Minutes of the 21ˢᵗ meeting of the London Group on Environmental Accounting: Circulation Draft

2-4 November 2015, The Hague

Monday, 2 November 2015

Opening session

1. **Welcome address by G.J. Eding (*Director of National Accounts, Statistics Netherlands*)**

Mr. Eding welcomed participants to the 21ᵗʰ meeting of the London Group on Environmental Accounting on his behalf and on behalf of his deputy director of the Netherlands statistics office. He discussed the challenges of SEEA implementation and the importance of the countries' collaboration to insure its success. He also highlighted the role of SEEA into the implementation of the SDGs.

2. **Opening remarks (*London Group Chair*)**

Joe St. Lawrence opened the meeting. He requested each participating organisation/country to fill out a short questionnaire about the future direction of the London Group. This would serve as a starter discussion for the session 5 on Day 3

3. **UNCEEA update (*G.J. Eding, Statistics Netherlands*)**

Mr. Eding provided an overview of UNCEEA's vision on the SDG indicators and how SEEA can be used for their assessment. Among others, he discussed how to link SEEA with tourism satellite accounts. UNCEEA recognised the importance to get countries to present how they implement SEEA (countries experiences, best practices). These will serve as material to enter in the technical notes presently under development. UNCEEA also thinks the LG should keep developing training material, with a focus on more in-depth modules, with a priority on water and energy. Increasing the number of trainers was underlined as important.

The first batch of the technical notes will be submitted to UNCEEA in 2016.

There is a proposition to develop an international SEEA database which could contain data (physical and monetary). This is a work in progress.

Session 1 –SEEA: Implementation (10:30-12:00)

The goal of this session is to discuss current initiatives related to SEEA implementation, inform about the process to develop indicators in the context of Post 2015 Development agenda and discuss contribution of the London Group to the exercise.

4. **SEEA Implementation strategy update (*Alessandra Alfieri, UNSD*)**

Alessandra presented the new logo for SEEA, which represents the focus of a repetitive form signifying what accounts do to statistics.

Over the last year, many policies aligned with the SEEA-Central Framework (SEEA-CF) being adopted an implemented; we have now to implement a SEEA-Experimental Ecosystem Accounting (SEEA-EEA) strategy, as well as some integrated strategies for the CF and Ecosystems.

Many data initiatives took place in the National Statistics Offices: SDG indicators, modernization of statistical systems, big data for baseline information, and geospatial data including the GGIM (a common global infrastructure for geospatial data). Developed countries focused their work on energy, EPEA and EGGS, as developing countries focused on energy, water, and ecosystem accounts. UNSD would like all countries to join SEEA-CF and SEEA-EEA, among others to work towards global datasets to answer the data requirements of the SDGs. Targets were set for future implementation of the SEEA-CF in 100 countries and implementation of SEEA-EEA in 50 countries Strategic priorities include comparable global baseline data (to support SDGs), policy linkages, capacity building, the communication strategy, and regional/sub-regional approaches to implementation. Also noted was an update of SEEA-EEA to reflect best practices.

It was recognised that coordination is required among international agencies, academia, and business community to increase the usefulness of the accounts. Work on strategies for funding to support SEEA application is also needed. UNSD asked UNCEEA for comments, and the results will be presented soon for final approval.

Discussion

Points raised in the discussion include the strong support for integration of data demands from international agencies, the importance of demonstrating the usefulness of Big Data, the business link to and interest in Green Jobs, managing expectations related to implementation and the importance of quick wins. Opportunities to update the SNA guidance and OECD reporting requirements to reflect the needs of SEEA and the SDGs should be explored. If international organisations could agree on a few key SEEA modules, this might help focus and facilitate implementation. Providing countries with a table based on international datasets might also be a way to promote implementation.

Funding of SEEA work was identified as an issue, with more dollars currently being able for ecosystems, opportunities to support Central Framework implementation through contributions to ecosystem accounting should be considered. Linking implementation of SEEA-CF and SEEA-EEA was thus supported to some extent given the obvious overlaps, but the difference between the two in terms of subject-matter and processes was highlighted as a limiting factor.

Training was identified as one of the primary bottlenecks in implementation – the availability of Eurostat courses was highlighted as a resource for training. Some coordination or at least awareness of training opportunities/activities was suggested as beneficial given the numerous sessions being carried-out by various London Group members.

Geospatial data was identified as something gaining more importance and as likely the future of this work, particularly in developing countries. Reaching beyond the statistical community with geospatial work was identified as important for success.

In terms of the implementation status and goals, it was asked what having a programme in place meant, and if one or two accounts were sufficient for this designation.

Data quality assessment and certification of SEEA accounting work was identified as an area in need of consideration.

5. **SEEA and the SDG process (*G.J. Eding, Statistics Netherlands & Viveka Palm, Statistics Sweden*)**

UNCEEA recognised that SGDs indicators are a very high priority - 17 goals and 169 targets. There was agreement to promote alignment between SDGs and SEEA (June 2015). The papers UNCEEA/10/3a and UNCEEA/10/3b discussed how an integrated statistical framework like SEEA can help the SDG process.

The need to standardize reporting was discussed, with too many requests to provide data, with only small slightly differences being too time consuming. The use of integrated statistics and international standards were suggested as important messages. This is a great advantage to country comparison and it would increase data quality. SEEA offers an opportunity for the SDGs, since it is a link between economic and environmental data. Other benefits may also be realised by the use of SEEA. Sustainable production and consumption indicators have the greatest environment-economy link and relevance for the SEEA.

The Inter-Agency Expert Group on SDGs (IAEG-SDGs) met a few times over the last year. Last October's conclusions are that SGDs are universal/relevant for all countries, and their economy-society-environment aspects are a complement to the basic human needs indicators. At the meeting, some National Statistical Offices (NSOs) expressed the concern that the Goals were written in a way that they would not be able to avoid new data collection or new work. Recommendations were to: 1) Identify the capacity that needs to be developed in countries that lack their own dataset, 2) Discuss with users and experts outside NSOs, and 3) Develop models if required. For certain indicators, NSOs may not be the place to discuss or develop them, but at least the NSO can provide methodological guidance. Statistical office roles include producing the statistics, interpreting trends, capacity building, developing broader measures, and providing advice on indicators to be produced outside the NSO.

Sweden and Chile were writing about goal 12 to show how accounts can be used, where data can be found, and avenues for capacity building. The draft executive summary was presented at the Bangkok meeting in October. The next step will be to see the actual data.

Discussion

It was noted that there should be some expectation management related to the SDG reporting since in many countries the data being requested do not exist. It was asked if costs of responding to this effort are being factored into the decision making. One observation was that governments do not want a new reporting process, and that in this effort statistical offices may not end up in charge of the reporting even though they may have a key role in producing the estimates. Coordinating input into the national response was identified as a potentially large undertaking. Global data sets were identified as a means of easing the transition to national reporting.

The effectiveness of trying to influence the process at this point was questioned given the momentum of the negotiations. Integrating SEEA considerations at this stage seems to be a considerable challenge, especially given the lack of general awareness of SEEA. It was noted that, while there is unlikely to be much influence on the final indicator list, the influence can come in the methods and framework offices use to respond to the SDG data requests.

The Green Economy Indicators were brought into the discussion, the point being their relevance if the SDGs are supposed to cover that domain.

6. **SEEA implementation by WAVES (*Juan-Pablo Castaneda, World Bank*)**

Juan-Pablo provided an overview of WAVES objectives to mainstream natural capital in development planning, its countries and partnerships, and the work accomplished since its beginning in 2010. Natural Capital Accounting is influencing national strategies and demonstrates a usefulness of the accounts. Key results are available in their annual report. Ownership and institutional engagement, as well as implementation are important steps adopted by countries developing accounts. World Bank has developed a documentation tool to explain/promote Wealth Accounting and Valuation of Ecosystem Services.

Although global datasets are useful, country work is critical to the success of implementation. The London Group was identified as a key forum for WAVES, both in terms of contributing to discussions and learning from them. Valuation remains a key aspect of WAVES work.

Juan-Pablo seeks LG members for comments on the 6 future work-avenues identified, namely 1) fast tracking implementation, 2) streamlined macro-economic indicators, 3) strategic, structured learning, 4) link to World Bank operations to yield immediate uses, 5) link to specific policy questions to produce immediate uses, and 6) south-south cooperation. Also sought are contributions to the policy lens series, demonstrating uses of the accounting work.

Discussion

The World Bank link to finance ministries was identified as a key strength in this work. It was suggested that IMF could play a role by developing related reporting requirements. Some concern was voiced that the valuation aspect focuses on resource extraction from an economic perspective only, however the experience to date suggests that integrated accounts are proving helpful for planning (Costa Rica was cited as an example with an integrated forestry account based on both the SEEA-CF and the SEEA-EEA).

7. **UNECE/OECD SEEA implementation meeting update (*Michael Nagy, UNECE*)**

Michael covered the October 2015 meeting of 37 countries to share experiences and knowledge on SEEA implementation and policy use. Topics varied from policy uses to SEEA implementation and emerging issues (SEEA-EEA and SEEA-Agriculture). It was highlighted again that SEEA is a powerful tool which is not used yet at its full capacity: development of a communication strategy was identified as important. A survey sent prior the meeting showed that human resource constraints is a bottleneck for implementation, as well as an in-depth subject-matter knowledge. Another priority to aid in implementation is to get the documents translated into the country languages. Implementation presentations from countries were appreciated with the suggestion that more time should be given to better describe the problems encountered and their solutions. The suggestion of focussing on 2-3 topics at a time, or perhaps small groups of countries working in more specific seminars was proposed.

Michael presented the conclusions, which will be available on the UNECE website in November.

<u>*Discussion*</u>

Training countries with data related to their economy, even if derived from a global data set, was identified as a useful training tool. Some of the typical challenges in starting and maintaining implementation were discussed such as rotation of trained staff to other positions, and lack of complete and/or timely data.

Session 2 –SEEA Topic Sessions

The goal of these sessions was to provide an opportunity to highlight best practices in compilation and also to point out areas of difficulty in the compilation process.

Session 2a –SEEA Energy and Emissions Accounts

8. **Energy and emissions handbooks: lessons learned (*Anton Steurer, Eurostat)***

Anton outlined Europe's current situation with air emissions (voluntary collection 2009, mandatory in 2013) and energy flow accounts (voluntary in 2014, mandatory for 2017). Both themes have a manual to assist with the compilation process. Both the inventory first and energy accounts first methods were discussed. Eurostat found that a hybrid method of both works well. Lessons learnt from the reviews: 1) handbooks are necessary for countries. 2) it is important to review and revise handbooks when needed, but stability is important and 3) their update is a demanding task. Future work includes a focus on timeliness and data quality. Cooperation with inventories compilers was identified as important. Anton presented the website page presenting the handbook "add website for link".

9. **Combined energy and emissions accounts (*Nancy Steinbach, Statistics Sweden*)**

Sweden compiles emissions-relevant energy accounts. Nancy described their Energy-GHG methodology. As far as possible, micro data files are used for compilation. First step uses Energy balances (based on several surveys). Models to split energy are used when energy use is reported form a group of industries. For households, vehicle emissions come from mileage database (linked directly to the car owner).They follow the IPCC guidelines which creates difficulties with the EU reporting requirements. Sweden also compiles an air emission account for 10 gases. Nancy discussed the quality assurance steps put in place (checking the time series, checking the compilation programs, review the output calculations, comparison with other statistics, the revisions process, improvement of methods, and documentation to complete the production cycle). The presentation ended with the following thoughts: waste is considered a residual in Eurostat reporting but it also serves as a product for energy production (*e.g.* spent pulping liquor), and the fact there is no internationally harmonised method for calculating emissions from final demand (Was not mentioned in SEEA applications and extensions). Outcomes of the PRINCE project related to this work will be disseminated in 2017.

10. **PSUT for Energy (*Zarinah Mahari, Department of Statistics Malaysia*)**

The work done over the last 5 years was presented. Zarinah explained that the SEEA work is allocated to her department since "environment" is part of SEEA, even though they had no experience in the SNA. To cover that issue, time to communicate with other agencies and read the official documents are integrated in their schedule and form part of their knowledge development. Availability of data and policy demand were the factors chosen to guide implementation. Core tables were identified as a helpful guide. Challenges faced include human resource capacity building, the need for governance to enhance understanding between and within ministry/stakeholders, data availability, and difficulties to explain to users how to read the accounts. Manuals were identified as useful but insufficient, for example in finding distribution keys, or dealing with large statistical differences. Examples from other countries were identified as important, since they can be used as examples and for comparison. Keys to success were commitment from top management, commitment from other agencies, supporting documentation, availability and quality of source data, and a strong foundation in the SNA in addition to environmental knowledge. Water PSUT and Energy PSUT are planned to be produced every 5 years. EPEA is planned for a first release in 2020.

11. **Energy accounts from international databases (*Kristine Kolshus, Statistics Norway*)**

Kristine listed the different approaches of compilation of an energy accounts: 1) energy accounts and balances are built by the same team; 2) energy accounts are based on balances compiled by another section (or anther department); 3) energy statistics and balances are both reported to international agencies and the accounts are derived from the international data sources. All these differences were the starting point to give a course on the compilation on Energy accounts based on the different scenario mentioned above. IEA data were identified as a good basic source if national data are unavailable or cannot be accessed, other sources include UNFCCC, OECD, WTO, IMF and Eurostat.

Some challenges are faced while using global datasets: not every country is represented, the NSO is not always the data collector, and the data collected may have not the same concepts for each country. An advantage however is that the use of a global dataset leads to less difficulties to access than finding the required data among all the departments producing the data. It was noted that the origin of the data should be well understood first to evaluate the quality.

Chair's summary of discussions and best practices

Institutional arrangements and cooperation with air emissions inventory compilers *was identified as an important collaboration to encourage. This helps with data coherence and also permits the coordination of messaging related to the different totals that can result from SEEA-CF accounting requirements and the accounting or reporting requirements of other international agencies such as the United Nations Framework Convention on Climate Change (UNFCCC).*

*The need for **guidance on bridging items** was highlighted. These accounting entries help explain the differences in accounting and reporting requirements mentioned above, but they can be difficult to find or derive without additional data or the help of inventory compilers. It is of relevance to note if the bridging goes to the national or the international data sets.*

Consistency in time series was mentioned as an important consideration. Changes to methodology (and updating of associated documentation and guidance documents) should be done at specific intervals with plans for back-casting the changes to avoid breaks in the series.

Voluntary reporting and the publication of **pilot accounts** *was identified as a good means to test proposed tables and reporting requirements in advance of full implementation.*

Distribution keys *are often required to estimate energy and air emissions values for industries for which detailed survey data do not exist. Advice on such keys (e.g. gross output, value added, employment, expenditures, etc.) should be provided in the technical notes.*

The **harmonisation of international reporting requirements** *was identified as an important consideration to avoid duplication of work and response burden. These should be considered in the development of core tables and the work plan going forward in particular for the technical notes but also for the UNCEEA and London Group in general.*

There is a need for standard methods and data sources for the compilation of multi-regional input-output models to ensure consistent calculations of **consumption based indicators** *which are relevant to both the proposed OECD Green Growth indicators and the Sustainable Development Goals (SDGs).*

In some countries the **frequency of the economic census** *will make the compilation of annual accounts a challenge since production functions and other important data will be difficult to estimate in the interim. Advice on how to project or estimate the inter-censal periods will be required in these cases.*

It was noted that guidance documents and manuals are not sufficient to assist in the compilation of accounts. **Practical documentation and/or training are required** *to implement these accounts for new compilers.*

Global datasets *(e.g. International Energy Agency, OECD, World Trade Organisation, etc.) were identified as important resources for countries beginning a programme of work or training on these accounts. These should be considered as an option for accounts compilers should they not have, or not have access to, detailed data from energy balances and other information sources domestically. Data quality can vary however, so checking and/or confrontation with other domestic sources is recommended.*

Technical notes and compilation handbooks should provide a **minimal set of options** *when discussing compilation techniques to avoid overwhelming new compilers with too much information. They should also clearly* **highlight the value added** *by the accounting approach (e.g. the direct link to economic data). This should be considered, keeping in mind the need to make the notes useful in as many countries as possible.*

The situation of what to do when there are **no energy data at all** *needs to be addressed. Can other information be used in the interim while surveys are being developed?*

It was suggested that a **detailed country compilation paper** *would be useful additional documentation.*

Use of the **IEA questionnaire** *was discussed as a tool for guidance and compilation. It was noted, however that this is a very complex source and that there are challenges related to accessibility of the material.*

Session 2b –SEEA Water Accounts

    12. **Water accounts in The Netherlands (*Cor Graveland, CBS*)**

Cor gave an overview of the account history, discussed the issues related to water in the Netherlands, as well as the different accounts they are producing. He presented in more detail the production of the physical flow account of water (data and methodology). Data are presented per river basin. Environmental accounts are separated from the water statistics team. The compilation challenges were highlighted. The water asset account was also presented.

    13. **Water accounts in Canada (*Joe St. Lawrence, Statistics Canada*)**

Joe explained Canada's water use flow accounts. A distinction between extraction and use was made: abstraction of water creates a "multi" counting of water abstraction for hydroelectricity (many dams on the same river). The Canadian physical flow account only covers water intake which represents around 1% of water yield. In Canada, the bulk of water is used in certain industries (electric power supply, agriculture, public water supply, pulp and paper, and primary metals). An important feature of water is its variability in space and time. Data sources and challenges were presented. An important consideration is that the economic importance of an industry can be quite different from its importance as a water user.

Chair's summary of discussions and best practices

*In the technical guidance it is important to note that **water accounting takes time**. Countries should expect development in this area to be a medium to long term effort.*

***Institutional arrangements and cooperation** are particularly important given that water statistics and expertise often exist outside the national statistical office.*

*Work in The Netherlands to develop a **groundwater abstraction register** and to link it with the business register was identified as a sound basis for beginning work on compiling water accounts.*

*The importance of **water use coefficients** (e.g. per employee, per unit of GDP, per unit of output, etc.) in the physical flow accounts was identified as an important consideration.*

***Variability** of water availability in both space and time highlight the potential need for data at sub-national scales and sub-annual frequencies. This should be highlighted in the technical guidance and mentioned for planning and development purposes.*

***Micro-data validation** is an important consideration in water use surveys given the heterogeneity of water use within even detailed industry classifications. The challenge of this and its relationship to generalized business survey processing models warrants consideration.*

*As with the energy accounts, **distribution keys** are important for allocating water use to non-surveyed industries and for industries where coefficients are not available or are not reliable. This is particularly important for allocating treated water from municipal supply if billing data or direct consumption are not available.*

***Surveys are advisable for large water users** such as electric power generation, paper manufacturing, agriculture, water treatment plants, and primary metal manufacturing.*

Difficulties interpreting the data were noted, particularly when looking at renewable water yield and multiple instream uses such as hydro-electric power generation.

It was noted that the **OECD/Eurostat Joint questionnaire on inland waters** requires several data points for water that are relevant to this work.

The importance of estimating **leakages** was highlighted. This can be a high proportion of the municipal supply produced (up to 50% was noted for Ireland). This is also important from the perspective of the Sustainable Development Goals (SDGs) where efficiency of the water supply system has been mentioned.

The **complexity of the water supply and use tables** was identified as an impediment to implementation.

The **measurement of stocks** was identified as questionable, especially given such difficult measures like soil water, for example. Changes in water yield and flows might be better ways to analyse the resource. However, artificial water reservoirs were identified as important stock measures in many developing countries.

The **link to ecosystem accounts** was identified as important to mention. The analysis of water flows can be a gateway to work in the domain of ecosystem provisioning services.

Tuesday, 3 November 2015

Session 2c –SEEA Activity Accounts (4:00-5:00)

14. **Issues and challenges in compilation of activity accounts (*Kristine Kolshus, Statistics Norway*)**

Kristine provided an overview of the type of the environmental activity accounts based on SEEA noting that demand for "green" statistics is growing. The overall goal of the Norwegian account is to find the green figures in existing data with a monetary focus. Difficulties are faced while trying to extract data due to unclear definitions/boundaries (*e.g.* what is "green"?), classifications being used for another focus, lack of detail in statistical sources, and the inability of establishments to identify their green activities in some cases. More detailed National accounts are beneficial to this work.

Norway found easiest to establish the environmental taxes accounts when definitions were agreed. Experience showed that when draft rough estimates are out, people asked for more detailed information. The future work targets better communication with other units of the NSO and the National Accounts, and a comparison of institutional/university analysis versus official statistics.

15. **Activity accounts in Mexico (*Raúl Figueroa, INEGI*)**

Raúl underlined the importance of automation of the work for data production on EPE in Mexico; including documentation as a process flow diagram. This helps the computer program crew to develop better systems. Raúl presented how they import data in the system and how they generate outputs. Reports can be presented per industry and by other classification types. A methodological guide has been written for users/employees to understand the production accounts for the country; for more information they can refer to

SEEA. Raúl would like to see this kind of guide prepared for other countries. He also highlighted the importance to find the data at a more detailed level (*e.g.* municipal, etc.)

16. **Activity accounts for the EU (*Arturo de la Fuente, Eurostat*)**

A summary of the existing account in the EU was presented in addition to the work done over the last 12 months on three projects (new guidelines on transfers, updating the EGSS handbook, and a new EPEA questionnaire). The environmental transfers project released a guideline describing a pilot data and collection test. The updating of the EGSS handbook (last done in 2009) is scheduled to be released in summer 2016. It will reflect a better integration with the other activity accounts. Finally, the new EPEA questionnaire is ready since there are new regulations to follow by Eurostat. A new handbook on EPEA will also be developed.

Arturo then discussed the Integrated Framework for Monetary Accounts. Since the activity and monetary accounts in the SNA use in part the same classifications, concepts, and terms, it is valuable to compile them together, however many countries compile them in silo approach. Eurostat would like to harmonized the variable names and have clearer links and bridges between the accounts to help the countries.

17. **Employment in Renewable Energy Activities (*Brendan Freeman, Australian Bureau of Statistics*)**

Australia released its first experimental estimates in April 2015. A challenge was how to allocate employment per industry when there is no such industrial classification. Australia focused on the activity of the employment rather than trying to classify the industry via a 50% or some other rule. Brendan explained the methodology they used to identify the employment factors by activity and the results obtained. The shifting political environment happening during the studied years was reflected in the experimental accounts and Brendan emphasised that this is likely to become more pronounced in later years with the removal of a number of environmental taxes in Australia. Going forward, ABS wants to improve the estimate for manufacturing, among others. Brendan noted that conceptual differences in approach can lead to very large differences in the final results and that, going forward, the ABS is aiming to work in a generally more collaborative manner with its stakeholders.

Chair's summary of discussions and best practices

Environmental goods and services sector

*The environmental goods and services sector is meant to cover the industries that have environmental laws or environmental awareness as a vital part of their business, examples include waste and water treatment, renewable energy and certified green products. The importance of **expert validation** of results was highlighted, and should be something built into the programme of work in this domain. Before choosing between a survey or compiling statistics based on registers one needs to consider that in some cases, establishments and enterprises may not even know what green activities they are engaged in, as the area is still rather new.*

*It is **important to not underestimate the challenge** associated with producing these accounts.*

***Practice is still evolving** regarding defining and categorising EGSS, (e.g. what is clean technology, what is "green" apart from the core businesses such as waste management and water treatment). The coverage depending on if the activities are found via registers or*

surveys make it difficult to compare across countries (e.g. differing approaches to how much of the indirect activities are being measured).

Environmental protection and resource management expenditures, transfers and taxes

Lack of classifications impedes the work, for example when trying to filter government budget lines to get at the relevant expenditures related to policy issues such as e.g. sustainable management. On the industry side, the lack of industry classifications in this area requires taking an activity perspective and, for example, looking at the number of full time equivalents in each industry devoted to environmental activities rather than trying to classify entire establishments to this category.

The **differing coverage, concepts and definitions** pose challenge for interpretation. Environmental Protection Expenditures is dealing with the issue of what the 'extra' costs are that respond specifically to environmental legislation and that are not part of 'normal management'. However, Environmental Goods and Services statistics cover the entire size of green businesses and what can be the expected size, growth and gains from having greener policies. This may pose challenge for interpretation if users believe that they are the same thing, one from the cost side and the other from the demand side, and that they should balance. Since one is focussed on the 'the extra cost' and the other covers a broader scope, they will not be easily matched.

Environmentally related Taxes were identified as an area that is easier to compile, suggesting that the technical notes could identify them as a quick-win topic. Eurostat work should result in a better definition of potential problems and solutions given the EU regulated questionnaire to members of the European Statistical System and efforts to implement EU reporting.

Issues for all the topics:

Work in this domain often **requires the construction of new data collection systems**. Systematisation is a big help in this area, so this should be considered in the work plan for these accounts. It makes compilation easier, and provides more time for analysis and interpretation.

Institutional arrangements and cooperation is required in this work given the cross-cutting nature of the data and subject-matter.

Quick start methodological guidance is important in this area to help with the interpretation of the larger manuals.

Policy makers want detail when they receive these data. Broad estimates can be developed, but it should be clear from the outset that there will be a demand for this to be broken down into more detailed estimates. This is an issue for macro analysis in general and communication with users is a key to understanding what statistics can give and where detailed studies will have to be used.

Making requirements for activity accounts known to SNA compilers can be a successful means of incorporating the necessary detail into existing production processes to facilitate activity accounts production, at least for environmental taxes and for industry breakdowns. This links to the current European discussions on an **integrated framework for monetary accounts**.

*It was noted that the measurement of **expenditures on biodiversity** is required under the Convention on Biological Diversity, and value measurement is a requirement under the Aichi Targets. This should be noted in the technical note.*

__Eurostat's ESTP courses__ were identified as a resource for specific training.

Session 2d –SEEA Agriculture Accounts

18. **SEEA Agriculture (*Silvia Cerilli, FAO*)**

Silvia presented a brief overview of the project history, and an update of the progress and steps towards UNCEEA March 2016 meeting. Since last London Group meeting, a first global consultation on the Draft document was launched, and a side-event was done at the UNCEEA March 2015 meeting. Outcomes can be found here http://unstats.un.org/unsd/envaccounting/ceea/meetings/tenth_meeting/Paper8.pdf. A second global consultation will be launched in Nov 2015-Dec 2015. The final revised SEEA-Agriculture will go for adoption in March 2016. Silvia presented the "Tired approach" to compilation developed over the last year (Tier 1 involves completing tables with global data sets, Tier 2 uses national data, and Tier 3 is full implementation with extensions to sun-national and geospatial representation of data). Any feedback, comments or questions from the London Group members was welcomed.

Discussion

It was noted that the Tiered approach was really liked by the UNCEEA. For global consultation the document will be circulated to all NSOs who should also contact relevant ministries of fisheries and forestry, etc. It was noted that FAO has also been in contact with relevant parts of the OECD for expert engagement.

Session 2e –SEEA Asset Accounts

19. **Asset Accounts issues (*Pierre-Alain Pionnier, OECD*)**

Pierre-Alain reminded the Group that the driver for SEEA Asset Accounts implementation in OECD is the Green Growth Strategy. To this end, the SEEA Task-force was created 2 years ago with a mandate to advise OECD members on air emissions accounts (published on the website) and physical stocks and flows on minerals energy resources (not yet released). Pierre-Alain presented the results of discussions and research to date. Countries not only rely on different classification systems, but and also present results for different classes (SEEA class A, B, and /or C). Main recommendations from the OECD related to classification are: 1) stock data should not be limited to SEEA Class A, 2) to support the SEEA recommendation to report Class A separately, and 3) to cover flows beyond extraction.

Pierre-Alain identified a main issue in the practical compilation of NPV. SEEA does not explain how to project it. Main recommendations were presented to, make valuation at the mine level, to use net capital stock from SNA in compilation of the estimates, and to research means of accounting for uncertainty in deposit size. The Taskforce will be presenting at the next OECD Working Party on Environmental Information (November 2015) and seeking an extension of its mandate to continue its work.

Discussion

Expansion of the coverage of these accounts was discussed, for example products like sand and expansion of the OECD data base to include other materials such as phosphate was suggested. Cost curves and variability in prices were identified as difficult issues. Mine- and well-level estimates were highlighted as impractical for some deposits/countries (Canada, for example, has approximately 250,000 oil and gas wells in operation) and that companies may not have expenses data available at this level.

The change in focus of the original taskforce from core tables to its current research was questioned, the explanation being that these methodological issues required resolution before making any final recommendations on core tables.

Session 3 – SEEA CF Research Agenda and other topics (*10:45-12:00*)

The goal of this session is to discuss the SEEA CF Research Agenda and other topics related to the Central Framework. An updated version of the research agenda will be presented and discussed and London Group members will be asked if they would like to take on these issues and write issue papers for upcoming London Group meetings.

20. **Updated SEEA CF Research Agenda (*Sjoerd Schenau, CBS*)**

Sjoerd presented eight research agenda topics (Development of classifications, valuation methodologies, definition of resource management, statistics on hazards and climate change, depletion of biological assets, soil, valuation of water, and adapted goods), and four new suggestions (physical and monetary asset accounts, integrated frameworks for environmental activities, tourism accounts, and extensions to the social domain). He the invited Clara van der Pol from UNWTO to provide more information about SEEA's links to tourism accounts.

Clara described the goals of this new project on a satellite accounts for sustainable tourism (Carl Obst is the editor) and linked it to the SDGs on tourism. One of the objectives is the link of SEEA and the tourism satellite account. International comparison is also a goal. A working group will be set-up with UNSD. The initiative will be launched in Puerto Rico this November and technical notes will be launched early January.

Sjoerd asked the LG members if we should start the work on these Research Agenda or wait. Are all the topics relevant? Do the members agree with the proposal topic selection/organisation of work? How can we organise the work on research topic? The London Group was invited to send comments until end of December, and the research agenda note will be updated in January based on that input.

Discussion

The importance of tourism was questioned from an environmental impact perspective, but it was pointed-out that the linkages of the topic go far beyond this into ecosystem services, economic drivers, social aspects, and links to the SDG process.

Economy-wide material flow accounts was identified as an easy win for the research agenda. It was suggested to add a session on SEEA-social linkages to the next London Group meeting, which was fully supported. The difference between the SEEA research agenda and the London Group research agenda was also highlighted as something that could be clarified.

In general a more focused approach to research was suggested as beneficial, with opportunities to explore the linkage to ecosystem accounting being considered. Leveraging

the current interest in ecosystem accounting to help solve some of the related Central Framework issues was suggested. Expanding the scope to Applications and Extensions was suggested, with input-output links being identified as important. Treatment of losses was also identified as missing.

The question of process was raised, specifically who decides what to work on: London Group members? UNCEEA? In addition to how should the work be recorded? The time frame was also discussed with the suggestion to first revise and summarise the list of issues (including a status report for those underway) followed by a work plan. Short and medium term programmes of work were suggested with links to other international groups (e.g. Oslo group) being seen as potentially important.

21. **Classification of land (*Alessandra Alfieri, UNSD*)**

UNSD met with the Group on Earth Observation to inform them about SEEA and the Land Cover classification. Many SDG targets and indicators are linked into land, and the classification cuts across the Central Framework and Experimental Ecosystem Accounts. However there is some issues; 1) there are many global datasets, but no guidance on which one to use for which purpose, 2) there is no internationally agreed classification, and 3) there is no guidance on how to integrate the various data sources.

SEEA CF has 15 Land Cover classes with no subclasses. The goal is to develop a classification that will embed some ecosystem considerations such as condition and biodiversity since looking at LC is not enough. UNSD proposes to work towards a "characteristics" Land Cover with climate data, etc. UNSD asked for country advice on which data sets could be used to develop a standard classification. The current plan is to assess available global products, look into the feasibility of a global reference grid, start the international classification, and assess what would be required to produce the data more frequently. Alessandra presented the starting point of that work, and listed questions that should be resolved. She also said a few words about the South Africa experience: a 16 land cover classification, where actual conditions are compared to "initial condition" i.e. 1840 reference condition.

John Matuszak provided an overview of the new initiative at the Group on Earth Observation to get communities of practice together and consult with users to improve land use, land use change and ecosystem services measures. London Group members were invited to express interest in this work as representatives of the statistical community.

Discussion

The FAO database was mentioned as a resource in this domain. The point was raised that land cover and use issues are primarily local concerns so any internationally harmonised classification would have to take that into account. It was recognised that local data is an important concern and that there should be only a relatively high-level roll-up that allows for international comparison. Changing methodologies were identified as a challenge each time the data are compiled – factoring this into the technical guidance and considering some means of making the classification "future proof" should be considered.

22. **Input-Output Applications**
   a. **The FIGARO project (*Anton Steurer, Eurostat*)**

This project aims to produce coherent intra-country IO tables for the EU. These will allow for the calculation of GHG footprints among other uses. FIGARO should become a full international account – production is planned from October 2015 to December 2017 for a 2010 table using a standardised production method. Anton presented the objectives of the work, noting the challenge of data reconciliation and the need to link back to country data. Globalisation was identified as a key motivator. Eurostat is working with OECD to increase country representation.

b. UN input-output handbook (*Alessandra Alfieri, UNSD*)

Revisions to international standards has led to a need to revise the UN handbook on input-output tables. A much more practical approach is planned for this edition, as well as extending the scope to include SEEA-2012. Alessandra discussed the editorial team, the approaches and the structure of the handbook. Chapter 13 is building on what is in the SEEA Applications and Extensions.

Alessandra is asking for help from countries to provide examples for the handbook. Global consultation is planned for 2016. The London Group will be asked to review.

Discussion

In the discussion it was clarified that the level of detail proposed for international reporting will be 64 industries. Use of physical data and incorporating them into the IO structure was highlighted as a consideration.

c. Multi-regional IO (*item was not available*)

23. Quarterly Asset Accounts (*Cindy Lecavalier, Statistics Canada*)

Cindy presented an overview of a paper outlining Canada's implementation of the SNA 2008 recommendation to include natural resource assets in the balance sheet. The SEEA-2012 recommendation on how to sector the value ($) has been preferred over the SNA-2008 sectoring proposition. Cindy presented how annual historical natural resources values will be broken into quarters (the Canadian National Balance Sheet is quarterly), and how quarterly projection will be done. The first data release planned with the December 2015 historical revision to the balance sheet. The paper will be released on November 17th.

Discussion

There was a question about how double counting was avoided with both land and timber being included in the balance sheet. It was pointed out that the land value currently only includes land associated with buildings and farmland, and so forest land is not included in the land estimate thus avoiding the issue of separating timber from the land value.

24. Nordic Council of Ministers project (*Viveka Palm, Statistics Sweden)*

Viveka informed the London Group of an ad-hoc group of several countries responding to a request from their environment ministries to look at air emissions, taxes and subsidies, material flows, energy use and possibly other modules. A workshop is planned for 2016 with the goal of adding health and social issues into the discussion. Energy use data provided a

good example of the need for data harmonisation. A paper will be prepared as the work advances.

25. **Links between SEEA and Business accounting (*moved to item 42*)**

Session 4 – *SEEA Experimental Ecosystem Accounting (Chaired by Rocky Harris)*

The goal of this session is to provide an update on current developments in Ecosystem Accounting, providing examples that contribute to the research agenda.

Rocky mentioned that the country responses to the request to update members on current work in ecosystem accounting are posted for reference to the London Group meeting website.

Session 4a – General communications (3:15-4:30)

26. **Towards a definition of Natural Capital (*Anton Steurer, Eurostat*)**

Anton noted that an updated draft of the paper developed following the last meeting is now on this London Group meeting website. He explained that in the EU, natural capital is coming to mean ecosystems. He said that there remain some issues on cultivated vs. non-cultivated resources and the treatment of water as a resource as opposed to water ecosystems.

Aldo Femia provided an additional presentation discussing the general concept in more detail. The question of whether or not things that are not owned can be considered an asset was raised, highlighting the issue of the boundary here and whether or not the name "natural capital" accurately conveys the idea we are trying to discuss.

Discussion

It was asked if defining natural capital is required given that it is primarily a policy concept. Coming-up with a statistical definition of the idea was considered worthwhile.

27. **Technical Guidance on ecosystems accounting – state of play (*Leila Rohd-Thomsen, UNSD*)**

Leila presented the different thematic papers on ecosystem accounting developed by UNSD. These papers were used to develop Technical Guidance, which put emphasis on clarifying terms and making a stronger link to the SEEA Central Framework. Key issues were the clarity of terms, stronger links with the Central Framework, description of geospatial methods, and spatial units. Next steps are the development of agreed technical recommendations for the chapters. Peer review will be launched at the end of the month. London Group members were asked to please consult the project website for more information.

28. **Policy uses: "The accounting push and policy pull" (*Michael Vardon, World Bank*)**

A full paper about this presentation will soon be available. Michael highlighted the fact that using the term "Accounting for management" creates a different reception than "Accounting for policy." He believes this is probably more appropriate since it applies to corporate management and public sector management (spending by Finance, economic management by

Treasury Board, and the goals of the Environmental and Natural Resources departments). Michael explained the cascading action chain from accounts to decisions, as well as the decision-centred design organigram and the outcome of the policy roundtables that have been done with some countries. He noted also that decisions are not the only indicator of use of the accounts, with accounts contributing to instrumental, conceptual, tactical, symbolic, and political aspects of management.

Discussion

It was noted that one could interpret the use of accounts beyond fine-tuning management to include strategic decisions like going out of some business, etc. It was agreed that the paper should reflect this. It was also suggested that it might be beneficial to reflect in the paper the idea that people outside the cycle of decision making (e.g. researchers) are also users of these data. The idea that the process is often done in reverse was highlighted, with accounts providing justification for decisions based on other criteria. Quick wins for the accounts are viewed as important to justify the investment in this work, and to keep them relevant integration in the feedback loop was suggested as a key to see what works. The point was made that different levels of data quality are needed depending on the types of questions being asked, with accounts being seen as raising the bar for quality and comprehensiveness.

29. **Policy applications of forest accounts (*Juan-Pablo Castaneda, World Bank*)**

Juan-Pablo explained why forest accounts was selected as a topic for the Sourcebook and provided an overview of the document. Some guidance on how to use the accounts and how to build the accounts should be created. It was noted that the document links to the SEEA-CF, SEEA-EEA and also to the upcoming SEEA-Agriculture. More development is planned in 2016, which could lead at some point to a SEEA-Forest. Juan-Pablo would appreciate to receive feedback on this project from LG members, particularly in the area of examples and uses.

30. **Further development of the Common International Classification of Ecosystem Services (CICES) (*Jan-Erik Petersen, European Environment Agency*)**

The origins and objectives of the CICES project was presented. Current uses of CICES are in the MAES process, OpenNESS and ESMERALDA, among others. Next steps include a second internet survey to harvest user experiences, improving the coverage for marine ecosystems, and the draft release of a user manual for CICES. Since CICES is used in different communities, CICES could provide a linking opportunity between all the users.

Discussion
It was asked if CICES would work with the SEEA-EEA, the reply being that there would need to be some revisions to the treatment of provisioning services. It was noted that CICES is currently more a list than a classification. It was agreed that there continues to be room for improvement, noting that the process to do so does take time, and that final versus intermediate ecosystem services still in discussions. Parallel work with the Final Ecosystems Goods and Services classification was suggested as a possible benefit here.

Session 5 – London Group terms of reference and governance

This session and the related items 43 and 44 of the original agenda were moved forward to ensure broader participation of group members.

43. **London Group terms of reference** *(Joe St. Lawrence, London Group Chair)*

Joe presented the results of a brief survey submitted to the group at the start of the meeting. He noted that overall, it seems the group is one mind. A summary of the responses and discussions is provided below.

Q1 – Since the beginning of the revision process of the SEEA, the London Group has been a technical group of the UNCEEA. Do you agree to maintain the current relationship with the UNCEEA? If yes, the timing of the UNCEEA and London Group meetings makes agenda setting and, in particular, the timely posting of meeting materials a challenge. Do you support adjusting the timing of the two meetings to allow more time to plan the London Group agenda?

- Maintaining the relationship with UNCEEA was supported, but it was noted that the current relationship is unclear. How communication between the groups should happen is also not clear.
- It was stressed that the London Group should have a degree of freedom to do its own work while helping UNCEEA.
- It was suggested that the Chair of London Group should attend the UNCEEA meeting to facilitate communication. If this is done, there should be no need to change the timing of either meeting.

Q2 – The previous London Group work plan was largely focused on the SEEA revision. Going forward, do you think the London Group has a role to play in any or all of the following (if possible please suggest where these items could be discussed if you choose "no"):

a) Methodological development of SEEA Central Framework and SEEA Experimental Ecosystem Accounting

b) Support the SEEA Implementation and capacity building (e.g. compilation issues, statistical production process, technical guidance, in country visits, etc.)

- Work in both subject matter areas (CF and EEA) was supported. The practical aspect sand promotion of this work should be increased too.
- Implementation and capacity building efforts were also seen as being relevant to the London Group mandate. Guidelines are an important feature of this work to which the London Group should contribute since it provides a forum to discuss guidelines at the working level. The London Group also has the potential to exercise a strong role in the coordination of international work since this is not occurring elsewhere.

Q3 –Do you think the London Group could benefit from the formation of a Bureau (countries) to assist the Chair with the development of the work plan and the preparation of the meeting agenda? (A proposed composition is Chair of the London Group, Chair of the Technical Committee of SEEA CF, Chair of the Technical Committee on SEEA Experimental Ecosystem Accounting (tbd), and the host country.)

- This suggestion was widely supported. The group was asked if it should be composed only of countries or also international organisations, the latter being supported.
- The Bureau was seen as a way to facilitate earlier posting of presentations, agenda development, and formulation of discussion points.
- It was suggested that membership in this group could rotate depending on interest.

Q4 – It has been suggested in previous meetings that it might be beneficial to focus the agenda on a particular topic rather than trying to fit the full breadth of accounting work into each meeting. The idea is that this would encourage the participation of experts in each area. Do you support the idea to focus the meetings into subject-matter themes?

- Opinions were split on this idea. It was suggested that perhaps the format could alternate with a specific focus one year, and more general discussions the following year. Another option was to provide part of the meeting for a focused discussion, but still touch on all themes each year.

Q5 – Please provide any additional input you feel could be of benefit to the group.

- Addition of training or seminars the day after before the meeting was suggested as a way to facilitate implementation.
- The need for a research agenda was highlighted
- Broader participation in the group would be appreciated.
- The meaning of membership was questioned, and the idea of voting/non-voting members was fielded.
- Greater international coordination was recognised as important.
- Research on gross ecological product was suggested as relevant for policy.
- More time to read and discuss items was asked for.

Discussion

It was noted that UNCEEA needs a body to conduct work for it and that the London Group is the obvious choice given its membership includes the people who would do this work, however it was also stressed that the London Group needs autonomy in order to stay at the forefront of the development of methods in environmental-economic accounting. The London Group's important role as the place where experts in this field can meet was stressed. It was noted that we have in some senses put many of the difficult issues to rest and that now the focus of the group could shift partially to a focus on production issues. The need for a multi-year work programme was highlighted. Subgroups was suggested as a means of moving certain topics forward more quickly. The proposal to form a UN inter-secretariat working group to support coordination and data collection was announced, suggesting UNCEEA and this group could help remedy this issue. An update to the London Group mandate paper was supported, noting that it need not be an overhaul, but rather a refreshing to reflect current subject matter concerns and recent accomplishments. Again the idea of keeping the core group small but of opening the meeting to some training or less technical discussion/seminars was supported. The two main streams of London Group work were highlighted, namely expert discussion/methodological recommendations and capacity building. Clarifying the role of the Technical Committee was suggested as a beneficial idea. The "country round" of previous meetings was recalled as a useful part of the meeting for updating each other on current work. Volunteers to participate in the new London Group Bureau included Eurostat, World Bank, Netherlands, UK Defra, Sweden, Italy, and FAO.

Joe agreed to update the terms of reference for consideration of the bureau, and for subsequent discussion and adoption by the Group.

44. **Election of the next Chair of the London Group (*postponed, pending future discussion with the Bureau*)**

Session 4b – Ecosystem accounting issues, continued (Rocky Harris as Chairman)

31. **Reconciling environmental values with valuation procedures in the SNA (*Giles Atkinson, London School of Economics/World Bank*)**

This WAVES project focuses on reconciling the valuation work many experts from the economic accounting and the economic appraisal fields. Giles's team works at classifying ecosystem services based on exclusive/non-exclusive services and rival/non-rival concepts (more in line with the economic supply and demand concept, which affects the price) to help focus the valuation approach. This allows the possibility to look at marginal cost (production) and willingness to pay (consumption). Transaction costs can be linked to ecosystem services (*e.g.:* travel cost to a park). Giles discussed the future work: identify what is left out from their concept that should not be, and putting valuation in place, among others. This project will lead to the publication of a few papers, with current plans to look at the value of ecosystem services and wealth accounting. The group is looking for London Group views on the work.

Discussion

The clarity of this work was praised as a great step forward. The focus on exchange value was supported, but it was noted there remains the problem that values are not based on real transactions. The idea of valuation versus measurement was raised with the notion that valuation doesn't necessarily have any relation to the importance of environmental assets for the functioning of the environment. It was suggested that the project could acknowledge these limits. The needs of developing countries were highlighted, since valuation methods are an important tool in assessing degradation. The need to clarify direct link as opposed to upstream values was highlighted as important.

32. **Accounting for biodiversity (*Michael Vardon, World Bank*)**

Progress and challenges related to biodiversity were discussed, noting that lots of literature was coming out reflecting key engagement with the biodiversity community. Michael noted that more precision is required to clarify the discussion around what we are trying to measure here. He provided an overview of several species level metrics, and noted the various levels (genetic, species, ecosystem) at which this work can be done. A case study was presented for Australia, which worked on expending their species account for the state of Victoria. Challenges included the need to improve primary data sources, determining the contribution of biodiversity to the value of service flows and assets, explaining the relationship between biodiversity and ecosystem condition and services, the identification and treatment of thresholds and reference conditions, developing practical approaches to the delimitation of accounting units and impacts of these for aggregation and scale effects, the need to talk across professions (biodiversity and accounting), and the threatened species classification whose

spatial scales and local application pose a challenge for interpretation. It was also noted that land use and land cover data don't necessarily snap together very well, posing a further challenge. Opportunities in this area include the presence of lots of existing data, the Aichi targets spurring action by countries, the usefulness of applying ecosystem accounting to threatened species and area management, and the potential for producing policy tools.

Further observations include that the CBD does not precisely define how to measure biodiversity; more precision is needed. Do we account for all species, the nice species, and species in danger?

33. **Accounting for ecosystem capacity (*Lars Hein, Wageningen University*)**

Lars presented the outcomes of discussions held over the last year about "what is Capacity?" In the context of SEEA it was defined as the ability of an ecosystem to produce ecosystem services under current conditions that are sustainable. That concept description is required at two points in time in the EEA (it's relevant for the measurement of assets and to adjust future flows of services, and because changes indicate ecosystem degradation). Thoughts on how to compile NPV were presented – ecosystem capacity vs the expected flow if sustainably managed. Lars identified four concepts for further discussions with LG and other experts (flow of ecosystem services, ecosystem capacity, theoretical supply, and ecosystem capability). A paper will be prepared and distributed. The idea is to produce technical recommendation for SEEA-EEA and pilot ecosystem accounts.

Discussion

The links between capacity and theoretical supply were identified as important. The ideas of over-use and under-use were identified as a way to simplify the terminology. Off-sets were discussed with the idea that changes in time/space could influence if there really was a benefit provided in relation to a loss. It was noted that the Australian account will actually reveal this change of assets, if those trade-off had been made, or not.

It was noted that simple concepts are easier to implement. Further London Group discussion of this issue was recommended. Capacity was recognised as an important topic, with a suggested comparison being made to GDP and "potential GDP."

Session 4c – Ecosystem accounting, Country experiences

34. **Monetary accounting for ecosystem services: test case for Limburg province, the Netherlands (*Rixt de Jong, Central Bureau of Statistics, The Netherlands*)**

Rixt noted that the ecosystem is under pressure in Netherlands, and that the country's small natural areas are highly valued by the population. SEEA-2012 was used to develop Supply and Use tables (physical and monetary), supported by maps. The ecosystem units map was presented, as well as an economic users map (ISIC registry) which helps identify the users of the services (e.g. who is located in flooding zones). Resource rent, avoided damage costs and replacement costs were evaluated and mapped. As a conclusion, it was noted that ecosystem accounting is feasible in Netherlands, although there are still some challenges to consider: for

example how to compare internationally a same activity (hunting), that could be either a provisioning service in one country or a cultural service in another country? Carbon sequestration was also identified as an issue, is it a global good? Who benefits and where does it fit in the accounts?

35. **Developments in UK natural capital accounting (*Emily Connors, Office for National Statistics, UK*)**

ONS UK made progress in the publicity of their accounts lately with the environment secretary reporting the value of natural capital. More and more of their statistics are being used in the policy decision making, and they have a goal to put natural capital in the national accounts by 2020. From the beginning the ONS got strong support from government as well as other groups. A 5 year-road map was developed with the first priority to produce high-level aggregates and pilot projects to build awareness. Emily listed the issues presently under consideration (asset lives, discount rate, value of time, exchange values, and resolution/scaling of estimates) and the next steps which include a coastal aspect. Their next releases include a cross-cutting account on Carbon, initial accounts for Farmland and Coastal Margins and revised monetary UK natural capital estimates, all planned for the first half of 2016.

36. **Ecosystems accounting in Guatemala and links to the SNA (*José Miguel Barrios, Institute for Agriculture, Natural Resources and the Environment, Rafael Landivar University, Guatemala*)**

This project started 10 years ago, driven by university members. Several results were presented over the years. Future steps are to compile these data as an ordinary tasks in government agencies. Food security and risks related to ecosystem condition will be the main topics assessed, as identified by their government. Case studies and response to specific policy questions were identified as was to encourage this work. As a start, three sections of the country will be studies. Land cover sources and pixel level data were studied to identify the best scaling choice to make. Challenges and future work were presented including an enhanced connection to the SNA. Data management was identified as an important consideration.

37. **Brazil accounts for stocks of water and changes of land use (*José Antonio Sena do Nascimento, Brazilian Institute of Geography and Statistics*)**

Water, land use change, forest and energy accounts are the priorities for work. Working agreements were made between the water and NSO departments. It was noted that 90% of electricity production in Brazil comes from hydro, and that it takes considerable work to move water data into the SEEA format, noting the requirement of surveys and coefficeints to estimate the economic flows. José presented results, tables, and maps of water studies in Brazil. Challenges are related to the spatial distribution of the resource. Land cover (land use) change was presented, as well as some tables. This was identified as a great tool to follow what happens to the forest area in the country. Uses were identified including GHG emissions

planning in the agriculture ministry. Next steps will be to integrate this in their statistical grid, and be able to link socio-economic data to it. José will send the copy to UNSD. Accounts should help organised the information.

Additional item:

John Matuszak provided an overview of the recent directive in the US from the White House to incorporate ecosystem services into government planning and decision making. A dozen agencies are already working on the topic, but it is disparate, so more standardised models are being requested. This was identified as a good opportunity to encourage implementation of the SEEA-EEA in the US.

38. **Ecosystems accounts WAVES project in the Philippines (*Lars Hein, Wageningen University/World Bank*)**

The Philippines selected two different regions facing different policy questions for this work to start their EEA. Policy questions were related to managing development and focused on natural areas, land cover change and reefs. Flooding, water quality, sedimentation, water use/rice production, and urban areas were some of the topics considered. Lars presented the process followed, the main findings, the summary tables for policy, the policy applications results could inform, and the next steps/lessons learned. SEEA was used to perform the work, which should be published in Dec 2015. It was noted that the pilot work demonstrated enough usefulness for one of the regions to commit staff to continue the work in this area. It was noted that there is much government support for this work with local experts building capacity and looking to scale the smaller areas up to the national level.

39. **An experimental ecosystem account for the Great Barrier Reef Region (*Brendan Freeman, Australian Bureau of Statistics*)**

First results of this work were released in 2015, which supported analysis on threats to the marine park ecosystem and seascape. Brendan updated the London Group on the findings for the different variables studied, one of which was a partial value of ecosystem services related to agriculture, fishing, aquaculture and tourism. ABS faced some key issues during the work, one being controversy over the findings suggesting the benefits of better communication with stakeholders, the presence of lots of data but the difficulty connecting it given consistency/time series issues, the need for small area economic data to improve valuation, and the need to fill data gaps with modelling. They also faced some difficulty with the confidentiality of ABS data while bringing-in technical experts.

Brendan advised that future work will aim to broaden the focus from primarily supply, to also identify the users of the services (*i.e.* who are the benefits accruing to), as well as employing new datasets and valuation methods to enable valuation of a wider range of services, particularly those under the regulating and recreational and cultural services.

40. **Experimental Ecosystem Accounting in Mexico: Progress Report and Work Plan (*Raúl Figueroa Díaz, INEGI Mexico*)**

Raúl presented the steps in the compilation of ecosystem accounts following SEEA-EEA in Mexico, as well as the pilot studies and the framework developed. He highlighted the importance to work with diverse partners to achieve the results. He highlighted that technical guides are more important than large manuals to get the work done. The sequence of work was to look at extent, condition, and then supply and use in the production of land cover change and condition indicators. Next steps are to finalise areas not covered yet, and do a pilot monetary units account in 2016. The goal is to link this work to the national plan. Raúl also presented the online tutorial created to help users to use the data from their website.

41. **EU Ecosystem Accounting System (*Anton Steurer, Eurostat; Jan-Erik Petersen, European Environment Agency*)**

Anton presented the policy context of the EU Biodiversity Strategy 2020 under the 7th Environmental Action Programme and explained the roles of the different agencies involved. To respond to this, biophysical accounts are needed for direct use, valuation studies and upscaling. The goal is to have an EU data layer of accounts under a common methodology. Since there is many GIS challenges (many data held by diverse institutions, data developed for other purposes than ecosystem accounting, data not always coherent, and sometimes expensive), the KIP (Knowledge Innovation Project) and INCA (Integrated system for National Capital and ecosystem services Accounting) project were developed. The feasibility phase until will lead if approved to an implementation phase in 2016-2020. Jan-Erik presented the existing potential input layers and the next steps. This project should be the answer for EU policy requirement.

42. **The UNSD led project on Advancing Natural Capital Accounting (*Alessandra Alfieri, UNSD and Derek Eaton, Global Footprint Network*)**

This project, which is still at a preliminary stage, has for goal to bring together multiple expert communities (biology, ecology, etc.). Seven pilot country assessments (blue prints) and national plans are being done with technical notes and training developed being the major outputs. A road map will be developed next April in order to uniform the work. Alessandra talked about the issues discussed at the last forum, the outcomes and the mechanisms for moving forward.

Since there is a range of definitions about natural capital, there is a desire for as wide (not specific) a support-base as possible to provide guidelines/methodologies for businesses. Derek discussed about managing expectations. The group is in progress of writing a paper (end of 2016) about the topic studied and the work done. Derek is open to comments from the London Group members.

It was noted that EEA is often a driver to support Central Framework activities since it is currently where funding is available. Derek explained that footprint accounting is their business and that they receive a large amount of demand from the business sector for uses and information, etc.

(Closing of the meeting)

Joe presented his closing comments, thanking Statistics Netherlands, the presenters, and the participants. He offered to produce the best practices summaries, new terms of reference, and minutes for comment and to get the London Group Bureau up and running immediately following the meeting. He then invited Sjoerd Schenau to close the meeting.