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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND  
THE COUNCIL**

**on the implementation of Regulation (EU) No 691/2011 on European environmental  
economic accounts**



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### (1) INTRODUCTION

Regulation (EU) No 691/2011 on European environmental economic accounts<sup>1</sup> (the Regulation) introduced a common framework for collecting, compiling, transmitting and evaluating European environmental economic accounts. Article 10 of the Regulation provides for the following:

*By 31 December 2013 and every 3 years thereafter, the Commission shall submit a report on the implementation of this Regulation to the European Parliament and the Council. That report shall evaluate in particular the quality of the data transmitted, the data collection methods, the administrative burden on the Member States and on the respondent units, as well as the feasibility and effectiveness of those statistics.*

This is the fourth report fulfilling this obligation. The previous reports were published in 2019<sup>2</sup>, 2016<sup>3</sup> and 2013<sup>4</sup>.

### (2) ENVIRONMENTAL ECONOMIC ACCOUNTS

The European Green Deal resets the Commission's commitment to tackling climate and environmental-related challenges<sup>5</sup>. Europe aims to be the first climate-neutral continent by becoming a modern, resource-efficient economy. The European Green Deal will improve the health and well-being of people across the EU, as well as that of future generations, with a range of actions on climate, environment and oceans, energy, transport, agriculture, finance and regional development, industry and research & innovation. The European Green Deal is an integral part of the Commission's strategy to implement the 2030 Agenda and the UN Sustainable Development Goals.

Environmental economic accounts, or environmental accounts for short, are a powerful, multipurpose information framework addressing the sustainability aspects of our economic behaviour. Mainstream economic statistics, such as national accounts, which underpin GDP, do not take account of environmental aspects in production, consumption, investment or

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<sup>1</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02011R0691-20140616>.

<sup>2</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583142055591&uri=CELEX:52020DC0056>.

<sup>3</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1478531808092&uri=CELEX:52016DC0663>.

<sup>4</sup> <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52013DC0864>.

<sup>5</sup> [https://ec.europa.eu/info/sites/info/files/european-green-deal-communication\\_en.pdf](https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf)

financing. Environmental accounts enable the integration of economic and environmental aspects to complete this picture.

The key feature of environmental accounts is *integration*. This encompasses both the integration of environmental and economic aspects, and the integration into a consistent economic accounting system of a range of key thematic environmental aspects such as (i) energy, taxation and air emissions; (ii) material extractions and waste; and (iii) government and business expenditure and investment. This integration fits nicely in the holistic paradigm of the European Green Deal. The accounting approach is useful because:

- it reuses available data and thus allows new information to be produced with limited administrative burden on businesses and members of the public;
- it enables high quality information to be produced by combining and integrating source data into robust estimates.

At EU level, *European* environmental accounts underpin the supranational dimension of environmental issues and provide a systematic approach and coverage across Member States and environmental topics that enable policy assessment and comparisons across Member States.

European environmental accounts are based on the international standard System of Environmental-Economic Accounting (SEEA)<sup>6</sup>. This standard was produced and released by the United Nations, the European Commission (Eurostat), the Food and Agriculture Organisation of the UN, the Organisation for Economic Cooperation and Development (OECD), the International Monetary Fund and the World Bank group.

The Regulation establishes the European environmental accounts. The Regulation has EEA relevance<sup>7</sup>. It structures the accounts in modules, as follows:

- **Air emissions accounts:** the emissions into the atmosphere of six greenhouse gases (including CO<sub>2</sub> and CO<sub>2</sub> from biomass used as a fuel) and seven air pollutants (including ammonia and fine dust particles), with a breakdown covering 64 emitting industries plus households.
- **Environmentally-related taxes by economic activity:** environmental taxes for four broad groups: energy, transport, pollution and resources, with a breakdown covering 64 paying industries plus households and non-residents.
- **Economy-wide material flow accounts:** the amounts of physical inputs into the economy, material accumulation in the economy, and outputs to other economies or back to the environment.

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<sup>6</sup> <https://seea.un.org/>

<sup>7</sup> It covers Norway and Iceland. Liechtenstein has a complete derogation. The bilateral Statistical Agreement of Switzerland with the European Union, includes the Regulation since December 2019.

- **Environmental protection expenditure accounts:** spending by economic units for environmental protection purposes.
- **Environmental goods and services sector accounts:** output, value added and exports of goods and services that have been specifically designed and produced to protect the environment or manage resources. The employment associated with these activities is also reported.
- **Physical energy flow accounts:** flows of energy from the environment into the economy (extraction of natural inputs), within the economy (manufacture and use of energy products) and from the economy to the environment (discharge of energy residuals).

Member States have been obliged to submit data to the Commission (Eurostat) under Annexes I to III since 2013 and Annexes IV to VI since 2017.

### (3) ACTIVITIES SINCE THE LAST REPORT

#### LEGAL FRAMEWORK

The Commission adopted Commission Delegated Regulation (EU) 2022/125 of 19 November 2021 amending Annexes I to V to Regulation (EU) No 691/2011<sup>8</sup>. This Delegated Regulation updates the technical specifications of five of the six existing modules, listed in the previous section, with a view to producing faster information (shorter transmission deadlines) and updating the lists of characteristics. In particular, the latter includes: (a) requesting additional breakdowns of CO<sub>2</sub> taxes; (b) requesting additional breakdowns of data for the environmental sector and on environmental expenditure; (c) requesting information on the total environmental sector (as opposed to the market part of the environmental sector); (d) updating the technical lists of material flows and air emission gases; and (e) simplifying information requirements on the economic industries of the environmental sector as well as on the imports and exports of materials.

Those changes improve the ability to monitor progress towards a green, competitive and resilient circular economy and towards the Sustainable Development Goals relevant to the EU, as well as to support climate and pollution policies. The changes also make it easier for users to interpret data and allow statisticians to accurately measure the total national expenditure on environmental protection. To reduce the reporting burden for Member States, the required level of detail of the NACE classification have been reduced for the environmental goods and services sector accounts and for the environmental protection expenditure accounts.

Furthermore, on 11 July 2022 the Commission adopted the proposal for a Regulation of the European Parliament and of the Council (COM(2022) 329)<sup>9</sup> amending Regulation (EU)

<sup>8</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2022.020.01.0040.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2022.020.01.0040.01.ENG).

<sup>9</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2022:329:FIN>.

691/2011 as regards introducing new environmental accounts modules. This proposal introduces three additional modules:

- **Forest accounts**, encompassing asset accounts of forest resources (wooded land and timber on wooded land) and economic activity in the forest and logging industry.
- **Environmental subsidies and similar transfers accounts**, about unrequited payments from general government to other institutional sectors and from non-residents (rest of the world) for the purpose of protecting the environment or reducing the use and extraction of natural resources.
- **Ecosystem accounts**, about ecosystem extent, ecosystem condition (i.e. degradation) and ecosystem services (crop provision, pollination, wood provision, air filtration, global climate regulation, local climate regulation and nature-based tourism).

These three modules are expected to increase the information available to the EU for several European Green Deal actions and goals, including: its climate neutrality ambition, the ‘Farm to fork’ strategy, the new EU forest strategy, EU biodiversity strategy for 2030 and nature restoration law, the zero pollution action plan and Sustainable Development Goals indicators.

The new modules will also boost the six initial modules, as new and old accounts can be combined to derive new indicators. For instance, the new ecosystem accounts can be combined with existing air emission accounts to measure carbon sequestration versus emissions of greenhouse gases. There is also a link between ecosystem accounts, forest accounts and economy-wide material flow accounts as regards the extraction of biomass.

The Commission started to prepare its proposal, with the help of expert groups (participating national statistical offices), in 2020. The modules on forest accounts and environmental subsidies and similar transfers are based on pre-existing voluntary transmissions (respectively, since 2016 and 2015). The administrative burden for Member States already reporting on these accounts will be minimal.

The module on ecosystem accounts will be new for most Member States. The Commission selected it due to its high policy relevance for nature, biodiversity and zero pollution, as well as its potential for other policies, including the European Semester. It represents the first implementation in the EU of the UN SEEA Ecosystem accounts, adopted by UN Statistical Commission in March 2021. Eurostat has been gaining experience and developing methodologies under the EU-wide project INCA (‘Integrated natural capital accounting’) since 2015<sup>10</sup>. The three new modules benefit from Member States pilot projects and tests co-financed with Commission (Eurostat) grants (24 grants awarded between 2015 and 2021, and support actions planned for following years).

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<sup>10</sup> Project INCA was accompanied by the Mapping and Assessment of Ecosystem Services by the Joint Research Centre.

## **DATA COLLECTION METHODS AND ADMINISTRATIVE BURDEN**

Environmental accounts do not generally require new microdata to be collected as they mostly make use of data already held by national authorities, complemented with additional estimates where needed. In addition to national accounts data, environmental accounts collate data from a wide range of sources, e.g. underlying statistics on energy, transport, agriculture, government expenditure and taxation, as well as some non-statistical sources. However, occasionally, households or business surveys have to be adapted or expanded to provide a data basis for individual items in the environmental accounts.

To fulfil the data requirements set out in the Regulation, Member States can adjust existing data to bring it into line with the concepts in the System of Environmental-Economic Accounting Central Framework (SEEA CF) and SEEA Ecosystem Accounts (SEEA EA). This may require specific work from Member States. The fact that environmental accounts reuse existing data means that, as long as data sources exist and are maintained, any additional burden on businesses and households is very small. Countries can also choose to set up specific data collection processes for environmental accounts, which will help to improve data quality. One such practice, involving the environmental goods and services sector accounts (Annex V to the Regulation), entailed some countries setting up surveys to complement their other sources of data. The additional burden that these surveys - which are conducted every year or every few years - place on businesses is often very low.

National authorities (typically the national statistical institutes) carry out most of the work required to produce the accounts, which involves processing existing data and improving their analytical potential. The average number of staff required to compile the accounts in each national authority is estimated at between four and six full-time equivalents for the six Annexes to the Regulation<sup>11</sup>. The three new Annexes proposed will require around two or three additional full-time equivalents in each national authority<sup>12</sup>, with the exact number depending on the individual Member State's circumstances, existence/extent of data sources, etc. The accounts add considerable value to the basic data and increases the potential to analyse mutual interactions between the topics in the Annexes e.g. air emissions and energy use. Several national authorities used pilot studies (co-financed by the Commission) to set up the methods for processing and analysing the data.

## **FEASIBILITY AND EFFECTIVENESS**

The modules laid down in the Regulation were tested and piloted before the Commission proposed a legal framework, thus ensuring their feasibility (see below). The testing is carried

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<sup>11</sup> Source: Member States national statistical institutes, data collected in the 2020 cost analysis of European statistics.

<sup>12</sup> Source: Member States national statistical institutes, data collected from and for discussion by the expert group 'Directors of sectoral and environmental statistics and accounts (DIMESA)' in 2021.

out in cooperation with the Member States so as to benefit from their expertise and ensure there is a common understanding about the modules' feasibility. Pilot studies of further, potential new modules are currently under way.

The effectiveness of the environmental accounts depends on two factors: first, how existing information can be reorganised into a common framework; and second, how and to what extent the accounts are used.

On the first point, the air emissions accounts (Annex I to the Regulation) provide one example of how existing information has been reorganised. These accounts use information already gathered for the air emission inventories required under the UN Framework Convention on Climate Change (UNFCCC) and under the UN Economic Commission for Europe Convention on Long-range Transboundary Air Pollution (CLRTAP). Further information is then added to the data to bring them into line with the classifications and concepts used in the national accounts. Once this is done, applications of the air emissions accounts can be developed. For instance, environmental footprints are derived when combining them with input-output tables. These footprints measure the global pressures on the environment around the world by EU consumption and investment. Another example of effectiveness is a low-cost model based on the (annual) air emissions accounts, which is used to produce much more timely quarterly estimates. Eurostat has produced these estimates since November 2021. The data are published 4.5 months after the reference quarter and significantly improve the timeliness of the data required in the Regulation, which is 21 months.

Air emission accounts can also be used together with environmental accounts for other areas such as energy or environmental taxes. This information can be used in causal frameworks for describing and analysing the interactions between society and the environment, like the framework 'Driving forces, Pressures, State, Impact and Responses' adopted by the [European Environment Agency](#).

On the second point, the environmental accounts underpin the 8<sup>th</sup> General Union Environmental Action Programme to 2030<sup>13</sup>. Environmental accounts underpin economic analysis and impact assessment and are used to monitor progress on policy objectives. More specifically indicators building on environmental accounts are used in the current monitoring frameworks for the 8<sup>th</sup> Environmental Action Programme and circular economy, and in the future they can contribute to monitor biodiversity and zero pollution. Environmental accounts are also used to monitor the EU's progress towards the relevant Sustainable Development Goals<sup>14</sup> and in the resilience dashboard.

## QUALITY OF THE DATA TRANSMITTED SINCE THE LAST REPORT

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<sup>13</sup> OJ L 114, 12.4.2022, p. 22-36.

<sup>14</sup> <https://ec.europa.eu/eurostat/en/web/products-statistical-books/-/ks-09-22-019>. SDG indicators based on environmental accounts are: 'air emission intensity of industry', 'material footprint', 'gross value added in the environmental sector', 'circular material use rate' and 'shares of environmental taxes in total tax revenues'. Furthermore, this report also uses carbon footprints in the chapter about spillover effects.



The Regulation requires Member States, as well as EEA countries, to report data to Eurostat<sup>15</sup>. A number of candidate countries and potential candidate countries for EU membership also report some data on a voluntary basis. This implementation report focuses on the first group of countries (EU/EEA countries). Eurostat validates the data received and makes them publicly available on its website<sup>16</sup>, together with technical explanations (metadata) and background information<sup>17</sup>.

The vast majority of Member States submitted complete data sets within the deadlines set in the Regulation. A few Member States missed the deadlines, usually by only a few days, except for one Member State which had a longer delay. However, these delays have had no tangible impact on the processing or dissemination of the data.

It should be noted that the reporting deadlines set in the Regulation determine the timing of the data production in the Member States for environmental accounts. This is an indicator of data quality, as fresher statistical data are always better. However, there is a trade-off with other data quality aspects, such as accuracy or coherence across environmental accounts topics e.g. data on greenhouse gas emissions, energy use and energy taxes.

Overall, for all Annexes I to VI, data quality improved over 2019-2022. The statistical data for Annexes I to III submitted by Member States under the Regulation is of high quality. The data for Annexes IV to VI are less mature because obligatory reporting only started in 2017. Annexes IV and V are also more complex than the other Annexes and require other categories of source data. The Commission (Eurostat) expects the quality of the data for Annexes IV to VI to improve in the next few years. Improvement is still needed in several areas, for instance in data availability for producing Annex V (Environmental goods and services sector accounts). The Commission (Eurostat) continues to work with the Member States to resolve technical issues. A number of measures to improve quality are either planned or already being implemented, see next section.

#### **(4) IMPROVEMENT MEASURES**

The Commission (Eurostat) and the Member States have agreed on a European strategy for environmental accounts for 2019 to 2023<sup>18</sup>. This is a programme of further work agreed by the Commission (Eurostat) and the Member States and adopted by the European Statistical System Committee. This strategy coordinates European efforts and paves the way for possible new modules. The objectives for 2019 to 2023 are to:

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<sup>15</sup> Switzerland reports under the bilateral Statistical Agreement of Switzerland with the European Union since December 2019. Liechtenstein has a complete derogation from 691/2011, as specified in Decision of the EEA Joint Committee No 98/2012 of 30 April 2012 amending Annex XXI (Statistics) to the EEA Agreement (<https://www.efta.int/sites/default/files/documents/legal-texts/eea/other-legal-documents/adopted-joint-committee-decisions/2012%20-%20English/098-2012.pdf>).

Regulation (EU) 691/2011, Annex IV, Section 5.1 grants a derogation for those NACE codes, which Member States are not obliged to collect under Regulation (EC) 295/2008 on structural business statistics.

<sup>16</sup> <https://ec.europa.eu/eurostat/web/environment/data/database>

<sup>17</sup> <http://ec.europa.eu/eurostat/web/environment/overview>

<sup>18</sup> <https://ec.europa.eu/eurostat/documents/1798247/6191525/European+Strategy+for+Environmental+Accounts/>

- continue to improve the quality of the current European environmental accounts, including long time series and timely data;
- better communicate the relevance and content of European environmental accounts, including by expressing the environmental modules as a whole system;
- serve user needs by offering further extensions, applications and indicators, including footprints, based on the current European environmental accounts;
- assess the need to adjust European environmental accounts to new priorities and areas;
- support those who produce the accounts in the Member States with financial resources, training, handbooks and compilation tools;
- contribute to the further development of global standards of the UN SEEA and global initiatives such as monitoring the Sustainable Development Goals.

A review was conducted midway through the strategy, as scheduled<sup>19</sup>. The strategy is accompanied by an action plan with a concrete list of actions and deadlines, for each objective listed above<sup>20</sup>.

The European strategy for environmental accounts does not prevent individual Member States from also developing other streams of work, according to their national circumstances, policy needs and available resources.

## **PROPOSALS FOR NEW MODULES**

Article 10 of the Regulation states that this implementation report, where appropriate and taking into account the findings of pilot studies, must be accompanied by proposals for new modules in a number of named areas<sup>21</sup>.

As stated above, three new modules have now been developed to the point that the Commission has proposed them for inclusion in the Regulation, through an amendment currently in ordinary legislative procedure (COM(2022) 329). Those modules are: forest accounts, environmental subsidies and similar transfers and ecosystem accounts.

## **(5) CONCLUSIONS**

<sup>19</sup> <https://ec.europa.eu/eurostat/documents/1798247/6191525/Mid-term+review+of+the+European+Strategy+for+Environmental+Accounts+2019-2023.docx/22f0aaa1-4b9e-97c6-e859-a87c437b1ca6?t=1616431339959>

<sup>20</sup> <https://circabc.europa.eu/ui/group/c4687299-277c-42f8-8747-dee3f17341de/library/03f07982-845b-400b-8b0d-104cbb615939/details>

<sup>21</sup> Namely: Environmental Protection Expenditure and Revenues (EPER)/Environmental Protection 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), Three of them (EPEA, EGSS and Energy Accounts) eventually became part of the Regulation (Annexes IV to VI) already.

The Commission and the Member States have continued to improve the European environmental accounts under Regulation (EU) No 691/2011, in particular by:

- proposing to add three new thematic modules to the Regulation;
- strengthening data quality and effectiveness;
- improving communication;
- developing further indicators to meet users' needs; and
- assessing the need to adjust the European environmental accounts to new priorities and areas.