Single Integrated Metadata Structure (SIMS v2.0)
Country : Greece
Domain name: Waste Generation and Treatment)

ELSTAT metadata
Reference metadata
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2. Statistical presentation	Top
2.1. Data description	
On the basis of EC Regulation on waste statistics (EC) No. 2150/2002, as amended by Commission Regulation (EU) No. 849/2010, data on the generation and treatment of waste are compiled by Member States. The information on waste generation has a breakdown in sources (19 business activities according to the NACE classification and household activities) and in waste categories (according to the European Waste Classification for	

statistical purposes). The information on waste treatment is broken down to three basic treatment types (recovery, incineration and disposal) and six subcategories, as well as, and in waste categories.

Data collection for waste generation and treatment is conducted by utilizing the following sources:

1) EWR: Electronic Waste Register. The Electronic Waste Register is an electronic service provided by the Ministry of Environment and Energy (MoEE) and includes the electronic registration of the obligated bodies (Companies and Organizations) in the register and at the same time supports the registration of their activities (Collection-Transport Facilities and activities) in conjunction with the declaration of the waste they manage and the permits that document them.

2) ATS: Alternative Treatment System. Data collection relative to special streams of wastes such as Waste electrical and electronic equipment (WEEE), End-of-life vehicles (ELV), used oils, accumulators, used tyres etc. The relevant data of the Hellenic Recycling Organization (HRA) which are based on the data of the respective Alternative Management Systems were utilized.

3) Sustainable Development Indicators (SDIs) tables for waste generation of mineral wastes provided by the Greek Mineral Enterprises Association.

4) Municipal Waste Statistics as compiled by the MoEE are used for specific waste categories of Households

5) For "Household and similar waste" (W101) a survey is carried out on landfills by the Waste Management Department of the Ministry of Environment and Energy, in the context of the implementation of Directive 1999/31 / EC

6) For "Common Sludges" (W11) data collected from the Ministry of Environment and Energy (MoEE) through the survey on Wastewater Treatment Plants (WWTP).

2.2. Classification system

Waste statistics consists of four data sets referring to:

A) Quantities of generated waste

B) Quantities of treated waste, especially referring to :

- quantities of incinerated waste
- quantities of disposed waste
- quantities of recovered waste

The data sets are broken down by waste categories according to the European Waste Classification for statistical purposes: EWC-Stat Rev. 4

This classification is linked to the administrative classification, List of wastes .

The data set on waste generation is broken down by 51 (non-hazardous and hazardous) waste categories and 19 groups of economic activities (including household activities).

NACE Rev.2 division 38 (Waste collection, treatment and disposal activities; materials recovery) is linked to waste management and contains secondary waste.

The data sets on waste treatment refer to treatment types, on the basis of the treatment operations defined in the Waste Framework Directive 2008/98/EE.

Distinction is made in 3 basic treatment types and 6 subcategories: a) Incineration : energy recovery, other incineration, b) Recovery: backfilling, other recovery, and c) Disposal: Deposit onto or into land, Land treatment and release into water bodies.

Data on waste treatment are also broken down by 51 waste categories, as in the table concerning waste

generation.
Data on generation and treatment of waste are available at national level and the measurement unit is the tone.

2.3. Coverage - sector

- The dataset on waste generation covers all economic activities and in addition waste generated by households.
- The datasets on waste treatment do not include pre-treatment waste operations (D8, D9, D11, D13, D14, D15, R12, R13), but only final treatment operations.
- Quantities of exported waste for treatment abroad are not included, but quantities of waste imported from other countries that are treated inside the country are included.

2.4. Statistical concepts and definitions

Concepts and definitions are based on Waste Framework Directive 2008/98/EC

2.5. Statistical unit

- In the table of waste generation, the statistical unit is the enterprise by sector of economic activity.
- In the table of waste treatment the statistical unit is its waste management facility.

2.6. Statistical population

Regarding generation of waste, the population and the administrative data refer to all waste producers.
Regarding waste treatment, the population and the available administrative data cover all licensed treatment plants.

2.7. Reference area

All data refer to Greece total.

2.8. Coverage - Time

From 2004 (when the Regulation was first implemented) onwards on a biennial basis (2006, 2008, 2010, 2012, 2014. 2016, 2018).

2.9. Base period

Not applicable.

3. Statistical processing

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3.1. Source data

Waste generation and treatment datasets are compiled by using the following sources:
- Primary data are obtained from the Electronic Waste Register,(EWR) which is managed by the Ministry of Environment and Energy (MoEE)

- Administrative data concering waste streams such as Waste of electrical and electronic

equipment (WEEE), End-of-life vehicles (ELV), used oils, accumulators, used tyres, e.t.c. are provided by the Hellenic Recycling Agency (HRA) and the MoEE

- Mineral waste data are mostly provided by the Greek Mining Enterprises Association (GMEA)

- A survey on landfills by the Waste Management Department of the Ministry of Environment and Energy is conducted for "Household and similar waste" (W101)

- Municipal waste statistics are also used for Households waste generation

3.2. Frequency of data collection

Biennial

3.3. Data collection

The main administrative sources of data include the Ministry of Environment and Energy (MoEE), the Hellenic Recycling Agency (HRA), Alternative Treatment System, Greek Mining Enterprises Assosiation(GMEA) and Municipal Waste Statistics.

3.4. Data validation

Completeness and quality checks are carried out by the MoEE during the whole statistical process. Data are checked in order to detect and duly correct any errors.

These checks include checking extreme values of variables and their comparability over time. Possible errors are investigated and the necessary corrections are performed.

In certain cases source data have also been validated with other statistical domains, as in the case of mineral wastes where the severe decrease in the last data collections (e.g. in 2018) have been confirmed with similar decreases in National Accounts aggregates (Output, Gross Value Added) of Mining and Quarrying (Nace Rev.2 Section B) and b) production of main mineral products.

In certain cases source data have also been validated with independent estimations, like the generation of "animal and mixed food waste" (w091) where certain data from Electronic Waste Register has been cross checked with an estimation based on meat production.

3.5. Data compilation

The data are mainly collected by MoEE through the Electronic Waste Register and the other data sources as described. After data collection, logical checks are performed and final compiled tables with the results are transmitted to Eurostat through an electronic transmission system.

3.6. Adjustment

Not applicable.

4. Quality management

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4.1. Quality assurance

The data presented in the waste tables are derived from administrative data.

Completeness and quality checks are performed at all stages of the process. The data are reviewed to identify and correct possible errors. The possible errors are investigated in collaboration with the administrative source and the necessary corrections are performed.

Member States describe data sources and methodology and compile a quality report.

The data are also validated by Eurostat which uses specific rules in order to make the necessary data checks.

4.2. Quality management - assessment

All the rules for error detection and correction are applied, as described in points 3.4 and 4.1.

Concepts, definitions, classifications and formats which are clearly defined in European legislation, ensure comparability accross Member States regarding the choice of available sources and methods.

5. Relevance

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5.1. Relevance - User Needs

The requirement for Regular Community statistics on the waste generation and treatment from businesses and private households, for monitoring the implementation of waste policy is fulfilled. This creates the basis for monitoring compliance with the principles of maximization of recovery and safe waste disposal.

In addition, the statistical data are a significant source of information for local and international users (government entities, education foundations, students, research institutes, international organizations etc.).

Users' needs are not satisfied in cases of unavailability of the requested data or in case an issue of statistical confidentiality arises and the requested data cannot be provided without the approval of ELSTATS' President.

5.2. Relevance - User Satisfaction

ELSTAT conducts a user satisfaction survey.

The User Satisfaction Survey is conducted by ELSTAT, on a daily basis, in the form of a questionnaire which users are asked to complete, optionally, every time they request and receive information from the Service. The Department of Statistical Information and the Department of Library, drawing on information from the user satisfaction survey, prepare an annual report containing data on the number of users, the level of response to user requests, the type of data requested, and how the statistical information is disseminated.

Available information is to be found on the ELSTAT website at the location

https://www.statistics.gr/el/user-satisfaction-survey

5.3. Completeness

The requirements of (EC) Regulation 2150/2002, as amended by Commission Regulation (EU) No. 849/2010, are fully applied.

5.3.1. Data completeness - rate

The requirements of Regulation 2150/2002 are fully applied.

6. Accuracy and reliability

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6.1. Accuracy - overall
The overall accuracy is largely based on the quality and completeness of the primary administrative data. Accuracy is ensured through a series of logical checks and comparisons on primary data sources (as described in section 8). Additionally, Waste statistics final data are thoroughly validated by Eurostat including analytical checks on data coherence, extreme values, time series consistency, e.t.c
6.2. Sampling error
Not applicable.
6.2.1. Sampling error - indicators
Not applicable.
6.3. Non-sampling error
There are no errors related to inconsistent implementation of definitions and classifications.
6.3.1. Coverage error
There is no divergence between the frame population and the target population
6.3.1.1. Over-coverage - rate
Not applicable
6.3.1.2. Common units - proportion
Not applicable
6.3.2. Measurement error
Not applicable.
6.3.3. Non response error
Not applicable
6.3.3.1. Unit non-response - rate
Not applicable.
6.3.3.2. Item non-response - rate
Not applicable.
6.3.4. Processing error
Not applicable
6.3.4.1. Imputation - rate
Not applicable
6.3.5. Model assumption error
Not applicable
6.4. Seasonal adjustment
Not applicable for biennial data
6.5. Data revision - policy
The revision policy of ELSTAT for 2018 is being implemented at the following link:

https://www.statistics.gr/documents/20181/1195539/ELSTAT_Revisions_Policy_25_10_2018_EN.pdf/604b51dd-5dc2-4c7c-8b74-2766bda16e5e

6.6. Data revision - practice

A revision of the previous published reference year (2 years ago) is usually performed as long as there are changes to primary data.
Data for the current reference year are flagged as "Provisional".

6.6.1. Data revision - average size

-

7. Timeliness and punctuality

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7.1. Timeliness

Data are published within two years after the end of the reference period

7.1.1. Time lag - first result

Data are released within two years after the end of the reference period

7.1.2. Time lag - final result

Data of the previous reference year are usually revised and finalised with the current release of the data.

7.2. Punctuality

Data are transmitted within 18 months after the end of the reference period, according to the EU regulation.

7.2.1. Punctuality - delivery and publication

Data are transmitted within 18 months after the end of the reference period.

8. Coherence and comparability

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8.1. Comparability - geographical

The use of common definitions and classifications ensures high level of comparability among member States.

8.1.1. Asymmetry for mirror flow statistics - coefficient

Not applicable

8.2. Comparability - over time

From 2004 onwards, data are available, on a biennial basis.
The amendment of Regulation (EC) No. 2150/2002 by Regulation (EU) 849/2010. has resulted to the break of the time series for the years 2010 and 2012 in comparison with the previous years 2008, 2006 and 2004.
Differences are due to the following :
a) In waste treatment tables, waste data are presented at the level of NUTS 1 for the years 2004, 2006 2008, but for the years 2010 and 2012 the data are presented only at national level pursuant to the amended Regulation.

b) Data in the waste generation table are broken down by 48 waste codes for the years 2004,2006 2008, while data in waste treatment tables are broken down by groups of waste codes, different for each treatment type. In accordance with the amended Regulation, for the years 2010 and 2012 the data are broken down by 51 waste codes both in waste generation table and waste treatment tables. This format allows us to follow each waste flow from its generation to its final treatment.

8.2.1. Length of comparable time series

2010 - 2018

8.3. Coherence - cross domain

Data are consistent with other waste streams such as Waste electrical and electronic equipment (WEEE), End-of-life vehicles (ELV), used oils, accumulators, used tyres etc and the municipal waste statistics which are used as sources for the compilation of the waste statistics.

In certain waste categories, data have also been compared with other statistical domains, as in the case of mineral wastes where the severe decrease in the last data collections have been compared a) National Accounts data and b) production of main mineral products.

8.4. Coherence - sub annual and annual statistics

Not applicable.

The results are published only on annual basis

8.5. Coherence - National Accounts

In certain waste categories source data have also been validated with NA data, as in the case of mineral wastes where the severe decrease in the last data collections (e.g. in 2018) has been compared and confirmed with National Accounts aggregates (Output, Gross Value Added) of Mining and Quarrying (Nace Rev.2 Section B)

8.6. Coherence - internal

Data have a high degree of internal coherence (totals are equal to the sum of the breakdowns in each row and column of the tables). Furthermore, the uniform structure of the reporting generation and treatment tables, allows us to follow the treatment of each waste stream.

Checks are performed for the comparability of time series and for the coherence between waste treatment and generation.

9. Accessibility and clarity

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9.1. Dissemination format - News release

Member States transmit data to EUROSTAT at 18 months after the end of reference period.

Data concerning waste statistics, are published on the website of ELSTAT'S every two years and after their transmission to EUROSTAT.

The results are announced in press releases by ELSTAT within 2 years after the reference period.

9.2. Dissemination format - Publications

There is not a special publication on waste statistics.

Selective waste data are included in the publication "*Living conditions in Greece"* and specifically in chapter "Environment". This publication is posted on ELSTATS' website at the link:
http://www.statistics.gr/portal/page/portal/ESYE/PAGE-livingcond

9.3. Dissemination format - online database

Data are published on ELSTAT'S website
https://www.statistics.gr/en/statistics/-/publication/SOP06/-

9.4. Dissemination format - microdata access

Data are made available to users, (provided that the principle of confidentiality is always observed, as it is described in paragraph 11.2) usually through fax or e-mail, after submission and approval of their request.
Users must submit their request to the Statistical Information and Publications Division, 46 Pireos & Eponiton str. 18510 Piraeus (tel.(30) 213-135 2022, 2340 FAX : (30) 213- 135 2312 describing the requested data.
The contact email address is: data.dissem@statistics.gr

9.5. Dissemination format - other

Current data files are disseminated through ELSTAT'S website
https://www.statistics.gr/en/statistics/-/publication/SOP06/-
Historical printed publications are available at the digital library of ELSTAT
http://dlib.statistics.gr/portal/page/portal/ESYE
Also waste statistics data are disseminated through Eurostat's tables and database:
https://ec.europa.eu/eurostat/web/waste
https://ec.europa.eu/eurostat/web/waste/data/database

9.6. Documentation on methodology

The Manual on the Implementation of Regulation (EC) No 2150/2002 on waste statistics and the guidance on classification of waste according to the European Waste Classification for statistical purposes (EWC-Stat) are published on EUROSTAT'S website:
https://ec.europa.eu/eurostat/web/waste/methodology

9.7. Quality management - documentation

Data transmission to Eurostat includes a quality report, which sets out the data sources used, as well as the methodology implemented for the compilation of waste statistics.

9.7.1. Metadata completeness - rate

Metadata are in compliance with the general characteristics of the structure that must be applied.

9.7.2. Metadata - consultations

Relative Metadata are released on ELSTAT'S website.
https://www.statistics.gr/en/statistics/-/publication/SOP06/-

10. Cost and Burden

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The primary administrative data are collected by the Ministry of Environment and Energy (MoEE). The total cost and burden for both the MoEE and ELSTAT has not been calculated.

11. Confidentiality

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11.1. 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.

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.

http://www.statistics.gr/en/statistical-confidentiality?inheritRedirect=true

11.2. 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 accesses 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 severity and the repercussions of the violation. Any relapse constitutes an aggravating factor for the assessment of the administrative sanction.

12. Comment

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Annexes

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Annexes of Quality Report