



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
STATISTICS DIVISION  
UNITED NATIONS

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**ESA/STAT/AC.157**  
UNCEEA/3/12

**Third Meeting of the UN Committee of Experts on  
Environmental-Economic Accounting  
New York, 26-27 June 2008  
United Nations Secretariat, Conference Room C**

## **Note on funding**

Paper prepared by the Secretariat

*(for discussion)*

## **Note on funding**

1. The Bureau of the UNCEEA at its Meeting in Oslo on 14 and 16 April 2008 recognized the urgency of securing funds for the project on the revision of the SEEA in order to ensure the success of the project. It urged to develop a strategy for raising funds. It recommended as a first step, that the Chair and Secretariat approach possible donors via face-to-face meetings to explain the usefulness of the project. Bureau members should also play a role in trying to raise funds starting from their own organizations. As a second step, a letter would be sent to national statistical offices requesting their financial contribution. The Bureau also considered useful preparing a brochure presenting the usefulness of environmental-economic accounting and the terms of reference of the project. (Minutes of the Bureau, April 14 & 16, Oslo)

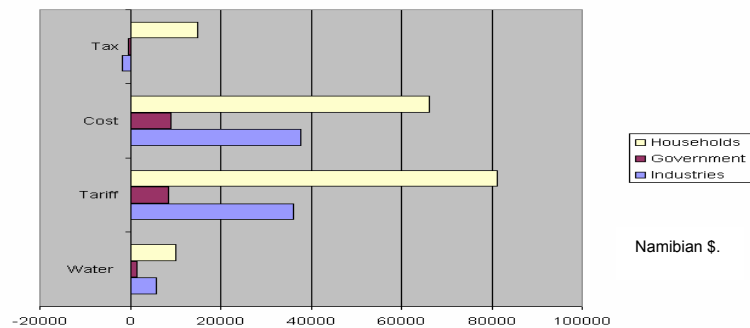
2. In response to the Bureau's request, the Secretariat prepared a brochure and a concept note. The brochure describing the usefulness of environmental-economic accounting and provides a brief description of the SEEA revision project to elevate it to an international statistical standard (Annex I). The concept notes aims at facilitating approaching donors by providing a brief description of the project, its rationale as well as giving some context on environmental-economic accounting. (see Annex II).

3. The UNCEEA may wish to express its views on the following:

- 1) *Does the UNCEEA have any suggestions on the funding strategy, in addition to what has been recommended by the Bureau?*
- 2) *Does the UNCEEA agree with the contents of the brochure [Annex I]?*
- 3) *Does the UNCEEA agree with the contents of the concept note [Annex II]?*

Water accounts create value added by relating the impacts of climate change in terms of changes in precipitation and flooding to the adaptation costs – e.g. capital investments in dykes and levees. They are therefore an essential tool for Integrated Water Resources Management (IWRM).

#### Cost-recovery in Windhoek by the water supplier Namwater

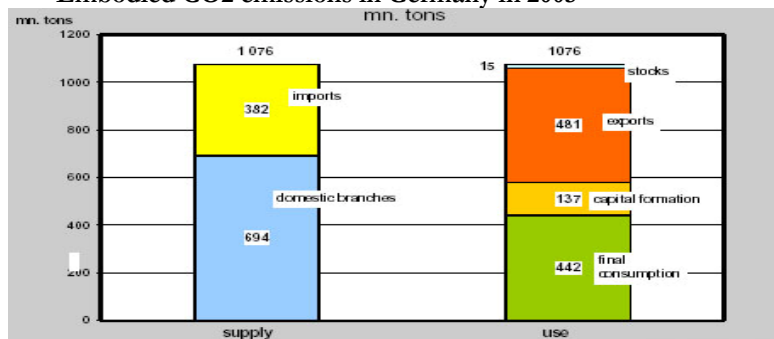


Source: Lange (2008), adapted from DWA 2005.

- Namwater, the bulk water supplier for Windhoek - the largest municipality in Namibia - has achieved full cost-recovery as total tariffs are larger than costs. The breakdown reveals that households are taxed, while government and industries are subsidized.

Other applications of the SEEA provide insight in the potential side-effects of mitigation strategies such as ‘carbon leakage’. Using input-output modeling the emissions embedded in imports and exports - ‘rucksacks’- can be calculated.

#### Embodied CO2 emissions in Germany in 2005



Source: Federal Statistical Office of Germany Environmental-Economic Accounts 2008

- CO2 emissions are significantly higher in production of exported goods than in the production of imported goods; therefore energy-intensive industries cannot be identified to be shifting abroad.

#### History of the SEEA

Several years of experimenting by experts in developed and developing countries as well as international agencies eventually materialized in the revised Handbook of Environmental-Economic Accounting National Accounting: Integrated Environmental and Economic Accounting, Rev. 1 (SEEA-2003). After a wide consultation process that concluded in 2002 it has been issued in 2003 by the United Nations, the European Commission, the International Monetary Fund, the Organization of Economic Cooperation and Development, and the World Bank.

#### Existence of Environmental Accounting Programs



Source: Global Assessment of Environment Statistics and Environmental-Economic Accounting 2007

The SEEA-2003 represented a major step forward in the development of (a) relevant and comparable concepts and methods in environmental-economic accounting; and (b) a consistent framework for environmental-economic accounts, related statistics and indicators. Because of this achievement and of the existing considerable practical experience in countries, the international community agreed to elevate the SEEA-2003 from a manual of best practices to an international statistical standard.

#### Revision of SEEA to international statistical standard

The objective of the revision is to obtain an internationally agreed set of recommendations expressed in terms of concepts, definitions, classifications, accounting rules and standard tables in order to obtain international comparability of environmental-economic accounts and related statistics. The revised SEEA is designed for analysis, decision taking and policy-making, whatever the industrial structure or stage of economic development reached by a country.

Secretariat

UNSD Environmental Economic Accounts Section: [seea@un.org](mailto:seea@un.org)

<http://unstats.un.org/unsd/envaccounting>

#### What is environmental-economic accounting?

Environmental-economic accounting brings together economic and environmental information in an integrated accounting framework to measure the contribution of the environment to the economy and the impact of the economy on the environment. By using common concepts, definitions and classifications used in economic statistics, the SEEA provides a transparent information system linking environmental and economic information for strategic planning and policy analysis which can be used to identify more sustainable paths of development.

#### Why should the SEEA be elevated to an international statistical standard?

- Mainstream environment statistics within official statistics.** Programs on economic statistics and social statistics are in most countries an established part of the work programs of the national and international statistical systems. Environment statistics on the other hand does not enjoy the same status and often results from ad-hoc rather than regular programs in countries. There is a clear need to equip the world with a statistical standard for environment statistics that integrates the environment and the economy. This would not only mainstream environment statistics within official statistics, but at the same time enhance the quality of environment statistics.
- Go ‘Beyond GDP’.** The System of National Accounts (SNA) in its measurement of economic activity does not fully account for the role of the environment in terms of providing (a) raw materials as input in production and consumption, (b) sink and other service functions, and (c) space. For instance, while the income from oil extraction is recorded in the national accounts, the depletion of the oil reserves is not accounted for as a loss of income.

The SEEA, while maintaining the production boundary of the SNA, expands its analytical capacity by accounting for the costs of depletion and degradation of the environment and by enlarging the asset boundary to include all natural capital (e.g. ecosystems). In short, the SEEA goes beyond GDP.

The United Nations Conference on Environment and Development (UNCED) - Rio de Janeiro, 1992, Agenda 21 - includes a programme area to “establish systems for integrated environmental and economic accounting in all member States at the earliest date.” In his Millennium Report the United Nations Secretary-General encouraged governments “to consider the SEEA carefully and identify ways to incorporate it into their own national accounts”.

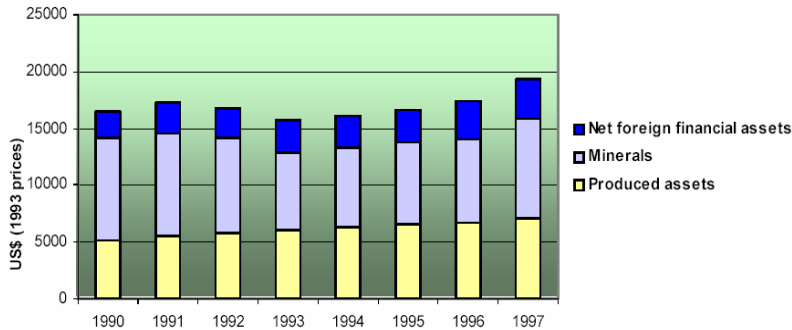
**Policy relevance of SEEA**

The SEEA consists of several modules that can be used to identify more sustainable paths of development through a range of indicators and applications.

**Asset accounts**

Asset accounts record stocks and changes in stocks of natural resources such as land and ecosystems, forest, fish, water and minerals. Monetary asset accounts show the value of natural resources and the depletion cost. When the value of natural capital is added to produced and financial capital we obtain a more comprehensive measure of the wealth of a country. Changes in wealth are an indicator of sustainable development.

**Per capita wealth in Botswana**



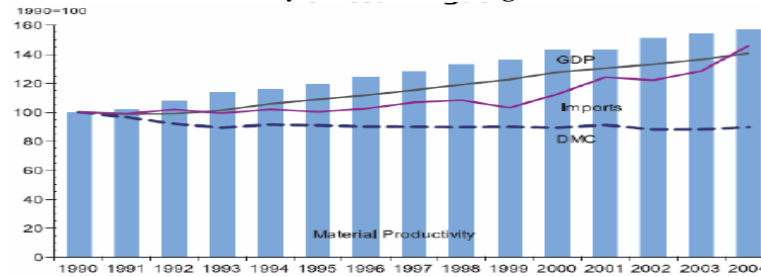
Source: Lange (2004), Environmental & Resource Economics, 29:257-283

- Botswana has been successful in using its natural capital (primarily minerals) to build national wealth as evidenced by a rising per capita wealth in the 1990s.

**Physical and hybrid flow accounts**

These accounts provide a systematic physical description of production and consumption, including natural resource inputs, product throughputs and outputs (waste and emissions). Hybrid accounts can be used to assess decoupling or productivity in a consistent manner.

**Material Productivity in the United Kingdom 1990-2004**



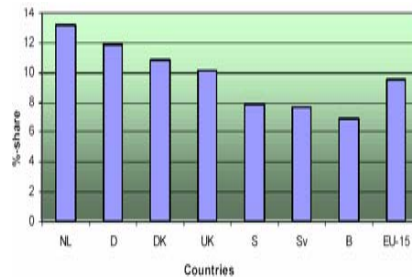
Source: ONS

- The material productivity of the U.K. has increased over time. While in recent years imports of materials (in weight) increased faster than GDP, Domestic Material Consumption experienced an absolute decoupling from GDP growth.

**Economic accounts and environmental transactions**

SEEA separately identifies environmentally-related transactions presented in the existing SNA flow accounts.

**Environmental taxes as share of total tax revenues**



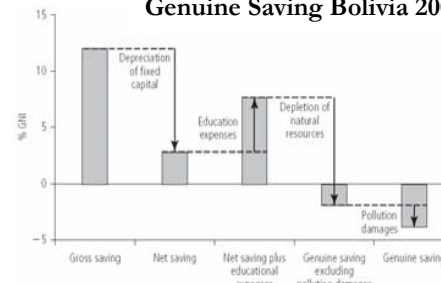
Source: Eurostat

These accounts illustrate: (a) the importance of environmental taxes (and subsidies) in the total tax regimes of countries i.e. ‘greening of the tax system’; (b) assess the effectiveness of cost-recovery, or; (c) polluter-pays principles.

**Environmentally-adjusted aggregates**

The modules of SEEA can be combined to form a full-sequence of accounts from which environmentally-adjusted aggregates as ‘Green GDP’ or ‘Genuine Saving’ can be derived. These adjustments could include depletion, defensive expenditure or degradation.

**Genuine Saving Bolivia 2003**



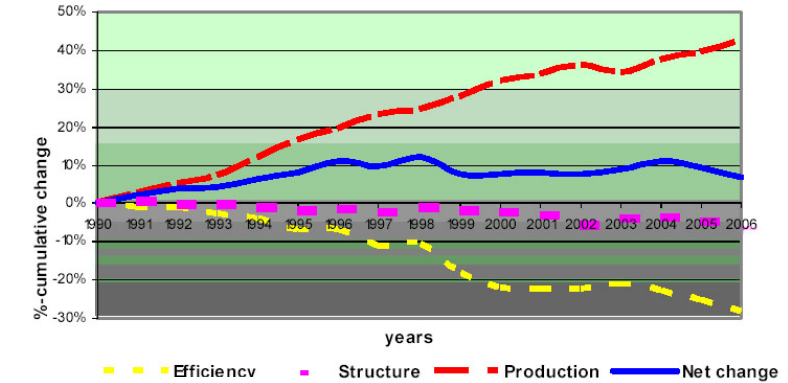
Source: World Bank 2005

**SEEA and Climate Change**

As an integrated framework, SEEA provides value added in assessing climate change in terms of analyzing pressures and impacts as well as in assessing the effectiveness of mitigation and adaptation strategies.

In addition to recording the time series of Green House Gas emissions by economic activity, the SEEA— using decomposition analysis – allows for breaking down the causes of emissions over time.

**Global warming emissions in the Netherlands**



Source: Statistics Netherlands

- Notwithstanding higher levels of production in economy (red), emissions (blue) have stabilized since the beginning of the 1990s. This development can be attributed to improvements in the efficiency of production processes (yellow) and a greater share of the services industries in total value added (pink).

Figure 2.2 Formation of new land cover in the region of Valencia, Spain



Source: European Environment Agency

Land and ecosystem accounts fully integrate spatial data from GIS applications. They track land use/cover changes over time and therefore give a clear picture of impacts of climate change in terms of deforestation, desertification and change in land-use (for instance in areas prone to increased risk of flooding).

## Annex II

### Concept Note

#### **Project title: Revision of the System of Environmental-Economic Accounting to elevate it to an international statistical standard**

The purpose of this concept note is to describe the project undertaken by the United Nations Committee of Experts on Environmental-Economic Accounting (UNCEEA) to elevate the System of Environmental-Economic Accounting (SEEA) to an international statistical standard. Before doing so, the concept note provides some background information on environmental-economic accounting to put the revision of the SEEA into context.

#### **What is environmental-economic accounting?**

Environmental-economic accounting brings together economic and environmental information in an integrated accounting framework to measure the contribution of the environment to the economy and the impact of the economy on the environment. By using common concepts, definitions and classifications used in economic statistics, the SEEA provides a transparent information system linking environmental and economic information for strategic planning and policy analysis which can be used to identify more sustainable paths of development.

#### **Why should the SEEA be elevated to an international statistical standard?**

There are several reasons why the SEEA needs to be elevated to an international statistical standard. They include:

- **Mainstream environment statistics within official statistics.** Programs on economic statistics and to social statistics are in most countries an established part of the work programs of the national and international statistical systems. Environment statistics on the other hand does not enjoy the same status and often results from ad-hoc rather than regular programs in countries. There is a clear need to equip the world with a statistical standard for environment statistics that integrates the environment and the economy. This would not only mainstream environment statistics within official statistics, but at the same time enhance the quality of environment statistics.
- **Provide a framework for climate change and official statistics.** The Conference on Climate Change and Official Statistics (Oslo April 2008) recognized SEEA as a framework that has proven its potential and added value in many areas of environmental-economic analysis and as the most practical way forward. As an integrated framework, the SEEA provides value added in assessing climate change in terms of analyzing pressures and impacts as well as in assessing the effectiveness of mitigation and adaptation strategies.
- **Go 'Beyond GDP'.** The System of National Accounts (SNA) in its measurement of economic activity does not fully account for the role of the environment in terms of providing (a) raw materials as input in production and consumption, (b) sink and other service functions, and (c) geography. For instance, while the income from oil extraction is recorded in the national accounts, the depletion of the oil reserves is not accounted for as a loss of income.

The SEEA, while maintaining the production boundary of the SNA, expands its analytical capacity by accounting for the costs of depletion and degradation of the environment and by enlarging the asset boundary to include all natural capital (e.g. ecosystems). In short, the SEEA goes beyond GDP.

### **Historical overview of environmental-economic accounting**

Several years of experimenting by experts in developed and developing countries as well as international agencies eventually materialized in the revised Handbook of Environmental-Economic Accounting National Accounting: Integrated Environmental and Economic Accounting, Rev. 1 (SEEA-2003). After a wide consultation process that concluded in 2002 it has been issued in 2003 by the United Nations, the European Commission, the International Monetary Fund, the Organization of Economic Cooperation and Development, and the World Bank.

The SEEA-2003 represented a major step forward in the development of (a) relevant and comparable concepts and methods in environmental-economic accounting; and (b) a consistent framework for environmental-economic accounts, related statistics and indicators. Because of this achievement and of the existing considerable practical experience in countries, the international community agreed to elevate the SEEA-2003 from a manual of best practices to an international statistical standard.

The Statistical Commission in its thirty-sixth session in March 2005 established the United Nations Committee of Experts on Environmental-Economic Accounting (UNCEEA). The UN Committee's objectives are (a) to mainstream environmental-economic accounting and related statistics; (b) to elevate the SEEA to an international statistical standard by 2010; and (c) to advance the SEEA implementation in countries.

### **Scope and objectives of the revision project**

The key drivers of the revision process are the need for a framework to assess climate change and sustainable development. The revised SEEA will maintain its consistency with the *1993 System of National Accounts* (1993 SNA) and its update, SNA 2008, other macro-economic standards recently revised or currently under revision as well as the international business accounting standards.

The objective of the revision is to obtain an internationally agreed set of recommendations expressed in terms of concepts, definitions, classifications, accounting rules and standard tables in order to obtain international comparability of environmental-economic accounts and related statistics. This entails formulating unique recommendations when multiple options were provided in the SEEA-2003. The revised SEEA is designed for analysis, decision taking and policy-making, whatever the industrial structure or stage of economic development reached by a country.

The main issues that the revision will address are the following:

- Energy and emissions: several outstanding issues regarding the valuation of resources (e.g. petroleum) need to be solved, such as agreed methodology to record depletion. Further, linking emission inventories to the accounts will provide added value to emission statistics by linking to economic information on output, value added, taxes, subsidies etc. New developments in the area of renewable energy necessitate that classifications by purpose be developed e.g. to better distinguish the use of products for non-energy and energy purposes (e.g. food as bio-fuel);
- Material Flow Accounting: there is a clear need to present MFA in the revised SEEA in recognition of the growing policy interest in sustainable consumption, dematerialization and foot-printing, taking the recent work by OECD/Eurostat/UNEP in this field into account;
- Land and Ecosystem Accounting: there is a need to develop classifications for ecosystem services building on the work of the Millennium Ecosystem Assessment and the current Ecosystem Assessment for Europe (lead by European Environment Agency) and to better incorporate the spatial dimension in the SEEA framework.

### **Governance structure and coordination**

The UNCEEA is responsible for managing and coordinating the revision process of the SEEA. It is assisted by its Bureau, which under delegated authority from the UNCEEA will carry out the following tasks:

- Provide strategic direction to the revision of the SEEA and ensure proper coordination and complementarities of work among the city groups and expert groups contributing to the revision of the SEEA;
- Negotiate tasks of the city groups and technical expert groups and track progress made in the revision of the SEEA;
- Secure funding for and manage the trust fund held by one of the Bureau members; recommend staffing for the project;
- Develop a transparent communication strategy including liaising with stakeholders;
- Ensure overall consistency of the revised SEEA with other macro-economic standards.

The United Nations Statistics Division, as the Secretariat of the UNCEEA, provides secretarial support to the revision process.

The project consists of the following stages:

- A global call for issues has resulted in a research agenda (2006);
- Issues on the research agenda are first deliberated by various existing technical expert groups, such as the London Group on Environmental Accounting and its Subgroups, the Oslo Group on Energy Statistics, regional commission meetings, electronic discussion groups, and possibly new expert groups as well as electronic discussion groups (2007-2009);
- The editor drafts the text for the revised SEEA, which will comprise 3 volumes: Volume 1 covering those accounts that can be elevated to international statistical standard (e.g. energy, water, material flow, forest accounts – flows and stocks in physical and monetary terms, valuation of depletion and derivation of depletion-adjusted aggregates); Volume 2 covering those accounts that are highly policy relevant but for which consensus on methodology has not yet emerged (e.g. land and ecosystem accounts, valuation of degradation, etc.); Volume 3 including applications of the accounts presented in Volume 1 and 2 (e.g. derivation of indicators and modeling) (2009-2012)
- Recommendations are considered by the UNCEEA for discussion and final recommendation progressively as they agreed by the various groups to the UN Statistical Commission (2011);
- Draft SEEA is submitted to the UNCEEA for approval and recommendation for adoption to the United Nations Statistical Commission (Vol.1 and part of Vol. 3 related to accounts in Vol.1 2012, Vol.2 and Vol. 3 in 2013).

### **Resources needed**

The revision process requires considerable resources. An editor has to be appointed to draft the revised SEEA on the basis of the recommendations of the expert groups. A project manager has to be appointed on a part-time basis to undertake the day-to-day management of the project and supervise the editor. Further, participation of experts from the developing countries in meetings, some consultancies and the preparation of the electronic version and index of the revised SEEA are all essential preconditions of achieving the successful completion of the revised SEEA.

A trust fund will be set up to finance, as a minimum, the activities of the Project Manager and the Editor, including their travel. The resource requirements to be financed in the first stage amount to US\$ 900,000.

Fundraising efforts will be targeted at donor agencies as well as international organizations who have established programs in the field of environment and/or climate change. Member States are encouraged to contribute to the trust fund to complement these contributions.