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Items for discussion and decision: environmental-economic accounting

Report of the Committee of Experts on Environmental-Economic Accounting

Note by the Secretary-General

In accordance with Economic and Social Council decision 2023/325 and past practices, the Secretary-General has the honour to transmit the report of the Committee of Experts on Environmental-Economic Accounting, which is submitted to the Commission for discussion and decision.

* [E/CN.3/2024/1](#).



Report of the Committee of Experts on Environmental-Economic Accounting

I. Introduction

1. At its fifty-fourth session, held from 28 February to 3 March 2023, the Statistical Commission adopted decision 54/110 (see [E/2023/24](#), chap. I, sect. B), in which it:

(a) Welcomed the report of the Committee of Experts on Environmental-Economic Accounting, and expressed its appreciation for the continued work in advancing the System of Environmental-Economic Accounting implementation and its mainstreaming;

(b) Welcomed the adoption of the Kunming-Montreal Global Biodiversity Framework and its monitoring framework, welcomed the acknowledgement by the Conference of the Parties to the Convention on Biological Diversity of the value of aligning national monitoring with the System of Environmental-Economic Accounting in order to mainstream biodiversity, called upon national statistical offices to engage with their biodiversity focal points, and called upon the Committee to actively engage in the Convention on Biological Diversity process and facilitate further collaboration between the statistical and the biodiversity communities to strengthen national monitoring systems and for monitoring and reporting on the Kunming-Montreal Global Biodiversity Framework;

(c) Welcomed the establishment of the new Group of 20 Data Gaps Initiative and the involvement of the Committee in the work to close climate change data gaps using System of Environmental-Economic Accounting accounts for Group of 20 countries and beyond;

(d) Welcomed the Committee's progress towards the development of global databases, in particular through the launch of global data collection for energy and air emission accounts, and noted the importance of these databases for climate change and circular economy initiatives;

(e) Welcomed the collaboration of the Committee with United Nations Economic Commission for Europe and the Organisation for Economic Co-operation and Development in advancing a statistical framework for measuring the circular economy;

(f) Welcomed the progress made in advancing the research agenda and developing methodologies to support implementation of the System of Environmental-Economic Accounting Ecosystem Accounting, in particular the work of the forest ecosystems and ocean accounts groups, and supported the Committee's collaboration with the earth observations community with the aim of providing robust and cost-effective earth observations solutions for ecosystem accounting;

(g) Supported the close collaboration between the Committee, the Advisory Expert Group on National Accounts, and the Intersecretariat Working Group on National Accounts on the update of the 2008 System of National Accounts, noting the importance of taking into account the System of Environmental-Economic Accounting to reflect environmental issues within the updated 2008 System of National Accounts;

(h) Requested the Committee to continue to advance the research agenda on the System of Environmental-Economic Accounting Ecosystem Accounting, taking into consideration the discussions on valuation within the context of the update of the 2008 System of National Accounts;

(i) Supported the engagement of the Committee of Experts on Environmental-Economic Accounting with the Committee of Experts on International Statistical Classifications in the revisions of the International Standard Industry Classification, the Central Product Classification, the Classification of Environmental Functions and the Standard International Energy Product Classification, as well as the upcoming revision of the Classification of the Functions of Government, noting the importance of ensuring that the updated classifications take into account environmental considerations, are fit for purpose for System of Environmental-Economic Accounting compilation and are sufficiently forward-looking in scope;

(j) Welcomed the increase in country implementation of the System of Environmental-Economic Accounting, and encouraged the continued development of guides and tools to support implementation, as well as the use of partnerships and regional collaboration to accelerate implementation;

(k) Requested that the System of Environmental-Economic Accounting manuals and e-learning courses be made available in all official languages of the United Nations as soon as possible;

(l) Welcomed the progress of the working group on business accounting, and supported the group's collaboration with the Task Force on Nature-related Financial Disclosures, the Global Reporting Initiative and the Capitals Coalition to better align private sector methodologies and standards with the System of Environmental-Economic Accounting, noting the benefits to both the public and private sectors in this regard;

(m) Noted the update provided on the statistical framework for measuring the sustainability of tourism, encouraged the finalization of the document, and welcomed its future submission to the Commission.

2. The work of the Committee is organized according to four broad areas of work, with members of the Bureau leading the related parts of the programme of work, as agreed in the Committee's terms of reference. The areas of work are: area A, coordination and communication, led by the Australian Bureau of Statistics; area B, methodological development for normative standards and other research, divided into two sub-areas (area B1, SEEA Central Framework, led by Statistics Netherlands, and area B2, SEEA Ecosystem Accounting, led by South Africa); area C, development of databases, led by the Organization for Economic Co-operation and Development (OECD); and area D, implementation and statistical capacity-building, jointly led by the Statistical Institute for Asia and the Pacific and the Kenya National Bureau of Statistics. Statistics Canada currently chairs the Committee, taking over from Statistics Netherlands. The Committee works in close collaboration with the London Group on Environmental Accounting, chaired by the German Federal Statistical Office, to advance the practical and methodological development of the SEEA Central Framework and SEEA Ecosystem Accounting.

3. The present report discusses the progress made during 2023 and future areas of work. Action to be taken by the Statistical Commission is presented in section VI.

II. Area A: coordination and communication (led by the Australian Bureau of Statistics)

4. The working group on coordination and communication focuses on fostering collaboration between initiatives related to environmental-economic accounting and implementing practical strategies to promote the use of the SEEA for emerging policy issues. These efforts demand collaboration between national statistical offices, line ministries and the international community. In 2023, the working group shifted in

leadership from Statistics Canada to the Australian Bureau of Statistics. In addition, the working group has re-focused its programme of work to finalize a landscape assessment and begin developing a webinar series.

5. The working group recently finalized a landscape assessment of different groups working in the environmental accounting space and their relationships. There are several task teams and expert groups working in the environmental accounting space, having different objectives and working on different aspects of environmental statistics and accounts. The goal of the landscape assessment is to provide an internal overview of the environmental accounting space to the broader Committee, so that this can inform future collaboration and coordination with relevant initiatives and groups. This will help to identify emerging priority issues for the Committee. The landscape assessment will be kept up to date and re-evaluated on an annual basis.

6. The working group will begin a webinar series in 2024, highlighting various priority and/or emerging policy areas. The main goals of the webinar series are to showcase the benefits of the SEEA, demonstrate how the SEEA can answer policy questions, explore areas where the SEEA has not been used but could play a role and to bring people together from various disciplines. The working group will finalize the topics and dates of the webinars in early 2024.

7. In addition, the working group has focused on mainstreaming the SEEA in five main thematic areas: biodiversity, measuring the sustainability of tourism, climate change, the circular economy and business accounting. These are areas where the accounts can provide valuable insights into current international priorities related to environmental challenges.

Biodiversity

8. At its fifteenth meeting, held in Montreal, Canada, in December 2022, the Conference of the Parties to the Convention on Biological Diversity adopted the Kunming-Montreal Global Biodiversity Framework and its monitoring framework. Since the adoption of the Global Biodiversity Framework, the Ad Hoc Technical Expert Group on Indicators, established under the auspices of the Convention on Biological Diversity, has progressed in developing the metadata for the indicators of the monitoring framework. These efforts include aligning them with the statistical frameworks developed under the Commission, including the Sustainable Development Goals, the SEEA and the Framework for the Development of Environment Statistics. The Statistics Division of the Department of Economic and Social Affairs of the Secretariat was nominated for membership in the Ad Hoc Technical Expert Group on Indicators. In particular, it will liaise with the Committee and the Ad Hoc Technical Expert Group on Indicators to promote the use of common standards related to data and methods, in particular on the monitoring of goals and targets. In this regard, the SEEA is recognized as the underlying methodological basis for the compilation of headline indicators. These include indicator A2: extent of natural ecosystems; indicator B1: services provided by ecosystems; and indicator 9.1: benefits from the sustainable use of wild species. This effort will include close consultation with the Technical Committee on the SEEA Ecosystem Accounting as well as collaboration with national statistical offices, line ministries and the science community, as mentioned below under section III, area B2. It is anticipated that the overall methodology for the headline indicators of the monitoring framework will have been agreed to by the Ad Hoc Technical Expert Group on Indicators by April 2024. The metadata will be finalized at the sixteenth meeting of the Conference of the Parties to the Convention on Biological Diversity in late 2024.

9. To support adoption of the monitoring framework and the work of the parties, the European Union, with the support of the secretariat of the Convention on

Biological Diversity and the United Nations Environment Programme (UNEP)-World Conservation Monitoring Centre, continues to develop the Global Knowledge Support Service for Biodiversity.¹ This initiative will build on existing tools, technologies and networks to support national efforts for the implementation, monitoring, reporting and review of progress towards the goals and targets under the Global Biodiversity Framework. The Committee, through the Department, plans to contribute to this initiative in order to support parties in their use of statistical tools and products for monitoring and reporting.

10. In addition, the Department is developing a project proposal to support the development of the indicators of the monitoring framework based on the SEEA Ecosystem Accounting. The project will also focus on building capacity in several countries and supporting the testing, implementation and reporting of the SEEA Ecosystem Accounting-based indicators in those countries.

Measuring the sustainability of tourism

11. The Committee has continued to collaborate with the World Tourism Organization on the development of the statistical framework for measuring the sustainability of tourism which aims at providing an integrated and internationally agreed statistical framework for measurement of the impacts and dependencies of tourism on the economy, society and the environment. The framework supports country production of reliable, internationally comparable data on the performance of countries and subnational regions regarding the sustainability of tourism. In 2023, the Expert Group on Measuring the Sustainability of Tourism finalized the statistical framework. As part of this process, and in order to ensure a consistent approach, the Committee and the Technical Committee on the SEEA Central Framework have reviewed and endorsed the chapter of the statistical framework that focuses on the environmental sustainability of tourism and the linking of relevant environmental-economic accounts to the Tourism Satellite Account constitutes an important element in that context. Following several rounds of consultations, the statistical framework underwent a global consultation in late 2023, with final views being sought from the statistical community (including the Committee) and the tourism policy community.²

Climate change

12. Area A continues to prioritize mainstreaming the SEEA into climate change initiatives. Area A and the broader Committee have continued to contribute to the third phase of the G20 Data Gaps Initiative. The workplan of the Initiative was welcomed by the Group of 20 Finance Ministers and Central Bank Governors during their October 2022 meeting and in the G20 Bali Leaders' Declaration in November 2022. Half of the 14 recommendations under the workplan for the third phase address climate change statistics data gaps. The SEEA provides the methodological basis for many of these recommendations, in particular recommendations on greenhouse gas emission accounts and national carbon footprints (recommendation 1); energy accounts (recommendation 2); climate impacting government subsidies (recommendation 6); and climate change mitigation and adaptation expenditures (recommendation 7). The G20 leaders have asked the International Monetary Fund (IMF), the Financial Stability Board and the Inter-Agency Group on Economic and Financial Statistics, along with the G20 and participating economies, to begin closing the data gaps outlined in the workplan.

¹ See <https://gkssb.chm-cbd.net/>.

² More information is available in the report of the World Tourism Organization (E/CN.3/2024/17), submitted to the Statistical Commission at its fifty-fifth session under the agenda item on tourism statistics.

13. In 2023, substantial progress has been made in the implementation of the workplan for the third phase of the G20 Data Gaps Initiative. Given the range of topics covered by the third phase, task teams have been established to organize and implement the workplan and members of the Committee are participating in all relevant task teams. The task teams have conducted several virtual meetings/workshops for G20 and participating economies to facilitate progress on the implementation of each recommendation, including a workshop on recommendations 1–3 and a separate workshop on recommendations 6 and 7. These workshops have addressed existing methodological frameworks, data gaps and results of stocktaking surveys as well as ways to overcome challenges and advance the implementation of recommendations. The global and Eurostat questionnaires on energy and air emission accounts will be used as the data templates for filling in the data gaps for recommendations 1 and 2. Further, efforts are under way to support countries in filling in the data templates using global data sets. In 2024, the Committee, and particularly the Technical Committee on the SEEA Central Framework (area B1) and the working group on the development of databases (area C), will continue to assist the G20 and participating economies in progressing towards closing these gaps.

14. The working group on coordination and communication continues to coordinate with the Economic Commission for Europe (ECE) with respect to engagement in activities aimed at improving the usefulness of official statistics for climate policy and analysis, including advancing the use of the SEEA for climate change indicators. In particular, the working group has contributed to the annual ECE expert forum for producers and users of climate change-related statistics and the ECE task force on the role of national statistical offices in achieving national climate objectives. The task force is developing guidance on the role of national statistical offices in reporting under the Paris Agreement, meeting information needs of national policymaking in the areas of climate change adaptation and mitigation, and informing the public about climate-related issues. The guidance document is expected to be finalized and presented for endorsement to the Conference of European Statisticians in 2024. The working group's activities in the coming years will include engaging with international groups such as the secretariat of the United Nations Framework Convention on Climate Change, the Intergovernmental Panel on Climate Change and the Expert Group on Environmental Statistics to facilitate communication and collaboration.

Circular economy

15. Area A is actively engaging in two complementary efforts on the circular economy through the participation of: (a) the ECE task force on measuring the circular economy, established by the Bureau of the Conference of European Statisticians; and (b) the OECD expert group on a new generation of information for a resource-efficient and circular economy.

16. The ECE task force has drafted jointly with the OECD expert group the ECE/OECD guidelines for measuring the circular economy (part A), which were endorsed by the Conference of European Statisticians in June 2023. Part A clarifies the headline definition of a circular economy, defines a conceptual monitoring framework and the statistical boundaries of a circular economy and proposes a set of harmonized indicators to monitor progress and guides their measurement. The conceptual monitoring framework and further measurement considerations are based largely on the SEEA. The next step in the work entails drafting part B, which will provide guidance on data sources for producing the core indicators, the requirements for institutional collaboration, guidance on using indicators and further case examples. The findings of the task force have shown that the SEEA is suitable for measuring many of the circular economy drivers such as recycling and reuse of materials; goals

at the macro and meso levels (as related, for example, to economic activity sectors, industries and cities), such as waste reduction; and direct and indirect effects on issues such as climate change and biodiversity loss.

17. The work of the OECD expert group aims towards improvement of the information base for resource efficiency and circular economy policies. It is carried out in close cooperation with the ECE task force, with some elements being prepared jointly. The OECD expert group has focused on the development of a common working definition of a circular economy and of a harmonized conceptual framework and indicator set for monitoring progress and supporting policy development and evaluation. The results of the work of the OECD expert group are being integrated into a joint ECE-OECD report on measuring the circular economy.

Business accounting

18. In order to streamline its programme of work, the Committee decided to integrate the activities of the Working Group on the SEEA and Business Accounting (area E) into the activities of area A, while fully recognizing the importance of remaining engaged and visible in this area and maintaining the momentum achieved by area E in terms of aligning the SEEA and business accounting frameworks and standards on the environment and ecosystems.

19. In March 2023, the Committee participated in the global consultation on the Global Reporting Initiative biodiversity topic standard. The standard aims at encompassing internationally agreed best practice and recent developments in the field of biodiversity to provide guidance on private sector reporting and management of biodiversity-related impacts. The draft biodiversity topic standard already contained several references and areas of alignment to the SEEA Ecosystem Accounting. The Committee's feedback provided examples of additional areas where alignment with the SEEA Ecosystem Accounting could be strengthened, thereby harnessing synergies between private and public sector accounting for biodiversity.

20. In 2023, the Department continued to serve as a knowledge partner of the Task Force on Nature-related Financial Disclosures. The Task Force on Nature-related Financial Disclosures released its recommendations in September 2023 and the final recommendations include the use of concepts and definitions used by the SEEA. This alignment should facilitate the use of official SEEA accounts for private sector decision-making and reporting, as well as the use of private sector data by national statistical offices in the production of SEEA accounts.

Communication

21. The SEEA website³ and the quarterly newsletter SEEA News and Notes⁴ continue to function as the Committee's main vehicles for engagement with and provision of information to stakeholders and the general public. The website and newsletter serve as an important mechanism for sharing by countries of their national experiences and publications and for the highlighting by the Committee of international initiatives and events relevant to the community, such as the 2023 Africa Natural Capital Accounting Policy Forum and the side event at the 2023 United Nations Water Conference entitled "Water Accounting for the Sustainable Development Goals". The newsletter saw a steady growth of its audience during 2023, with approximately 200 new subscribers being added. Moreover, the Department continues to expand the knowledge base of the SEEA website and added approximately 65 publications on the SEEA in 2023.

³ See <https://seea.un.org/>.

⁴ See <https://seea.un.org/content/seea-news-and-notes-archive>.

22. Over the course of 2023, the Committee participated in discussions with other groups, such as the Network of Economic Statisticians and the Friends of the Chair Group on social and demographic statistics. Those discussions focused on how to improve the integration of measures of the economy, society and the environment, support achievement of the Sustainable Development Goals and address issues raised in the report of the Secretary-General entitled “Our Common Agenda”.

III. Area B: Methodological development for normative standards and other research

23. An important component of the work of the Committee, as well as of the London Group on Environmental Accounting, is the advancement of the research agenda of the SEEA Central Framework and the SEEA Ecosystem Accounting. The present section describes the progress of methodological development and implementation for both.

A. Area B1: SEEA Central Framework (led by Statistics Netherlands)

Update of the SEEA Central Framework

24. At its eighteenth meeting in 2023, the Committee discussed a possible update of the SEEA Central Framework, citing the update of the 2008 System of National Accounts (SNA) and the need to stay coherent with the updated SNA as a motivating factor, as well as the upcoming updates of other statistical standards and classifications; the adoption of the SEEA Ecosystem Accounting; and the progress on the research agenda of the SEEA Central Framework. The Committee emphasized the need to ensure that the SEEA Central Framework serves as a statistical framework that responds to the data needs of policies on the environment-economy nexus, in particular climate change, circular economy, biodiversity and sustainable finance, among others. Citing these factors, the Committee agreed to an update of the SEEA Central Framework and, noting concerns regarding the availability of resources and the capacity of national statistical offices and international organizations to undertake this work, recommended that the update of the SEEA Central Framework have a focused scope. The Committee requested the technical committee of the SEEA Central Framework to develop criteria for a prioritization of issues and evaluate the costs and benefits of the issues.

25. The Technical Committee is currently developing an initial list of issues, based mainly on the research agenda of the SEEA Central Framework as well as on the inputs from the discussions of the London Group on Environmental Accounting and the update of the 2008 SNA. Broadly speaking, the issues can be assigned to different thematic groups, such as: improvement of the classifications in the SEEA Central Framework (for example, through use of new classifications and alignment with recently revised classifications); improvements made to the SEEA Central Framework (for example, improving the links to emerging policy needs); better alignment between the SEEA Central Framework and the SEEA Ecosystem Accounting; and new topics in the research agenda stemming from the implementation of the SEEA Central Framework in recent years. It should be noted that a number of issues associated with the update of the SEEA Central Framework relate to chapter IV on monetary flow accounts and to ensuring consistency with the 2025 SNA and alignment with the SEEA Ecosystem Accounting. Moreover, applications of the SEEA Central Framework will be examined, although an update of the SEEA Applications and Extensions would be addressed through a separate process, which is under discussion.

26. The Technical Committee and broader Committee will circulate the list of priority issues for global consultation in the first half of 2024. The Committee will then finalize the list of issues for submission to the Commission in 2025. Identifying sources of funding and in-kind resources would also be a focus of the Committee during this period. The Committee plans to involve not only national statistical offices in the update process, but the broader user community as well, in order to ensure that the updated SEEA Central Framework meets users' data needs. Once the list of issues is finalized, issue papers will be drafted and global consultations will be organized in order to finalize the discussion on the various issues. The timeline for the update process of the SEEA Central Framework is being coordinated with the upcoming revision processes of related standards such as the Classification of the Functions of Government, the Government Finance Statistics Manual and the Monetary Finance Statistics Manual. It is envisaged that the updated SEEA Central Framework could be finalized by 2027, with submission to the Statistical Commission in 2028. The Commission is invited to endorse the update of the SEEA Central Framework.

Involvement in updates of classifications and other frameworks

27. In 2023, the Technical Committee on the SEEA Central Framework has continued to provide substantial input to the ongoing update processes for the International Standard Industrial Classification of All Economic Activities, the Central Product Classification and the Standard International Energy Product Classification to ensure that those classifications are fit for purpose for compiling the SEEA. For the International Standard Industrial Classification update, the Technical Committee on the SEEA Central Framework concentrated on making environment-related activities visible by making them explicit in the explanatory notes of existing classes and creating some separate classes. For the Central Product Classification update, the Technical Committee of the SEEA Central Framework identified several topics that are particularly relevant for the SEEA, including waste products, specific environmental products and services, energy products and the alignment of the Standard International Energy Product Classification with the Central Product Classification and the Classification of Environmental Purposes, in particular concerning climate change and biodiversity. The group is actively participating in the updates of the Standard International Energy Product Classification and the upcoming revision of the Classification of the Functions of Government to ensure that both classifications can be used effectively by SEEA compilers.

28. Eurostat and a dedicated European task force have been working over the past years on the revision of the classification of environmental activities, which serves as a fundamental building block for the compilation of environmental activities accounts in the SEEA. A fully developed version of the structure of a new, integrated classification, bringing together the Classification of Environmental Protection Activities and Expenditure and the Classification of Resource Management Activities, under the name "Classification of Environmental Purposes", was drafted along with explanatory notes. The Classification of Environmental Purposes was presented at the Technical Committee of the SEEA Central Framework and the Committee of Experts on International Statistical Classifications and underwent global consultation, administered by the Statistics Division as secretariat of the Committee of Experts on Environmental-Economic Accounting. Based on the results of the global consultation and the revised classification, the Technical Committee and the broader Committee endorsed the Classification of Environmental Purposes, which was also endorsed by the Committee of Experts on International Statistical Classifications at its October 2023 meeting, and noted the importance of the continuous update of this classification, especially with regard to the upcoming revision of the Classification of the Functions of Government and the update process of other macroeconomic standards, such as the SEEA Central Framework, in order to

ensure alignment and consistency. The Classification of Environmental Purposes is submitted to the Commission for adoption as an international statistical standard by the Committee of Experts on International Statistical Classifications.

29. The Technical Committee on the SEEA Central Framework has continued to play a key role in the update of the 2008 SNA and has reviewed draft chapters of the 2025 SNA that are related to the SEEA, as well a glossary of terms and definitions. Furthermore, members of the Committee are participating in the OECD informal Expert Group on Natural Capital, which has been formed to address the practical implementation challenges of the 2025 SNA in relation to reporting of natural capital and its inclusion in net measures of production and income.

B. Area B2: SEEA Ecosystem Accounting (led by South Africa)

30. Following the adoption of the SEEA Ecosystem Accounting in March 2021 and its implementation strategy in March 2022, uptake of the SEEA Ecosystem Accounting by the statistical community and beyond has continued. The implementation and further development of guidance materials have been overseen by the Technical Committee on the SEEA Ecosystem Accounting. The Technical Committee consists of experts in ecosystem accounting from various member States, international and regional organizations, individual experts and chairs of working groups of the Technical Committee. The Technical Committee convenes regularly in bimonthly meetings to discuss the progress and developments in the implementation of the SEEA Ecosystem Accounting and to develop implementation guidelines.

31. Since the adoption of the SEEA Ecosystem Accounting, the scope of work of the Technical Committee has shifted from the revision of SEEA Experimental Ecosystem Accounting towards supporting the implementation of the new framework. The Technical Committee consequently adopted new terms of reference and a revised membership structure. Those new terms of reference aim towards strengthening the focus on supporting implementation of the SEEA Ecosystem Accounting; the addition of members will strengthen country and regional representation in the Technical Committee.

32. The Technical Committee adopted its work programme for 2023–2025, which is centred on six main components: (a) development of practical guidance notes for countries; (b) supporting the development of headline indicators for the Kunming-Montreal Global Biodiversity Framework that are based on the SEEA Ecosystem Accounting; (c) overseeing the working groups on forest ecosystems and ocean accounting; (d) contributions to the broader SEEA and SNA processes; (e) engagements with related initiatives; and (f) the community of practice on ecosystem accounting. The first two components are priorities for the Technical Committee.

33. With respect to the development of practical guidance notes, the Technical Committee has prioritized notes related to operationalizing the International Union for Conservation of Nature Global Ecosystem Typology, approaches and methods for compiling ecosystem extent accounts, and methods for measuring ecosystem services (including global climate regulation services).

34. Another main priority for the Technical Committee is supporting the development of the metadata of the headline indicators of the Kunming-Montreal Global Biodiversity Framework related to the SEEA, as further elaborated in section II above in the paragraphs on biodiversity. The Technical Committee is engaging with the Ad Hoc Technical Expert Group through the Department and providing input into the development of metadata for the SEEA-related indicators included in the monitoring framework. Task teams have been established under the Technical Committee to take this work forward.

35. The Technical Committee is engaging with all relevant initiatives working towards advancing the implementation and development of tools for ecosystem accounting, in particular to measure ecosystem extent and services accounts. In the future, the Technical Committee would like to establish mechanisms of cooperation with private sector accounting initiatives.

36. To advance implementation and further methodological development, the Technical Committee has established two working groups on forest ecosystems and ocean accounting to contribute to the advancement of the ecosystem accounts, in relation to forest ecosystems and oceans respectively. The working groups identify best practices, methods, models, data and tools, looking at both biophysical and monetary aspects, as well as examining policy entry points.

37. The working group on forest ecosystems, established in 2021, is co-chaired by Rey Juan Carlos University in Spain and Griffith University in Australia and has about 23 members from several countries, organizations and academic institutions. The working group established four task teams on: (a) ecosystem extent accounts; (b) ecosystem condition accounts; (c) global climate regulation as an ecosystem service from forest ecosystems; and (d) policy links and users of forest ecosystem accounts. The fourth task team, on policy links and users of forest ecosystem accounts, developed and published a paper entitled “Using the system of environmental-economic accounts ecosystem accounting for policy: a case study on forest ecosystems”. The task team made substantial progress on a note outlining the definitions of forest ecosystems. The task team on ecosystem extent accounts is focusing on how to treat issues of defining different forest ecosystem types and mapping extent and changes in extent of forest ecosystems in relation to the International Union for Conservation of Nature Global Ecosystem Typology. The task team on ecosystem condition accounts is performing a stocktake on forest-related condition accounts to learn from previous experiences and understand the characteristics used to compile condition accounts. Finally, the task team on the global climate regulation as an ecosystem service from forest ecosystems is developing a note on improving estimates of carbon stocks using ecosystem accounts for climate change policy and testing the methodology in Senegal.

38. The working group on ocean accounting is chaired by the Australian Bureau of Statistics and has about 27 members from the environmental accounting, scientific and environmental economics communities, representing countries, international organizations, non-governmental organizations and academia. This working group, with the support of the Global Ocean Accounts Partnership, has developed a research agenda and has agreed to tackle the following substantive topics in seven background papers to be developed over 2023–2024: (a) a global stocktake of SEEA implementation concerning the ocean; (b) data structures; (c) accounting for coastal and marine ecosystem services; (d) monetary valuation of ecosystems for the ocean domain; (e) high-impact, actionable indicators from ocean accounts; (f) accounting for biodiversity of marine and coastal ecosystems; and (g) other thematic ocean accounts.

39. The working group on SEEA Ecosystem Accounting indicators was established by the Technical Committee in June 2020 with the main objective of supporting the revision process and, in particular, the drafting of chapter 12 of the SEEA Ecosystem Accounting. This task was successfully carried out, and since the adoption of the Kunming-Montreal Global Biodiversity Framework and the establishment of the Ad Hoc Technical Expert Group to advise on the operationalization of its monitoring framework and indicators, with which the Division will engage, there is no longer a need for a dedicated working group on indicators. Thus, this working group was dissolved and the task of supporting the development of indicators was passed on to the Technical Committee itself.

40. Similarly, the subgroup on accounting for biodiversity was established in 2020 with the objective of supporting the revision process, in particular the drafting of chapter 13, building on a range of conceptual advances and practical experiences in accounting for and measuring biodiversity. As the task was completed with the revision of the SEEA Ecosystem Accounting, the subgroup was dissolved. However, the contribution of the SEEA Ecosystem Accounting to accounting for biodiversity, including to the implementation and monitoring of the Global Biodiversity Framework, remains a focus of the Technical Committee as a whole.

41. To support the implementation of the SEEA Ecosystem Accounting, the Department has been working with the International Union for Conservation of Nature and the Committee of Experts on International Statistical Classifications to include the International Union Global Ecosystem Typology in the family of international classifications. The Global Ecosystem Typology is the reference classification for ecosystem types in the SEEA Ecosystem Accounting and, as such, it underpins the full suite of ecosystem accounts. It is being submitted to the Commission by the Committee of Experts on International Statistical Classifications for adoption as an international statistical standard.

C. London Group on Environmental Accounting (led by the Federal Statistical Office of Germany)

42. The London Group on Environmental Accounting is a city group consisting of experts from national statistical offices and international organizations. The London Group meets annually and provides a forum for discussion and work towards the conceptual and methodological development of environmental-economic accounts. The twenty-ninth meeting of the London Group, hosted by Statistics South Africa, was held in Pretoria from 11 to 15 September 2023.

43. The upcoming update of the SEEA Central Framework was one of the central topics of the meeting. The London Group has reiterated its support to the Technical Committee on the SEEA Central Framework in advancing methodological issues. To this end, the London Group will contribute to the discussion on the issues identified for the update of the SEEA Central Framework and will develop position papers.

44. In coordination with the Technical Committee on the SEEA Central Framework, the London Group has agreed to prepare position papers for the 2024 meeting covering (a) the integration of climate mitigation and adaptation expenditures as new SEEA accounts; (b) the treatment of emission certificates in environmental-economic accounting; (c) the compatibility of classifications and accounting rules for environmental taxes between monetary and physical accounts in the SEEA and the SNA; and (d) the treatment of human-caused flows within the environment. During its meeting, the London Group discussed more practical applications and techniques, including, for example, input-output models and seasonal adjustment to quarterly air emission accounts. With respect to quarterly air emission accounts, the London Group agreed that existing technical methods for seasonal adjustments could be applied to quarterly air emission accounts. In addition, in the London Group's discussion on input-output models, important analytical uses for SEEA accounts were highlighted, although the Group agreed that there were no new developments relevant for the SEEA Central Framework update.

45. The London Group will work on an issue paper on general recommendations for setting baselines and using modelling with SEEA accounts. Based on these general recommendations, position papers for valuation of ecosystem services and on potentially environmental damaging subsidies (including tax abatements) will be developed by 2025. The London Group bureau has decided to include two new topics

for exploration in 2024: spatially disaggregated accounts and the inclusion of agriculture in energy accounts.

46. In order to foster efficient collaboration during the year beyond annual meetings, an electronic discussion forum will be set up. The 2024 meeting will be hosted by the Bureau of Economic Analysis in Washington, D.C., and the 2025 meeting, by Statistics Estonia.

IV. Area C: Development of databases (led by OECD)

47. The working group on the development of databases is composed of members from international organizations responsible for developing international compilations for the five priority accounts (air emissions, energy, material flows, land and water), as well as for other emerging international SEEA compilations. The priority accounts were identified in 2016 at the Committee's eleventh meeting.

Global databases

48. The objective of the working group on the development of databases is to establish a set of global SEEA databases to provide users with SEEA-compliant data sets for integrated policy development and analysis, including for the Sustainable Development Goals. This is achieved by coordinating support for the development of SEEA databases at the international level, facilitating the exchange of related data among international organizations and providing direct access to existing SEEA databases through the websites of international organizations and, ultimately, through the Statistics Division SEEA website.

49. In 2023, the working group on the development of global databases continued to make progress on priority actions, as outlined in its road map. Work on expanding the global coverage of compilation of air emissions accounts and physical energy flow accounts was advanced during 2023 with the launch of the first round of a joint global data collection for air emission and physical energy flow accounts by the Department and OECD, complementing existing data collection for European Union countries by Eurostat. To that end, the joint questionnaires, aligned with the Eurostat questionnaires, have been developed and finalized after testing with countries in 2022. The joint questionnaires are mapped to the global Statistical Data and Metadata Exchange data structure definitions for the SEEA. The Department and OECD are currently validating the data and expect to disseminate those data in 2024.

50. In addition, several international organizations have formed a partnership to develop quarterly greenhouse gas emissions statistics based on the SEEA. Eurostat, IMF and OECD continue to make regional aggregates available on a quarterly basis. Moreover, during 2023, OECD completed work on developing global nationally aggregated estimates on CO₂ emissions from maritime transport, complementing existing related estimates for air transport, as part of the broader work programme, contributing to improved compilation, granularity, and timeliness of air emission accounts.

51. Along with the working group on coordination and communication, the working group on the development of global databases continues to coordinate with and contribute to the third phase of the G20 Data Gaps Initiative. In 2023, members of the working group have conducted workshops on recommendations on greenhouse gas emission accounts (recommendation 1) and energy accounts (recommendation 2). To minimize the reporting burden for countries and avert any duplication of efforts across international organizations, results from the joint global data collection on air

emissions and physical energy flow accounts will be used to monitor progress regarding these third phase-related recommendations.

52. UNEP continues to undertake work on material flow accounts. The *Global Manual on Economy Wide Material Flow Accounting*, originally prepared in 2021 by UNEP and the International Resource Panel, jointly with Eurostat and in cooperation with OECD, was revised and republished in 2023.⁵ By December 2023, updated global material flow accounts estimates will be available in the Global Material Flows Database,⁶ which is used as input for monitoring the Sustainable Development Goals, with time series up to 2023 for all Member States. Prefilled material flow accounts questionnaires will be sent to countries in early 2024 for verification and replacement with national data, as applicable.

53. UNEP, in collaboration with the Commonwealth Scientific and Industrial Research Organization, is developing an online global footprint tool. The global footprint tool will include a database of material, energy, carbon, water and land footprint estimates by country and will allow national statistical offices and other relevant organizations to calculate their national environmental footprints using the multiregional Global Resource Input-Output Assessment database. The tool will be available by the end of 2023.

54. OECD and the Food and Agriculture Organization of the United Nations have developed a concept note guiding the work on developing a global database of land cover accounts. Key future milestones include a discussion with countries and stakeholders of the draft land cover questionnaire, a written consultation with data producers and users to ensure best value added of the land accounts for analytical and policy work and a virtual workshop in 2024 to finalize the questionnaire. Once the questionnaire is finalized, the working group will consider undertaking pilot data collection. The working group will report its progress to the Committee in 2024.

55. Work on SEEA water accounts has focused on ensuring the availability of core data for the accounts from the joint OECD/Eurostat-UNEP/Statistics Division questionnaires on inland waters. While simplified SEEA water accounts have been compiled, the resulting tables remain partial and options for obtaining more complete data need to be explored. In 2024, OECD will undertake a feasibility study to review existing national and international data sources for their potential to fill remaining data gaps.

Artificial Intelligence for Environment and Sustainability for the SEEA (ARIES for the SEEA)

56. The Basque Centre for Climate Change, the Donostia International Physics Centre, the Department and the United States Geological Survey have continued to collaborate on the Sector Hub of Artificial Intelligence for Environment and Sustainability for the SEEA (ARIES for the SEEA), in support of the United Nations Global Platform. The Sector Hub, which is managed by the Basque Centre for Climate Change, is a collaborative and action-oriented knowledge, technology and innovation hub, which will bring together the use of artificial intelligence and big data and provide a much-needed platform to further the interoperability of data and models in the domain of environmental-economic accounting and sustainability.

57. Some of the main activities undertaken in 2023 include: in-person and virtual participation in capacity-building workshops in Africa, Asia and Latin America; technical support on land cover and ecosystem accounts compilation provided to several countries, including Botswana, Senegal and South Africa; model testing with

⁵ See <https://wedocs.unep.org/bitstream/handle/20.500.11822/36253/UNRE.pdf>.

⁶ See www.resourcepanel.org/global-material-flows-database.

national statistical offices; coupling of the ARIES platform to the openEO platform of the European Space Agency;⁷ and the development of global baseline estimates of vegetation/soil carbon stocks for terrestrial ecosystems, which will be used for the upcoming report of the World Bank entitled *The Changing Wealth of Nations*. The number of users of the application has increased from about 3,300 to 4,800. An advisory committee for the Sector Hub is being finalized. The committee, comprising selected senior officials from national statistical offices and other government agencies, space agencies and academia, will advise on the strategic direction, vision and programme of work of the Sector Hub.

V. Area D: Implementation and statistical capacity-building (led by Kenya National Bureau of Statistics and the Statistical Institute for Asia and the Pacific)

58. The working group on implementation and statistical capacity-building has identified several areas of focus for its work programme and developed a list of priorities for the period from July 2023 to June 2024. These are centred on three main activities: (a) coordinating of capacity-building and implementation activities; (b) revitalizing the SEEA focal points network; and (c) supporting the Global Assessment of Environmental-Economic Accounting and Supporting Statistics.

59. In 2023, in addition to ensuring the coordination of capacity-building and implementation activities at the global level, the group reviewed and updated the SEEA implementation guide. The guide was initially developed in 2014 and focused mostly on the implementation of SEEA Central Framework. Since 2014, several new developments have arisen, most notably the adoption of SEEA Ecosystem Accounting and the advancement in the use of global data and Earth observation in support of SEEA accounts compilation.

60. The updated implementation guide, entitled “Towards the institutionalization of the SEEA: implementation guide”, contains five core sections, on: (a) strategic planning; (b) building mechanisms for implementation; (c) compiling the accounts; (d) disseminating the accounts; and (e) institutionalizing the SEEA. Each section outlines the main aspects related to the implementation of both SEEA Central Framework and the SEEA Ecosystem Accounting and includes at least one country example to illustrate relevant aspects of the SEEA implementation. The updated implementation guide was endorsed by the Committee at its eighteenth meeting in July 2023 and is available online in a user friendly and interactive format.⁸

61. The working group, with members from countries, the regional commissions and other international organizations, has the objective of coordinating capacity development activities at the global and regional levels, as well as ensuring that lessons learned from the various experiences with SEEA implementation in countries are shared widely. This involves maintaining and updating a list of active projects on SEEA implementation in countries to avoid duplication and ensure efficient use of resources.

62. The Global Assessment on Environmental-Economic Accounting and Supporting Statistics aims towards gaining a better understanding of national SEEA implementation, including institutional and funding arrangements, countries’ priorities and future plans for implementing accounts, technical assistance received and provided, and the use of the accounts. It helps assess the support required by countries for implementing the SEEA. The Global Assessment supports the

⁷ See <https://eo4society.esa.int/projects/openeo/>.

⁸ See <https://seea.un.org/content/towards-institutionalization-seea-implementation-guide>.

monitoring of Sustainable Development Goals through two indicators: (a) 15.9.1, on the integration of ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts; and (b) 12.b.1, on the implementation of standard accounting tools to monitor the economic and environmental aspects of tourism sustainability. The benchmark Global Assessment was sent to countries in September 2023 and the results are submitted to the Commission as a background document.

63. Acknowledging the importance of the flow of information on capacity-building and implementation activities at both regional and global levels, the working group aims at expanding its membership to include new international and regional organizations that are increasingly interested in the implementation of the SEEA, as well as a few countries that could serve as ambassadors for SEEA implementation in their regions.

64. The contact of the working group and the broader Committee with countries is maintained through the SEEA focal points, established in 2020, who serve as the first point of contact in countries for all matters related to the SEEA, including compilation updates, responding to the global assessment, data validation, and coordination of SEEA work. The SEEA focal points network was established through requests for nominations from all Members States. The Department received approximately 192 nominations from 123 countries.

65. The network has served well as a point of contact for all SEEA-related matters. The working group aims at reviewing the terms of reference for the focal points, reviewing and updating the current membership of the group and, as needed, further engaging with the focal points to support them in fulfilling their responsibilities as laid out in the terms of reference.

66. There are many SEEA implementation activities and projects under way. The Department has just concluded a three-year project funded by the twelfth tranche of the United Nations Development Account. The project supported the following countries on SEEA implementation and its use in evidence-based policymaking in Asia and Africa: Bhutan, Kenya, Mozambique, the Philippines and Senegal. The Department has provided support to the project countries in building institutional frameworks in support of SEEA implementation, compiling pilot accounts and promoting the accounts in support of policymaking and the Sustainable Development Goals. The Department organized several regional training workshops as part of the project, including the Regional Training Workshop on an Accounting Approach to Climate Change Statistics and Indicators, held in Chiba, Japan, in April 2023; the Regional Training Workshop on the SEEA Ecosystem Accounting for Asia and the Pacific, held in Manila in June 2023; and the Regional Training Workshop on an Accounting Approach to Climate Change Policy in Africa, held in Nairobi in September 2023.

67. The SEEA Ecosystem Accounting e-learning course, developed by the Department and the United Nations Statistical Institute for Asia and the Pacific in 2023, has been translated into French and Spanish. A facilitated e-learning programme, in which 348 participants from 73 countries participated, was conducted from October to November 2023. In addition, in 2023, the Department made the e-learning course entitled “SEEA for policy makers” available in a Portuguese version, as an addition to the English, French and Spanish versions which were already available.

68. The Global Program on Sustainability,⁹ which is the umbrella technical assistance facility of the World Bank on the economics of natural capital, ecosystem

⁹ See www.worldbank.org/en/programs/global-program-on-sustainability.

services and sustainability, has as its objective to strengthen and promote use of data and analysis (economic and financial) on natural capital and ecosystem services in order to inform global dialogues, government and financial market decisions. The Global Program on Sustainability is providing technical assistance grants for compiling natural capital accounts in several countries including Ethiopia, Ghana, Nigeria and Türkiye. At the global level, the Global Program on Sustainability regularly compiles and publishes a comprehensive assessment of wealth accounts for over 140 countries (including natural, produced and human capital). The fifth issue of this series, entitled *The Changing Wealth of Nations*, is currently under production and aims at expanding the scope as well as the conceptual and methodological depth of wealth accounting and analysis.

69. OECD and ECE organized the eighth joint annual seminar on the implementation of the SEEA in March 2023, at which the following issues, among others, were discussed: the role of the SEEA in measuring the transition towards a circular economy; progress made by countries in implementing ecosystem accounts; integration of accounts for analytical purposes; and related new developments in international standards and classifications such as the System of National Accounts.

70. The Economic and Social Commission for Asia and the Pacific (ESCAP) assists countries in the region in the production and use of integrated statistics and accounts in response to priority policy concerns, such as sustainable development of the oceans. During 2023, support on ocean accounts was extended to two countries: (a) Palau, for monitoring seagrass beds in Airai State as an important fish habitat, and monitoring coral ecosystems in Koror State in the context of sustainable tourism income, as well as for a national pilot on mangrove accounts; and (b) Samoa, for extending initial pilot accounts, with a focus on mangroves. In collaboration with the Global Ocean Accounts Partnership, ESCAP supported the initiative of Maldives on natural capital accounting in Laamu atoll. Regarding other SEEA accounts, ESCAP supported Fiji in developing high-impact, integrated statistics and accounts, including accounts from both the SEEA Central Framework and the SEEA Ecosystem Accounting, with a focus on forests. Several e-learning courses were organized by the Statistical Institute for Asia and the Pacific during 2023, including on the SEEA water accounts and use of the SEEA for climate change indicators.

71. IMF recently launched a new environment and climate change statistics capacity development programme, which will provide IMF member countries with the tools, resources and technical capacity to develop a range of macrorelevant environment and climate change statistics based on the SEEA. The programme works in close coordination with other international organizations, in particular United Nations entities and the World Bank. It currently supports the implementation of climate change-related statistics based on the SEEA in Bangladesh, Colombia, Ghana, Indonesia, Mozambique, Peru, South Africa and Viet Nam. Two training courses were organized in 2023 as part of this programme. The first was an online course for African countries organized in collaboration with the IMF African Training Institute based in Mauritius. The second was a two-week course organized in collaboration with the IMF Middle East Center for Economics and Finance, the Arab Monetary Fund and the International Energy Agency. The course was held in Abu Dhabi from 4 to 15 December 2023. Officials from central banks, ministries of finance and national statistical offices participated in both courses.

72. The Natural Capital Accounting Community of Practice for Africa¹⁰ continued to host regular webinars, providing opportunities for countries of the region and international organizations to share experiences. The community of practice convened and facilitated the second Africa Natural Capital Accounting Policy Forum, which

¹⁰ See <https://seea.un.org/content/africa-community-practice>.

was held in Nairobi on 6 and 7 September 2023 under the theme “Using natural capital accounting and analysis to inform policies for development, climate change and nature protection”. The Forum, which was held alongside the Africa Climate Summit, provided participants with a focused platform for discussing the use of natural capital accounting and the challenges and opportunities associated with using natural capital data, tools and analysis to inform and support policies in African countries. Over 120 representatives from 30 countries attended the Forum.

VI. Points for discussion

73. The Statistical Commission is invited to express its views on:

- (a) The proposed update of the SEEA Central Framework (see sect. III);**
 - (b) The Committee’s role and engagement in the Kunming-Montreal Global Biodiversity Framework and the engagement of national statistical offices in the development and implementation of the monitoring framework (see sect. II);**
 - (c) The progress made in global data collection and databases for both the SEEA Central Framework and the SEEA Ecosystem Accounting (see sect. IV);**
 - (d) The involvement of the Committee in the Data Gaps Initiative, particularly on climate change recommendations 1, 2, 6 and 7 (see sect. II);**
 - (e) The progress made in upscaling implementation of the SEEA Ecosystem Accounting, advancing the research agenda and developing methods and guidance for compilation (see sect. III);**
 - (f) The use of partnerships, regional collaboration and the SEEA focal points network to make advances in global implementation of the SEEA (see sect. V);**
 - (g) The work programme of the London Group (see sect. III).**
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