Circular economy country profile 2024 – The Netherlands

European Environment Agency
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Circular economy and resource use

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Contents

Introduction

The European Commission requested the EEA to produce EU country profiles that offer an updated view of the following elements:

- what circular economy policies are being implemented at a national level with a particular focus on elements that go beyond EU mandatory elements, and
- what are best practices with a focus on policy innovation.

With the EU Circular Economy Action Plan (CEAP 2020) "the Commission [..] encourages Member States to adopt or update their national circular economy strategies, plans and measures in the light of its ambition".

These country profiles originate in the work leading to the EEA More from less report (2016)[1], that presented an overview of approaches to material resource efficiency and to circular economy in thirty-two European countries. The More from Less report was followed by the 2019 EEA Report 'Resource efficiency and the circular economy in Europe 2019 – even more from less: An overview of the policies, approaches and targets of 32 European countries'[2].
It presented an updated and extended assessment of approaches and identified trends, similarities and new directions taken by countries in the connected policy areas of resource efficiency and the circular economy.
These reports, comprising a compilation of extensive survey responses from countries, were accompanied by 32 country profiles.

In the second quarter of 2022 a new survey with questions and guidelines was launched. Based on information reported by the Eionet network, in particular, the Eionet Group on Circular Economy and Resource Use, and after review and editing by the European Topic Centre on Circular economy and resource use (ETC CE), the 30 2022 CE country profiles[3] were published alongside the EEA report 'Circular Economy policy innovation and good practice in Member States'[4] (2022).

These 2024 CE country profiles are an update of the 2022 ones and based on the responses of 29 countries to the survey questions and guidelines that were launched in March 2024. The information in the countries' responses was again reviewed and edited by the European Topic Centre on Circular economy and resource use. A selection of Eurostat data was made to further complement these country profiles.

The main objectives of these assessments and its updates are to: • stimulate exchange of information and share good practice examples among country experts; • support policymakers in Eionet countries, the European institutions and international organisations by providing an updated catalogue of circular economy actions being undertaken in European countries.

This circular economy country profile is based on information reported by the Eionet network and, in particular, the Eionet Group members on Resource Efficiency and Circular Economy in the second quarter of 2024. Proposals for the further development or amendment of policies represent the view of the reporting country. For the Netherlands, all input was provided by the Dutch Environmental Assessment Agency (PBL) and Rijkswaterstaat (RWS). The information was reviewed and edited by the European Topic Centre on Circular economy and resource use. A selection of Eurostat data was made to further complement this country profile.

[1] More from less — material resource efficiency in Europe — European Environment Agency (europa.eu)
[2] Resource efficiency and the circular economy in Europe 2019 — European Environment Agency (europa.eu)
[3] Country profiles on Circular Economy in Europe — Eionet Portal (europa.eu)
[4] draft-report-for-dg-env_final.pdf (europa.eu)

The information is current as of September 2024, when members of Eionet verified the content of this profile.

The Netherlands – facts and figures

GDP: EUR 1,067.6 billion (6.3 % of EU27 total in 2023)

GDP per person: EUR 59,710 (purchasing power standard) (133.7 % of EU27 (from 2020) total per person)

Use of materials (domestic material consumption (DMC))
176.7 million tonnes DMC (2.8 % of EU27 total in 2022)
9.9 tonnes DMC/person (70.2 % of EU27 average per person in 2022)

Structure of the economy (2023):
Agriculture: 1.9 %
Industry: 20.8 %
Services: 77.3 %

Employment in circular sectors:
105,173 people employed in CE sectors (2.5 % of EU total in 2021)
People employed expressed as a percentage of total employment: 1.1 % (compared to 2.1 % for EU average in 2021)

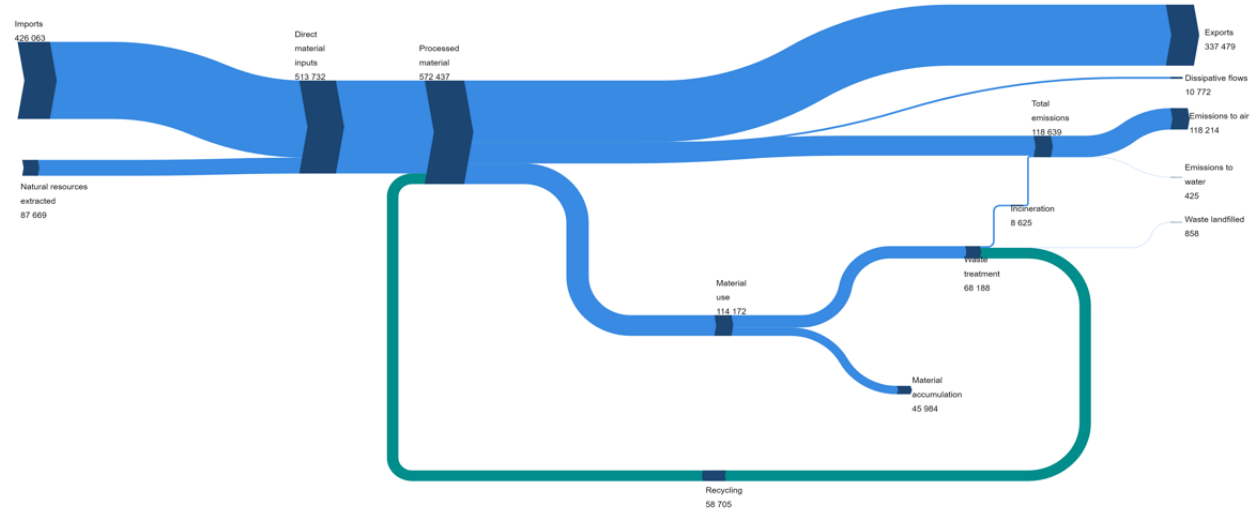
Surface area: 41,540 square kilometres (1.0 % of EU27 total)

Population: 17,811,291 (4.0 % of EU27 total in 2023)

Note: all definitions and metadata used in this profile are taken, as shown, from Eurostat

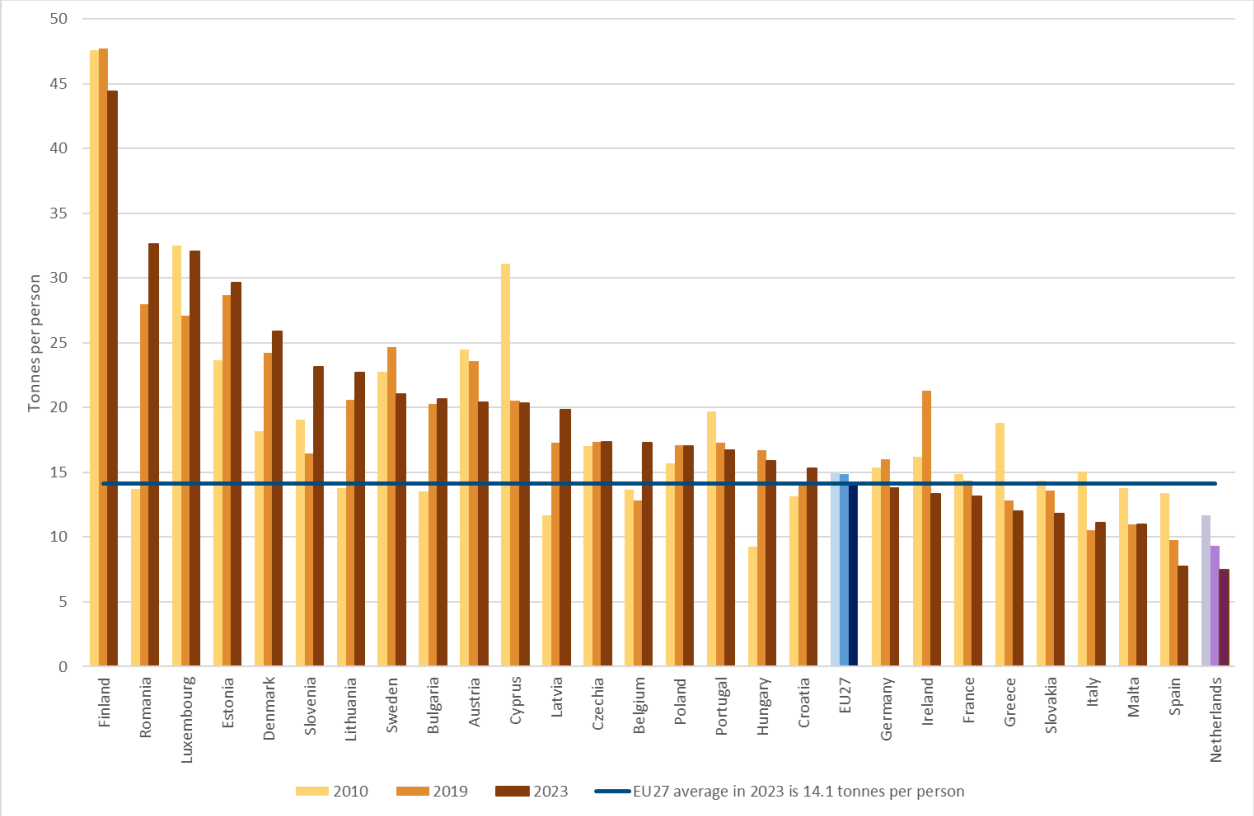
Source: Eurostat datasets, EU27 2021 EU27 2022 and EU27 2023 (accessed 21 August 2024)

Figure 1 Material flow diagram for Netherlands in 2022, thousand tonnes



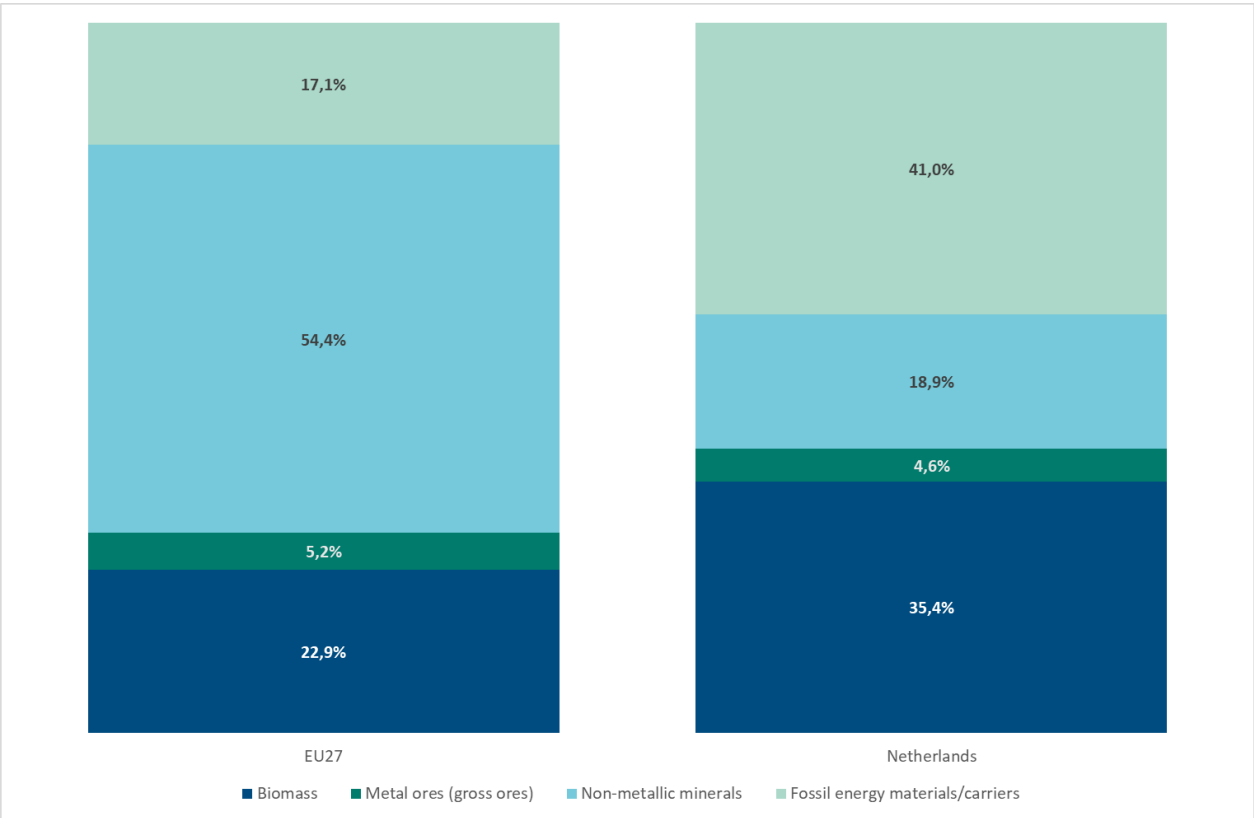
Source: Eurostat (2024) [env_ac_mfa], [en_ac_sd], [env_wassd] (accessed 21 August 2024)

Figure 2 Material footprint (raw material consumption), 2010,2019 and 2023, tonnes per person



Source: Eurostat (2024) [env_ac_rme] (accessed 21 August 2024)

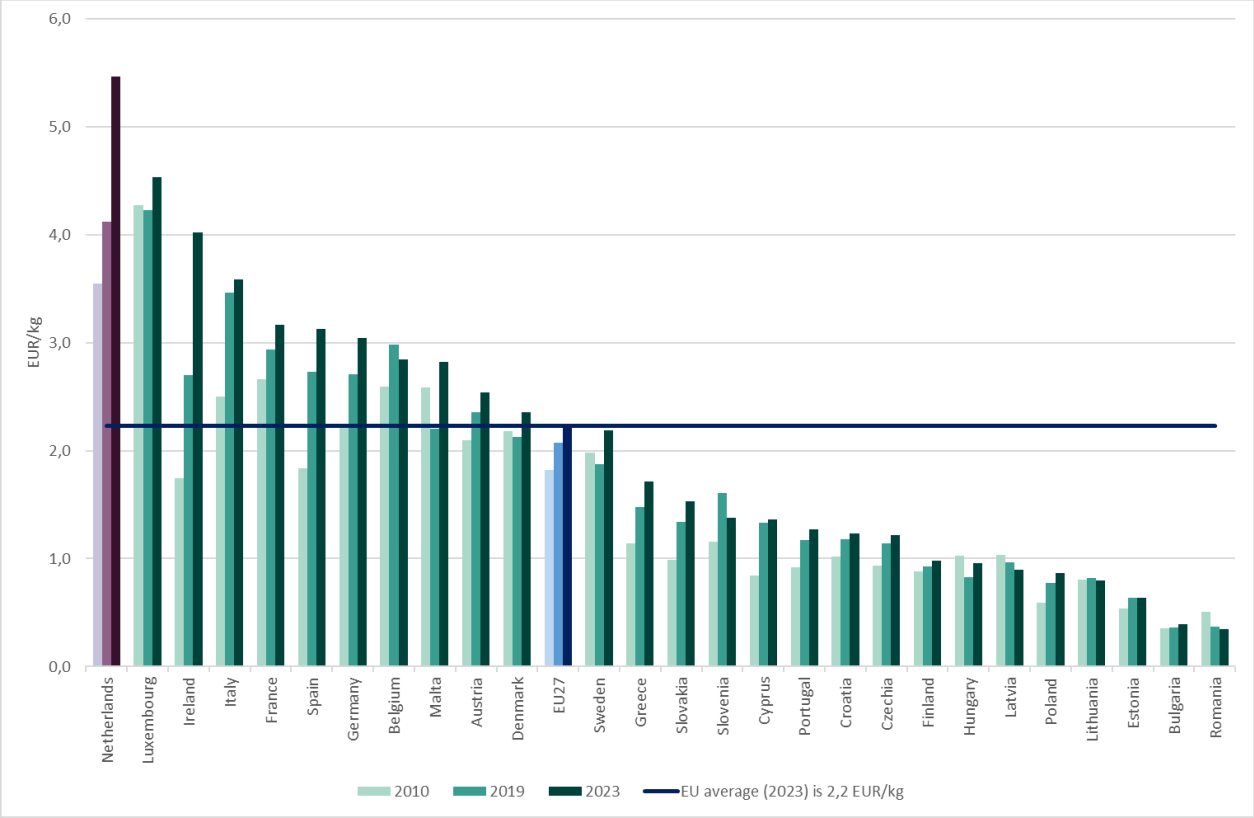
Figure 3 Domestic material consumption by selected material category, EU and the Netherlands, 2023, per cent



Note: totals may not sum to 100 % due to rounding

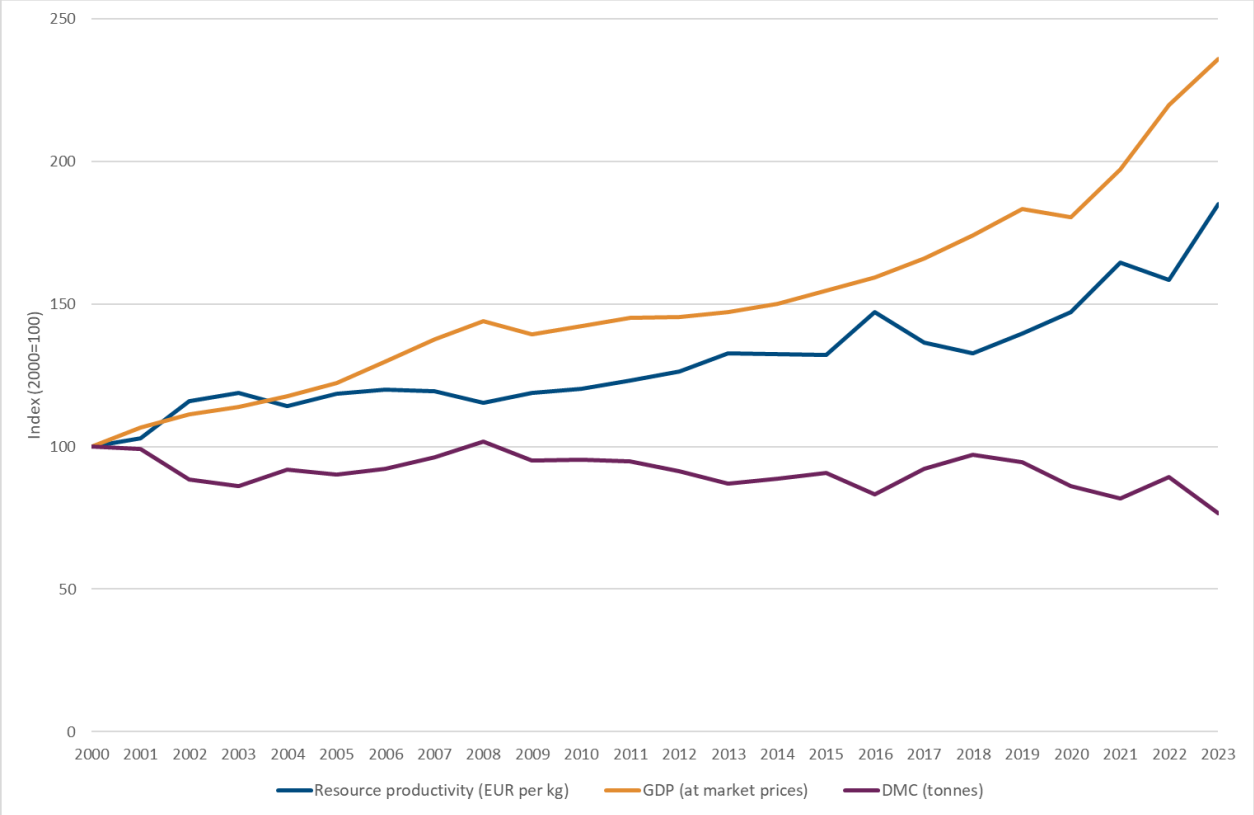
Source: Eurostat (2024) [env_ac_mfa] (accessed 21 August 2024)

Figure 4 Resource productivity (gross domestic product/domestic material consumption), EU27, 2010, 2019 and 2023, EUR per kilogramme



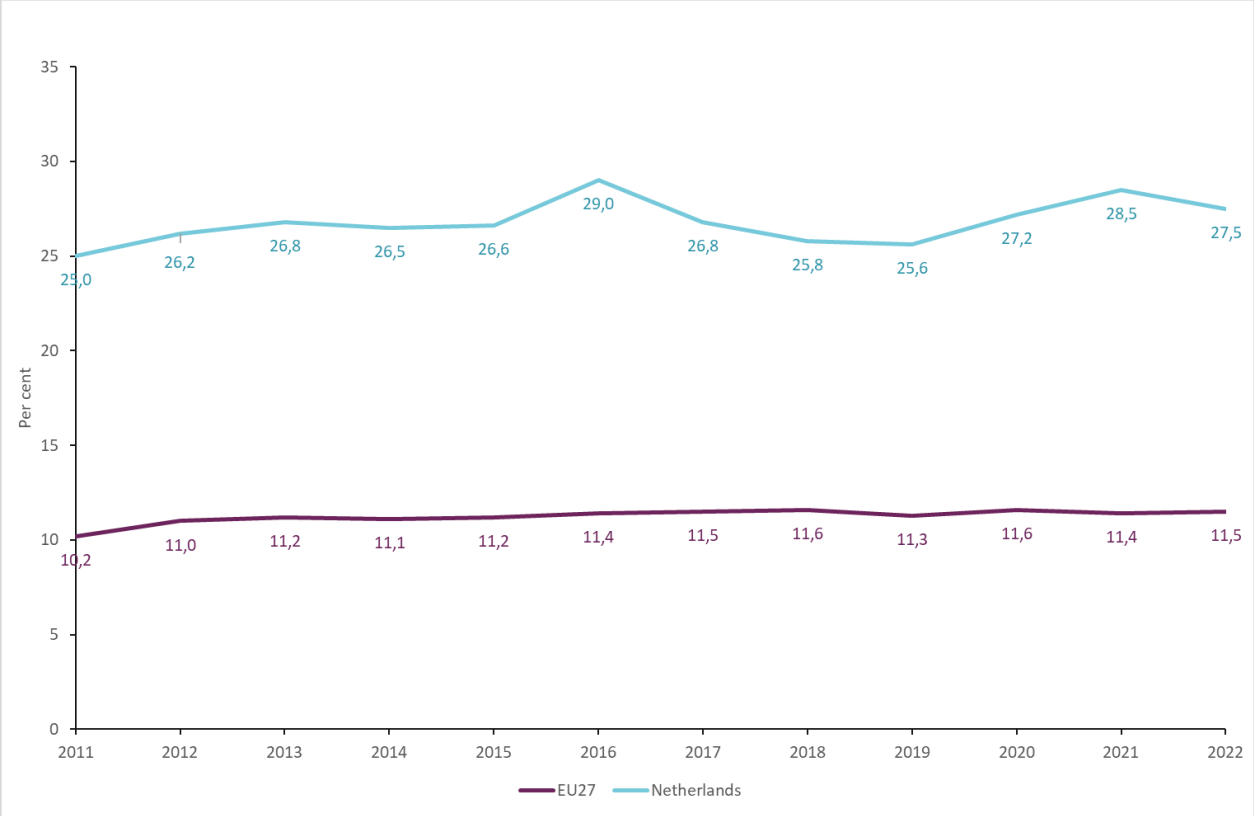
Source: Eurostat (2024) [env_ac_rp] (accessed 21 August 2024)

Figure 5 Gross domestic product, domestic material consumption and resource productivity trends, the Netherlands, 2000–2023, index (2000=100)



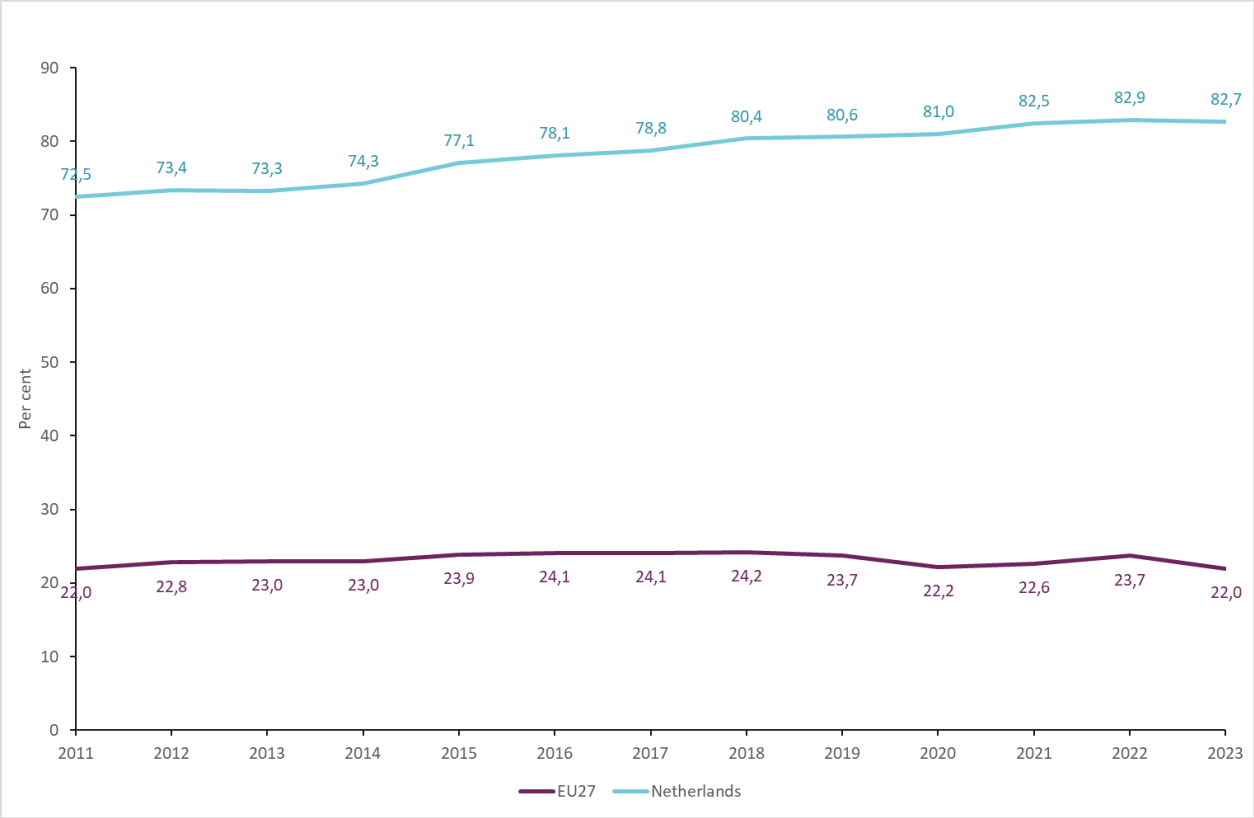
Source: Eurostat (2024) [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 21 August 2024)

Figure 6 Circular material use rate in the Netherlands, 2011–2022, per cent



Source: Eurostat (2024) [env_ac_cur] (accessed 21 August 2024)

Figure 7 Material import dependency in the Netherlands, 2011-2023, per cent



Source: Eurostat (2024) [cei_gsr030] (accessed 21 August 2024)

Existing policy framework

Dedicated national and/or regional and/or local strategy, roadmap or action plan for circular economy

The government-wide programme for a Circular Economy, entitled *A Circular Economy in the Netherlands by 2050*[5], was presented to the House of Representatives on 14 September 2016. The programme sets out what needs to be done to utilise raw materials, products and services in more efficient and smarter ways, thus enabling the realisation of the ambition for the Netherlands to be circular by 2050.

By 2030 consumption of primary abiotic raw materials should be halved.

The **main objectives** are:

- a 50 % reduction in raw material consumption by 2030;
- a circular economy by 2050.

The Dutch government has set out **three underlying goals** aimed at making the Dutch economy circular as quickly as possible.

1. To ensure production processes **use raw materials more efficiently**, so that fewer are needed.
2. When new raw materials are needed, to use sustainably produced renewable and widely available raw materials, such as biomass – raw material made of plants, trees and food waste. This will make the Netherlands **less dependent on fossil fuel resources**, and it is better for the environment.
3. To develop new production methods and design new products to be **circular.**

These national goals are linked to international goals to which the Netherlands is committed, including EU policies on the circular economy, the UN 2030 Sustainable Development Goals (SDGs) and the Paris Agreement on climate.

In January 2023, PBL (Netherlands Environmental Assessment Agency) published their second bi-annual Integral Circular Economy Report (ICER)[6]. This report describes in detail the progress towards the circular economy including **main messages** and findings for the Dutch Government: "*Circular goals are still far out of reach*".

In February 2023, the National Circular Economy Programme 2023-2030 (NPCE) was published[7]. With this programme, the Netherlands is building on the solid foundations which were laid down the years before. Every two years, an updated version will be published. The next version Is expected in September 2025.

The ambition is to be fully circular in 2050 and to get production and consumption within The Netherlands' planetary boundaries. With this circular goal, the Dutch climate goal is also supported.
Over 300 measures are described. **These measures are concentrated around four 'knobs'** which we can turn to get a more circular economy:

1) Reducing raw material usage
2) Substituting raw materials
3) Extending product lifetime
4) High-grade processing.

[5] https://www.government.nl/documents/discussion-documents/2017/01/24/national-agreement-on-the-circular-economy

[6] Integrale Circulaire Economie Rapportage 2023 | Planbureau voor de Leefomgeving (pbl.nl) (In Dutch)

[7] https://www.rijksoverheid.nl/documenten/beleidsnotas/2023/02/03/nationaal-programma-circulaire-economie-2023-2030 (available in Dutch and English)

Concrete targets have been formulated and specific policy has been developed for the most impactful product groups within these key targeted product chains, namely:

- **Consumer goods:** electric and electronic goods; packaging and disposables; textiles; furniture.
- **Plastics:** plastic packaging; plastics in the construction industry; plastics in agriculture.
- **Construction:** housing; offices and industrial buildings; concrete viaducts and bridges; road surfaces.
- **Manufacturing:** Capital Equipment; wind farms; solar PV systems; climate control systems.

The available knowledge on the progress of the circular economy is published every two years in an **Integral Circular Economy Report that mainly focusses on the national level**. The ICER 23[8] is the second of these that makes use of a nationally developed CE assessment policy framework. It also includes an assessment of the circular transition process with indicators. In the years between ICERs, a less extensive CE progress report[9] for the Netherlands is published. The 2022 report was the first of these.

In March 2023, PBL (Netherlands Environmental Assessment Agency) published the Working programme on Monitoring and Steering Circular Economy 2023-2024[10]. This document contains the actions of PBL and different knowledge institutes to get a better view on the transition towards the circular economy. The results are used in the ICER to be published in 2025.

One of the main issues towards the next NPCE in 2025 is to get to national goals for the years to 2030 and 2050. The 300 measures in the current NPCE are monitored twice a year to see their progress. The first step in this exercise was to make these measures SMART (specific, measurable, actionable, realistic, time-bound).

The shift to including regional measures is also one of the issues in our National Circular Economy Programme (see also section 2.3 of the programme). CE in the Region is a programme of Rijkswaterstaat in cooperation with regional authorities. Achievements of this programme are combined on the "Circular in the region" website[11]. See for instance the practical examples of circular neighbourhood initiatives or the Circular Economy region deals.

Circular Cities

No updates since 2022

Circular economy policy elements included in other policies

CE policy element	Included in policy
Environmental performance requirements for buildings	Construction policy (Ministry of Interior)
Promotion of circular agriculture	Biomass and food (ministry of agriculture, nature and food quality)
Development of waste management plan into circular materials plan (In Dutch)	Waste Management
Establish nationwide network of local reuse and repair centres (In Dutch)	National Circular Economy Programme 2023-2030

[8] Integral Circular Economy Report 2023. Assessment for the Netherlands (pbl.nl)
[9] https://www.pbl.nl/en/publications/circular-economy-progress-report-2022
[10] Werkprogramma Monitoring en Sturing CE 2023-2024 | Planbureau voor de Leefomgeving (pbl.nl) (In Dutch)
[11] https://www.afvalcirculair.nl/circulair-regio/ (in Dutch)

Government policy is made up by the government-wide circular economy, the government response to the transition agendas and the implementation programmes for the circular economy. In the government-wide circular economy programme, the Ministry of Infrastructure and Water Management has a coordinating role for circular economy policies. In addition, each of the following ministries is responsible for one or several transition themes:

- Ministry of the Interior and Kingdom Relations: construction (housing and non-residential);
- Ministry of Infrastructure and Water Management: construction (civil engineering);
- Ministry of Economic Affairs and Climate Policy: manufacturing industry;
- Ministry of Infrastructure and Water Management: plastics and consumer goods;
- Ministry of Agriculture, Nature and Food Quality: biomass and food.

There are also contacts with other Ministries about education, the labour market and fiscal policy.

A recent analysis shows that **the participating ministries are especially involved in the transition agendas which they oversee but less responsible for the circular economy policy as a whole**. These ministries also draw up specific and operational policies to stimulate the transition within the transition themes for which they are responsible. Examples include the toughening of environmental performance requirements for buildings, introduced by the Ministry of the Interior, and the promotion of circular agriculture by the Ministry of Agriculture.

Monitoring and targets

Assessment of circular economy performance

The European Commission has set up a monitoring framework to keep track of progress towards a circular economy. This framework provides a holistic view as it:

- measures direct and indirect benefits of 'becoming circular' and
- values the contribution of a circular economy in living well within the limits of the planet
- addresses energy and material supply risks.

It consists of **5 thematic sections** with a total of **11 statistical indicators**, some of which have additional sub-indicators. In some cases policy targets exist which should be achieved in the future, and the indicators monitor progress towards these targets. The current monitoring framework is a revision of the original framework which was set up in 2018.

This section elaborates on the assessment of the Netherlands' progress in terms of observed trends over the last 5 years and what country characteristics or policy actions may explain differences between the country its performance and the average EU performance.

One of the main tasks of PBL on the monitoring (and steering) of the Circular Economy is the **combination of the knowledge of different knowledge centres** into the ICER. The ICER is published every two years.

The main findings of the Integral Circular Economy Report 23 (ICER 23) are as follows:

"*So far, there is no noticeable acceleration in the transition to a circular economy in the Netherlands. Circular companies still make up no more than about 6% of the total number of Dutch companies, and financial support for circular activities has been constant for years, with about 10% of total support from the schemes surveyed. Many circular initiatives are still in an early phase, without many scale up or breakthrough activities. As yet, substantial market demand for and supply of circular products and services is lacking.*"

Table 1 The Netherlands, overview of material resource use and its impact Indicator Magnitude Trend

Indicator	Magnitude			Trend		Compared with EU27
	2010	2016	2018	2010-2018	2016-2018	per person, 2018
				%	%	%
Natural resources required						
Material resources for domestic use, DMC (mt)	195	193	195	0	1	-22
Material resource footprint domestic use, RMC (mt)**	–	–	–	–	–	–
Resource efficiency (GDP in EUR/kilo DMC)	3	4	4	12	5	+125
Material resources for the economy, DMI (Mt)	401	402	397	-1	-1	+95
Material resource footprint of the economy, RMI (Mt)	597	627	647	8	3	+89 (2017)
Share of bio-based resources (kilo/DMI, %)	24	25	26	8	5	+5
Total sustainable renewable material resources (kilo/DMI)	–	–	–	–	–	–
Share of secondary materials, CMUR (kilo secondary/DMI, %)	–	13	14	–	6	+167 (2017)
Use phase						
Lifespan	–	–	–	–	–	–
Value retention	–	–	–	–	–	–
Waste processing and recovery						
Dutch waste (Mt)	60	60	61	2	2	+44 (2016)
Share of recycled waste in processed waste (recycled waste/waste, %)	81 (2012)	79 (2012)	80	1*	1	+31
Waste recycled in the Netherlands (Mt)	54 (2012)	52	53	1*	3	+111 (2016)
Incinerated waste	10 (2012)	10	11	11	6	+74 (2016)
Landfilled waste in the Netherlands (Mt)	2	3	3	51	14	+81 (2016)
Effects						
Environmental impacts						
National greenhouse gas emissions ($MtCO_2$ eq.)	214	195	188	-12	-4	+33
Greenhouse gas emission footprint of consumption ($MtCO_2$ eq.)	300	252	282	-6	12	+35 (2015)
Greenhouse gas emission footprint of production ($MtCO_2$ eq.)	462	432	–	-7 (2016)	–	+54 (2015)
Emissions to air, water and soil, such as nitrogen and particulate matter	–	–	–	–	–	–
Land-use footprint of consumption (million ha)	10	–	10 (2017)	3 (2017)	–	-15 (2015)
Land-use footprint of production (million ha)	11	12 (2015)	–	9 (2015)	–	-28 (2015)
Water abstraction	–	–	–	–	–	–
Water footprint of consumption (km^3)	52 (2008)	–	–	–	–	+21 (2008)
Biodiversity footprint of consumption (million MSA loss ha/year)	19	–	–	–	–	+1 (2010)
Biodiversity footprint of production (million MSA loss ha/year)	20	–	–	–	–	+2 (2010)
Toxicity	–	–	–	–	–	–
Socio-economic impact						
Supply risks (indicator being developed)	–	–	–	–	–	–
Added value of circular activities (EUR billion)	28	31	34	23	9	–
Share circular activities (added value circular/GDP, %)	4	4	4	1	0	–
Circular employment (no. circular jobs, FTEs, '000*)	311	318	326	5	2	–
Circular employment share (no. circular jobs/total no. jobs, %)	4	4	4	-2	-2	–

Key

Trends
- Trend moving in right direction
- Trend moving in wrong direction
- Trend is stable, hardly any difference (up to 5%)

Compared with the EU27
- NL scores better than EU27
- NL scores worse than EU27
- Hardly any difference (up to 5%)

Notes

Deviating years are provided in brackets

* 2012–2018, no data available for 2010

** RMC requires new calculation

– No data available

CMUR Circular Material Use Rate

DMI Domestic material input

FTE Full-time equivalent

ha Hectare

km3 Cubic kilometres

Mt Million tonnes

$MtCO_2$ Million tonnes of carbon dioxide equivalent

MSA Mean Spicies Abundance

RMI Raw material input

Source: ICER21

Table 1 shows that **material resource use in the Dutch economy is more or less constant**. The total use of material resources has hardly changed since 2010, both in domestic consumption and the economy as a whole. Over the same period, however, biotic resource use, i.e. minerals, metals and fossil raw materials, has declined, by 0.5–1 % each year. Resource efficiency has increased by 12 % since 2010, but this improvement has not led to a significant change in the amount of materials used. **The material resource footprint of the Dutch economy increased by 8 %**, between 2010 and 2018. This footprint also includes the resources used in the production of materials, parts and products abroad.

With regard to country characteristics or policy action that may explain differences between the Netherlands and the average EU performance, the main findings of the ICER 21 state that **the Netherlands recycles 80 % of its waste**. This makes it one of the front runners in Europe, although it should be noted that this 80 % often involves low-grade recycling. The use of raw materials for Dutch consumption is 22 % lower than the EU average. In part because of the population density that makes the usage of the raw materials needed for infrastructure (roads, railroads and pipe systems) relatively efficient. Moreover, the Netherlands has a service-oriented economy.

The EU circular economy policy is of great importance to the Netherlands when it comes to taking further steps towards a circular economy. **Setting requirements for the use of material resources** in product design or **preventing the use of harmful substances in products** particularly requires an EU approach. If the EU were to elaborate its plans for producer responsibility and requirements for product design and repair, it would ensure a more level playing field between Member States. The Netherlands would benefit more than average from this, because of its very open economy and ambitious waste policy of recent decades, which has recently been further developed into a circular economy policy.

Circular economy monitoring frameworks and their indicators beyond the ones from Eurostat

At this moment PBL is conducting study on what is needed for the CE monitoring from 2025 until 2030. Particularly, PBL is researching which information, indicators and funds to find data.

The available knowledge on the progress of the circular economy is published every two years in an **Integral Circular Economy Report that mainly focusses on the national level**. The ICER 23[12] is the second of these that makes use of a nationally developed CE assessment policy framework. It also includes an assessment of the circular transition process with indicators. In the years between ICERs, a less extensive CE progress report[13] for the Netherlands is published. The 2022 report was the first of these.

The ICER focuses on **what the Netherlands needs to know and can measure** in the circular economy domain. It describes a framework for monitoring the transition to a circular economy, which comprises **two core elements**. The first addresses the **visualisation of material resource use** and the intended environmental and economic impacts of the transition. The second deals with the **transition process,** which is made up of various ways, action and efforts of government and societal stakeholders, and paves the way for achieving the intended impacts.

[12] Integral Circular Economy Report 2023. Assessment for the Netherlands (pbl.nl)
[13] https://www.pbl.nl/en/publications/circular-economy-progress-report-2022

Circular economy targets

The **overall target is still to be fully circular in 2050 and to be halfway in 2030**. The 'only' problem is having to determine the current state of the Netherlands. There is an ongoing debate going on with(in) the ministry on how to make these targets measurable. The current expectation is that the Netherlands will have nationwide legally targets within a year to be published in the second NPCE (in September 2025).

Innovative approaches and good practices

Examples of public policy initiatives (national, regional or local)

No updates since 2022

Examples of private policy initiatives (sectoral)

No updates since 2022

The way forward

Addressing barriers and challenges

The overall conclusion of the last ICER 23 was:

"The raw materials transition is essential for tackling major social problems. Current challenges include: climate change, loss of biodiversity, air pollution, water and soil and economic vulnerability. That deserves more attention from the whole cabinet. T**he policy implemented has not yet led to an acceleration in the Netherlands** transition to a circular economy and is not sufficient to achieve the ambition of halving of primary abiotic raw material use in 2030. A cabinet-wide one efforts are necessary to change the rules across the full breadth of government policy, so that circular solutions become the new norm."

In other words: **the transition is starting but it is not fast enough to reach the intermediate target in 2030.**

The barriers and challenges are dependent on the stakeholder in the circular economy transition.

Future policy plans

On October 4th 2022, the National Recovery and Resilience Plan[14] of the Netherlands was accepted by the European Commission, with a total budget of 5,2 billion euros.[15]

[14] Definitief Nederlands Herstel- en Veerkrachtplan | Rapport | Rijksoverheid.nl (in Dutch)
[15] No more Circular Economy-specific information was provided at this stage related to the Recovery and Resilience Plan of the Netherlands.

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