

Minutes of the 25th Meeting of the London Group on Environmental Accounting 7-10 October 2019, Melbourne

Minutes of 20 December 2019

Presentations and other materials can be found here: <https://seea.un.org/events/london-group-environmental-accounting-25th-meeting>

Brief Summary

The 25th Meeting of the London Group on Environmental Accounting was held from 7-10 October 2019 in Melbourne, Australia and hosted by the ABS of Australia. The three-and-a-half-day meeting included sessions on the SEEA Central Framework (SEEA CF) methodology, implementation of the SEEA CF, SEEA Experimental Ecosystem Accounting (SEEA EEA) methodology and communications and policy applications of the SEEA. The three-year work plan of the LG (2019-2021) was introduced together with the instructions of the London group as a city group to the UN.

In terms of SEEA CF methodology, the London Group supported the current research agenda and method of prioritizing topics and looks forward to the further development of topics including the fossil fuel subsidy methodology and classification of environmental activities that has moved forward during the year. A discussion on the proposed natural resource reserve index and its placement in the SEEA CF continued and is now proposed to be included in the SEEA CF research agenda expanding the index with non-renewables as well as renewable natural resources.

The London group also took the opportunity to learn more on specific implementation and new developments. For example, the work of the US and Australia on land related accounts, on circular economy in Finland and in Australia and on agriculture accounts in Australia.

The agenda devoted one-and-a-half days to the SEEA EEA, learning about the progress made by the research area leads of the revision working groups for spatial units, valuation and ecosystem services. Several presentations also highlighted the importance and difficulties of accounting for urban areas, and about services. New areas such as marine and ocean accounts was also discussed at the meeting. The group discussed various constraints and provided direct guidance on the specific presentations provided. The group also learned about country experiences in implementing the SEEA EEA from e.g. Estonia, Netherlands, Canada, and South Africa, discussing successes and lessons learnt.

The London Group also covered communication and policy applications of the accounts. Several experiences were shared by national statistical offices as well as representatives of the international organisations. A wide range of topics were covered, from the experiences of the World bank, Costa Rica, Australia and Sweden on natural capital accounting, on SDGs and use of existing models. During multiple points in the meeting, participants recommended an increased cooperation with multidisciplinary actors, such as the academia, private sector and other agencies to enhance the statistics provided the use of them. In addition the London group assisted the Friends of the Chair on Future of economic statistics by discussing and delivering ideas on the request for input by them.

Session A: Introduction

1. Welcome to country

Welcome to country and opening remarks (Amanda Clark, Program Manager, Physical Environment and Agriculture Statistics and Uncle Bill Nicholson, Wurundjeri Tribe).

Amanda Clark opened by mentioning the long standing relationship between the ABS and the London Group. She welcomed people to Australia and introduced Uncle Bill Nicholson, elder of the Wurundjeri Tribe. Uncle Bill welcomed the meeting to the Wurundjeri traditional lands and gave his family's story of the long-standing relationship with the land. He informed the group of how there is a deep connection with the land and its people.

2. Opening remarks, previous meeting notes, presentation of work plan

The Chair of the London Group, Nancy Steinbach (Statistics Sweden), welcomed the participants. Nancy also presented the work plan of the agenda (2019-2021), which reiterated the objectives and long-term goals of the group, the scope of the work and the achievements made over the last few years. The group was also informed about the rationale for the group.

The core objectives of the London group are:

- Methodological research and advancement to revisions issues
- Implementation advice and best practices for SEEA
- Development and sharing of uses, applications, and extensions of the environmental-economic accounts

3. Round table of participants

The participants presented themselves briefly.

4. UNCEEA business

Sjoerd Schenau (Statistics Netherlands) shared an update of the 14th Meeting of the UNCEEA. The meeting focused on the programme of work which ends next year. The work programme covers the following issues:

A. Coordination and promotion

B1. 'Methodological development for normative standards and other research' for the SEEA Central Framework

B2. 'Methodological development for normative standards and other research' for the SEEA Experimental Ecosystem Accounting

C. Development of databases

D. Implementation and Statistical Capacity Building

E. Formulation of a statistical response on emerging policy issues

A key outcome of the work programme was the target set of a 100 countries implementing the SEEA CF and 50 countries implementing ecosystem accounting. There have been several countries implementing the SEEA CF and ecosystem accounts since

the strategy was put in place, however, there is still a shortage of countries for the targets to be fully met by 2020 as the situation currently is.

For more details about the 14th UNCEEA meeting please look at the conclusions:
https://seea.un.org/sites/seea.un.org/files/unceea_conclusions_final_all.pdf

Discussion

From the following discussions a few issues were raised. These were focusing on the process of filling the databases and the implementation strategy. With regards to the databases the process is not yet established on how to fill them. However, the intention is to use existing national data as far as possible – often via SDMX transfers between the international organisations and that country estimates, where needed, is foreseen to go through country validation before being published. It is not clear yet how data by the countries will be transmitted to the hosting databases if there is no other data collection in place.

With regards to the implementation strategy questions related to the definition of “implementation” and experiences were shared on how some countries had chosen to fill out the UN survey of implementation. There was some concern that the current number of countries are overestimated.

Outcome

The London group suggests to the lead of Area D Capacity building that the current questionnaire on implementation should be tested and new questions should be developed to better lead the respondents into understanding what information is requested. A clear definition of what “implementation” means should also be put forward.

In addition, the London group suggests to the lead of Area E Communication that the SEEA-website could yet again be a repository for country reports and host best-practices.

Session B: Methodological Work SEEA CF

5. Introduction to the SEEA CF Research Agenda

Sjoerd Schenau (Statistics Netherlands) provided an overview of the current topics in the SEEA CF research agenda as well parts of the SNA research agenda that touches upon the SEEA. The work plan for the area that stretched 2017-2019 has come to an end. The result was that 3 projects were finished (integrated framework, SDMX, EW-MFA) 3 are still ongoing and 3 has not started. The reason for issues not having started relates to their complexities as well as finding no one who can take the lead on the work. The lack of clear goal is also a problem for some issues. The new plan is to be developed.

There is a current proposal from the UNCEEA to look into the potential of revising the SEEA CF. The rationale is related to the work of the ecosystem accounts and new policy demands. However, the scope, timing and options of the revisions are to be further analysed moving forward.

Discussion

The work of the revision issues of the SNA was discussed. They touch upon SEEA with a sub-group “Wellbeing and sustainability group” lead by Mark de Haan to expand the information base of the SNA. It was clear that the community of SEEA should engage more with the SNA revision issues and the processes. The impact of changes in the SNA is often large for the SEEA data. The discussion also suggested that this work should seek funds, and seek cooperation with academia to move forward.

The unresolved issues were also discussed. Opinions on if they should remain or not was opted and if other ways of working together could be a possibility with a more focused research agenda. It was suggested that the TF on fossil fuel subsidies provides a good example on how to move forward together.

Outcome

The London group looks forward to the new work plan of the research agenda. The London group will wait for the new proposals related to the revision of the SEEA CF. A vigilant approach is recommended to the work on the SNA revision and the sub-group on wellbeing. It is good that the SEEA community of statisticians engages in this process.

6. Identifying fossil fuel subsidies in the SEEA for SDG reporting

Viveka Palm (Statistics Sweden) introduced the work done by the London group Task Force on fossil fuel subsidies. The work is continued from last year and aim to present a recommendation on how the statistics should be compiled under the SEEA Framework. The concept of “fossil fuel subsidies” cover on-budget transfers and tax abatements. There is a discussion ongoing if and how an international price reference can be used and chosen. The TF also work on the broader scope of covering other greenhouse gas emissions by industry from the SEEA.

A second presentation was held by Arturo de la Fuente (Eurostat) and this covered Eurostat’s work on detailing the scope and methodologies available to measure transfers related to potentially environmentally damaging subsidies. There has been an inventory map created on defining the categories of subsidies and a comparison of where they aligned with other collection efforts by the OECD and IMF. Both Viveka and Arturo welcome participation from countries currently not involved to get in touch.

Discussion

The discussions brought forward that the overview that the SEEA can provide looking at both taxes and subsidies jointly is very good and should be part of the work of the TF. Specific issues were raised regarding the development of regional statistics, and how the private sector influences international pricing mechanisms. It was also brought to group’s attention about resource rents and their impact on the use of fossil fuels.

There was also a debate about the demand for this kind of overview and information. The request from the SDGs to measure fossil fuel subsidies has increased the visibility of them, even though the topic has been known for quite some time.

Outcome

The London group welcomes the work of the TF and the overview provided by Eurostat. It was recommended that the TF in their report discusses clearly on how to delimitate the area and how to apply the method through examples.

The London group will be invited to comment on the draft report that the TF is developing before the end of the year 2019.

The London group is welcome to contact Viveka Palm if there is an interest to be more actively involved.

7. Moving forward with the Classification of Environment Activities

Arturo De la Fuente (Eurostat) presented the ongoing work of the TF at Eurostat to update and improve the classification on CEPA and CReMA. The TF is anticipated to work until 2020 but the mandate could be prolonged depending on how far advanced the work is.

The presentation focused on three areas of discussion:

1. The structure of a possible integrated classification
2. Energy storage
3. Construction of energy-efficient buildings

Discussions

The London group brought forward the importance of meeting policy demands without locking the classification to any specific policies as they change more rapidly than the statistics. It was also discussed how the classification – future or current, can meet the ecosystem areas with data. Especially related to biodiversity or even more regional or local data on ecosystem condition.

Pros and cons of an integrated approach for the environmental protection and the resource management was also discussed. The added-value of an integrated approach was argued could be more relevant to countries rich in natural resources. The restriction was argued that the loss of detailed information would be too large and that the issue of focusing on the primary purpose would be lost in the work.

Another issue of discussion related to the scope of natural resource management. The work of the TF should emphasize that it is not “general resource management” that is the scope, but rather sustainable resource management.

There was no time to discuss the second and third issue of the presentation so input are welcome to be provided after the meeting.

Outcome

The London group suggests to keep the classification distinct between EP and RM activities and not to label the groups in any existing policy initiatives.

The London group also welcomes the idea of see how the link to the ecosystem accounts and the integrated framework can be established.

If the results of the TF are to feed into the SEEA CF then the classification needs to align to the version available in the CF.

Comment and feedback is welcome and can be sent on to Arturo.

8. Natural gas resources and dwellings in Groeningen

Sjoerd Schenau (Statistics Netherlands) presented a current methodological discussion in the Netherlands related to the balance of payments and gas reserves. Some issues facing CBS is determining ownership of natural resources with combined ventures; and issues on the determination of provisions for households after earthquakes from mining activity.

The issue is also discussed within the SNA revision process.

Discussion

The discussion showed that there were some mixed reactions to the shared asset approach. It was noted that there are too few countries with national balance sheets to evaluate the uncertainty behind wealth calculations. It was noted that ownership of natural resources is included in the SEEA CF and it would be useful feedback if this was incorrect or needs improvement. It was noted that there is some academic interest in the issue of future flows. The concept of debt with natural resources is now also being discussed. Some country examples (UK, Germany, Norway, Australia) of how shared ownership was handled was offered in the discussion, focusing on the use of legal ownership to supplement where economic ownership is insufficient. There was some academic interest in the role of provisioning payments.

Outcome

The London group thanked for the opportunity to discuss this issue. It was proposed that a combined pooled expertise of the SEEA and the SNA could be helpful moving forward.

9. An up-date on the Natural Resource Reserve Index

Francois Soulard (Statistics Canada) presented Canada's continued work on the Natural Resource Reserve Index (NRRI). The NRRI tries to overcome the fact that reserves are measured in different units and that resource prices often fluctuate. The NRRI sums all changes (discovery, depletion, value) into one number to supplement the natural resource assets estimate, which is integrated with land and produced asset accounts in national balance sheet accounts. The new development in the NRRI meant that the nature was included as part of the index.

Statistics Canada will publish this indicator on a regular basis.

Discussion

The London group discussed how the indicator can be applied. It was raised that the indicator is focusing on the economic benefit even though the index is now including the aspect of the natural resource as well. There was also questions on if the index represented a sustainable view on the use of natural resources as there were should be problems when resources are close to extinction but the impact of globalisation keeps the

price down. There were other specific concerns about the representation of substitution in the index and the impact of any material recovery initiatives. Its link to the work of the OECD was also raised as something that could be investigated further.

It was noted that the index would be interesting to expand further upon and include both aspects of renewable and non-renewable resources. This could be a potential candidate for the CF research agenda.

Outcome

The participants noted the development since last year and thanked Statistics Canada for their efforts.

The London group welcoming the idea of including the natural reserve index to the CF research agenda and expand the current index to cover both renewable and non-renewable resources. If the index is to stand alone the group recommends that it situate within the SNA rather than the SEEA.

10. Summary and next steps

Sjoerd wrapped up the session with the highlights of the day:

1. General discussion on the SEEA Research Agenda and the need for re-prioritisation and to consider the overlaps with the SNA process.
2. Subsidies were should to be progressing well with the view to a draft reports and noting some challenges lay ahead.
3. Classification of Environmental Activities noted that there were 2 options: a small revision to existing classes; and a large revision to combine the two classifications together. He noted that there is a need to work through what is the best way forward to suit both policy and standards needs.
4. Natural Gas needs to be resolved into either a SNA or SEEA problem. Though the solution should probably be a combination. The NRRI is an interesting example which needs more investigation and to discuss in the UNCEEA as well as discuss the location in SEEA.
5. The SEEA CF work plan and structure will be updated in time.

11. World Café round tables

Participants split into three separate groups to listen to 25-minute presentations by 6 different presenters. These presenters included: Julie Hass (Bureau of Economic Analysis) and Ann Kristin Raymer (ANU), who presented work related to land accounts and analytical approaches of their results; Jonathon Khoo (Australian Bureau of Statistics) and Danielle A. Klomp (Ministry of Environment) presenting their work on waste account jointly with Sami Hautakangas (Statistics Finland) who presented their work on circular economy. Finally Lisa Green and Vasili Piperoglou (Australian Bureau of Statistics) presented their work on the pilot of compiling SEEA Agriculture.

Outcome

The London Group appreciated this informal setting of hearing about implementation. The presenters in turn reflected that each group came with a whole new set of questions for them showing how diversified the group is.

Session D: Methodological Work SEEA EEA

13. Introduction to the EEA revision and the state of play

The SEEA EEA session started with Rocky Harris (Defra), who set out the process for the revision of the SEEA EEA. There are four research areas, corresponding to the main accounts set out in the framework. Timing is fairly tight, and the final report is expected to be delivered for the UNSC in March 2021. Global consultation is expected to begin in early 2020.

14. About ecosystem type classifications

Sjoerd Schenau (Statistics Netherlands) presented on the work from WG1, to review existing classifications and establish general ecological principles that will underlie the classification of ecosystem types. Of particular concern was the treatment of the atmosphere, issues of scale, marine ecosystems and options for dealing with mosaic landscapes in both urban and rural areas.

Sjoerd suggested that there were 2 goals with the process:

1. Develop a better ecosystem type classification for SEEA-EEA, something from an international classification which can enable a crosswalk with other ecosystem type classifications.
2. Provide guidance for further disaggregations for ecosystem accounting at a national or sub-national scale.
3. Sjoerd covered the process that they were going through to validate the classification. The next steps were to do more testing of the classification in 2019-20. He presented 5 options to progress this work on classifications with a preference for options 1-3 (examining the use and links of the new IUCN Global Ecosystem Typology and the USGS/Esri GDBBS). He mentioned that the view of UNCEEA was option 3 (a hybrid of IUCN Red list and USGS/Esri). Support was to be given to level 3 of the classification to support developing countries.

Sjoerd covered the process that they were going through to validate the classification. During the 2019 Glen Cove meeting the SEEA EEA working group on spatial units proposed that the IUCN Global Ecosystem Typology would be the best candidate for the SEEA EEA reference classification.

The next steps were to do more testing of the classification in 2019-20, which include the cross walking to national ecosystem type classification but also to international classification schemes, including the work of USGS/Esri GDBBS.

Sjoerd mentioned that he was looking for volunteers to test the following:

- a. Crosswalking with other domestic classes
- b. Usability of the USGS/Esri

- c. Crosswalking IUCN Ecosystem Functional Groups (EFGs) with other institutional classification schemes.

Sjoerd invited the London group to participate in a group of experts digging deeper into the classifications.

Kaia Oras (Statistics Estonia) served as discussant to this session stressing the importance of the national level as scope to the project. Land use and land cover are most of the plant community types, thus there should be more emphasis on the services and condition linked to the mapping exercise.

Discussion

The London group discussed the approach and potential risk of recommending a classification that is under current development. The classification has been undergoing discussions for the past 10 years and is expected in the near future to be accepted by the IUCN. Some participants noted that in the version available for testing show some potential that the same results would not be reached if you chose to build your data in accordance with the top-down or the bottom-up approach.

Outcome

The London group welcomed the work done by the working group on the ecosystem type classification and look forward to the future results from the working group.

15. Introduction to ecosystem services and valuation issues

Rocky Harris (Defra) then presented the work of Research Areas 3 and 4, covering ecosystem services and valuation. There is an intent to establish a list of potential services.

Two papers are being prepared:

- a. A list of services on which there is a degree of agreement, together with a discussion of specific issues relating to particular services
- b. More cross-cutting issues affecting more than one service.

These papers would be reviewed by a reasonably large group of people, with the aim of feeding into the drafting of new chapters in the New Year.

15a. Furthering methods on valuation

Kaia Oras (Statistics Estonia) presented their work on valuation of nature education and other services. She was relating the education service to CICES class 3.1.2.2 which was agreed to through some stakeholder discussions. Her key points were:

- a. They established an asset-services relationship
- b. They developed a scoring system which enabled prioritisation of the services to be included in the accounts
- c. They tested several valuation methods for the different services

Kaia concluded that it is possible to estimate the contribution of the ecosystem for some but not all of the services. The Expenditure based approach makes it easy to calculate but

using a contingent valuation approach is more difficult. Data from the National Accounts can be used but for non-market valuation you need to estimate some kind of willingness to pay. And then the issue arises of what is the nature of the transaction?

15b. Monetary ecosystem accounts

Sjoerd Schenau (Statistics Netherlands) presented their monetary supply and use table for ecosystem services. In their work they also tested several different methods in the valuation procedure. The CBS is still working on how to communicate the results of the study.

15c. A panel discussion

Irene de Alvarado Quesada (Central Bank of Costa Rica) lead the panel discussions. There was some discussion around the nature education services, there was a need for measuring this from an Estonian point of view; Uncle Bill's welcome to the country highlighted the need for education in how the environment works, but there was debate around if this was a benefit from/use of the environment.

The discussion around ecosystem monetary accounts focused on the problems with communicating the result. It is well known since studies in the late 1990's that the valuation of the environment usually renders low values – around 2% of GDP which might be considered lower than expected. However, some participants had seen the same results elsewhere in studies performed in the mid 1990's. The interpretation of the results can vary significantly and it will not be enough to say to users that they should interpret them with care. Some of the participants recommended that the calculations should be dropped from the SEEA and others recommended that more time and care has to be given to the issue in order to reach the best communication plan.

The other point was the use of expenditure based estimates for tourism, there was contention over the treatment of purchases of goods and services which may have been provided to tourists but were also for general use.

Other comments focused on the link between condition and the service or the value of the service. There was some concern that the process for the standard seemed rushed compared to the development of SEEA-CF and that it is difficult to see if EEA are statistics rather than an account. There was a reminder that the accounts include the measurement of the physical characteristics and too much focus on monetary valuation might be unhelpful

Outcome

The London group thanked the presenters and the panel for the vibrant discussion. The group suggests a need for better underpinning rationales for providing monetary valuations of ecosystem services into the SEEA. It was generally agreed that a key focus of the accounts is the measurement of the physical characteristics as well as monetary valuation.

It was also suggested to bring in the UNCEEA lead on communication to assist in this matter.

16. About carbon accounts

Heather Keith (ANU) introduced their work on carbon accounts, taking the southern box woodlands as an example and asking the questions if carbon storage and carbon sequestration were services. The main point was that carbon storage seemed like warehousing and the additional amount of carbon sequestration for forests over and above other forms would also be the provision of a service. This would mean an expansion of the production boundary to include plantation forests.

Carl Obst (IDEEA) was discussant to this session. He noted that there was a motivation to provide a more comprehensive view, which in turn would provide better decisions. Accounting is information and a frame for how information can be read. He also suggested that the presentation gave an excellent list of characteristics of carbon accounts, particularly in gross terms. His main concern was the need to differentiate between physical flows and ecosystem services. The concept of warehousing was conceptually ok with respect to carbon storage but recommended caution when linking transactions with physical (natural) flows. He also recommended that service flows would be beneficial to be incorporated into the paper.

Discussions

The comments on the paper covered scope issues such as the definition of carbon (CO₂, CH₄) and if it would work for other carbon storage stores such as methane deposits in permafrost. There was a question over the links to the carbon accounts described in the CF (for timber resources) and it was clarified that no change in the SEEA CF was required.

Outcome

The London group thanked for the presentation and work done on carbon accounts. The work will move forward as part of the SEEA EEA revision process.

17. Linking the SEEA-EEA to the SEEA CF and the SNA

17a. Links between the EEA and the SNA (measuring planet A)

Carl Obst (IDEEA) presented on the existing links between SEEA-CF and SEEA-EEA asking the fundamental question whether the wording in the manuals reflects the links between them and if not, what is missing. He also presented the options for revising the SEEA group of standards asking if there should be one manual, two as current or some other version.

Direct comments on the paper raised some concerns about double counting with the SNA which were answered as these do happen and best practice is to try and avoid it as much as possible. Carl described that double counting can only take place within a single account and it is quite ok for the same number to be included in two accounts – eg. An SNA account and a SEEA account.

17b. Linking SEEA-CF and SEEA-EEA: Revitalising Economic Concepts for Greater Integration of Environmental-Economic Accounts

Peter Meadows (ABS) talked through the challenges facing the ABS at the moment discussing the difference between SEEA-CF and SEEA-EEA with stakeholders. He discussed three options they were exploring at the moment:

1. Use of combined presentations
2. Introducing a national physical balance sheet, which means introducing ownership into the environmental asset tables and providing data on ecosystems as a memorandum item.
3. Introducing a national physical balance sheet and developing a new institutional sector for environment, incorporating ecosystems into the balance sheet.

Introducing ownership into the physical accounts means a challenge for the definition of a natural resource asset, is it a right to exploit the asset after transferring from the environment?

17c. Panel discussion

Sofia Ahlroth, (World Bank) lead the panel discussions. The thoughts presented are integrating the thematic areas in interesting new ways, but can the idea be applied to all assets or services? Or would the presented table perhaps imply a causal link that might not be there?

The panel brought forward the issues that directly comes with the question – that there are no data sets available to test the integrated approach yet but that such an approach might also mean that it could be used as a way to translate the national picture to the micro level. But it also brings forward the issue of coherence between the accounts. And how can the national official statistics be reconciled with other data?

The discussion also brought attention to the key features of the SEEA CF which focus on linking directly economic activities to environmental pressures and the response to change these relationships. The SEEA EEA introduces more complexity by including biophysical and locational attributes. This means in practice that the data demands differ widely and also the expertise on how to create the data. The rationale for the compilations also differ and they become contextualized and scaled differently. They can meet at some regional breakdowns but almost never on local level.

The discussion also considered the proposal from the first day of revising the SEEA CF and where one option was to merge the CF with the EEA into one single manual. Concerns were raised that one single manual would be too cumbersome to handle and that the progress made so far on implementing the CF would be lost. The issue of the purpose of the two sets was also brought up, noting that the user community does not care from what framework the data and indicators come from as long as they are sound and transparent in the use.

Outcome

The London group thanked the presenters and panel for good discussions. The idea of providing integrated approaches of communicating results and analysis is always welcome and is the backbone to the SEEA.

The London group looks forward to further discussions on how best to move on the potential revision process forward.

18. Introduction to the SEEA EEA implementation

Rocky Harris (Defra) introduced François Soulard (Statistics Canada) as the lead on the SEEA-EEA revision with regards to ecosystem accounts for urban areas.

19. Urban accounts

19a. Ecosystem accounts for urban areas

François Soulard (Statistics Canada) introduced the thematic account as a result of the UNCEEA meeting in 2019. François discussed the difficulties in producing an urban account including issues with defining urban as an ecosystem, boundaries in urban accounts, scale in the accounts and defining an asset versus defining the condition of urban ecosystems. François proposed a number of questions for reviewers of the standards including identifying the policy need; should there be a harmonised global approach; and what scale should the SEEA recommend?

19b. Urban economic accounts in the US – Heat mapping of urban environments

John Matuszak, (National Council for Science and the Environment) introduced the topic indicating that this was an independent look at urban ecosystems with support from US government agencies. John discussed how they defined urban in their statistics as well as setting out some of the limitations of their data (30m grid, some of the central states had limited information). They developed a method for measuring urban tree cover and combined this with heat mapping from satellite data and rainfall maps with an interest in determining:

- Heat mitigation by urban trees
- Rainfall interception by urban trees

This enabled them to calculate the energy savings for 700 cities from tree offsets for air conditioning. It also enabled them to investigate the amount of rainfall not entering the waterways from tree cover.

Discussion

After the two presentations discussions followed. The issue of confidentiality was brought up. The revised manual on ecosystem accounts should consider a chapter on confidentiality, especially with a bearing on urban accounts. There might be statistical offices or UN groups working on spatial data that will look into the issue of confidentiality with the need for increased spatial data but the London group is not aware of it. Also precision in definitions of different concepts in the urban environment might be necessary in the manual. One example from Norway about the problems of defining what e.g. a “city centre” was in relation to policy applications.

Another issue of discussion related to urban accounts vs. urban statistics. Some members highlighted that the data presented in the presentations had limited connections to the economy. Scalability was another issue brought up as well as a classification for the urban information. The rationale for calling the presented data “accounts” was described as it has links to services and the values provided by the services to the cities can be calculated also through monetary valuation. Urban sprawl has economic ramifications and thus it was seen as part of the SEEA.

Outcome

François will take the discussions into consideration moving forward in the future work on the revision of the SEEA-EEA.

20. Biophysical modelling

Michael Vardon (ANU) presented an overview of different models that can be used to estimate ecosystem services, ecosystem condition and other biophysical information. There are indirect links between the biophysical models and the information needed in the SEEA. Michael also described how FAIR data principles could be applied in the work – Findable, Accessible, Interoperable, Reusable.

Discussion

Comments from the London Group suggested that the Statistical Agencies are perhaps not yet in a position to use results from biophysical models to any large extent in their own data productions. Questions were posed asking if there was an expectation that they would be expected to validate the models or the results in them. Some of the difficulties raised in this approach was dealing with uncertainty within and between models. It was suggested that something could be put into the standards on the use of models. It was noted that the links between accounts and models are useful for identifying gaps and where more research is needed. It was also noted that the presentation was very useful in learning more about what models are out there and what questions they have the possibility to answer, for future reference.

Outcome

The London group took note of the work and recommended that it would be good to hear more about examples of where biophysical models are used to provide data for SEEA EEA compilation.

21. Marine and ocean accounting

21a. Marine accounting

Rocky Harris (Defra) presented the UK’s coastal and marine accounts. He noted that the science is less well established for marine areas and more work is needed to define condition measurement and to understand the results. The link to science was essential. In the UK there are discussions underway about boundary issues between coastal and marine. Their particular problem was establishing the nature of the seabed in sub-littoral zone, where it wasn’t visible but not deep enough for measurement by boat.

Rocky presented the range of ecosystems services they thought were relevant in the UK context and the potential policy applications for the accounts. Rocky noted that identification of the social characteristics of beneficiaries was of policy interest and would help understanding of the blue economy but probably not through the use of Social Accounting Matrixes.

Discussion

Comments from the London Group focused on services such as carbon sequestration from phytoplankton and detailed questions about the components of the presented account. Examples from Netherlands were given, they are creating a pilot marine account and looking to use the data in spatial planning. There were some questions about the usefulness of a habitat definition for marine environments.

21b. Ocean accounts guidance update

Ben Milligan (University of NSW) set out the context behind the UNESCAP's work on Ocean accounts and a call for assistance in the development of guidance from the London Group.

Ben described the institutional relationships between the High level panel on sustainable ocean environments and the UNESCAP work on developing the accounts. He noted a proliferation of national visions on measuring the contribution of oceans as national policy with the accounts as way to monitor and plan. He noted there are about 10 pilot ocean accounts underway including activities on estimating the marine economy, developing a SEEA for oceans, and ecological assessments as the main initiatives. He noted the progress on defining outputs and processes in the ocean accounting work. The next steps were to have a conference of the Global Ocean Accounts Partnership in Sydney in November 2019 and move the work on the technical guidance forward. London group members were very welcome to join the Partnership.

Discussion

The London Group noted that there was a clear policy interest in the development of ocean accounts. There were some comments about how information about governance could be incorporated within the ocean accounts and questions as to why this was run through UNESCAP and not through standard UNSD processes, but it was noted that there was strong overlaps between people working on SEEA and those working on Oceans.

The discussion also raised concerns about the gaps in the SEEA on shipping and how the lessons learned through this work could help further the analysis and integration of different modules of the SEEA.

21c. A panel discussion

Viveka Palm (Statistics Sweden) lead the panel discussion following the session on marine and ocean accounts. Panel members were Rocky Harris (Defra), Ben Milligan (University of NSW) and Gerhard Bower (Statistics South Africa).

Gerhard Bouwer was given the opportunity to inform the London group about recent results of their work in South Africa on oceans accounts. He demonstrated how marine regions could be used to define ocean accounts in their context. He mentioned that marine accounts were a collaborative effort between statistical and scientific personnel. He noted that there was strong overlap between the ocean accounts and the IUCN classifications. He noted that statistical agencies played a key role in coordinating activities on oceans accounts and brought the specialist network together.

Viveka started the discussion by outlining a question around the marine accounts in particular what uses were for these accounts.

The panel responses varied around the demand from government on information about the ocean and the ability for the accounts to communicate a wide range of data on oceans.

The London Group discussed issues around the time series relationship to the information and the range of ecosystems that the accounts might cover. The group also discussed issues on boundaries and the interaction with the economy. They noted that the ecosystems covered were based on pilot studies and not a complete picture, but recognised that issues such as waste mediation, energy production and economic use of the oceans were important.

22. Big data and SEEA

22a. Ensuring data quality

Michael Vardon (ANU) introduced the topic of big data and how to view quality through fitness for purpose and data quality framework lenses. He proposed that big data raises a challenge for statistical agencies to re-think traditional models of data quality from a producer to a user state of mind. He questioned if models such as the IMF's 7 aspects of data quality were still relevant in a modern approach to data sources such as earth observations or other transactional data sources. He noted that this was an initial view based on informal discussions.

22b. A panel discussion

John Shepherd (ABS) lead the panel discussion on big data. Panel members were: Michael Vardon (ANU), Francois Soulard (Statistics Canada), Arturo de la Fuente (Eurostat) and Viveka Palm (Statistics Sweden).

John asked the panel about their experiences with big data and any reflections on data quality. The panel responded by saying that transactional data and use in statistical agencies was unstoppable. There were still reservations about quality and they noted some initiatives with universities to work through key issues. It was also noted that there was existing work in other fields of statistics and transactional data after initial processing were now treated with the same data quality criteria as other sources.

Comments from the London Group focused on experiences with transactional and earth observations data, giving warnings about the use of these data directly in statistics, and noting that much work has to be done in order to move from raw satellite data into statistics. It was noted that it was a rich data source and possibly a way for developing

countries to gain access to a wide range of data. It did however depend on the statistical agencies' processes and their ability to deal with large amounts of data from external sources. It was also noted that the move from census based operation to survey based operations faced similar issues which were largely overcome by the methodologists: the expectation was similar given the reach of transactional data.

23. Summary of the discussions and next steps for the SEEA-EEA

Rocky summed up the sessions. On spatial units, there was some concern about the newness of the IUCN classification and more work was needed on marine areas, atmosphere and subsoil assets. Volunteers are needed to test out the proposals. A number of options for measuring the ecosystem contribution to education and recreation services were discussed, further comments on the options would be welcomed.

On carbon, there was general agreement that carbon storage was a service although double-counting and valuation remained issues. It was necessary to distinguish between changes in stocks and sequestration, also to report the flows in gross terms.

The work by the Dutch on the valuation of services and assets had prompted a lively discussion on the merits of valuation and comparisons with GDP. It was clear that that the results needed to be presented carefully and the link with information from the physical accounts should not be forgotten.

On links with the SNA and Central Framework, it was recognized that there were distinct differences between the three manuals, mostly in practical terms such as data requirements and data availability. There were options for further elaboration of applications and extensions within the SEEA EEA revised publication; another way forward might be combined presentations or 'themed accounts' focusing on particular issues or sectors.

More work was needed on accounts for urban areas, concerning spatial scales, whilst the boundary definition depend upon the purpose and focus of interest, but there was some work that could be used now such as the US study of heat mitigation. Rocky noted that there was an opportunity for using open source models, with a caution about the use of black boxes. Statistical agencies needed to understand these models before using them.

Rocky noted the work on Ocean accounts saying that there were unknowns in our understanding of oceans: more work was needed to integrate the available information, and more work was needed to establish relevant condition indicators. London group members were strongly encouraged to get involved with the Global Ocean Accounts Partnership.

Finally, Rocky noted the discussion about continuing concerns about data quality and uncertainty with big data. His conclusion was that it is probably time to take these data more seriously and establish processes for handling the data with confidence.

Session E: Communication and Policy Applications

24. Natural capital accounting in decision making

Sofia Ahlroth (World Bank) and Peter Burnett (ANU) presented the results of a study on the interaction between policy and SEEA. Sofia presented the mechanisms in which SEEA can influence policy concentrating on the scalability of the accounts and the macro/meso interactions. She mentioned how the World Bank was working with partner countries on implementing SEEA, with a focus on identifying data gaps, releasing data and increasing the consistency and authority of data providers. She mentions that institutional arrangements were key to the success of SEEA. In some countries this means working with the Central Bank in other countries statistical agencies. Usually success came from where this is a present by the SEEA compilers at the table and a chain of users. Sofia pointed out that quality was a key consideration by partner countries and a good peer review process was integral to quality assurance. She finally mentioned the annual policy event for Natural Capital.

Peter Burnett introduced the work on linking policy to the accounts. He reminded us of the standard policy cycle. Peter presented the results of the study they were working on. The key messages were most of the accounts were used to identify issues and water, greenhouse gas emissions and forests were the most popular accounts. He pointed out that there was work done on moving from promoting Natural Capital accounting to reimagining decisions making processes. Peter finished by questioning the ways in which to increase the policy use of Natural Capital Accounts such as a database on policy uses, use of a data quality framework in the accounts increase confidence in users using the London Group and educational institutions to promote skills in the accounts.

Discussion

The discussion from the London Group worked through the interaction with some of the international initiatives such as Green Growth and questioning the lack of SEEA or Natural Capital in their work. It was noted that working with policy agencies was difficult due to reasons such as lack of confidence in using the accounts which could be alleviated with better education programs; and how to work with strong policy agencies that may use the data for deliberately bad decisions on resource allocation.

25. About environmentally extended input-output

Nancy Steinbach (Statistics Sweden) presented the results of a survey that had gone to the London group to see how many were involved with environmentally extended input-output. The survey was a cooperation with Eurostat and the OECD.

The emphasis of the presentation was to continue the work started in the manual of the SEEA, the Applications and Extensions volume. Nancy presented that about 14 countries had responded that they were doing IO environmental analysis, with about 11 with long term work. Most considered that this was not official statistics. Communicating the results of IO analysis was the key problem, though most surveyed suggested that there was a role in communicating the results of SEEA.

Moving forward Nancy was looking to for a group of experts to:

1. Identify methodological issues

2. Be a partner when solving new issues
3. Identify how to communicate the results of IO analysis

The plan was the follow through the work to create a report on the merits of IO analysis with country examples on data and analysis with respect to SEEA.

The London group formed discussion groups and was given the task to provide suggestions on how the disposition of such work could look like. The London group was also asked if there was an interest to join the expert group working on the issue.

Outcome

The outcome of the group discussions was sent on to Nancy providing good guidance on how to frame the continued work.

Several countries volunteered to join the group: Netherlands, Canada, Costa Rica, Mexico, Japan, Estonia, Australia (NSW government and CSRIO) and New Zealand. Germany would check if experts could be involved.

Nancy will contact the countries early 2020 to kick-start the work. More volunteers are welcome to contact Nancy.

26. I talk

6 speakers took the opportunity to share expertise and results of projects in 4 minutes each.

1. Julie Hass, Bureau of Economic Analysis, USA – Update on USA’s SEEA-related activities
2. François Souldard, Statistics Canada – New data streams for environmental accounting? The use of satellite earth observations to measure the Anthropocene
3. Takashi Hayashi, PRIMAFF, Japan – Spatial analysis of forest accessibility and ES in Japan
4. John Matzusak, NCSE – Earth observation for ecosystem accounting (EO4EA)
5. Viveka Palm, Statistics Sweden – Agenda 2030 and the SEEA
6. Irene Alvarado Quesada, Banco Central de Costa Rica – Impact of policy measures of the national decarbonization plan 2018-2050

27. FOC Future of economic statistics

The UN Statistical Commission has asked the Friends of the Chair on the Future of Economic Statistics (FOC) to convene meetings over the next year to discuss whether the current planned updates to the system of economic statistics considers user-identified priority areas of development or whether gaps exist. The Commission also asked the FOC to examine whether the current governance and infrastructure supporting the system of economic statistics is sufficient to meet the need for an increasingly responsive and comprehensive system of economic statistics.

See annex for the letter sent to Statistics Canada on 25 October 2019

Discussions

The London group formed smaller discussion groups to work through the questions sent by the FOC. The outcome of these discussions were sent on to Nancy who summarised them and sent on to the FOC on 25 October 2019.

28. AOB

Participants thanked the ABS for their hospitality and excellent planning. Participants expressed their satisfaction with how the past three and a half days went.

For the next meeting, participants provided several suggestions on topics. Topics mentioned included Earth observation, oceans, the outputs of the revision working groups and a greater focus on country implementation of the SEEA, particularly ecosystem accounting.

The 26th meeting of the London group will be hosted by Destatis, in Bonn. Preliminary dates are 5-9 October 2020

Responses from the London group to the FOC of Future of economic statistics

The London group was asked to contribute to the discussion and questions from the FOC on the Future of economic statistics. The London group met in Melbourne Australia on 7-10 October and the issue was discussed there. These are the outcomes of those discussions.

Statistical systems and data availability

Within the statistical systems world-wide the data availability is growing. In all fields of statistics the requests of more information that has not previously been asked is common. The human resources available to handle the new questions posed are not always matching the need for more information. This is not a particular problem for economic statistics but for all areas of statistics.

However, the development of new production processes and new technology that can incorporate the flow of new data is also happening. What is seen when the opportunity arise to work across fields of statistics is that there are a lot of data available that can enhance a certain issue in new ways not seen before.

The FOC asked for areas that the system of economic statistics could increase its presence in that has a global reach. What came out of our discussions at the London group was that questions such as: how can an economy be built that does not destroy ecosystems, and provides employment opportunities that ensures a healthy work environment among some important aspects of life. So not only climate is important – but how land and biodiversity is used and maintained for long life. Issues that profits for the economy is not profit for the society was also discussed. But is this something that the economic accounts can and should answer? As there are statistics available that measure social abilities and societal well-being, perhaps it is *a matter of educating* the economic statistical system on what is already available? To become better at referring the new data needs to those who can answer the questions posed?

The satellite accounts – the social, the environmental and tourism to mention a few do integrate the economic framework in the results and analysis made. However, there is yet to *develop a sustainability account* – that can integrate all three aspects. This would enable using existing statistics in new ways that would increase the depth and analysis to look at the social-environmental-economic nexus jointly.

Governance structure of UN groups

In the recent past, the UNSD has asked us how we (the London group) work together with other city groups and other important functions within the UN. Within the environmental economic accounts area the cooperation between groups either from the UN/OECD/Eurostat/World Bank are good. However, the cooperation between different areas of statistics – be it within the UN system, OECD, Eurostat or any other community is less prominent. A few members of the London group follow the work of the AEG or the ISWGNA on national accounts. Some follow the work of the Oslo group, which focus on energy statistics. But there is no high level exchange. This has an impact on our community. We have seen the power of the SNA to help or obstruct the environmental economic accounts. When the SNA is revised we just have to follow, because our concerns are often either not “as things are done” or would show up in the GDP. We need to engage with one another to be able to work together. We have e.g. seen that data is sometimes disappearing when SNA makes changes. Examples are e.g. related to the treatment of CO₂- permits, ISIC codes that are remade where the level of detail needed for SNA on the basic industries are disappearing and how the treatment of goods sent for produce overseas made us loose information.

We would like to propose that the committees related to all fields of statistics *has a standing point on there agendas* where the other areas are welcomed to present ongoing work that is related. We would even like to suggest that the *chairs of the committees meet* and exchange information, at least once or twice a year. From our viewpoint the unbalanced resources between the national accounts and the satellite accounts is an issue. The culture of seeing the satellite accounts as “something on the side” is not constructive. *By lifting our combined issues together* we can create stronger statistical systems that has the capability to respond faster and better to societal changes.

Innovation and cooperation with other fractions in society

Many colleagues within the London group has established cooperation's with academia, or expert consultants as a regular part of their work. We see it enriching our knowledge of our data and provides venues to think in new ways surrounding the data we produce. What we have also noticed is that the colleagues working in the core of the national accounts have little time to devote to innovation and novelties, as the production of the statistics are so streamlined and pressed. If the established groups has regular space on the agenda to speak about innovation or new ideas in general we don't know, but to encourage at the international level more discussions on projects that has lead to improvements in production, or data sources, or analysis would be desirable.

To *invite speakers* to the groups from academia on related research would also be an encouragement to the statistical community to continue to *push the boundary* of our imaginations. That might also lead to a changed view from our users that nothing happens or takes a very long time to do.

The use of existing data in new ways would be a cost-effective way to provide users with new information. But it requires that projects are done and that the results are communicated in broad fashions so that the information does not stop within the statistical community. Within the London group we are very interested to enhance the cooperation with the national accounts and the statistical system, nationally, regionally and globally.

In Europe there are user communities that have combined their interest and expertise to assist in the statistical developments. The Beyond GDP initiative¹, has taken up a lot of work that was previously done and store this knowledge through an institutionalized platform.

In addition, the OECD has incorporated economy and the environment in important work such as the peer-reviews, several working parties and through their collection of statistics. Lessons can be learned how they have moved towards an integrated process between the economy and the environment.

On behalf of the London group,
Nancy Steinbach, Chair

¹ https://ec.europa.eu/environment/beyond_gdp/index_en.html

OXFORD

the big creaky wheel
a thousand years to turn

thousand meetings, thousand emails, thousand rules
to keep things from changing
and heaven forbid
the setting of a precedent

yet in this magisterial inefficiency
there are spaces and hiding places
for fragile weeds to bloom
and sometimes bear a strange fruit

like the FHI, a misfit prodigy
daytime a tweedy don
at dark a superhero
flying off into the night
cape a-fluttering
to intercept villains and stop catastrophes
somebody has to do it

and why not base it here?
our spandex costumes
blend in with the scholarly gowns
our unusual proclivities
are shielded from ridicule
where mortar boards are still in vogue

(Nick Boström, 2018 <https://www.nickbostrom.com/poetry/poetry.html>)