SESSION DESCRIPTION

ID: T3a

The operationalization of ecosystem services indicators: a matter of scale, data, purpose and end-users

Hosts:

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Abstract:

The operationalization of ecosystem services (ES) monitoring at a global scale requires the identification of essential metrics linked to readily accessible data. This includes capturing both the ecological and social dimensions of ES to assess socio-ecological systems (including potential, supply, demand, flow, and value/benefit). However, some ES are more easily conceptualized and measured at a specific scale, while it may be challenging to understand the ES at other scales. Due to the diversity in data collection scales and methods, science and policy domains, methodological frameworks, and potential users, it is difficult to support the formulation of recommended concrete indicators. So, how and why do we deem an ES indicator as most appropriate to the purposes of their assessment? Do advances in big data availability and analysis enable the monitoring of ES at larger scales, thus contributing to the creation of more fit-for-purpose and replicable ES indicators? If so, how can the up-scaling of ES indicators facilitate decision-making processes when management actions are often made locally? How can local data be used to complement or validate the evaluation of ES that is based on large-scale data? And what type and frequency of data ensure the usefulness of ES indicators to policymakers devising local decisions? Given the variety of mapping and modeling approaches for monitoring and assessing ES, are 'simple', straightforward, and replicable ES indicators more understandable to users than the ones that are more 'complicated', time-consuming, and resource-based, meaning risking feasibility? Finally, Several ES studies frequently refer to achieving or supporting different environmental objectives and goals (e.g. SDGs, post2020 Biodiversity Framework, and Common Agricultural Policy); still, few studies feed information

back into planning processes to influence land-use decisions. All this indicates the need for close collaboration between ES data providers/producers (domain experts), analysts/modelers (researchers), and receivers (end-users) to bridge the gap between ES science and policy implementation. This session of the Thematic Working Group (TWG) 3 on Ecosystem Services Indicators sets out to identify key variables of ecosystem services, contributing to the general attempt of developing a conceptual and methodological framework for identifying and monitoring ES at multiple scales. One of the TWG's main goals is to communicate ES indicators to be more easily conceptualized and used by the intended end-users. Therefore, we welcome both traditional (e.g. slides presentation) and alternative (e.g. video/multimedia) presentation formats with your creativity being the only restriction. We invite submissions, with data and ES indicators being central in your submission, that emphasize:

– the combination of multiple datasets (e.g. earth observation, products from ES initiatives, socioeconomic datasets, field measurements, and local data, etc.) to estimate ES indicators,

– the idea behind the selection of a specific method and ES indicator (including, data availability, analyses' complexity), for a particular ecosystem (e.g. forest, agricultural, coastal, urban), and

– the usability and usefulness from the perspective of both researchers and end-users (practitioners and decision-makers).

Goals and objectives of the session:

To discuss the development and use of ES indicators while answering some of the questions raised above. To showcase how different data sources can be used to assess all components of ES. We envision identifying how practitioners and ES experts can collaborate to produce a more concrete and reproducible list of ES indicators. Finally, we want to advance and reflect on the work of ESP TWG 3 on ES Indicators.

Planned output / Deliverables:

In the latter part of the session, we will discuss interest in and commitment to an open access Special Issue composed of the session contributions for an Open Access journal. We consider it crucial that practical experience and reflection should be published and shared.

Session format:

Other (Standard-like session where presenters may choose between a traditional (slides) and an alternative presentation format (video/multimedia))

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 3 – ES Indicators](#)