



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 3: Spatial units for Ecosystem Accounting

Chapter 4: Accounting for Ecosystem Extent

Chapter 5: Accounting for Ecosystem Condition

Comments Form

Deadline for responses: 30 April 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 nine 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

Question 1: Do you have any comments on the definition and description of ecosystem assets and ecosystem accounting areas and the associated measurement boundaries and treatments?

No comments.

Question 2. Do you have any comments on the use of the IUCN Global Ecosystem Typology as the SEEA Ecosystem Type Reference Classification?

We would encourage further work to ensure that the typology aligns with the land cover classes in the SEEA CF given that there appear to be land-use/anthropogenic elements in the IUCN typology.

Question 3. Do you have any comments on the recording of changes in ecosystem extent and ecosystem condition, including the recording of ecosystem conversions, as described in chapters 4 and 5?

See response to question 4 regarding ecosystem conversions.

Question 4. Do you have any comments on the three-stage approach to accounting for ecosystem condition, including the aggregation of condition variables and indicators?

We think that adding an explicit normative process into a statistical framework is very problematic. It is not clear how a set of normative indicators will work with the range of normative users of ecosystem services data. For example, a normative optimisation of ecosystem services may result in the decline of the ecosystem, which could be interpreted as both 'good' and 'bad' depending on the interested party (e.g. land user vs. environmentalist), and world view (the EEA framework seems to be imposing two different worldviews on compilers and users).

With the normative approach, there is an implicit assumption that the ecosystem should persist, yet ecosystems exist within a physical context (temperature, precipitation, etc.), yet if that changes, e.g. via climate change, how do we normatively assess the transition from one ecosystem type to another? As an ecosystem changes type, it can switch from "good" to "bad" instantaneously, as the ecosystem reference levels change.

The framework seems to assume issues with ecosystem succession away
Are we designing a framework that can't account for broader environmental change in a time where broader environmental change will be the overarching dynamic?

We have significant concerns about aggregating normative data to build a composite indicator and whether techniques are sufficiently developed for statistical offices to utilise. There is no obvious basis for weights, and using equal weights is a deliberate choice that is unfounded (and entails unspecified assumptions). It should be verified whether data can be aggregated as some variables appear to be ecosystem components, while others appear to be emergent properties of the ecosystem.

Question 5. Do you have any comments on the description and application of the concept of reference condition and the use of both natural and anthropogenic reference conditions in accounting for ecosystem condition?

The use of a reference condition for each variable introduces significant issues regarding comparability across ecosystems within a country, between countries, and additivity, implying that any level of aggregation is problematic.

Question 6. Do you have any comments on Ecosystem Condition Typology for organising characteristics, data and indicators about ecosystem condition?

Generally, we agree with the variable categories. One exception is for landscape variables – this seems to be an analytical use of the spatial data, not a condition variable for the ecosystem unit itself. Alternatively, it could be a characteristic of a larger “whole”, such as a landscape, biome, etc. which would have its own emergent properties.

We agree that CO₂ isn’t an ecosystem condition variable, but it is an important piece of ancillary data, like temperature, which influences primary productivity. More work could be done to understand the ancillary, physical, biological variables relate to each other, which may inform how ecosystem variables relate to flows, and a value neutral condition indicator process.

Question 7. Do you have any other comments on Chapter 3?

No comments.

Question 8. Do you have any other comments on Chapter 4?

No comments.

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

It is still unclear whether a set of ecosystem condition indicators forms an “account” or whether they can be used in an accounting framework.

Our thinking behind this statement is based on the notion of the information pyramid that links data, to accounts, to indicators. When we consider the indicators resulting from the three stage approach for measuring ecosystem condition, we arrive at something that we would expect to see in the “indicator” part of the information pyramid, which is based on a specific use, and therefore doesn’t seem to belong in an accounting framework.

Although fundamentally different in nature, ecosystem condition indicators are more like price indices than national accounting accounts. However, ecosystem condition has no observable weighting process, such as the observable transactions underpinning price weights; prices generally reflect asset condition and characteristics, and therefore is derived from them based on consumer tastes. It could be that there is an issue with terminology that still needs to be resolved, but this would be of value to ensure it is clear how ecosystem condition is compiled and used in the SEEA EEA framework.