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**Programme of work of the Statistics subprogramme of the
United Nations Economic Commission for Europe****Reports on the work of the Conference of European Statisticians, its Bureau and Teams of Specialists****Implementation of the United Nations Economic Commission
for Europe Statistical Programme 2020****Addendum****Summary of discussions and conclusions of the Joint OECD/UNECE
Seminar on the Implementation of the System of Environmental-
Economic Accounting (SEEA)****Prepared by the secretariat***Summary*

The report presents the key outcomes of the Joint OECD-UNECE Seminar on the Implementation of the System of Environmental-Economic Accounting (SEEA) which took place on 9-11 March 2021 in an online format.

The report is submitted to the Conference of European Statisticians for information.

* Re-issued for technical reasons on 25 June 2021.



I. Introduction

1. The sixth Joint OECD/UNECE Seminar on the Implementation of the System of Environmental-Economic Accounting (SEEA) was held as an online meeting from 9-11 March 2021. It was jointly organized with the Organisation for Economic Cooperation and Development (OECD) and an organising committee with members from Belarus (Co-Chair), Statistics Netherlands (Co-Chair), Australian Bureau of Statistics, Statistics Canada, Statistics Finland, Federal Statistical Office of Germany, Statistics Committee of the Republic of Kazakhstan, National Statistical Committee of the Kyrgyz Republic, Statistics Sweden, Eurostat, UNDP Kyrgyzstan, UNSD and Tillväxtanalys (Sweden).

2. Experts from the following countries participated in the meeting: Armenia, Austria, Azerbaijan, Belarus, Belgium, Brazil, Canada, Chile, China, Costa Rica, Croatia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, India, Ireland, Israel, Italy, Japan, Kazakhstan, Latvia, Lithuania, Luxembourg, Malta, Mexico, Mongolia, Montenegro, the Netherlands, New Zealand, Norway, Portugal, Republic of Moldova, Romania, Russian Federation, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland and United States of America.

3. Representatives of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), United Nations Environment Programme (UNEP), United Nations Statistics Division, United Nations Secretariat for Biological Diversity, International Monetary Fund, International Labour Organization (ILO), International Union for Conservation of Nature, European Commission – Eurostat, Food and Agriculture Organization (FAO), European Environment Agency (EEA) and the Organisation for Economic Cooperation and Development (OECD) also participated in the meeting.

4. The non-governmental organizations included Conservation International, Hancock Natural Resources Group, iDiv German Centre for Integrative Biodiversity Research, Institute for Nature Management, Institute for Sustainable Innovation, Leibniz Institute of Ecological Urban and Regional Development, Maastricht Generation, Arab Women Water Energy Environment Network Association and Make Mothers Matter.

5. Academia and research were represented by Belarusian State University, University of Chester, Kyushu University, United Nations University, Eurac Research, Idaho National Laboratory, Stantec, Technical University of Civil Engineering of Bucharest, University of Portsmouth and Zhytomyr Politechnic.

II. Organization of the meeting

6. The seminar was chaired by Ms. Ekaterina Poleshchuk from the National Statistical Committee of the Republic of Belarus.

7. The participants adopted the agenda of the seminar.

8. The seminar consisted of five sessions:

(a) **Session 1: Opening and Introduction** – Session Chair: Ekaterina Poleshchuk (National Statistical Committee of the Republic of Belarus);

(b) **Session 2: SEEA Ecosystem Accounts (SEEA-EA) and its relevance in policy and decision making** – Session Chair: P. Bhanumati (Ministry of Statistics and Programme Implementation of India);

(c) **Session 3: Measuring circular economy with SEEA, and the role of waste accounts** – Session Chair: Sven Kaumanns (German Federal Statistical Office);

(d) **Session 4: Using SEEA for policies on climate change and sustainable finance** - Session Chair: Greg Peterson (Statistics Canada);

(e) **Session 5: Conclusions and Recommendations: Storytelling with SEEA** – Session Chair: Nancy Steinbach (Tillväxtanalys, Sweden).

9. All documents of the meeting and weblinks to meeting recordings are available at <https://unece.org/statistics/events/joint-oecdunece-seminar-seea-implementation-online>.

III. Summary of the discussion and main conclusions reached at the meeting

A. Session 1: Opening and introduction

10. The meeting was opened by Ekaterina Poleshchuk (chair), Lidia Bratanova (UNECE, Director of Statistical Division), Peter van de Ven (OECD, Head of National Accounts) and Viveka Palm (Eurostat, Head of Eurostat Directorate on Sectoral and Regional Statistics).

11. The session informed about recent global developments of relevance for the region.

12. UNSD gave an update on the work of the United Nations Committee of Experts on Environmental-Economic Accounting (UNCEEA), and informed about the adoption of chapters 1-7 of the revised “SEEA Ecosystem Accounting” as an international statistical standard at the 52nd Session of the United Nations Statistical Commission (2-5 March 2021).

13. The representative of the German Federal Statistical Office (Destatis) and chair of the London Group (LG) on Environmental Accounting informed about the discussions at the 26th meeting of the LG which was held as series of online meetings between 5 and 12 October 2020. Discussions at the LG included fossil fuel subsidies, classification of environmental activities, SNA revision, treatment of imports and exports, circular economy and ecosystem accounting.

14. OECD presented the environmental-economic issues of the ongoing update of the 2008 SNA. The related work is carried out by the “Task Team on Well-being and Sustainability”. The issues include refining economic ownership of natural resources, accounting for biological resources, accounting for a broader range of renewable natural resources, guidance on valuation methods, recording losses, classifications, recording of pollution permits, recording of provisions, recording of depletion of natural resources and defining elements of SEEA which should be part of the broader framework of extended accounts. The goal is to update the 2008 SNA in 2025.

B. Session 2: System of Environmental Economic Accounting-Ecosystem Accounts and its relevance in policy and decision making

15. The session was chaired by P. Bhanumati (Ministry of Statistics and Programme Implementation of India). It was organised in two parts of which the first part provided the context of the policy relevance of SEEA-EA, and the second part focussed on the compilation of SEEA-EA.

16. The objectives of the session were to introduce the context and policy relevance of SEEA Ecosystem Accounting, to introduce countries to a tool that will allow jumpstarting its implementation using global datasets and to showcase country case studies.

17. In the first part of the session presentations on important policy links that are currently being explored were given by UNEP-CBD (Monitoring Framework for the Global Biodiversity Framework) and IUCN (IUCN Motion on Accounting for Biodiversity). UNEP-CBD provides the Secretariat for the Post-2020 Global Biodiversity Framework and informed that SEEA-EA will underpin many of the indicators. The “IUCN Motions” is a mechanism by which IUCN Members guide the policy and programme of IUCN and influence third parties. This mechanism also supports piloting and implementation of SEEA biodiversity accounting.

18. Furthermore, the NGO “Conservation International” presented how accounting for biodiversity supports management of protected areas and biodiversity. The tool uses web-based collaborative modelling and a global models approach which can be customized and improved with local data.

19. In the second part of the session a representative of the US Geological Survey's Geosciences & Environmental Change Science Center presented “ARIES[†] for SEEA”, a tool for rapid accounts generation that was developed by UN agencies, the European Union, USGS and some research partners.

20. National examples on the implementation of SEEA-EA were showcased by Brazil and Estonia. Brazil demonstrated how SEEA-EA are produced, disseminated and contribute to informing multiple national policies on land use dynamics and threatened species. Estonia presented its recent case study on grassland ecosystems as an integral part of their strategy to produce a range of SEEA-EA on a regular basis from 2024 onwards.

Conclusions

21. The session showed opportunities for “storytelling” exploiting the fact that ecosystem accounting is inherently spatial (i.e. accounts derived from underlying maps of information) and allows to inform, in a more user-friendly manner, a wider set of policy questions than traditional accounts.

22. The need for having a team in NSO dedicated to communications cannot be stressed enough. Like, in the case of Brazil, with good media access, the accounts compiled can make a big difference in uptake of the story in media, which in turn, can lead to their adoption by the decision makers.

23. The integration of ecosystem accounts with economic information, like that of ownership or subsidies/taxes, can enrich policy discussions. To best address the needs of such discussions it is important to work closely with key stakeholders from the beginning of compilation.

24. The key suggestions for the way ahead emerging from the session were as follows:

(a) With the endorsement provided to the SEEA EA by the UNSC, efforts could be made for an increased exchange across the different agencies - the NSOs, the international agencies, the researchers and the civil society, so that the collaborative effort can help an improved adoption of the SEEA EA.

(b) Using macro-level/headline indicators to summarize the accounts, that can also integrate different components of the accounts, may improve its uptake by policy makers.

(c) Case studies on how the different countries are using the SEEA accounts to address the needs of policy makers could be publicized to promote peer-learning.

(d) Capacity building efforts need to be stepped up not just for the compilation of accounts but also for communication and outreach, so that the demand for these accounts ensures the sustenance of the programme for environmental economic accounting.

C. Session 3: Measuring circular economy with SEEA and the role of waste accounts

25. The session was chaired by Sven Kaumanns (German Federal Statistical Office). It was organised in two parts, the first part focussing on ongoing work to measuring circular economy, and the second part discussing the implementation of SEEA waste accounts and how to use them for measuring circularity of flows of materials and products.

26. Statistics Finland presented the main outcomes of the “CES In-depth Review of Measuring Circular Economy” which was drafted under their leadership jointly with Belarus, Canada, Netherlands, the European Environment Agency (EEA), Eurostat and OECD. Colombia, UNECE, UNSD and UNEP also contributed to the paper. The in-depth review identified several measurement challenges, and recommended the establishment of a task force for drafting practical guidelines.

[†] Artificial Intelligence for Environment and Sustainability

27. Statistics Canada presented their project on measuring circular economy and plastic waste. It was demonstrated how plastics material flow accounts can be produced and be used to inform related policies.

28. A representative of the Swedish research institute Tillvaxtanalys discussed how the government can contribute to the greening of the industry through promoting resource efficient systems for materials and metals. Some of the challenges include the different definitions of “recycling” used in statistics, research and by industry associations. Furthermore, lacking data related to input materials into production and the lack of a coherent data set that focuses on the flow of materials (metals) through input-output, including reuse/recycling, were mentioned as important constraints.

29. In the second part of the session Eurostat gave an introduction to waste accounts. Eurostat informed that there are waste statistics in the European Union, but not waste accounts. Eurostat is running a study to derive waste accounts from waste statistics with the intention to integrate them with the Sankey diagram of material flows.

30. United Nations University presented their lessons learned from accounting of electronic wastes. The main challenges of integrating e-waste statistics in waste accounts are that no official statistical information available on unregulated e-waste, and that even in countries with legislation on e-waste a large proportion is not accounted for.

Conclusions

31. Participants agreed on the relevance of waste accounts. However, only very few statistical offices actually calculate them. The structure of the tables for waste accounts is available, but currently the focus is more on producing “traditional” waste statistics.

32. As a methodological reference the SEEA-CF seems to be sufficient, but SEEA extension/application for waste accounts would be appreciated.

33. Measuring the circular economy requires much more than just waste accounts, e.g. integration of additional accounts (MFA, emissions/energy, monetary accounts) and additional information. However, its measurement scope still needs to be defined.

D. Session 4: Using SEEA for policies on climate change and sustainable finance

34. The session was chaired by Greg Peterson (Statistics Canada). It was organised in two parts, the first part discussing the use of SEEA for national climate change policy and the second part was a panel discussion on sustainable finance and business accounting.

35. In the first part Statistics Luxembourg, the National Autonomous University of Mexico (UNAM) and Statistics New Zealand shared their experiences. Luxembourg has implemented a national set of SEEA-based climate change-related indicators and can inform several important policy questions with it (e.g. for assessing the impact of the CO₂ taxes). Mexico worked on monetary evaluation of carbon storage and sequestration. It helps to analyse the non-linear relationship with circular causality channels, considering economic and social factors as well as public policies. New Zealand’s quarterly greenhouse gas emissions puts emissions reporting on a similar level to GDP in terms of timing and prominence. It educates users of environmental accounts and on the connection between environmental and economic development.

36. The panel discussion on sustainable finance and business accounting included panellists from the International Monetary Fund (IMF), Central Bank of Netherlands and the company Ambuja Cement (India).

37. Panellists presented and discussed their related activities:

(a) IMF has developed a Climate Change Indicators Dashboard. SEEA-EA is considered a strong link to existing macroeconomic frameworks provides institutions like the IMF with an ideal source of information to develop policies on climate change and sustainable finance. Several of the indicators utilize data from SEEA-CF, including

Economic Activity and Climate Indicators, Cross-border Indicators, Financial Indicators, Physical and Transition Risk Indicators as well as Government Policy Indicators.

(b) Central Bank of Netherlands pointed out that climate change is increasingly relevant for the financial sector, and hence for central banks. Climate change is a growing source of risk for the financial sector, it poses physical risks - associated with abrupt or gradual changes in climate, as well as transition risks - risks and financial implications of the move to a low-carbon economy (government policy changes, taxation,...). The financial sector is increasingly encouraged to contribute to reducing climate change and to reducing the carbon footprint of their asset portfolios. Central Bank of Netherlands uses three types of SEEA-based indicators, exposure of financial institutions to climate-change related physical risks, CO₂ footprint of financial institutions and number and value of green financial instruments.

(c) Ambuja Cement participated in an international pilot project on Natural Capital Accounting of Ecosystem Services. In 2019 an “Environmental Profit & Loss Account” was established to calculate the “true value” of their outputs. The NCA approach was used to assess all externalities (positive and negative), such as removal of land (negative) and rehabilitation of quarries (positive). Lots of NCA data is needed for that, the available data sources do not yet always provide the required level of accuracy.

Conclusions

38. There are many good national case studies available on how to push and use SEEA to meet policy needs in the area of climate change. The specific needs of the business community and central bankers have been presented, not all of them can be met yet with data in the required granularity, but SEEA provides the right framework for the needed statistics and indicators.

39. The use of SEEA-based statistics and indicators allows for a useful to drill down for analytic purposes and give education to many different users. It allows for combining with other statistics on economy and social factors, which is of broad interest.

40. Quicker estimates (e.g. quarterly emissions, aligned with GDP) are possible and create lots of interest.

41. However, sometimes users still do not completely understand what the statistical community can bring as a benefit to the area of climate change. More work is needed to ensure to add to the communication and not to be perceived as competition. The statistical community should continue in becoming more visible.

42. To advance the use of SEEA for policy on climate change and sustainable finance it would be beneficial to:

(a) Increase the frequency and timeliness of key SEEA outputs.

(b) Improve coverage – especially among developing economies

(c) Develop and elaborate a “sustainable finance” conceptual and methodological framework coherent with the SEEA-CF and SNA.

43. Some aspects of SEEA that are of particular use for developing indicators on climate change and the financial sector are

(a) Indicators on the energy use, efficiency, and emissions of the non-financial corporations sector can be made available at a detailed ISIC/NACE level;

(b) SEEA allows production of indicators on the energy use and efficiency of residential and commercial real estate (real estate energy labels, e.g. to support analysis or mortgage portfolios).

E. Session 5: Conclusions and recommendations: Storytelling with SEEA

44. The final session was chaired by Ms. Nancy Steinbach from Tillväxtanalys (Sweden).
45. Main outcomes of sessions 2, 3 and 4 were briefly presented by the respective session chairs.
46. Panellists from Statistics Sweden, Central Bank of Costa Rica and the European Agency discussed how SEEA could be used in good ways for telling policy-relevant stories.
47. Statistics Sweden used the example on baseline Swedish consumption and environmental pressures. SEEA is used to integrate different types of statistics, e.g. I-O tables for Sweden and the rest of the world with statistics on environmental pressures and socio-economic parameters for Swedish and international production. This way it is possible to generate time series for indicators on environmental pressures and socio-economic parameters for Sweden from the consumption perspective which are disseminated in various ways.
48. Costa Rica gave the example on informing policies on nature-based tourism and the regional strategy for an inclusive and decarbonized economy (including post COVID-19 recovery). Data originating from the tourist expenditure survey are turned into a nature-based tourism account (still under development). The main challenges are using data sources that were designed for other purposes and to work with analogous, non-digitalized, information.
49. The European Environment Agency presented how SEEA data was used in their “State of the Environment Report 2020” for an integrated assessment focused on sustainability. With SEEA sustainability could be addressed in a coherent manner by environmental themes, economic sectors as well as systems and sustainable transitions.

Conclusion

50. Panellists concluded that there is no “one size fits all” when it comes to telling policy-relevant stories. The users are different, how to tell the story needs to be different.
51. However, panellists agreed that the role of NSOs does not end with producing an accounting table. Visualisation and contextualisation are important.
52. There is need for a team in NSO dedicated to communications.
53. Key issues for informing policy are high data quality and reliability, furthermore regularity in the production of the data (annual, quarterly, monthly, daily) – which was also shown with many of the examples presented in earlier sessions (e.g. on quarterly emissions accounts).
54. The main problem on the institutional level seems to be availability of enough resources and/or the mandate to producing SEEA accounts in the required quality and to visualise and contextualise the information.

F. Next Seminar

55. Participants recommended to continue with the organisation of “Joint OECD/UNECE Seminars on SEEA implementation” on an annual basis. The next seminar is planned to be held on 24-25 March 2022.