# Single Integrated Metadata Structure (SIMS v2.0)

**Country: Greece** 

**Domain name: Environmental protection** 

expenditure accounts

# Elstat metadata

# Reference metadata

- 1. Contact
- 2. Metadata update
- 3. Statistical presentation
- 4. Unit of measure
- 5. Reference Period
- 6. Institutional Mandate
- 7. Confidentiality
- 8. Release policy
- 9. Frequency of dissemination
- 10. Accessibility and clarity
- 11. Quality management
- 12. Relevance
- 13. Accuracy and reliability
- 14. Timeliness and punctuality
- 15. Coherence and comparability
- 16. Cost and Burden
- 17. Data revision
- 18. Statistical processing
- 19. Comment

1. Contact	
1.1. Contact organisation	HELLENIC STATISTICAL AUTHORITY (ELSTAT)
1.2. Contact organisation unit	Directorate General of Statistics/Agriculture, Livestock, Fisheries and Environmental Statistics Division (B2) Energy & Environment Statistics Section (B24)
1.5. Contact mail address	46 Pireos str. & Eponiton str. 185 10, Piraeus

2. Metadata update				
2.1. Metadata last certified	20/06/2025			
2.2. Metadata last posted	20/06/2025			
2.3. Metadata last update	20/06/2025			

# 3. Statistical presentation

# 3.1. Data description

Environmental protection expenditure accounts (EPEA) describe transactions related to preventing, reducing and eliminating pollution and any other degradation of the environment.

The key aggregate resulting from EPEA is national expenditure on environmental protection (NEEP), which measures the resources dedicated by resident businesses, households and government to protecting the natural environment. This aggregate covers uses of environmental protection services, investment (gross fixed capital formation) for environmental protection activities, and net transfers to the rest of the world for environmental protection.

Under European Regulation (EU) 691/2011(Annex IV), the reporting of EPEA data is mandatory from 2017-onwards. EPEA data are compiled on an annual basis and Member States are required to report on output, consumption, imports and exports of environmental protection services, investment (gross fixed capital formation and acquisitions less disposals of non-produced non-financial assets) for the production of EP services, transfers for environmental protection.

# 3.2. Classification system

The datasets use the following dimensions:

- 1) Environmental economic characteristics: see section 3.4 below.
- 2) Classification of environmental protection activities (CEPA). The following categories exist:
- 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 2000 is a recognized international standard included in the family of international economic and social classifications.

Groupings of categories are also used according to EPEA mandatory data compilation and reporting under Regulation (EU) 691/2011(Annex IV).

- 3) Classification of economic activities NACE rev.2 (NACE\_R2): Data are aggregated for publication with special groupings divisions (2-digits of the classification) relevant for EPEA.
- 4) Sector: Institutional sector as defined in SEEA CF 2012 and ESA2010, with the following groupings: corporations, general government and non-profit institutions serving households, households, rest of the world (as beneficiary, or origin, of transfers for environmental protection).
- 5) Period of time (TIME): Data are annual.
- 6) Unit (UNIT): Millions of euros.

### 3.3. Coverage - sector

The data set covers the entire national economy as defined in National Accounts (ESA 2010,

paragraph 2.04). In EPEA the following institutional sectors are used for reporting:

- general government and NPISH (S13 and S15) as producers and consumers of EP services;
- corporations (S11 and S12) as producers and consumers of EP services. This sector includes in particular specialist and secondary market producers of EP services (i.e. the units of the corporations sector whose principal activity is the production of EP services, classified primarily to NACE Rev. 2 divisions 37, 38.1, 38.2 and 39, and units for which production of EP services is a secondary activity). EPEA accounts also provide information on the ancillary activities of corporations other than the specialist producers (see 3.4 below)
- households, as consumers of EP services. Households as producers of EP market goods and services or goods and services for exclusively own final use are classified together with corporations
- the rest of the world as beneficiary, or origin, of transfers for environmental protection. The institutions of the EU and international organizations are included in EPEA as part of the rest of the world sector.

### 3.4. Statistical concepts and definitions

Environmental protection (EP) includes all activities and actions which have as their main purpose the prevention, reduction and elimination of pollution and of any other degradation of the environment. Those activities and actions include all measures taken in order to restore the environment after it has been degraded. Activities which, while beneficial to the environment, primarily satisfy the technical needs or the internal requirements for hygiene or safety and security of an enterprise or other institution are excluded from this definition.

The mandatory reporting covers the following characteristics which are defined in accordance with ESA:

- output of environmental protection services. Market output, non-market output and output of ancillary activities are distinguished,
- intermediate consumption of environmental protection services: Total and for production of environmental services,
- imports and exports of environmental protection services,
- valued added tax (VAT) and other taxes less subsidies on products on environmental protection services,
- gross fixed capital formation and acquisitions less disposals of non-financial non-produced assets for the production of environmental protection services,
- final consumption of environmental protection services,
- environmental protection transfers (received/paid).

A comprehensive methodological guidance is provided in the Eurostat's EPEA handbook as well as in ESA 2010 and SEEA CF 2012 (chapter 4).

### 3.5. Statistical unit

Environmental protection expenditure accounts present data, in a way that is compatible with the data reported under ESA, on the expenditure for environmental protection, i.e. the economic resources devoted by resident units to environmental protection. EPEA use

statistical units from national accounts. National accounts define and use various statistical units and groupings of units that interact economically (see ESA 2010, §§ 1.54-1.56, 2.01-2.03).

### 3.6. Statistical population

The statistical population is the national economy as defined in SEEA CF 2012 and the European System of Accounts (ESA 2010). It includes all economic activities undertaken by resident units to produce environmental protection specific services. While some economic activities may be undertaken only for a single purpose, many activities are undertaken for a variety of purposes. Following general principles of classification, activities are deemed to be environmental activities only if the primary purpose of the activity is consistent with the definitions of the environmental protection.

#### 3.7. Reference area

The reference area of the statistics is Greece. The reference area is the economic territory as defined in the European System of Accounts (ESA 2010). A unit is said to be a resident unit of a country when it has its centre of economic interest in the economic territory of that country, that is, when it engages for an extended period (1 year or more) in economic activities in that territory.

## 3.8. Time coverage

The aggregate figure for national expenditure on environmental protection (NEEP) therefore also covers the period 2018-2021, due to the new variable of Intermediate Consumption of environmental protection services (commission delegated regulation (EU) no. 2022/125) that also covers the period 2018 -2022.

The data for the remaining variables of the Environmental Protection Expenditure Accounts as reported in section 3.4 cover the period 2014-2022.

#### 3.9 Base period

Not applicable

#### 4. Unit of measure

Macro economic variables (output, intermediate consumption, investment etc.) are measured in million units of national currency.

#### 5. Reference Period

The reference period for EPEA data is the calendar year.

# 6. Institutional Mandate

# 6.1. Legal acts and other agreements

The legal framework concerning the organization and operation of ELSTAT is available at the following link: <a href="https://www.statistics.gr/en/legal-framework">https://www.statistics.gr/en/legal-framework</a>

EPEA are legally covered by Regulation (EC) No. 691/2011 on European environmental economic accounts (EEEA) as amended by Regulation (EU) No. 538/2014 and commission delegated regulation (EU) 2022/125. EEEA currently include six modules (air emissions accounts, environmentally related taxes by economic activity, economy-wide material flow

accounts, environmental protection expenditure accounts, environmental goods and services sector accounts, and physical energy flow accounts).

The EEEA are fully in accordance with internationally agreed concepts and definitions set out in the system of environmental economic accounting 2012 – central framework (SEEA CF 2012, see annex). The SEEA CF is a multi-purpose conceptual framework to report the interactions between the environment and the economy. EEEA present environmental information in a way that is fully compatible with National Accounts.

### 6.2. Data sharing

Not applicable

# 7. Confidentiality

# 7.1. Confidentiality - policy

The issues concerning the observance of statistical confidentiality by the Hellenic Statistical Authority (ELSTAT) are arranged by articles 7, 8 and 9 of the Law 3832/2010 as in force, by Articles 8, 10 and 11(2) of the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System and by Articles 10 and 15 of the Regulation on the Operation and Administration of ELSTAT.

Furthermore, ELSTAT disseminates the statistics in compliance with the statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

https://www.statistics.gr/en/statistical-confidentiality.

The Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics) applies for EPEA.

## 7.2. Confidentiality - data treatment

- ELSTAT protects and does not disseminate data it has obtained, or it has access to, which enable the direct or indirect identification of the statistical units that have provided them by the disclosure of individual information directly received for statistical purposes or indirectly supplied from administrative or other sources. ELSTAT takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by ELSTAT if and only if:
  - a) these data have been treated, as it is specifically set out in the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System (ELSS), in such a way that their dissemination does not prejudice statistical confidentiality or
  - b) the statistical unit has given its consent, without any reservations, for the disclosure of data.
- The confidential data that are transmitted by ELSS agencies to ELSTAT are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in this task and appointed by an act of the President of ELSTAT.
- ELSTAT may grant researchers conducting statistical analyses for scientific purposes access to data that enable the indirect identification of the statistical units concerned. The access is granted provided the following conditions are satisfied:
  - a) an appropriate request together with a detailed research proposal in conformity with

current scientific standards have been submitted;

- b) the research proposal indicates in sufficient detail the set of data to be accessed, the methods of analyzing them, and the time needed for the research;
- c) a contract specifying the conditions for access, the obligations of the researchers, the measures for respecting the confidentiality of statistical data and the sanctions in case of breach of these obligations has been signed by the individual researcher, by his/her institution, or by the organization commissioning the research, as the case may be, and by ELSTAT.
- Issues referring to the observance of statistical confidentiality are examined by the Statistical Confidentiality Committee (SCC) operating in ELSTAT. The responsibilities of this Committee are to make recommendations to the President of ELSTAT on:
- the level of detail at which statistical data can be disseminated, so as the identification, either directly or indirectly, of the surveyed statistical unit is not possible;
- the anonymization criteria for the microdata provided to users;
- the granting to researchers access to confidential data for scientific purposes.
- The staff of ELSTAT, under any employment status, as well as the temporary survey workers who are employed for the collection of statistical data in statistical surveys conducted by ELSTAT, who acquire access by any means to confidential data, are bound by the principle of confidentiality and must use these data exclusively for the statistical purposes of ELSTAT. After the termination of their term of office, they are not allowed to use these data for any purpose.
- Violation of data confidentiality and/or statistical confidentiality by any civil servant or employee of ELSTAT constitutes the disciplinary offence of violation of duty and may be punished with the penalty of final dismissal.
- ELSTAT, by its decision, may impose a penalty amounting from ten thousand (10,000) up to two hundred thousand (200,000) euros to anyone who violates the confidentiality of data and/or statistical confidentiality. The penalty is always imposed after the hearing of the defense of the person liable for the breach, depending on the gravity and the repercussions of the violation. Any relapse constitutes an aggravating factor for the assessment of the administrative sanction.

# 8. Release policy

#### **8.1.** Release calendar

EPEA data are disseminated through EL.STAT website according to <u>Annual Statistical Work</u> Program. There are no scheduled Press Releases.

#### 8.2. Release calendar access

Press Release Calendar is available on **ELSTAT website**.

#### 8.3.User access

In compliance with Community legislation and the European Statistics Code of Practice, ELSTAT releases all national statistical data on its webpage, fully observing professional independence and with a view to ensuring the simultaneous, equal, and timely access of all users to statistical data.

# 9. Frequency of dissemination

Data are disseminated annually.

#### 10. Accessibility and clarity

#### 10.1. News release

Not applicable.

# 10.2. Publications

EPEA data are available at **ELSTAT's website** 

#### 10.3. Online database

EPEA data are disseminated with data files at **ELSTAT's website** 

Data are also disseminated at the **Eurostat database**.

#### 10.4 Micro-data access

Not applicable.

#### 10.5. Other

Data can be provided to users (given that restrictions on statistical confidentiality are fully met) usually by e-mail, by submitting a relevant data request. Users have to submit their request, describing in detail the requested data, to the Division of Statistical Information and Publications. The requests must be submitted electronically to the following e-mail address: data.dissem@statistics.gr.

# 10.6. Documentation on methodology

The EPEA manual and other methodological information can be downloaded from **Eurostat's website**.

# 10.6.1. Metadata completeness - rate

All metadata mandatory items are completed.

# 10.7. Quality documentation

European Member States are obliged to provide quality reports, according to EU Regulation 691/2011, article 7.

# 11. Quality management

#### 11.1. Quality assurance

Quality of the data is ensured with the following procedures:

- Implementation of methodological guidelines provided by the Eurostat with the EPEA handbook (2017 edition) and additional guideline documents
- Extensive validation procedure of the data by Eurostat. The validation tools checks for inappropriate symbols, consistency and plausibility (e.g. changes in time series, extreme values, revisions, internal consistency of variables)

# 11.2. Quality assessment

The overall quality of the data is considered satisfactory at the current stage of EPEA development. EPEA compilation has started recently (mandatory reporting from 2017) and

the length of available data is still relatively short (2014 - 2021). The quality and coverage in terms of mandatory variables are expected to improve in the next few years. ELSTAT continues to improve data compilation following guidance from Eurostat.

#### 12. Relevance

#### 12.1. User Needs

No identification of the users of EPEA at national level is currently performed. Main potential users for the EPEA could be: the Ministry of Environment & Energy, the Ministry of Development and Investments, Researchers, Corporations and non-profit institutions, press and media.

There are also foreign institutional users (Eurostat, OECD, United Nations, etc.).

#### 12.2. User Satisfaction

The Statistical Information and Publications Division of ELSTAT conducts a survey on user satisfaction, the results of which are available at the website.

However, as EPEA data have been recently published for the first time, there is currently no feedback from users yet.

# 12.3. Completeness

The requirements of the Regulation 691/2011 for mandatory reporting are fully met.

#### 12.3.1. Data completeness - rate

EPEA mandatory items (according to EC 691/2011) are 100% complete. Voluntary items of the EPEA data collection are also completed.

# 13. Accuracy

# 13.1. Accuracy - overall

The overall accuracy is considered to be satisfactory. Accuracy is also ensured by checking the Supply and Use framework for each CEPA category. Accuracy of national data is also systematically assessed through Eurostat's validation checks to all EPEA data reported.

# 13.2. Sampling error

Not applicable to accounts that do not conduct a sample survey.

# 13.2.1. Sampling error - indicators

Not applicable to these accounts that do not conduct a survey.

#### 13.3. Non-sampling error

Accuracy is also ensured by checking the Supply and Use framework for each CEPA category.

#### 13.3.1. Coverage error

EPEA accounts are benchmarked to respective NA aggregates.

#### 13.3.1.1. Over-coverage - rate

Not applicable to the applied current methodology for the compilation of EPEA accounts.

### 13.3.1.2. Common units - proportion

Not applicable to the applied current methodology for the compilation of EPEA accounts.

#### 13.3.2. Measurement error

Not applicable to the applied current methodology for the compilation of EPEA accounts.

### 13.3.3. Non response error

Not applicable to the applied current methodology for the compilation of EPEA accounts

# 13.3.3.1. Unit non-response - rate

Not applicable to accounts that do not conduct a sample survey.

#### 13.3.3.2. Item non-response - rate

Not applicable to the applied current methodology for the compilation of EPEA accounts

### 13.3.4. Processing error

No processing errors are currently identified in the compilation process.

### 13.3.5. Model assumption error

EPEA data compilation methodolodgy applies benchmarking to respective National Accounts aggregates as described in 18.5.

# 14. Timeliness and punctuality

#### 14.1. Timeliness

The data are submitted to Eurostat 24 months after the end of the reference year. After validation data are published by the third quarter of the following year according to the release schedule of the Statistical Program of ELSTAT.

# 14.1.1. Time lag - first result

Approximately 30 months after the reference period

# 14.1.2. Time lag - final result

Final results are produced 2 years after first results, meaning approximately 54 months after the reference period

#### 14.2. Punctuality

EPEA are transmitted within the deadlines set out by the European Regulation.

# 14.2.1. Punctuality - delivery and publication

EPEA are delivered and published within the deadlines as set by the European Regulation and the National Statistical Program (0 days).

# 15. Coherence and comparability

# 15.1. Comparability - geographical

EPEA are compiled according to harmonised guidelines provided by Eurostat and hence are comparable across European member states that report EPEA. The adoption of common statistical concepts and definitions, as defined in the Eurostat handbook, and the validation checks applied by Eurostat enhance the comparability between countries.

# 15.2. Comparability - over time

EPEA data are available and comparable from 2014. The data refer to the mandatory data

as reported in the regulation 691/2011.

Data on Intermediate Consumption and NEEP are comparable from year 2018.

#### 15.2.1. Length of comparable time series

- For National Environmental Protection Expenditure and Intermediate Consumption 6 years of comparable data (since 2018) are available.
- For all other EPEA characteristics 10 years of comparable data (since 2014) are available.

#### 15.3. Coherence - cross domain

Data are coherent with principles, definitions and concepts in National Accounts (ESA - European System of Accounts), and Environmental Accounting (SEEA - System of Environmental-Economic Accounting). This ensures a high level of coherence with the core national accounts.

# 15.3.1. Coherence - sub annual and annual statistics

There are not sub annual EPEA accounts compiled

# 15.3.2. Coherence - National Accounts

Coherence with National Accounts is totally ensured as compilation process followed performs benchmarking to NA data (COFOG, SUT and more detailed available breakdowns for certain variables) at current prices.

#### 15.4. Coherence - internal

The internal coherence is considered as high, ensured by the accounting framework and reporting tables (totals are consistent with the sum of the breakdowns). Appropriate compilation methods (as described below in 18 section) and the validation of the accounting framework (supply and use tables) for each CEPA category ensure internal consistency.

### 16. Cost and Burden

Approximately, 3 months of full-time equivalents (FTE) were used for this data compilation (2024) of EPEA.

### 17. Data revision

# 17.1. Data revision - policy

EPEA data should comply with the revision policy of the underlying data sets used, meaning mainly National Accounts and Structural Business Statistics data.

# 17.2. Data revision - practice

Previously published EPEA data by Cepa categories have been revised for the whole reporting period mainly due to the respective National Accounts revision (base year revision) for the period of 2014 - 2021.

# 17.2.1. Data revision - average size

Average revision of NEEP for the period 2018-2021 ia approximately 3,2%

# 18. Statistical processing

# 18.1. Source data

The main data sources used for the compilation of EPEA data by institutional sectors and economic variables (with a reference to the Eurostat data tables) are the following:

#### General Government and NPISH

COFOG statistics and detailed GG accounts from NA are the main data sources. COFOG Statistics are available in table «General government expenditure by function» of the National Accounts (ESA 2010) transmission program. CEPA categories are derived from the direct correspondence of the sub items of division 05 - Environmental Protection of COFOG statistics. Certain variables not available in COFOG statistics table (like intermediate consumption of EP services, consumption of fixed capital, and payments for non-market output) have been complemented by detailed General Government data provided by the respective National Accounts section. Market output is 0 for General Government as derived from detailed general government accounts data. Non market Output is derived from Final consumption of EP services by adding payments for non-market output (p.131).

- Corporations as specialist and secondary producers of market EP services :
  - Supply and use tables (SUT) data at current prices compiled by National Accounts, where data are aggregated for NACE sectors and CPA products 37-39 "Sewerage; waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services".
  - CEPA categories are calculated by using detailed respective Nace Rev.2 4-digit data from Structural Business Statistics (SBS).
  - Intermediate Consumption of EP services is calculated (as also reported in EPEA handbook) by applying the ratio of IC to Output (from Supply and Use Tables) for EP services to market output
- Corporations other producers of ancillary EP services

SBS data are used for Corporations' mandatory items.

Gross Fixed Capital Formation (GFCF) is based on SBS variables:

- Investments for the purchase of environmental equipment and installations for the management, treatment, measurement of emissions and waste, which do not entail any change in the production process (separate equipment)
- o Investments for the purchase of environmental equipment and facilities, which bring about a change in the production process (integrated equipment).

Ancillary Output is calculated using SBS variable for "Total current expenditure on environmental protection".

SBS figures are available with subcategories that correspond directly to CEPA categories and to Nace Rev.2 -digit breakdown.

Intermediate Consumption of EP services for other production is calculated starting from the IC reported in SUT for products 37-39 and subtracting a) the amount of IC not attributed to EP services (nace 38.3 ratio as calculated from SBS statistics) and b) the IC of EP service producers (GG and Corporations). The remaining IC is allocated amongst

Nace sectors (SUT data for IC) and CEPA categories.

#### Transfers:

- Subsidies data from General Government expenditure available in COFOG statistics for division 05 - Environmental Protection are mainly used
- Concerning Transfers from the institutional sector "Rest of the World" EU transfers data from the EU Financial Transparency System (FTS) as proposed in the EPEA handbook are used.
- Other macro economic data (trade, VAT etc.)

NA Supply and Use table data are utilized for Imports, exports and taxes concerning product 37-39 ("Sewerage; waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services"). CEPA categories figures for imports and exports are calculated on information available in international trade statistics.

NEEP aggregate: The automatic calculation method provided by Eurostat is followed

Resource management (RM): No data compilation is currently performed for resource management.

### 18.2. Frequency of data collection

Data are collected annually.

#### 18.3. Data collection

The data collection for compiling EPEA is performed by the following data providers:

- 1) National Accounts Division from ELSTAT which provide economic variables for:
  - General Government (COFOG Statistics),
  - Detailed Supply and Use tables (SUT),
  - Households' final consumption data.
- 2) Business Statistics Division of ELSTAT for Structural Business Statistics data at Nace Rev.2 classification for Output (market and ancillary) and Gross fixed Capital Formation data for the institutional sector of Corporations
- 3) Other administrative like EU transfers data from the Financial Transparency System (FTS) for the institutional sector "Rest of the World"

#### 18.4. Data validation

Before finalizing, data also undergo a series of logical and consistency checks as regards the change of variables over time, revisions, extreme values and cross domain consistency. Data are also extensively validated by Eurostat using IT tools and validation reports.

#### 18.5. Data compilation

Compilation process based on the aforementioned data sources from National accounts (COFOG statistics, Supply and Use tables) performs benchmarking to NA data at current prices.

The following tables are compiled and published for the economic aggregates related to Environmental Expenditure:

- Detailed EPEA economic aggregates (Output, Intermediate Consumption, Final consumption, GFCF, Transfers) by Institutional Sector:
  - Table 1) General Government and NPISH
  - Table 2) Corporations as specialist and secondary producers of market EP services
  - Table 3) Corporations other for ancillary Output and GFCF
  - Table 4) Households final consumption
  - Table 5) Transfers
- National Expenditure on Environmental Protection. The final key aggregate produced based on the EPEA data is national expenditure on environmental protection ('NEEP') which measures the total resources devoted by resident units to protecting the natural environment. It is calculated as a sum of the above detailed data on uses of environmental protection (EP) services by resident units, gross fixed capital formation (GFCF) for EP activities, and net transfers to the rest of the world for EP.

#### 18.5.1. Imputation - rate

No imputation is performed according to the compilation methodology

#### 18.6. Adjustment

Not applicable for this frequency.

# 18.6.1. Seasonal adjustment

No seasonal adjustment is applied to annual EPEA data

4	^	_	_			_		
1	q		n	m	m	ρ	n	т