Environmental economy – statistics on employment and growth

Statistics Explained

Data extracted: April 2026
Planned article update: April 2027

Highlights

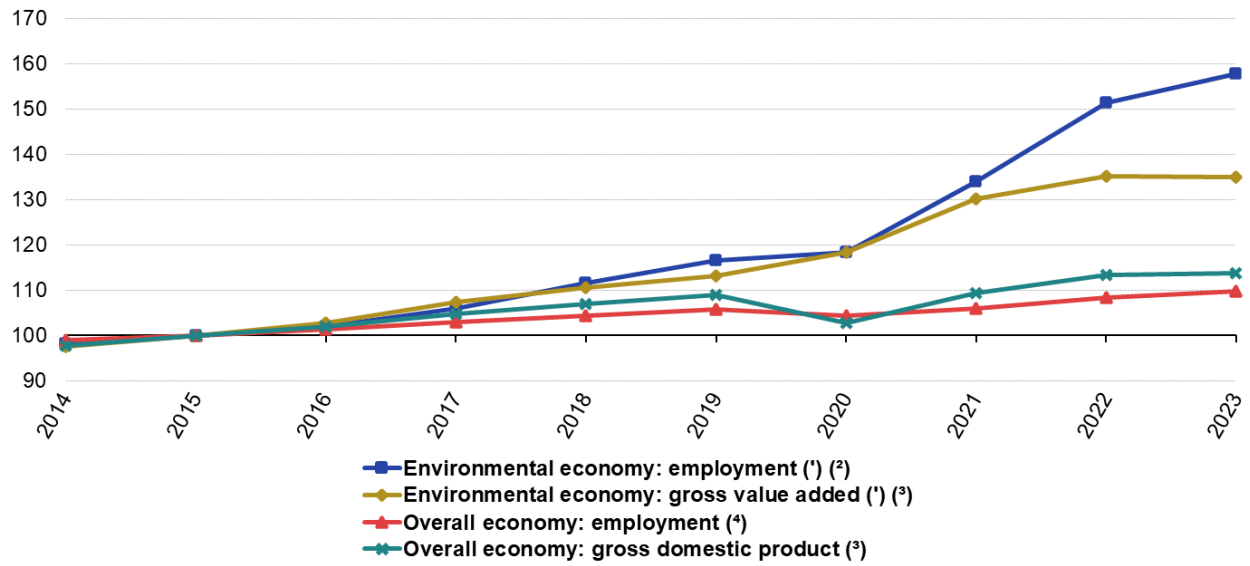
In 2023, value added in the EU environmental economy slightly decreased.

This article presents statistics on employment and growth in the European Union's (EU's) environmental economy, as it is defined in the European environmental goods and services sector (EGSS) accounts. The environmental economy encompasses activities and products that serve either 'environmental protection' — that is, preventing, reducing and eliminating pollution or any other degradation of the environment, or 'resource management' — that is, preserving natural resources and safeguarding them against depletion. EGSS accounts provide information on production (output) and export of environmental goods and services and the related employment and gross value added .

Development of key indicators for the environmental economy

According to Eurostat estimates, employment in the EU environmental economy increased from 3.6 million full-time equivalents in 2014 to 5.8 million full-time equivalents in 2023. The environmental economy generated € 1 327 billion output and € 492 billion gross value added in 2023. Between 2014 and 2022, employment and gross value added grew faster in the environmental economy than in the overall economy (see Figure 1). In 2023, gross value added in the environmental economy saw a slight decrease of -0.2%, compared to a minor increase in the overall economy.

Development of key indicators for the environmental economy and the overall economy, EU, 2014-2023
(Index with base year 2015 = 100)



(¹) Eurostat estimates
(²) In full-time equivalents
(³) Index compiled for chain-linked volumes data in € million (reference year 2020; at 2020 exchange rates)
(⁴) Thousand persons
Note: y axis does not start at 0
Source: Eurostat (online data codes: nama_10_a10_e, nama_10_gdp, env_egss_emp, env_egss_mon)

Figure 1: Development of key indicators for the environmental economy and the overall economy, EU, 2014-2023 Source: Eurostat (env_egss_emp), (env_egss_mon), (nama_10_gdp) and (nama_10_a10_e)

Employment increased on average 4.4% on an annual basis from 2014 to 2023 and has marked the highest value in 2023. Only the public sector saw a slight decrease of -0.9% in 2023. The strongest increase from 2014 to 2023 was observed in the construction sector with 124.2%, which is also the sector contributing most to the environmental economy.

Between 2014 and 2023, the environmental economy has outperformed the overall economy in terms of employment. Regarding gross value added, the picture changed slightly in 2023. Starting with a quick economic recovery since 2021, in 2023, EU gross domestic product increased by 0.4% while the environmental economy gross value added decreased by -0.2%. The increase in energy prices for oil and natural gas over the last few years is a driving factor that spurs renewable energy production as well as improvement in energy efficient construction.

Employment by environmental purpose

Employment in the environmental economy can be broken down by environmental protection and resource management activities, all of which fulfil an environmental purpose and can be classified accordingly. Figure 2 presents a breakdown of all environmental purposes into the main categories. Employment with focus on clean air and energy, including renewable energy production and the production of electric cars, grew by a factor of 1.7 since 2014. The number of full-time jobs in the other domains grew with a similar rate of more than 1.

Job creation related to renewable energy and energy efficiency stems from the production of renewable energy itself as well as from the manufacturing of renewable energy and energy-efficient equipment, and the provision of pertinent installation, engineering and research services. Employment in this domain increased from 0.6 million full-time equivalents in 2014 to 1.0 million full-time equivalents in 2023. This equates to an increase of 70% since 2014. Another large contributor to environmental employment in 2023 is waste management and recovery of materials, with the number of jobs increasing from 0.9 million full-time equivalents in 2014 to 1.3 million full-time equivalents in 2023 (overall increase of 34%). In comparison, employment related to wastewater management

increased in the same period by 37% from 0.4 million to 0.6 million full-time equivalents.

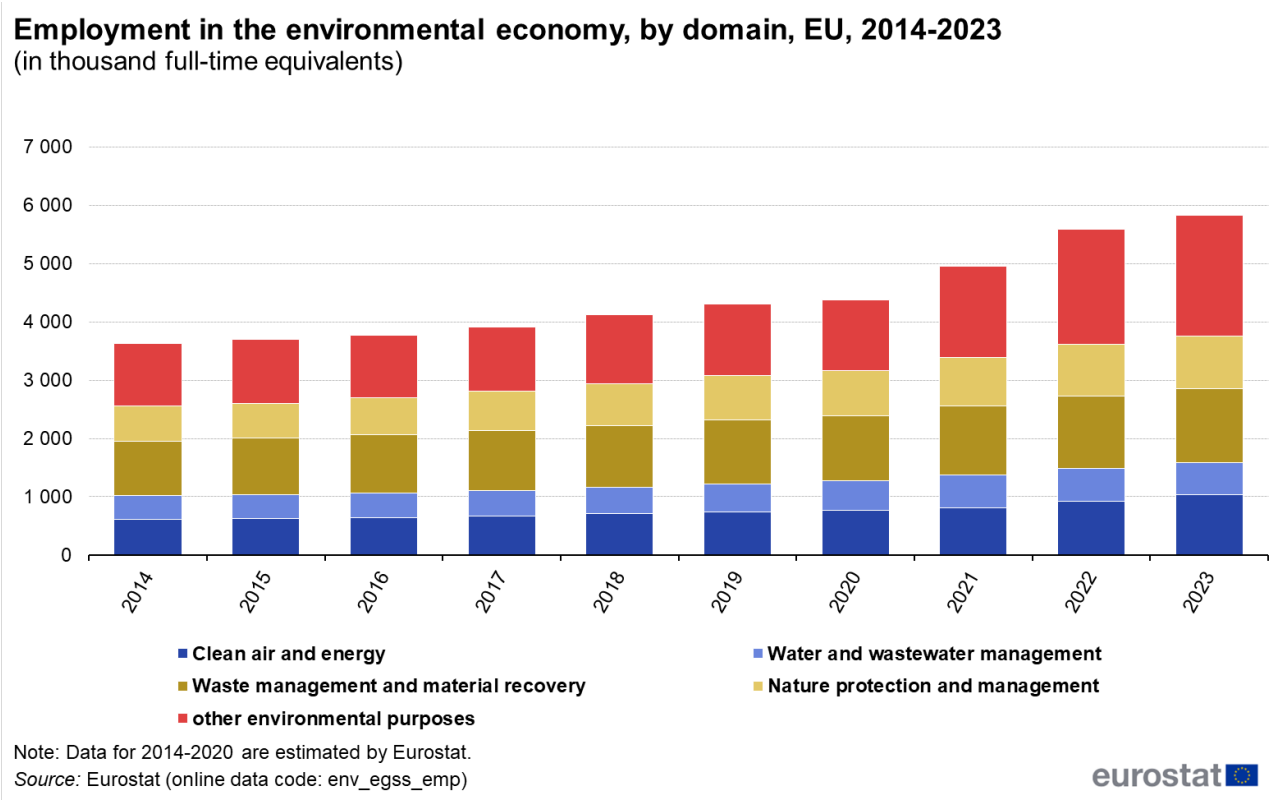


Figure 2: Employment in the environmental economy, by domain, EU, 2014-2023 Source: Eurostat (env_egss_emp)

Production, price effects and productivities in the environmental economy

The environmental economy can also be analysed with a view on production units, using the statistical classification of economic activities (NACE) . Because units producing environmental goods and services can engage in a range of activities, an analysis by economic activity provides a complementary picture to the analysis by environmental domain. The main contributor to the environmental economy, in terms of gross value added, is Water and Waste management (NACE Section E) which provides almost 25% of the overall gross value added in 2023. Other important sectors are Construction (NACE Section F) and the Manufacturing sector (NACE Section C) which both cover roughly 20% of the overall gross value added in 2023.

Looking at the development of production over time, it is useful to remove price effects that are the result of high inflation. For that matter, chain linked volumes can be calculated, which only focus on the change in volume instead of prices. As an example, Manufacturing grew by more than 80% between 2014 and 2023 in current prices but the increase reduces to 46.8% in real terms. Figure 3 shows how the development over time changes both in current prices and real terms. The environmental economy production increased in real terms by 38.2% from 2014 to 2023, showing a slight decrease in 2023.

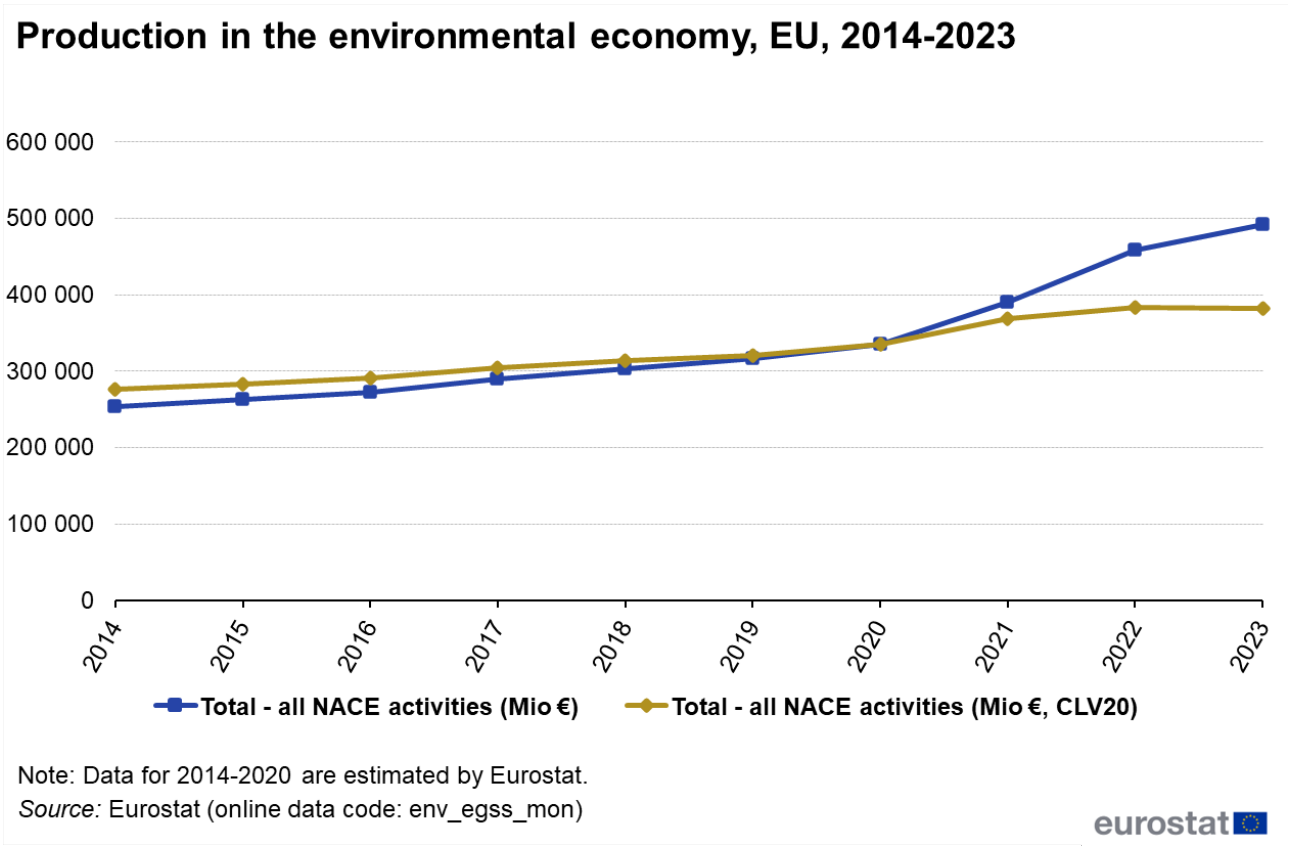


Figure 3: Production in the environmental economy, EU, 2014-2023 Source: Eurostat (env_egss_mon)

Labour productivity is expressed as value added per full-time equivalent. The higher the productivity, the more value each full time job adds to the overall value added of the environmental economy. The highest labor productivities in 2023 are observed in Information and communication activities (NACE Section J) and Professional, scientific and technical activities (NACE Section M). The lowest productivities are found in Agriculture, forestry and fishing (NACE Section A) and Construction (NACE Section F).

When looking at the overall productivity of the environmental economy, the productivity has started declining since 2020. Most NACE Sections experienced a slight decline, as can be seen for Manufacturing in Figure 4. However, Electricity, gas, steam and air conditioning supply (NACE Section D) lost more than half its productivity and dropped from more than 220 000 Euro per FTE in 2020 to less than 90 000 Euro per FTE in 2023.

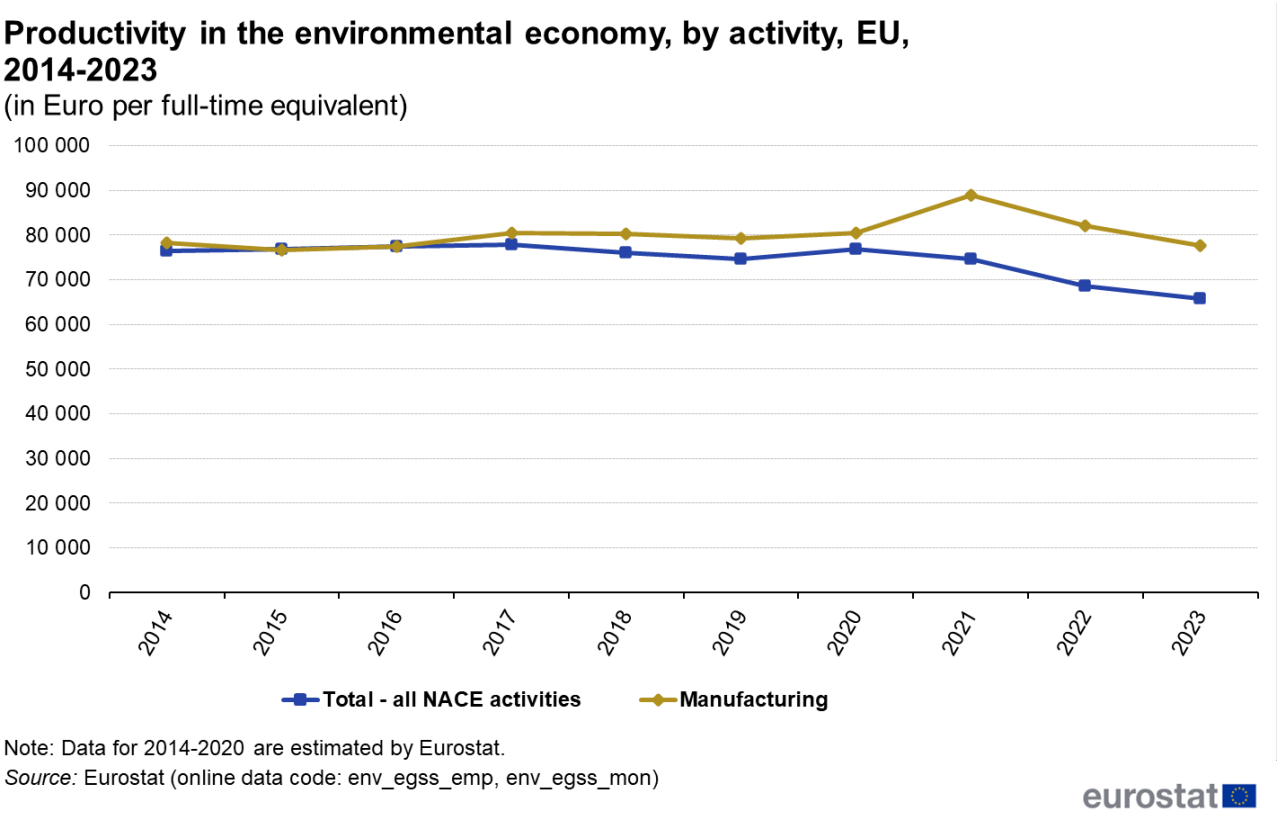


Figure 4: Labor productivity in the environmental economy, by activity, EU, 2014-2023 Source: Eurostat (env_egss_emp), (env_egss_mon)

Source data for tables and graphs

- Environmental economy - employment and growth 2026

Data sources

This article presents data from the environmental goods and services sector (EGSS) accounts, which constitute one of the nine modules of the European environmental economic accounts. Environmental economic accounts analyse the interaction between the environment and the economy by organising environmentally relevant information on the economy in a way that is consistent with the accounting principles of national accounts . Environmental economic accounts can be used, for example, to identify the most polluting economic activities or activities that contribute most to the depletion of natural resources. They also provide information on the interaction of government and households with the environment, on the expenditures for protecting the environment and, in the case of EGSS, on the economic activity dedicated to environmental protection and resource management. European environmental accounts are established by Regulation (EU) No 691/2011 ; Annex V of the regulation sets out the reporting requirements for Member States. The first data collection took place in 2017. Since then, data for the environmental goods and services sector at the Member State level are collected on an annual basis.

The EU aggregates reported in this article are compiled as a direct sum of EU Member States estimates and reported data.

The accounts for the environmental goods and services sector provide information on output, gross value added, employment, and export related to the production of goods and services that help protecting the environment or preserving the stock of natural resources. Eurostat's methodology for data recording is in line with the United Nations (UN's) system of integrated environmental and economic accounting (SEEA) , which is an international statistical standard.

This article focuses on employment and gross value added; the latter is given in volume terms, as chain-linked

volumes for the reference year 2020 (at 2020 exchange rates; Figure 1 & Figure 3) and for individual activities in current prices (i.e., at prices of the year to which the data refer; Figure 3). The volume measures are overall used to analyse the economic growth over time, discounting the effect of price changes.

The scope of the environmental goods and services sector is defined in the Commission Implementing Regulation (EU) No 2015/2174 , comprising an indicative compendium of environmental products and activities.

Employment is defined as in national accounts. It is measured in full-time equivalents (total hours worked divided by the average annual hours worked in a full-time job).

Output is the total value of goods and services that have been produced for use outside of the producer unit, for own final use or for inventories at the end of the reporting period. The environmental goods and services sector accounts distinguish between market and non-market output, output for own final use and for ancillary use, the latter consisting of products for further transformation in down-stream production processes within the enterprise.

Gross value added represents the contribution of environmental goods and services towards GDP. In broad terms, it is the difference between the value of production output and intermediate consumption .

The environmental goods and services sector accounts comprise of 2 broad groups of activities and products:

- environmental protection — activities whose purpose is to prevent, reduce and eliminate pollution and any other degradation of the environment;
- resource management — activities whose purpose is to preserve and maintain natural resources, hence safeguarding them against depletion.

EGSS data are collected and disseminated following established schemes for the classification of environmental purposes (CEP). CEP is a recognised international standard included in the family of international economic and social classifications. It can be downloaded from the ShowVoc website. See the CEP technical note for further detail.

Context

The accounts of the environmental goods and services sector provide the ideal framework to compile and report data on employment directly related to production activity intended to protect the environment and to manage natural resources. National and EU-wide data on the environmental economy can provide rationale for policy intervention and serve as a benchmark for policy targets under the European Green Deal and European Commission priorities. Being compatible with the concepts from national accounts, EGSS data can provide input to microeconomic and macroeconomic analyses and multi-disciplinary research initiatives.

View this article online at *http://ec.europa.eu/eurostat/statistics-explained/index.php/Environmental_economy_-_employment_and_growth*

Explore further

Other articles

- Environmental economy – statistics by Member State
- Environmental protection expenditure accounts
- Material flow accounts and resource productivity

Database

- Environment , see:

Environmental goods and services sector (env_egs)

Employment in the environmental goods and services sector ([1])

Production, value added and exports in the environmental goods and services sector ([2])

Thematic section

- Growth and jobs in the environmental sector

Methodology

- Environmental Goods and Services Sector Accounts Handbook
- Environmental Goods and Services Sector Accounts Practical Guide
- Production, value added, employment and exports in the environmental goods and services sector (ESMS metadata file — env_egs_esms)

Legislation

- Regulation (EU) No 691/2011 on European environmental economic accounts
- Regulation (EU) No 549/2013 of 21 May 2013 on the European system of national and regional accounts (ESA2010)
- Commission Implementing Regulation (EU) No 2015/2174 on the indicative compendium of environmental goods and services
- Summaries of EU legislation: European environmental economic accounts
- Summaries of EU legislation: European Union system of national and regional accounts

External links

- European Green Deal
- European Environment Agency: SOER 2020 — The European environment — state and outlook 2020: knowledge for transition to a sustainable Europe
- Communication of the European Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (COM(2014) 446 final) Green Employment Initiative: Tapping into the job creation potential of the green economy
- Eco-Innovation
- Eco-innovation Observatory (EIO)
- Measuring the Environmental Goods and Services Sector: Issues and Challenges (UNEP, 2014, Working Paper)
- OECD - Green growth and eco-innovation
- Promoting green jobs throughout the crisis — a handbook of best practices in Europe (2013)
- Study on the competitiveness of the EU Renewable Energy Industry (EU REI)
- ILO's green jobs website