



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?

- 3.36 –the second sentence should say “within” not “beyond”.
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Question 2. Do you have any comments on the use of the IUCN Global Ecosystem Typology as the SEEA Ecosystem Type Reference Classification?

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

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?

There is little written on the mechanics of how the actual changes in extent are recorded except to say that a change in one ET is reflected in a change to another. Seems as though a paragraph on using double-entry accounting would be beneficial. While this is well understood in the accounting community, considering the utility of SEEA to the broader conservation, sustainability, business space, this could help make SEEA seem more grounded in existing systems.

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?

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

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?

yes

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

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

Most of the comments below are grammatical/stylistic except when highlighted in yellow.

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

3.11 – would benefit from a diagram to show the layers

3.12 – if subsoil is part of the ecosystem asset, then what happens to soil accounting in the SEEA CF?

3.12 Unconfined aquifers containing groundwater that are directly influenced by the (surrounding) ecosystem by water infiltration or possible contamination, are considered part of that ecosystem asset.

> This seems very unlikely. Please see Fundamentals of Ecology Eugene Odum

3.22 In concept, an EA is differentiated from neighbouring EAs by the extent to which the relationships between biotic and abiotic components within the EA are stronger than the relationships with components outside of the EA.

> I don't see how this can hold in all cases so should not be a criteria.

3.24 The occurrence and extent of EAs delineated using these principles can change over time. Indeed, the expectation is that over time, through the use of the same principles and classifications, different EA boundaries would be delineated to reflect the changing sizes and configuration of spatial units (e.g. due to deforestation). Recording these changes is the focus of accounting for ecosystem extent discussed in Chapter 4.

> is there an occurrence account? There is reference made to spatial units – what are they? Aren't they EAs, if yes then don't use the term spatial units.

3.26 While natural and semi-natural areas are mainly governed by natural ecological processes, the intensively managed areas will primarily be defined by land use maintained by human activity.

> does this suggest that intensively managed areas are not governed by ecological processes?

> caution needs to be used when using the term ecological processes - <https://www.epa.gov/report-environment/ecological-processes>

3.30 Raster data, e.g. from classified remote sensing imagery — entire pixels will be classified as either stream/river, or as another ET. Extent is computed by multiplying the pixel count with the pixel area. There is no explicit distinction between narrow and wide streams.

A pixel can be defined as narrow or wide stream. If in the extreme pixels are 0.5m square, then you may have many many pixels and the more pixels you have the wider the stream. And so on.

3.32 Complex mosaics

> please remove all reference to Complex mosaics – and apply ecosystem asset rules

3.37 Subterranean ecosystems

> what about a cave with water in it? Isn't that an aquifer as noted above? And above it was noted it is part of the ecosystem. This is confusing.

- There is inconsistent use of the terms “ecosystem services” and “final ecosystem services” throughout the documents. For example page 6 of the cover note uses both and treats them as equals.
- Section 3.23 references the CBD. CBD is not defined (we presume it is defined in chapters 0-2). It may be better to reference the IUCN as the GET is used. If not “following the CBD” maybe be better written “from the CBD.” In the next bullet of the section “and identified in a specific” should be “to a specific”. In the bullet iii “, and comprehensive” should be deleted it is redundant. Bullet iv notes the reason for the rule. The other bullets do not explain why the rule is important. These bullets should be standardized in format.
- Section 3.30 the open bullets the formatting after data is inconsistent. Also in 3.30 in the second black bullet, the second “should” should be “and”
- In 3.31. “it is noted that” should be deleted
- 3.40 and throughout: SEEA Ecosystem type (ecosystem should be lowercase). Also, you use SEEA Ecosystem type, SEEA Ecosystem and SEEA ET inconsistently. Worth defining early and just using the SEEA ET consistently. You also need to be clear if you are referring to SEEA ET or just ET throughout.
- Check placement of reference numbers in document – sometimes it is before and sometimes after the period or comma.
- 3.43 – greater clarity could be brought to the last line with “among other ecosystem and related classification systems.”
- In the GET section, use either “top levels” or “upper levels” rather than switching between them.
- 3.45 – what is “modern functional biome concept” compared to the definition of biome that you used above. It reads as two different

concepts. You are better off defining biomes (with the numbers of each earlier when you introduce the concept).

- 3.48--* at bottom of table—no “:” and delete “the list in” from the last sentence. it is not necessary.
- 4th paragraph on page 16 should be Keith et al. (presently there is no period). Also there is inconsistent use of (), (e.g.) (eg (i.e.) and the like. There’s also an extra space after the last comma of the paragraph (I’ve noticed a few of these and worth turning on the auto checker for this feature.) also there a numerous such errors in this section that a copy editor is better able to sort out.
- Bullets under this same paragraph have mixed punctuation and structure that could be aligned. The definition/example of “resources” seems as though it would be confusion to non biologists. Also it’s not actually a definition. It’s more of a characteristic.
- In the ecotones definition, remove “along a gradient” from the first line.
- Annex 3.3 in the first para, first sentence, change the phrase in between the 2 commas to “for accounting” . also in the last sentence of that para delete “nature of the” . Also the use of the en dash in this section is inconsistent with the rest of the document. Paragraph 4 of this section need not separated “global data sets” but say that all data, from national, regional, global or non-state actors. In para 5 (Landsat) and (Sentinel-2) should have an e.g. paragraph 6, change “proposed” to “encouraged” or “advised” . Page 26 paragraph 4, delete “in the accounting structure” in the 2nd sentence.
- The first paragraph in the “developing national spatial data infrastructure” has a number of subordinate clauses and could be reduced to a single sentence. maybe something like “Ecosystem accounting is typically developed in parallel to NSDI...”
- Page 27, para 2, delete “on data access” from the 1st sentence.
- Page 27 in data layers and delineation, seems to be missing economic data (activities/business types)—the uses of ESflows, which in par determine that the EEP is for the ES.
- the last two sections (integration across spatial scales and scaling) should be integrated. The value transfer and meta analysis, for example can be up or down scales. The way this is written it only goes in one direction. Also the key way that ecological modelling is use for is upscaling – it’s hard to model at large scales, so often you can research at small ones. This is worth mentioning.

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

4.7 drop the word “compilers” it is not used in the previous chapters (not that I can remember). s

4.19 are the mapping of extent include in chapter 3 with regards to data infrastructure and data sharing agreements. Also an “(e.g ...)” listing some of the benefit would help. That grammatical structure is used throughout the document.

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

5.3 change en dash to em dash.

5.5 need a period before “for example” . substitute “completing the accounting picture” with “understanding the environmental values of an EEA.”

5.8 the titles you use in 5.2 of the 3 stages would be good here (e.g. “ecosystem condition characteristics)

5.9 “use of additional assumptions” seems to add necessary vagueness. Is this phrase needed or can it be made more clear.

5.20 first sentence the last words should be “differences within a single ET around the globe.” Change “rule of thumb” to “guidance”

Table 5.2 eliminate “ecosystem condition metrics” and “ecosystem characteristics and their metrics” from the cells in the short description column. They are redundant.

5.24 change “harmful” to “unharmful.” Or “not harmful.”

5.28 2nd sentence is confusing. Break into 2 sentences?

5.30 delete “out”

5.33 an example of an anthropogenic reference condition would be helpful.

--this and other chapters often have a subordinate clause “In SEEA context” “For SEEA purposes” “in an accounting context” – I’m not certain this is necessary and could save space throughout.

5.35 remove “generally” from last sentence

5.41 can “flow on to” be made less colloquial?

5.42 – 2 e.g. in 1st sentence.

5.51 – this could use an example...“Does not set targets..” also does this pertain to all part of accounts and therefore belong in an early chapter?

5.56 Change “nevertheless” to “however”

5.57 –the eg makes it hard to read. Consider. “The favourable reference level is in most cases higher than the non-favourable one, but not always. For example, increases in pollutant concentrations are higher than decreases. In these situations, an increase in the variable value means a decrease in the indicator.”

5.60 clarify what “the previous account” is. The last sentence should be simplified to a simple declarative sentence.

5.61 “observed values” or “values”? “As for the condition account” or “Just like with the condition variable account” or better “the indicators are grouped based on the ECT, just as they are for the condition variable account”

5.69 i.e. should be e.g.

5.75 you can use “in the case of” with a plural “most pressures” and no “,” after variable. Does the underlying variable measure or serve as a proxy for the stock or is it the stock? (you label or re-label it in the next paragraph and then again in 5.78) Meet all the selection criteria of an ECT? There is also a missing word or two in the last sentence.

5.76 change “multiple further” to “other” and number each advantage (1) they can be used) or better bullet them. the second bullet, as it is currently written, needs to be rewritten as a separate sentence it is also unclear what it is trying to say – I think you mean a subset of the previous bullet – maybe “For example, the value of a ET.” Remove “very clear and perinate.” If so, “multiple further” is 2.

5.77 this states that timber is a ecosystem service. While CICES calls this an ES, it measures this ES as the marginal contribution of soil, water, temperatures, etc to timber production for the producer. NESCS defines the FES as the flows of water, soil, temperature, etc. to the producer for timber production. NESES measures it/them in the same way. If the CICES “provisioning” ES or other natural resources are used in SEEA, the SEEA docs should clearly noted what that actual FES is – both CICES and NESCS agree on what the FES is, just not the identification or naming of the FES/ES.

5.78. either introduce the term “drivers” earlier or eliminate it.

5.83 a qualifier/explanation of the last example (flooding) would be useful as it is the only one that looks years into the future. Perhaps a new sentence.

5.84 the last sentence has “should” and “necessarily” – delete 1 of them.

5.85 says “additions in one ET in one location within an EAA may”. Do you need “in one location” and why is it “may”. Not “will” maybe you are considering updated methods to new datasets that change the reference levels. If so, maybe you could narrow the discussion to just being about conversions which “will” have the offset. Also, could “offset” be misunderstood by some in the conservation community. This paragraph could also be a good place to mention double entry accounting.

More guidance is needed on how to make these transitions – when does ET X turn into y or vice versa?

5.88 add “help” before “ensure effective application.”

5.93 change “key policy commitments measurable” to “key policy commitments more easily measurable” . could add Ramsar Convention and blue and green components of carbon commitments