DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS

System of Environmental Economic Accounting

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

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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.

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

General comments

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

The comprehensive revision and improvements of the SEEA-EA handbook are welcomed and appreciated.

However, we express the concern that the valuation chapters (8-11) have not reached satisfactory maturity to be accepted as a statistical standard. In particular, this regards the lack of consensus on conceptional issues around the use of exchange values for valuation and on the standard set of methods used for valuation. We are further wary about the potential consequences, if valuation results are interpreted by policy decision-makers in the absence of sound and mature methodologies and guidelines.

We would therefore suggest presenting chapters 1-7 as standard to the UNSC. The later chapters should be kept within the book to express the relevance for ecosystem accounts but under provisional status. They should be developed further with the aim of future adoption as a "full" standard.

Comments by sets of chapters

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

Chapter 1:
1.24: "There is also a range of accounts and presentations related to these five accounts" – Could it be possible that there is a mistake in this sentence? For us it sounds as if the first "accounts" should be replaced by another word.

Chapter 2:
2.3: Consistent with our proposal for 2.14 and 6.9 we would rewrite the last sentence of this section: "In doing so, it provides a basis for analyzing the role that ecosystems play in supporting economic activity *and human wellbeing* and understanding the impact that economic and human activities have on ecosystems."

2.14: It is stated that "ecosystem services are the contributions of ecosystems to the benefits that are used in economic and other human activity." From our point of view, ES should always be described as the contributions to (benefits to) human wellbeing - not only limiting the contribution to economic and other human ACTIVITIES. For example in the case of ES in form of flood or erosion protection, we would not perceive it as a human ACTIVITY. Also, thinking about some of the cultural ES, we tend to link them to human wellbeing components, which are no ACTIVITY as such (this comment also applies to the same definition in chapter 6 (6.9) and the GLOSSARY).

2.40: in front of "Compilation" a "." Is missing.

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

Chapter 3:
3.37: New paragraph before "The first factor…" increases the readability in particular with respect to 3.38.

3.42 ii. and 3.43: Hedgerows seem like a bad general example for linear features which can be attributed to the surrounding ecosystem. Hedgerows in cropland, for example, are very distinct from their surroundings and outstanding with respect to biodiversity and carbon storage. Furthermore, by assessing the exact location of hedgerows, it is possible to derive more precise data with respect to erosion (let it be wind or water). In addition, the importance of hedgerows connecting ecosystems can only be identified if the hedgerows are present in the extent account. Thus, it is reasonable to consider hedgerows in cropland in the extent account. As a consequence, hedgerows also have to be considered in ecosystems that are likely to be converted into cropland in order to get meaningful information on the change in hedgerow area between two extent accounts.

3.53: "The IUCN Global Ecosystem Typology v2.0: Descriptive profiles for Biomes and Ecosystem Functional Groups." By Keith et al. (2020) is hard/impossible to find.

A3.3: typo, "One **or** more…"

A3.21: Either incomplete paragraph or low readability due to sentence extended over two paragraphs

Chapter 4:
4.28: From our point of view, estimating extent accounts for a point in time without a solid data basis, as indicated in 4.28, is questionable. By no means, such an estimate can be up to the standards of extent accounts aimed for in this handbook. Hence, we argue that looking back as far as for example 1750 may be reasonable to define the natural condition of certain ecosystem types. Accounting for a whole EA as a reference for the natural condition in the aggregate, however, seems neither achievable nor desirable since, for example, such an account delegitimized settlements founded after that time.

4.38: typo, "to be highly **influenced"**

Chapter 5:
Chapter 5.41 states: "condition account should cover as much relevant ecological information as possible, but parsimoniously, using as few variables as possible". It would be very useful if a minimum set of key variables (and indicators) would be provided here to get a better guidance.

Section 5.5.3: This section is about pressure indicators and how to use them. It would be useful to have an example list of pressure indicators and some guidance on how to use them and which pressure indicators should be avoided.

Annex 5.1 listed different methods for setting reference conditions. Point 1 based on "stable or resilient ecological state maintaining ecosystem integrity". But how to, in fact of different or changing resilience of ecosystems, set reference conditions?

Annex 5.1 lists different methods for setting reference conditions. In case countries use different reference conditions for the same ecosystem type, a comparison becomes very difficult. In this case, it would be good if the chapter provided a crosswalk between different reference conditions so that a comparison across countries becomes feasible.

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

Chapter 6:
6.9: It is stated that "ecosystem services are the contributions of ecosystems to the benefits that are used in economic and other human activity." From our point of view, ES should always be described as the contributions to (benefits to) human wellbeing - not only limiting the contribution to economic and other human ACTIVITIES.
For example in the case of ES in form of flood or erosion protection, we would not perceive it as a human ACTIVITY. Also, thinking about some of the cultural ES, we tend to link them to human wellbeing components, which are no ACTIVITY as such (this comment also applies to the same definition in chapter 2 (2.14) and the GLOSSARY).

6.5: "The explicit recording *OF* the contribution [...]" - We think that "of" is missing in the sentence.

6.6: "Together with information *ON* the extent and condition [...] - We think that "on" is missing in the sentence.

6.38: "The primary criterion for inclusion in the reference list of selected ecosystem services is that the service is considered to constitute a relevant and material ecosystem service in many countries and contexts." – What did you want to express with the word "material"? – Material in the sense of substantial/ fundamental or material as in "material needs"/ "material things"? We would disagree with the latter option, as there are some (important) ecosystem services in the reference list

(e.g. some regulating and cultural ES), which are not material/tangible. In case you used the term "material" in the sense of "substantial"/ "fundamental", we do agree with the meaning, but we would still consider using a different term as the term can be understood ambiguously.

6.42: "[...] the focus is on the description of the types of interactions that individual*S* have with ecosystems, for example whether they take place within ecosystems or outside." - the "S" is missing behind the "individual(s)"

Table 6.3:

- Pollination is defined as "intermediate" service, contrary to pest control, which is defined as being either final or intermediate. We would treat pollination just as pest control and leave the option to the scope of the specific assessment (as outlined in 6.43)
- The last ES has no entry for "use"

6.74: The formulation of the second part of this section is a bit misleading and could be improved. In the first part ("However, in practice, there is a considerable measurement challenge in either identifying all of the relevant individual inputs or accurately measuring the ecosystem contribution to the gross biomass that is harvested that takes into account the diversity of cultivated production contexts") the challenges of indicating the ecosystem service is explained. Then, the second sentence starts with a "Thus," and outlines that the gross biomass harvested is considered a suitable proxy measure. We would recommend to start the sentence with a term like "However," or "Nevertheless," and to stress the fact that this proxy is not perfect but only "good enough" and in particular applicable, in case no better indicator is easily available.

6.75ff: Here, we would recommend to add a section on the potential degradation of the ecosystems through the additional human inputs such as fertilizers and pesticides. Thus, stressing the fact that even though these inputs might increase biomass provisioning services in the short run, in the longer run the ecosystem (condition) might be degraded and future (provisioning) ecosystem services jeopardized.

Chapter 7: 7.2: " can be measured in physical or quantitative terms" – We are not convinced the OR makes sense here, as a lot of physical measurements are actually quantitative.

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

General: A general statement should be placed in front of chapters 8-11:

- Introducing ecosystem validation as integral and important part of ecosystem accounting;
- Telling that the available concepts for ecosystem validation and especially monetarisation have not reached such level of acceptance to declare them a standard;
- Highlighting that the following suggestions are based on a state of discussion and might change – even conceptually – more than other parts of this document during future revisions;
- Offering the following chapters as a provisional idea for how – if a national implementation is intended – one possible concept for validation and monetarisation might look like;
- Announcing further methodological and conception work in the relevant groups in future.

Chapter 8:

8.7: Monetary values for non-market goods and services: The examples used in the third bullet point are from SNA rather than ecosystem accounting, so they seem slightly out of place. It may be appropriate to add that the given examples are valued by alternative methods in SNA 2008 and show that using such an approach for ecosystem is in line with SNA standards (as it is later done in 8.18).

8.20: How does the presence of market imperfections in local or national contexts allow for cross-regional or global comparisons? Perhaps the handbook could elaborate on this.

8.2: The subsection on "Monetary valuation of ecosystem services" is a not entirely clear regarding ecosystems being interpreted as producing units or productive assets. In connection with the use of exchange values it may be confusing to envision transactions between ecosystems and economic units. If property rights of ecosystem assets are well-defined, then the owner will market some of the ecosystem services. It would therefore be worth to connect the concept of valuation of non-market goods to the multiple potential reasons why markets may not exist and why exchange values cannot be derived from transactions between the land owner and other economic units. Could an exchange-value-based valuation of a non-market service be interpreted as the price that the land owner could charge if the service was excludable?

Chapter 9:

9.3.2: The section should mention that even if market prices are directly observed, other inputs (administrative, transaction costs, transport costs) likely have to be deducted in all cases as the pure ecosystem service is hardly ever sold on the market.

Chapter 10:

10.3.4: It would be useful to add information on how condition and service accounts from previous years can be used to estimate a non-linear trend that helps to predict both future price and future physical flows of ecosystem services. A fast depreciating asset will have a low valuation because of low future flows, which might send a problematic message to decision-makers. Is there scope to evaluate the asset value for depreciating/constant/improving ecosystem condition in order to provide asset valuations for potential changes in ecosystem management?

10.71: The formulation "rates available from government determined processes" is too imprecise. Therefore, it does not give a clear guidance which social discount rate should be selected. Is there a scope to estimate social discount rates in the context of ecosystems? If this is the case, how should it be approached?

Annex 10.1: There should be some detailed discussion or example here to understand how the projection of prices and quantities in Table 10.2 would come about. How can the information in the accounts of previous years and other sources such as climate models be used to correctly project non-linear or linear trends in p and q? Can such information also be used to endogenize ecosystem asset lives?

Chapter 11:
Section 11.1: Paragraphs 11.1 to 11.4 should be shortened, since the they do not provide any new information and are very general. Paragraph 11.5 should be moved to the top of the section, since it contains a good overview of the content of the chapter.

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

Chapter 12:
The content of this chapter is very conceptual and gives little guidance on how to use this information precisely to produce accounts. In our view, this chapter should not be included in the core SEEA (E)EA handbook, but should be included in a more general appendix or manual about further methodological issues.

Chapter 13:
Section 13.3 Accounting for biodiversity
Table 13.2: On option would be to group species in the table along the ecological/food pyramid and denote for every group the absence or presence of each species group and whether the group is present.

Section 13.4 Accounting for climate change
13.39: Are CO2 emissions from ecosystems not captured by changes in the carbon storage ecosystem service?

13.54-13.58 How can ecoystem accounting contribute to complete GHG emission accounts? E.g. should the net carbon balance enter as emissions from ecosystems?

Section 13.5 Accounting for the ocean:
13.64: “The ocean, earth’s coastal and marine areas is large, deep and mostly unknown.” – Insert “,” behind “areas”.

13.65: In order to be consistent, you may consider using the plural form of economic activity in the second last row.

Table 13.4: For means of consistency, you might want to double check when to use lowercase/ uppercase letters.

Chapter 14:
14.32-14.33: These paragraphs read very much like an advertisement for the CBD monitoring framework. It could be shortened and condensed to one or two sentences and added to paragraph 14.34.