Second Meeting of the Expert Group on the Revision of the Framework for the Development of Environment Statistics

New York, 4-6 May 2011

Report

1. The Second Meeting of the Expert Group (EGM) on the revision of the Framework for the Development of Environment Statistics (FDES), organized by the United Nations Statistics Division (UNSD) was held in New York from 4 to 6 of May 2011.

2. The meeting was attended by 27 experts from Australia, Austria, Belize, Brazil, Canada, Czech Republic, Estonia, Finland, Guinea, India, Indonesia, Jamaica, Mauritius, Mexico, Netherlands, Nigeria, Norway, Suriname, United Arab Emirates, the United States of America, the European Commission Joint Research Centre, the European Environment Agency, Eurostat, the Food and Agriculture Organization of the United Nations and the Development Policy and Analysis Division (DPAD) of the United Nations.

3. The meeting was co-chaired by Ms. Iva Ritschelova (Sessions 1, 3 and 4) and Mr. Wynandin Imawan (Session 2). Ms. Eszter Horvath chaired Session 5.

4. The meeting was opened by Mr. Paul Cheung, Director of UNSD. After welcoming the participants he reviewed the mandate given by the 41st Statistical Commission to revise the 1984 FDES and the steps taken so far in the revision process. He stressed that the meeting has to conclude on the objective and scope of the new framework and on an appropriate structure for integrating its dimensions and building blocks; and agree on the outline that will guide the drafting of the text of the revised FDES. He also requested the meeting to set up the criteria for identifying the most important and relevant set of statistics that could be indicative to countries in developing environment statistics. He emphasized that the fundamental principle of practical utility should prevail over purely theoretical approaches. He urged participants to share their knowledge and expertise by contributing to the work and support UNSD in finalizing and submitting the revised FDES and the Core Set of Environment Statistics to the 43rd session of the Statistical Commission in March 2012, in time to be considered as a tool to be presented at the Rio+20 Conference.

5. The EGM was organized as follows:

Introduction:	Progress report and objective of the meeting
Session 1:	Review of key concepts, frameworks, geospatial and statistical developments relevant to the FDES (plenary)
Session 2:	Towards a Revised Framework for the Development of Environment Statistics (working groups and plenary)

Session 3: Towards the core set of environment statistics (plenary)
Session 4: Outline of the revised FDES (plenary)
Session 5: The way forward (plenary)

6. Ms. Eszter Horvath presented a summary of the progress made since the last meeting of the Expert Group in November 2010 and articulated the objectives of the EGM as reaching agreement on: (i) the objective, scope and coverage; (ii) the structure and dimensions; (iii) the outline of the revised FDES; (iv) the process and criteria for the selection of the core set of environment statistics; and (v) on the work programme, timetable, responsibilities and contributions.

7. The EGM's discussions were based on 12 papers and the corresponding presentations prepared by EGM members and UNSD. All papers and presentations submitted for the EGM are available and can be downloaded from the Expert Group's website at http://unstats.un.org/unsd/environment/fdes/fdes_egm.htm

8. The main conclusions of the meeting are summarized in the following paragraphs 9 – 18, followed by the revised outline and work programme. A summary of the presentations and discussions in Sessions 1 - 5 is attached as Annex A. The agenda of the meeting is attached as Annex B. The list of participants is attached as Annex C.

Main conclusions of the Meeting

9. The Expert Group expressed its appreciation to UNSD for the quality of the papers and presentations prepared for the meeting and for the work done since the last EGM in November 2010.

10. The Expert Group adopted the objective, scope and coverage of the revised FDES as contained in document EGM-FDES.2.11.

11. Significant progress was attained during the Working Groups in the elaboration of the structure and contents for the revised FDES during Session 2. The Expert Group invited the Working Groups to further elaborate and fully describe their proposals for the structure, components and building blocks of the revised FDES and send them to UNSD by 31 May 2011. The proposals will include the following elements:

- Conceptual thinking and rationale behind the proposed structure
- Table and description of matrix or structural components
- Description of Rows and Columns (alternative description of rows and sub-rows, and/or columns) or components
- Illustration of the table(s) with real environmental themes, topics and/or dimension (contents)
- Identification of advantages and disadvantages of the proposed structure

- Matching the proposed structure with the agreed objective, scope and coverage of environment statistics
- Matching the proposed structure with the agreed criteria for the FDES

12. It was agreed that Working Groups 1 and 2 will work together on a single structure as their proposals had a lot of common elements. The final proposal for the structure of the revised FDES will be elaborated by UNSD based on the contributions from the Working Groups.

13. The Expert Group appreciated the progress towards the identification of a core set of environment statistics, and: (i) agreed with the process that had been followed; (ii) agreed that the leading criteria for the selection of the core set should be policy relevance, measurability, methodological soundness and frequency of use; and (iii) recommended that UNSD continue the work following the evolving structure of the revised FDES.

14. There was general agreement that the core set of environment statistics should be part of the FDES document. It was agreed that the relevant chapter will include why a core set is needed; how the statistics were chosen; and what the relationship is between the core set and the FDES.

15. The Expert Group requested UNSD to amend the draft outline of the revised FDES according to the conclusions of the meeting, complement it with the provisional number of pages under each heading, circulate it for written comments and include the revised outline in the final report.

16. The Expert Group requested UNSD to amend the work programme and timetable according to the conclusions of the meeting, circulate them for comments and include the revised work programme and timetable in the final report. It was agreed that contributions from the experts will be sought when the FDES structure, the outline and the timetable have been finalized.

17. As the planned chapters 1 and 2 are not affected by the proposed amendments, the Expert Group requested UNSD to start drafting the text for these chapters as soon as possible in order to keep the tight deadlines of the work programme.

18. The Expert Group unanimously agreed that a face-to-face meeting is necessary, preferably after the global consultation process, so that the experts can discuss the observations and suggestions and collectively work to finalize the revised FDES. The tentative dates for this meeting were set as 2-4 November 2011.

Proposed outline of the revised FDES

1 June 2011

Introduction (3 pages)

- The FDES 1984
- The need for and objective of the revision
- The revision process

1. Major developments relevant to environment statistics (10 pages)

1.1 Conceptual and policy developments and related frameworks

Including: Sustainable development
Climate change
Ecosystem and Natural Capital Approaches
Green economy and green growth
Major Multilateral Environmental Agreements

1.2 Statistical developments

Including: General statistical developments
Environment statistics and indicator frameworks
The System of integrated Environmental-Economic Accounting
Classifications relevant to environment statistics
Geospatial statistics

2. The environment statistics domain (12 pages)

2.1 The objective of environment statistics, its main functions, uses and users
2.2 Scope and boundaries of environment statistics; links with the economic and social statistics domains
2.3 The nature of environment statistics: the environment and its quantification
2.4 Statistical units
2.5 Spatial considerations
2.6 Temporal considerations
2.7 Sources of environment statistics
- 2.7.1 Administrative data
- 2.7.2 Statistical surveys
- 2.7.3 Environmental monitoring
- 2.7.4 Modeling and estimation
- 2.7.5 Research data
- 2.7.6 Remote sensing

2.8 Quality assessment
2.9 Institutional dimension of environment statistics and the need for interagency collaboration

3. The revised FDES (10 pages)

3.1 Objective of the FDES
3.2 Criteria to be satisfied
3.4 Uses and users – audience
3.5 Main concepts and definitions
3.6 Relationship between the FDES and other Frameworks

4. The structure and components of the revised FDES (20 pages) (draft is based on matrix structure)

- 4.1 Presentation of the structure
- 4.2 Main components and dimensions
- 4.3 The rows of the synthesis matrix: components of the environment
  - 4.3.1 Row 1
  - 4.3.2 Row 2
  - 4.3.n Row n
- 4.4 The columns of the synthesis matrix: analytical categories/dimensions
  - 4.4.1 Column 1
  - 4.4.2 Column 2
  - 4.4.n Column n
- 4.5 The cells of the matrix: statistical topics or themes and their linkages
- 4.6 Layers of the matrix: From statistical topics to variables
  - 4.6.1 The role of classifications
  - 4.6.2 Examples of layers
- 4.7 Applications for crosscutting issues and themes
  - 4.7.2 Combinations of cells
  - 4.7.3 Examples

5. Core Set of Environment Statistics (10 pages)

- 5.1 Objective and criteria of the core set
- 5.2 Description of the statistics to be included in the core set
- 5.3 Justification of the statistics chosen
- 5.4 Linkage of core set to the structure of the FDES

6. Towards implementation of the FDES and the Core Set of Environment Statistics (5 pages)

Annexes (15 pages)
Glossary (5)

Total: 90 pages

Work plan and timeline for the revision of the FDES
10 May 2011 – 20 January 2012

Activity/Output	Responsibility	Timeline
Revised proposals by the two working groups	Chairs of the Working Groups	10 May – 3 June
Drafting of chapters of the revised FDES (UNSD with contributions from experts[1]) Chapters 3,4 and 5 All other Chapters	UNSD	 3 June - 15 July 3 June - 22 August
Electronic consultation with the EG Chapters 3, 4 and 5 All other Chapters	EG members	 15 July - 15 August 22 August - 16 September
First revision of drafts according to the results of the consultation (UNSD with contributions from experts)	UNSD	15 August -26 September
Global consultation	UNSD	26 September -21 October
Summary and circulation of comments from global consultation to EG	UNSD	21 - 28 October
Third meeting of the EG	UNSD, EG members	2-4 November
Second revision of drafts (UNSD with contributions from experts)	UNSD	7 - 30 November
Final electronic consultation on second revision with EG		1 - 15 December
Report to the 43rd session of the Statistical Commission	UNSD	9 December
Submission of the revised FDES to the 43rd session of the Statistical Commission as background document	UNSD	20 January 2012

Note: In case the tight deadlines cannot be kept, a possible (but not preferred) option is to implement the global consultation after the 3rd meeting of the EG and discuss the results electronically

[1] Contributions from experts will be sought after finalizing the outline, work plan and timetable.

ANNEX A

Summary of the discussions of the Second Meeting of the Expert Group on the revision of the Framework for the Development of Environment Statistics

Session 1: Review of key concepts, frameworks, geospatial and statistical developments relevant to the FDES

1. Robert Smith (Statistics Canada) made a presentation on the results of Canada's national consultation process on environment statistics. The process was primarily intended as a broad public consultation that would help in planning for future development in environment statistics. New activities had been undertaken in the existing programme of work and these needed to be conveyed to potential users and Statistics Canada wanted to engage a broader community of users, including governments of the provinces and municipalities. Undertaken through a variety of media – email, Internet, telephone and face-to-face meetings, the consultation was targeted at both actual and potential users. While the consultation has not been finalized, early results indicated that there was much interest in management of the ecosystems and ecological goods and services and that while people were relatively comfortable with physical measurement, they were less so with monetary measures. It was revealed that the concept that the environment is a source of wealth, comprised of a suite of natural capital, was well accepted as a framework that can be used in the decision making context by providing a link between natural capital and the ecological goods and services necessary for human well-being. Environment statistics that are coherent with economic and social statistics are evidently needed. A number of data gaps clearly exist including statistics on biodiversity, "place-based" environment statistics, data linking economic growth to environment and environmental quality to human well being; and data quality issues such as frequency, timeliness and accessibility of data remain paramount.

2. Rayén Quiroga (UNSD) presented a review of key concepts and analysis of explicit and implicit frameworks relevant to environment statistics. This presentation examined a selection of policy, assessment and statistical initiatives that have been relevant at the global and regional scales in the area of environment statistics, sustainable development and related fields. She presented an analysis of the frameworks that are explicit or implicit in these initiatives, reviewing the context and specificities of each of the initiatives and its appropriateness as possible inputs for the revised FDES. A selection of frameworks traditionally used in the organization of environment statistics and indicators was also presented. She finally examined conceptual approaches underlying the initiatives that were reviewed, providing a summary of those with the highest potential for contributing to the revision of the FDES. She concluded that most frameworks were tailor made to fit specific monitoring needs, and they were supported by a mixture of different concepts about the environment and the human activities and

welfare; and the most relevant to FDES revision were the ecosystems and natural capital approaches. However, statistical capabilities created by the functioning and development of the national statistical systems and national statistical offices, the allocated human and other resources and the availability of current datasets are key in determining what is feasible for the resulting revised FDES.

3. Eszter Horvath (UNSD) made a presentation on existing and emerging environment statistics classifications that have to be considered in the revision of the FDES. The presentation covered the classifications developed by UN ECE from the late eighties to the mid nineties; and the classifications that have been (or are being) developed within the frame of the revision of the System of Environmental-Economic Accounting (SEEA). Further work on the assessment of classifications relevant for environment statistics will be extended to cover economic and social classifications as well as the classifications used for the different reposting obligations to multilateral environmental agreements, conventions and international data collection initiatives. She emphasized that the revision of the FDES should make use of these classifications to ensure integration and consistency over different analytical frameworks and statistical domains.

4. Jean-Louis Weber's (EEA) presentation focussed on recent geospatial developments that might have a revolutionary effect on the collection, compilation, analysis and dissemination of environment statistics. He described and gave examples of how the integration of spatial data and statistics makes analysis possible over multiple spatial units at various scales and how can it be used to define accounting and statistical units for ecosystems. He explained the difference between theoretical, analytical and observation units and described the method of constructing socio-ecological landscape units as the basic accounting unit for ecosystems. He illustrated the relationship between classifications and the accounting units using the classification of land cover as the starting point. He finally gave some examples of open source tools to manage geospatial data and produce statistics.

From the discussions in this session, the key points raised were:

5. It was noted that environment statistics and indicators are linked, but there is a need to separate them. The frameworks reviewed by UNSD relate more to indicators than to statistics as they derive from policy, assessment and statistical initiatives. However, as ultimately indicators need to be supported by the underlying environment statistics, the frameworks reviewed are relevant and represent the demand for environment statistics.

6. With regard to the task of recommending a structure for the FDES, one should be cautious about using a single theory as there is no theory that is accepted by all the stakeholders. Nevertheless, we could advance by treating theories as guiding scientific knowledge, but not introduce them directly into the framework, nor derive frameworks directly from any theory in particular. Indeed it should be acknowledged that there is a large body of valid scientific knowledge that can guide in the development of individual

statistics and indicators within the FDES. We need a framework that is practical, cost effective, simple and easily applicable in most countries. We should be aware that not all countries can apply the more complex suggestions.

7. On the subject of the role of policy issues in the development of the FDES, it was agreed that specific policy initiatives should not be part of the structure, but that the structure should be sufficiently flexible so that such initiatives' monitoring needs could be supported by the framework. The framework should accommodate the issues raised by these political initiatives, but it should not be related nor restricted to any of these issues directly.

8. With regard to the integration of geospatial data with statistics it was mentioned that there are important challenges, e.g., problems with institutional aspects of the production of environment statistics as most NSOs are not mandated or do not have the capacity to produce and analyze such types of spatial and geographic data. There are also issues with confidentiality, open data strategies and cooperation, and agreements for enabling same. Clear strategies and guidance should be enunciated for this in the FDES. It should be noted that using "cloud computing" for outsourcing the computing may lead to loss of control over one's data. It was mentioned that while maps seem simple, they are often complicated and expensive. It was also noted that while there may be free mapping software available, they can be misused for making quick decisions and there can be problems with the use of administrative and international boundaries. It is however possible that the confidentiality problem is overstated. One caution that emerged during the discussion was that statisticians should not be aiming to do the work that belongs to the domain of geographical institutes.

9. The representative of FAO mentioned that they are proceeding with work on land use and land cover classifications. Not all of this is formally established, but much of it is driven by initiatives such as the SEEA and that of other parties such as IPCC concerning e.g., greenhouse gas inventories and calculation of GHG emissions related to land use and land cover changes. There is a newly updated publication on the classifications and the FAO Land Cover Classification System is becoming an ISO standard. A meta-language will be discussed at the ISO as part of the process. It was further noted that in drafting the FDES it is important to use a common language and that any language adopted should be easily understood.

10. A question was raised as to whether there were capacity building activities and technical cooperation available in the field of geospatial statistics and the use of relevant software. The response was that there could be cooperation on use of the software, but training in this field should be done by universities and training institutes.

Session 2: Towards a revised Framework for the Development of Environment Statistics

11. The first presentation in this session, made by Rayén Quiroga (UNSD), summarized the findings of the review of the 1984 FDES aiming at the identification of elements, topics and dimensions that need strengthening or are missing in the 1984 Framework. She listed the main conceptual, scientific, statistical and technological developments and emerging environmental policy issues that have shaped environment statistics since 1984. She pointed out the areas where the revised FDES has to be more articulate which are as follows: clarification and distinction between the objective and scope of environment statistics and those of the Framework; users of the FDES; institutional aspects and how to use the FDES to identify the role of the different players in the environmental information system. As to the structure and components of the FDES, she emphasized that the revised framework will have to better handle cross-cutting issues as well as the interrelations between the components of the environment and will need a stronger focus on the state, and changes of the state, of the environment.

12. The second presentation, made by Eszter Horvath (UNSD), focussed on the objective, scope and coverage of environment statistics and the revised FDES. Her presentation synthesized the conclusions reached by the Expert Group during its preparatory (2009) and first (2010) meetings on these issues and the agreed criteria for the revision of the FDES. She sought feedback from the group on whether they considered these conclusions satisfactory, or whether there was anything to be added or modified before they were adopted by the Expert Group.

13. To facilitate the upcoming discussions in the Working Groups, Robert Smith (Statistics Canada) presented a categorization of frameworks and their relevance to the FDES revision. He gave a general definition and described the main functions of a framework. He made a distinction between the "fundamental" and "operational" parts of a framework. He argued that the "fundamental" part is either conceptual (based on any kind of conceptual thinking) or heuristic (based on experience and practice); however, most frameworks use a combination of conceptual and heuristic elements. The "operational" part of the framework is based on the rules that arise from the "fundamental" part. He said that in his opinion the 1984 FDES was a hybrid framework with more conceptual and some heuristic elements. He suggested that the revision could keep this hybrid character, taking into consideration progress in scientific conceptual thinking as well as existing practice; or, it could be developed by strengthening either the conceptual or the heuristic elements. In his opinion a purely heuristic framework would be against the fundamental principles of official statistics.

14. The last presentation in this session was made by Rayén Quiroga (UNSD), who presented different options for the structure of the revised FDES and discussed their advantages and disadvantages, including a discussion on the structuring criteria and examples of the topics and contents commonly used in breaking up the environmental continuum for statistical purposes. She gave examples of matrix type visual presentations of the structure using different conceptual approaches such as the ecosystem and the natural capital approach and the combination of those with the well known PSR or DPSIR framework, also elaborating on the advantages and disadvantages of different row and column sets. She also explored the possibility of using non-matrix structures such as

the use of hierarchical lists based on themes and sub-themes. She emphasized that the objective of the presentation (and the underlying paper) was to facilitate the work of the working groups by giving an overview of the pros and cons of different options.

15. Following the last presentation, three invited experts made comments on the objective, scope, coverage and possible structure of the revised FDES. Matthias Bruckner (UN DPAD) elaborated on a modified media/ecosystems approach in the rows and a combination of the ecosystems/PSR approach for the columns of the FDES matrix. Michael Nagy (Austria) developed a 4-level hierarchical structure using the example of freshwater and matched the elements of the structure with other analytical frameworks such as the DPSIR or the SEEA, linked the components to available statistical recommendations, and also provided links to data sources and responsible institutions. Jean Louis Weber (EEA) argued that the FDES has not to be in itself a comprehensive standalone analytical or reporting framework but it has to organize the supply of statistics to various analytical and reporting frameworks; has to establish the workflows between environment statisticians and the primary producers of environmental data, administrative sources, sector statistics, economic and social statistics; it has to be based on existing (appropriately revised) classifications and should facilitate priority setting according to policy demand.

From the discussions in this session, the key points raised were:

16. There was a general agreement on the elements presented in the typology of frameworks and the description of conceptual and heuristic elements. However, the question was raised about how the different components were negotiated from the political point of view, by the different interested parties.

17. The basic understanding is that the field of environment statistics is multidisciplinary in nature, catering to three major groups: economists/social scientists; natural scientists/ecological scientists; and policy makers/administrative personnel. This is the big challenge – the framework must cater to all these parts. The capital approach is closer to economists, while ecosystems are closer to environmental science and the PSR and derived sequences are more geared to the policy makers.

18. Most frameworks are hybrids between heuristic and conceptual ones as purely conceptual frameworks are challenging. There is a missing aspect of the framework - that is the political one. There is demand for this. With regard to the social statistics aspect, the social sciences are full of theories, with several in conflict. The heuristic approach will pick the best aspects of various theoretical approaches. It would be a sign of maturity to adopt a heuristic framework with a good focus on the political aspect. The valid bodies of knowledge to be drawn upon for this would be “political theory/political practice”. Policy consensus is very important. The framework can also be compatible with many theories at the same time.

19. The question was raised about what was meant by the FDES being a "comprehensive" framework, i.e. whether comprehensive meant simply broad, or all inclusive and all encompassing. The response clarified that in this context the word comprehensive is used in the meaning of encompassing all aspects of the environment and as such, it is all inclusive. In terms of the cells in a matrix, the attribute of comprehensiveness means a full menu from which countries can prioritize according to their priorities, policy imperatives, resources and other special conditions. However, it was argued that when preparing the revised FDES document the set of statistics that will emerge may not be so thorough and complete that every single dimension would be covered. Rather, it should have representative information that could warrant follow up. This would be a more achievable objective. We do not simply want to structure all the information we can find. We should determine variables with: high precision, medium precision or no precision at all. This should be reflected in the Framework as a guiding principle. There should be some theory on why data are to be collected. We need a mechanism for establishing priorities.

20. The issue of the scope of the FDES and the links to socio-economic statistics was raised by several participants, especially in relation to the impacts of the changes of the state of the environment on humans and the economy. Questions were also posited about where the boundary stands and whether the link between the environment and socio-economic processes has to be sacrificed. It was agreed that the socio-economic impacts should be included in the framework at least in the form of links. The examples given were: human health and the environment as an emerging field; the impact of resource depletion on prices; and the issue of environmental governance.

21. With regard to structure, it was argued that the matrix approach is attractive, but when issues are complicated, the matrix is sometimes inadequate as the environment is more complex and cross-cutting. It was proposed by some participants to abandon the idea of a matrix and move towards a hierarchical list-type structure. A matrix type presentation is closed and therefore less flexible. On the other hand, as the choice of the rows and columns has to be based on clear concepts, a matrix-type framework can better be used to define the scope and boundaries of environment statistics within the given conceptual context and to identify data gaps.

22. Finally, the development of a glossary of the different terms used in the revised FDES was recommended to ensure the use of common language and to foster common understanding of the concepts included in the Framework.

Working Groups

23. Two additional presentations were made before breaking out into working groups. The first one by Eszter Horvath (UNSD) was an attempt to summarize and consolidate the different options that were presented by UNSD and various experts, in order to facilitate the discussion in the groups. The second presentation by Jochen Jesinghaus (EC

JRC) illustrated a different approach to structure the FDES based on themes and sub-themes established according to the most pertinent global environmental policy issues.

24. Following the presentations the work continued in three groups. The task of the working groups was to develop a concrete proposal for the structure of the revised FDES based on the agreed objective, scope and criteria. They were requested to cover the following steps:

- Development of the rationale;
- Creation and description of the structure;
- Description of rows and columns or components of the structure;
- Illustration of contents with environment statistics topics;
- Identification of advantages and disadvantages of the proposed structure

25. The Working Groups presented the results of their work to the plenary session. While remarkable progress was made and concrete proposals (for both matrix and non-matrix structures) were developed and presented by the rapporteurs, none of the groups had enough time to fully elaborate the framework structure and the underlying rationale. During the discussion several points were raised that the groups might consider when revising and completing their work. The discussion concluded that the proposals provided a very good basis for reconciliation and the groups should be given additional time to continue and finalize their work.

26. The Expert Group invited the Working Groups to further elaborate and describe their proposals for the structure, components and building blocks of the revised FDES. The proposals will include the following elements:

- Conceptual thinking and rationale behind the proposed structure
- Table and description of matrix or structural components
- Description of rows and columns (alternative description of rows and sub-rows, and/or columns) or components
- Illustration of the table(s) with real environmental themes, topics and/or dimension (contents)
- Identification of advantages and disadvantages of the proposed structure
- Matching the proposed structure with the agreed objective, scope and coverage of environment statistics
- Matching the proposed structure with the agreed criteria for the FDES

27. It was agreed that Working Groups 1 and 2 will work together on a single structure as their proposals had a lot of common elements. Each group will carry out their work under the leadership of the Chairperson and will be assisted by the UNSD team using email as the basis for the organization and revision of the work. The two groups are expected to send their revised proposals to UNSD by 31 May 2011. The final proposal for the structure of the revised FDES will be elaborated by UNSD based on the contributions from the Working Groups.

Session 3: Towards a Core Set of Environment Statistics

28. Two presentations were made during this session. The first one by Eurostat was on the "Selection Criteria of Environmental Indicators – the European Experience" and the second one by UNSD was on the "Preliminary Results of the Analysis of Existing Environment Related Indicator Sets" which included reference to a paper also prepared for the meeting on "Common Indicators of Existing Indicator Sets".

29. Christian Heidorn (Eurostat) gave a progress report on the EU Indicator streamlining project, described the relevant selection processes that were applied for the European indicator sets and pointed out the possible linkages to the FDES revision and the core set of environment statistics. While the EU project is aiming at the level of indicators and the presented criteria have been used for the selection of indicators, their relevance can be extended to the underlying statistics. Therefore, the European experience and the lessons learned so far can also be beneficial to the process of setting up the core set of environment statistics.

30. Reena Shah (UNSD) presented the process and the work done so far towards the development of a core set of environment statistics. The adopted process includes: (i) the extensive review of existing indicators/statistics used for monitoring and assessment, (ii) the definition of their common elements; (iii) the assessment of the corresponding statistical requirements created by these common indicators/statistics; and (iv) their allocation in the revised FDES structure. She described the scope of the work (the indicator sets and statistics reviewed) that included all important global and regional initiatives. She explained the provisional structure of themes and sub-themes that were used for grouping the indicators/statistics and identifying the most common ones under these themes and sub-themes in the different sets. The next steps will be to further reduce duplications and overlaps and match the core set with the emerging FDES framework structure.

31. During the discussion participants expressed interest in the work done by Eurostat in streamlining the European environmental indicators and reducing their number from about 150 to about 50-60 indicators. Doubts were expressed about the development and use of composite indices and the application of headline indicators were recommended instead.

32. The participants also expressed appreciation for the work that UNSD has carried out to date on the development of the core set of environment statistics. It was noted that the approach taken to review the existing international/regional indicator/statistics sets or lists was very useful as it: (i) gave a good indication of global, regional and also thematic priorities that will help in the identification of the core set of statistics; and (ii) provided the opportunity to identify important borderline themes (such as environmental health) that, due to their importance, have to be handled within the FDES and therefore they have an effect on the scope of the Framework itself and its links with other statistics. It was

noted that the focus of the set of statistics should be on the environment but that some related socio-economic statistics should also be included.

33. It has to be kept in mind that the objective is to set up a core (minimum) set of environment statistics that all countries would produce based on standardized methodologies. It was raised during the discussion that, beyond the core set, a wider reference set of statistics be recommended from which countries could select those statistics that are more relevant for their purposes. However, it was recognized that this reference set should originate from the statistical topics of the Framework itself (the full scope of environment statistics) and countries will prioritize based on the relevance of the given topic to their specific conditions. As it had been agreed earlier, the elaboration of the Framework at the level of statistical variables should be supported by a suite of topic specific recommendations and guidelines.

34. With regard to the level of information to be included, it was reinforced that the core set should be about "statistics" and not indicators. With regard to the criteria for the selection of the indicators that are used as a first iteration to identifying the core set of statistics, it was agreed that the most important criteria were policy relevance, measurability, methodological soundness and frequency of use. The objective of the core set determines that the criteria of policy relevance has to be interpreted at the global level, while specific national policy issues will be taken into account in the application of the FDES.

35. The meeting agreed that the number of indicators/statistics used as reference in determining the core set of statistics should be further reduced and prioritized by filtering out duplications and overlaps among them. It was also agreed that the core set would be allocated in the FDES structure, be combined into the FDES document and be part of the global consultation process.

Session 4: Outline of the Revised FDES

36. A presentation was made by Eszter Horvath (UNSD) on the draft outline of the revised FDES. Several participants made comments, the most important ones being the following:

37. It was felt that the connection between the core set of environment statistics and the FDES was not made explicit enough and should be strengthened in the outline. It was recommended that the chapter on the core set should be extended to include the following sub-headings:

- objective of the core set;
- description of the statistics to be included in the core set;
- justification of the statistics chosen; and
- linkage of the core set to the structure of the FDES

38. It was also proposed to include a glossary of terms used in the revised FDES. Finally, it was suggested to add a chapter on the roadmap for the implementation of the Framework.

39. It was agreed that UNSD would amend the draft outline according to the comments, complement it with tentative page numbers for each chapter and send it out to the EG members for written comments before finalizing it. The finalized outline will be included in the final report of the meeting.

Session 5: The Way Forward

40. Eszter Horvath (UNSD) presented the tentative work plan for the way forward. She emphasized that the time available for drafting the revised FDES, circulating it globally for comments and preparing the final version is very short and she asked the members of the EG to assist UNSD as much as possible by contributing to the drafting process.

41. It was agreed that UNSD modify the tentative work plan according to the conclusions of the meeting in sessions 1-4, add a detailed timetable to the work plan taking into account the deadline for submitting the documents to the 43rd session of the Statistical Commission, and circulate it to the EG for written comments before finalization. The final work plan and timetable will be included in the final report of the meeting. Contributions from the EG members will be sought after these documents have been finalized.

42. As the planned chapters 1 and 2 are not affected by the proposed amendments, the Expert Group requested UNSD to start drafting the text for these chapters as soon as possible in order to keep the tight deadlines of the work programme.

43. The Expert Group unanimously agreed that a face-to-face meeting is necessary before finalizing the revised FDES, preferably after the global consultation process, so that the experts can discuss the observations and suggestions and collectively work to finalize the revised FDES. The tentative dates for this meeting were set as 2-4 November 2011.

ANNEX B

ESA/STATISTICS/236
EGM-FDES/2/1

DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS

Expert Group Meeting on the Revision of the Framework for the Development of Environment Statistics (FDES)
New York, 4-6 May 2011
Landmark View Room
Millennium Plaza Hotel, West Tower 29th floor
One United Nations Plaza

4 May 2011

Agenda and Organization of Work

Wednesday, 4 May 2011

Morning session (09:30-13:00)

09:00 – 09:30 Registration (Millennium Plaza Hotel, Landmark View Room)

09:30 – 10:00 Opening of the Meeting (Paul Cheung, Director UNSD)
Adoption of Agenda
Progress report (EGM-FDES.2.4 - UNSD)

10:00 – 11:30 Session 1: Review of key concepts, frameworks, geospatial and statistical developments relevant to the FDES

Session 1 will discuss the impact of major environmental policy initiatives and statistical developments on the revision of the FDES.

Presentations:
- Results of Canada's national consultation process on environment statistics (EGM-FDES.2.8 - Robert Smith, Statistics Canada)
- Review of key concepts and analysis of explicit and implicit frameworks relevant to environment statistics (EGM-FDES.2.5 - UNSD)
- Existing and emerging environment statistics classifications (EGM-FDES.2.7 - UNSD)

Discussion

11:30 – 12:00 Coffee break

12:00 – 13:00 Session 1 continued

Presentation:

- Geospatial developments relevant to environment statistics (EGM-FDES.2.6 - Jean-Louis Weber, EEA)

Discussion

13:00 – 14:00 Lunch break

Afternoon session (14:00 – 18:00)

14:00 – 15:30 Session 2: Towards a Revised Framework for the Development of Environment Statistics

Session 2 will concentrate on the revised framework for environment statistics. It will present a synthesis of the missing elements, topics and dimensions reflecting the state of the art. The role, objectives and main properties of the framework will be discussed including the identification of the target audience and main users. The session will then focus on the possible designs and structures, dimensions and contents of the revised FDES. The session will be organized as plenary (Wednesday afternoon), and working groups (Thursday morning and afternoon). The working groups will report back to the plenary (Thursday afternoon). The session is expected to conclude with an agreement on the proposed structure, contents and tables of the revised FDES.

Presentations:

- Results of the review of the 1984 FDES: missing elements, topics and dimensions (EGM-FDES.2.9 - UNSD)
- Objective, scope and coverage of the revised FDES (EGM-FDES.2.11 - UNSD)
- Categories of frameworks and their relevance to the FDES revision process (EGM-FDES.2.15 - Robert Smith, Statistics Canada)

Discussion

15:30 – 16:00 Coffee break

16:00 – 18:00 Session 2 continued

Presentations:

- Notes on the structure and contents of the revised FDES (EGM-FDES.2.12 -UNSD)
- Comments by invited experts

Discussion

Formation of working groups, nomination of Chairs

18:00 - 19:30 Reception (DC2-14th floor)

Thursday, 5 May 2011

Morning session (09:30 – 13:00)

09:30 – 11:00 Session 2 continued: Working groups on structure, dimensions and contents of the revised FDES

The working groups are expected to focus on specific types of structure, rows, columns and cell contents of the synthesis matrix of the revised FDES according to the guidelines prepared for these discussions.

- **Working Group 1: Landmark View Room**
- **Working Group 2: Small room adjacent to Landmark View Room**
- **Working Group 3: DC2-1684 Conference Room**

11:00 – 11:30 Coffee break

11:30 – 13:00 Session 2 continued: Working groups

13:00 – 14:00 Lunch break

Afternoon session (14:00 – 18:00)

14:00 – 15:30 Session 2 continued: Working groups

15:30 – 16:00 Coffee break

16:00 – 18:00 Presentations to plenary

- **Working Group 1: Rapporteur**
- **Working Group 2: Rapporteur**
- **Working Group 3: Rapporteur**

Discussion

Friday, 6 May 2011

Morning session (09:30 – 13:00)

09:30 – 11:00 Session 2 continued: discussion and conclusions

11:00 – 11:30 Coffee break

11:30 – 13:00 Session 3: Towards a Core Set of Environment Statistics

Session 3 will discuss the process leading to, and the criteria to use for the identification of an agreed core set of environment statistics.

Presentations:

- Selection criteria of environmental indicators – the European experience (EGM-FDES.2.16 - Christian Heidorn, Eurostat)
- Preliminary results of the analysis of existing environment related indicator sets (EGM-FDES.2.13 - UNSD)

Discussion and conclusions of Session 3

13:00 - 14:00 Lunch break

Afternoon session (14:00 – 16:00)

14:00 – 15:00 Session 4: Outline of the Revised FDES

Session 3 will discuss the detailed outline of the revised FDES and the possible contributions from the experts to the drafting of specific sections of the revised FDES.

Presentation:

- Proposed outline of the revised FDES (EGM-FDES.2.10 - UNSD)

Discussion and conclusions of Session 4

15:00 – 16:00 Session 5: The way forward

Session 5 will discuss practical matters such as the work programme for May 2011 – February 2012, expected outputs and the timetable, distribution of work and responsibilities.

Presentation:

- The way forward (UNSD)

Discussion and conclusions

Evaluation and closing of the meeting

ANNEX C

ESA/STATISTICS/AC.236
EGM-FDES/1/3

DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS

Second Expert Group Meeting on the Revision of the Framework for the Development of Environment Statistics (FDES)
New York, 4-6 May 2011

List of Participants

AUSTRALIA
Mr. Mark LOUND
Director
Industry and Land Statistics
Australian Bureau of Statistics
Locked bag 10
Belconnen act 2617
Australia
Tel: +61 262526325
Mobile: +61 (0)400314392
Fax: +61 262527102
E-mail: mark.lound@abs.gov.au

AUSTRIA
Mr. Michael NAGY
Head of Department
Data Management and Reporting
Environment Agency Austria
Spittelauer Lände 5
1090 Vienna
Austria
Tel: +43 1 31304 3490
Fax: +43 1 31304 3533
E-mail: Michael.nagy@umweltbundesamt.at

BELIZE
Mr. Edgar EK
Deputy Chief Environmental Officer
Department of the Environment
Government of Belize
Market Square
Belmopan
Belize
Tel: +501 822 2816
Fax: +501 822 2862
E-mail: envirodept@btl.net
Edgar_ek@yahoo.com
doe.dceo@nrei.gov.bz

BRAZIL
Mr. Wadih NETO
Assistant Director Geosciencies
Brazilian Institute of Geography and Statistics
Av. República do Chile, 500, 12^0 andar
20031-170 – Centro – Rio de Janeiro
Brazil
Tel: +55 21 21424666
Fax: +55 21 21420005
E-mail: wadih.neto@ibge.gov.br

CANADA
Mr. Robert SMITH
Director
Environment Accounts and Statistics Division
Statistics Canada
7th floor, R.H. Coats Bldg
Ottawa, Ontario K1A 0T6
Canada
Tel: +613 951-2810
Fax: +613 951-0634
E-mail: Robert.B.Smith@statcan.gc.ca

CZECH REPUBLIC
Ms. Iva RITSCHELOVA
President
Czech Statistical Office
Na padesatem 81
100 82 Prague 10
Czech Republic
Tel: +420 2 7405-2411
Fax: +420 2 7405-2133
E-mail: I.Ritschelova@czso.cz, predsedkyne@czso.cz

ESTONIA
Ms. Kaia ORAS
Head of Environment and Sustainable Development Statistics Section
Statistical Office of Estonia
15 Endla Street
TALLIN EE0100
Estonia
Tel: +3726259234
E-mail kaia.oras@stat.ee

FINLAND
Mr. Leo KOLTTOLA
Senior Adviser Environment and Energy
FI-00022 Statistics Finland
Finland
Tel: +358 9 17343234
Fax: +358 9 17343429
E-mail: leo.kolttola@stat.fi

GUINEA
Ms. Fanta KABA
ECOWAS Commission Consultant
51 William Street
West Haven, CT 06516
Tel: 203-809-4808
E-mail: fantakaba@gmail.com

INDIA
Ms. Sekhar JEYALAKSHMI
Additional Director General
Ministry of Statistics and Programme Implementation
Central Statistical Office, Social Statistics Division
West Block-8, Wing-6, R.K.Puram Sector 1
New Delhi-110066
India
Tel: +91 11 26108529
Fax: +91 11 26108529
E-mail: adg-ssd-mospi@nic.in, jeyalakshmisekhar@yahoo.in

INDONESIA
Mr. Wynandin IMAWAN
Deputy Chief Statistician for Social Statistics
BPS-Statistics Indonesia
Badan Pusat Statistik
Jalan Dr. Sutomo No. 6-8
Jakarta 10710
Indonesia
Tel: +62-21-3843959
Fax: +62-21-3507055
E-mail: w_imawan@yahoo.com
wynandin@bps.go.id

JAMAICA
Ms. Janet GEOGHAGEN-MARTIN
Manager, Environment Statistics Unit
Statistical Institute of Jamaica
7 Cecelio Avenue,
Kingston 10
Jamaica
Tel: (876) 926-5311, Ext. 1120
Fax: (876) 926-1138
E-mail: sesu@statinja.gov.jm
jgeoghagen@yahoo.com

MAURITIUS
Mr. Anand SOOKUN
Statistician, Environment and Energy
Central Statistics Office
Life Insurance Corporation of India Centre
John Kennedy Street
Port Louis
Mauritius
Email: asookun@mail.gov.mu

MEXICO
Ms. Adriana Oropeza LLITERAS
Instituto Nacional de
Estadística y Geografía (INEGI)
Patriotismo # 711, Torre A-PH
Col. San Juan Mixcoac
Delegacion Benito Juarez
CP 03730
México, D. F.
Tel: +52 (55) 5278 1087/5482 6133
Email: adriana.oropeza@inegi.org.mx

NETHERLANDS
Mr. Hendrik Jan DIJKERMAN
Head, Energy Statistics
Statistics Netherlands
Postbus 24500
2490 HA The Hague
The Netherlands
Tel: +31 70 337 4878
E-mail: hdkn@cbs.nl

NIGERIA
Mr. Philip Olatunde BANKOLE
Deputy Director (Statistics)
Dept. of Policy Analysis,
Monitoring and Inspectorate
Federal Ministry of Environment
Abuja
Nigeria
Tel: +234 8037260542
E-mail: philip_olab@yahoo.com

NORWAY
Mr. Svein HOMSTVEDT
Head of Division
Division of Environment Statistics
Statistics Norway
P.O. Box 8131 Dep. NO-0033 Oslo
Norway
Tel: +47 2 1094966
Cell: +47 45 00 49 62
Fax: +47 2 1094973
E-mail: hom@ssb.no

SURINAME
Mr. Andreas TALEA
Manager Economic Statistics and
Environment
General Bureau of Statistics
P.O. Box 244
Klipstenenstraat 5
Paramaribo
Suriname
Email: anrotalea@gmail.com

UNITED ARAB EMIRATES
Mr. Khamis RADDAD
Acting Director of Agriculture and
Environment Department
National Bureau of Statistics
Mohemal Ibn Zayed City
P. O. Box 93000
Abu Dhabi
United Arab Emirates
Tel: +971 50 325 3164
Fax: +971 2 6276456
E-mail: khamisrd@hotmail.com

UNITED STATES
Mr. Richard W. GULDIN
Director, Quantitative Sciences
USDA Forest Service, Research & Development
1601 North Kent Street, 4th Floor;
Arlington, VA 22209-2105
Postal Service Address:
1400 Independence Ave., S.W.
Washington, DC 20250-1120
USA
Tel: 703.605.4177
Cell: 703.201.7829
Fax: 703.605.5131
E-mail: rguldin@fs.fed.us

Mr. William SONNTAG
United States Environment Protection Agency (USEPA)
Office of Environmental Information
Tel: 1-202 564-3871
Mobile: 1-202 247-5480
E-mail: Sonntag.William@epamail.epa.gov

INTERNATIONAL ORGANIZATIONS

EUROPEAN ENVIRONMENT AGENCY
Mr. Jean-Louis WEBER
Senior Special Adviser
European Environment Agency
Kongens Nytorv 6
DK-1050 Copenhagen K
Denmark
Tel: +45 3336 7245
Fax: +45 3336 7293
E-mail: jean-louis.weber@eea.europa.eu

EUROSTAT
Mr. Christian HEIDORN
Senior Statistician - Environment Statistics
European Commission - Eurostat
Office: BECH C2-617
L-2920 Luxembourg
Tel.: +352.4301-35271
E-mail: Christian.Heidorn@ec.europa.eu

JOINT RESEARCH CENTRE
Mr. Jochen JESINGHAUS
European Commission
DG JRC TP 36/170
Via Enrico Fermi, 1
I-21020 Ispra (VA)
Tel: +39-0332-78-6489
Cell: +39-334-85-90-209
Fax: +39-0332-78-57-33
E-mail: Jochen.Jesinghaus@jr.ec.europa.eu

FAO
Mr. Robert MAYO
Senior Statistician
Statistics Division
Food and Agricultural Organization of the United Nations
Viale delle Terme di Caracalla
Rome
Italy
Tel: +390657054105
E-mail: Robert.Mayo@fao.org

Mr. Mike ROBSON
Senior Officer, Information Systems
Plant Production and Protection Division
Food and Agricultural Organization of the United Nations
Viale delle Terme di Caracalla
Rome
Italy
Tel: +39-06-570-54439
Fax: +39-06-570-53369
E-mail: mike.robson@fao.org

UN DESA DPAD
Mr. Matthias BRUCKNER
Development Policy and Analysis Division
Department for Economic and Social Affairs
United Nations
2 UN Plaza, DC2-2082
New York, NY 10017
USA
Tel: +1 212-963-2137
E-mail: brucknerm@un.org

UNITED NATIONS STATISTICS DIVISION

ENVIRONMENT AND ENERGY STATISTICS BRANCH

Ms. Eszter Horvath
Chief
Environment and Energy Statistics Branch
2 United Nations Plaza
Room DC2-1418
New York, N. Y. 10017
Tel.: + 1-212-963-4581
Fax: + 1-212-963-0623
E-mail: horvath@un.org

Ms. Reena Shah
Chief
Environment Statistics Section
Environment and Energy Statistics Branch
2 United Nations Plaza
Room DC2-1416
New York, N. Y. 10017
Tel.: + 1-212-963-4586
Fax: + 1-212-963-0623
E-mail: shahr@un.org

Mr. Ralf Becker
Chief
Industrial and Energy Statistics Section
2 United Nations Plaza
Room DC2-1414
New York, N. Y. 10017
Tel.: + 1-212-963-4600
Fax: + 1-212-963-0623
E-mail: beckerr@un.org

Ms. Rayen Quiroga
Statistician
Environment Statistics Section
Environment and Energy Statistics Branch
2 United Nations Plaza
Room DC2-1410
New York, N. Y. 10017
Tel.: + 1-917-367-4201
Fax: + 1-212-963-0623
E-mail: quirogar@un.org

Ms. Karen Cassamajor
Statistician
Environment Statistics Section
Environment and Energy Statistics Branch
2 United Nations Plaza
Room DC2-1404
New York, N. Y. 10017
Tel.: + 1-212-963-4561
Fax: + 1-212-963-0623
E-mail: cassamajor@un.org

Ms. Robin Carrington
Statistical Assistant
Environment Statistics Section
Environment and Energy Statistics Branch
2 United Nations Plaza
Room DC2-1403A
New York, N. Y. 10017
Tel.: + 1-212-963-6234
Fax: + 1-212-963-0623
E-mail: carrington@un.org

Ms. Evelyne Michaud
Staff Assistant
Environment and Energy Statistics Branch
2 United Nations Plaza
Room DC2-1417
New York, N. Y. 10017
Tel.: + 1-212-963-3184
Fax: + 1-212-963-0623
E-mail: michaude@un.org