Forum of Experts in SEEA Experimental Ecosystem Accounting

28 - 30 April, 2015
New York, United States

Concept Note

Background

1. The System of Environmental-Economic Accounting 2012 - Central Framework (SEEA Central Framework) was adopted by the United Nations Statistical Commission as the international statistical standard for environmental-economic accounting. It is a multipurpose statistical framework for describing the interaction between the economy and the environment and for describing stocks and flows of environmental assets. The SEEA Central Framework is complemented by the System of Environmental-Economic Accounting 2012 - Experimental Ecosystem Accounting (SEEA Experimental Ecosystem Accounting). SEEA Experimental Ecosystem Accounting offers a synthesis of the current knowledge in ecosystem accounting and serves as a platform for its development at national and sub-national levels. It provides a common set of terms, concepts, classifications, and an integrated accounting structure for measuring ecosystem services and ecosystem condition in both physical and monetary terms.

2. The United Nations Statistical Commission at its 44th session considered the SEEA Experimental Ecosystem Accounting as an important step in the development of a statistical framework for ecosystem accounting and encouraged its use by international, regional agencies and countries wishing to test and experiment in this new area of statistics. The Commission also considered a draft research agenda to advance the SEEA-EEA and requested the United Nations Committee of Experts on Environmental-Economic Accounting (UNCEEA) to develop a medium-term programme of work in this area. In taking these steps the Commission recognized the growing policy demand for information about ecosystems and the linkages to economic and other human activity. At the same session the UNSC endorsed the research agenda associated with the SEEA Experimental Ecosystem Accounting. At the 45th session, the UNSC agreed with the UNCEEA proposal to establish a technical committee to take on the task.

3. The paper "Programme of work for the SEEA Experimental Ecosystem Accounting" was presented in the Ninth meeting of the UNCEEA in 2014 for discussion. The UNCEEA expressed strong support for testing and experimentation in ecosystem accounts using SEEA Experimental Ecosystem Accounting and agreed on a set of priorities for the research agenda, identifying the short-term priorities as: (a) delineation of spatial units and associated classifications, including method for geo-spatial linking of environmental and socio-economic data; (b) methods to measure ecosystem services and ecosystem assets in physical term; (c) presentation of structure, including structure of the tables and relevant indicators

that can be derived from the accounts; (d) valuation of ecosystem services, and (e) Integrated accounting issues such as accounting concepts, connection between ecosystem services and ecosystem condition, and aggregation and ecosystem-wide indicators.

4. The relevance and utility of SEEA Experimental Ecosystem Accounting is evident. In particular its ability to inform the post-2015 development agenda and Sustainable Development Goals (SDGs) monitoring process was recognized considering its features of integrating in a common approach different information on economic, social and environmental aspects. Ecosystem accounting information can be used to evaluate a number of policy issues including: the overall degradation of ecosystems stemming from economic and other human activity; the potential for alternative patterns of production, consumption and accumulation; alternative sources of energy and other resources and the extent of decoupling of economic growth; the effectiveness of resources spent to restore and enhance ecosystem; and more generally the trade-offs between the different baskets of ecosystem services that arise from alternative uses of ecosystems.

5. SEEA has also been recognized as the main statistical framework for ecosystem accounting in various international and regional policy initiatives. These include, but are not limited to, the World Bank-led Wealth Accounting and the Valuation of Ecosystem Services (WAVES) partnership, the Valuation and Accounting of Natural Capital for Green Economy initiative launched by the United Nations Environment Programme (UNEP), the EU project on Mapping and Assessment of Ecosystems and their Services (MAES), the Convention on Biodiversity Aichi Biodiversity Target 2 and the UNEP-led initiative on the economics of ecosystems and biodiversity.

6. The SEEA Experimental Ecosystem Accounting provides the conceptual framework for ecosystem accounting. However, it provides little guidance on how to implement the accounts. Several issues identified in the research agenda are closely related to measurement issues; therefore the advancing of the research agenda and the testing of the SEEA Experimental Ecosystem Accounting will proceed simultaneously.

7. In 2014, UNSD, UNEP and CBD launched a project to advance the System of Environmental-Economic Accounting (SEEA) Experimental Ecosystem Accounting. The project, supported by funding from the Government of Norway, aims at assisting pilot countries to make an assessment of policy priorities and data availability and develop a programme of work on the testing of selected modules of the SEEA Experimental Ecosystem Accounting through building capacity and establishing inter-institutional cooperation in seven pilot countries (Bhutan, Chile Indonesia, Mauritius, Mexico, South Africa, Vietnam). The project is to deliver the following:
    - A Global Strategy for testing the SEEA-Experimental Ecosystem Accounting;
    - Guidance document on how to compile ecosystem accounting;
    - Training material;
    - Convening of a Forum of experts in ecosystem accounting;
    - Organization of a meeting linking business accounting with the SEEA
    - National assessments and programme of work (for the 7 pilot countries); and
    - Outreach & Communications.

Purpose: Forum of experts in SEEA Experimental Ecosystem Accounting

8. An Expert Forum will be established and meet in person on an annual basis to discuss progress of testing of the SEEA-Experimental Ecosystem Accounting and advance the research agenda as defined by the UNCEEA. The work of the group would lead to a large multi-stakeholder, international conference bringing together various stakeholders and communities is proposed to be held in 2016 with the objectives of:

    i. showcasing advances in research and testing on the SEEA-Experimental Ecosystem Accounting;
    ii. highlighting to the potential for more definite methods and guidelines;
    iii. providing recommendations for the revision of the SEEA Experimental Ecosystem Accounting.

9. The Forum is intended to discuss the guidance documents that have been drafted to advance the testing of the SEEA Experimental Ecosystem Accounting. The development of the guidance material has highlighted the tradeoffs associated with scale, scientific rigor (accuracy of the methods employed) and cost. For instance there are a number of high level national/global models that can be used to estimate carbon storage; however they are not suitable for use at the sub-regional and regional scale to estimate changes in carbon stocks associated with specific economic transactions. The forum will bring together experts, practitioners and statisticians to discuss these tradeoffs and make recommendations for more forward in testing them for ecosystem accounting.

10. Presentations and discussions will focus on the science and modelling methodologies that can be applied at different scales to meet the needs of ecosystem accounting at different scales (national, sub-national, regional, local). In the context of land, water, biodiversity and carbon the following topics will be discussed:

    i. Ecosystem accounting units – discussion of approaches and methods.
    ii. Ecosystem service classification and links to ecosystem condition
    iii. Ecosystem service modelling – methods used to estimate ecosystem services being provided by ecosystem assets
    iv. Ecosystem condition and capacity – examine the link between condition and capacity and how does this impact on the flow of future services

Organizers

11. The Forum will be organized by UNSD in collaboration with the United Nations Environment Programme, Secretariat of Conventional of Biological Diversity and the Government of Norway.

Participants

12. Participants in the meeting will include statisticians and experts in the area of ecosystem accounting, ecosystem modelling, spatial analysis of ecosystem services, and environmental and ecological economics. Representatives of pilot countries would also be in attendance.

Organization of the Forum

13. The Forum will be held in New York at the United Nations headquarters from 28-30 April 2015. The meeting will be held in English.

14. The Forum will consist of four main sessions as list above in Paragraph 10. Each session will:
    i) Present the current guidance material
    ii) Provide feedback and comment on the status of current guidance material
    iii) Discuss recommendations emerging from the guidance material and prioritize options for testing

15. The presentations and discussions for each session will cover key issues with reference to the guidance document of the SEEA Experimental Ecosystem Accounting. A portion of the session will consist of break-out groups discussing the issues in the context of land, water, biodiversity and carbon as applicable. Each of the break-out groups will report back to the plenary regarding the outcome and any recommendations from their focused discussions across these areas.

16. Fundamental to all accounting is the need for a clear framework to delineate accounting units. The challenge in ecosystem accounting is finding a match between ecological units and accounting units such that (dis)aggregation can occur systematically and the ecosystem services for each unit can be identified consistently. This session on ecosystem accounting units aims to review examples from ongoing activities, advance understanding of and provide recommendation on the techniques and information available to measure and classify areas of land and other spatial areas for the purpose of delineating and classifying spatial units for ecosystem accounting.

17. The importance to have a robust classification of ecosystem services that are exhaustive but flexible for the purpose of ecosystem accounting was recognized. The session on ecosystem service classification aims to discuss issues in classification of ecosystem services and their relationship with the functions and conditions of the ecosystems. The importance to have a robust classification of ecosystem services that are exhaustive but flexible for the purpose of ecosystem accounting was recognized. There are two clear challenges – 1) what is the boundary to define the services; and 2) What is the link between functions, conditions and services? This session aims to discuss alternative approaches and ideas in a common classification of ecosystem services, and to provide recommendation on specific classification issues to advance the development and application of classification of ecosystem services for ecosystem accounting

18. Many of the ecosystem services flows (water and air purification, carbon sequestration, waste assimilation etc.) are provided by ecological or bio-physical functions (evaporation, transpiration, recharge, runoff, carbon, biomass accumulation) that are difficult to observe and must be modelled. Modelling these processes has been occurring for decades but the challenge accounting brings is the need to understand data uncertainty (both input and output from models) and the appropriate scale at which the model can be applied and feasibly linked with economic transactions. This session on ecosystem modelling aims to discuss the progress of methods used to estimate ecosystem services being provided by ecosystem functions and assets with an objective to advance our understanding of the criteria to assess a model's ability to be used for the measurement of ecosystem services for ecosystem

accounting. The session will also evaluate a few selected models against a set of criteria including data input requirement to examine their suitability for accounting purpose.

19. Many ecosystems and their properties (including biodiversity) are linked with potential future services flows. Often such properties relate with resilience and adaptability in view of environmental change and can be characterized through asset condition and capacity. This session aims to review the advances of measurement and modelling techniques, examine the link between assets' condition and capacity and the impact on the flow of future services. The condition and capacity of ecosystem are explicitly linked but further work is required to ensure they are appropriately applied in an accounting context. The session on ecosystem condition and capacity will discuss what concepts of ecosystem capacity are relevant and how they might be measured, as well as identifying the main ecosystem characteristics for the measurement of ecosystem condition by different ecosystem types. The session will also evaluate a few selected models against a set of criteria including data input requirement to examine their suitability for accounting purpose.

20. In addition to the discussion of the guidance document, participants will also be presented with the latest information on the Global Strategy for testing the SEEA Experimental Ecosystem Accounting. Following the presentations, participants will have an opportunity to provide feedback and recommendations to the Global Strategy.

21. Participants will also have an opportunity to discuss and provide feedback on the research agenda of the SEEA Experimental Ecosystem Accounting and the Technical Guidance, and will be invited to share their experience or plans, as applicable, for the advancement of the research agenda of the SEEA Experimental Ecosystem Accounting.

22. The Forum will conclude with a summary that will serve as an input for the development of a more refined methods and guidelines in advancing the testing of the SEEA Experimental Ecosystem Accounting.