DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS

System of Environmental Economic Accounting

# System of Environmental-Economic Accounting— Ecosystem Accounting

## *Global Consultation on the complete document: Comments Form*

**Deadline for responses: 30 November 2020**
**Send responses to: seea@un.org**

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The comments form has been designed to facilitate the analysis of comments. There are six guiding questions in the form, please respond to the questions in the indicated boxes below. To submit responses please save this document and send it as an attachment to: seea@un.org.

All documents can be found on our website at: https://seea.un.org/content/global-consultation-complete-draft

In case you have any questions or have issues with accessing the documents, please contact us at seea@un.org

**General comments**

**Question 1: Do you have comments on the overall draft of the SEEA Ecosystem Accounting?**

On behalf of my colleagues at the ABS we welcome this draft of the SEEA Ecosystem Accounting manual. The release of this manual for global consultation represents a significant step forward since the SEEA Experimental Ecosystem Accounting manual was drafted in 2012. I have personally played a small role by sitting on the editorial board/technical committee and have seen firsthand how the work has evolved over the drafting process. The quality of the release is a testament to the significant amount of work by experts across the world.

The ABS, in collaboration with the Australian Government Department of Agriculture, Water and the Environment, have been actively engaging our local expert community through 2020. There are many Australian experts who have been active through the revisions process. The ABS has facilitated Australian Expert Group meetings at each phase of the consultation process to bring people together and discuss the drafts. We appreciate the time and energy everyone has put in to the process. In particular, I acknowledge the support of Carl Obst, who as the editor of the manual presented the state of play at each of the meetings and provided invaluable feedback and context to the discussions. This type of in-country outreach by National Statistical Offices will become increasingly important as ecosystem accounting matures, and highlights the important role we play as data stewards.

I would like to make 4 overall comments on this draft.

1. Our review of the document as well as consultation with local experts have not identified any significant issues with the current draft of the ecosystem accounting manual. I am recommending that the ABS support adoption of this manual as a statistical standard when it is presented at UNSC in 2021.
2. Chapter 1 notes that this draft of the manual has dropped the term 'experimental' from the title. I support this change as it recognises the significant conceptual development since the last iteration of the manual.
3. I do acknowledge that there are some aspects that are in scope of the manual may not be fully resolved as part of this revisions process. It will be important for the Ecosystem Accounts to have an ongoing an active research agenda where outstanding issues can be addressed.

As well, there is a specific comment on the definition of tenure, which is referenced in a few chapters. This is an important concept when dealing with spatial data, but has not been well defined in SEEA. In Australia there is ongoing discussion amongst information agencies about this definition. Feedback from some of these agencies have indicated that it may be useful to consider a definition for tenure, either in this manual or in the Central framework, and how tenure interacts with the concept of economic ownership in SEEA (and the SNA more broadly).

There are some other specific comments raised in sections below. These are matters of clarification and presentation, or issues best considered as part of a future SEEA EA research agenda.

**Comments by sets of chapters**

**Question 2. Do you have comments on Chapters 1-2 of the draft SEEA Ecosystem Accounting?**

The framing provided by Chapter 1 is critical in outlining the purpose of SEEA Ecosystem Accounting, the role of a National Statistics Office, and linkages to existing frameworks including the System of National Accounts (SNA). It does this job well, and has benefited from feedback received during initial consultation. I support the statements in section 1.2.3 that states that SEEA EA is a statistical standard for Ecosystem Accounting.

Section 1.3 outlines the conceptual underpinning for the suite of ecosystem accounts. One additional suggestion in this section is to be clear that the framework treats ecosystems as either entities in their own right or having an owner equivalent to economic units in the SNA. This allows for transactions to be recorded between ecosystems (or their owner) and economic agents and helps to link together the future chapters which expand on this notion (such as Chapter 2 and Chapters 7-11).

Chapter 2 brings together a range of perspectives of ecosystems and how they link into the SEEA EA framework. This chapter will be a useful reference to ensure that everyone is on the 'same page', which is very important given the multi-disciplinary nature of Ecosystem accounts. Chapter 2 also introduces the term ecosystem assets in section 2.11, which operationalises the concept of ecosystems from a statistical and accounting context. One possible area of confusion is distinction between the concept of ecosystem assets (i.e. ecosystem assets provide services to the economic agents) and the accounting treatment (the provision of these services is recorded as a transaction between the ecosystem asset's owner and an economic agent). This point could be made in section 2.5 on national accounting principles.

**Question 3. Do you have comments on Chapters 3-5 of the draft SEEA Ecosystem Accounting?**

Based on feedback received by expert ecologists and practitioners, these chapters provide a good summary of the biophysical issues measures in Ecosystem Accounting.

I have a specific comment on condition accounts (Chapter 5). This chapter outlines a good framework for measuring condition of ecosystems. That said, even with the guidance provided there remain a number of decisions that will still need to be made to operationalise a set of condition accounts, such as choice of condition variables/indicators, choice of reference condition and aggregate measures of condition over both ecosystem assets and condition indicators. These considerations may make comparability of condition across ecosystem accounts difficult due to different stakeholder perspectives. One potential way to do this is to more strongly link condition with the notion of ecosystem capacity, which is touched on in Ch 5 (section 5.5.6) and Ch

6 (section 6.5). As noted in section 6.5 these relationships are very complex, and I suggest that this issue be considered in the future research agenda for SEEA EA as more experience is developed.

**Question 4. Do you have comments on Chapters 6-7 of the draft SEEA Ecosystem Accounting?**

These chapters provide a good introduction to the ecosystem service measurement and presentation in physical terms. I support the pragmatic distinction between ecosystem services and abiotic flows made in Chapter 6 and note the importance of combined presentations when considering issues that may straggle the boundary between the SNA, SEEA CF and SEEA EA frameworks. The logic chains in Annex 6 are also important in providing a way to conceptualise ecosystem services.

Chapter 7 provides a clear presentation of a physical ecosystem services supply and use table, with some good examples outlining how services should be recorded in the accounts. I support the proposed recording treatments outlined in the chapter.

**Question 5. Do you have comments on Chapters 8-11 of the draft SEEA Ecosystem Accounting?**

I support and welcome the work that has been done in these chapters, which outlines the valuation and accounting treatments for the monetary ecosystem accounts. Linking the biophysical elements of the ecosystem accounts to a set of monetary accounts is a strength of SEEA EA in a similar way to how SEEA CF links physical and monetary measures. Unlike the SEEA CF, valuation in SEEA EA extends the SNA by valuing ecosystem services that contribute to non-SNA benefits. Chapter 8 outlines the key principles for this extension including:

- Monetary valuation of ecosystems reflect the contributions of ecosystem assets to human benefits.
- These services are conceptualised in SEEA-EA as transactions between ecosystems and economic agents (noting that these transaction fall outside the production boundary).
- Exchange values is the core valuation concept used to value these services in SEEA EA. Non-market valuation techniques are required as prices are not observable.

One way to conceptualise these flows in an accounting context is to use the simple circular flow diagram of an economy. This diagram shows how a simple economy with firms and households is extended to add additional sectors, such as Rest of the world, the financial sector, and rest of the world. Ecosystems can be thought of in a similar way, with a specific

set of transactions that occur with this sector like how other sectors interact with a simple economy (e.g. exports/imports with the rest of the world; government spending/taxation with the government sector; financing transactions with the financial sector).

Chapter 9 outlines the structure of a monetary account and provides a list of valuation techniques that can be applied. The techniques that are suggested is very comprehensive, so guidance from a compilation perspective will be useful. Given that this is more of an implementation issue rather than a conceptual one, this discussion on valuation techniques may be better placed in compilation guidance outside of the manual.

Chapter 10 provides some specific definitions on key concepts such as degradation, enhancement and conversions. Some care is likely to be needed with the interpretation of statistics from these definitions. For example, changes in ecosystem extent are recorded as conversions. However, some conversions have a clearly negative environmental effect (e.g. conversion of forest to an urban area), which may be considered degradation by a layperson. Giving users a clear understanding of what these terms measure will be important. Some other specific points in this chapter:

- The monetary asset framework discussed early in Chapter 10 would benefit from linkages to previous discussions on valuation (for example, the discussion on sales of land with ecosystems para 8.41).
- In section 10.3.5 on asset lives, it would be useful to discuss the interaction between the condition accounts and expected asset life.

The extended presentations in chapter 11 are welcome, and provide guidance on how ecosystem accounts could be integrated with existing economic information to present extended sets of accounts. I support the guidance in this section regarding portioned ownership of ecosystem assets based on the services provided. While appropriate in the context of SEEA EA where multiple ecosystem services flowing from a single asset, this should not impact on decisions around ownership in the SNA. This issue is being considered as a proposal on the SNA 2025 research agenda, and I welcome further discussion.

It is likely that issues around valuation and economic ownership will remain after this iteration of the manual is completed, and this should be considered an important topic to have on the SEEA EA research agenda. In particular, it will be important to maintain coherence between the SEEA EA and any proposals to update the SNA.

**Question 6. Do you have comments on Chapters 12-14 of the draft SEEA Ecosystem Accounting?**

Chapter 12 is an important addition to the SEEA EA that outlines complementary approaches to valuation. It is clear that these approaches fall outside the core scope of SEEA EA (which are consistent with SNA core principles), but also recognise that broader applicability of SEEA EA based approaches to provide information on a wide range of issues.

Chapter 13 outlines a range of thematic accounts on specific issues that are no doubt worthy of their own manuals. The specific issues that are related to biodiversity, carbon, ocean ecosystems and urban ecosystem are welcome. Chapter 14 shows how SEEA EA can be combined with information on SEEA CF and the SNA to provide powerful combined presentations for specific applications. Chapter 14 also provides linkages between SEEA EA and other frameworks. Both chapters are welcome and will serve as an important bridge to users familiar with these frameworks.