Discussion on Chapter 2

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Expert workshop, Melbourne, May 2012
Papers

• Draft Chapter 2, dated 11 May 2012
• Two options (Mark, Bram)
Objective of chapter

• Chapter 2 presents the model of ecosystem operation that underpins the accounting framework and places into context ecosystems, ecosystem services, ecosystem stocks, condition and capacity and ecosystem degradation. These various elements are subsequently described in greater detail in later chapters.

• Chapter 2 also discusses the definition of statistical units for ecosystems that become the focus for measurement and accounting and outlines some general measurement issues that apply to all areas of ecosystem accounting.

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Objectives of ecosystem accounts

• Organising information by developing conceptual linkages between ecology, economics and statistics
• Identifying information gaps and key information requirements
• Consistent application of a common concepts and terminology
• Allowing connections to be made to environmental/economic information
• Permitting integration with the standard national accounts to aid the measurement of the production and consumption of ecosystem services, the attribution of the degradation of ecosystems to economic units, the recording of expenditure by economic units on the maintenance and restoration of ecosystem, and the development of wealth accounting.

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Structure of chapter

• Key conceptual relationships in ecosystem accounting (see schema)
• Statistical units for ecosystem accounting
• General measurement issues in ecosystem accounting
  – ecosystem dynamics; integration of information across different spatial scales; timing issues; reference points
• Relationships to the SEEA Central Framework and the SNA (not yet drafted, except for brief earlier discussion)

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Coverage

• What’s missing:
  – SNA, SEEA links
  – Internal monetary accounts, payments for ecosystem services

• What to leave for later discussion:
  – Capacity accounts (Chapter 4)
  – SNA links (Chapter 5)
Schematic

- Inputs used in obtaining benefits (e.g. labour, produced assets)
- Socio-economic & cultural conditions (incl population)

Ecosystem services

Generation of benefits

Returns

External impacts

Material & Non-material Benefits

Other ecosystems

Inputs used in managing the ecosystem

Ecosystem
Alternative: the cascade schematic

Critical levels of natural capital?

Biophysical structure or process (e.g. woodland habitat or net primary productivity)

Function (e.g. slow passage of water, or biomass)

Service (e.g. flood protection, or harvestable products)

Benefit (e.g. contribution to aspects of well-being such as health and safety)

Value (e.g. willingness to pay for woodland protection or for more woodland, or harvestable products)

Limit pressures via policy action?

Σ Pressures

Source: R Haines-Young

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Ecosystem services definition

- *Ecosystem services are the biophysical contributions of the ecosystem to the generation of material and non-benefits for enterprises, households and governments.*
- The contributions made by ecosystems to the generation of both the material and non-material benefits are referred to as ‘ecosystem services’.

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Reference condition

• Measures of the condition of an ecosystem at a particular point in time necessarily require an assessment of the ecosystem in relation to either another ecosystem or, more commonly, in relation to the condition of the same ecosystem at an earlier point in time.
Accounting issues

• Emphasis on cultivated/non-cultivated assets or material/non-material benefits
• Links to economic units (Mark/Bram - Mother Nature)
• Land cover classification for carbon accounting
• Time periods
• Statistical units

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Summary

- Do you agree with main objectives of ecosystem accounts?
- Is the conceptual model clear enough and sufficient? In particular do we have clarity on terminology and treatment of supporting and final services?
- Does there need to be a clearer distinction between physical and monetary accounting?
- Is the discussion on flows and stocks balanced?
- SEEA/SNA links – how far to cover in this chapter?
- Clarity on spatial scales – is it possible?
- Accounting issues
  - Links to economic units
  - Statistical units for marine
  - Land cover classification for carbon accounts
  - Reference points for condition
  - Time periods

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