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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?

We welcome the separation in 3 chapters which brings clarification on the organisation of information sets.

The chapter 1 on the description of ecosystem accounting areas is rather clear.

However, here is one comment: Even if Ecosystem Areas are delineated on ecological characteristics, it will be useful to add some other characteristics on land ownership, population, land management, etc. to facilitate the link to national accounts or to enable analysis on ecosystem extent or condition.

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

It is useful to have a global ecosystem typology, scientifically validated and largely implemented, internationally comparable.

This UICN Global Ecosystem Typology seems to meet the standards required in Chapter 3 but is still very new and not yet adopted as an international standard. Before this classification could be selected, it is still needed to dress a global mapping of the ecosystems types and to establish correspondence tables with the other typologies actually used.

For example, in France we don't use the UICN Ecosystem Typology by now. We would need correspondence tables with Corine Land Cover, Lucas and EUNIS typologies.

Indeed it is important to get a large interoperability between the typology that will be adopted at global scale and the main different reference typologies that are more precise and often used for national purposes. The most relevant information probably lies at the lowest levels of the classification and, without guidance on the disaggregation at national and local levels, there is a concern that most practices may be different from the common standard.

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?

To present matrices of changes in land areas is a method that is often used for the analysis of changes in physical land use in France.

This method supports the measurement of ecosystem extent changes, units being areas (hectares). Therefore this method can be helpful to provide some SDGs indicators as 6.6.1 Change in the extent of water-related ecosystems over time, 11.3.1 Ratio of land consumption rate to population growth rate, 15.1.1 Forest area as a proportion of total land area.

Still one difficulty is to precise attribution of changes between extent and conditions, when changes of the ecosystems are gradual and longer term. It can be reported as changes in Ecosystem Accounts conditions before being considered as different Ecosystem Types. That could provide different recordings for the same conversion.

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Another question is what time step to adopt between two reports, according to some slow evolution of ecosystems. It depends on the reference period requested and of the purpose of the accounts. A five-year time step would seem enough for policy needs.

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?

The level I should be enough. We don't agree at this stage with the level 2 and 3.

The usual triangle representation of the UNSD puts the production of indicators as a supplementary and distinct stage of statistical accounts. Then ecosystem statistical accounts could be restricted to level 1 on observed changes in areas units. Stages 2 and 3 build indicators, that should be presented as a process which does not belong to accounting *per se.* The selection of indicators usually answer to policy needs and could require policy debates more than universal statistical framework. Stage 3 on composite index is really immature and we reject in general composite indicators because the results are difficult to understand and analyse.

More in details:
For level 1 (selection of characteristic variables, changes in level), the question of the geographical level will arise (national, regional, or by ecosystem, etc.). Another question is on the initial reference year. How is it set? Is it identical for all countries? Is it identical for all items?

For level 2 (qualification of the variables / reference state), will happen ongoing debates on the choice of what reference state to adopt and on favourable or unfavourable thresholds. Reference conditions can't be harmonised at a global scale because this concept is not absolute but depend on local consensus.

For level 3 (aggregation to obtain a quality index between 0 and 1), the discussions could focus on the basket of indicators to be retained, in particular by taking care not to select correlated indicators. But, more in depth, the meaning of such a synthetic indicator to qualify the ecosystems condition is problematic.
Composite indicators present some well known defects. While they make it possible to express an overall result easy to read, they present difficulties in terms of robustness, in particular because of the weighting factors of the various components, which may be questionable or arbitrary. The weights should have a scientific rationale. Also it is important to avoid combining already correlated factors. Then composite indicators make difficult the analyse of results, for example to explain the principal factors of the evolution observed.

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On another side, the "good" condition of ecosystems is a multi-dimensional concept and reducing it to an index between 0 and 1 risks preventing any relevant analysis. If a "virgin" ecosystem (untouched by man) could be recognised as being in "good" (ecological) condition, it is worth noting the rarity of virgin ecosystems: almost all natural environments have already been subject to human influence. Thus, a "good" ecological condition can either be assessed by the gap between the current state and the "pristine" state, or between the current state and a state deemed desirable by the human community with fewer natural constraints and more of certain ecosystem services. And in this case, the "right" condition is the result of political deliberation.

Please note that the French national EFESE program ("programme d'évaluation française des écosystèmes et services écosystémiques") consider three dimensions to describe the ecosystems conditions: 1/ the capacity of the ecosystem to provide goods and services sustainably; 2/ the state of health of natural species and heritage habitats; 3/ the fact that for each of the pressures exerted on the ecosystem, no threshold of irreversibility is exceeded.

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?

It seems very challenging since there is not one method to define a reference value, and the reference year might differ from one country to another. Comparability will be problematic.

Indeed, there is no absolute reference conditions of the ecosystems. The choices of an initial reference point and of a desired point to get are subject to policy discussions. They depend on the type of ecosystems and could also be depending on the policy targets needed to be followed-up.

In other words, who will be able to determine global reference conditions and if the changes are favourable or unfavourable? And reference conditions could depend on the chosen historical depth, 10 years ago, a century ago or in the Middle Ages.

The desired state of ecosystems could be based not only on the good health of biodiversity but also on the sustainability of services provided by different ecosystems, and eventually on agreed strategies with time steps adopted in the purpose to restore a better quality of some ecosystems or regarding threats due to different pressures exerted on the ecosystems.

Then international comparisons will be difficult.

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

The described method is too complex to be developed at a national scale and for all types of ecosystems.

To evaluate ecosystems conditions would suppose that reference levels of ecosystems conditions have been established on a strong and shared scientific basis and agreed under public policies. Such a basis is needed before statistical work.

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

Maybe an example could be provided on how to proceed to define National Spatial Data Infrastructure (NSDI), consistent with the 3 level of IUCN Global Ecosystem Type.

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

It could be provided a case study measuring changes in ecosystems extent.

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

This chapter is the most complex and it is not ready to be endorsed.

Too many questions are still unsolved :
- what is the meaning and analytical soundness of a synthetic index about the conditions of ecosystems ?
- how to choose reference condition levels by type of ecosystems, adequate time steps, geographical resolution, the main descriptors to be observed ?
- and does it depend on different policy needs ? Then could such results be comparable at different geographical scales and between different countries ?

Then the writing is too complex and too long. But there are not enough examples and figures to illustrate the concepts. Case studies would be provided.

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