Single Integrated Metadata Structure (SIMS v2.0)
Country: Greece

Domain name: Material Flow Accounts

Elstat metadata

Reference metadata

1. Contact   Top

1.1. Contact organisation	Hellenic Statistical Authority (ELSTAT)
1.2. Contact organisation unit	Energy & Environment Statistics Section Agriculture, Livestock, Fisheries and Environmental Statistics Division
1.5. Contact mail address	46 Pireos St. & Eponiton St. 185 10, Piraeus, Greece

2. Metadata update   Top

2.1. Metadata last certified	April 2021
2.2. Metadata last posted	April 2021
2.3. Metadata last update	April 2021

3. Statistical presentation Top

3.1. Data description

Material flow accounts (MFA) provide an aggregate overview, in thousand tonnes per year, of the material flows into and out of an economy. MFA cover solid, gaseous, and liquid materials, except for bulk flows of water and air. Like the system of national accounts, MFA constitute a multi-purpose information system. The detailed material flows provide a rich empirical database for numerous analytical purposes. Further, MFA are used to derive various material flow indicators.

The National Statistical Institute (NSI) sends the MFA to Eurostat annualy. The accounts comprise of the following reporting tables:
- Table A - Domestic extraction (DE): records material flows from the environment into the economy in a detailed breakdown by type of material
- Table B - Imports-total imports and
- Table D - Exports-total exports:
  These physical trade tables record the imports and exports of products in thousand tonnes and grouped by materials.

3.2. Classification system

MFA record physical flows of materials is broken down by type of flow and by type of material.

The type of flow dimension corresponds to the MFA questionnaire reporting tables and derived indicators, namely:
- domestic extraction (Table A)
- physical imports (Table B)
- physical exports (Table D)

The breakdown by type of material employs a classification of materials. This MFA classification of materials is hierarchical with main material flow categories (1-digit level). Each main category is further broken down, up to 4-digits-level.

3.3. Coverage - sector

The data refer to national economies as defined in the system of national accounts.

3.4. Statistical concepts and definitions

Conceptually, material flow accounts (MFA) belong to the international system of environmental economic accounting (SEEA-Central Framework). Furthermore, MFA is one of several physical modules of Eurostat's programme on European environmental economic accounts. It is covered by Regulation (EU) No. 691/2011 on European environmental economic accounts.

MFA are closely related to concepts and definitions of national accounts. Most notably they follow the residence principle, i.e. they record material flows related to resident unit's activities, regardless where those occur geographically.

Further methodological guidelines are provided in various publications by Eurostat (see Eurostat website > Environment > Methodology, heading: 'Material flows and resource productivity').

For more detailed information please see also 3.1.

3.5. Statistical unit

The data used for the compilation of Material Flow Accounts refer to the extraction of materials by all the institutional units of the economy.

3.6. Statistical population

All materials within the scope of the Regulation (EU) No 691/2011.

MFA refer to the entire national economy of the reporting country (see also 3.3 'Coverage - sector').

MFA include all materials (excluding water and air) crossing the system boundary (between the environment and the economy) on the input side or on the output side. The economy is demarcated by the conventions of the national accounting system (resident units).

Material inputs to the economy cover extractions of natural resources (excluding water and air) from

the natural environment and imports of material products (goods) from the rest of the world economy (ROW).

Material outputs are disposals of materials to the natural environment and exports of material products and waste to the ROW. Information on natural resources extracted and traded products is provided by different statistical units.

3.7. Reference area
Data on materials refer to Greece total.

3.8. Coverage - Time
Please see the table in 3.8.1.

3.8.1. Coverage – Time: by questionnaire table

Questionnaire table	From (YEAR)	To (YEAR)
Domestic extraction (Table A)	2000	2018
Imports – Total trade (Table B)	2000	2018
Exports – Total trade (Table D)	2000	2018

3.9. Base period
Not applicable because MFA are not reported as indices.

4. Unit of measure

The unit of measure is in thousand tonnes.

5. Reference Period

The data refer to calendar years. Last reported reference period is 2018.

6. Institutional Mandate

6.1. Institutional Mandate - legal acts and other agreements
Material Flow Accounts (MFA) are legally covered by Regulation (EU) 691/2011 on European Environmental Economic Accounts.

6.2. Institutional Mandate - data sharing
Not applicable in national level. This information is required at European level only.

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 defence 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

Data on MFA and derived indicators, are disseminated on ELSTAT's web site.

8.2. Release calendar access

The release calendar is available on ELSTAT's website.

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 web site, fully observing professional independence and with a view to ensuring the simultaneous, equal and timely access of all users to statistical data. Neither users nor any government bodies have access to data before their official release.

9. Frequency of dissemination Top

Data are disseminated annually.

10. Accessibility and clarity Top

10.1. Dissemination format - News release

At present time, a press release for the dissemination of MFA data is not published.

10.2. Dissemination format - Publications

Data on MFA and derived indicators, are disseminated on ELSTAT's web site.

10.3. Dissemination format - online database

MFA data files are available on ELSTAT's website (https://www.statistics.gr/en/statistics/-/publication/SOP09/-).

10.3.1. Data tables - consultations

Not applicable.

10.4. Dissemination format - microdata access

Information for the provision of microdata are available on the ELSTAT Website> Products and Services > Provision of microdata (https://www.statistics.gr/en/scientific_provision_data)
Microdata are made available to users after submitting a request to the:
Division of Statistical Information and Publications
46, Peiraios and Eponiton Str., 18510, Piraeus
Tel: +30 213 135 2022
e-mail: data.dissem@statistics.gr

10.5. Dissemination format - other

Data can be provided to users (given the fact that statistical confidentiality is always observed) usually by fax or e-mail, by submitting a relevant data request. Users have to submit their request, describing in details 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 and data.supply@statistics.gr

10.5.1. Metadata - consultations

Not implemented yet.

10.6. Documentation on methodology

No additional methodolodgical document is currently disseminated.

10.7. Quality management - documentation

Currently, there is no available documentation on quality management practices.

11. Quality management Top

11.1. Quality assurance

Compilation of data on Material Flow Accounts refers mostly to the cumulative synthesis of data on material (raw material) that are collected from several competent official national agencies and relevant Ministries that contribute to delivering the necessary data.

11.2. Quality management - assessment
Quality assessment is characterized by a series of logical checks, comparability over time and internal and cross domain coherence as described below (15).

12. Relevance

12.1. Relevance - User Needs
At a national level, the potential users for the economy-wide material flow accounts could be: Ministry of Rural Development & Food, Ministry of Environment, Energy & Climate Change, regional and local authorities, Technical University of Athens and other academic institutions, researchers, businesses and non-profit institutions, press and media. There is also foreign institutional users (Eurostat, OECD, United Nations, etc.).
12.2. Relevance - User Satisfaction
The Statistical Information Dissemination Section 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.
12.3. Completeness
The requirements of the Regulation 691/2011 are fully met.
12.3.1. Data completeness - rate
Not appliccable

13. Accuracy

13.1. Accuracy - overall
For compiled Tables A, B and D, no deficiencies or lower quality data has been noticed.
13.2. Sampling error
Not applicable because data are not based on a sample survey.
13.2.1. Sampling error - indicators
Not applicable because data are not based on a sample survey.
13.3. Non-sampling error
Not applicable.
13.3.1. Coverage error
Not applicable.
13.3.1.1. Over-coverage - rate
Not applicable.
13.3.1.2. Common units - proportion
Not applicable.
13.3.2. Measurement error
Not applicable.
13.3.3. Non response error
Not applicable.
13.3.3.1. Unit non-response - rate
Not applicable.
13.3.3.2. Item non-response - rate

Not applicable.

13.3.4. Processing error

Not applicable.

13.3.5. Model assumption error

Not applicable.

14. Timeliness and punctuality

14.1. Timeliness

The data are submitted to Eurostat 24 months after the end of the reference year.

14.1.1. Time lag - first result

Not applicable.

14.1.2. Time lag - final result

Not applicable.

14.2. Punctuality

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

14.2.1. Punctuality - delivery and publication

Material Flows Accounts data are transmitted and published within the deadlines set out by Eurostat.

15. Coherence and comparability

15.1. Comparability - geographical

Data on MFA are compiled according to harmonised guidelines provided by Eurostat and hence are comparable with data from all European countries that report MFA data to Eurostat.

15.1.1. Asymmetry for mirror flow statistics - coefficient

Not applicable.

15.2. Comparability - over time

Please see 15.2.1.1.

15.2.1. Length of comparable time series

2008 - 2018

15.2.1.1. Comparability - over time detailed

No breaks are currently reported for the period 2008 - 2018.

15.3. Coherence - cross domain

The accounting framework of MFA is consistent with the System of Environmental-Economic Accounting (SEEA-CF) adopted by the United Nations Statistical Commission as a world-level statistical standard in March 2012.
MFA is also consistent with the European System of Accounts (ESA) and hence coherent with national accounts.

15.3.1. Coherence - sub annual and annual statistics

Not applicable; reported MFA data are only annual.

15.3.2. Coherence - National Accounts

MFA is consistent with the European system of accounts (ESA) and hence coherent with national accounts.

15.4. Coherence - internal
Internal coherence is established with the use of applicable methods and data sources as described in the "Economy-wide material flow accounts HANDBOOK" (Eurostat, 2018).

16. Cost and Burden

Primary data are derived either by other Government bodies (Ministry of Environment and Energy, Ministry of Rural Development and Food etc) or by ELSTAT, therefore there is no burden for ELSTAT in terms of data collection and data processing.

The overall administrative cost of ELSTAT has not been estimated.

17. Data revision

17.1. Data revision - policy
In 2011 a change of base year has been made in Material Flow Accounts. The new year of reference is 2008.

When estimating the values of the reporting year, data from previous years are cross-checked and revised if necessary. |
| **17.2. Data revision - practice** |
| No revised values have been reported for previous years sequence. |
| **17.2.1. Data revision - average size** |
| Not applicable. |

18. Statistical processing

18.1. Source data
Data sources used to produce economy-wide material flow accounts are described in the sub-concepts 18.1.1 (and Annex) and 18.1.2.
18.1.1. Source data - Table A, B, D, F and G
Source data used for compilation of MFA are reported in 18.3.
18.1.2. Source data - Table I
No reported data for Table I.
18.2. Frequency of data collection
The frequency of data collection for MFA is annual.
18.3. Data collection
The primary data used for the submission of Material Flow Accounts are a combination of statistical data that have been collected, processed and published from various data sources as follows:

- Regarding the agricultural products, the data have been collected from the Ministry of Rural Development and Food (YPAAT). The Ministry collects and transmits to Eurostat and to other international organizations the data on agricultural production.

- Data on forestry products and especially on timber have been collected from the Special Secretariat for Forests of the Ministry of Environment and Energy.

- Data on fishery products have been derived from Fishery Survey of the division of "Agriculture, Livestock, Fishery and Environment Statistics" of ELSTAT.

- The hunting products have been collected from the Hunting Confederation of Greece, which in turn, collects the relative data from the local hunting associations.

- Data on metal ores, non-metallic minerals and energy materials have been collected from |

(i) Ministry of Environment and Energy.

(ii) Mining and quarrying companies.

(iii) Eurostat's energy database.

For the calculation of each metal's total gross ore, the protocol described in EUROSTAT's "MFA HANDBOOK 2018 edition" for coupled production has been followed.

- Data on imports and exports of raw material, have been collected from "Business Statistics Division International Transactions Statistics Section" of ELSTAT.

18.4. Data validation

The output values are cross-checked using multiple national data sources and databases. For instance, in most of the subcategories, output data from the PRODCOM database is comparable to the annual reports of several national sources e.g. the Ministry of Environment and Energy or the Ministry of Rural Development & Food.

Additionally, logical checks regarding growth rates for the whole time series are performed.

18.5. Data compilation

Material Flow data on corresponding sectors are compiled as follows:

1) The primary data are collected from several national official sources.

2) Conversions and adjustments are applied to compile the report according to the requested measurement unit and classification.

3) The output values are cross-checked using multiple available data sources.

4) After the aforementioned process is completed, relevant tables of Eurostat's Questionnaire of Material Flow are compiled.

18.5.1. Imputation - rate

Not applicable.

18.5.2. Estimation approaches for specific items

Most reported values have been derived from national data sources.

For certain items (like mineral gross ores calculations), primary source data has been adjusted according to the procedures and methods described in "MFA HANDBOOK 2018 edition".

18.5.3. Adjustment used of correspondence table for Tables B and D

Traded goods are assigned to material categories using EUROSTAT's correspondance table for Tables B and D.

18.5.4. Adjustment used of conversion factors for Tables B and D

No conversion factors for Tables B and D have been applied.

18.5.5. Fuel trade, residence adjustment

Adjustments of fuel trade by non-residents in territory or residents abroad have not been allocated yet. The resident adjustment for fuel trade is scheduled to be included in future data releases.

18.5.6. Significant problems

The most significant problem on compiling the MFA questionnaire is related to the calculation of subcategory *MF.1.2.2.2 Grazed Biomass.*

This is due to deficiency of trustworthy national data on:

- the dietary habits of grazing animals (annual feed intake per animal class) and

- the degree of yield (alpine, extensive, improved) of permanent grassland areas

18.6. Adjustment

Not applicable; i.e. in MFA no time series adjustment necessary.

18.6.1. Seasonal adjustment

Not applicable on annual data.

19. Comment