



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS



System of
Environmental
Economic
Accounting

System of Environmental-Economic Accounting 2012 – Experimental Ecosystem Accounting Revision

First Global Consultation on:

Chapter 8: Principles of valuation for Ecosystem Accounting

Chapter 9: Accounting for ecosystem services in monetary terms

Chapter 10: Accounting for ecosystem assets in monetary terms

**Chapter 11: Integrated and extended accounting for ecosystem services and
assets**

Comments Form

Deadline for responses: 6 July 2020

Send responses to: seea@un.org

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The comment form has been designed to facilitate the analysis of comments. There are twelve 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 the following e-mail address: seea@un.org.

All documents can be also found on the SEEA EEA Revision website at:
<https://seea.un.org/content/seea-experimental-ecosystem-accounting-revision>

In case you have any questions or have issues with accessing the documents, please contact us at seea@un.org

Questions related to Chapter 8

Question 1: Do you have comments on the principles proposed to underpin monetary valuation for the revised SEEA EEA, including the use of exchange values and net present value approaches?

The principles are good. However, not all methods that attempt to estimate exchange values are equal, and cannot be freely compared or used. See further comments under Question 3.

Question 2. Do you have any suggestions for topics to include in Annex 8.1?

Click here and start typing (The length of your response is not limited by this text box.)

Question 3. Do you have any other comments on Chapter 8?

The chapters do a good job of explaining the background for valuation (eg relation to SNA prices and resulting need to estimate exchange values) and eligible valuation methods. However, the scope and purpose of valuation, which is key to consistent and meaningful use of valuation, is not sufficiently explained.

Chapter 8 lays out the scope and purpose of valuation. It starts out by saying that “A number of motivations exist for the monetary valuation of ecosystem services and ecosystem assets depending on the purpose of analysis and the context for the use of valuations in monetary terms. The different motivations point to different requirements in terms of concepts, methods and assumptions.” This is well put and an important starting point when venturing to do valuation of ecosystem services. The choice of valuation method should be made with the purpose of the valuation in mind. However, this aspect is soon lost and does not guide the subsequent chapters on valuation.

In the same section, it is stated that: “Monetary valuation can play a role in signalling the relative scarcity of ecosystem services and assets” and further down on the page, that “In ecosystem accounting, the motivation for monetary valuation using a common monetary unit or numeraire is to be able to make consistent comparisons of different ecosystem services and ecosystem assets” and that the “general ambition [is] making explicit the relative importance of ecosystem services and assets.”

However, in many cases, the valuation of ecosystem services does not signal scarcity. Depending on the method you use, you get very different information. Using market prices or resource rents can signal the price that society is effectively putting on a particular service as a result of the institutional or management setting, but does not necessarily signal scarcity, and indeed often doesn't. In the case of cost-based methods, there is no relation to scarcity. In addition, if different methods are used to value different services, the values will not say anything about the relative importance of these services, and the comparison will not be consistent, since the scope of the methods are so different. Thus how you apply the estimated values is key. This does not come through in the draft.

Our suggestion would be to start the introductory chapter 8 with a more in-depth discussion of the scope and purpose of valuation, and add a chapter that discusses how values can be used, depending on the valuation methods chosen.

Other points:

Para 8.8 discusses the Total Economic Value (TEV) approach, but it's not clear what point is being made. TEV is primarily a typology of benefits. Although it has usually been applied with welfare-based measures of value, it can be (and has been) applied with exchange-based measures of value, as well (and unfortunately has also been applied with a mix of welfare-based and exchange-based measures, eg with exchange values used for direct and some indirect use benefits, and welfare-based values for the rest).

Para 8.19 says that "ecosystem services are distinguished from the benefits to which they contribute, and hence the focus of valuation is on the contribution of the ecosystem asset and not on the valuation of the benefits" — This important distinction needs to be better explained, perhaps with some examples.

Para 8.21 makes the important point that some benefits of ecosystems are already included in national accounts (pollination is given as an example). But the point is then left hanging. What do we do with these benefits? They might be easier to value because they involve exchange values, but what then? How will they be counted without double-counting?

Questions related to Chapter 9

Question 4. Do you have comments on the range of valuation methods proposed for use in estimating exchange values of ecosystem services?

The coverage is very comprehensive and good.

It can be discussed whether stated preference methods and travel costs should be listed separately from the simulated exchange method, as they are not eligible in their own right. Although it is made clear in the footnote, it is not totally accurate to have them represented in the figure and list the way they are. Perhaps the boxes could be colored differently to emphasize that these methods are only applicable under specific conditions.

Although the draft discusses the pros and cons of every technique, it might provide more explicit guidance on choice of technique, eg by ranking techniques from most to least preferred

The draft notes that the section on Benefits Transfer (9.5.1) will be updated in light of new research. This is very important, as in practice BT is likely to be very commonly used. One consideration that should probably be stressed here is to clearly mark uses of BT as such, to avoid the values used being considered as being independent estimates (and thus taken as confirming the original estimates).

We agree with the suggestion of including a discussion of uncertainty in valuation.

Question 5. Do you have any other comments on Chapter 9?

Click here and start typing (The length of your response is not limited by this text box.)

Questions related to Chapter 10

Question 6. Do you have comments on the definitions of entries for the ecosystem monetary asset account including ecosystem enhancement, ecosystem degradation and ecosystem conversions?

Click here and start typing (The length of your response is not limited by this text box.)

Question 7. Do you have comments on the recommendations concerning the selection of discount rates for use in NPV calculations in ecosystem accounting?

Click here and start typing (The length of your response is not limited by this text box.)

Question 8. Do you have comments on Annex 10.1 describing the derivation and decomposition of NPV?

Click here and start typing (The length of your response is not limited by this text box.)

Question 9. Do you have any other comments on Chapter 10?

The chapter is to be commended for taking a very pragmatic and implementable approach to asset valuation. The two most thorny issues concern treating multiple ecosystem services (ES) as separable although they are jointly produced by an ecosystem asset, and estimating the future flow of these interdependent ES.

Section 10.3.3 Valuation of returns advises practitioners in para 10.50 to take into account possible future price changes, with no further discussion, in contrast to the more lengthy treatment in section 10.3.4. on future flows of services in physical terms. There is a reference to discussion in Chapter 8, but that is very general and provides no more detail than in Chapter 10.

Regarding asset valuation, an excellent and highly relevant report came out earlier this year from the Bank for International Settlements called, Green Swan (<https://www.bis.org/publ/othp31.pdf>). It advises central banks and other financial institutions to look at asset management/valuation from a risk management perspective that takes into account 'green swan' events like climate change, and, more recently, Covid-19. This would suggest an additional, though experimental, approach to asset valuation to consider the degree to which asset value varies and 'bounds' the simple asset value due to potential impacts of climate change. This kind of scenario approach could be based, for example, on IPCC scenarios.

In Chapter 11, the issue of asset valuation and the implicit assumption of substitutability is raised. It should be noted in this chapter because all valuation reflects implicit trade-offs/choices, that is the role of economic valuation, whether market exchange or any other valuation principle. It is not correct to assume that because the asset value may stand alone in an independent report rather than part of an official balance sheet that it doesn't imply substitution and weak sustainability. It might be better to include in the Chapter 8 the limits of all monetary valuation—demonstrated in a standard graph with a downward-sloping demand curve that becomes vertical at some $q > 0$, and approaches the horizontal axis at some large value of q . Valuation is only relevant for q non-vertical (or some point before that) and $q > 0$.

Regarding section 10.4 Measuring ecosystem capacity. Capacity, and its potential impact on asset value, should be clearly distinguished from asset value based on current and expected value of ES. It is hypothetical, much in the spirit of the 'bounding' exercise suggested above. It is an example of analysis of the accounts rather than the accounts themselves, and an important analysis for the relevance of ecosystem accounting.

Other comments:

Para 10.12 lists "restoration, rehabilitation and reclamation" as the possible sources of ecosystem enhancement. These are all purposive, anthropogenic sources of improvement. Ecosystems can sometimes also improve through their own dynamics, without intervention. Most degraded forests will regenerate if left alone, for example. The draft seems to consider this a subset of restoration and rehabilitation, where the action is reduce pressure. But it might be useful to distinguish purposive, proactive enhancement from natural regeneration; it'll certainly affect the costs of such enhancement and also its benefits (through different rates of enhancement, and also through differences in composition of the enhancement).

Questions related to Chapter 11

Question 10. Do you have comments on the proposed structure of the extended balance sheet that integrates the monetary values of ecosystem and economic assets?

Click here and start typing (The length of your response is not limited by this text box.)

Question 11. Do you have comments on the approaches to assigning the ownership of ecosystem assets that underpins the structure of the extended sequence of institutional sector accounts?

The section on assigning economic ownership recognizes that different approaches have been discussed over the years. It would be useful to refer back to the analytical tools in para 11.8 to explain how the proposed treatment might affect usefulness for these tools, particularly degradation/enhancement.

Question 12. Do you have any other comments on Chapter 11?

Para 11.12 recommends that the extension of SUA should be limited to final ecosystem services, and analysis of intermediate services undertaken separately. It should be stated whether/how this recommended treatment affects the usefulness and ability of the extended SUA to support the analytical tools identified in para 11.8.

Discussion of paras 11.19 and 11.20 are relevant to chapter 10 as well. The issue is not setting the value of ecosystem assets against those we are more familiar with assigning values to, it is the process of valuation itself which results in weak sustainability. All valuation, whether market or any other principle, is based on substitutability and tradeoffs.

Paras 11.37-11.40 Renewable energy assets offshore, is 'sea' now considered part of SNA Land? Best to explain to what extent: 12-mile Territorial limit, EEZ, Continental shelf, 2 dimensions or 3?