Monetary ecosystem accounts - Session: guidelines to support SEEA EA implementation

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Outline

- Perspectives on monetary accounts from SEEA EA, proposed EU Regulation
- Joint NCAVES-MAIA Technical report on monetary valuation
- Use of monetary accounts in policy making

Objectives of monetary valuation in SEEA EA

- **Objectives of SEEA EA monetary accounts:**
  - **Statistical standardization /comparison purposes**: ecosystem services and ecosystem assets consistent with standard measures of products / assets in national accounts
    - Need to follow valuation principles of SNA:
      - exchange value,
      - ecosystem services treated similarly to unpaid household work
  - **Decision-support purposes**:
    - make contributions of nature visible to the economy and people
    - better record of the impacts that economic and other human activity have on the environment
- **Problems encountered when developing SEEA EA**:
  - Interpretation of how SNA valuation principles apply when valuing ecosystem services in **non-market** situations

Monetary valuation accounts in SEEA EA Chapters 8-11

- **SEEA Ecosystem Accounting adopted in March 2021**
  - > Chapters 1-7 with conceptual framework and physical accounts as **statistical standard**
  - > Chapters 8-11 recognized as describing **internationally recognized statistical principles and recommendations** for the valuation of ecosystem services and assets **in a context that is coherent with the concepts of System of National Accounts**
  - > Requested the Committee to promptly resolve the outstanding methodological aspects in chapters 8–11 as identified in the research agenda.

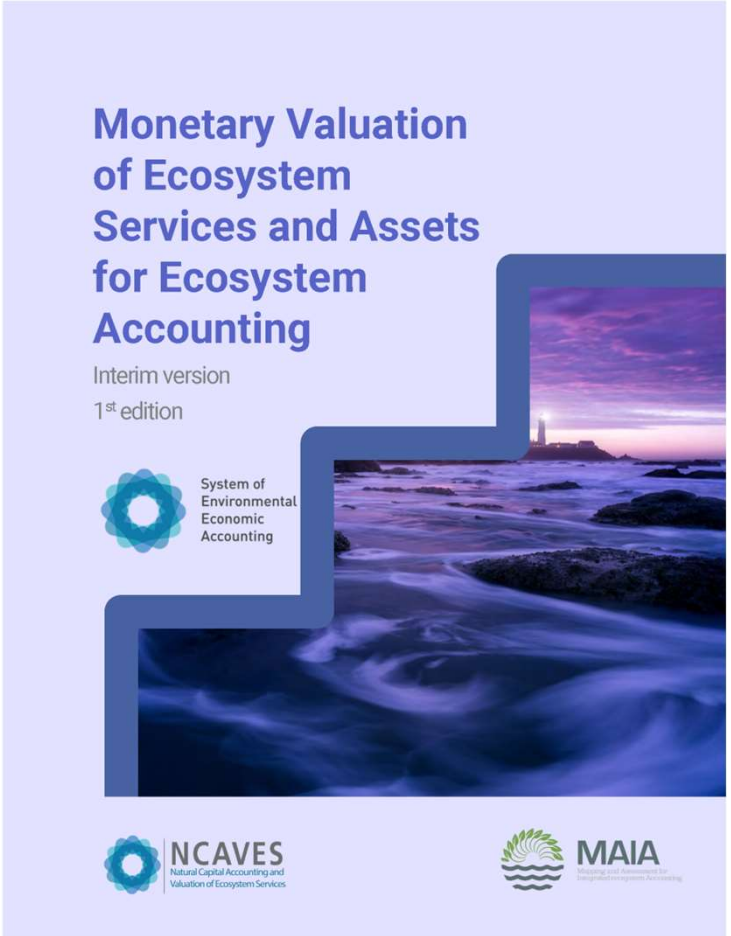
Monetary ecosystem accounts are not yet a reporting requirement in proposed EU regulation

‘4a.The Commission (Eurostat) shall carry out a **methodological and feasibility study on the monetary valuation of ecosystem services**. Based on the results of this study, the Commission may supplement this Regulation in order to define, by means of a **delegated act**, for which of the ecosystem services already included in the reporting tables in section 5 of Annex IX monetary values shall be reported, the first reference year as well as a list of **acceptable methods** for establishing these monetary values.’;

Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) No 691/2011 as regards introducing new environmental economic accounts modules

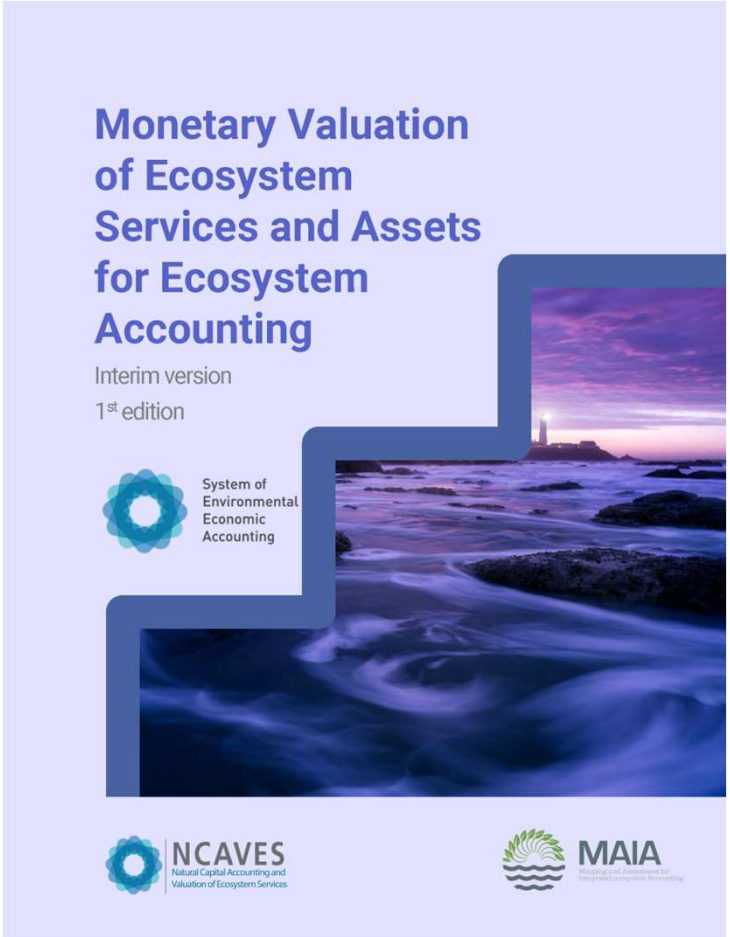
NCAVES MAIA Technical report on valuation

- **Support SEEA EA implementation in countries**
- **Technical report – (not guidelines)**
  - > Addresses demand in short term for those who wish to undertake monetary valuation in context of SEEA EA
  - > Joint output of NCAVES and MAIA projects (not a UN document)
- **Interim status - work will continue**
  - > Thematic WGs on forest, oceans etc.
  - > SNA revision process:
    - Well-being and sustainability task team
  - > WG on SNA valuation principles
  - > In context of private sector initiatives (corporate NCA)
    - Task Force on Nature Risk Financial Disclosure (TNFD)



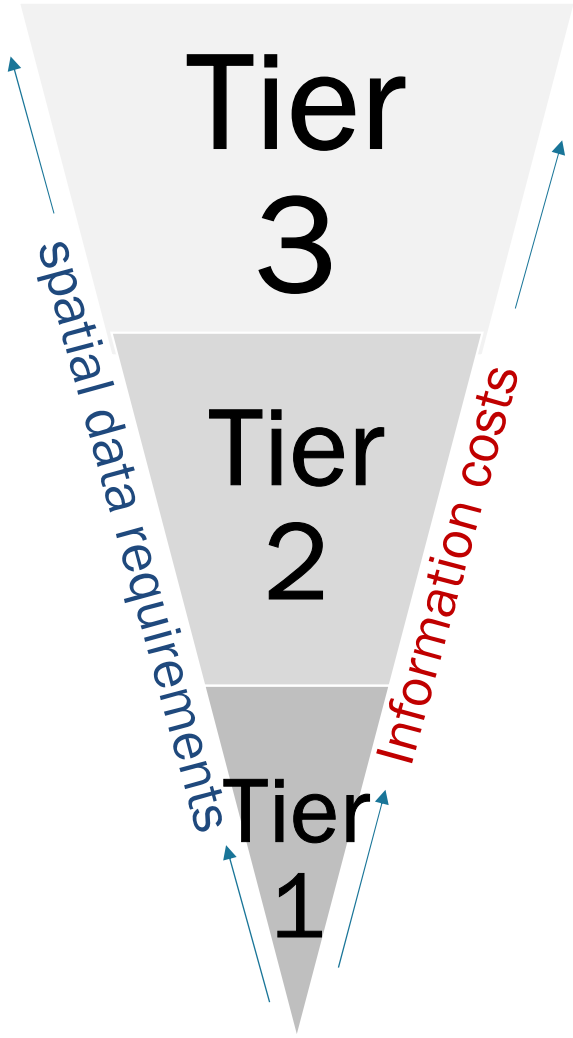
Valuation report – outline

1. Introduction
2. Foundations
3. Valuation methods
4. Valuing ecosystem services
    1. *Method tiers for each ES*
5. Valuing ecosystem assets
6. Other considerations
    1. *Value transfer*
    2. *Platforms and tools*
    3. *Aggregation*
    4. *Communicating values*



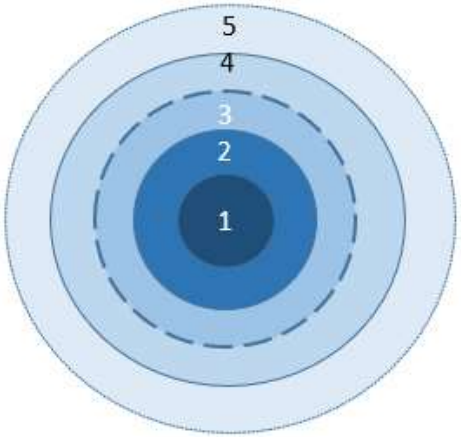
Tiered approach to valuation method selection

- **Tiered approach to valuing ES taking into account**:
  - > Overall preference order for valuation method types' approximation to exchange value recorded in the SNA
  - > Whether the ES contributes to SNA benefits or non-SNA benefits.
  - > Expected accuracy and spatial resolution – Tier 2-3 methods usually require better data availability.
- **Record the most conservative / lowest value** of methods available in account
- Supplementary information **reports on the range of values** due to
  - > Inaccuracies of data across Tier 1 to Tier 3 methods
  - > Sensitivity analysis of different method assumptions



Examples of tiered selection of valuation methods by ecosystem service and 'proximity' to SNA recorded benefits

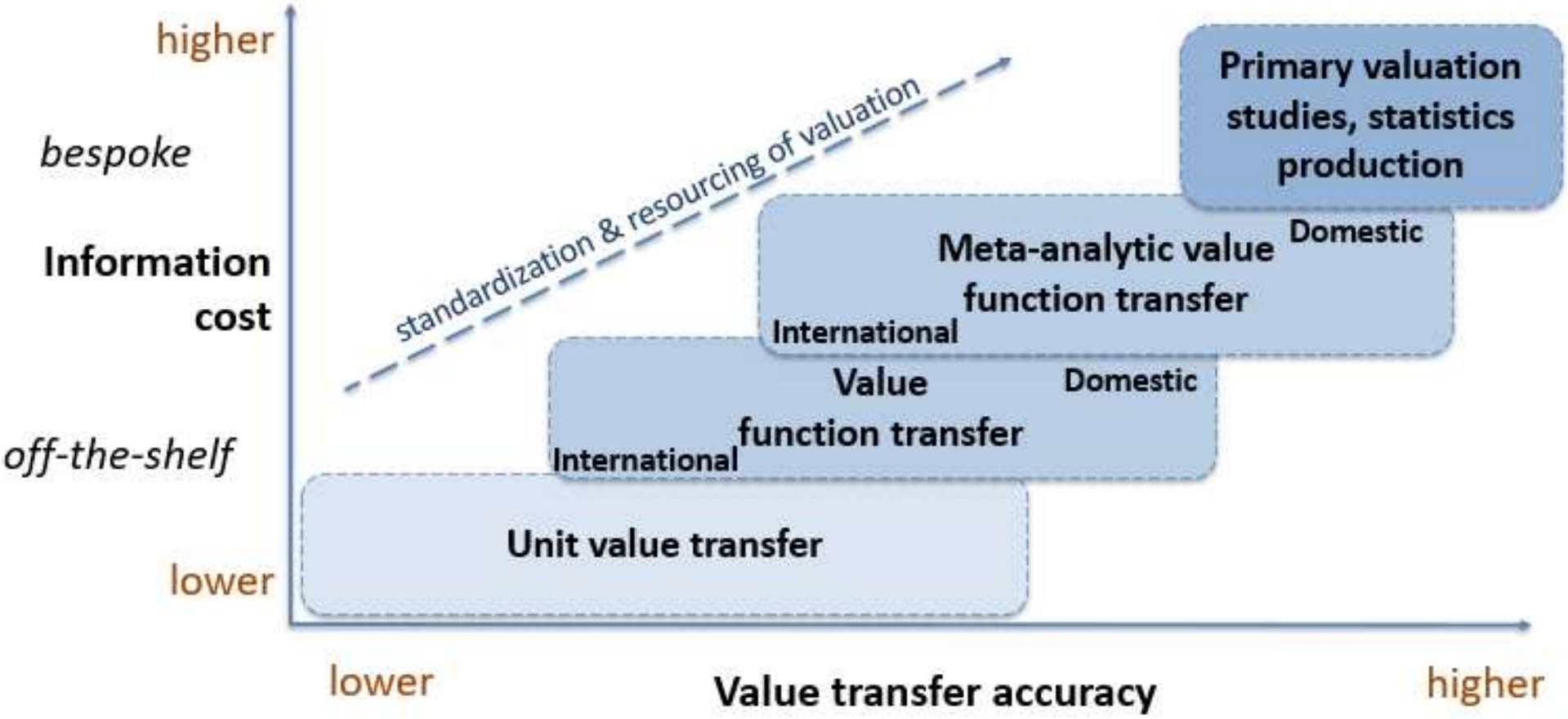
Proximity to benefits recorded in SNA



SEEA EA order	SEEA EA Category of method	Methods
1	**Prices are directly observable**	Market prices
2	**Prices from similar markets**	Similar markets
3	**Prices embodied in market transactions**	Residual value; resource rent
		Hedonic pricing
		Productivity change
4	**Prices from revealed expenditures on related goods and services**	Averting behaviour
		Travel expenditure
5	**Prices from expected or simulated expenditures or expected markets**	Replacement cost
		Avoided damage cost
		Simulated exchange value

Crop provision	Air filtration	Recreat-ion
Tier 3		Tier 1
Tier 1 Tier 2		
Tier 3		
	Tier 1	
		Tier 2
	Tier 3	
		Tier 3

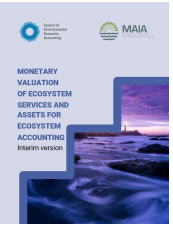
Get monetary accounts started with value transfer, moving in time to statistics production



Communicating differences between approaches using consumer surplus and non-use values, or estimates of economic value and SEEA EA exchange values

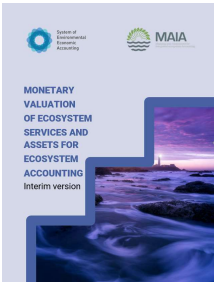
- ***Netherlands*** (Horlings et al. 2020)***:*** aggregate ecosystem service ***exchange values*** for 2015 of 13,0 billion Euro/yr. or ***1.9% of NL GDP*** (using a broad valuation scope)
- World Economic Forum (2020): using a ***Gross Value Added*** approach, half of the world's GDP is moderately or highly dependent on Nature ($44 trillion)
- Costanza et al. (2014) - based on value transfer including ***welfare value estimates*** - suggests that ecosystem services provide benefits of USD 125-140 trillion per year. ***150% of global GDP***

Conclusions on communicating monetary ecosystem accounts in policy contexts



- Exchange values have ***particular applications*** that are different from applications that require the use of wider economic values or which use alternative assumptions
- ***Exchange values will not reflect the full importance of ecosystems for people and the economy***.
- Values in monetary ecosystem accounts are generally ***limited in their scope to use/instrumental values***.
- ***Exchange values do not capture the potential or capacity of ecosystems*** to generate or sustain values under alternative management arrangements.
- A ***range of both monetary and non-monetary metrics*** are needed to assess the importance of ecosystems - such assessments may not require compilation of ecosystem accounts in monetary terms.
- when monetary accounts are released, the ***associated data on*** changes in ecosystem extent and condition and flows of ecosystem services in physical terms ***should also be released***.Necessary for appropriate interpretation and application of the monetary data in policy and decision-making

Research agenda: Demonstrate the use of monetary accounts for different purposes



Awareness raising

- ***comparing the values of environmental assets*** (including ecosystems) with other asset types (e.g., produced assets) as part of extended measures of national wealth;
- ***highlighting the relevance*** of non-market ecosystem services (e.g., air filtration);
- ***assessing the contribution*** of ecosystem inputs to production in specific industries and their supply chains;
- ***improving accountability and transparency*** around the public expenditures on the environment by recognising expenditure as an investment rather than a cost;

Change detection and impact

- ***evaluating trends*** in measures of income and wealth;
- ***deriving complementary aggregates*** such as degradation adjusted measures of national income;
- ***assessing*** financial ***risks*** associated with the environment; and

Priority-setting

- ***comparing the trade-offs*** between different ecosystem services through consideration of relative prices;

Policy instrument design

- ***providing baseline data*** to support scenario modelling and broader economic modelling;
- ***calibrating the application*** of monetary environmental policy instruments such as environmental markets and environmental taxes and subsidies

MAIA
Mapping and Assessment for
Integrated ecosystem Accounting

Thank you

Mapping & Assessment for Integrated ecosystem Accounting
Road Name, City Name, Post Code, Country
http://maiaportal.eu/

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