

EUROPEAN COMMISSION

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2010/0073 (COD)

Proposal for a

# REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

## on European environmental economic accounts

**(Text with EEA relevance)**

# EXPLANATORY MEMORANDUM

## 1. CONTEXT OF THE PROPOSAL

### 1.1. Grounds for and objectives of the proposal

The concepts in the European System of Accounts (ESA) are multi-purpose: for a great range of uses the ESA concepts are accepted, though they need to be supplemented for some uses. For some specific data needs, as for e.g. the analysis of the interaction between the environment and the economy, the best solution is to draw up separate satellite accounts.

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. The national accounts have therefore to be complemented with integrated environmental-economic accounting that provides data that are fully consistent.

The proposal is expected to ensure the means to reach the following three objectives:

- To implement the ideas laid down in the environmental accounts part of the new chapter on satellite accounts in the forthcoming revised ESA.

- To give priority to regular production of a core set of accounts based on the revised European Strategy for Environmental Accounting (ESEA 2008), as adopted by the Statistical Programme Committee in November 2008.

- To ensure that National Statistical Institutes (NSIs) maintain and potentially expand their work on environmental accounting, with the main objective of providing harmonised and timely data of reasonable quality.

It will help ensure that adequate resources for the development of environmental economic accounts become available at the NSIs.

### 1.2. General context

Following the Amsterdam Treaty, environmental and sustainability policy moved up the political agenda, focusing on the integration of environmental and economic policy making and on integrating environmental concerns into other policy areas. At EU level, key policy initiatives important for environmental accounts include the 6th Environmental Action Programme, the EU Sustainable Development Strategy and various sectoral policy initiatives related to the Cardiff process. Key areas include climate change, sustainable transport, nature and biodiversity, health and the environment, natural resource use and waste management and the international dimension of sustainable development. The structural indicators, designed to monitor progress towards the Lisbon objectives, have been extended by adding environmental indicators.

As long as primary statistics are incomplete, environmental accounting can play a useful role by providing a framework and estimation procedures for missing data, e.g. based on non-statistical sources.

Users put much emphasis on analysis and applications of environmental accounts in modelling and forecasts/outlooks, both for preparing policy proposals and reporting on policy implementation and impacts. Examples are the design of taxation policies related for instance to climate change and energy uses, or the assessment of the effects of international trade on emissions and resource use.

User needs may differ somewhat across countries reflecting national endowments with natural resources and environmental assets or specific national policy priorities but the key standard components of environmental accounts are similar: selected natural resources accounts, air emissions and energy accounts, material flows accounts, environmental expenditure, activities and taxes.

### 1.3. Existing provisions in the area of the proposal

In 1994, the European Commission identified the main lines of action for the development of a *Green National Accounting* framework based on satellites to National Accounts[1]. Since then, Eurostat, in collaboration with Member States' statistical offices and DG Environment's financial support, has assisted European countries in collecting data through some pilot studies.

Data in relation to Environmental Accounts is reported to Eurostat in a number of different ways. On a mandatory basis:

- Some data on Environmental Expenditure by industries is collected in connection to the Structural Business Statistics (SBS) regulation[2]
- Data transmitted to Eurostat in connection to the ESA 95 regulation[3] with regard to National Accounts (e.g. supply-use tables, Input-Output tables, COFOG and tax statistics)

By gentlemen's agreement, Environmental Accounts data compiled in NSIs is transmitted to Eurostat on a regular basis (yearly or two-yearly) via:

- The Joint Eurostat/OECD questionnaire (environmental protection expenditure and revenues)
- A separate questionnaire on Economy-Wide Material Flows Accounts
- A separate questionnaire on air emissions accounts
- A separate questionnaire regarding environmental taxes by industry

Decision No 1578/2007/EC of the European Parliament and of the Council of 11 December 2007 on the Community Statistical Programme 2008 to 2012 makes a clear reference to the

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1 COM (94) 670 Directions for the EU on Environmental indicators and Greened National Accounting – Integration of Environmental and Economic Information Systems.

2 Regulation (EC) No 295/2008 of the European Parliament and of the Council of 11 March 2008 concerning structural business statistics (OJ L 97, 9.4.2008, p.13)

3 Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community (OJ L 310, 5.11.1996,p.1)

need of high quality statistics and accounts in the domain of the environment. Furthermore, under the main initiatives for 2008 to 2012[4] it is stated that "legal bases will be developed, where appropriate, for core areas of environmental data collection currently not covered by legal acts."

### 1.4. Consistency with other policies and objectives of the Union

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 is enshrined in Article 3 of the Treaty.

The Sixth Community Environment Action Programme[5] 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.

The current proposal is consistent with the Commission priorities.

## 2. CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT

### 2.1. Consultation of interested parties

*Consultation methods, main sectors targeted and general profile of respondents*

The proposal has been discussed with data producers in the European Statistical System and Commission services (DG ENV, JRC, Environmental European Agency), through written consultations, in the relevant working groups and task forces, and with the directors for environmental statistics and accounts.

*Summary of responses and how they have been taken into account*

The current proposal is the result of intensive negotiations between all interested parties.

### 2.2. Collection and use of expertise

*Scientific/expertise domains concerned*

The national and Commission (DG ENV, JRC, Environmental European Agency) representatives at the meetings of DG Eurostat's task force "Material Flow Accounts", working groups on "Environmental Accounts" and "Environmental Expenditure statistics", and Director's Meeting on "Environmental Statistics and Accounts" (DIMESA) were all experts with knowledge of the existing legislation, the national systems for collecting and compiling environmental accounts and statistics and new trends in the development of environmental accounting.

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4 OJ L 344, 28.12.2007, p.15

5 Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the sixth Community Environment Action Programme (OJ L 242, 10.09.2002, p.1)

*Methodology used*

The experts contributed to task force, working groups and DIMESA meetings and written consultations during the preparation process.

*Main organisations/experts consulted*

The main experts were from the National Statistical Institutes, Environmental Ministries and Agencies, as well from DG ENV, JRC and Environmental European Agency.

*Summary of advice received and used*

A very positive and supportive response was noted. The existence of potentially serious risks with irreversible consequences was not mentioned.

*Means used to make the expert advice publicly available*

The working documents and minutes of the meetings of the task force, working groups and DIMESA are available via CIRCA.

### 2.3. Analysis of effects and consequences

Two options have been identified:

- Option 1: to continue with gentlemen's agreement as until now
- Option 2: to establish a legal base to support the data collection on environmental economic accounts.

#### 2.3.1. Option 1: Continue with the gentlemen's agreement as until now.

*Effects and consequences for citizens and households*

No direct effect or consequence is expected. They will be indirectly affected by the continued use of scattered and incomplete information used by policy makers that makes their work more fragmented and less coordinated with information regarding the economy and society.

*Effects and consequences for enterprises*

No direct effect or consequence is expected. They will be indirectly affected by the continued scattered and incomplete information used by policy makers and their decisions based upon it.

*Effects and consequences for Member States*

Under the current situation which is based on a gentlemen's agreement without any legal base, in the best case scenario the data quality and availability will continue to be at the current less-than-adequate level or, even more likely, data availability will decrease. In connection to the study 'Environmental Accounts in Europe – State of play of recent work' carried out for the Commission in 2007, a number of countries made it clear that the priority setting in their country was to focus almost exclusively on legally required reporting and that data compiled and reported under gentlemen's agreements would cease to be compiled due to a lack of legal

requirement. This would also be true for well established statistics in environmental accounts due to budgetary constraints.

*Effects and consequences for policies at European Union level*

There are increasing needs to link information on the environment to information on the economy. Integrated assessments are called upon in several EU action plans and strategies. The assessment of the environmental strategies can be done only if reliable data is available. The current situation based on the gentlemen's agreement does not guarantee data of adequate quality, timeliness and coverage to properly perform this assessment.

By remaining under the gentlemen's agreement there is a risk that missing data will be estimated and collected elsewhere on an ad hoc basis whenever policy demands requires information on the relationship between the economy and the environment. Thus the possibilities to build up a knowledge base and adequate data to answer the policy demands will be limited under the current conditions.

### 2.3.2. Option 2: Establish a legal base to support the data collection on environmental economic accounts

*Effects and consequences for citizens and households*

No direct effect or consequence is expected. They will be indirectly affected by the improved information base provided to the policy makers and their decisions based upon it.

*Effects and consequences for enterprises*

There may be some cases of confidential data that will be necessary to manage.

Environmental Accounting is mainly about re-organising existing data and not collecting new statistics from enterprises.

For the three modules envisaged in this Regulation, namely air emission accounts, environmentally-related taxes by economic activities and economy-wide material flow accounts, the necessary data is compiled on the basis of already established reporting obligations. For example, air emission accounts rely on the data produced for air emission inventories (under the UNFCCC and the CLRTAP mentioned in the Annex I). The data in the second module on environmentally related taxes is derived on the basis of tax statistics and government finance statistics as well as tax data from the national accounts. Finally, the data needed for the economy-wide material flow accounts is derived from agriculture statistics, industrial production statistics and trade statistics.

Thus, no new major reporting requirements for enterprises should arise from the adoption of this Regulation.

*Effects and consequences for Member States*

Environmental accounts do not generally require new data collection but create additional uses for national accounts data (e.g. supply-use and input-output tables), for environment statistics and other areas of statistics. Primary data needed, alongside the national accounts, are environment, energy, transport, forestry, fisheries, air emission inventories and other

statistics as well as other data held by ministries, specialised institutions and environmental agencies.

Based on the replies to the study 'Environmental Accounts – State of play of recent work' carried out for Eurostat in 2007, a number of European countries have declared that Environmental Accounts will not be developed or even continued without a European legal base, providing the legal right to claim for the necessary resources to fulfil this requirement.

*Effects and consequences for policies at European Union level*

The assessment of the European Environmental Policy and its Thematic Strategies can only seriously be done if reliable data is available. The Thematic Strategy on the Sustainable Use of Natural Resources clearly requires data to build up indicators on decoupling of economic growth from natural pressures and indicators on environmental impact. These indicators are based on data that is currently being collected through gentlemen's agreement. The required consistent and regular production and reporting of environmental accounts would improve the quality of the statistics. Until now the data used for one of the Structural Indicators and three of the Sustainable Development Indicators was not using country-reported data but has been developed from international databases (for example, from the FAO, UN). The data for the indicator reports in 2009 have, for the first time, used country reported data provided under the current voluntary data collection arrangement.

On the other hand, other EU policies (e.g. recycling and prevention of waste, air emissions and climate change, sustainable consumption and production) would be much better monitored if data of good quality linking environment and economy would exist. This data can be collected through the framework of environmental accounts, but it is necessary that every country participates and that harmonisation is fully guaranteed. An appropriate legal base for this data collection can ensure these requirements.

The following benefits are also expected: data collection in an important area EU-wide, increased visibility of environmental accounts as a tool for policy monitoring exploring the possibility to link environmental and economic data, possibility to take advantage of the current revision of SNA / ESA and get synergies for data collection.

### 2.3.3. Summary of risks of keeping status quo

If option 2 is not implemented, the following risks have been identified:

- Risk that data is not appropriately collected to provide EU level estimates and that no final complete data set on environmental accounts is available. Thus resulting in incomplete information on the links between the environment and the economy.

- Risk that analysis is done based on non-official data. This includes a risk that other actors will estimate information on the links between the environment and economy and do what Eurostat and the European Statistical System should do in a more systematic and harmonized way.

- Risk that the EU is not recognised as a worldwide, leading actor in the field of environmental accounts. There is a risk that the effort done until now is wasted without any clear final benefit.

### 2.3.4. The preferred option

The choice between continuing collecting data on environmental accounts using a gentlemen's agreement or supported by EU legislation clearly points to the second option as the one which produces the best results.

## 3. LEGAL ELEMENTS OF THE PROPOSAL

### 3.1. Summary of the proposed action

The objective of this Regulation is to establish a common framework for the collection, compilation, transmission and evaluation of European environmental economic accounts.

### 3.2. Legal basis

Article 338 of the Treaty on the Functioning of the European Union provides the legal basis for European statistics. Acting in accordance with the ordinary legislative procedure, the European Parliament and the Council adopt measures for the production of statistics, where necessary, on the performance of the activities of the Union. This Article sets out the requirements relating to the production of European statistics, stating that they must conform to standards of impartiality, reliability, objectivity, scientific independence, cost-effectiveness and statistical confidentiality.

### 3.3. Subsidiarity principle

The subsidiarity principle applies insofar as the proposal does not fall within the exclusive competence of the EU.

The objective of the proposed action, namely the collection, compilation, transmission and evaluation of European environmental economic accounts, cannot be sufficiently achieved by the Member States and can therefore be better achieved at EU level on the basis of a Community legal act, because only the Commission can coordinate the necessary harmonisation of statistical information at Community level, while the collection of data and compilation of comparable environmental economic accounts can be organised by the Member States. Consequently, the Community may adopt measures in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty.

### 3.4 Proportionality principle

The proposal complies with the proportionality principle for the following reason(s).

In line with the principle of proportionality, this Regulation confines itself to the minimum required to achieve its objective and does not go beyond what is necessary for that purpose. This Regulation does not specify the data collection mechanisms for each Member State, but merely defines the data to be supplied so as to ensure a harmonised structure and timing.

For most of the domains, there is no obligation for the Member States to make any changes to the compilation of environmental economic accounts, for which data are already being collected at EU level under gentlemen's agreements. In some domains there might be a change of survey reporting that might affect enterprises. However, environmental accounting

is mainly about re-organising existing data and not collecting new statistics from enterprises. In fact, environmental accounts do not generally require new data collection but create additional uses for national accounts data (e.g. supply-use and input-output tables), for environment statistics and other areas of statistics.

### 3.5. Choice of instruments

Proposed instruments: Regulation

Other means would not be adequate for the following reason(s).

Selection of the appropriate instrument depends on the legislative goal. Given the information needs at European level, the trend for European statistics has been to use Regulations rather than directives for basic acts. A Regulation is preferable because it lays down the same law throughout the EU, assuring its accurate and comprehensive application by the Member States. It is directly applicable, which means that it does not need to be transposed into national law. In contrast, directives, which aim to harmonise national laws, are binding on Member States as regards their objectives, but leave the national authorities the choice of form and methods used to achieve these objectives. They also have to be transposed into national law. The use of a Regulation is in line with other statistical legal acts adopted since 1997.

## 4. BUDGETARY IMPLICATION

The data collection has no new implication for the Community budget.

## 5. Additional information

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.

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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,

After transmission of the proposal to the national Parliaments,

Acting in accordance with the ordinary legislative procedure,

Whereas:

(1) Article 3 of the Treaty on European Union provides 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[6] 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.

(3) Decision No 1578/2007/EC of the European Parliament and of the Council of 11 December 2007 on the Community Statistical Programme 2008 to 2012[7] 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.

(4) 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

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6 Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme (OJ L 242, 10.9.2002, p. 1).

7 OJ L 344, 28.12.2007, p. 15.

of August 2009 on GDP and beyond. To this end, environmental accounts offer a means of monitoring the pressures exerted by the economy on the environment and of exploring how these might be abated. In line with the tenets of sustainable development and the drive to achieve a low-carbon economy, embedded in the Lisbon Strategy and various major initiatives, developing a data framework that consistently includes environmental issues along with economic ones becomes all the more imperative.

(5) 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[8] (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.

(6) 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.

(7) 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.

(8) 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.

(9) 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.

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[8] OJ L 310, 30.11.1996, p. 1.

(10) The Commission presented its first strategy on 'green accounting' in 1994[9]. 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.

(11) 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.

(12) Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European Statistics[10] 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.

(13) As the different sets of environmental economic accounts are under development and at different stages of maturity, a modular structure providing adequate flexibility should be adopted.

(14) A programme of pilot studies should be established to improve reporting and data quality, enhance methodologies and prepare for further developments.

(15) The Commission should be entitled to grant derogations to Member States when major adaptations to their national statistical systems are required.

(16) 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.

(17) The measures necessary for the implementation of this Regulation should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission[11].

(18) The Commission should be empowered to adopt delegated acts in accordance with Article 290 of the Treaty on the Functioning of the European Union for the purpose of adjusting the modules to environmental, economic and technical developments, as well as providing methodological guidance.

(19) The European Statistical System Committee has been consulted,

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9 COM(1994) 670.
10 OJ L 87, 31.3.2009, p. 164.
11 OJ L 184, 17.7.1999, p. 23.

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, whereby only transactions identified by the national accounts as a tax are to be included;

(3) '*economy-wide material flow accounts (EW-MFA)*' means consistent compilations of the overall 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 module 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 adopt delegated acts in accordance with Article 9 for the purpose of adjusting the modules to environmental, economic and technical developments, as well as providing methodological guidance.

*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.

2. The results 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. On the basis of the conclusions of the pilot studies, the Commission shall adopt the necessary delegated acts in accordance with Article 9.

*Article 5*

**Data collection**

1. Member States shall collect the necessary data for the observation of the modules' characteristics referred to in Article 3(2).

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 used and the quality of the data from the sources listed in paragraph 2.

*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 regulatory procedure referred to in Article 12(2).

*Article 7*

**Quality assessment**

1. For the purpose of this Regulation, the quality criteria as referred to in Article 12(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 regulatory procedure referred to in Article 12(2).

4. The Commission (Eurostat) shall assess the quality of the data transmitted.

*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 regulatory procedure referred to in Article 12(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 powers to adopt the delegated acts referred to in Articles 3(3) and 4(2) shall be conferred on the Commission for an indefinite period of time.

2. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

3. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in Articles 10 and 11.

*Article 10*

**Revocation of the delegation**

1. The delegation of power referred to in Articles 3(3) and 4(2) may be revoked by the European Parliament or by the Council.

2. The institution which has commenced an internal procedure for deciding whether to revoke the delegation of powers shall inform the other legislator and the Commission at the latest one month before the final decision is taken, stating the delegated powers which could be subject to revocation and the reasons for any such revocation.

3. The revocation decision shall put an end to the delegation of the powers specified in that decision. It shall take effect immediately or at a later date specified therein. It shall not affect the validity of the delegated acts already in force. It shall be published in the *Official Journal of the European Union.*

*Article 11*

**Objections to delegated acts**

1. The European Parliament or the Council may object to a delegated act within a period of two months from the date of notification. At the initiative of the European Parliament or the Council this period may be extended by one month.

2. If, on expiry of that period, neither the European Parliament nor the Council has objected to the delegated act, or if, before that date, the European Parliament and the Council have both informed the Commission that they have decided not to raise objections, the delegated act shall enter into force on the date stated in its provisions.

3. If the European Parliament or the Council objects to a delegated act, it shall not enter into force. The institution which objects shall state the reasons for objecting to the delegated act.

*Article 12*

**Committee**

1. The Commission shall be assisted by the European Statistical System Committee.

2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period laid down in Article 5(6) of that Decision shall be set at three months.

*Article 13*

**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,

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| *For the European Parliament* | *For the Council* |
| *The President* | *The President* |

# ANNEX I

# 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 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 activities by industries as well as private households' activities.

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 | $N_2O$ | 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 µ | $PM_{10}$ | tonnes (Mg) |
| | Particulate matter < 2.5 µ | $PM_{2.5}$ | 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. The first reference year is the year when the Regulation enters into force.

4. In the first data transmission, Member States shall also include annual data from 2008 to the first reference year.

5. 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**

1. 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 for national and regional accounts), 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.

2. 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 NAMEA air emissions (industry + households)** |
| Less National residents abroad |
| - National fishing vessels operating abroad |
| - Land transport |
| - Water transport |
| - Air transport |
| Plus Non-residents on the territory |
| + Land transport |
| + Water transport |
| + Air transport |
| (+ or -) Other adjustments and statistical discrepancy |
| **= Total emissions of pollutant X as reported to UNFCCC[12]/CLRTAP[13]** |

**SECTION 6**

**Maximum length of the transitional periods**

A transitional period cannot be granted.

[12] United Nations Framework Convention on Climate Change.
[13] Convention on Long-Range Transboundary Air Pollution.

# ANNEX II

# MODULE FOR ENVIRONMENTALLY RELATED TAXES BY ECONOMIC ACTIVITIES

## SECTION 1

### Objectives

Environmentally related tax revenues record and present data on environmentally related taxes in a way that is compatible with the national accounts. They record national economies' environmentally related tax revenues in a breakdown by economic activities as delineated in ESA 95. Economic activities comprise production activities by industries as well as private households' activities.

This Annex defines the data to be collected, compiled, transmitted and evaluated for environmentally related tax revenues by industry 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 from the national accounts 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 the national accounts and improve international comparability.

The national accounts also contain information about which industries and sectors are paying the taxes. Information on taxes coming from the national accounts can be found in the institutional accounts for the government, in the supply and use tables and in the generation of income account.

## 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 accordingly to the following characteristics:

(1) Energy taxes,

(2) Transport taxes,

(3) Pollution taxes,

(4) 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. The first reference year is the year when the Regulation enters into force.

4. In the first data transmission, Member States shall also include annual data from 2008 to the first reference year.

5. 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 for the institutional sectors that are paying the taxes.

For the general government and corporations sectors, the requested breakdown is by hierarchical classification of economic activities, NACE Rev.2 (A*64 aggregation level for national and regional accounts), fully compatible with ESA 95. In addition, for each of characteristics 1 and 2 referred to in Section 3, data shall be produced for:

- Households,
- Non-residents,
- Not allocated.

**SECTION 6**

**Maximum length of the transitional periods**

A transitional period cannot be granted.

# ANNEX III

# 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 (ESA 95), 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.

Only flows that cross these system boundaries are included in EW-MFA. Material flows within the economy are not represented in EW-MFA. This means that the national economy is treated as a black box in EW-MFA and e.g. inter-industry deliveries of products are not described. Natural flows into, within, and out of the natural environment are likewise excluded.

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.

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 3**

**List of characteristics**

Member States shall produce statistics on the characteristics listed in Section 5.

**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. The first reference year is the year when the Regulation enters into force.

4. In the first data transmission, Member States shall also include annual data from 2008 to the first reference year.

5. 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.

***Table A — Domestic extraction (DE)***

| |
|---|
| **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 (*)

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 (**)

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.

## 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 (***)

## 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

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

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

(***) Optional reporting.

***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, fodder crops and grazed biomass

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 and grazed biomass

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 (*)

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**

(*) Optional reporting.

**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 reference year.