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Subject : Proposal for a Regulation of the European Parliament and of the Council on
European Environmental Economic Accounts
- Approval of the final compromise text

1. On 23 April 2010, the Council received a Commission proposal for a Regulation of the European Parliament and of the Council on European Environmental Economic Accounts ¹.
2. The Working Party on Statistics examined the text at a number of meetings. In parallel, informal meetings between representatives of the European Parliament, the Council and the Commission took place, with a view to reach a first-reading agreement in the framework of the ordinary legislative procedure and pursuant to Article 294(4) TFEU.

¹ Doc. 8898/10 - COM(2010) 132 final.

3. On 9 November 2010, the Environment Committee of the European Parliament adopted a report containing a number of draft amendments to the Commission proposal.
4. On 16 March 2011, the Working Party on Statistics agreed on the attached text, which reflects the overall compromise deal resulting from the informal discussions held between representatives of the 3 institutions ².
5. On 21 March 2011, all political groups at the European Parliament agreed through written procedure on the attached text.
6. In light of the above, the Permanent Representatives Committee is invited to:
 - approve the overall compromise text as set out in the Annex, pending its legal/linguistic revision, and
 - mandate its Chair to write to the Chair of the European Parliament's Environment Committee to confirm that, should the European Parliament adopt a position which corresponds to the attached overall compromise text ³, the Council would, in accordance with Article 294(4) TFEU, be in a position to approve it, thus adopting the act in the wording which corresponds to the position of the European Parliament.

² Doc. 7665/11.

³ Once the text will have been finalised by the jurist-linguists of the European Parliament and of the Council.

**Proposal for a Regulation of the European Parliament and of the Council on
European Environmental Economic Accounts
(text with EEA relevance)**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 338(1) thereof,

Having regard to the proposal from the European Commission ⁴,

After transmission of the proposal to the national Parliaments,

Acting in accordance with the ordinary legislative procedure,

Whereas:

- (1) Article 3(3) of the Treaty on European Union provides inter alia that the Union "shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment".
- (2) The Sixth Community Environment Action Programme confirmed that sound information on the state of the environment and on the key trends, pressures and drivers for environmental change is essential for the development of effective policy, its implementation, and the empowerment of citizens more generally. Instruments should be developed with a view to enhancing public awareness of the environmental effects of economic activity.

⁴ OJEU C ...

- (3) A scientifically sound approach to measuring the shortage of resources will, in the future, be crucial to the sustainable development of the European Union.
- (4) Decision No 1578/2007/EC of the European Parliament and of the Council of 11 December 2007 on the Community Statistical Programme 2008 to 2012⁵ makes a clear reference to the need for high-quality statistics and accounts in the domain of the environment. Furthermore, under the main initiatives for 2008 to 2012 it is stated that legal bases should be developed, where appropriate, for core areas of environmental data collection currently not covered by legal acts.
- (5) The need to supplement already existing indicators with data that incorporate environmental and social aspects in order to allow more coherent and comprehensive policy making has been recognised in Commission Communication COM(2009) 433 of August 2009 on GDP and beyond. To this end, environmental accounts offer means of monitoring the pressures exerted by the economy on the environment and of exploring how these might be abated. Because they show the interaction between economic, household and environmental factors, environmental accounts are more informative than national accounts alone. They provide a significant source of data for environmental decisions and should be consulted for the drawing up by the Commission of impact assessments. In line with the tenets of sustainable development and the drive to achieve a resource-efficient and low-pollution economy, embedded in the Europe 2020 Strategy and various major initiatives, developing a data framework that consistently includes environmental issues along with economic ones becomes all the more imperative.

⁵ OJ L 344, 28.12.2007, p. 15.

- (6) The European System of Accounts (ESA), set up by Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community ⁶ (hereinafter referred to as ‘ESA 95’), consistent with the System of National Accounts (SNA), adopted by the United Nations Statistical Commission in February 1993, is the main tool behind EU economic statistics as well as many economic indicators (including GDP). The ESA framework can be used to analyse and evaluate various aspects of the economy (e.g. its structure, specific parts, development over time) yet for some specific data needs, such as analysis of the interaction between the environment and the economy, the best solution is to draw up separate satellite accounts.
- (7) In its June 2006 conclusions, the European Council called on the European Union and its Member States to extend the national accounts to key aspects of sustainable development. National accounts should therefore be supplemented with integrated environmental economic accounts providing data that are fully consistent.
- (8) It is of great importance that European environmental economic accounts, as soon as the system is fully operational, are actively and accurately used in all EU Member States and in all relevant EU policy making as a key input to impact assessments, action plans, legislative proposals and other significant products of the policy process.
- (9) More timely data could also be produced by now-casting, which uses statistical techniques similar to those used in forecasting to make reliable estimates.
- (10) Satellite accounts allow the analytical capacity of national accounting to be expanded for selected areas of social concern, such as pressures on the environment stemming from human activity, in a flexible manner, without overburdening or disrupting the central system. Satellite accounts should be made available to the public regularly and in comprehensible form.

⁶ OJ L 310, 30.11.1996, p. 1.

- (11) The System of integrated Environmental Economic Accounts (SEEA), developed collectively by the UN, the European Commission, the IMF, the OECD and the World Bank, is a satellite system of the SNA. It brings together economic and environmental information in a common framework to measure the contribution of the environment to the economy and the impact of the economy on the environment. It provides policy-makers with indicators and descriptive statistics to monitor these interactions as well as a database for strategic planning and policy analysis to identify more sustainable paths of development.
- (12) The SEEA synthesises and integrates as far as possible the different categories of environmental accounts. In general, all these categories broaden the existing SNA concepts of cost, capital formation and stock of capital by supplementing them with additional data in physical terms in order to encompass environmental cost and the use of natural assets in production, or by amending them through the incorporation of these effects in monetary terms. Within this general orientation, the several existing categories differ considerably in terms of methodology and environmental concerns addressed.
- (13) The Commission presented its first strategy on ‘green accounting’ in 1994⁷. Since then the Commission (Eurostat) and the Member States have developed and tested accounting methods to the point where several Member States now regularly provide first sets of environmental accounts. Most common are physical flow accounts on air emissions (including greenhouse gases) and on material consumption and monetary accounts on environmental protection expenditure and taxes.
- (14) One of the objectives for the period covered by the Community Statistical Programme 2008 to 2012 is to take initiatives to replace agreements by European legislation in certain areas of regular production of European statistics which have reached sufficient maturity.

⁷ COM(1994) 670.

- (15) Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European Statistics ⁸ provides a reference framework for European environmental economic accounts. In particular, it requires conformity with principles of professional independence, impartiality, objectivity, reliability, statistical confidentiality and cost effectiveness.
- (16) As the different sets of environmental economic accounts are under development and at different stages of maturity, a modular structure providing adequate flexibility, allowing inter alia for the introduction of additional modules, should be adopted.
- (17) A programme of pilot studies should be established to improve reporting and data quality, enhance methodologies and prepare for further developments.
- (18) The introduction of additional reporting requirements should be preceded by a feasibility assessment.
- (19) The Commission should be entitled to grant derogations to Member States during the transitional periods when major adaptations to their national statistical systems are required.
- (20) The European Union should encourage the introduction of environmental economic accounts in third countries, particularly in those that share environmental resources (mainly water) with EU Member States.

⁸ OJ L 87, 31.3.2009, p. 164.

- (21) Since the objective of this Regulation, namely the establishment of a common legal framework for the collection, compilation, transmission and evaluation of European environmental economic accounts, cannot be sufficiently achieved by the Member States and can be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve that objective.
- (22) There is a need for uniform conditions for the implementation of this Regulation in order to ensure the proper functioning of the system of European environmental economic accounts. Implementing powers should therefore be conferred on the Commission and exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and the Council of 28.02.2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers.⁹
- (23) The power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission for the purpose of adjusting the modules to environmental, economic and technical developments, as well as providing methodological guidance. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing-up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and Council.
- (24) The European Statistical System Committee has been consulted.

⁹ OJ L 55, 28.02.2011, p. 13.

HAVE ADOPTED THIS REGULATION:

Article 1

Subject matter

This Regulation establishes a common framework for the collection, compilation, transmission and evaluation of European environmental economic accounts for the purpose of setting up environmental economic accounts as satellite accounts to ESA 95 by providing methodology, common standards, definitions, classifications and accounting rules, intended to be used for compiling environmental economic accounts.

Article 2

Definitions

For the purposes of this Regulation the following definitions shall apply:

- (1) ‘*air emission*’ means the physical flow of gaseous or particulate materials from the economic system (production or consumption processes) to the atmosphere which is part of the environmental system;
- (2) ‘*environmentally related tax*’ means a tax whose tax base is a physical unit (or a proxy of it) of something that has a proven, specific negative impact on the environment (only transactions identified by ESA-95 as a tax are to be included);
- (3) ‘*economy-wide material flow accounts (EW-MFA)*’ means consistent compilations of the material inputs into national economies, the changes of material stock within the economy and the material outputs to other economies or to the environment.

Article 3

Modules

1. The environmental accounts to be compiled within the common framework referred to in Article 1 shall be grouped in the following modules:
 - (a) a module for air emissions accounts, as set out in Annex I;
 - (b) a module for environmentally related taxes by economic activities, as set out in Annex II;
 - (c) a module for economy-wide material flow accounts, as set out in Annex III.

2. Each Annex shall contain the following information:
 - (a) the objectives for which the accounts are to be compiled;
 - (b) the coverage of the accounts;
 - (c) the list of characteristics for which data are to be compiled and transmitted;
 - (d) the first reference year, frequency and transmission deadlines for the compilation of the accounts;
 - (e) the reporting tables;
 - (f) the maximum length of the transitional periods referred to in Article 8 during which derogations may be granted by the Commission.

3. The Commission shall be empowered to adopt, in accordance with Article 9, delegated acts to:

- (a) provide methodological guidance; and
- (b) update the Annexes referred to in paragraph 1 as regards the information referred to in paragraph 2 (c) to (e),

where necessary to take account of environmental, economic and technical developments. In exercising its power pursuant to this provision, the Commission shall ensure that its delegated acts do not impose significant additional administrative burdens on the Member States and on the respondent units.

Article 4

Pilot studies

1. The Commission shall draw up a programme for pilot studies to be carried out by Member States on a voluntary basis in order to develop the reporting and data quality, establish long time series and develop methodology. The programme shall include pilot studies to test the feasibility of introducing new environmental account modules. In drawing up the programme, the Commission shall ensure that no additional administrative or financial burdens are placed on the Member States and on the respondent units.
2. The findings of the pilot studies shall be evaluated and published by the Commission, taking into account the benefits of the availability of the data in relation to the cost of collection and the response burden. These findings shall be taken into account in the proposals for introducing new environmental account modules that the Commission may include in the report referred to in Article 10

Article 5

Data collection

1. In accordance with the annexes of this Regulation, Member States shall collect the necessary data for the observation of the characteristics referred to in Article 3(2)(c).
2. Member States shall collect the necessary data using a combination of the different sources specified below, applying the principle of administrative simplification:
 - (a) surveys;
 - (b) statistical estimation procedures where some of the characteristics have not been observed for all of the units;
 - (c) administrative sources.
3. Member States shall inform the Commission and shall provide details concerning the methods and sources used.

Article 6

Transmission to the Commission (Eurostat)

1. Member States shall transmit to the Commission (Eurostat) the data set out in the Annexes, including the confidential data, within the time limits specified therein.
2. The data shall be transmitted in an appropriate technical format, which shall be laid down in accordance with the examination procedure referred to in Article 11(2).

Article 7

Quality assessment

1. For the purpose of this Regulation, the quality criteria as referred to in Article 13(1) of Regulation (EC) No 223/2009 shall apply to the data to be transmitted.
2. Member States shall provide the Commission (Eurostat) with a report on the quality of the data transmitted.
3. In applying the quality criteria referred to in paragraph 1 to the data covered by this Regulation, the modalities, structure and periodicity of the quality reports shall be defined in accordance with the examination procedure referred to in Article 11(2).
4. The Commission (Eurostat) shall assess the quality of the data transmitted and may, within a time-limit of one month, request the Member State in question to submit additional information regarding the data or a revised data set, as appropriate.

Article 8

Derogations

1. The Commission may grant derogations to Member States during the transitional periods referred to in the Annexes in accordance with the examination procedure referred to in Article 11(2) insofar as the national statistical systems require major adaptations.
2. To this end, the Member State concerned shall present a duly justified request to the Commission not later than three months after the entry into force of this Regulation.

Article 9

Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.
2. The delegation of power referred to in Article 3(3) shall be conferred on the Commission for a period of 5 years from the entry into force of this Regulation. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.
3. The delegation of power referred to in Article 3(3) may be revoked at any time by the European Parliament or by the Council.

A decision of revocation shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the Official Journal of the European Union or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.
5. A delegated act adopted pursuant to Article 3(3) shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of 2 months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or the Council.

Article 10

Report and review

The Commission shall submit a report on the implementation of the Regulation to the European Parliament and the Council every three years. This report shall evaluate in particular the quality of the data transmitted, as referred to in Article 6, the data collection methods, the administrative burden on the Member States and on the respondent units, as well as the feasibility and effectiveness of these statistics.

The report shall, if appropriate and taking into account the findings referred to in Article 4(2), be accompanied by proposals:

- for introducing new environmental account modules, such as Environmental Protection Expenditure and Revenues (EPER)/Environmental Protection and Expenditure Accounts (EPEA), Environmental Goods and Services Sector (EGSS), Energy Accounts, Environmentally Related Transfers (subsidies), Resource Use and Management Expenditure Accounts (RUMEA), Water Accounts (quantitative and qualitative), Waste Accounts, Forest Accounts, Ecosystem services Accounts, Economy-Wide Material Stock Accounts (EW-MSA) and the measurement of unused excavated earthen materials (including soil).
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- designed to further improve data quality and data collection methods, thereby improving the coverage and comparability of data and reducing the administrative burden on business and administration.

The first report shall be submitted by 31 December 2013.

Article 11

Committee

1. The Commission shall be assisted by the European Statistical System Committee established by Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.
2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 of the European Parliament and the Council laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers shall apply.

Article 12

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the European Parliament
The President

For the Council
The President

MODULE FOR AIR EMISSIONS ACCOUNTS

SECTION 1

Objectives

Air emissions accounts record and present data on air emissions in a way that is compatible with the system of national accounts. They record national economies' emissions to air in a breakdown by emitting economic activities as delineated in ESA 95. Economic activities comprise production and consumption.

This Annex defines the data to be collected, compiled, transmitted and evaluated for air emissions accounts by the Member States. These data will be developed in a way that links direct emissions by industries and households to these economic production and consumption activities. The direct emissions data reported under this Regulation will be combined with the economic input-output tables, supply and use tables and household consumption data that are already reported to the Commission (Eurostat) as part of ESA 95 reporting.

SECTION 2

Coverage

Air emissions accounts have the same system boundaries as ESA 95 and are also based on the residence principle.

In accordance with ESA 95, the concept of residence is based on the following principle: a unit is said to be a resident unit of a country when it has a centre of economic interest in the economic territory of that country - that is, when it engages for an extended period (one year or more) in economic activities in this territory.

Air emissions accounts record emissions arising from all resident units' activities, regardless of where these emissions actually occur geographically.

Air emissions accounts record the flows of residual gaseous and particulate materials originating from the national economy and flowing into the atmosphere. For the purpose of this Regulation, the term '*atmosphere*' refers to a component of the environmental system. The system boundary relates to the borderline between the national economy (as part of the economic system) and the atmosphere (as part of the environmental system). After having crossed this system boundary, the emitted substances are out of any human control and become part of natural materials cycles and may induce several environmental impacts.

SECTION 3

List of characteristics

Member States shall produce statistics on the emissions of the following air pollutants:

Code	Name of air emission	Symbol of air emission	Reporting unit
	Carbon dioxide without emissions from biomass	CO ₂	1 000 tonnes (Gg)
	Carbon dioxide from biomass	Biomass CO ₂	1 000 tonnes (Gg)
	Nitrous oxide	N ₂ O	tonnes (Mg)
	Methane	CH ₄	tonnes (Mg)
	Perfluorocarbons	PFCs	tonnes (Mg) CO ₂ -equivalents
	Hydrofluorocarbons	HFCs	tonnes (Mg) CO ₂ -equivalents
	Sulphur hexafluoride	SF ₆	tonnes (Mg) CO ₂ -equivalents
	Nitrogen oxides	NO _x	tonnes (Mg) NO ₂ -equivalents

	Non-methane volatile organic compounds	NMVOCs	tonnes (Mg)
	Carbon monoxide	CO	tonnes (Mg)
	Particulate matter < 10 µm	PM ₁₀	tonnes (Mg)
	Particulate matter < 2.5 µm	PM _{2,5}	tonnes (Mg)
	Sulphur dioxide	SO ₂	tonnes (Mg)
	Ammonia	NH ₃	tonnes (Mg)

All data shall be reported to one decimal place.

SECTION 4

First reference year, frequency and transmission deadlines

1. Statistics shall be compiled and transmitted on a yearly basis.
2. Statistics shall be transmitted within 21 months after the end of the reference year.
3. In order to meet user needs for complete and timely datasets, the Commission (Eurostat) shall produce, as soon as sufficient country data becomes available, estimates for the EU-27 totals for the main aggregates of this module. The Commission (Eurostat) shall, wherever possible, produce and publish estimates for data that have not been transmitted by Member States within the deadlines specified in this Regulation.
4. The first reference year is the year when the Regulation enters into force.
5. In the first data transmission, Member States shall also include annual data from 2008 to the first reference year.
6. In each subsequent data transmission to the Commission, Member States shall provide annual data for the years n-4, n-3, n-2, n-1 and n, where n is the reference year.

SECTION 5

Reporting tables

- For each of the characteristics referred to in Section 3, data shall be produced by a hierarchical classification of economic activities, NACE Rev.2 (A*64 aggregation level), fully compatible with ESA-95. In addition, data shall be produced for:
 - Household air emissions;
 - Bridging items. By bridging items is meant reporting items which clearly reconcile the differences between the air emissions accounts reported under this Regulation and those data reported in official national air emission inventories.
- The hierarchical classification referred to in paragraph 1 is as follows:

Air emissions by industry — NACE Rev.2 (A*64)
Household air emissions
- Transport
- Heating/cooling
- Other
Bridging items
Total air emission accounts (industry + households)
<u>Less National residents abroad</u>
- National fishing vessels operating abroad
- Land transport
- Water transport
- Air transport
<u>Plus Non-residents on the territory</u>
+ Land transport
+ Water transport
+ Air transport
<u>(+ or -) Other adjustments and statistical discrepancy</u>
= Total emissions of pollutant X as reported to UNFCCC ¹⁰/CLRTAP ¹¹

¹⁰ United Nations Framework Convention on Climate Change.

¹¹ Convention on Long-Range Transboundary Air Pollution.

SECTION 6

Maximum length of the transitional periods

For the implementation of the provisions of this Annex, the maximum length of the transitional period is two years after the first transmission deadline.

MODULE FOR ENVIRONMENTALLY RELATED TAXES
BY ECONOMIC ACTIVITIES

SECTION 1

Objectives

Statistics on environmentally related taxes record and present data seen from the perspective of the entities paying the taxes in a way that is fully compatible with the data reported under ESA 95. They record national economies' environmentally related tax revenues according to economic activities. Economic activities comprise production and consumption.

This Annex defines the data to be collected, compiled, transmitted and evaluated for environmentally related tax revenues by economic activities by the Member States.

The environmentally related tax statistics can make use of the tax statistics and government finance statistics directly, but there are some advantages in using the tax data reported under ESA-95 if this is possible.

The environmentally related tax statistics are based on the amounts evidenced by assessments and declarations or time adjusted cash receipts, to ensure consistency with ESA-95 and improve international comparability.

The ESA-95 also contains information about which industries and sectors are paying the taxes. Information on taxes reported under ESA-95 can be found in the institutional sector accounts and supply and use tables.

SECTION 2

Coverage

Environmentally related taxes have the same system boundaries as ESA 95 and consist of compulsory, unrequited payments, in cash or in kind, which are levied by general government or by the institutions of the European Union.

Environmentally related taxes are in the following ESA 95 categories:

- Taxes on production and imports (D.2),
- Current taxes on income, wealth, etc. (D5),
- Capital taxes (D91).

SECTION 3

List of characteristics

Member States shall produce statistics on environmentally related taxes according to the following characteristics:

- Energy taxes,
- Transport taxes,
- Pollution taxes,
- Resource taxes.

All data shall be reported in million national currency.

SECTION 4

First reference year, frequency and transmission deadlines

1. Statistics shall be compiled and transmitted on a yearly basis.

2. Statistics shall be transmitted within 21 months after the end of the reference year.
3. In order to meet user needs for complete and timely datasets, the Commission (Eurostat) shall produce, as soon as sufficient country data becomes available, estimates for the EU-27 totals for the main aggregates of this module. The Commission (Eurostat) shall, wherever possible, produce and publish estimates for data that have not been transmitted by Member States within the deadlines specified in this Regulation.
4. The first reference year is the year when the Regulation enters into force.
5. In the first data transmission, Member States shall also include annual data from 2008 to the first reference year.
6. In each subsequent data transmission to the Commission, Member States shall provide annual data for the years $n-4$, $n-3$, $n-2$, $n-1$ and n , where n is the reference year.

SECTION 5

Reporting tables

For each of the characteristics referred to in Section 3, data shall be reported from the perspective of the entities paying the taxes.

For producers, data shall be reported on a breakdown by hierarchical classification of economic activities, NACE Rev.2 (A*64 aggregation level as set out in ESA 95).

For consumers, data shall be reported for:

- Households,
- Non-residents,

Where the tax cannot be attributed to one of the above groupings of activities, the data shall be reported as not allocated.

SECTION 6

Maximum length of the transitional periods

For the implementation of the provisions of this Annex, the maximum length of the transitional period is two years after the first transmission deadline.

MODULE FOR ECONOMY-WIDE MATERIAL FLOW ACCOUNTS (EW-MFA)

SECTION 1

Objectives

EW-MFA covers all solid, gaseous, and liquid materials, except for flows of air and water, measured in mass units per year. Like the system of national accounts, economy-wide material flow accounts serve two major purposes. The detailed material flows provide a rich empirical database for numerous analytical studies. They are also used to compile different economy-wide material flow indicators for national economies.

This Annex defines the data to be collected, compiled, transmitted and evaluated for EW-MFA by the Member States.

SECTION 2

Coverage

The distinction between stocks and flows is a fundamental principle of a material flow system. In general, a flow is a variable that measures a quantity per time period, whereas a stock is a variable that measures a quantity at a certain point in time. EW-MFA is a flow concept. It measures the flows of material inputs, outputs and stock changes within the economy in mass units per year. EW-MFA is coherent with the principles of the system of national accounts, such as the residence principle. It accounts for material flows associated with the activities of all resident units of a national economy regardless of their geographic location.

In EW-MFA two types of material flows across system boundaries are relevant:

1. Material flows between the national economy and its natural environment. This consists of the extraction of materials (i.e., raw, crude or virgin) from and the discharge of materials (often called residuals) to the natural environment.
2. Material flows between the national economy and the rest of the world economy. This encompasses imports and exports.

All flows that cross these system boundaries are included in EW-MFA, as well as the additions to the man-made stocks. All other material flows within the economy are not represented in EW-MFA. This means that the national economy is treated in its entirety in EW-MFA and e.g. inter-industry deliveries of products are not described. Natural flows within the natural environment are likewise excluded.

SECTION 3

List of characteristics

Member States shall produce statistics on the characteristics listed in Section 5 for the EW-MFA where applicable.

1. Domestic extraction (DE) covers the annual amount of solid, liquid and gaseous materials (excluding air and water) extracted from the natural environment to be used as inputs in the economy.
2. Physical imports and physical exports covers all imported or exported commodities in mass units. Traded commodities comprise goods at all stages of processing from raw products to finished goods.

SECTION 4

First reference year, frequency and transmission deadlines

1. Statistics shall be compiled and transmitted on a yearly basis.
2. Statistics shall be transmitted within 24 months after the end of the reference year.
3. In order to meet user needs for complete and timely datasets, the Commission (Eurostat) shall produce, as soon as sufficient country data becomes available, estimates for the EU-27 totals for the main aggregates of this module. The Commission (Eurostat) shall, wherever possible, produce and publish estimates for data that have not been transmitted by Member States within the deadlines specified in this Regulation.
4. The first reference year is the year when the Regulation enters into force.
5. In the first data transmission, Member States shall also include annual data from 2008 to the first reference year.
6. In each subsequent data transmission to the Commission, Member States shall provide annual data for the years $n-4$, $n-3$, $n-2$, $n-1$ and n , where n is the reference year.

SECTION 5

Reporting tables

Data, in mass units, shall be produced for the characteristics listed in the following tables.

1 Biomass

1.1 Crops (excluding fodder crops)

- 1.1.1 Cereals
- 1.1.2 Roots, tubers
- 1.1.3 Sugar crops
- 1.1.4 Pulses
- 1.1.5 Nuts
- 1.1.6 Oil-bearing crops
- 1.1.7 Vegetables
- 1.1.8 Fruits
- 1.1.9 Fibres
- 1.1.10 Other crops n.e.c.

1.2 Crop residues (used), fodder crops and grazed biomass

- 1.2.1 Crop residues (used)
 - 1.2.1.1 Straw
 - 1.2.1.2 Other crop residues (sugar and fodder beet leaves, other)
- 1.2.2 Fodder crops and grazed biomass
 - 1.2.2.1 Fodder crops (including biomass harvest from grassland)
 - 1.2.2.2 Grazed biomass

1.3 Wood (In addition, optional reporting of the net increment of timber stock.)

- 1.3.1 Timber (industrial roundwood)
- 1.3.2 Wood fuel and other extraction

1.4 Wild fish catch, aquatic plants/animals, hunting and gathering

- 1.4.1 Wild fish catch
- 1.4.2 All other aquatic animals and plants
- 1.4.3 Hunting and gathering

2 Metal ores (gross ores)

2.1 Iron

2.2 Non-ferrous metal

2.2.1 Copper (In addition, optional reporting of the metal content.)

2.2.2 Nickel (In addition, optional reporting of the metal content.)

2.2.3 Lead (In addition, optional reporting of the metal content.)

2.2.4 Zinc (In addition, optional reporting of the metal content.)

2.2.5 Tin (In addition, optional reporting of the metal content.)

2.2.6 Gold, silver, platinum and other precious metals

2.2.7 Bauxite and other aluminium

2.2.8 Uranium and thorium

2.2.9 Other n.e.c.

3 Non-metallic minerals

3.1 Marble, granite, sandstone, porphyry, basalt, other ornamental or building stone (excluding slate)

3.2 Chalk and dolomite

3.3 Slate

3.4 Chemical and fertiliser minerals

3.5 Salt

3.6 Limestone and gypsum

3.7 Clays and kaolin

3.8 Sand and gravel

3.9 Other n.e.c.

3.10 Excavated earthen materials (including soil), only if used (optional reporting)

4 Fossil energy materials/carriers

4.1 Coal and other solid energy materials/carriers

4.1.1 Lignite (brown coal)

4.1.2 Hard coal

4.1.3 Oil shale and tar sands

4.1.4 Peat

4.2 Liquid and gaseous energy materials/carriers

4.2.1 Crude oil, condensate and natural gas liquids (NGL)

4.2.2 Natural gas

Tables B (Imports — Total trade), C (Imports — Extra-EU trade), D (Exports — Total trade), E (Exports — Extra-EU trade)

1 Biomass and biomass products

1.1 Crops, raw and processed

1.1.1 Cereals, raw and processed

1.1.2 Roots, tubers, raw and processed

1.1.3 Sugar crops, raw and processed

1.1.4 Pulses, raw and processed

1.1.5 Nuts, raw and processed

1.1.6 Oil-bearing crops, raw and processed

1.1.7 Vegetables, raw and processed

1.1.8 Fruits, raw and processed

1.1.9 Fibres, raw and processed

1.1.10 Other crops n.e.c., raw and processed

1.2 Crop residues and fodder crops

1.2.1 Crop residues (used), raw and processed

1.2.1.1 Straw

1.2.2.2 Other crop residues

1.2.2 Fodder crops

1.2.2.1 Fodder crops

1.3 Wood and wood products

1.3.1 Timber, raw and processed

1.3.2 Wood fuel and other extraction, raw and processed

1.4 Fish capture and other aquatic animals and plants, raw and processed

1.4.1 Fish capture

1.4.2 All other aquatic animals and plants

1.5 Live animals other than in 1.4, and animal products

1.5.1 Live animals other than in 1.4

1.5.2 Meat and meat preparations

1.5.3 Dairy products, birds' eggs, and honey

1.5.4 Other products from animals (animal fibres, skins, furs, leather, etc.)

1.6 Products mainly from biomass

2 Metal ores and concentrates, raw and processed

2.1 Iron ores and concentrates, iron and steel, raw and processed

2.2 Non-ferrous metal ores and concentrates, raw and processed

2.2.1 Copper

2.2.2 Nickel

2.2.3 Lead

2.2.4 Zinc

2.2.5 Tin

2.2.6 Gold, silver, platinum and other precious metals

2.2.7 Bauxite and other aluminium

2.2.8 Uranium and thorium

2.2.9 Other n.e.c.

2.3 Products mainly from metals

3 Non-metallic minerals, raw and processed

3.1 Marble, granite, sandstone, porphyry, basalt and other ornamental or building stone (excluding slate)

3.2 Chalk and dolomite

3.3 Slate

3.4 Chemical and fertiliser minerals

3.5 Salt

- 3.6 Limestone and gypsum
- 3.7 Clays and kaolin
- 3.8 Sand and gravel
- 3.9 Other n.e.c.
- 3.10 Excavated earthen materials (including soil), only if used (optional reporting)
- 3.11 Products mainly from non-metallic minerals

4 Fossil energy materials/carriers, raw and processed

- 4.1 Coal and other solid energy products, raw and processed
 - 4.1.1 Lignite (brown coal)
 - 4.1.2 Hard coal
 - 4.1.3 Oil shale and tar sands
 - 4.1.4 Peat
- 4.2 Liquid and gaseous energy products, raw and processed
 - 4.2.1 Crude oil, condensate and natural gas liquids (NGL)
 - 4.2.2 Natural gas
- 4.3 Products mainly from fossil energy products

5 Other products

6 Waste imported (Tables B and C)/exported (Tables D and E) for final treatment and disposal

The following adjustments for the residence principle shall be included in Tables B and D:

Fuel bunkered by resident units abroad (addition to imports Table B) and Fuel bunkered by non-resident units on the national territory (addition to exports Table D)

- 1 Fuel for land transport
- 2 Fuel for water transport
- 3 Fuel for air transport

SECTION 6

Maximum length of the transitional periods

For the implementation of the provisions of this Annex the maximum length of the transitional period is two years after the first transmission deadline.
