



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
STATISTICS DIVISION  
UNITED NATIONS



System of  
Environmental  
Economic  
Accounting

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## System of Environmental-Economic Accounting— Ecosystem Accounting

### *Global Consultation on the complete document: Comments Form*

**Deadline for responses: 30 November 2020**

Send responses to: [seea@un.org](mailto:seea@un.org)

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The comments form has been designed to facilitate the analysis of comments. There are six guiding questions in the form, please respond to the questions in the indicated boxes below. To submit responses please save this document and send it as an attachment to: [seea@un.org](mailto:seea@un.org).

All documents can be found on our website at: <https://seea.un.org/content/global-consultation-complete-draft>

In case you have any questions or have issues with accessing the documents, please contact us at [seea@un.org](mailto:seea@un.org)

## General comments

### **Question 1: Do you have comments on the overall draft of the SEEA Ecosystem Accounting?**

Statistics Netherlands welcomes the draft document for SEEA Ecosystem accounting. The draft is a significant improvement with regard to the previous manual from 2012. We would like to congratulate UNSD, the editor and all people involved for this important achievement.

The SEEA EA is a conceptual manual. The current draft provides a consistent description of the key concepts, definitions and classifications needed for the statistical description of ecosystems and the ecosystem services they supply. Moreover, this description is coherent and consistent with the SEEA CF and SNA. In that regard revision process has been a success, the SEEA EA provides sound statistical guidelines worthy of being adopted as a statistical standard.

We thus support the adoption of the SEEA EA as a statistical standard, including the chapters on valuation. SEEA is about integrating physical and monetary data. This is a key strength and characteristic of SEEA and this is also very important to maintain in the SEEA EA.

The glossary needs some more work. Some terms that may be added: willingness to pay, consumer surplus, ecosystem disservice, degradation, items from the carbon stock account (biocarbon, geocarbon etc.).

## Comments by sets of chapters

### **Question 2. Do you have comments on Chapters 1-2 of the draft SEEA Ecosystem Accounting?**

#### **Chapter 1**

##### **Statistics Netherlands:**

Section 1.5.4 Uses and applications of ecosystem accounting is still underdeveloped (the SEEA EEA 2012 had more text here). Also, only chapter 5 has a separate section on applications, but that is not the case for the other accounts.

Annex 1. Is very important and could be further improved, including:

- Mention that both SEEA CF and CG have an extended (and thus the same) asset boundary, whereas SEEA EA has an extended production boundary
- Check if A1. 16 is now consistent with the description of abiotic flows in chapter 6.
- A.1.23 may be expended, providing more detail (which CEA categories) can be linked to ecosystem management, subsidies, taxes etc.

##### **Wageningen University:**

1.5.2 The role of national statistical offices

- Indeed the document rightly points out to the important role of NSOs. Yet it is recommended to bring a bit more balance in this section such that other public offices including those dealing with environmental matters will also feel more motivated to become part of the SEEA EA community. Of course they also have quality control procedures and understand data, for instance.

1.5.4 Uses and applications of ecosystem accounting 1.49 In support of ongoing reporting requirements and discussion of emerging issues, the accounts provide information that is: ... and so on...

- This section presents the strengths of the SEEA EA. However it is recommended to also briefly reflect upon limitations, e.g. that SEEA EA accounts will for the foreseeable future not be complete, that they require substantial time and data to compile, and that they do not indicate the 'value of nature', for instance.

Figure 2.1: The general ecosystem accounting framework

- the lay out of the figure could be enhanced by placing benefits more to the left, making it more intuitive that there is a flow from the ecosystem to society. Also it is recommended to take out the term 'societal well-being'. By including this term in the figure it gets some prominence, yet the term is actually not very important in the overall SEEA EA.

2.49 Thematic accounts are accounts, that organise data on themes of specific policy relevance. Examples of relevant themes include biodiversity, climate change, oceans and urban areas. In all of these cases, some data can be obtained from the ecosystem accounts but relevant data can also be sourced from SEEA Central Framework and SNA accounts, for example concerning greenhouse gas emissions and resource management expenditure. For biodiversity and climate change additional accounts are also relevant, namely species accounts and carbon accounts. The principles and design of thematic accounts are described introduced in chapter 13.

- In my perspective, this section is not entirely clear. It suggests that the thematic accounts can be compiled only by using data from the SEEA EA, CF and SNA. However this is not correct I believe, often additional datasets will be needed that are not included in any of these 3 sources.

Section 2.5.1 complete or "true" value of nature;

- this phrasing may suggest to some malevolent readers that SEEA EEA deals with the 'untrue' value of nature. This term should I think be replaced by 'full societal value'. Clearest way of putting it in my perspective is that SEEA EA analyses the contribution of ecosystems to the economy, in physical and money terms. Hence the value of ecosystems' contribution to the economy.

**PBL:**

Chapter 1 (A1.23) states: "measures of expenditure on, for example, ecosystem restoration, may be compared to changes in ecosystem condition and changes in flows of ecosystem services to provide an assessment of the effectiveness of any expenditure". It could be explained that more is needed than just this comparison in order to arrive at conclusions on effectiveness of expenditures.

**Question 3. Do you have comments on Chapters 3-5 of the draft SEEA Ecosystem Accounting?**

No comments

**Question 4. Do you have comments on Chapters 6-7 of the draft SEEA Ecosystem Accounting?**

**Statistics Netherlands**

6.3.5 *The treatment of ecosystem disservices*: This par. needs some more work, with regard to definition, scope and accounting treatment. Part could be left to the research agenda.

6.62 add definition: *Collectively, these have been labelled ecosystem disservices, which are defined as **the negative impacts of ecosystems on benefits used in economic and other human activity***

6.62 and 6.64: Here two main context are described but emissions from ecosystems and forest fire are two examples that go beyond these to contexts.

Delete 'selected economic units' from table 7.1. Supply table (just grey cells).

7.24 *Use of final ecosystem services is attributed to an economic unit (business, government, household)*. Add 'or exports'.

7.2.6: The discussion on imports and exports takes the EEA as the point of departure (which is ok). As long as the EEA is a country then we have full consistency with the SNA and SEEA CF, but when this is not the case we run into consistency problems. It would be good to consider this here.

**Wageningen University:**

*Externalities versus disservices.*

On first reading Sections 6.3.5 and 12.2.3 i thought it was clear and nicely done, but after thinking about it a bit more in detail I am not convinced it is appropriate to state that disservices can always be attributed to an ecosystem, and externalities can / should be attributed to an actor. I do agree with the difference that disservices result from a 'normally' functioning ecosystem, they could be seen as 'acts of nature'. Externalities are connected to specific economic activities. These activities are carried out by an economic actor in a specific ecosystem asset. Hence they can be attributed BOTH to the asset and to the actor / agent / institution/. It depends upon context what is more relevant. Take for instance oil palm production in tropical peat. Only part of the oil palm is grown in peat (say 30% of oil palm in Indonesia). Not all growers cultivate the crop in peatland. Hence it doesn't make much sense to attribute the very high per hectare CO2 emissions (the externality) to the overall

sector. For environmental management it is much more relevant to attribute them to the specific area where they are generated, i.e. the peatlands. In this case, the externality ' CO2 emissions' only occurs for this economic activity in peat. Same applies of course for dairy farming on peat in the NLs. I would recommend to explain in the document that externalities can be allocated (and included in accounting tables) both by ISIC and by ecosystem. I think this is an important point that, if we don't open this up, will really limit people in the way they can link externalities to the accounts (of which we know that it is in some cases very policy relevant)

**PBL:**

Chapter 6 (6.23) states: “To support integration with the SNA, the measurement scope of ecosystem services is set such that transactions in ecosystem services do not overlap with the transactions in goods and services recorded in the SNA (i.e., SNA benefits).” Providing an example could help explain what is meant here.

For example, Annex 6.1 under “forests” includes Gross tonnes of timber biomass harvested as ecosystem service and Harvested timber as SNA benefit, which seem to suggest that these do overlap.

**Question 5. Do you have comments on Chapters 8-11 of the draft SEEA Ecosystem Accounting?**

Chapters 8-11 provide a consistent overview of the key concepts for compiling monetary accounts for ecosystems. Important is that is coherent with the SNA and SEEA CF. It has much improved with regard what was in SEEA EEA (2012).

Below some remarks for further improvement.

**Chapter 8**

Probably in chapter 8 (it is now partly done in par. 2.4): more should be said on the interpretation of the monetary values based on exchange values: how should these be interpreted, what are the limitations, how should they be presented etc.,

*8.7 All monetary values are of most applicability in analyzing changes that are marginal.....* This is a bit cryptic and difficult to interpret (particularly for non-economists). And if an ecosystem collapses, the calculated value would go to zero, would that not be a result to be used ?

*8.11 Monetary valuation depends on two factors in an accounting context, namely (i) the definition and scope of goods, services and assets included; and (ii) the valuation concept that is used.* The text then continues discussing exchange values but does not directly address the first factor (at least not here).

*8.2.1 Defining exchange values for ecosystem accounting:* Maybe good to stress in this section that the exchange values does not imply that (in all cases) actual monetary exchanges are taking place. This is the one of the main points of confusion for people not familiar with the concept.

8.28 *In applying national accounting principles to accounting for ecosystems, and particularly in the context of the monetary valuation of ecosystem services, it must be recognized that transactions in ecosystem services are not recorded in the SNA.....* This is not entirely true, some of the capital services related to natural resources concur with ecosystem services and they are recorded in the SNA. See table 20.11 in the SNA.

## Chapter 9

Delete 'selected economic units' from table 9.1. Supply table (just grey cells).

9.35 Description of productivity change method is not clear. You multiply a price with a price, which give you the price of the ecosystem service....(?). Example (in a footnote really would help).

9.38 Also mention here that this is often used for amenity values.

9.43 *The cost of time to travel to, and to enjoy time at, the site may also be included.* Valuing time in the SNA – SEEA context (exchange values) is still contentious..... I would leave this out. Or may be a subject for the research agenda..

9.44 *An alternative approach that may be suitable for aggregate measures of ecosystem services values is to add up all direct consumption expenditures. This is sometimes referred to as the consumption expenditure approach.* → maybe add some mote text here.

*Note that measures of consumer surplus which are commonly estimated using the travel cost method should not be included in accounting values.* → move to 9.42 or 9.43

9.66 *Cost-based methods are the most commonly used methods for monetary valuation using the averting behaviour, replacement cost or the avoided damages methods.* Sentence is not clear....

9.67 *The most common methods for estimating the demand are revealed preference methods based on the travel cost method.* Yes, but only for one particular ecosystem service (recreational), not general for all cultural services.

As stated in 7.52 : *The recommended treatment for the ecosystem services supply and use account in physical terms is to record a supply and corresponding use for each visitor interaction, with the supply shown from the relevant ecosystem type and households as users of the service. This flow should be recorded irrespective of the degree to which there is involvement of businesses in facilitating or supporting the activity.* → Accordingly, it would not be appropriate to use the residual method for cultural services (which is tied to production activities)....

## Chapter 11

Table 11.2 use table: why is gross value added for ecosystems indicated by grey cells (zero by definition)? This seems not correct. One of the purposes of this table is to show the GVA generated by ecosystems in comparison with GVA produced by economic units.

Also show GDP in this table (under the assumption the EEA is a country)

In the supply table add column for taxes / subsidies (on products)

Table 11.3 (for non-financial assets as stated in the title) includes financial assets as one of the entries....

**PBL:**

Chapter 9 (9.40-9.44) states w.r.t. the Averting behaviour method that the expenditures incurred are considered a lower bound estimate of the benefits. Does the same apply for Travel cost method?

**Question 6. Do you have comments on Chapters 12-14 of the draft SEEA Ecosystem Accounting?**

Move annex 12.1 to chapter 8: it is better placed in chapter 8 and needs to be part of the statistical standard.

**PBL:**

Chapter 12, Fig. 12.2 shows that welfare value or total surplus equals  $X+Y$ , whereas the accounting value equals  $Y+Z$ . This implies that welfare value equals accounting value if  $X=Z$ , and welfare value equals is lower than accounting value if  $X<Z$ , and welfare value equals is higher than accounting value if  $X>Z$ . Can more be said about the circumstances under which these three options materialize?