

Expert Meeting on Ecosystem Accounts

Melbourne, Australia

16-18 May 2012

<http://unstats.un.org/unsd/envaccounting/seeaLES/egm2/lod.htm>

SEEA Experimental Ecosystem Accounts (SEEA Part 2)

Draft Outline

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16 April, 2012

Background

The following outline has been developed building on earlier discussions on the possible content of SEEA Part 2, discussion at the 1st meeting of the Editorial Board for SEEA Part 2, and a subsequent round of feedback from Editorial Board members. It covers all of the 10 key measurement issues that have been set out in relation to ecosystem accounts. (The measurement issues are listed at the end of this note).

Based on discussion at the Editorial Board it was confirmed that all of the issues that were considered to be in scope of SEEA Part 2 have been identified. Nonetheless, it is likely that further development of the content and structure through the process of drafting and consultation will occur. Hence this document represents a starting point for the organisation and coverage of relevant text.

It is intended that this draft of the outline will be presented and discussed again at the Ecosystem Accounts Expert Group meeting to be held in Melbourne from 16-18 May, 2012. The focus of that discussion is to allow any clarification of intended content and to identify any potential missing areas.

SEEA Experimental Ecosystem Accounts: DRAFT OUTLINE

Chapter 1: Introduction

Context, purpose and motivation for SEEA Part 2

Incl links between ecosystem accounts in SEEA compared to local approaches and broad global approaches (such as TEEB)

Ecosystem accounts policy applications and relevance (incl. links to sustainability) (covered by Issue 1)

Links to SEEA Parts 1 & 3

Chapter 2: Ecosystem accounting structure

Definition of ecosystems and ecosystem services

Relationships between ecosystem structures, functions, services and benefits

Basic model of relationships between ecosystem services and ecosystem stocks, condition and capacity

Classification of ecosystem services

Relationships between ecosystems, hydrological networks, the atmosphere, sub-soil resources

Statistical units (covered by Issue 3)

Structure of land cover and ecosystem accounting units

Geographical boundaries (incl treatment of coastal and marine environments)

Classifications of ecosystem accounting units

Relationship to economic and administrative units

Accounting structures (covered by Issue 2)

Ecosystem service flow accounts

Asset accounts

Sequence of accounts

Key measurement issues

Integrating information across different spatial scales

Time of recording and length of accounting period

Baselines and reference points

Degradation and depletion

Constructing index numbers

Relationships to SEEA Part 1 and SNA

Link to production boundary and physical flows

Link to individual environmental assets

Links to business accounting

Chapter 3: Accounting for flows of ecosystem services in physical terms

General principles in measuring ecosystem services

- Measurement scope for different types of services

- Quantitative and qualitative measures

- Criteria for selecting most relevant ecosystem services (covered by Issue 9)

Measurement techniques for selected ecosystem services

- Provisioning services

- Water supply

- Carbon sequestration

- Air filtration

- Tourism and recreation

- Coastal protection

- Erosion and sedimentation control

- Amenity, cultural and social benefits

Chapter 4: Accounting for ecosystem stocks in physical terms

Key concepts

- Concepts of stock, condition and capacity of ecosystems

- Relationship to degradation

- Relationship to resilience

Component based approaches to measurement

- Description of general approach

- Selection of relevant components

- Use of quantitative and qualitative information

Description of specific components

- Land use/land cover change accounts

- **Components to be determined (possible inclusions carbon, water, biodiversity, soil, timber)

Summary measures of ecosystem capacity (covered by Issue 7 & 2)

- (Possible reference to EEA and Wentworth Group approaches)

Related accounts

- Carbon accounts (covered by Issue 4)

- Biodiversity accounts (covered by Issue 6)

Chapter 5: Approaches to valuation for ecosystem accounts (covered by Issue 10)

Explanation of SNA valuation principles

- Valuation of market and non-market production

Links to consumer surplus, welfare, etc
Valuation of flows, assets, changes in assets
Relationship between prices and values

Approaches to valuation

Net Present Value NPV (resource rents, discounting)
Restoration cost & Damage avoidance approaches

Valuation techniques

Techniques for valuation of ecosystem services
(provisioning, regulating, cultural)
Techniques for the valuation of ecosystems

Challenges of measurement and interpretation (incl. valuing ecosystems under uncertainty, complex ecosystem dynamics)

Chapter 6: Accounting for ecosystems in monetary terms (covered by Issues 2 and 10)

Uses of estimates in monetary terms

Integration of ecosystem accounts and economic accounts in monetary terms

Sequence of accounts and recording degradation

Aggregate measures (Degradation adjusted measures of income and saving)

Relationship to SNA balance sheets and wealth accounting

Treatment of taxes, subsidies and other transactions related to ecosystems

Incl payments for ecosystem services, links to environmental protection and resource management accounts

Annexes

List of references

List of issues for SEEA Experimental Ecosystem Accounts

1. Policy applications
2. Structure of accounts
3. Land cover mapping, land cover classifications and accounting units
4. Carbon accounts, Nitrogen and Phosphorous balances, and Soil accounts
5. Landscape accounts and landscape ecological potential
6. Biodiversity accounts and indexes
7. Ecosystem health/Total ecological potential
8. Classification of ecosystem services

9. Prioritisation of ecosystem services
10. Principles of monetary valuation