SESSION DESCRIPTION

ID: T17a

Ecosystem condition accounting: overcoming operational challenges

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Abstract:

The recent adoption of the statistical framework for the System of Environmental Economic Accounting - Ecosystem Accounting (SEEA-EA) by the United Nations (United Nations, 2021) represents a key step forward in recognizing the role of ecosystems as contributors to our economy and well-being. SEEA-EA integrates ecosystem extent, ecosystem condition, ecosystem service flows, monetary ecosystem assets, and thematic ecosystem accounts. Many countries see these accounts as an instrument of extraordinary potential for policy support. This system is currently tested in many pilot exercises and will soon be applied in national ecosystem accounting systems. Hence, to ensure that ecosystem accounts as a policy instrument are up to expectations, any potential operational issue of SEEA-EA needs to be explored and addressed adequately during the testing phase.

In this session, we focus on SEEA-EA ecosystem condition accounts. Specifically, we will hold discussions about operational challenges and associated issues faced in all ecosystem types. Ecosystem condition accounts give a simple, yet realistic overview of the "state" of ecosystem assets using few carefully selected key variables. They are strongly interrelated with ecosystem extent accounts, together both accounts represent the stocks influencing ecosystem service flows accounts. Ecosystem condition and its reference levels are strongly rooted in the concepts of ecosystem integrity, stability, and resilience. Despite the theoretical robustness of the

framework, its implementation still presents challenges. Among existing challenges, below we introduce four of them for orienting purposes. The session is also open to any other challenge and associated issue identified by the presenters or attendees.

1. Ecosystem extent and condition accounts are very interrelated, and a clear differentiation might not be straightforward. How to ensure that the characteristics used to distinguish and delineate ecosystem(sub) types, i.e. ecosystem extent accounts, do not interfere with the characteristics used for reporting conditions, which may lead to accounting artefacts?
2. The appropriate level of interrelation between ecosystem condition accounts and ecosystem services accounts is not always clearly defined. Ecosystem conditions influence the capacity to provide ecosystem services. To what extent characteristics selected as variables for ecosystem condition should (and can) inform ecosystem services flows? How does this influence selection of ecosystem condition variables? How to balance linkages between both accounts without excessively constraining their independence and underlying concepts?
3. The identification of appropriate (upper and lower) reference levels for some condition variables is challenging. Ecosystem condition rooting concepts do not fully work for anthropogenic ecosystems, to which the concept of restoration is not commonly attached either. How to operationalise definition of reference levels in anthropogenic ecosystems? How reference levels can help to define feasible restoration targets? Besides anthropogenic ecosystems, how to ensure that the selection and the "development" of condition variables helps reducing the difficulties in identifying appropriate reference levels?
4. Ecosystem condition accounts should inform economy-related policies, but they also have a great value for other policies, especially those impacting on the management of ecosystems. Which could be the added-value in building more robust and less ad-hoc territorial sustainability assessments? Which policies could benefit from ecosystem condition accounts? How to design them to support a wide range of policy-making processes?

This session follows a mixed format: a standard session followed by a world café. In the first part, we welcome contributions from speakers working on ecosystem condition accounts (at a conceptual or applied level) and dealing with operational challenges, including those illustrated above and others identified by the presenters. These contributions will be the starting point for the "world café", exploring the challenges through open discussions in small table groups in which the topics will rotate, maximising the feedback collected from attendees.

Goals and objectives of the session:

This session aims to discuss operational challenges for building ecosystem condition accounts under the SEEA-EA framework in European contexts. The session is focused on ecosystem

condition accounts of any ecosystem type and developed at any spatial level, i.e., local, regional, national, international.

The session will discuss operational challenges and potential solutions using two approaches:

1. learning from recent/on-going case studies and conceptual works presented during the session;
2. several open discussions in small groups about an operational challenge or a set of related specific issues, which can use the works presented as a starting point to facilitate the beginning of the dialogue.

For the first ("standard") part of the session (oral presentations), we will prioritise case studies of ecosystem condition accounts, but we are also open to innovative conceptual works offering solutions to some of the existing implementation/operational challenges. We especially welcome case studies developing ecosystem condition accounts for more than one ecosystem type in the same area of scope. Operational issues are more evident when more than one ecosystem type is studied, especially when accounts are developed in a geographically exhaustive way. We also highly welcome case studies on ecosystem accounts of anthropogenic ecosystem types (i.e., agroecosystem and urban ecosystems) since additional issues are anticipated for them.

Planned output / Deliverables:

A series of papers in a special issue or a perspective paper on ecosystem condition challenges and emerging solutions, depending on the material available from the session.

In addition, a policy brief to be integrated in a broader technical report from the Joint Research Centre of the European Commission is expected to be prepared out of the session.

Session format:

Other (Mixed Session: Standard Session + World Café)

Voluntary contributions accepted:

Yes, I allow any abstract to be submitted to my session for review

Related to ESP Working Group/National Network:

Thematic Working Groups: TWG 17 – ES Accounting & Greening the economy