



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
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**Preliminary Meeting of the UN Committee on
Environmental-Economic Accounting
New York, 29-31 August 2005
Two United Nations Plaza
Conference Room 23rd floor**

**RESEARCH AGENDA:
SEEA-2003 CHAPTERS 7 AND 8:
MINERAL AND ENERGY ASSET ACCOUNTS
(INTEGRATED WITH FLOW ACCOUNTS)**

Statistics Denmark and UNSD

Current situation

1. The general principles of physical and monetary mineral and energy resources accounts are discussed in Chapters 7 and 8 of the SEEA-2003. At the time of writing these Chapters, a single agreed approach could not be reached for all issue. Therefore, the SEEA-2003 presents for those issues for which agreement could not be reached various options. Some of those issues are reported in Appendix 2 of this document for ease of reference. It is also worth mentioning that Eurostat has issued in 2003 guidelines on how to compile accounts for oil and gas.
2. The London Group on Environmental Accounting at its meeting in Rome in November 2003 identified mineral and energy asset accounts as one of the areas where considerable practical experience exists and for which harmonized guidelines could be established. A Subgroup on Mineral and Energy accounts, moderated by Statistics Denmark in cooperation with UNSD, was created with the objective of addressing the unresolved methodological issues and of preparing a handbook on mineral and energy asset accounts on the basis of country practices. The handbook would provide methodological and practical guidelines on how to compile physical and monetary asset accounts.
3. At the London Group meeting in Copenhagen in September 2004, selected country experiences were presented together with the results of a survey on selected country practices in the compilation of mineral and energy asset accounts. The London Group confirmed its intention to work on a handbook on the topic and agreed that the Subgroup – due to scarcity of time and resources – should focus on selected issues and work towards the development of an annotated outline for the guidelines on mineral and energy asset accounts.
4. The Subgroup includes at present mostly environmental accountants and statisticians from Statistics Norway, Statistics Canada, Statistics Denmark, NSCB Philippines, Statistics New Zealand and UNSD. However, due to members' time constraints, the subgroup is not firmly based and commitments from countries and organizations need to be reconfirmed to ensure their active involvement and contributions. Its composition might need to be extended with new members including national accountants and energy statisticians to broaden the expertise. There may also be a need to change its status from a Subgroup to the London Group to a Technical Expert Group of the UN Committee.
5. The Subgroup on Mineral and Energy Asset Accounts has accomplished the following: (a) compiled an initial list of issues (attached in Appendix 2), (b) undertaken a survey of country practices among the countries that are part of the subgroup, and (c) proposed a draft table of content for the handbook.
6. The survey on country practices has shown that there is considerable experience in the compilation of the accounts, but the application of the SEEA-2003 recommendations is not applied consistently in the countries. There is a need for harmonizing methods, definitions and classifications and for preparing international guidelines for the

compilation of mineral and energy asset accounts taking also into consideration country practices as well as the deliberations of other groups. During the update of the 1993 SNA, the Canberra II Group and the Advisory Expert Group in National Accounts have addressed issues that are relevant for the compilation of mineral and energy asset accounts. These recommendations will supersede the recommendations in the SEEA-2003 (e.g. decommissioning costs, recording of ownership of mineral-related assets, etc.).

7. The draft table of content of the handbook is included in Appendix 3. It covers physical and monetary asset accounts, the analytical use of the asset accounts and a country practices. The table of contents at present does not include discussion on how to calculate depletion and capital services which could be added to reflect the progress made in the 1993 SNA update. It covers exclusively mineral asset accounts without addressing the compilation of energy flow accounts.

8. Recently, at the request of the Statistical Commission, a City Group on Energy Statistics, the Oslo Group, and an Inter-Secretariat Working Group on Energy Statistics have been created. The Terms of Reference of these Groups are reported in Appendix 4. The objectives of these groups are to develop standards on energy statistics and firmly anchor energy statistics in the national statistical systems. One of the recommended actions of the Oslo Group is “to adopt links or develop bridges to international standard concepts and classifications in economic/ environment statistics to facilitate the integration and interface of energy statistics with other statistical systems”. Close cooperation between the Mineral and Energy Asset Accounts Group and the Oslo Group should be established in order to ensure harmonization between flow and asset accounts.

Looking ahead

9. It is proposed that Statistics Denmark in collaboration with UNSD will remain the moderators of the Group. The draft Terms of Reference for the Group are included in Appendix 1. UNSD is committed to work in cooperation with Statistics Denmark on the preparation of the handbook. Further, Eurostat has provided a grant to Statistics Denmark for the development of an outline of the international guidelines on mineral and energy asset accounts in 2006.

10. Statistics Denmark and UNSD will reconfirm the commitments of countries as well as broaden the expertise of the group. It is expected that these reconfirmations shall be obtained with the recognition of this Group by the UN Committee.

Questions to the Committee

- (a) *Does the Committee agree with the objectives of the Group to resolve outstanding issues and prepare the handbook on mineral and energy assets accounts?*
- (b) *What is the opinion of the Committee on possible ways to ensure coordination between the Mineral and Energy Asset Accounts Subgroup and other Groups (e.g. Canberra II Group, Oslo Group and Inter-Secretariat Working Group on Energy Statistics, etc.)?*
- (c) *Does the Committee would like to advise to widen the expertise of the Group by including more national accountants, environmental accountants and energy statisticians from countries and international organizations?*
- (d) *What is the opinion of the Committee on the mechanism to ensure proper contributions by countries/international organizations in participating in the activities of the Group?*
- (e) *Does the Committee agree with the list of issues provided in Appendix 2?*
- (f) *Does the Committee agree with the draft table of content of the handbook?*
 - i. *Does the Committee have any suggestions for other topics to be included?*
 - ii. *Should the handbook include also (energy) flow accounts to ensure integration with the asset accounts?*
- (g) *Does the Committee agree with the draft TOR of the Group presented in Appendix 1?*

Appendix 1

TERMS OF REFERENCE OF THE GROUP ON MINERAL AND ENERGY ACCOUNTS

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1. The Subgroup on Mineral and Energy Accounts was created by the London Group on Environmental-Economic Accounting in November 2004 in Rome and its functioning was confirmed by the London Group at its meeting in Copenhagen in September 2004. It was further reconfirmed by the United Nations Committee on Environmental-Economic Accounting at its Preliminary Meeting in August 2005. The main objectives of the Group is to further research in mineral and energy accounts and to prepare a draft handbook on mineral and energy accounts for consideration and approval by the Committee. The Group will take into account the work being undertaken by other groups such as the Canberra II Group, the Advisory Expert Group in National Accounts, the London Group, the Oslo Group and the Inter-secretariat Working Group on Energy Statistics.
2. The membership of the Group would include experts in environmental accounting, national accounts, energy statistics from selected countries and international organizations.
3. Statistics Denmark will be the moderator of the Group, in cooperation with UNSD.
4. The primary means of communication will be electronic but the Group will meet during the meeting of the London Group on Environmental Accounting, where at least one session will be organized by the Group.
5. The Group will have a limited duration and it will cease to exist once the handbook on mineral and energy accounts has been completed.
6. The Group will submit reports to the Committee, at times determined by its moderator. These might include progress reports, summaries of conclusions, issues and outcome papers and draft chapters of the handbook.
7. To ensure efficient discussions, issue and outcome papers, setting out the results of Group's deliberations and recommendations, will be presented to the Committee according to a standard format (see Annexes 1 and 2).

ANNEX 1: STANDARD FRAMEWORK FOR ISSUES PAPERS

1. Title/name of the issue to be addressed
2. Description of the issue and current situation for the treatment of the issue, including summary of the treatment in the SEEA-2003 and the 1993 SNA and its update, description of selected country practices, alternative treatments and solutions to the issue;

3. Concerns/shortcomings of the treatment of the issue (on practical as well as methodological grounds), including specific countries' concerns;
4. Questions/points for discussion.
5. Annex of the most relevant documents.

ANNEX 2:STANDARD FRAMEWORK FOR OUTCOME PAPERS

1. Title/name of the issue
2. Issue(s)
3. Recommendations by the sub-group including arguments for and against each alternative and reasons for rejections.
4. Questions, if any, for the Committee.

Appendix 2

LIST OF ISSUES OF THE GROUP ON MINERAL AND ENERGY ACCOUNTS

1. *Definition of physical reserves*

The terminology and classification used for physical reserves differs across countries. One issue is whether it is possible to aggregate over the different reserves (e.g. proven, probable and possible on the basis of probability of existence, etc.)? Should renewable energy resources be included in the accounts in terms of stocks?

2. *Valuation of stocks*

The net present value method has been identified as being the preferred method as compared to the appropriation method. Issues on how to implement the NPV method still remain unsolved. They include, e.g.:

- Calculation of the capital services on natural resources (i.e. resource rent): Should taxes and subsidies be included in the calculation of the resource rent? What rate of return to capital should be used? How to implement the capital service approach in this context by identifying the produced and non-produced assets in production? How should the resource rent be allocated to different products in case of joint production (e.g. in the case of a mine which produces silver and copper)? How to deal with heterogeneity (different quality and costs) of the reserves? How to deal with fluctuations in resource rents over relatively short periods of time? How to deal with negative resource rents (e.g. should a moving average be recommended)?
- Calculation of NPV? What discount rate to choose? How to calculate the lifetime of the reserve?
- How can constant price valuation of assets be obtained (e.g. using GDP deflator, constant rent from base period, etc.)?

3. *Valuation of changes in stocks and, in particular, depletion*

The following options have been put forward in the SEEA-2003. They include (SEEA-2003 Box 10.8):

Option E1 Is consistent with the SNA. This records the value of the depletion in the other changes in asset account.

Option E2 Partitions the actual payment into two elements. The part which corresponds to the decline in value of the asset is recorded as a capital transfer from the user to the owner as recompense for the decline in the

asset's value; the rest is recorded as property income (rent) payable from the user to the owner in the distribution of primary income account.

- Option E3 Maintains the recording of the actual payment from the user to the owner as property income in the distribution of primary income account but treats this as rent gross of depletion. An element for the consumption of natural capital is shown in this account for the owner also to reduce the rent to a value net of depletion.
- Option E4 It is similar to option E3 but assumes that the consumption of natural capital allows for the discoveries made during the year as well as the extraction.

More discussion should take place to reach an agreement on the recording of depletion in the SEEA.

4. Decommissioning costs and recording ownership of mineral-related assets

The SEEA-2003 suggested more than one option in recording decommissioning costs and recording of ownership of mineral-related assets. The Canberra II group and the AEG have agreed with changing the current SNA treatment of decommissioning costs. The SEEA will have to be updated to reflect the changes in the 1993SNA Rev.1.

5. Extension of the methodology used for oil and gas accounts to other mineral resources

Most of the methodological work as well as compilation of mineral accounts has focused on oil and gas. Would the methods for, say calculating the resource rent, valuing the stocks, etc. be applicable also for other mineral resources?

6. Confidentiality and the compilation of minerals and energy resources

Several countries have raised the issue that although information on stocks is often available, it should be treated as confidential. Further international guidelines have to be made on how to deal with confidential information when compiling and publishing mineral accounts.

7. Inclusion of financial wealth related to natural assets in the SEEA asset boundary (Statistics Norway)

This issue is raised in the context of mineral accounts because in some countries a large portion of the national wealth generated by the extraction of mineral resources is invested in financial assets. For analytical purposes, the changes in wealth of a country from the exploration of mineral assets should reflect non-produced, produced and financial assets (e.g. Norwegian oil fund).

8. Resource rent and "specific" taxes and subsidies (for example on oil extraction) in the national accounts (Statistics Norway)

There is a question of whether these "specific" taxes should be treated as general taxes and thus excluded from the part of the resource rent that the government captures (as recommended by the SEEA-2003) or they should be treated as royalties. Here consistency with the GFS should be sought.

Appendix 3

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HANDBOOK ON MINERAL AND ENERGY ASSET ACCOUNTS

DRAFT

- 1. Introduction**
 - 1.1. Aim**
 - 1.2. Subsoil asset accounting within the SEEA 2003 framework**
 - 2. Asset Accounts in physical terms**
 - 2.1. Accounting - form and entries**
 - 2.2. Classifications**
 - 2.3. Data sources**
 - 3. Asset Accounts in monetary terms**
 - 3.1. Accounting - form and entries**
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 - 3.4.1. NPV-method**
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 - 3.7. Fixed price calculations**
 - 3.8. Decommissioning costs**
 - 3.9. Reliability measures**
 - 4. Use of the accounts**
 - 5. Country examples**
- References**

Appendix 4

ENERGY STATISTICS

Recommendations from the Ad-hoc Energy Group Meeting

Goal: *To improve the quality of energy statistics at the national and international level to better meet the needs of the users by:*

Tools:

- Developing global international standards for official energy statistics;
- Strengthening official energy statistics as part of the system of national statistics;
- Adopting performance measures for countries;
- Formalizing international collaboration and coordination to reduce response burden and make most efficient use of existing resources;
- Creating an international community of energy statisticians.

Organization of work:

The work will be carried out by two complementary working groups:

1. A City Group to contribute to the development of improved methods and international standards for national official energy statistics;
2. An Inter-secretariat Working Group to enhance international collaboration and coordination.

1. CITY GROUP ON ENERGY STATISTICS - TERMS OF REFERENCE - DRAFT

Objective: To address issues related to energy statistics and contribute to improved international standards and improved methods for official energy statistics by pooling expertise in the energy community.

Actions:

- To identify users' needs;
- To define scope of official energy statistics;
- To identify and collect national and international best practices;
- To review and contribute to the updating of UNSD handbooks and manuals on energy statistics;
- To identify gaps in coverage (e.g. fuel types, flows) and to develop methodology to cover gaps;
- To adopt link or develop bridges to international standard concepts and classifications in economic/ environment statistics to facilitate the integration and interface of energy statistics with other statistical systems;
- To recommend a core set of tables as minimum requirement at national and international level to satisfy major users' needs.

Participants:

- Experts from national statistical offices and/or energy ministries/authorities
- Experts from international organizations engaged in energy statistics
- Experts from academia: energy sciences, energy economics, statistics

- Energy experts from the private sector to be invited to participate as advisers.

Time frame: 5 years, 2006 – 2010
 Working method: Electronic discussions and annual meetings

First meeting: January 2006
 Host: Statistics Norway (to be confirmed)

2. INTER-SECRETARIAT WORKING GROUP ON ENERGY STATISTICS- TERMS OF REFERENCE - DRAFT

Objective: To enhance coordination of international energy statistics and collaboration of international (global, regional and sectoral) organizations with a view to improve the availability and quality of energy statistics without increasing the response burden of countries and by making best use of resources.

Actions:

- To make inventory of the current data collection-processing-dissemination system of the major organizations working on energy statistics;
- To reduce reporting burden by harmonizing (when possible) data collection, data processing and dissemination by limiting duplication and/or by building links/bridges between the existing energy statistics questionnaires, concepts and methods and timetables;
- To improve distribution of the collecting/processing work between organizations and enhance data sharing and transmission once data validation procedures have been agreed and implemented;
- To improve coordination of energy statistics with social, economic and environmental statistics on the international level;
- To promote training and capacity building and coordinate the related efforts;
- To create joint fora to promote the dialogue of statisticians and the user community;
- To raise the profile of energy statistics and energy statisticians at all levels.

Participants: International organizations/agencies involved in collecting energy statistics at the global/regional/subregional/sectoral level or user of energy statistics.

Secretariat: Biennial rotation

Time frame: Permanent

First meeting: November 2005

Host: IEA, Paris