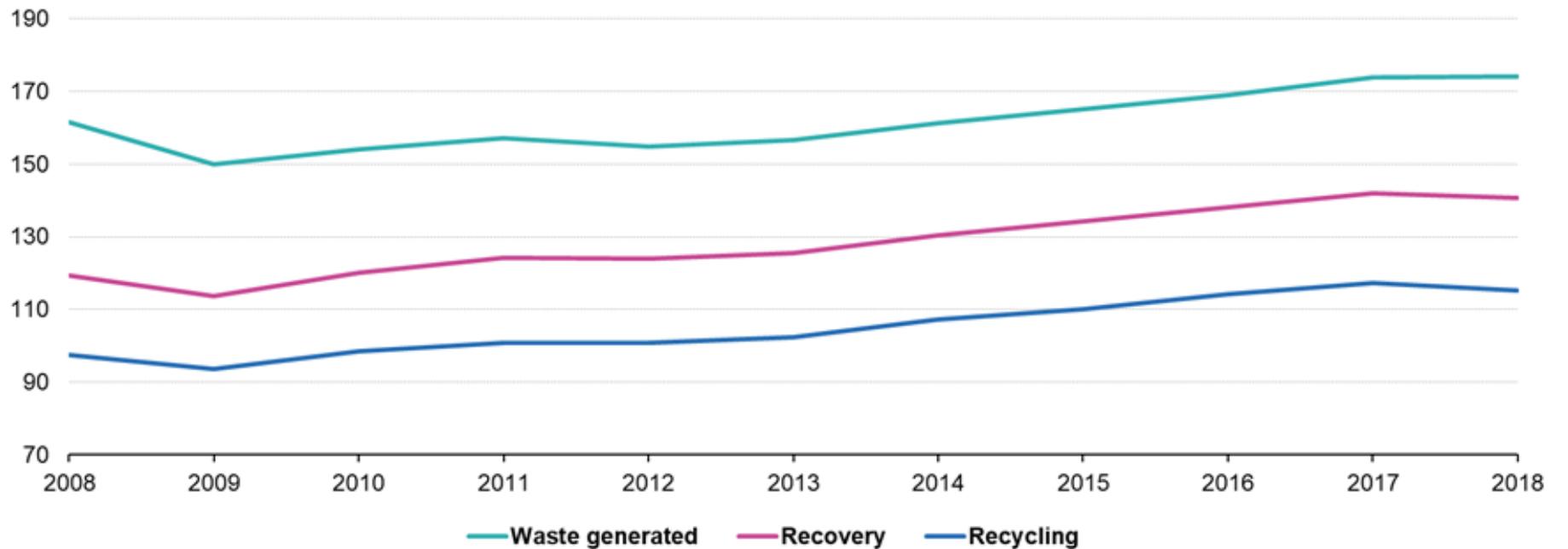
Production  
and  
consumption

Generation  
of packaging  
waste



© istockphoto/Jaroslav Frank

**Packaging waste generated, recovered and recycled, EU-27, 2008-2018**  
(kg per capita)



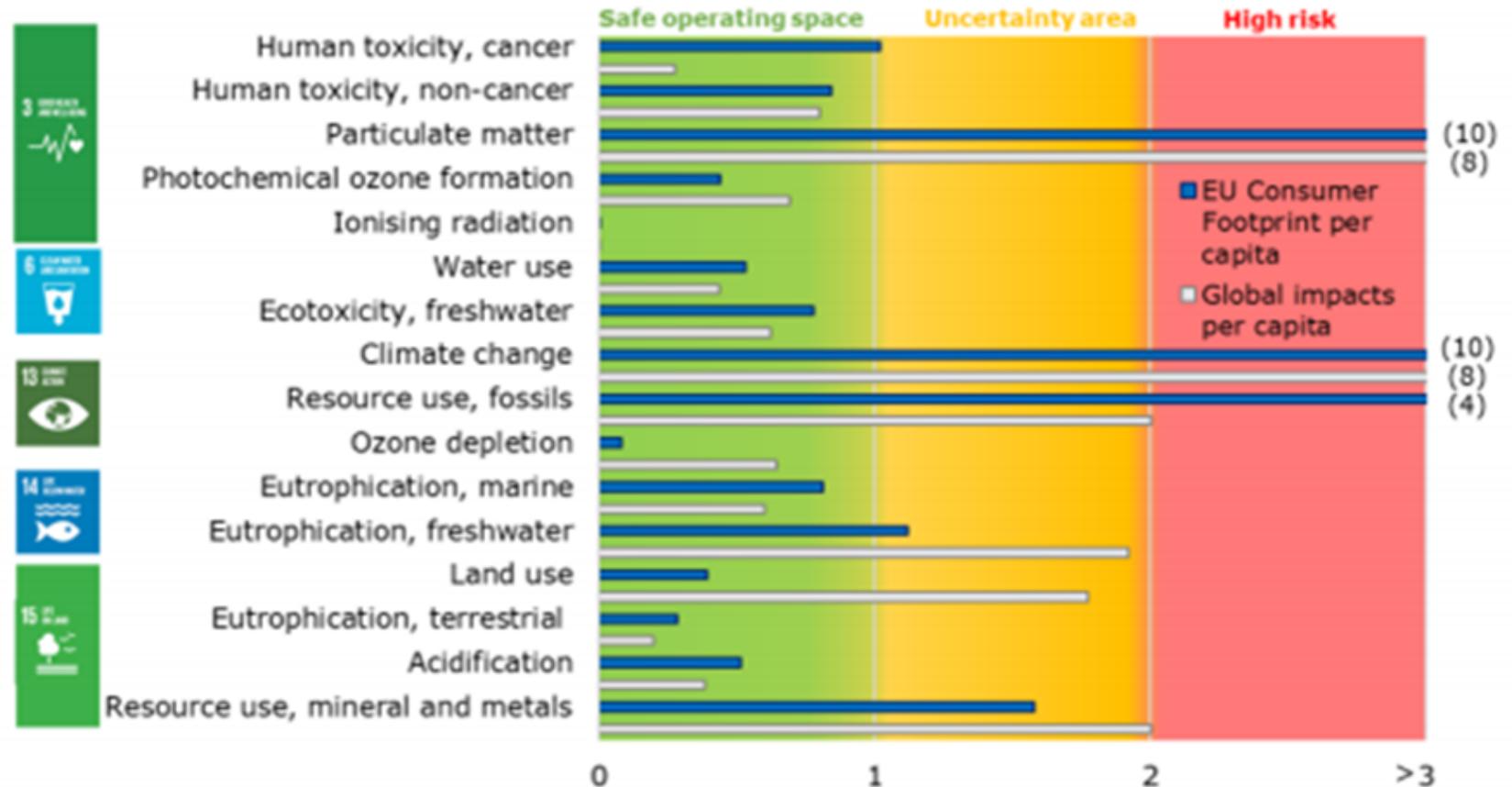
Note: Eurostat estimates between 2008 and 2011 as well as 2018. The y-axis is cut.

The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and location.

# 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

# WHAT NEXT?



# Tentative timeline



Discussion in the Commission

Consultation of Member States and stakeholders

Revised version and adoption

**EKC (February 2021)**

**Commission services (March)**

**WG on Environmental accounts (May)**

**Joint WG SPC / IPP (June)**

**Others (WG RMS, EEA/Eionet/ETC, ECESP)**

**Commission services, ISC (Autumn)**

**Commission adoption and website update (by end 2021)**

# Thank you

More here:

[https://ec.europa.eu/environment/circular-economy/index\\_en.htm](https://ec.europa.eu/environment/circular-economy/index_en.htm)



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