

Environmental accounts

Resource productivity in the EU up by 35% in 2015 compared with 2000

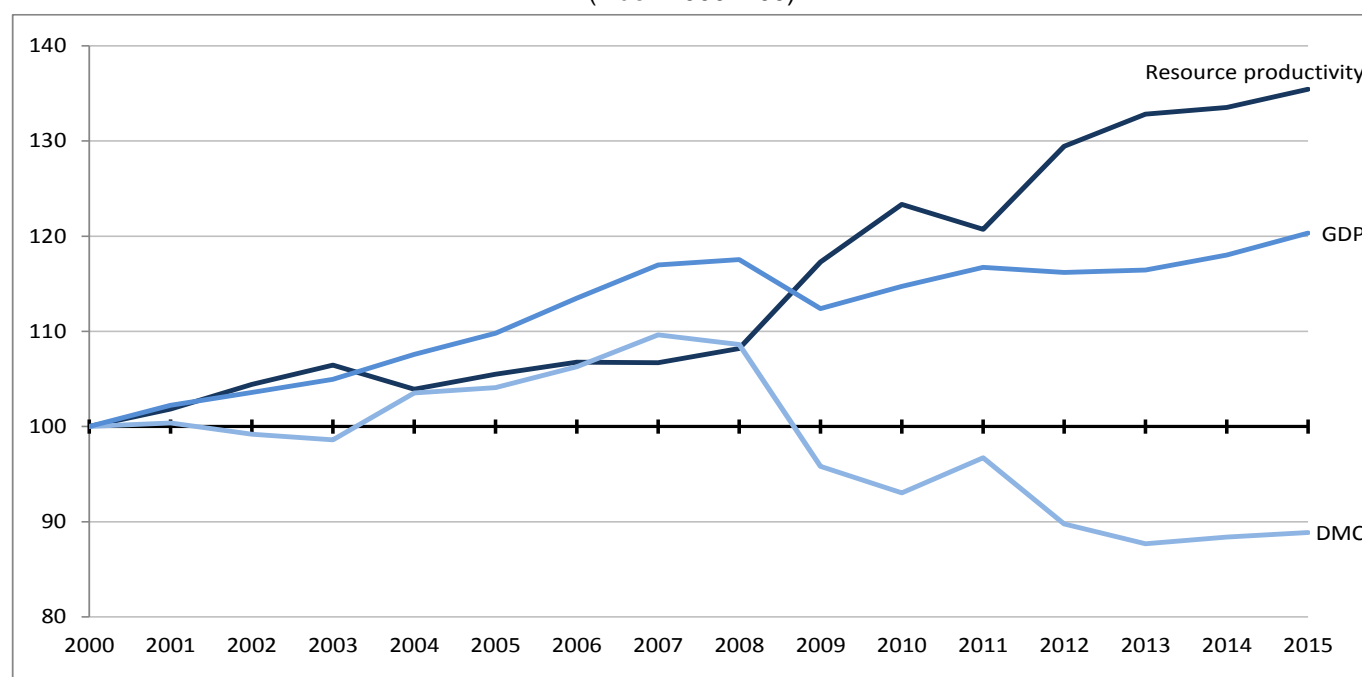
Maintaining economic growth while decreasing material consumption

In the **European Union** (EU), resource productivity increased to 2.00 €/kg in 2015 from 1.48 €/kg in 2000, an increase of 35.4% in real terms. Resource productivity measures how efficiently natural resources are used by the economy and indicates whether economic growth is compatible with a more efficient use of the natural resources from the environment. Since 2008, resource productivity progressed in the **EU** both by increasing economic activity, as measured by GDP, and by reducing the extraction of materials, as measured by domestic material consumption (DMC). In the previous period between 2000 and 2008, GDP and domestic material consumption grew in parallel in the **EU**, leading to relatively constant resource productivity.

According to the new DMC estimates for 2015, 13.2 tonnes of crops, minerals and metals were consumed per inhabitant in the EU, compared with 15.5 tonnes in 2000. This reduction is equivalent to savings of 2.3 tonnes per person, meaning that in 2015 more than 6kg less was consumed per person and per day than in 2000.

This information on material flow accounts and resource productivity in the **EU** comes from a [report](#) issued by **Eurostat, the statistical office of the European Union**. The amount of resources used by an economy plays a crucial role in the generation of environmental pressures, from the extraction of natural resources for production and consumption activities to materials released into the environment, e.g. disposal of waste and emissions to air and water. Moving towards a circular economy is at the heart of the resource efficiency agenda established under the Europe 2020 strategy for smart, sustainable and inclusive growth.

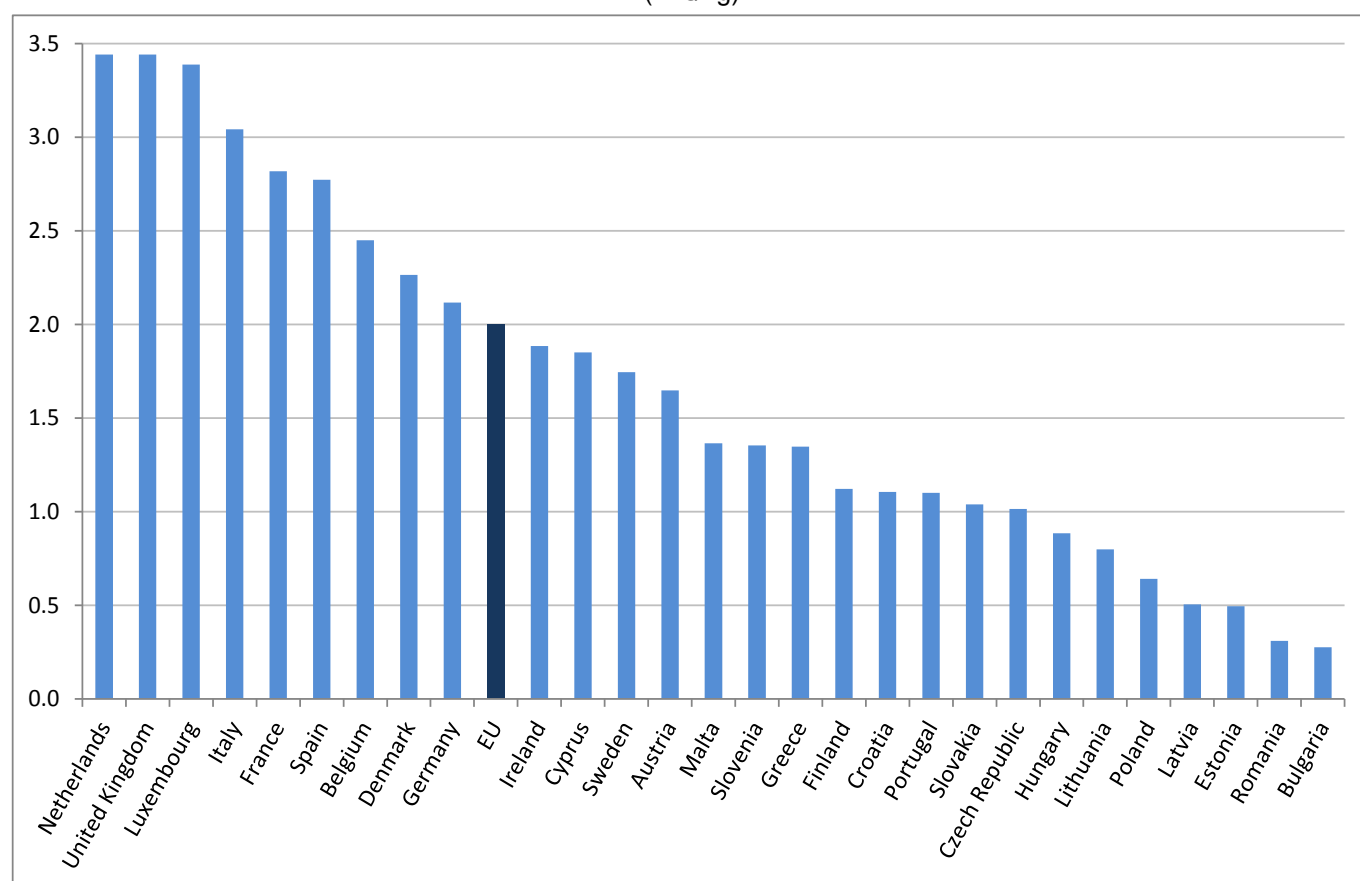
Development of resource productivity and its components in the EU, 2000-2015
(index 2000=100)



Resource productivity highest in the Netherlands, the United Kingdom and Luxembourg

The level of resource productivity varies widely between the EU Member States, depending on countries' natural resources, the diversity of their industrial activities, the role played by the services sector and by construction activities, the scale and patterns of consumption and the different energy sources. Across Member States, the highest resource productivity in 2015 was recorded in the **Netherlands** and the **United Kingdom** (both 3.44 €/kg), ahead of **Luxembourg** (3.39 €/kg) and **Italy** (3.04 €/kg). At the opposite end of the scale, seven Member States registered resource productivity lower than 1 €/kg: **Bulgaria** (0.28 €/kg), **Romania** (0.31 €/kg), **Estonia** and **Latvia** (both 0.50 €/kg), **Poland** (0.64 €/kg), **Lithuania** (0.80 €/kg) and **Hungary** (0.88 €/kg).

Resource productivity in the EU Member States, 2015
(in €/kg)



Largest growth in resource productivity in Spain and Cyprus

Compared with 2000, an overwhelming majority of EU Member States have seen their resource productivity in 2015 rise, with the highest increases being observed in **Spain** and **Cyprus** (both +120.3%), followed by **Ireland** (+98.2%), **Italy** (+85.4%), **Slovenia** (+65.9%), the **United Kingdom** (+64.2%) and the **Czech Republic** (+62.1%). In contrast, decreases were recorded in **Romania** (-35.8%), **Estonia** (-19.1%) and **Malta** (-7.6%).

Resource productivity mainly driven by domestic material consumption

An analysis of the resource productivity components helps to explain these developments. The Member States recording the highest increases in resource productivity were generally also those where domestic material consumption decreased the most. This was particularly the case for **Italy**, **Cyprus** and **Spain** where DMC almost halved between 2000 and 2015. Similarly, those Member States registering a decrease in resource productivity between 2000 and 2015 are those where domestic material consumption significantly increased over the same period: **Romania** and **Estonia** notably where DMC has more than double between 2000 and 2015, as well as **Malta** to a lesser extent.

Resource efficiency in the EU Member States, 2015

	Resource productivity (in €/kg)		Domestic material consumption (in million tonnes)		Gross domestic product (in billion €)	
	2015	Change 2015/2000 (%)	2015	Change 2015/2000 (%)	2015	Change 2015/2000 (%)
EU	2.00	35.4	6 707.5	-11.2	13 420.5	20.3
Belgium	2.45	20.4	156.0	2.0	382.3	22.7
Bulgaria	0.28	14.0	147.4	46.1	40.7	66.5
Czech Republic	1.01	62.1	164.8	-9.9	167.0	46.0
Denmark	2.26	26.5	110.2	-12.5	249.5	10.7
Germany	2.12	30.5	1 315.1	-9.6	2 782.6	18.0
Estonia	0.50	-19.1	35.5	104.3	17.6	65.3
Ireland	1.88	98.2	104.2	-19.8	196.4	58.9
Greece	1.35	8.8	137.4	-10.4	185.1	-2.5
Spain	2.77	120.3	386.8	-43.9	1 072.0	23.5
France	2.82	40.6	743.8	-15.9	2 095.0	18.2
Croatia	1.10	5.1	39.8	18.6	44.0	24.6
Italy	3.04	85.4	508.6	-46.4	1 547.2	-0.5
Cyprus	1.85	120.3	9.4	-44.1	17.4	23.1
Latvia	0.50	42.5	42.2	21.7	21.3	73.5
Lithuania	0.80	27.1	41.9	43.7	33.5	82.6
Luxembourg	3.39	24.9	13.5	21.1	45.8	51.3
Hungary	0.88	35.1	120.9	-1.7	106.8	32.8
Malta	1.36	-7.6	5.8	59.5	7.9	47.3
Netherlands	3.44	25.6	190.8	-5.9	655.6	18.2
Austria	1.65	20.1	188.1	1.7	309.9	22.1
Poland	0.64	40.5	652.1	20.9	418.2	69.6
Portugal	1.10	32.0	155.9	-22.2	171.6	2.7
Romania	0.31	-35.8	461.8	167.8	142.6	71.8
Slovenia	1.35	65.9	27.5	-19.5	37.2	33.5
Slovakia	1.04	34.5	73.0	34.5	75.8	80.9
Finland	1.12	23.8	167.2	-4.2	187.4	18.6
Sweden	1.74	4.2	233.7	30.5	407.6	36.0
United Kingdom	3.44	64.2	584.7	-20.8	2 011.6	30.0

The source dataset on resource productivity can be found [here](#).

Geographical information

The **European Union** (EU) includes Belgium, Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden and the United Kingdom.

Methods and definitions

This News Release uses data from the Eurostat economy-wide material flow accounts (EW-MFA), which are one of the European environmental economic accounts. Environmental accounts analyse the interaction between the environment and the economy by organising environmental information in a way that is consistent with the accounting principles of national accounts. This enables the investigation of many questions, for example: which activities are the most polluting; the implications of resource use for development and the environment; the role of government and households; how expensive is it to protect the environment and who pays for it; how large is the environmental economy in terms of employment or output; how large are the flows of natural resources and energy. The methodology of European environmental accounts is in line with the [system of environmental-economic accounting](#) (SEEA), which is an international statistical standard.

Resource productivity is defined as the ratio of GDP (in chain-linked volumes) to domestic material consumption (DMC). The indicator is expressed in € per kg.

Domestic material consumption measures the total amount of material directly used by an economy, such as biomass products, metal ores, fossil fuels and non-metallic minerals and is equal to domestic material extraction plus physical imports minus physical exports. This indicator is expressed in tonnes per year.

For more information

A resource-efficient Europe is one of the flagship initiatives of the Europe 2020 strategy: it supports the shift towards a resource-efficient, low-carbon economy to achieve sustainable growth.

Eurostat resource efficiency scoreboard.


Eurostat website section dedicated to material flows and resource productivity.

Eurostat metadata on material flow accounts.

Eurostat Statistics Explained articles on material flow accounts and resource productivity, resource productivity statistics and physical imports and exports.

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