

Beyond GDP *Newsletter*

Measuring progress, true wealth, and the wellbeing of nations

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October 2014

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Interview

European economic environmental accounts



Anton Steurer has been Head of the Unit for environment statistics and accounts and sustainable development in Eurostat since 2014. In that role, he is responsible for the development of European environmental economic accounts.

He is an economist, engineer and national accountant and has been working on environmental accounts since the 1990's.

What is Eurostat and what is its role in developing environmental economic accounts in Europe?

Eurostat is the statistical office of the European Union. It works with the national statistical institutes (NSIs) and other national authorities responsible in each Member State for the development, production and dissemination of European statistics in the context of the [European Statistical System \(ESS\)](#).

Eurostat is also a Directorate General of the European Commission. Given its role it has a special status and the Director General of Eurostat, Mr Walter Radermacher, is at the same time the Chief Statistician of the European Union. The work

of Eurostat is set out in the [European Statistical Programme](#). This programme includes the production and further development of environmental accounts.

The basic idea of environmental accounts is to present environmental information in a way that is fully aligned with mainstream national accounts. The national accounts are a system of economic accounts that is used to compile, among other things, gross domestic product (GDP) and its growth rate, to determine government debt and deficit and to provide a rich set of data used for economic modelling and forecasting.

There are several sets of environmental accounts. Three are

enshrined under statistical legislation since 2011 (air emission accounts, environmental taxes and material flow accounts) and three more have been added in 2014 (environmental protection expenditure, environmental goods and services sector, and physical energy flow accounts).

In the context of environmental accounts, Eurostat has several roles:

- to develop methods and sources for the environmental accounts in close cooperation with ESS member countries and international partners such as the EEA, UN and OECD;
- to publish handbooks and guidelines;
- to assist ESS member countries in implementing environmental accounts;
- to ensure the application of existing legislation including collection and publication of environmental accounts;
- to produce EU estimates;
- to propose new legislation.

The Regulation on European environmental economic accounts paves the way for sound knowledge of the interactions between the economy and the environment in the EU. Can you please tell us about the process that led to the legal act?

Today, the European Union is a world leader in environmental accounting. The 1994 Communication for the establishment of green national accounting played an instrumental role since it mobilised the funds necessary for the development of environmental accounts. Developing sound statistics and accounts takes time: the concepts and methods need to be developed and tested, data sources need to be analysed and adapted, and compilers need to be trained. The quality of the data needs to be improved and the production processes need to be made efficient to ensure that the data produced are fit for purpose and the production is not too costly. The 1994 Communication created the conditions for methods and sources to be in place and tested, and for voluntary data collection to be up and running by the turn of the century.

In 2003, a first strategy for European environmental accounts was adopted by the heads of the national statistical offices of the ESS. Methods were further refined and in a number of areas of mainstream statistics, elements essential for the environmental accounts were incorporated. For example, classifications of government expenditure or of economic activities were amended to provide more environmental detail. The strategy was renewed in 2008, resulting in the legislation currently in force. In May 2014, the latest [European Strategy for Environmental Accounts](#), covering the period 2014-2018, was adopted.

The new Regulation (No 538/2014 of 16 April 2014) amends the previous Regulation (No 691/2011) by adding three new modules: environmental protection expenditure (EPE), environmental goods and services (EGSS) and physical energy flow accounting modules. How have these been chosen?

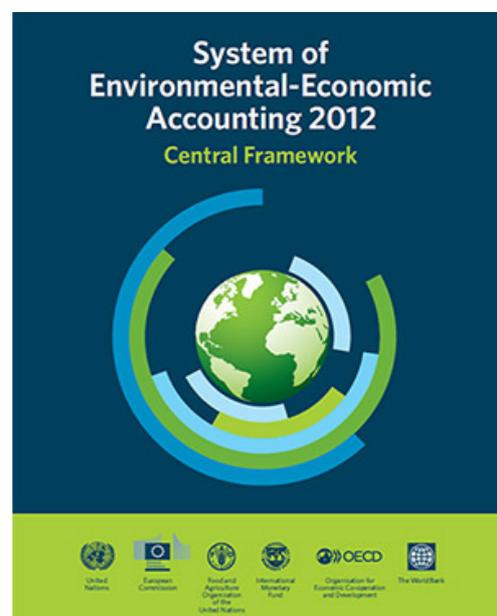
The modules have been chosen based on a set of criteria, such as the policy relevance and the maturity and feasibility of the accounts. To be useful, accounts have to be relevant but it is also necessary that they can be produced with sufficient quality and at an acceptable cost.

The energy accounts are relevant for energy and climate change policy. They are also fully aligned with the air emissions

accounts already in place allowing integrated analysis. The EPE and EGSS modules allow for an analysis of the economic aspects of environmental protection and resource management, including environmental employment.

To what extent did the revised UN System of Environmental-Economic Accounting (SEEA 2012) pave the way for the introduction of these new accounting modules?

The process leading to the SEEA 2012 was very important and certainly helped the adoption of the new EU legislation. The European Commission is one of the joint publishers of the SEEA 2012 Central Framework, which is the outcome of a longer process. Its publication means that there is now an international statistical standard for environmental accounts just like for other key areas of statistics: environmental accounts are now part of mainstream statistics. It is important that a growing number of countries across the world will introduce environmental accounts.



Will the Regulation contribute to monitoring progress towards Europe 2020 objective and a resource efficient Europe?

It certainly will. The Europe 2020 strategy already has a strong focus on energy and climate as well as employment, and the accounts will be of great help there. The Europe 2020 strategy is under review and should this lead to the introduction of additional targets, for example in the area of resource efficiency, the accounts would also prove useful. Eurostat's [Resource Efficiency Scoreboard](#) already presents indicators covering themes and subthemes of the Roadmap to a Resource Efficient Europe. The scoreboard aims to monitor the implementation of the roadmap, to communicate the link between resources and the economy and to engage stakeholders. The new Regulation also opens up further opportunities for monitoring in this field (see spotlight article).

The European Strategy for Environmental Accounts (ESEA) 2014 identifies among the future priorities the consolidation of existing modules in the legal framework and the facilitation of greater use of the modules by policy makers.

1. "The use of an accounting framework enables the stock of ecosystems – ecosystem assets - and flows from ecosystems – ecosystem services - to be defined in relation to each other and also in relation to a range of other environmental, economic and social information. (...)Accounting for ecosystems in physical (i.e. non-monetary) terms is a key feature of the SEEA Experimental Ecosystem Accounting.". Source: [SEEA 2012 – Experimental Ecosystem Accounting](#)

How would you suggest promoting the use of environmental economic accounts to policy makers?

Some of the most important steps that are being taken to ensure environmental accounts are used by policy-makers include:

- making the statistics more timely and more comprehensive - Eurostat discusses with Member States how timeliness could be further improved;
- the introduction of early estimates at least for the EU level;
- further improvements to dissemination products; and
- offering standard analysis quicker and to a greater extent (for example footprint-type analysis which shows environmental aspects such as CO2 emissions or raw materials that are embedded in imports and exports)

Member States are at different stages of development for the different environmental account modules. Do you envisage any action to help them in collecting data under the legal framework, by, for example, sharing best practices among countries, or developing implementation guidelines?

The Regulation does indeed account for temporary discrepancies between Member States. It allows countries to ask for a temporary derogation and some have made use of this. The Regulation is however concerned with closing the gap and does foresee funding for pilot studies in countries for example – in order to help some countries set up their production system. We also offer training courses and have regular meetings with countries to discuss issues of common interest. Finally, a range of handbooks have been developed in several areas and we are working on keeping them fully up to date. We intend to progressively focus on compilation guides to help the compilers in Member States in particular. It is not efficient that every country develops its methods and adapts them to changing circumstances in isolation.

Member States also have a role to play in helping best practice emerge and facilitating mutual learning: the Regulation also requires countries to provide quality reports on the data they supply. This is an important basis for further harmonising the data and improving its quality.

Recent years have witnessed a growing policy demand for information about ecosystems, the provision of ecosystem services and the linkages to economic and other human activity. This has translated into calls for an ecosystem accounting framework [1].

Do you believe ecosystem accounts will one day be systematically reported as part of official statistics? If so, which new accounts do you foresee will be the first ones to be introduced?

Ecosystem accounting is in its early days. It took about 20 years to move from the 1994 EC Communication for the establishment of green national accounting to where we are today where a range of environmental accounting modules have become part of official statistics. Today we are in an experimental phase for ecosystem accounting, just as we were in an experimental phase for environmental accounting in the 1990s.

It will certainly take further efforts and time before the first ecosystem accounts can be part of official statistics. At the same time, it is also clear that we are quickly moving closer to the limits of our planet: the pressure to carefully manage our natural assets will continue to grow and with it the recognition that ecosystem accounts can be useful monitoring tools. This

is also reflected in EU's [7th Environmental Action Programme](#) which has one of its key objectives to protect, conserve and enhance the Union's natural capital.

At the same time, the very considerable period that it is taking to establish a climate policy at international level serves as a reminder that, in particular for assets that do not belong to a single nation, this can be a lengthy process.



At the moment official statisticians in Europe are observing the developments and offer assistance. Work on ecosystem accounting is driven by the European Environment Agency (EEA) with Eurostat and National Statistical Institutes mainly providing basic data (on environment and other key areas such as agriculture and forestry) and statistical advice. The area is at an experimental stage and major new data sources are becoming available such as the survey on the state and the dynamics of changes in land use and cover in the European Union (called the [LUCAS survey](#)) or the satellite data from [COPERNICUS](#). This also suggests that the first ecosystem accounts to become available are likely to focus on land use and land cover. An integrated system of georeferenced information with a core around land use and land cover will be the centrepiece of the future ecosystem accounts.

As ecosystem accounts are still largely experimental accounts, with data and methods evolving, what do you see as the key areas for methodological development to allow the EU to meet its commitment to ecosystem accounting?

The most important steps are to establish a common system of terms and methods, which should not be overly difficult, and then to work on integrating all the many existing pieces of information – starting with the integration of LUCAS and satellite images. Before establishing new collections it is important to make good use of the information that is already available. The testing and experimenting doesn't come for free, however, and - if there is a genuine commitment to progress in this area – it needs to be supported with sufficient resources.

Key factors for a successful introduction of ecosystem accounts are a combination of political will and making resources available to develop these accounts swiftly and comprehensively. Comprehensive ecosystem accounts based on solid information collected bottom up, would be more resource intensive than, say, air emissions inventories. In terms of resource needs they are more comparable to a traditional population census – an onerous exercise which costs many million euro per country for one iteration and would only make sense if repeated on a regular basis. This is probably the only way you could know everything about every space.

In the spotlight

New environmental accounts for better policy making

By identifying the links between environmental data and economic activity sectors, environmental economic accounts help policymakers designing policy measures more efficiently. Environmental accounts can be used to analyse the impact of production and consumption on natural resources and the environment, as well as the effects of economic policy measures such as environmental taxes, subsidies and environmental expenditures. In recent years, the EU has undertaken actions to ensure that high quality and comprehensive statistics are available to policy-makers in the future.

The [EU Regulation on European environmental economic accounts](#), adopted in 2011, established a common framework for the collection, compilation, transmission and evaluation of European environmental economic accounts. It introduced modules for air emissions accounts, environmentally related taxes and economy-wide material flow accounts, and invited the Commission to propose the introduction of new environmental economic accounts modules if appropriate. The revised Regulation on European environmental economic accounts entered into force in June 2014. [The amendments](#) create a legal base for three new environmental economic accounts: environmental protection expenditure (EPE), environmental goods and services (EGSS) and physical energy flow accounts. The EPE and EGSS accounts are especially important for the resource efficiency strategy, as they capture the size of the market for green products and services from both the supply (EGSS) and the demand side (EPE). The new accounts thus contribute directly to the Union's policy priorities of green growth and resource efficiency by providing needed information on indicators such as the market output and jobs through the EGSS, national environmental protection expenditure and the energy use broken down by [NACE](#) codes.

The European Strategy on Environmental Accounts (ESEA) 2014, endorsed by the European Statistical System Committee in May 2014, defines the priorities of the European Statistical System (ESS) work on environmental economic accounts for the period 2014-2018. It includes, among others: consolidating the existing accounts by filling data gaps and increasing data quality and timeliness; promoting the use of environmental accounts for policy making; assisting the development of ecosystem accounting led by the European Environment Agency.

These developments at EU level need to be seen as part of broader developments at international level. The System of Environmental-Economic Accounting (SEEA) Central Framework was adopted by the United Nations Statistical Commission, at its 43rd Session in 2012, as the first international standard for environmental-economic accounting. The final, official version of the SEEA Central Framework was published in February 2014. Work on the additional portions of the SEEA, namely Experimental Ecosystem Accounts and Applications and Extensions, to Water and Energy is on-going. The United Nations Statistical Commission welcomed in 2013 the SEEA Experimental Ecosystem Accounting as an important step in the development of a statistical framework for ecosystem accounting and encouraged its use by international and regional agencies and countries wishing to test and experiment in this new area of statistics. The United Nations, the OECD, the World Bank and the European Commission are piloting experimental ecosystem accounting.

Until you are in a position to carry out such a major undertaking you may need to primarily rely on accounts that provide data on the basis of which information on biodiversity can be inferred. Let me explain: if you know that specific combinations of geographical and physical characteristics are likely to result in specific conditions that attract certain types of biodiversity, you can make inferences as regards the type of biodiversity and ecosystem services that you are likely to find in a given location.

As already outlined, official statistics could play a supporting role in the testing and experimenting phase. Others would have to lead the work.

Which aspects will be best presented in biophysical terms and which in monetary terms? What types of natural capital and ecosystem services do you see as being most amenable to monetary assessment by 2020?

Information on some natural assets now has to be provided as part of the standard national accounts data delivery from Member States to Eurostat. This includes data on the value of the land, the value of standing timber and subsoil assets. Ecosystems, to the extent that they are not already captured in the value of land or buildings, will not be reported as part of the normal national accounts in a foreseeable future, but, arguably, they are not entirely absent as they are, at least in part, captured in the prices of other assets such as land and buildings close to natural assets such as parks or the coastline.

As regards monetary valuation of ecosystems and their services, official statisticians are very sceptical as regards the possibility of meaningful monetary valuation at larger scales – the system will largely remain in physical units.

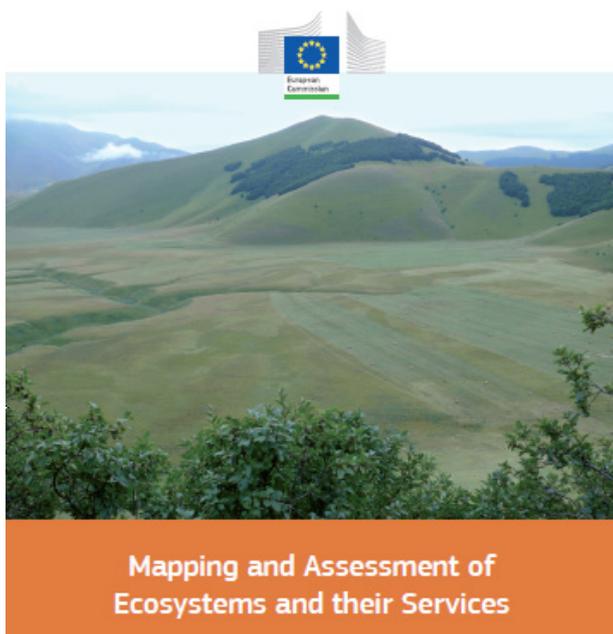
At the stages in which official statistics are traditionally used (eg monitoring and assessment) ecosystem accounts relying on monetary valuation would be of a limited usefulness. However at the earlier stage of problem recognition, when robust and precise estimates of changes in the value of an asset over time are not necessarily required, monetary values of ecosystems and their services can be useful. Such estimates would not be provided by official statistics but could be made by researchers.

Which policy areas stand to benefit most from the development of ecosystem accounts and why?

For statisticians this is a bit difficult to predict but one would expect that such accounts would play a role in many policy areas: environment, regional policy, climate, transport, agriculture – infrastructure and land use planning policies. It must be pointed out, however, that one would expect such accounts to be used just as much if not more at the local and regional levels than at national and European levels.

We would like thank Anton Steurer for this insightful interview.

In this area as well, international commitments to ecosystem accounting have translated into EU level commitments and activities. The 7th EU Environmental Action Programme highlights that *“the integration of the economic value of ecosystem services into accounting and reporting systems at EU and national level by 2020 will result in better management of the EU’s natural capital”* and that *“work to develop a system of environmental accounts, including physical and monetary accounts for natural capital and ecosystem services, will need to be stepped up”*. The [Mapping and Assessment of Ecosystems and their Services \(MAES\)](#) is a deliverable under the EU Biodiversity Strategy to 2020, which translates Aichi Target 20 of the Strategic Plan of the Convention on Biological Diversity, and requires Member States to *“map and assess the state of ecosystems and their services in their national territory by 2014, assess the economic value of such services, and promote the integration of these values into accounting and reporting systems at EU and national level by 2020”* (Action 5).



Mapping and Assessment of Ecosystems and their Services

The MAES was the focus of a High Level Conference on Mapping and Assessment of Ecosystems and their Services (MAES) in Europe on 22nd May 2014, hosted by Commissioner Potočník in collaboration with Commissioner Geoghegan-Quinn. The Conference, which was attended by more than 300 participants, presented the current state of outputs from MAES and demonstrated their relevance for policy making. The [Chair’s conclusions](#) were sent to the Environment Council of 12 June for information. The Conference was an opportunity to take stock of the progress made in meeting the objectives of action 5. While methodological issues and lack or difficult access of data were recognised as a challenge, the [Chair’s Conclusions](#) stressed that the results of ecosystem mapping and assessment of the state of ecosystems and their services by the end of 2014 will be key to successfully promoting the integration of ecosystem values into decision making processes and accounting and reporting systems at EU and national level by 2020. They also recognised that *“the political and societal relevance of MAES to broader debates – including beyond GDP work – needs to be further emphasised and the fact that natural capital and human well-being are intrinsically intertwined needs to be better understood and communicated”*.

While environmental economic accounts and ecosystem accounting have their specificities and are at different stages in their development, *“the development of ecosystem accounting should be envisaged as an enhancement within the broad [System of Environmental-Economic Accounting \(SEEA\)](#)*

framework rather than an alternative or competing approach to environmental economic accounting”. Together, the two approaches have the potential to describe comprehensively the relationship between the environment and economic and other human activity.

In brief

September 2014: World Economic Forum reports on sustainable competitiveness

Sustainable competitiveness balances economic prosperity with social inclusion and environmental stewardship. In its Global Competitiveness Report 2014-2015 the World Economic Forum (WEF) for the first time calculates a sustainable global competitiveness index (or sustainability-adjusted global competitiveness index). The Global Competitiveness Index measures the level of competitiveness of an economy, which is defined as the set of institutions, policies and factors that determine the level of productivity of an economy. The new index (the Sustainability-adjusted Global Competitiveness Index) also measures factors that encompass social and environmental sustainability (like social vulnerability, social cohesion, use of renewable resources and degradation of the environment), thus providing an indication of sustainable competitiveness.

The report finds in particular that there is no necessary trade-off between being competitive and being sustainable. Countries in the top half of the competitiveness rankings tend to perform better on sustainability as well.

[More Information](#)

[Download the full report](#)

September 2014: All-Party Parliamentary Group on Wellbeing Economics publishes report on “Wellbeing in four policy areas”

A new report by UK’s All-Party Parliamentary Group for Wellbeing Economics, a group that includes parliamentarians from across the political spectrum, explores how policy can enhance wellbeing without increasing public spending. The report covers four policy areas – labour markets, planning and transport, mindfulness in health and education, and arts and culture. It demands more focus on stable employment instead of economic growth, and emphasizes that in tough economic times it is even more important to increase wellbeing.

The report recommends putting wellbeing as an overarching policy objective and requests all political parties to set out in their manifestos their strategy for building a high well-being society and embedding well-being considerations into the policy process.

[Download the report](#)

August 2014 : Gallup-Healthways reveals a new framework for population health measurement

'Gallup-Healthways Well-Being 5' is a new survey instrument to measure well-being at individual, local, national and global levels. It accounts for five well-being dimensions: purpose in life, social relationships, financial aspects, community comfort and safety, and physical health.

This comprehensive index is the latest result of the two partners Healthways and Gallup in their efforts towards measuring well-being. From 2008 on, they have provided a comprehensive analysis of well-being across the US. In 2013, they have extended the scope of their Well-Being Index, offering this measure for 135 countries based on self-reported data from individuals across the globe.

[More information](#)

July 2014: ISTAT/CNEL published the second report on BES

ISTAT/CNEL published the second "Report on Equitable and Sustainable Wellbeing" (Benessere Equo e Solidale - BES 2014) which analyses the key dimensions of wellbeing in Italy and its territories.

The BES2014 report looks at 12 dimensions of wellbeing in Italy, using 134 indicators. This year's report offers an analysis of wellbeing in Italy throughout the last decade. The report finds overall positive trends over the longer run in areas such as health and education, and a degradation in areas more closely linked with economic cycles, such as work and the economic condition of families.

This year, a separate report entitled "Equitable and Sustainable Wellbeing in the Provinces" looks separately at 20 provinces and compares them with the Italian average across a number of areas including education and training, social relations, economic wellbeing, safety, environment, landscape and cultural heritage, quality of services.

[More information](#)

[Download the executive summary](#)

July 2014: Report from the Open Working Group on Sustainable Development Goals

The 13th session of the Open Working Group on Sustainable Development adopted a proposal for sustainable development goals (and targets) for the period post-2015, for consideration and appropriate action by the General Assembly. The proposal includes 17 goals and 169 targets across a wide

range of areas. Social goals include the end of poverty and hunger, ensuring healthy lives and quality education, achieving gender equality and reducing inequalities within and between countries. Environmental goals include taking action to combat climate change and its impacts; the sustainable use of oceans, seas and marine resources; the protection and restoration of terrestrial ecosystems; the sustainable management of forests; and the halting of desertification and land degradation. Economic goals include promoting sustained, inclusive and sustainable economic growth and sustainable industrialization and fostering innovation.

[Read the Open Working group's proposal](#)

Quote



"Headline figures are needed to communicate effectively and engage political debate. Indices and dashboards are also needed to assess complex concepts such as environmental pressures on our environment, resources and biodiversity"

Janez Potočnik, European Commissioner for the Environment 2010-2014, at the e-Frame project final conference, Amsterdam, February 2014.

Agenda

Moving "beyond GDP" in European economic governance.

Brussels, Belgium, 10 October 2014

<http://ec.europa.eu/social/main.jsp?langId=en&catId=88&eventsId=1006&furtherEvents=yes>

20th Meeting of the London Group on Environmental Accounting

New Delhi, India, 15-17 October 2014

<http://www.wavespartnership.org/en/20th-meeting-london-group-environmental-accounting>

Workshop of the High-Level Expert Group on the Measurement of Economic Performance and Social Progress on Multidimensional Subjective Well-being

Turin, Italy, 30-31 October 2014

<http://www.oecd.org/statistics/measuring-economic-social-progress/>

"Valuing our Life Support Systems" Natural Capital Summit

London, UK, 6-7 November 2014

<http://www.wavespartnership.org/en/valuing-our-life-support-systems-natural-capital-summit>



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