

# Environmental protection expenditure accounts

Statistics Explained

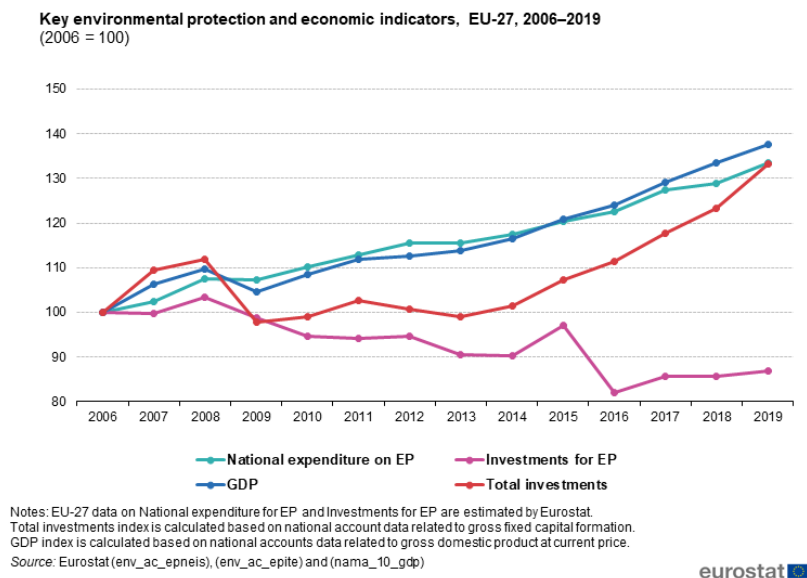
*Data extracted in July 2020.  
Planned article update: July 2021.*

This article provides an overview of environmental protection expenditure in the [European Union \(EU\)](#) as it is defined in the Environmental Protection Expenditure Accounts (EPEA). EPE accounts measure the economic resources devoted by the overall economy to activities and actions to prevent, reduce, and eliminate pollution and any other degradation of the environment. They cover the spending by a country (i.e. by its households, corporations and government) on environmental protection (EP) services, e.g. pollution abatement (air, water, soil and noise), waste and wastewater management, protection of biodiversity as well as research and development, education and training.

The environmental protection services are produced both by corporations and by government; data on production of environmental protection services by environmental domain (according to the [classification of environmental protection activities \(CEPA 2000\)](#)), are also collected within EPE accounts and are available on the Eurostat database ([env\\_ac\\_pestgg](#)), ([env\\_ac\\_pestsp](#)) and ([env\\_ac\\_pestnsp](#)).

More information about the supply of environmental protection products is also provided based on the environmental goods and services sector accounts data (EGSS): see the articles on [environmental economy — employment and growth](#).

## Key indicators for environmental protection



**Figure 1: Key environmental protection and economic indicators, EU-27, 2006–2019 (2006=100)** Source: Eurostat (env\_ac\_epneis), (env\_ac\_epite) and (nama\_10\_gdp)

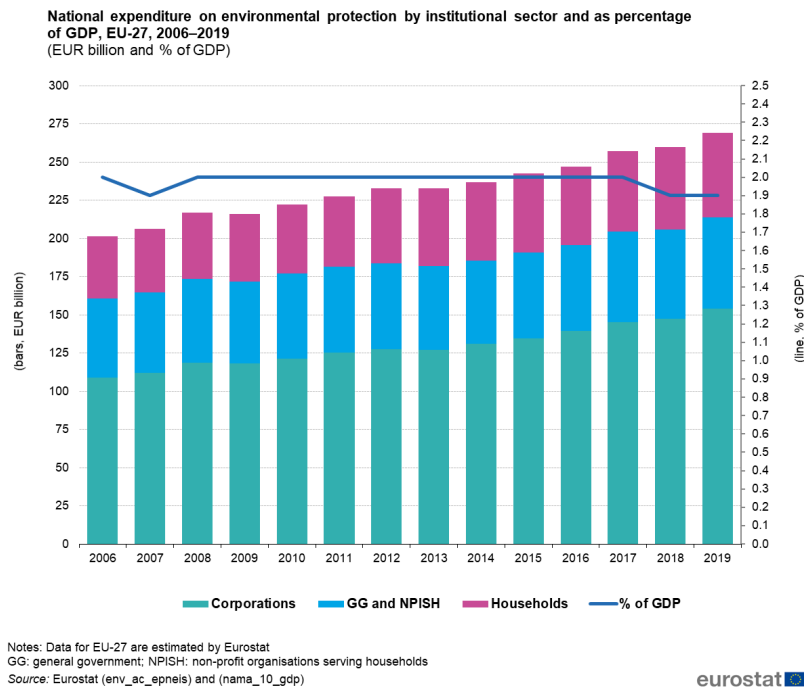
**National expenditure on environmental protection** ('NEEP') measures the resources used by resident units in a given period for protecting the natural environment. It is calculated as a sum of current expenditure on environmental protection (EP) activities and investments for EP activities, including net transfers to the rest of the world. According to Eurostat's estimates, from 2006 to 2019, EU-27 expenditure on environmental protection, measured by the NEEP aggregate, increased by 34 % following the overall trend of **gross domestic product (GDP)** (see Figure 1). In the two more recent years (2018-2019), NEEP's increase was, however, slightly lower than the one of GDP.

In the same period (2006-2019), investments for environmental protection decreased by 13 %. The trend observed for environmental protection investments is quite different from the one observed for total investments in the economy, notably for some specific years (such as in 2006, 2009 and 2016). In 2009, the financial crisis appears to have hit the total investments in the economy much stronger than the environmental protection investments. The latter, however, continued to decrease in most of the subsequent years, once the non-environmental protection investments had already recovered and, consequently, the total investments remained stable or started to rise. In particular, in 2016 a large decrease of environmental protection investments is observed following a reduction of these investments in almost all Member States.

### National expenditure on environmental protection

In 2019, **EU-27** national expenditure on environmental protection amounted to EUR 269 billion, according to Eurostat's estimates.

From 2006 to 2019, NEEP at current prices increased overall by 34 %, rising on average by nearly 2 % each year (see Figure 2, left-hand scale).

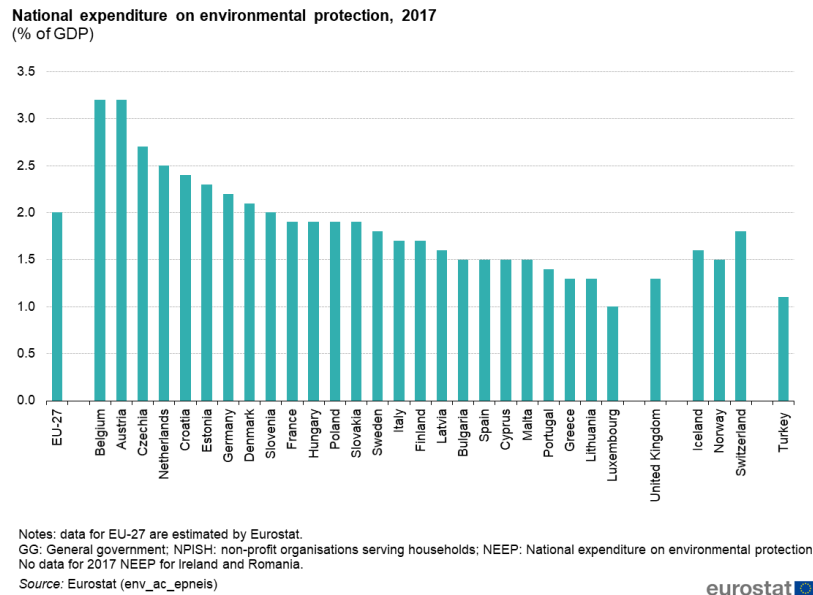


**Figure 2: National expenditure on environmental protection by institutional sector and as percentage of GDP, EU-27, 2006–2019 (EUR billion and % of GDP)** Source: Eurostat (env\_ac\_epneis) and (nama\_10\_gdp)

Relative to GDP, EU-27 NEEP remained relatively stable during the whole period, at ca 2.0 % of GDP in all years but 2007 as well as more recently, in 2018 and 2019, when it fell to 1.9 % of GDP.

Estimates by **institutional sector** point to the largest contribution to NEEP from the corporations sector (accounting for 57 % of total NEEP in 2019; see Figure 2). Expenditure on environmental protection of corporations includes current and capital expenditure both of specialist producers, i.e. of corporations that offer environmental protection services (e.g. waste or wastewater management) on the market, and of ancillary producers, i.e. those corporations that do not sell environmental services on the market but which undertake environmental protection activities in-house and for own use, in order to limit the negative environmental effects of their main production activity (e.g. a refinery or a water supply company that treats its exhaust gases or effluents). From 2006 to 2019, environmental protection expenditure of corporations increased by 42 %.

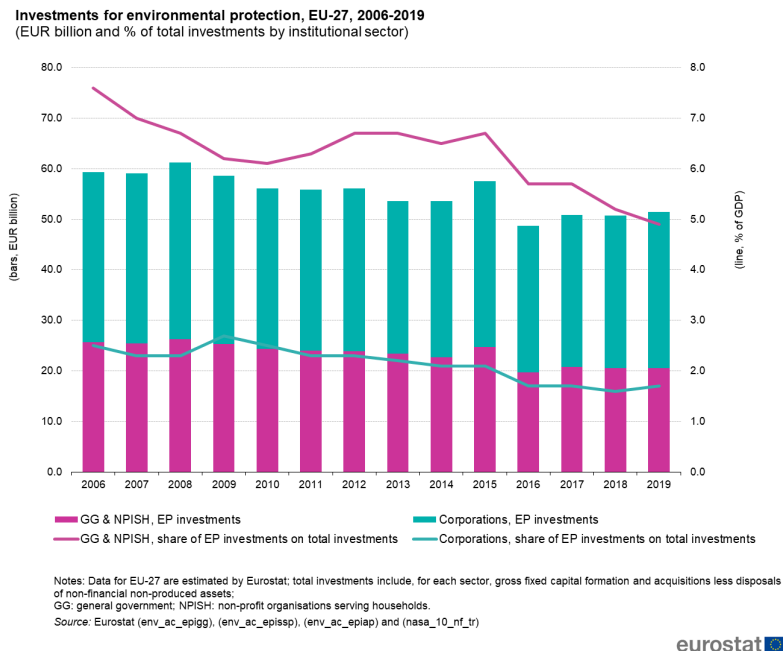
The expenditure of **general government** and **non-profit institutions serving households (NPISH)** (considered for the purposes of EPE accounts as one sector) and of households accounted in 2019 for 22 % and 21 % of total NEEP, respectively. From 2006 to 2019, environmental protection expenditure of GG and NPISH increased by 15 %; environmental protection expenditure of households, including mainly payments to local government or specialised enterprises for the collection and treatment of waste or wastewater, increased by 35 %.



**Figure 3: National expenditure on environmental protection, 2017 (% of GDP)** Source: Eurostat (env\_ac\_epneis)

### Environmental protection investments

In 2019, EU-27 invested EUR 51 billion into assets essential to provide environmental protection services (e.g. wastewater treatment plants, vehicles to transport waste, acquisitions of land to create a natural reserve, or cleaner equipment for producing with less polluting emissions).

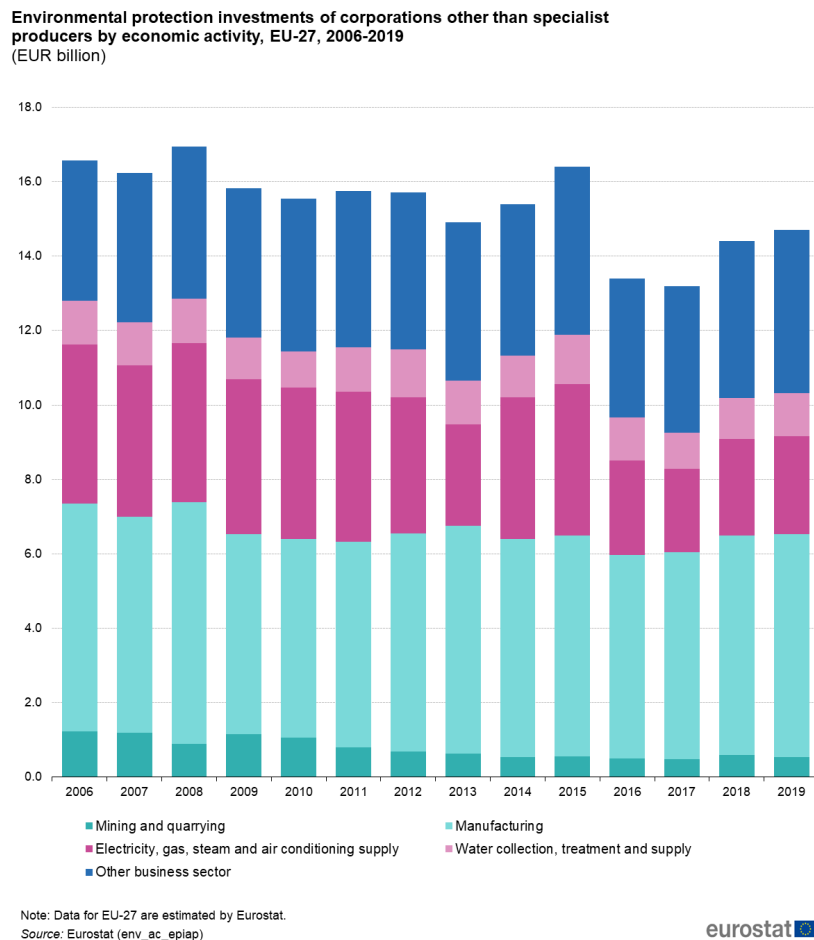


**Figure 4: Investments for environmental protection, EU-27, 2006–2019 (EUR billion and % of total investments by institutional sector)** Source: Eurostat (env\_ac\_epigg), (env\_ac\_epissp), (env\_ac\_epiap) and (nasa\_10\_nf\_tr)

About EUR 31 billion (60 % of total environmental protection investments) was spent by corporations, both the specialist providers of environmental protection services (e.g. private companies dealing with waste collection

and processing and with sewerage) and corporations other than specialist producers, which purchase technologies and equipment reducing the environmental pressures arising from their production process (e.g. equipment reducing their air emissions). General government and NPISH accounted, with EUR 21 billion spent in 2019, for the remaining share (40 %) of environmental protection investments (see Figure 4, left-hand scale).

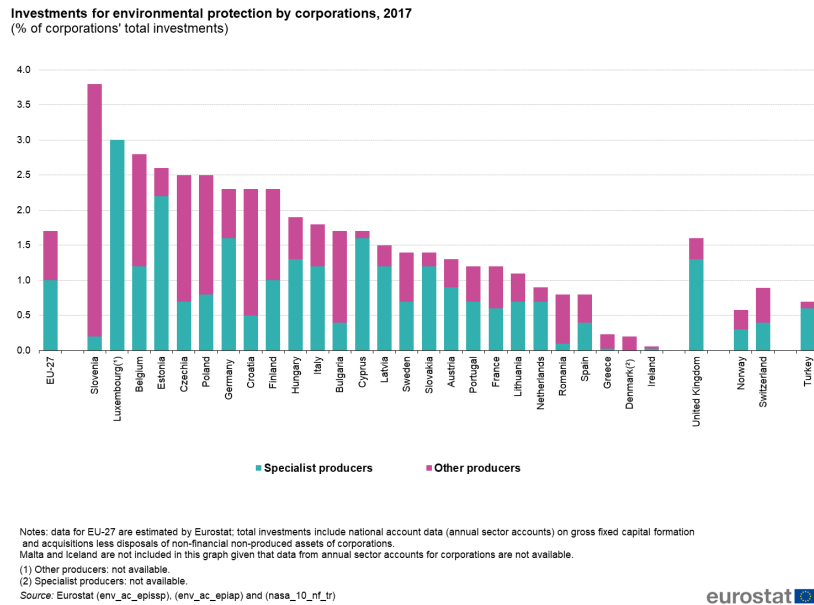
The share of environmental protection investments in total investments of corporations is relatively low. In 2019, it amounted to 1.7 %, having decreased by 1.0 percentage point since 2006. The equivalent share for general government amounted to 4.9 % in 2019, having decreased by 2.7 percentage points since 2006 (see Figure 4, right-hand scale).



**Figure 5: Environmental protection investments by corporations other than specialist producers by economic activity, EU-27, 2006–2019 (EUR billion)** Source: Eurostat (env\_ac\_epiap)

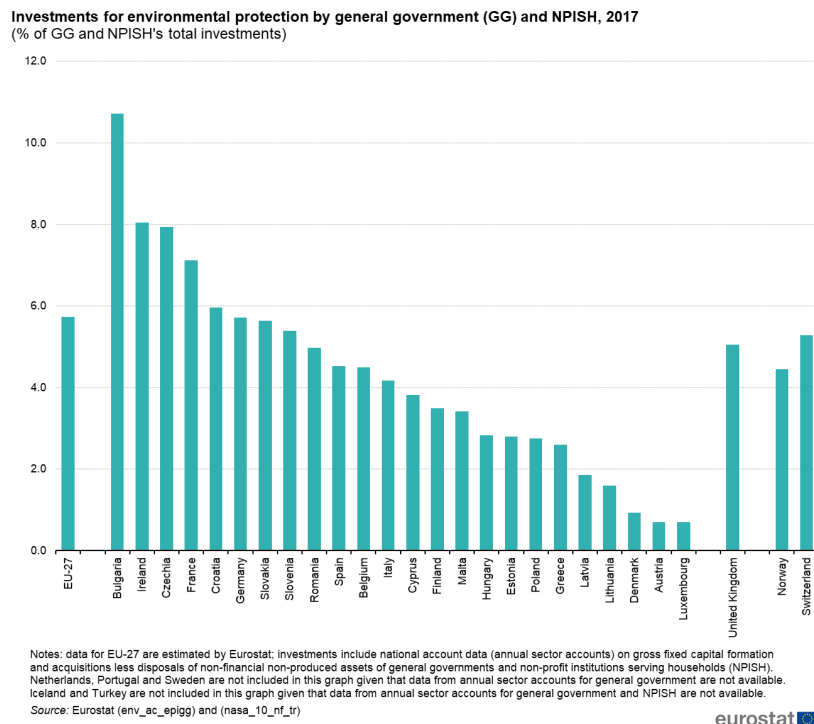
For corporations other than specialist producers in EU-27, undertaking investments to prevent and/or limit the negative environmental effects of their main production activity, the manufacturing sector accounted for the highest share of such environmental protection investments, 41 % in 2019; with other business sectors' investments at 30 % of the total, and followed by electricity, gas, steam and air conditioning supply sector (18 %), water collection, treatment and supply sector (8 %) and mining and quarrying (3 %) (see Figure 5).

More detailed data by Member State reveal that for 2017 (the most recent year for the mandatory EPEA data reporting), the share of environmental protection investments in total investments varied across countries, ranging from 0.1 % to 3.9 % of total investments (see Figure 6) .



**Figure 6: Investments for environmental protection by corporations, 2017 (% of corporations' total investments)**Source: Eurostat (env\_ac\_epissp), (env\_ac\_eplap) and (nasa\_10\_nf\_tr)

Even larger variations were observed for the general government and NPISH sector, with the equivalent shares ranging from 0.7 % to 10.7 % across the EU (see Figure 7). Given that a large amount of EP investments are related to waste and wastewater management services, the variations observed may be due to the different organization of provision of such services across countries, i.e. some countries rely strongly on the government sector (e.g., public utility entities) to provide such services, while others tend to resort, at least partially, to market-based instruments, and e.g. leave it to the market to set prices of such services.



**Figure 7: Investments for environmental protection by general government (GG) and non-profit institutions serving households (NPISH), 2017 (% of GG and NPISH's total investments)**Source: Eurostat (env\_ac\_epigg) and (nasa\_10\_nf\_tr)

## Source data for tables and graphs

- [Environmental protection expenditure accounts: tables and figures](#)

### Data sources

EPEA are a module of the European environmental economic accounts set out under [Regulation \(EU\) No 691/2011 on European environmental economic accounts](#). EPEA follow the international standards of the System of Environmental-Economic Accounting 2012 Central Framework (SEEA CF 2012), and are broadly compatible with the international System of National Accounts (SNA 2008) and its European version, the European System of National and Regional Accounts (ESA 2010). The EU Member States have a legal obligation to report EPEA data from 2017-onwards. Data for EFTA countries, candidate countries and potential candidates are also collected and disseminated on Eurostat database.

This article is based on the results of the 2019 data collection and provides a more comprehensive picture of environmental protection activities and investments across the EU since all Member States with reporting obligation submitted data for this third mandatory EPEA reporting. At the present stage of development, not all national totals exhaustively cover all types of activities and all environmental domains. In particular, for corporations as specialist producers, only the environmental activities of CEPA2, CEPA3 and CEPA4 are captured by the majority of reporting countries.

Statistics on EPEA provide data on a wide range of important economic variables, such as gross fixed capital formation, output, final and intermediate consumption, exports and imports, taxes less subsidies, compensation of employees, consumption of fixed capital, employment, current and capital transfers and earmarked taxes (for financing environmental protection measures). The data are broken down by environmental domain and institutional sector.

The EU-27 figures presented in this article are estimated, aggregating the available data from the Member States. For all EPEA reporting items used for the calculation of NEEP, data gaps were filled by Eurostat's estimates. In addition, for the reference period not covered in the mandatory EPEA data reporting, early estimates were compiled at the EU level. Country EPEA data are compiled on the basis of the following sources: national accounts (supply and use tables), government finance statistics, structural business statistics, labour statistics and trade statistics. In many countries, results of statistical surveys, administrative sources and statistical estimations are also used for EPEA data compilation.

Institutional sectors are defined in SEEA CF 2012 and ESA 2010. EPEA use the following groupings of sectors: - Corporations as specialist producers of environmental protection services;- Other corporations (as ancillary producers);- General government and non-profit institutions serving households (NPISH); - Households (as consumers of environmental protection services);- Rest of the world (as beneficiary or origin of transfers for environmental protection).

The corporation sector covers all units classified in national accounts to sectors S.11 and S.12. The most important providers of environmental services are specialist producers, i.e. the units of the corporation sector whose principal activity is waste collection, treatment and disposal, sewerage, remediation activities and other waste management services, which are classified under NACE Rev. 2 Divisions 37, 39 and under NACE Rev2 Groups 38.1 and 38.2. The secondary output of environmental protection services is also captured in EPEA and included in the output of specialist producers. The corporations other than specialist producers which undertake environmental protection expenditure to 'green' the process of their production of non-environmental goods and services are also covered in EPEA, but under a separate sector grouping (as 'other'/ancillary producers).

The scope of EPEA is defined according to the classification of environmental protection activities (CEPA). Data are collected and disseminated using the following breakdown:

- CEPA 1 — Protection of ambient air and climate
- CEPA 2 — Wastewater management
- CEPA 3 — Waste management
- CEPA 4 — Protection and remediation of soil, groundwater and surface water
- CEPA 5 — Noise and vibration abatement
- CEPA 6 — Protection of biodiversity and landscapes

- CEPA 7 — Protection against radiation
- CEPA 8 — Environmental research and development
- CEPA 9 — Other environmental protection activities

CEPA is a recognised international standard included in the family of international economic and social classifications. It can be downloaded from the [Ramon](#) website.

## Context

The increased awareness of the need to combat environmental pollution and preserve natural resources has led to an increase in the supply and demand of environmental goods and services, in other words, products to prevent, measure, control, limit, minimise or correct environmental damage and resource depletion.

Statistics on environmental protection expenditure enable to identify and measure society's response to environmental concerns and how it is financed. Environmental protection expenditure accounts (EPEA) quantify the resources devoted to environmental protection by resident economic units. They thus report the effort made by society towards implementing the 'polluter pays principle'. Environmental protection expenditure accounts contribute directly to the EU's policy priorities on environmental protection, resource management and green growth by providing important information on the production and the use of environmental protection services.

## Other articles

- [All articles on environment](#)
- [Environmental economy – statistics on employment and growth](#)
- [Environmental economy - statistics](#)

## Database

- [Environmental protection expenditure\(env\\_epe\)](#) , see:

Environmental protection expenditure accounts (env\_ac\_epea)

National expenditure for environmental protection (env\_neep)

Environmental protection investments (env\_epi)

Production of environmental protection services (env\_peps)

Consumption of environmental protection services (env\_ceps)

Environmentally related transfers (env\_ert)

Environmental protection expenditure and revenues (until 2013) (env\_eper)

Other environmental protection expenditure statistics (env\_oepes)

## Dedicated section

- [Environment](#)

## Publications

- [Energy, transport and environment indicators - 2017 edition](#) — Statistical pocketbook, 2017



## Methodology

- Methodological publications
- [Environmental protection expenditure accounts - Handbook - Eurostat - 2017 edition](#)
- ESMS metadata files
- [Environmental protection expenditure accounts](#) (ESMS metadata file — env\_ac\_epea\_esms)

## Legislation

Regulation (EU) No 691/2011 on [European environmental economic accounts](#) amended by [Regulation \(EU\) No 538/2014](#)

- [Summaries of EU legislation: European environmental economic accounts](#)

## External links

- [European Commission — Environment — Policies](#)
- [OECD Environment Directorate](#)