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Mineral and Energy Asset Accounts:

Background and outline for future work
and terms of reference for the work

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1 Introduction

At its preliminary meeting 29 to 31 August 2005 the *UN Committee of Experts on Environmental-Economic Accounting* (UNCEEA) endorsed a preliminary research agenda as part of the process towards raising SEEA 2003 to an international standard by 2010. The agenda includes a list of issues, some of which concern Mineral and Energy accounts. The list of issues has to be further developed. The objective is to reach a complete list of issues by mid-2006. Further, the Committee endorsed that a handbook on Mineral and Energy Asset Accounting should be prepared by 2007.

The purpose of this paper is twofold:

1. To review past activities and provide an overview of present situation in the field of mineral and energy asset accounts.
2. To present some ideas for a future work-programme.

The target group of this paper is first of all the London Group. The paper has been sent to members of the London Group for consultation, and will be presented at the London Group meeting in New York in June 2006 for further discussion and agreement of a final work programme. Based on that, it is expected that recommendations for the future work will be approved by the UNCEEA during its first meeting in June 2006.

2 Background and present situation

2.1 The UN Committee on experts on environmental economic accounting, UNCEEA

The United Nations Committee of Experts on Environmental-Economic Accounting was established by the United Nations Statistical Commission at its 36th Session in March 2005. Its overall objectives are (a) to mainstream environmental-economic accounting and related statistics; (b) to elevate the *System of integrated Environmental and Economic Accounting (SEEA)* to an international statistical standard; and (c) to advance the implementation of the SEEA in countries.

At its meeting in August 2005:

The Committee endorsed the update of the SEEA-2003 and its release as a statistical standard in 2010. It further endorsed the undertaking of a programme of research focusing on refining and clarifying those issues that will permit elevating it to the level of a statistical standard.

The Committee welcomed the initial issue list organized by the chapters of the SEEA 2003 and presented in document UNCEEA/Prelim/9. The preliminary list was prepared with the objective of identifying those issues that should feed into the update of the SEEA-2003. The Committee requested UNSD to extend the consultation process to a wide range of experts producing and using environmental-economic accounts through a general call for issues so as to develop a comprehensive research agenda by mid-2006. It urged to keep the list of issues manageable so as to meet the deadline of 2010.

The Committee urged an early start on addressing the issues in the research agenda and in particular requested the countries and international institutions proposing the issues to take steps towards tackling them.

The Committee considered a preliminary list of issues which was amended on the basis of the discussion at the meeting. Each issue has been classified as “short-term” and “long-term” on the basis of whether it could be solved between now and 2008 or it would need more time for an agreement on a single approach to be reached.

Concerning Mineral and Energy accounts, which are part of the subjects of chapter 7 and 8 in SEEA 2003 the UNCEEA endorsed a list of issues which are given in the annex of this paper.

Minutes and Operational Guidelines of the Committee and other information about UNCEEA are posted at

<http://unstats.un.org/unsd/envAccounting/ceeameetings.htm>

2.2 The London Group

The UNCEEA endorsed the work being carried out by the subgroup of the London Group on Mineral and Energy Accounts and in particular the preparation of a handbook on mineral and energy asset accounts.

The UNCEEA endorsed the following Terms of Reference of the sub-group. Although the TORs are in line with the objectives and programme of work of the Subgroup as agreed at during the London Group meetings in Rome 2003 and Copenhagen 2004, the TORs formalize the existence of the subgroup. They also give the subgroup a clear timeline for reporting the results of its work back to the UN Committee.

Further the Committee considered that maintaining consistency between stocks and flows is important and it urged the subgroup on Mineral and Energy Asset Accounts to work in close cooperation with the Oslo Group on Energy Statistics.

Statistics Denmark will coordinate the subgroup. UNSD will assist Statistics Denmark in the coordination of the mineral and energy asset accounts Subgroup and contribute to the drafting of a handbook on mineral and energy asset accounts.

2.2.1 Terms of Reference of the Subgroup on Mineral and Energy Asset Accounts

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 Subgroup on Mineral and Energy Asset Accounts is a Subgroup of the London Group whose main objectives are to further research in mineral and energy asset accounts and to prepare a draft handbook on mineral and energy asset accounts for consideration and approval by the Committee. Although the focus of the Group will be on asset, consistency with the flows will be ensured.
2. The Subgroup will work in close cooperation with the Oslo Group on Energy Statistics and 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 and the Inter-secretariat Working Group on Energy Statistics.
3. The membership of the Subgroup would include experts in environmental accounting, national accounts, energy statistics from selected countries and international organizations.
4. Statistics Denmark will be the moderator of the Group, in cooperation with UNSD.
5. The primary means of communication will be electronic but the Subgroup will meet during the meeting of the London Group on Environmental Accounting, where at least one session will be organized by the Subgroup.
6. The Subgroup will have a limited duration and it will cease to exist once the handbook on mineral and energy accounts has been completed.
7. The Subgroup 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.
8. 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 in UNCEEA document).

2.3 International guidelines on Mineral and Energy Asset accounts

It is expected that the work of the subgroup on developing the guidelines of Mineral and Energy Asset Accounts will be published as a handbook of national accounting by the United Nations and other international organizations that actively contribute to its preparation..

The work will draw on the Eurostat reports and guidelines for oil and gas asset account¹ that has been developed in relation to the regular collection by Eurostat of subsoil assets data through so-called standard tables from EU member states.

Both Eurostat and UNSD have as priority areas of work in the next biennium, mineral and energy asset accounts. Eurostat has granted financial support to Statistics Denmark to start work on guidelines for oil and gas asset accounts in 2006. Based on that Statistics Denmark will develop an annotated table of content for the handbook. In particular, in cooperation with the subgroup it will identify methodological problems and work towards developing practical solutions, building on country experiences.

It is expected that members of the Subgroup will contribute actively to the development of the guidelines.

3 Towards a work plan for mineral and energy accounts

3.1 Finalising the research agenda

The research agenda concerning mineral and energy asset accounts can be split into two parts concerning:

1) Identifying and solving the most important outstanding problems, including clarifying SEEA 2003 text

2) Preparing a handbook on mineral and energy asset accounting

The first step will be:

Re. 1) The UNCEEAA at its preliminary meeting in August 2005 approved a list of issues for the research agenda. This list will be extended based on a formal call for additional issues, which was sent out by UNSD in April 2006 and discussion in the London Group June 2006. A general call for issues to experts from countries and international organizations was undertaken by UNSD on behalf of the Committee in the spring 2006. The Subgroup may decide to extend a call for issues to additional experts to the ones identified in the general call for issues.

Re. 2) Based on consultations with members of the LG Subgroup on Subsoil assets prior to the LG meeting in New York Statistics Denmark will send out a first outline/annotated list of contents for a handbook which should be discussed and agreed at the LG meeting. The outline will reflect the existing content of the SEEA-2003, the Eurostat reports and guidelines, and the list of issues identified already (cf. appendix)..

As indicated, both the list of issues and the content of the handbook will be discussed at the London Group meeting in New York. At the end of the London Group meeting it is expected that agreement is reached regarding time schedule and programme of work with a clear understanding of who is doing what in terms of: (a) taking the lead in solving selected issues and preparing issue/outcome papers; and (b) drafting chapters of the handbook. These recommendations would be submitted to the UNCEEAA at its first meeting in June 2006.

¹ Eurostat, B1: Subsoil asset accounts for oil and gas – Guidelines for the set of standard tables, Revised version, Luxembourg, January 2003.

3.2 Seeking commitments/contributions from countries

To achieve the goals set up by UNCEEA as regards mineral and energy asset accounting it is necessary that countries/institutions with expertise within this field commit to actively contribute to the work programme of the Subgroup. Countries/institutions should agree to preparing issues papers for clarification of outstanding issues and problems, and by writing sections and chapters for the handbook on mineral and energy asset accounts.

At the UNCEEA meeting some members already expressed their willingness to contribute to the work. Further it is expected that members of the Subgroup will also actively contribute to solving the issues on the research agenda by providing issue papers, etc. for discussion at the London Group meetings.

3.3 Coordination and communication

UNSD has set up a website for disseminating the issue and outcome papers submitted to the UNCEEA. Also a website has been established on the UNSD website for the London Group Subgroup on mineral and energy accounts: <http://unstats.un.org/unsd/envAccounting/smineral.htm>

Statistics Denmark has offered to continue as moderator of the London Group Subgroup on mineral and assets accounts assisted by UNSD.

Draft issue and outcome papers and handbook drafts will be circulated by mail and/or posted at the UNSD/London Group website.

Papers and texts will be discussed at the London Group meetings. In-between meetings, the Subgroup will continue its work electronically. However, a meeting of the Subgroup + contributors (including key persons of the Canberra II group or SNA-advisory expert group or others) to discuss the draft handbook draft may be organized, if needed.

The mineral subgroup should also establish formal contact with the Oslo Group. It would be advisable for members of the mineral and energy asset accounts sub-group to attend the meeting of the Oslo Group and vice versa in order to ensure consistency between the work of the two groups.

3.4 Timetable

A more precise timetable will be drawn up after agreement on tasks and commitments at the London Group meeting in New York.

However, the following timetable could be used as departure for the discussion.

Milestones		Time
Agreement on issues list, content of handbook and timetable, some draft issues papers available	LG New York	June 2006
Endorsement by UNCEEA of conclusion at LG meeting	First UNCEEA meeting	June 2006
First rough outline of a handbook finished		Beginning 2007
Outcome papers for all issues on list finished	UNCEEA meeting	2008
Handbook finished	UNCEEA meeting	2008
SEEA adopted as an international statistical standard		2010

4 Annex

PRELIMINARY LIST OF ISSUES TO BE DEALT WITH CONCERNING MINERAL AND ENERGY ACCOUNTS

Mineral Accounts (Statistics Denmark and UNSD)

1. Definition of physical reserves – *Short term*

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 – *Short term*

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 – *Short term*

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 – Short term*

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 – Short term*

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 – Short term*

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) – Short term*

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) – Short term*

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.