

The European Commission's science and knowledge service

Joint Research Centre

Research Area 2 Ecosystem condition

*Progress update
LG meeting 1-4 October 2018*

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Background – UNCEEA 2017

Ecosystem asset condition is a fundamental aspect of ecosystem accounting since it is the regular monitoring of asset condition that lies at the heart of assessing the changing capacity of ecosystems to supply ecosystem services.

Two key areas require further research and discussion. First, developing a generalised model/structure of indicators of condition for different ecosystem types, taking into account different ecological characteristics and patterns of use.

Second, establishing a clear conceptual basis for defining reference conditions for the purposes of ecosystem accounting.

Of particular interest for accounting is understanding the nature of the linkages between different ecosystem services and hence between different ecosystem types.

Working group on ecosystem condition

- Joachim Maes (European Commission - Joint Research Centre, Ispra, Italy)
- Bálint Czúcz (European Topic Centre on Biological Diversity, Muséum national d'Histoire naturelle, Paris, France)
- Mandy Driver (South African National Biodiversity Institute, Cape Town South Africa)
- Beth Jackson (Victoria University of Wellington, Wellington, New Zealand)
- Heather Keith (Australian National University, Canberra, Australia)
- Emily Nicholson and Lucie Bland (Deakin University, Melbourne, Australia)

Revision of the SEEA EEA

- Further guidance and options for assessing and reporting ecosystem condition:
- Three discussion papers are in preparation:
 - **Purpose (or role or importance) of ecosystem condition accounts**
 - **Review of existing condition accounts**
 - **A typology for condition variables and criteria for selection of condition variables**

Purpose of ecosystem condition accounts

- The relation between ecosystem condition and other concepts such as ecosystem integrity, ecosystem resilience and ecosystem health
- Confrontation of different views on ecosystem condition
Relation between biodiversity and ecosystem condition
- Lessons from the "essential variables" concept
- A hierarchy of condition variables/indicators
- The relationship of the condition account with other accounts

A first draft version is ready for internal discussion and comments (within the working group).

Review of existing condition accounts

- A screening of about 60 documents
- 18 reported an accounting table on ecosystem condition
- Analysis of the condition tables for:
 - Reported indicators
 - Typology or classification of indicators
 - Aggregation into a single condition index
 - The use of reference levels for indicators or a reference for ecosystem condition
 - The format of the reporting table

This analysis is ongoing. First version of the paper planned for end October

A typology and criteria for ecosystem condition variables/indicators

- Review of conceptual classification systems or typologies found in the literature and look for common properties (such as ecosystem composition, structure and ecosystem functions, abiotic quality, biodiversity, ...)
- Proposal for a typology for ecosystem condition (which indicators should be measured to assess condition)

Draft table of contents ready. Drafting of the paper still needs to start.

Next steps – other issues to be covered

Issues concerning

- The use of reference values, and
- Approaches to the aggregation of condition indicators

will partly be covered in the earlier papers but may deserve later separate discussion.

A further paper on “Linking the measurement of condition and the measurement of ecosystem capacity (How to deal with links between biodiversity, condition, ecosystem functions and ecosystem services) is not yet formally planned as it would require additional expertise within the Group