



System of
Environmental
Economic
Accounting

Overview of the progress on the SEEA EEA revision in the area of indicators

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Process of drafting indicator chapter in the revised SEEA EA

□ June 2020

- Initial version of the annotated outline agreed by SEEA EEA Technical Committee

□ July & August 2020

- Development of the working paper on SEEA EEA indicators to serve as input for the drafting of the indicator chapter
- Comment on draft monitoring framework for the post-2020 global biodiversity framework

□ Sept 2020

- Establishment of the SEEA EEA indicator working group to support the drafting of the indicator chapter in the short term and link the SEEA EEA indicators to existing monitoring framework in the medium term
- 1st meeting of the working group conducted to seek comments on the working paper and input to the drafting process

□ October 2020

- Initial drafting of the indicator chapter completed
- Completed draft of SEEA EA circulated for global consultation

Outline of SEEA EA

- Section A: Introduction and overview (Ch.1-2)
 - Ch.1: Introduction
 - Ch.2: Principles of ecosystem accounting
- Section B: Accounting for ecosystem extent and condition (Ch. 3-5)
- Section C: Accounting for ecosystem services (Ch. 6-7)
- Section D: Monetary valuation and Integrated accounting for Ecosystem services and assets (Ch. 8-11)
- **Section E: Complementary valuations, thematic accounting and indicators**
 - Ch.12: Complementary approaches to valuation
 - Ch.13: Accounting for specific environmental themes
 - Ch.14: Indicators and combined presentations

Outline of Ch.14

14.1 Introduction

14.2 Combined presentations for ecosystem accounting

14.2.1 Introduction

14.2.2 Information on environmental activities

14.2.3 Information on environmental pressures

14.2.4 Economic dependence on ecosystems

14.2.5 Information on policy instruments

14.3 Indicators derived from the SEEA EA

14.3.1 Introduction

14.3.2 Roles and functions of SEEA EA indicators

14.3.3 Indicators from the ecosystem accounts

14.3.4 Indicators from thematic accounts

14.4 Indicator frameworks and the SEEA EA

14.4.1 SEEA EA and global indicator monitoring frameworks

14.4.2 Other indicators and applications

Main contents in Chapter 14.3 and 14.4

- ❑ Value-added of using SEEA EA in deriving a wide-range of indicators
- ❑ Overview of indicators that can be derived from the core accounts of the SEEA EA. Conceptual basis is based on chapter 3-11 of the SEEA EA
 - Ecosystem extent account
 - Ecosystem condition account
 - Physical ecosystem services flow account
 - Monetary ecosystem services flow account and ecosystem asset account
- ❑ Metadata
 - Description of indicators
 - Spatial unit (e.g. by EAA or ET)
 - Disaggregation (e.g. by spatial or thematic area)
 - Unit of measurement
- ❑ Highlights the potential indicators in the SDGs and the post-2020 global biodiversity framework that could be directly derived from SEEA EA
- ❑ Brief elaboration on the linkage of SEEA EA indicators to various indicator initiatives

Potential indicators on ecosystem extent

Extent indicators	Spatial unit	Disaggregation	Unit of measurement
Percentage of ecosystem accounting area covered by specific types, including:	Ecosystem accounting area	Ecosystem type	Hectares; % of opening
urban areas (IUCN GET T7.4)			
agricultural areas (IUCN GET T7.1, T7.2, T7.3)			
forests (IUCN GET T1, T2)			
wetlands (IUCN GET F1, F2, TF1, FM1, MFT1)			
Change of area covered by specific ecosystem types during an accounting period, including:	Ecosystem accounting area	Ecosystem type	%
urban areas (IUCN GET T7.4)			
agricultural areas (IUCN GET T7.1, T7.2, T7.3)			
forests (IUCN GET T1, T2)			
wetlands (IUCN GET F1, F2, TF1, FM1, MFT1)			
Percentage of area unchanged (opening stock - reduction),	Ecosystem accounting area	Ecosystem type	Hectares; % of opening
Percentage of area changed (additions + reductions),	Ecosystem accounting area	Ecosystem type	Hectares; % of opening

Potential indicators on ecosystem condition

Ecosystem condition indicators	Further description	Spatial unit	Disaggregation	Unit of measurement
Overall ecosystem condition index		Ecosystem accounting area	Ecosystem type, ecosystem condition classes	Index
Physical state indicator	Overall physical state characteristics of an ecosystem asset (including characteristics on soil structure, water availability)	Ecosystem type	Ecosystem condition sub-classes	Index
Chemical state indicator	Overall chemical state characteristics of an ecosystem asset (including characteristics on soil nutrient levels, water quality, air pollutant concentrations)	Ecosystem type	Ecosystem condition sub-classes	Index
Compositional state indicator	Overall compositional state characteristics of an ecosystem asset (including characteristics on species diversity)	Ecosystem type	Ecosystem condition sub-classes	Index
Structural state indicator	Overall compositional state characteristics of an ecosystem asset (including characteristics on vegetation, biomass, food chains)	Ecosystem type	Ecosystem condition sub-classes	Index
Functional state indicator	Overall functional state characteristics on an ecosystem asset (including characteristics on ecosystem process, disturbances regimes)	Ecosystem type	Ecosystem condition sub-classes	Index
Landscape / seascape indicator	Overall characteristics on landscape (including landscape diversity, connectivity fragmentation, embedded semi-natural elements in farmland)	Ecosystem type	Ecosystem condition sub-classes	Index

Potential indicators on physical ecosystem services flows

Physical ecosystem services flow indicators	Further description	Spatial unit	Disaggregation	Unit of measurement
Amount of biomass generated	Biomass provisioning services	Ecosystem accounting area	Ecosystem type; Type of biomass	Tonnes
Water abstracted for use by household and industry (proxy measure)	Water supply services	Ecosystem accounting area	Ecosystem type	Cubic metres
Tonnes of carbon retained (captured and stored/trend in the carbon sequestered)	Global climate regulation services	Ecosystem accounting area	Ecosystem type	Tonnes
Tonnes of airborne pollutants captured (e.g., PM10; PM2.5)	Air filtration services	Ecosystem accounting area	Ecosystem type; type of pollutant	Tonnes
Tonnes of waterborne pollutants removed (e.g., chemical oxygen demand) from wastewater	Water purification services	Ecosystem accounting area	Ecosystem type, type of pollutant	Tonnes
Number of properties/ km of coast/shoreline/riparian zone protected; change in degree of risk	Flood mitigation services	Ecosystem accounting area	Ecosystem type	Count/km
Number of tourist/recreation visits	Recreation-related services	Ecosystem accounting area	Ecosystem type	Count

Potential indicators on monetary ecosystem services flows account and ecosystem asset accounts

Monetary indicators	Further description	Spatial unit	Disaggregation	Unit of measurement
Gross Ecosystem Product (GEP)	The economic value added of all ecosystem services generated	Ecosystem accounting area	Ecosystem type, ecosystem services classes	Local currency
Value of ecosystem services linked to industry value added	Value added of industries with direct inputs of ecosystem services	Ecosystem accounting area	Ecosystem type	Percentage
Monetary ecosystem asset value		Ecosystem accounting area	Ecosystem type, per capita by administrative areas, planning areas	Local currency
Ecosystem asset value as a percentage of total national wealth		Ecosystem accounting area	Ecosystem type	Percentage
Cost of degradation		Ecosystem accounting area	Ecosystem type, per capita by administrative areas, planning areas	Local currency

SEEA EA and indicator framework

- Highlight the linkage of SEEA EA and global indicator monitoring frameworks
 - Post-2020 Global Biodiversity framework
 - Sustainable Development Goals
- Introduce additional initiatives and applications where SEEA EA could potentially support
 - National indicator initiatives
 - Land Degradation Neutrality
 - Intergovernmental and Science Policy Platform on Biodiversity and Ecosystem Services (IPBES)
 - RAMSAR Convention on Wetlands
 - The Group on Earth Observation – Biodiversity Observation Network (GEO BON)
 - Biodiversity Finance Initiative (BIOFIN)
 - Inclusive Wealth
 - Scenario analysis

Questions for discussion

- Prioritization of indicators and feasibility assessment

- One of the basic premise of the chapter is the importance of a **limited set** of indicators that are **feasible** for countries to compile. Do the proposed indicators satisfy the feasibility requirement?
- Another importance premise is **relevance**. Are the proposed indicators considered as highly relevant to address the current global/national concerns
- It was also suggested that representativity is another important principle, where the proposed indicators should represent the attribute for the whole population. Are the proposed indicators considered as **representative**?
- One of the value of SEEA EA is on **linking the state of ecosystem with socio-economic information**. Any additional suggested indicator from the core accounts that can amplify this linkage?
- Based on above, suggestion on proposed indicators from the core accounts that are considered as **priority for compilation and dissemination**
- In the light of our discussion what changes might be made to the draft text in the SEEA EA?

Further discussion questions

- What is the **suggested frequency** for the compilation and dissemination of the proposed indicators (seasonal, annual, longer time interval)?
- For indicators that measures change, how to determine the **opening stock** (last year or a reference year)?
- What is the appropriate **scale** for reporting (integrated national, EAA like catchment area, finer scale)?
- Could the proposed indicators be compiled using **national data sources**?
- What are the potential and limitation in using **earth observation data** for indicator compilation?



THANK YOU

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