

Single Integrated Metadata Structure (SIMS v2.0)

Country: Greece

Domain name: Environmental goods and services sector

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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	02/04/2024
2.2. Metadata last posted	02/04/2024
2.3. Metadata last update	02/04/2024

3. Statistical presentation

3.1. Data description

The environmental goods and services sector (EGSS) accounts report on an economic sector that generates environmental products, i.e. goods and services produced for environmental protection or resource management.

Products for environmental protection prevent, reduce and eliminate pollution or any other degradation of the environment. They include measures undertaken to restore degraded habitats and ecosystems. Examples are catalysts and filters to decrease pollutant emissions, wastewater and waste treatment services, or noise insulation works.

Products for resource management safeguard the stock of natural resources against depletion. Examples are renewable energy production, equipment and construction works for heat and energy saving, activities and equipment for recovery of materials.

EGSS accounts provide data on output and exports of environmental goods and services and on the value added of and employment in the environmental goods and services sector.

EGSS data are compiled following the statistical concepts and definitions set out in the System of Environmental-Economic Accounting 2012 – Central Framework ([SEEA CF 2012](#)).

3.2. Classification system

Environmental protection activities are classified by environmental domain as set out in the Classification of Environmental Protection Activities (CEPA 2000). Resource management activities are classified as set out in the Classification of Resource Management Activities (CReMA). The following sixteen categories are reported:

CEPA 1 - Protection of ambient air and climate, of which:

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, of which:

CEPA 9 - Other environmental protection activities

CReMA 10 - Management of water

CReMA 11 - Management of forest resources, of which:

CReMA 12 - Management of wild flora and fauna

CReMA 13 - Management of energy resources, of which:

CReMA 13A - Production of energy from renewable resources

CReMA 13B - Heat/energy saving and management

CReMA 13C - Minimisation of the use of fossil energy as raw materials

CReMA 14 - Management of minerals

CReMA 15 - Research and development activities for resource management

CReMA 16 - Other resource management activities

CEPA 2000 is a recognized international standard included in the family of international economic and social classifications

CReMA is set out in Annex V of [Regulation \(EU\) No 691/2011 of the European Parliament and of the Council on European environmental economic accounts](#).

The suppliers of environmental goods and services are scattered over many [NACE](#) sections,

and CEPA/CREMA categories.

3.3. Coverage - sector

EGSS comprises a sector of the economy that produces goods and services aimed at environmental protection and resource management. Environmental goods and services either reduce environmental pressures or help maintaining the stock of natural resources (e.g. vehicle catalysts, soil remediation services,) or they are designed to be cleaner and more resource efficient than conventional products (e.g. electric cars, zero-energy buildings). Environmental goods and services can be produced by corporations, households, governments and non-profit institutions.

For compiling EGSS data, lists of environmental activities and products have been set out in [Commission Implementing Regulation \(EU\) 2015/2174](#) called “the indicative compendium of environmental goods and services”.

3.4. Statistical concepts and definitions

EGSS shares the same system as the European System of Accounts (ESA 2010) and consists of all environmental products within this production boundary. ESA defines production as the activity carried out under the control and responsibility of an institutional unit that uses input of labour, capital, goods and services to produce output of goods and services.

Only goods and services produced for environmental purposes are included in the scope of the environmental goods and services sector.

'Environmental purpose' means that a good or service helps either 1) preventing, reducing and eliminating pollution and any other degradation of the environment or 2) preserving and maintaining the stock of natural resources and hence safeguarding against depletion.

The EGSS statistics aim at compiling data for the following economic variables:

Output: consists of products that become available for use outside of the producer unit, any goods and services produced for own final use and goods that remain in the inventories at the end of the period in which they are produced. Apart from market output there is also output for own final use and non-market output. EGSS statistics also include ancillary output, comprising output intended for use within an enterprise.

The mandatory economic variables for the EGSS compilation are the following:

- Output: the value of environmental goods produced, distinguishing between total and market output. Market output is to be valued at basic prices, that is, the prices receivable by the producer from the purchaser minus taxes and plus subsidies on products.
- Gross Value Added (GVA): represents the contribution of the production of environmental goods and services to GDP. It is the difference between the value of production and intermediate consumption. It is reported in total GVA and GVA of market activities.
- Employment: is measured in full-time equivalent jobs engaged in the production of output of environmental goods and services. Full-time equivalent is defined as total hours worked divided by the average annual working hours in a full-time job. It is reported in total employment and employment of market activities
- Exports: consist of sales, barter, gifts, or grants, of environmental goods and services from residents to non-residents.

3.5. Statistical unit
The recommended statistical unit for the collection and compilation of EGSS statistics (excluding general government) is the establishment. For general government, the recommendation is to use institutional units and groupings of units as defined in the European System of Accounts (ESA 2010) .
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).
3.7. Reference area
At national level data refer to Greece total.
3.8. Coverage - Time
Data cover the period 2014 -2021.
3.9. Base period
Not applied to this dataset.

4. Unit of measure
Output, gross value added, and exports are measured in million EUR. Employment is measured in full time equivalents (i.e., full time equivalent jobs).

5. Reference Period
The reference period for EGSS data is the calendar year.

6. Institutional Mandate
6.1. Institutional Mandate - legal acts and other agreements
<p>The legal framework concerning the organization and operation of ELSTAT is available at the following link: https://www.statistics.gr/en/legal-framework</p> <p>EGSS are legally covered by Regulation (EC) No. 691/2011 on European environmental economic accounts (EEEE) as amended by Regulation (EU) No. 538/2014 and commission delegated regulation (EU) no. 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).</p> <p>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 (NA).</p> <p>Moreover, EGSS are regulated through a common conceptual framework established by Implementing Regulation 2174/2015 that provides an indicative compendium of environmental goods and services and thus determines the perimeter of the EGSS sector.</p>

6.2. Institutional Mandate - data sharing

Not applicable at national level. ELSTAT disseminates aggregates of all validated non-confidential data on its website for all users.

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>

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

EGSS data are disseminated through ELSTAT. website according to Annual Statistical Work Program (<https://www.statistics.gr/en/programmes-and-reports>). There are no scheduled Press Releases.

8.2. Release calendar access

Press Release Calendar is available on ELSTAT. website (<https://www.statistics.gr/en/calendar>)

8.3. Release policy - 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. Dissemination format - News release
Not applicable.
10.2. Dissemination format - Publications
EGSS data are available at ELSTAT's website (https://www.statistics.gr/el/statistics/-/publication/SOP14/-)
10.3. Dissemination format - online database
EGSS data are disseminated with data files at ELSTAT's website (https://www.statistics.gr/el/statistics/-/publication/SOP14/-) Data are also disseminated on the Eurostat database at the following link: https://ec.europa.eu/eurostat/web/main/data/database
10.4. Dissemination format - microdata access
Not applicable
10.5. Dissemination format – other
Data can be provided to users (provided 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 EGSS manuals (handbook and practical guide) and other methodological information can be downloaded from Eurostat's website .
10.7. Quality management – 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 Eurostat is ensured by following the following procedures: - Implementation of methodological guidelines provided by the Eurostat handbook on EGSS (2016), EGSS practical guide (2016) and additional guideline documents - Extensive validation procedure of the data by Eurostat. The validation tools checks for inappropriate symbols, consistency and plausibility like changes in time series, extreme values, revisions, internal consistency of variables and consistency with other environmental accounts (e.g. EPEA).
11.2. Quality management – assessment
The overall quality of the data is considered satisfactory at the current stage of EGSS development. EGSS compilation has started recently (mandatory reporting from 2017) and the length of available data is still relatively short (2014 – 2021). The quality of the data are expected to improve in the next few years considering that there are still areas (e.g certain resource management activities) at technical level where improvement is needed. ELSTAT continues to improve data compilation following guidance from Eurostat.

12. Relevance
12.1. Relevance - User Needs
<p>No identification of the users of EGSS at national level is currently performed</p> <p>The potential users are national and international organizations, government agencies, research institutes and enterprises as well as students and other citizens interested in the economic aggregates of environmental goods and services.</p> <p>The relevance of EGSS is enhanced by using the same conceptual framework with National Accounts, which allows, e.g. to put in relation with estimates of production, value added, employment, GDP, etc.</p>
12.2. Relevance - User Satisfaction
<p>The Statistical Information and Publications Division of ELSTAT conducts a survey on user satisfaction, the results of which are available at the link: http://www.statistics.gr/el/user-satisfaction-survey.</p> <p>However, as EGSS data have been recently published for the first time, there is currently no feedback from EGSS yet.</p>
12.3. Completeness
The requirements of the Regulation 691/2011 are fully met.

13. Accuracy
13.1. Accuracy - overall
The overall accuracy is considered to be satisfactory. Accuracy of national data is also systematically assessed through Eurostat's validation checks to all EGSS data reported.
13.2. Sampling error
Not applicable to statistical accounts
13.3. Non-sampling error
Not applicable to statistical accounts

14. Timeliness and punctuality
14.1. Timeliness
<p>The data are submitted to Eurostat 22 months after the end of the reference year.</p> <p>After validation data are published by the second quarter of the following year according to the release schedule of the Statistical Program of ELSTAT.</p>
14.2. Punctuality
EGSS are transmitted within the deadlines set out by the European Regulation.

15. Coherence and comparability
15.1. Comparability - geographical
<p>EGSS are compiled according to harmonised guidelines provided by Eurostat and hence are comparable across European member states that report EGSS.</p> <p>Comparability of EGSS accounts compiled by EU Member States is ensured by a common conceptual framework and through Implementing Regulation 2174/2015 that provides an</p>

indicative compendium of environmental goods and services and thus determines the perimeter of the EGSS sector. Hence, EGSS data are consistent compilations of environmental activities of national economies.

15.2. Comparability - over time

EGSS data are available and comparable from 2014. The data refer to the mandatory data as reported in the Regulation 691/2011.

15.3. Coherence - cross domain

Coherence is ensured with other statistical domains such as National Accounts, other environmental accounts (e.g. EPEA) and other official statistics that are used as data sources in the compilation of EGSS.

15.3.1. Coherence - sub annual and annual statistics

Consistency is also ensured over time at an annual basis by applying the same methods and data sources over time. No breaks in series are currently reported.

15.3.2. Coherence - National Accounts

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). Applied compilation procedure (benchmarking to National Accounts data) are based on macroeconomic data sources (NA Supply and Use Tables, International trade statistics,..) and therefore consistency is ensured with National Accounts.

15.3.3. Coherence - EPEA

Consistency is also ensured with other Environmental Accounts as EPEA data are used as source for the compilation of EGSS data.

15.3.4. Coherence - other statistics

Consistency is ensured with other official statistics that are used as used data sources in the compilation of EGSS such as the structural business survey (SBS), manufacturing products (PRODCOM survey), internal trade statistics, agricultural crop statistics and energy statistics.

15.4. Coherence - internal

The internal coherence is very 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) for GVA and Employment based on Output and NA data ensure internal consistency between variables.

16. Cost and Burden

Approximately, 3 months of full-time equivalents (FTE) were used for this data compilation (2023) for EGSS accounts.

17. Data revision
17.1. Data revision - policy
EGSS data should comply with the revision policy of the underlying data sets used, meaning mainly National Accounts and Structural Business statistics data. The revisions of other environmental accounts such as EPEA are also included.
17.2. Data revision - practice
Previously published data have been revised mainly due to National Accounts revision for the reference year of 2020. GVA revision of total activities for 2020 amounts approximately to 0,6% mainly due to the respective National Accounts revision. Minor revisions for certain environmental categories (CEPA, CREMA) and economic activity (Nace) for the years 2018 - 2020 are caused mainly by the EPEA accounts.
17.2.1. Data revision - average size
GVA revision for 2020 amounts approximately to 0,6% for of total activities and 0.7% for market activities mainly due to the respective National Accounts revision.
17.2.2. Data revision - practice
EGSS accounts data are reported as provisional only for the reference year 2021.

18. Statistical processing
18.1. Source data
<p>The main data sources used for compiling the EGSS Output variable are:</p> <ol style="list-style-type: none"> 1) National accounts data from Supply and Use tables (SUT) and the ESA2010 transmission programme at current prices which are used as the benchmark of the following shares of environmental products and activities. 2) Structural Business Survey data, meaning both <ol style="list-style-type: none"> a) the SBS economic variables at Nace 4-digit code as compiled by the survey in accordance with the sectoral legislation of the Stuctural Business Statistics and b) the underlying detailed (at 8-digit code) administrative data based on tax records which were used in order to calculate the share of certain environmental activities and products, especially for specific Nace Rev.2 sections like manufacturing and construction, 3) PRODCOM survey specific 8-digit code products data which were used to calculate the respective ratios of the environmental activity/product, 4) Environmental Protection Expenditure Accounts (EPEA) data used mainly for the output of NACE sector 37 - 39 (Sewerage, Waste collection, treatment and disposal activities; materials recovery, Remediation activities and other waste management services) 5) The Agricultural Crop Statistics for calculating "Organic farming Output" by using the share of land on organic farming 6) The Energy Statistics for quantities and price data for calculating Electricity output from Renewable sources, Biogas and Biofuels. 7) Other administrative data, like the report from the Greek Mining Enterprises Assosiation(GMEA). <p>The methodology applied for the calculation of GVA, exports and Employment are based on</p>

the methods outlined in the respective EGSS handbooks and is described below in the data compilation (18.5)

18.2. Frequency of data collection

Data are collected annually.

18.3. Data collection

The main sources for compiling EGSS are the following:

- 1) National Accounts Division from ELSTAT: Economic Variables for Output, GVA and Employment and the detailed Supply and Use tables (SUT)
- 2) Ministry of Environment and Energy for National Energy Statistics
- 3) Business Statistics Division of ELSTAT for Structural Business Survey data and PRODCOM survey data
- 4) Independent Authority for Public Revenue for administrative economic data
- 5) The Ministry of Agriculture for the Agricultural Crop Statistics
- 6) The Greek Mining Enterprises Association for administrative source data for mineral enterprises.

18.4. Data validation

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

18.5. Data compilation

EGSS Output: the “top down compilation approach” is used by benchmarking source data on NA output data. Source data are provided by other official statistics, administrative sources and surveys (SBS, PRODCOM, etc) as mentioned above.

Total output figures are calculated including data for non market output, ancillary output and own final use data. Data for non market output are provided from EPEA accounts as compiled from COFOG and General Government statistics. Ancillary Output is also based on EPEA ancillary output as provided from SBS source data on environmental expenditure. Own final use estimates are based on national accounts information on own final use by Nace economic activity sector.

EGSS Gross Value Added: GVA shares in Output are used from National Accounts data in order to estimate EGSS GVA from EGSS output for each Nace activity and for each reference period. The use of National Accounts GVA shares is also described in the Practical guide of EGSS for the calculation of GVA.

EGSS Exports: Data on exports are compiled using a) data from International trade statistics where there is a 100% inclusion of the environmental product (CPA 37 - 39, fuel wood) and b) calculation based on the NA share of export to output for the specific environmental products that have exports.

EGSS Employment: The methodology described in the "EGSS practical guide" is applied, which uses mainly Labour Force Survey country data to calculate employment in Full time equivalent (FTE). Then FTE employment is then used as ratios to Total Output for each Nace

sector (and reference period) in order to calculate EGSS Employment from EGSS Output.

18.6. Adjustment

National accounts Output and GVA data (for Nace Sectors and CPA products) from Supply tables are mainly used to benchmark source data of environmental goods and services.

19. Comment