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Millennium UN Plaza Hotel - Manhattan Room

VALUATION OF ECOSYSTEM BENEFITS AND DAMAGES IN THE SEEA
PROGRESS REPORT

Paper prepared by the World Bank

(for discussion)

Valuation of ecosystem benefits and damages in the SEEA
Progress Report

A meeting was held to develop a Scope of Work for addressing valuation of ecosystem benefits and damages on June 10, 2009 at the World Bank

Attending:

Giles Atkinson, LSE (by videoconference)
Jeffrey Vincent, Duke University (by teleconference)
Charles Perrings, University of Arizona
Ivo Havinga, UN Statistics Division
Alessandra Alfieri, UN Statistics Division (by teleconference)
Kirk Hamilton, World Bank
Glenn-Marie Lange, World Bank
Giovanni Ruta, World Bank

The group agreed that the report will address both assets and services, integrating, to the extent possible, balance sheets with the income & product accounts.

In the discussion, the group agreed on the following broad outline for the report:

Chapter 1. Conceptual framework and classifications

This chapter will present the overall conceptual framework and develop classification schemes for ecosystem services and ecosystem assets.

The starting point for ecosystems accounting is the Millennium Ecosystem Assessment framework with its broad categories of ecosystem types and services: Provisioning, Regulating, Supporting and Cultural/recreation services.

Classification of ecosystem services
Within the broad categories of ecosystem services, the MA drew up a more detailed list of services. Charles Perrings pointed out that the MA list of ecosystem services was developed in a rather ad hoc way and could be improved. TEEB is working on a more operational list of ecosystem services, working from the MA list.

A table with the classification of services should also indicate if they are already included in the SNA, explicitly or implicitly, and whether they are used as intermediate inputs to production or as final products. This will help identify the valuation issues that arise.

Classification of ecosystem assets
Classification of assets is a bit more complicated for a number of reasons: ecosystems as defined in the MA are overlapping, and ecosystems actually consist of a portfolio of assets embedded within a single ecosystem. The delivery of a service relies on a portfolio of assets, rather than a single asset.

Chapter 2. Concepts of value

Many techniques for valuation of non-market services have been developed for cost-benefit analysis and often attempt to measure economic welfare which includes consumer surplus. (Note: the accounting community has a different understanding of the term welfare and this will have to be carefully explained.) The SNA uses market price for valuation, which is based on marginal value and excludes consumer surplus.

The purpose of this chapter is to identify techniques that can provide SNA-consistent values, and more broadly, to focus on how accounting can be informed by environmental economics. How can welfare economics contribute to accounting?

To the extent that ecosystem services are already included in the national accounts, the valuation task will be to 'disentangle' the value of ecosystem services from the product which embodies it. Where ecosystem services are not included in national accounts, the issue is whether they should be, and how they can be included in a manner consistent with SNA valuation.

A detailed description of valuation techniques should be put in an annex.

Some specific issues were raised for discussion

- Additionality
- Passive uses/biodiversity, how far to go with valuation if services are not yet marketed and only welfare measures are available?
- Valuing ecosystem services where financial payment systems are emerging, e.g., payments for ecosystem services, voluntary payments made for CO2 offsets, etc. These transactions are already included in the SNA and, in principle, are identified in part of SEEA Volume I, Environment-related transaction. However, their treatment in Volume I is rather limited in that it is not a theoretically derived attempt to understand the value of ecosystems or their services.

Chapter 3. Specific valuation issues

While Chapter 2 discusses general issues of valuation and valuation techniques, Chapter 3 should provide more detailed treatment for specific ecosystem services and damages. Of particular interest are those for which consensus for valuation is likely to emerge soon, because these are candidates for moving into the SEEA Standard.

Inclusion in the statistical standard requires agreement on methodology and availability of data for implementation by national statistical offices. For example, damage to human health from certain air pollutants is a good candidate for the statistical standard because there is general agreement on methodology and the data necessary for valuation are widely available. By contrast, there is general agreement on methodology for the value of water or the cost of soil erosion, but the data requirements for estimation are very large and will not be available in many countries. This is often the case for ecosystem services (or loss of services) where the value is highly site specific.

Policy relevance is also important. While the choice of issues to address should not be driven only by what is currently policy-relevant, it is necessary to respond to the demands by policy-makers for statistical support, e.g., if issues related to carbon and GHG are not adequately accounted for in Volume I, then it would be important to propose an accounting approach in this work. Since the SEEA, like other statistical handbooks, is always revised, the specific issues addressed can always be changed to address current priorities, as long as the underlying concepts are correct.

Several aspects of valuation need to be addressed

- Accounting issues related to Human Capital require that this form of capital be addressed. While it is beyond the scope of the SEEA to take on accounting for human capital, a review of work on human capital should be included.
- Accounting for publicly owned land, not included in the SNA
- Valuation of transboundary ecosystems
- Assets in the global commons

The group did not set priority ecosystem services for chapter 3.

Chapter 4. Macroeconomic aggregates and indicators

This chapter would describe the macroeconomic aggregates and indicators that are obtained from the accounts, and more generally address the policy uses of the accounts.

The SEEA editor may eventually decide to move parts of this discussion elsewhere, to fit the overall structure of the SEEA.

Chapter 5. The way forward

The accounts included in Volume II are those for which there is no consensus yet on the methodology. The objectives are

- To provide guidance for those national statistical offices that want to start implementing valuation of ecosystem services
- To identify the research necessary to create consensus and to move the accounts discussed here into the statistical standard.

Timeline

June 24-26, 2009:	Present Draft SOW to UNCEEA
Late June 2009:	Circulate draft SOW to larger Technical Experts Group
July 2009:	Prepare final SOW and begin work on papers
November 2009;	Present the final SOW at the London Group meeting
Early 2010:	Draft a paper on valuation & circulate to Technical Advisory Group
Spring 2010:	Convene meeting of the Technical Advisory Group to discuss the draft paper;
Late 2010:	Finalize the paper