



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?

Unlike analytical research and modelling, accounting requires crisp units with clear borders and stable classifications for compiling data and statistics and supporting comparisons in space and time (time series). The definition of such units and their classification is an essential preliminary step when defining an accounting framework.

Chapter 3 contains some open questions and even obscure methodological options for identifying ecosystem assets, ecosystem accounting units, and basic spatial unit. Obviously, the practical development of methodologies in these types of units is unclear. They need to be refined in order to understand their relations for analytical purposes and further development. As for the unit of accounting for ecosystems, it is impossible to understand nature without society, and society without nature, in order to separate the economy from nature, therefore their relationship is built into the idea of socio-ecological systems.

Otherwise, in Europe, a good example is the application led by the European Environment is, where the ecosystem functional units (LCEU) and ecosystem accounting units (EAU) are clearly designed and used in Europe and beyond (Eastern Partnership countries, ...); <https://www.cbd.int/doc/publications/cbd-ts-77-en.pdf>

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

The use of the IUCN Global Ecosystem Typology for the SEEA ecosystem Type reference classification is unclear. How can satellite data be classified according to the physiognomy of landscape to these ecosystem types?

How to transfer the Ecosystem Accounting units following the reference classes to IUCN GCT? Is there a practical example? What type of classification is for conversions.

By the end, it will be using the land cover data/CLC classes/subclasses for reference. The land-cover observations at two dates consider the practical possibility of interpreting the information provided by the classification of land-cover flows. As a rule, flows can be related to anthropogenic activities, but in some cases, uncertainties arise from the fact that change is the result of a combination of many natural and human causes.

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?

The ecosystem extent account structure reflects the logic of asset accounts, as described in the SEEA Central Framework, with an opening stock/extent, closing stock/extent, and additions and reductions in extent as flows. This is in line with the EEA approach which was created in Europe, in 2000, to account for the Land and Ecosystems (LEAC). Ref SEEA 2003, Land and ecosystem accounts in Europe, [2006](#) and [2017](#), [UN CBD Secretariat the QSP-ENCA, 2019](#).

The recording of changes in ecosystem extent and ecosystem condition, including the recording of ecosystem conversions questionable. What type of classification supports the recording of 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?

What information will be used for the three-stage approach? This approach keeps the SEEA ecosystem still at the experimental stage and use of various ecosystem assessment technics. Is this approach consistent and functional, although an attempt that remains at the level of experimentation? And in addition, is this approach based on national accounting principles? In practical sense, such approach is complex and unfeasible.

Explicit recording of ecosystem conditions in physical terms is an important aspect of completing the accounting picture for policymaking and awareness-raising for action, it is why we need robust, coherent knowledge based on principles of national accounts.

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?

Ecosystem accounts are based on the characteristics of the terrestrial ecosystems and related biodiversity, water quality, and soil properties. What is being proposed is very complicated. Any application of this methodological concept available?

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

Theoretically, still, only theoretically, it is also possible to aggregate ECI across ETs into a small number of Overall Ecosystem Condition Indexes. However, aggregation across all ET will likely result in aggregating some ETs that may be regarded as fundamentally incompatible or lacking in ecological meaning. As an example, aggregation across ETs from different realms (e.g. marine and terrestrial) or with different reference conditions (natural vs. anthropogenic) is not recommended.

How about practical use and the available data/variables that will feed and populate these accounts in aggregating to the Composition Index of Ecosystem Condition. It seems that aggregates will lack ecological meaning and compatibility.

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

Missing references to knowledge and practices developed in many countries (Brazil, Columbia, Mexico, including Europe and the European Environment Agency.)

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

The EEA LEAC is probably one of the few effective international frameworks able to deliver information on land ecosystem-based approach in a consistent way for 39 EEA countries (and beyond such as the Eastern Partnership countries ...), [2006](#), [2017](#). They are publicly accessible through the EEA website which provides users with a ready-made tool for extracting their own customised [land and ecosystem accounts](#).

The EEA LEAC methodology has defined measurement and statistical units, classifications, and an accounting structure in line with the basic statistical principles used in other statistical areas such as environmental statistics (FDES) and the SNA.

It is robust and coherent, and operational. The LEAC is a candidate to support the quick implementation of such future ecosystem-based developments. This approach is currently being tested in many countries outside the EU Member states in Africa, East Europe, and Latin America.

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

The Wikipedia defines “ a landscape” includes the physical elements of geophysical defined landforms such as (ice-capped) mountains, hills, water bodies such as rivers, lakes, ponds and the sea, living elements of land cover including indigenous vegetation, human elements including different forms of land use, buildings, and structures, and transitory elements such as lighting and weather conditions”.

This leads to overlapping between classes within the SEEA ECT classes for the quantitative determination of signs of quantitative metrics describing the characteristics of an ecosystem that may be a physical, chemical, biological, or landscape-level. How can you separate, quantify, and measure these characteristics using variables? What are they like? If since the SEEA ECT overlaps classes, then, as far as possible, when the compilation of ecosystem condition accounts to ensure that at least one variable for each of the six ECT classes is selected for each ET. The use of these practical rules is aimed at ensuring a minimum level of completeness of a complete set of variable conditions. Feasibility of this approach contains some open questions and even obscure methodological options.