European Environment Agency

8th Environment Action Programme

Employment in the environmental goods and services sector

8TH EAP HEADLINE INDICATOR, 2024

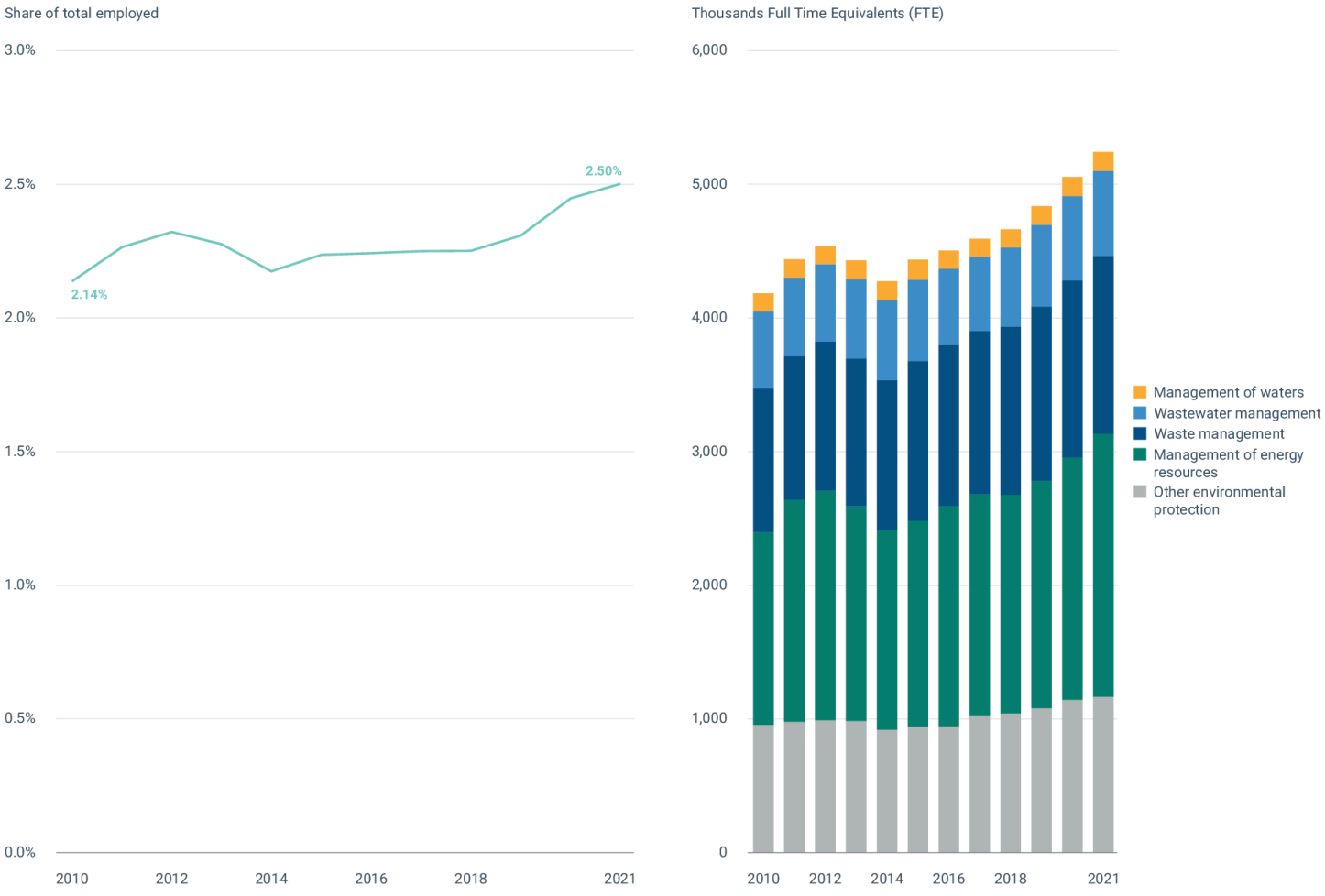
European Environment Agency

Employment in the environmental goods and services sector in Europe

Published 26 Jun 2024

Employment in the EU's environmental goods and services sector grew at a faster rate than the EU's overall employment rate in the last decade. It increased from 2.1% of total employment in 2010 to 2.5% in 2021, with the number of full-time equivalent employees in this sector reaching 5.2 million. This was mainly due to the creation of jobs related to renewable energy, energy efficiency and waste management. The EU aims to accelerate the green transition of its economy and become carbon neutral by 2050. This is expected to boost jobs in the EU's green economy in the coming years and therefore further increase the share of green employment in the EU economy.

Figure 1. Employment in the EU's environmental goods and services sector by domain, 2010-2021



The European Green Deal and the Eighth Environment Action Programme (8th EAP) aim to accelerate the green transition of the European Union's (EU) economy. The EU's environmental goods and services sector, also known as **the green economy**, produces goods and provides services that are used for environmental protection and resource management activities.

Employment in the EU's green economy as a share of employment in the EU's whole economy **increased** by 0.4 percentage points (or 1.1 million full-time equivalents (FTEs)) from 2010 to 2021. This represents an increase of 25%, compared with an increase of only 7% in employment in the EU's overall economy in the same period. This shows that pursuing environmental objectives has the potential to create jobs in the EU.

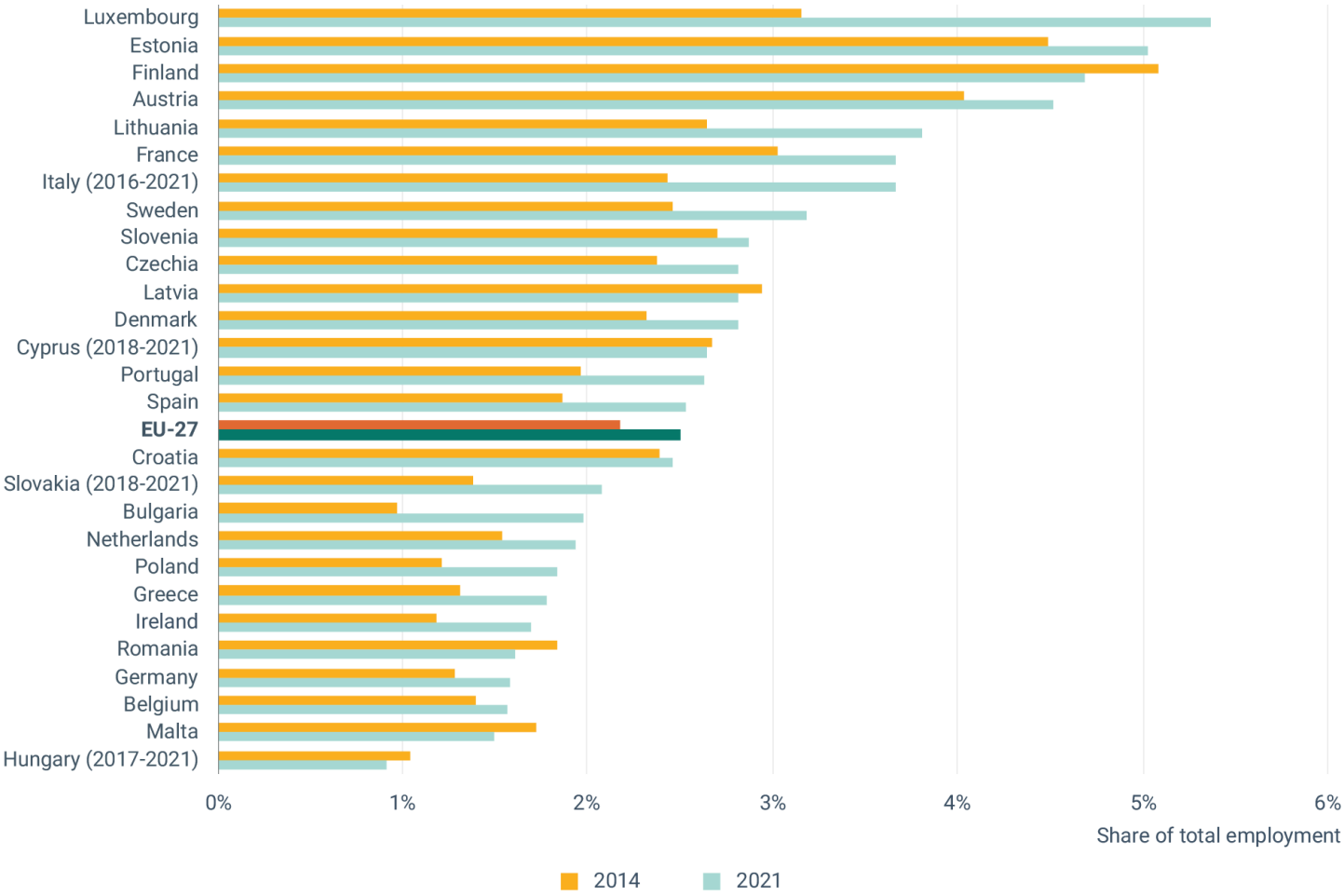
By 2021, the environmental goods and services sector **employed 5.2 million** people (in FTEs) in the EU, accounting for about 2.5% of total EU employment. The increase in green employment between 2010 and 2021 was largely driven by an increase of 525,000 FTEs in the number of jobs related to the management of energy resources[1]. For instance jobs related to:

- producing renewable energy;
- manufacturing equipment needed to generate renewable energy, such as wind turbines and photovoltaic cells;
- manufacturing energy-efficient equipment;
- research and development (R&D) activities;
- installation, consultancy and management services.

The **second largest contributor** to the increase in green employment was waste management, with the number of jobs in this domain increasing by 259,000 FTEs (+24%) over the period. Employment in all other domains increased to varying degrees. Modest increases were found in the management of water (+4%), wastewater management (+10%) and other environment protection domains (+22%).

Steps taken to support the green transition will create more green employment in the EU by 2030, mainly through applying circular economy principles[2] and moving towards a low-carbon economy[3][4][5]. It is therefore expected that, through policies, measures and investments, green employment will account for a higher share of total employment in the EU by 2030.

Figure 2. Employment in the environmental goods and services sector as a share of total employment, by EU Member States, 2014 and 2021



Shares of green employment in total employment increased in most EU Member States between 2014 and 2021. Exceptions were in Malta (-13%), Hungary (-13%), Romania (-12%), Finland (-8%), Latvia (-4%) and Cyprus (-1%). The largest increases were reported for Bulgaria (104%), Luxembourg (70%) and Poland (52%).

The **domains** accounting for most employment in the environmental economy differ between EU Member States. For example, during 2021, employment in resource management activities (i.e. management of energy and of water resources) accounted for most environmental employment in Luxembourg (81%), Sweden (77%), Finland and Estonia (66% in both countries). In contrast, employment in environmental protection activities (e.g. waste and wastewater management activities) accounted for most environmental employment in Belgium (78%), Malta (75%), and Croatia (73%) [6].

Highest shares of green employment in total employment for 2021 were in Luxembourg and Estonia, with green jobs making up more than 5% of all jobs in these countries. Moreover, a share of close to 5% was reported for Finland and Austria. The lowest shares, of 1.5% or less, were reported for Hungary and Malta.

Supporting information

Definition

The indicator 'Employment in the environmental goods and service sector' monitors employment in the EU's environmental (or green) economy. The indicator builds on Eurostat statistics on employment and growth in the EU's environmental economy, as they are defined in the European environmental goods and service sector

(EGSS) accounts. 'The environmental economy encompasses activities and products that serve either of two purposes: "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' [6].

For further information, see Eurostat (2016).

Methodology

This indicator is directly based on data published by Eurostat, and the underpinning methodology can be found in Eurostat [6]. EU-level data are based on Eurostat estimates. A detailed discussion of statistics on the environmental goods and services sector can be found in Eurostat (2016).

Policy/environmental relevance

This indicator is a headline indicator for monitoring progress towards meeting targets of the 8th EAP. It contributes mainly to monitoring progress in relation to aspects of Article 2.1, which requires that, 'by 2050 at the latest, people live well, within the planetary boundaries in a well-being economy where nothing is wasted, growth is regenerative, climate neutrality in the Union has been achieved and inequalities have been significantly reduced. A healthy environment underpins the well-being of all people and is an environment in which biodiversity is conserved, ecosystems thrive, and nature is protected and restored, leading to increased resilience to climate change, weather- and climate-related disasters and other environmental risks. The Union sets the pace for ensuring the prosperity of present and future generations globally, guided by intergenerational responsibility' [7]. The European Commission communication on the 8th EAP monitoring framework specifies that this indicator should monitor the 'increase ofthe shares… of green employment in the whole economy' [8].

Accuracy and uncertainties

Data sources and providers

- Employment in the environmental goods and services sector [env_ac_egss1__custom_10715540], Statistical Office of the European Union (Eurostat)
- Employment by A*10 industry breakdowns [NAMA_10_A10_E__custom_10717044], Statistical Office of the European Union (Eurostat)

Metadata

DPSIR

Response

Topics

 # Sustainability solutions

Tags

 # green economy **# 8th EAP** **# environmental goods** **# environmental economy** **# SUSO002**
 # Employment

Temporal coverage

2010-2021

Geographic coverage

Austria
Belgium
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden

Typology

Descriptive indicator (Type A - What is happening to the environment and to humans?)

UN SDGs

SDG8: Decent work and economic growth

Unit of measure

Employment in the environmental goods and services sector is measured in thousands of full-time equivalents (total hours worked divided by the average annual hours worked in a full-time job) and as a share (%) of total employment.

Frequency of dissemination

Once a year

References and footnotes

1. Eurostat, 2016, *Environmental goods and services sector accounts handbook: 2016 edition*, Publications Office of the European Union, Luxembourg.
↲
2. A study estimates that applying circular economy principles across the EU economy has the potential to create around 700,000 new jobs by 2030 (see footnote No. 5)
↲

3. EC, 2020, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions ‘A new circular economy action plan for a cleaner and more competitive Europe’, COM(2020) 98 final of 11 March 2020.
↲

4. EC, 2020, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions ‘A new industrial strategy for Europe’, COM(2020) 102 final of 10 March 2020.
↲

5. IRENA and ILO, 2022, *Renewable energy and jobs: annual review 2022*, International Renewable Energy Agency and International Labour Organization.
↲

6. Eurostat, 2024, 'Environmental economy — statistics on employment and growth', *Eurostat Statistics Explained* (
https://ec.europa.eu/eurostat/statistics-explained/index.php?
title=Environmental_economy_%E2%80%93_statistics_on_employment_and_growth).
a b c

7. EU, 2022, Decision (EU) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a general Union environment action programme to 2030, OJ L 114, 12.4.2022, p. 22-36.
↲

8. EC, 2022, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the monitoring framework for the 8th Environment Action Programme: measuring progress towards the attainment of the programme’s 2030 and 2050 priority objectives, COM (2022) 357 final of 26 July 2022.
↲