



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

Name:	Burkhard Schweppe-Kraft
Organization & country:	Federal Agency for Nature Conservation, Germany

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?

8.9 "...there are theoretical and practical connections between exchange values and welfare values."

-> You mention the practical connections later in the text, but it should be mentioned already here that the connections are not only theoretical.

8.11: "In these cases, it can be assumed that the amount of expenditure reflects the revealed preferences of a country or community."

-> This kind of wording seems to me to be rather close to welfare economics. The "amount of expenditure" is an aggregate with reference to a lot of different single products/goods. To keep more closely within the concept of exchange value, I would prefer the following term:

->..."the amount of expenditures for the last units serving for additional education etc. reflects the revealed preferences of a country or community.

8.19 "Analogously, in ecosystem accounting, 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 is of course very relevant for the valuation of ecosystem assets and therefore should be explained a little more precisely with examples from ecosystem assets, too. If I understood it right, then one example could be as follows:
If the benefits an urban park provides to people measured by exchange values would be "B" and the maintenance of this park would cost "M", then the asset value of the park would be calculated as the net present value of "B" minus "M." This is the amount the park could gain if it would sell itself on a market where urban parks are the sellers and communities were the buyers.

If I put it just the wrong way namely the way you did not intend (which you could take as an indicator for the need of additional explanation), then you may use the following alternative formulation, instead:

If the benefits an urban park provides to people measured by exchange values would be "B" and the maintenance of this park would cost "M", then the asset value of the park would not be calculated as the net present value of "B" minus "M", but as the net present value of "B". For this is the equivalent to the price the park could gain if it would sell itself on a market where urban parks are the sellers and the direct beneficiaries (here: the citizens) are the buyers.

8.21 The reader might get the impression here that it would be meaningless to calculate values of intermediate services. I, therefore, suggest to add the following:
"The value of such ecosystem services can be calculated as a part of the corresponding SNA-value of the product, produced with the help of this service using for instance a production function approach. The resulting value is however already part of the SNA and must not be added to SNA-values to avoid double counting."

8.22 "For example, air filtration services will contribute to cleaner air whose exchange value is not implicitly included in national accounts measures of output".

I am rather sure that a certain (possibly rather small) proportion of the value of air pollution services (and climate services) of urban green is already implicitly a part of SNA by rental prices. So better speak of "air filtration services of forests (that have no effect on rental prices"

Footnote 7: "There" instead of "The"

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

No comments

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

No other comments

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 experienced preference approach is missing, also known as life-satisfaction approach. It should be added, because it is a very powerful approach to value ecosystem services of urban green, but also of other services. See also related comments below to 9.48 and 9.49

I have the impression that there is still some ambiguity in the text regarding the applicability of cost-based approaches especially with regard to the cultural services of habitats of endangered species (or more general speaking: existence value of biodiversity):

In 9.37 it is stated:

“Possible alternatives for the design of a shadow project include: asset reconstruction (e.g., providing an alternative habitat site for threatened wildlife); asset transplantation (e.g., moving the existing habitat to a new site); or asset restoration (e.g., enhancing an existing degraded habitat).”

And in 9.43:

“Possible alternatives for the design of a shadow project include: asset reconstruction (e.g., providing an alternative habitat site for threatened wildlife); asset transplantation (e.g., moving the existing habitat to a new site); or asset restoration (e.g., enhancing an existing degraded habitat).”

Whereas, in contradiction to the last sentences 9.50 states:

“Stated preference methods... .. are the only ways of establishing values for non-use aspects of ecosystems”

Table 9.2:

There should also be a mark in the cell: Replacement Cost/Shadow Project – Cultural services

9.4.4 Valuation of cultural services

In this chapter a discussion/explanation/clarification should be added on the use of compensation schemes / offset schemes to avoid no net loss of biodiversity for the valuation of the cultural service "existence values" with regard to habitats.

Can the fact that there are regulations to avoid net-loss of biodiversity, be taken as an evidence for a "social" preference to avoid net loss? Can the average cost to avoid net-loss per unit (threatened) biodiversity be taken as a price for valuing the units of biodiversity an ecosystem provides?

What is the role of markets for biodiversity units (established for instance in Germany) that are rather similar to carbon markets? What do widespread activities to restore habitats for (additional) biodiversity (units) tell us about the value of already existing habitats? Should the existing habitats not have at least the same value (per unit biodiversity) as the cost for restoring new habitats?

What measure should be used for the value of biodiversity services if exchange values derived from stated preference come to a value for a biodiversity unit that is twice the value of the cost of producing that unit with the help of restoration measures?

Such a discussion/clarification is of urgent need. Many calculations made for ecosystems in Germany show that existence values for biodiversity are in most cases the most relevant ecosystem service.

For further background see the paper in the annex of my email

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

9.48: This paragraph should end with an additional remark, maybe as follows:
It should be noted, that hedonic pricing can reveal the full exchange value only in the case of a perfect market, where buyers are able to find properties with sets of characteristics optimally fitting their different preferences. In such a case, the complete exchange value accrues as a differential premium of the property value/rental to the landlord. In the more relevant case of an imperfect market a net benefit remains to the buyer/renter. This benefit can be measured by other methods (e.g. experienced preference method) and used for calculating exchange values with the simulated exchange value method. The complete exchange value can thus be calculated as a part that is paid to the landlord and apart that would be paid to the ecosystem, if there would be a (direct) market for the ecosystem service.

For background see the paper attached in my email.

9.48 A section on the experienced preference method should added between 9.48 and 9.49

Figure 9.1 The “experienced preferences” approach should be added under revealed preferences

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?

No comments

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

No comments

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

No comments

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

10.40 “The spatial attribution of ecosystem services to different ecosystem assets is discussed in Chapter 6 which notes that for provisioning services and most cultural services this attribution is relatively straightforward while many regulating and maintenance services are jointly supplied by a combination of ecosystem assets”

I wonder if “most” cultural services is the most apt term here. In Germany, the physical value of ecosystem services for recreation is normally calculated on the basis of the mix of ecosystems around a certain grid (e.g. 100X100m-grid). This methodological approach builds on findings that a mix of ecosystems (wood+ grassland) has a higher value than one ecosystem type alone (only wood, only grassland). Therefore, the value of each single ecosystem type depends on the neighbouring types.

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?

No comment

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?

No comment

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

11.31 "Treatment of biological resources. In general terms, the value of all natural (non-cultivated) and cultivated biological resources will be included in scope of both ecosystem assets and economic assets. The values considered in this context are limited to those biological resources that provide inputs to agriculture, forestry and fisheries production, including household production on own account, and hence will be reflected in relevant measures of operating surplus and biomass provisioning services."

Why should only "values of those biological resources that provide inputs to agriculture, forestry and fisheries" considered here.

Does "here" refer to economic assets only?

Or is the meaning of "resources" the reason why all other values of ecosystem assets should not be considered here? Please make it more explicit.

11.64 "The cropland used by the farmer provides a mix of ecosystem services (gross ecosystem services supply of 110) of which 80 are used by the farmer as input to wheat production (i.e., crop provisioning services as inputs to SNA benefits) and 30 are air filtration services which are inputs to the non-SNA benefit of cleaner air"

This example is not the best one. Normally cropland is a polluter and its air-filtering services are very limited.

Better take forest in connection with filtering services or grassland in connection with recreation related services or existence-value related services.