System of Environmental Economic Accounting

Key issues in the valuation of ecosystem services for ecosystem accounting

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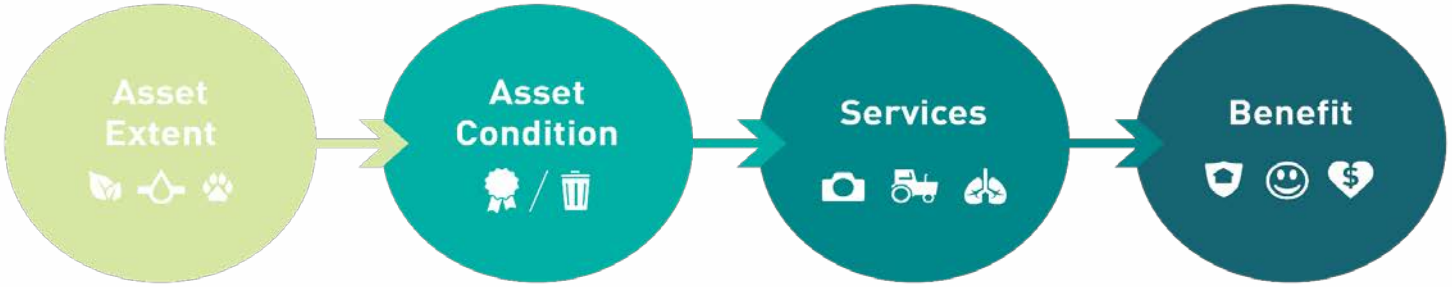
United Nations

Recapping the SEEA & ecosystem accounting

SEEA

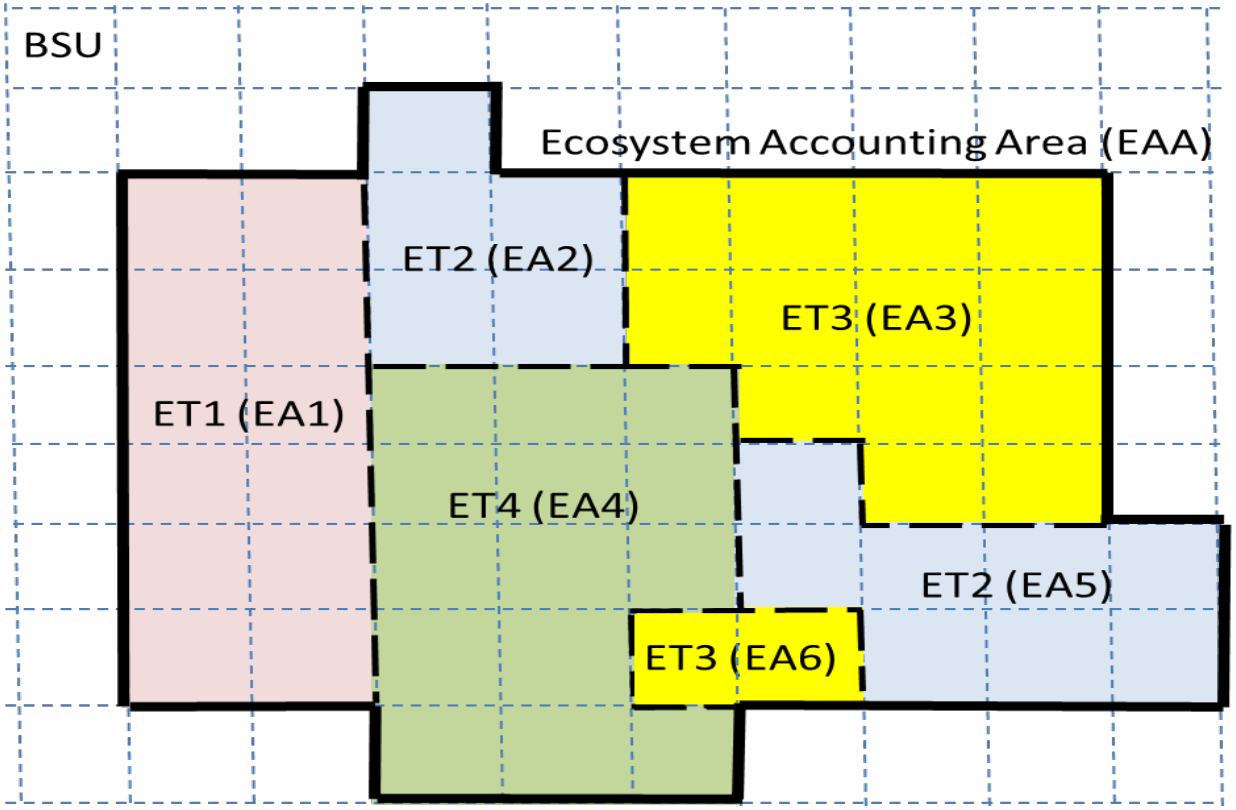
SEEA Framework

Core ecosystem accounting model



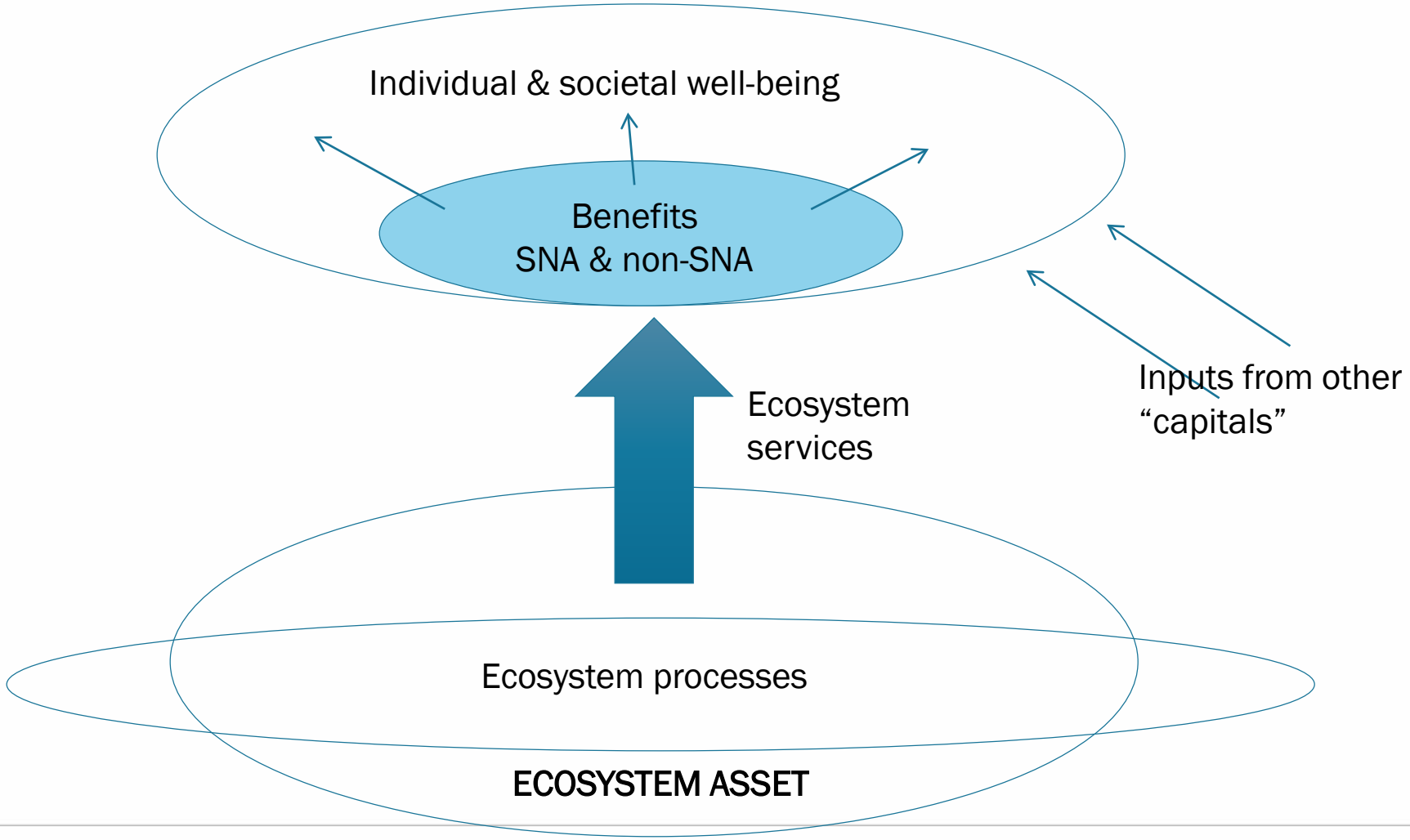
- Single asset framework applied to different landscapes and ecosystem types
- Assess impact of human activity on asset extent and condition
- Asset condition influences the production of ecosystem services
- Ecosystem services provide economic and social-wellbeing benefits

Delineating spatial units



Stylised presentation of six separate Ecosystem Assets (EA) of four different Ecosystem Types (ET)

Stocks & flows in ecosystem accounting



Valuation context

Context for a SEEA valuation approach

- Main aim in valuation is integration with national accounting values of production, income, consumption and assets
- For integration, need to apply a valuation concept that is consistent – i.e. exchange values or transaction prices
- Recognise other purposes and frameworks for valuation
  - Social cost-benefit analysis
  - Externality assessments
  - Inclusive wealth / green accounting
- SEEA based valuation should be a complement among valuations much as national accounting estimates complement other economic valuation work
- One part of the valuation challenge has been a lack of ongoing dialogue between the national accounts community and those leading the work on valuation in environmental economics and in wealth accounting

Accounting concepts

Key concepts in valuation

Accounting has a focus on recording transactions between units

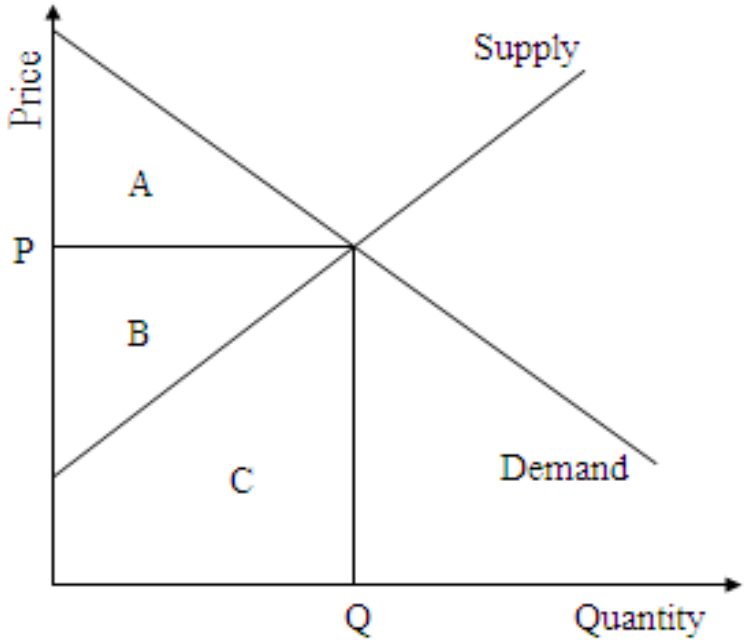
Types of transactions in SNA

- Monetary
- Non-monetary
- Imputed

Defining ecosystem services

- Ecosystem services as products that are transacted
- Ecosystem services are not the same as benefits
- Challenge of establishing quantification of service
- Coverage of final and intermediate services

Exchange values



Links to

- Market prices
- Welfare values and consumer surplus
- Shadow / “accounting” prices

Valuing non-monetary transactions

In SNA use

- Market price equivalent / similar markets
- Cost of production

Connection to ideas of Nordhaus – near and far market values

Methods considered to date for ecosystem accounting

- Resource rent, production function, hedonics
- PES and environmental markets
- Replacement cost, damage cost, averting behavior
- Travel cost
- Restoration cost
- Stated preference
- Simulated exchange values

Using channels of ecosystem services (from Freeman)

- Inputs to production, household consumption & well-being
- Consider both type of services and user characteristics

Key Issues in the Valuation of Ecosystem Services

SEEA

General issues

Placing exchange values in context

- Clarifying the policy and analytical question and matching valuation requirement with appropriate concept and method
- Considering potential of complementary accounts
- Ensuring connection to non-monetary valuation

Broad conceptual challenges

- Determining extent to which different valuation methods can be used to estimate exchange values
- Describing and determining the institutional and other economic assumptions that should underpin exchange values for accounting purposes
- Treatment of non-use values

Specific issues

Measuring exchange values for provisioning services where resource rents are low or negative

Potential of cost-based approaches

- Appealing to accountants but mixed views among economists
- Distinguishing cost of securing benefits from cost of supplying service
- Distinguishing costs already recorded in the accounts in the valuation of ecosystem services (e.g. travel costs)

Potential of simulated exchange values and using marginal values from demand functions

Use of prices from PES schemes and environmental markets

Linking the value of ecosystem services to human health outcomes

Expectations and Hopes

Mature conversation and improved understanding of different perspectives, finding a common language

Willingness to consider and communicate the basics, not only the leading edge

Insights and the identification of common ground

Clarification and prioritization of the conceptual issues and optimal research pathways

Narrowing the field of potential valuation approaches and common understanding of why

THANK YOU

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