



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.

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General comments

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

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

Comments by sets of chapters

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

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

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

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

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

Given the realities of ecosystem accounting, it is very likely that it will rely heavily on some sort of generalizations from existing studies (e.g., interpolations, extrapolations, etc.), using methods largely developed within the environmental benefit transfer literature (Johnston et al. 2015). Issues related to these transfers are covered briefly in Chapter 9 (Section 9.5 Considerations in the monetary valuation of ecosystem services). However, this section does not clearly specify the extent to which value generalization is (or is not) the same as benefit transfer, and the extent to which ecosystem accounting applications can draw insight from the large body of benefit transfer research. Other important issues are also missed within the discussion. Specific comments are as follows:

1. The section does not yet clearly address the relationships between “value generalisation” discussed on pages 173-174 and methods for benefit transfer that have been developed in the environmental economics literature over the past three decades (see Johnston et al. 2018 and Johnston and Rosenberger 2010 for reviews of this work). In general, the literature cited in this section is sparse and fails to reflect the large body of research devoted to these topics. The section should clarify the similarities and differences between what is called “value generalization” here and benefit transfer methods developed in the environmental economics literature. Is “value generalization” the same as benefit transfer or is it different? If it is different, how?
2. The section gives little attention to the literature addressing topics related to the accuracy of value or benefit transfers, mostly relying on only a single study by Kaul et al. (2013). Given the importance of accuracy, greater attention to prior findings in this area are warranted, rather than relying on the findings of only one paper. For example, see Rosenberger (2015) among others. Also see Boyle et al. (2010).
3. Although Section 9.5.1 is titled “Spatial variation and value generalisation for the purpose of ecosystem accounting”, this section gives little formal attention to spatial dimensions of value generalization and benefit transfer, and the extent to which different types of transfer methods are able to capture spatial variations in value. This is another topic for which there is published research that is not recognized within the section. See, for example, Schaafsma (2015) and Johnston et al. (2017, 2019) for discussions and a review of relevant work.
4. The proposed generalization methods seem to imply the need for value transfer/generalization based on parameterized value functions (e.g., from meta-analysis or other benefit functions) linked to GIS-based input variables. However, the need for these models is not expressed clearly in SEEA EA chapter 9, nor are state-of-the-art examples provided. These types of approaches have been demonstrated in the benefit transfer literature and in real-world applications by US EPA (for regulatory impact analysis) and others, but are not yet reflected in this section.
5. There are multiple areas of this section where the language is at least somewhat imprecise, leading to the potential for incorrect inferences to be drawn by readers. The following are two examples, but there are others.
 - a. The bulleted list in 9.69 seems to be presented as a complete list of the reasons why differences may exist “between the value from the observed

location and the target location.” However, values may also differ due to additional factors that are not included in this list. This bulleted list should be presented as a set of examples rather than a comprehensive list. For example, values may vary due to simple differences in preferences that cannot be easily traced to observable characteristics of sites or populations. In addition, this list seems to overlook the importance of spatial dimensions such as distances between households and ecosystem services. The section mentions variations in value over time, but not (explicitly) over space.

- b. When describing the use of meta-analysis to develop transfer functions, Section 9.72 states that such an approach “takes all existing studies and then estimates a relationship that gives changes in the values of ecosystem services as a function”. It is not clear what “all existing studies” means in this context. More specifically, it is important to clarify the role of consistency and study identification/screening in the identification of studies used for the development of meta-functions. In the benefit transfer literature, these topics fall under the headings of “welfare consistency” and “commodity consistency” (see literature review by Johnston et al. 2018), and there are also guidelines for the selection and coding of studies for economics meta-analysis (see Stanley et al. 2013).
6. To what extent are the meta-analysis functions that might be used for ecosystem accounting the same as those developed and tested within the benefit transfer literature? Are there needs for these models in accounting that differ from needs in benefit transfer? What lessons from meta-analysis in benefit transfer can be applied similarly to ecosystem accounting?
7. Overall, this section gives inadequate recognition to the extensive body of literature on benefit transfer and how it does (or does not) apply to parallel applications in accounting. After reading this section, someone unfamiliar with the benefit transfer literature might assume incorrectly that (a) value generalization is a distinct set of techniques from benefit transfer, and (b) there is not very much past work on these techniques. As noted above, it is also unclear whether and how the authors view value generalization as distinct from benefit transfer. There has been substantial research over the past three decades in benefit transfer that can be used to inform the development of parallel techniques for accounting.

References

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

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