



System of  
Environmental  
Economic  
Accounting

**Fourteenth Meeting of the UNCEEA**  
**Area B2: SEEA Experimental Ecosystem Accounting**

*Revision planning note*

*New York*

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United Nations

# SEEA EXPERIMENTAL ECOSYSTEM ACCOUNTING REVISION

## REVISION PLANNING NOTE

### Background

This document describes the current plans for the operation of the revision process for the SEEA Experimental Ecosystem Accounting (SEEA EEA). It builds on original material provided for discussion to the June 2017 UNCEEA meeting and incorporates subsequent discussions at SEEA EEA Technical Committee meetings, the June 2018 UNCEEA meeting and other discussions; and reflects proposals for activities in 2019 and 2020 based on the current state of development of research and discussion papers across the five working groups.

### Revision process

The revision process is organized along 4 main research areas and 5 Working Groups. For each working group, an area lead has been appointed.

- The selected area leads are:
  - Research area #1 (Working Group 1) – Spatial units: Sjoerd Schenau (Statistics Netherlands)
  - Research area #2 (Working Group 2) – Ecosystem condition: Joachim Maes (EU JRC)
  - Research area #3 – Ecosystem services
    - Working Group 3: concepts and measurement issues: Lars Hein (Wageningen University)
    - Working Group 4: Measurement and valuation of specific ecosystem services: Rocky Harris (UK DEFRA)
  - Research area #4 (Working Group 5) – Valuation concepts and accounting treatments: Juha Siikamaki (IUCN)

Working Groups of around 5-7 members each (including the chair) consisting of experts from the relevant communities of interest (see Annex 1 for the current membership). Most members of the group contributed in kind to drafting and reviewing papers. In exceptional cases, consultants were recruited to draft specific issues papers.

- Broader expert review groups

An overarching support and co-ordination role has been played by the UNSD, as Secretariat of the UNCEEA and the Editor of the SEEA EEA working in conjunction with the SEEA EEA Technical Committee. In practice, each working group was supported by (i) the Editor (Carl Obst), (ii) a UNSD staff member, and in some cases (iii) a representative of the chair of the SEEA EEA Technical Committee.

## Operation of the Working Groups

- Initial work focused on extensive clarification and description of the revision issues and engagement of an appropriately broad network of associated experts and the production of a detailed work programme and action plan.
- Initial drafts of the programs and plans were completed in the Fall 2018 and regularly discussed and endorsed by the SEEA EEA Technical Committee whose primary role is to ensure appropriate coherence and co-ordination across the work programs.

Drafting of issue paper started expediently in some of the Groups but others needed more time to get organized and resourced. All groups have prepared issues papers for discussion at the Forum. For some groups it was possible to have the papers undergoing a revision as a result of a broad consultation with relevant experts (WG#1, WG#2, WG#4). For the other groups (WG#3 and WG#5), more extensive consultation will happen after the Forum. The working groups will operate until June 2019. At that time, the use of an alternative structure, including an Editorial Board, has been proposed with a specific focus on ensuring integration and coherence across the types of accounts. Groups focused on specific research topics will also be established at this time and hence there will remain a role for those involved in the Working Groups beyond June 2019. The proposed groups include marine and ocean ecosystems, urban ecosystems, protected areas.

## Expert review groups

Those involved as broader expert reviewers have and will provide reviews of relevant research papers and draft chapters, and attend forums and workshops as invited. Efforts have been made to expand the involvement of experts from different disciplines through a targeted strategy which involved communication and outreach of the SEEA revision process through various technical and policy meetings of various groups.

Expert review groups were established and consulted regularly providing input and reviewing various stages of the draft documents. In the first half of 2019, discussion papers on spatial units and ecosystem condition were drafted and revised by a broad group of expert reviewers. It is expected that the experts participating in these review groups would continue to participate in the revision process and are also likely to be involved in the discussion of issues beyond a specific research area. Engaging experts throughout the revision process is key in ensuring the buy in of the final product by the various community and support the implementation and uptake in countries.

## Role of the SEEA EEA Technical Committee

The UNCEEA Bureau discussed and endorsed the proposal that an extended SEEA EEA Technical Committee (SEEA EEA TC) consisting of its original members, the area leads and those international organizations that are expected to co-publish the revised SEEA EEA will serve as the editorial board of the revised SEEA EEA. Members are experts from countries and international agencies and are encouraged to coordinate and engage with all relevant experts from within the

countries, organizations and relevant networks they are active in. The proposed membership of the extended SEEA EEA TC based on the current composition of the SEEA EEA Technical Committee is shown in Annex 2.

The extended SEEA EEA TC will first meet in June 2019 at the time of the Forum of Experts on Ecosystem Accounting in Glen Cove and remain operational in this composition until the completion of the document for submission to UNSC around the end of 2020. Regular meetings will be held as the draft chapters are developed ahead of their release for global consultation.

## Meetings and workshops

The broad coverage of topics in the research agenda of the SEEA EEA revision makes it challenging to hold meetings and workshops that cover the full breadth of material while at the same time having the detailed conversations that are required to make substantive progress on technical matters. A number of smaller, topic specific teleconferences and workshops have been held through the course of the revision process so as to allow smaller groups of experts to discuss issues in more depth.

Below is a list of workshops that have been undertaken until June 2019 and are expected to be undertaken during the revision process:

### Completed meetings

- 24-26 April 2018 (Bonn): Expert Workshop on Valuation for Ecosystem Accounting
- 18-20 June 2018 (Glen Cove): Forum of Experts on SEEA Experimental Ecosystem Accounting
- 1-4 October 2018 (Dublin): Meeting of the London Group on Environmental Economic Accounting
- 28-29 November 2018 (Paris): Expert meeting on Spatial Areas and Ecosystem Condition
- 30 November 2018 (Paris): Strategic meeting on accounting for biodiversity and ecosystems with IUCN and selected biodiversity experts
- 22-24 January 2019 (New York): Expert Meeting on Advancing the Measurement of Ecosystem Services for Ecosystem Accounting

### Forthcoming meetings

- 26-27 June 2019 (Glen Cove): Forum of Experts on SEEA Experimental Ecosystem Accounting
- 28-29 June 2019 (Glen Cove): Technical Expert Meeting on advancing the SEEA EEA Revision
- 7-10 October 2019 (Melbourne, Australia): Meeting of the London Group on Environmental Accounting
- May/June 2020 (NY): Forum of Experts on SEEA Experimental Ecosystem Accounting

## Outreach meetings

- Natural Capital Policy Forum for Better Decision Making (Paris France 26-27 November 2018)
- ISAR Corporate Transparency Accounting (UNCTAD) (Geneva, 24-26 October 2018)
- 2019 Natural Capital Symposium (18-21 March 2019)
- UNCCD COP-14 (New Delhi, 2-13 September 2019)
- Natural Capital Policy Forum for Better Decision Making (Kampala, Uganda 18-21 November 2019)
- COP 14 – CBD Sharm El-Sheikh Mexico (November 2019)
- Natural Capital Accounting – Making the Case: 18-20 March 2020 (Yale):
- IUCN World Congress (Marseille, 11-19 June 2020)
- COP-15 (Kunming, China October 2020)

## Ensuring coherence

Particular attention has been given to ensuring coherence among the 5 working groups. In particular, the following was undertaken:

- The SEEA 2012 EEA and the recently completed Technical Recommendations in support of the SEEA EEA served as the starting point for the groups to advance the research areas.
- The Editor participates in each Working Group and is involved in the development of discussion and issues papers, thus providing a single set of eyes over the discussions.
- The lead/chairs of each research area met regularly via teleconference together with the Chair of the SEEA EEA TC, the Editor and the Secretariat to ensure ongoing awareness and alignment of progress and connect all parts of the project to the wide range of meetings, forums and related developments.
- The SEEA EEA TC met on a regular basis to consider progress in the different research areas and highlight issues of coherence and from June 2019 the extended SEEA EEA TC will function as the editorial board of the SEEA EEA revision.
- Regular technically focused meetings, including small technical workshops, the expert forums and London Group meetings, provide opportunities to identify issues of coherence.
- As noted above, it is anticipated that the model of working groups for each research area will operate only until June 2019 at which time an alternative structure will be adopted with a specific focus on coherence. This will limit the potential for significant drift among the research areas.

Also, in relation to coherence some specific aspects were noted in June 2018 as of particular importance. These were:

- Alignment with the SEEA Central Framework, especially in relation to land use and land cover
- Alignment to the SNA with respect to the production boundary for defining ecosystem services and the conceptual basis for valuation
- The development of classifications and typologies, especially for ecosystem types and ecosystem services
- Accounting for marine and coastal areas
- Accounting for urban areas

These topics remain of interest and are complemented by a set of cross-cutting issues (described below) that have emerged in the work of the different research areas. A focus on these types of issues will support achieving the broader integration across the ecosystem accounting system that is required.

## Engagement approaches

The Forum of Experts on SEEA Experimental Ecosystem Accounting in June 2019 will be important in terms of continuing to raise awareness and secure participation from a wide range of stakeholders. Approximately 110 people will attend the two-day Forum and 60 the two-day Technical Expert Meeting, with the Forum providing an update on the status of the conceptual developments of the SEEA EEA revision process and the Technical Expert Meeting providing groups detailed discussions.

The London Group supports the revision process through contributing to the advancement of the research agenda, reviewing papers and draft chapters and testing. A number of topics for the SEEA EEA revision are on the agenda for the next London Group meeting to be held in October 2019 in Melbourne, Australia.

More broadly, considerable effort has been put on engaging with the wider statistical community, and in particular the national accounts community. A cross-fertilization of experts between the national accounts and the environmental-economic accounts have started with national accounts experts participating in the working group on valuation and environmental-economic accountants participating in national accounts meetings.

The SEEA EEA revision is involving experts from different communities to ensure that technical matters are as well founded as possible and to build as broad a consensus as possible around the accounting treatments. The relevant experts are from a range of sectors including the academic community, government and international agencies, non-government organizations, the private sector, and those involved in related international processes and networks such as IPBES, IUCN, TEEB, GEO EO4EA, Ecosystem Services Partnership (ESP), A Community of Ecosystem Services (ACES) and associations of environmental and resource economists.

In addition, the revision of the SEEA will build on the expertise and experience of those involved in testing the SEEA EEA at various scales. There are many such projects now in operation and

relevant experts are connected to the revision process to the greatest extent possible including the EU funded project Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES), the Knowledge Innovation Project on an Integrated system of Natural Capital and ecosystem services Accounting for the European Union (INCA), Mapping and Assessment of Ecosystem Services (MAES), the MAIA project, etc.

Establishing connections to natural capital assessment activities at the corporate level may also provide useful avenues for engagement. Both the UNSD led NCAVES project and the World Bank WAVES partnership have identified corporate engagement as an important aspect.

A separate but important matter for discussion is how best to engage with the user community. The appropriate strategy in this area is being developed in line with the work of UNCEEA.

By early 2020, it is expected that based on the results of the working groups and expert forum meetings draft chapters of the revised SEEA EEA will be released for global consultation thus going beyond specifically invited experts. This is in line with the usual processes for the development of international statistical standards.

## General process for review and consultation

In line with past practice in the development of the SEEA, an open and inclusive approach to gathering comments and feedback will be applied in the revision of the SEEA EEA. This will be somewhat more challenging than in the past with a much wider set of stakeholders now aware of and interested in the SEEA and its potential role.

The general process will be for draft material, including draft chapters, to be reviewed by a small group of experts. Following that review, largely intended to ensure no obvious errors or inconsistencies with the wider SEEA system, documents would be posted for comment by wider groups of experts, including but not limited to, UNCEEA and London Group members and nominated experts in the topic.

Comments from these experts would be expected over a 4-6 week time frame, after which a summary of comments would be prepared and, depending on the step in the process, a set of proposed responses would be drafted. These responses would be considered by the SEEA EEA TC in the first instance and then incorporated in subsequent draft material that is released for consultation. A separate document explaining the responses contained in the draft material would be released at the same time.

A more formal process seeking feedback on the draft chapters of the revised SEEA EEA will be established when that process commences in early 2020 involving global consultations on the chapters and the complete draft.

## Timelines for key tasks and outputs

There has been substantive progress in a number of areas. A separate document submitted to UNCEEA summarizes progress against the set of SEEA EEA revision issues and outlines the remaining issues. There are also a range of summary notes that have been provided to support discussion at the Forum of Experts that will provide additional detail on progress in specific areas.

It is expected that the discussion at the Forum of Experts will confirm the degree of progress and clarify the remaining issues and appropriate pathways. The following description of next steps should therefore be seen as providing an initial framing for discussion.

Three stages are summarized here: (i) expectations of progress to the end of June 2019; (ii) types of work to be undertaken through to the end of 2019; and (iii) work required in 2020 and early 2021.

The following summary of outputs and tasks are described from the perspective of the overall management of the project. There will be numerous associated tasks and events surrounding ongoing governance (e.g. meetings of area leads and SEEA EEA TC), the development of discussion papers by working groups, and consultation with wider expert review groups that are not documented here. The timelines for these tasks and events will be managed to work within the broad outline presented here and are the subject of ongoing planning discussions.

### **Stage 1. By end June 2019**

Substantive discussion papers will have been prepared and discussed (to varying degrees) across all revision areas and it should be possible at the Forum and associated Technical Expert Meeting (TEM) to lock in some clear decisions and clear directions. Areas for research and testing will also be identified.

It is assumed that the Working Group as established for each research area will not continue in their current form beyond the Forum/TEM but that smaller, issue specific research teams will be formed.

As noted earlier, it is proposed that the extended EEA TC will constitute the editorial board for the SEEA EEA revision from June 2019.

### **Stage 2. Work to end 2019**

Four activities are envisaged in taking forward the revision process through the remainder of 2019.

#### *a) Drafting of chapters*

This work will commence in July using the initial text based on SEEA EEA and EEA Technical Recommendations and incorporating the findings from the discussion papers and associated notes, and outcomes from the Forum and Technical Expert Meetings (TEM) discussions.

Draft chapters will be progressively circulated to the SEEA EEA TC for review and discussion. No broader review of the chapters (i.e. global consultation) is planned but wider review with selected experts is likely on an issue by issue basis.

In many cases, it is likely that the research to date, including discussion at the Forum and TEM, will identify options for consideration but where no clear alternative is currently agreed. In these cases, it will be the role of the SEEA EEA TC to provide direction to the Editor in the drafting of the chapters which will then be circulated for wider consultation.



*b) Research on individual/stand-alone topics*

This work is effectively a continuation of uncompleted work from the current round of research areas where substantive involvement of a small team would be beneficial to progress. Issues where research is largely complete and options for treatment have been identified should be advanced through the drafting process.

Tentatively, the following issues are noted here as falling in this category of work with this list to be confirmed at the Forum. Work on each issue to be led by a selected expert with a small team (max 3 people) to provide initial drafts by mid October for review by the SEEA EEA TC and final papers by end November. As possible and appropriate, work will be completed for consideration in time for the London Group meeting in early October. The aim is for the papers to provide options and recommendations for treatment in the revised SEEA EEA.

- Spatial units
  - Treatment of linear features and subterranean ecosystems
- Ecosystem condition
  - Reference levels and reference conditions
- Ecosystem services
  - Determining approaches to accounting for linkages between ecosystem services
  - Ecosystem service typologies and classification
- Valuation and accounting treatments
  - Continued discussion of topics advanced within discussion papers on valuation assumptions and methods, asset valuation and accounting treatments (papers #5.1, 5.3 and 5.4)
  - Connection of ecosystem asset values to market values of land
  - Valuation of cultural, health and non-use related services
  - Accounting for ecosystem disservices and externalities in the SEEA EEA

*c) Research on cross-cutting issues*

This work is to advance discussion across the research areas on themes identified as cross-cutting. An initial set of six issues is listed below.

Work on each issue to be led by a selected expert with a team (around 6-8 people) representative of the different research areas to provide initial drafts by end October for review by the SEEA EEA TC and final papers by end December. As possible and appropriate, work will be completed for consideration in time for the London Group meeting in October (Melbourne, Australia 7-10 October). The aim is for the papers to provide a thorough presentation of the issues and to the extent possible options and recommendations for treatment in the revised SEEA EEA. Where possible, face-to-face meeting of the SEEA EEA TC or other relevant experts will be organized back-to-back to other meeting.

Indicative list of cross-cutting issues

- The framing of values from a SEEA EEA perspective

- Aggregation and scaling
- Degradation and capacity
- Biodiversity
- Application of ecosystem accounting principles to specific areas – e.g. marine, urban areas (and agricultural mosaics), protected areas and the atmosphere
- Connections between ecosystem accounts

*d) Testing of current proposals*

This work is to examine the potential to apply the current thinking on SEEA EEA treatments in practice. It is envisaged that across the four research areas proposals for testing at national and sub-national level will be developed for discussion at the Forum and TEM in late June. The testing should be conducted through the second half of 2019 with reports on findings provided by December 2019.

Three areas for testing are envisaged as listed below. It is thought that the testing could be considered through the UNSD NCAVES and World Bank WAVES project countries, through the KIP-INCA and MAIA projects in the EU, through the GEO EO4EA initiative led by Conservation International, through the Task Team on Earth Observation of the UN Global Working Group on Big Data and through various national programs of work (e.g. UK, Netherlands, Australia, US, Canada, etc.). Connection to work by for example CI would also be of benefit. Further discussion is needed on the type of testing (e.g. reframing existing results to proposed structures) and the resourcing implied.

The co-ordination of the testing is matter for further discussion but a small management team might be appropriate to provide a focal point for work on testing in various places and to report back to the SEEA EEA TC regularly on progress. It is noted that work on testing should be co-ordinated with the development of compilation guidelines on biophysical modelling and valuation which are ongoing.

Suggested areas for testing

- Ecosystem type classifications
- Ecosystem condition indicators by ecosystem type
- Ecosystem services modelling and valuation

**Stage 3. Work in 2020 and 2021**

The following indicative timetable is envisaged for 2020 leading to the finalization of the revised SEEA EEA by the end of 2020. A more precise schedule will be developed as research and drafting continues through 2019.

Jan-Mar	Revise chapters
March	Report to the UN Statistical Commission
Apr – Jun	Global consultation on individual chapters

June	Report to UNCEEA
Jul-Sep	Revise chapters
Oct-Nov	Global consultation on complete document
Dec	Submission of draft to UNCEEA
Dec/Jan	Finalised SEEA EEA
Mar 2021	Submission to UNSC for adoption

## Annex 1: Working Group members @ June 2019

Research area	Area lead	Working group members	UNSD support
Spatial units	Sjoerd Schenau (Statistics Netherlands) with Edwin Horlings & Patrick Bogaart	Roger Sayre (USGS) Francois Soulard (Stats Canada) Douglas Muchoney (FAO) Francesco Tubiello (FAO) Keith Gaddis (NASA) Trond Larsen (CI) David Keith (UNSW)	Jessica Chan
Ecosystem condition	Joachim Maes (EU JRC)	Amanda Driver (South African National Biodiversity Institute) Heather Keith (Australian National University) Bethanna Jackson (Victoria University, NZ) Balint Czucz (EEA consultant) Emily Nicholson (Deakin)	Marko Javorsek
Ecosystem services	Lars Hein (Wageningen University, Neth)	Ken Bagstad (USGS) Neville Crossman (Adelaide) Sander Jacobs (INBO, Belgium) Alessandra La Notte (EU JRC) Rocky Harris (UK DEFRA) Jan-Erik Pedersen (EEA) Charles Rhodes	Julian Chow
Individual ES (Work completed in Feb 2019)	Rocky Harris (UK DEFRA)	All Co-ordinators of 10 research papers <ul style="list-style-type: none"> <li>• Lars Hein</li> <li>• Anthony Dvaskas</li> <li>• Benjamin Burkhard</li> <li>• Rocky Harris</li> <li>• Alessandra La Notte</li> <li>• Neville Crossman</li> <li>• Rosimeiry Portela</li> <li>• David Barton/Carl Obst</li> <li>• Steve King</li> <li>• Bram Edens</li> </ul>	Marko Javorsek
Valuation and accounting	Juha Siikamaki (IUCN)	David Barton (NINA, Norway) Jane Turpie (University of Cape Town) Eli Fenichel (Yale) Dennis Fixler (US BEA)	Bram Edens

		<p>Matias Piaggio (Environment for Development Center)</p> <p>Peter van de Ven (OECD)</p> <p>Brett Day (University of Exeter)</p> <p>Nicholas Conner (NSW Office for the Environment)</p> <p>Alejandro Caparrós (CCHS/CSIC, Spain)</p> <p>Mark de Haan (Statistics Netherlands)</p> <p>James Tebrake &amp; Joe St Lawrence (Statistics Canada)</p> <p>Peter Harper</p>	
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## Annex 2: Members of the extended SEEA EEA Technical Committee @ June 2019

1	Australia	Jonathon Khoo / Steven May
2	Canada	Francois Soulard
3	Netherlands	Sjoerd Schenau (AL) /Edwin Horlings
4	South Africa	Gerhard Bouwer
5	United Kingdom	Rocky Harris (AL)
6	EEA	Jan Erik Pedersen
7	Eurostat	Anton Steurer (Chair)
8	FAO	Francesco Tubiello / Silvia Cerilli
9	IUCN	Juha Siikamaki (AL)
10	JRC	Joachim Maes (AL)
11	OECD	Peter van de Ven
12	Wageningen University	Lars Hein (AL)
13	World Bank	Raffaello Cervigni / Glenn-Marie Lange / Sofia Ahlroth
14	ESCAP	Michael Bordt
15	UNSD (Secretariat)	Alessandra Alfieri / Jessica Chan / Julian Chow / Bram Edens / Marko Javorsek