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Executive summary

If the European Union

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Resources are used inefficiently

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A powerful way

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1 Why resource efficiency matters

The Commission's 2018 Resource Efficiency Communication (COM(2018) 98) sets out the EU's strategy for resource efficiency. It highlights the need to move from a linear economy to a circular one, where resources are used more efficiently and waste is minimized. This transition is essential for achieving the EU's climate and environmental goals, as well as for creating a more sustainable and competitive economy.

The Commission's 2020 Circular Economy Action Plan (CEAP) further elaborates on this strategy, outlining a series of measures to promote resource efficiency across various sectors. These measures include:

- Product Policy:** Encouraging the design of durable, repairable, and recyclable products.
- Waste Management:** Improving waste collection and recycling rates, and promoting the use of recycled materials.
- Industrial Symbiosis:** Encouraging companies to share resources and waste, reducing their overall environmental footprint.
- Public Procurement:** Encouraging public authorities to purchase more sustainable and resource-efficient products and services.
- Research and Innovation:** Supporting research and innovation in resource-efficient technologies and processes.

The Commission's 2022 Circular Economy Package (CEP) builds on the CEAP, introducing a series of new measures to further promote resource efficiency. These measures include:

- Waste Directive:** Revising the Waste Directive to improve waste management and recycling rates.
- Product Policy Directive:** Introducing a new Product Policy Directive to encourage the design of more sustainable and resource-efficient products.
- Industrial Symbiosis Directive:** Introducing a new Industrial Symbiosis Directive to encourage companies to share resources and waste.
- Public Procurement Directive:** Revising the Public Procurement Directive to encourage public authorities to purchase more sustainable and resource-efficient products and services.
- Research and Innovation Programme:** Supporting research and innovation in resource-efficient technologies and processes.

The Commission's 2024 Circular Economy Package (CEP) further builds on the CEP, introducing a series of new measures to further promote resource efficiency. These measures include:

- Waste Directive:** Revising the Waste Directive to improve waste management and recycling rates.
- Product Policy Directive:** Introducing a new Product Policy Directive to encourage the design of more sustainable and resource-efficient products.
- Industrial Symbiosis Directive:** Introducing a new Industrial Symbiosis Directive to encourage companies to share resources and waste.
- Public Procurement Directive:** Revising the Public Procurement Directive to encourage public authorities to purchase more sustainable and resource-efficient products and services.
- Research and Innovation Programme:** Supporting research and innovation in resource-efficient technologies and processes.



1. Commission Communication (COM(2018) 98).

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2 The environmental case for resource efficiency

2.1 The impact of resource over-use on the planet

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(IPCC, 2022). The current status of the nine planetary boundaries is shown in Figure 2. The boundaries are: 1. Climate Change: Exceeding the 1.5°C limit. 2. Ocean Acidification: Exceeding the 0.1 pH limit. 3. Land Use Change: Exceeding the 15% limit. 4. Freshwater Use: Exceeding the 4,000 km³ limit. 5. Nitrogen Cycle: Exceeding the 60 Tg N limit. 6. Phosphorus Cycle: Exceeding the 11 Tg P limit. 7. Air Quality: Exceeding the 3.6 µg/m³ limit. 8. Biodiversity Loss: Exceeding the 10% limit. 9. Chemical Pollution: Exceeding the 100 Tg limit.

Figure 2: Current status of the nine planetary boundaries

Source: (Rockström et al., 2009). <https://doi.org/10.1016/j.pbi.2019.01.002>

Y x .M x

Figure 3: Global contribution of materials vs remaining economy and households to CO2 emissions and land-related biodiversity loss, 1995 – 2022

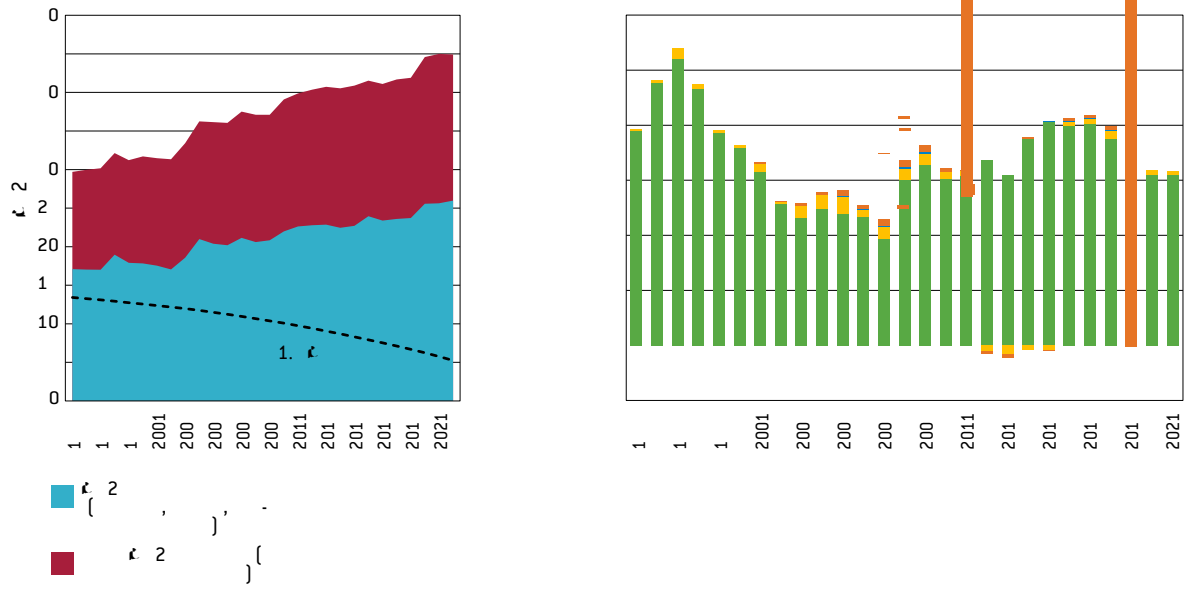


Figure 5: Raw material productivity, raw material consumption and GDP, EU14, 1970 – 2021 (1970 = 1)

2.4 The EU's progress towards circularity so far

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3 The economic case for greater resource efficiency

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3.1 Economic security and strategic autonomy

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4 How to improve the circular single market: policy recommendations

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Table 1: Barriers to resource efficiency

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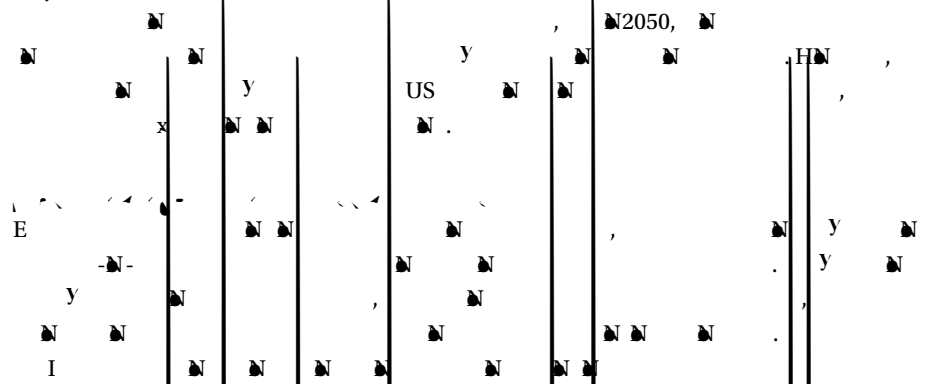
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... (EEA, 2024).

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Figure 6: Corporate attitudes to the circular economy, Germany, 2024

... the development of a circular economy more of an opportunity or a risk for your company's business model?

A... (B&B 1).

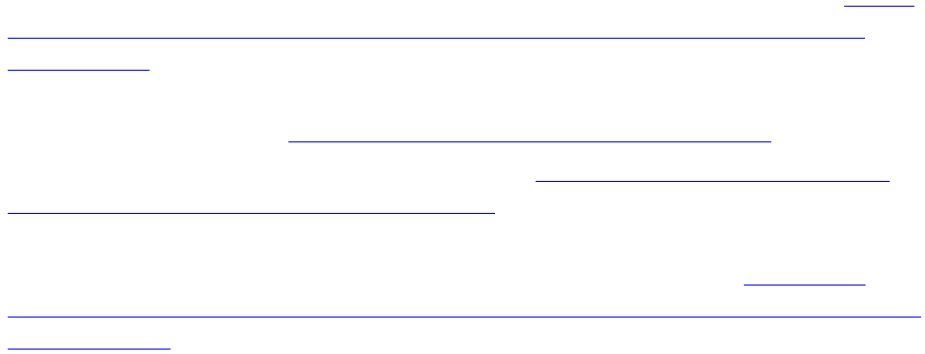
Box 1: Circularity metrics

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6 Conclusion

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Annex 1

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Figure A1: categorisation of economic activities to extraction and processing vs remaining economy and households

$y = x + y'$ (1)

