



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS

**SEEA Revision
Chapters 1-6**

Comment Form

Global Consultation Comment Form

Revised SEEA Chapter 1 - 6

Deadline for responses: 7 December 2011

Send responses to: seea@un.org

Your name:	Burkhard Schweppe-Kraft
Your country/organization:	Germany / Federal Agency for Nature Conservation
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To submit responses please save this document and send it as an attachment to the following e-mail address: seea@un.org.

The comment form has been designed to facilitate the analysis of comments. In Part I general comments on the general style, content and coverage of the chapter are sought. In Part II any technical and other comments should be included.

Relevant documents

Before submitting responses you are encouraged to read the accompanying papers available on the website.

Revision of the SEEA: Draft Version for Second Round of Global Consultation, October 2011 – Chapters 1 – 6

Reading guide for the SEEA Revision Second Round of Global Consultation

Supporting material for selected classifications and lists in the revised SEEA

Part I: General comments

This is the first global consultation based on the complete set of chapters for the SEEA Central Framework. In this section please provide general comments on the drafts chapters. You may like to consider providing comments on the style and tone, the content and coverage, and the general accessibility of the material.

Chapter 1 provides a useful overview and introduction relating the accounts in to the policy context in a meaningful way.

While we welcome very much the introduction of Ecosystem Accounting in this introductory chapter, we must be careful not to freeze here a grouping concept that is yet controversial from an accounting perspective (see our comments on paragraph 1.43 in Part II of this comment form). This discussion must be part of the discussion on Volume 2.

All Chapters:

Some more explanations and some changes in explanation regarding ecosystems, ecosystem goods and services and individual and public goods are needed to properly distinguish what kind of flows and assets should be accounted in the central framework and what should be accounted in the experimental accounts. The respective propositions can be found in Part II of the comments.

Part II: Technical and other comments

In the box below please supply any additional comments including those of a more technical nature. As this is the first consultation where the complete 6 chapters have been released, comments on the consistency of the technical content across the chapters would be appreciated.

Please reference your responses with the relevant paragraph number or section number.

We propose the following amendments:

1.2 Policy relevance and uses of the SEEA

Paragraph 1.10, lines 5 and 6

Proposition: please replace "benefits" by "goods and services."... that continuing economic growth and human welfare are dependent upon the ~~benefits~~ goods and services obtained from the environment. These ~~benefits~~ goods and services include the provision of raw materials, energy and other resources used ~~to~~ as inputs for produced goods and services;"

Rationale: Accounting language should clearly distinguish between goods/services and their benefits, as it is practiced in the more recent literature.

Paragraph 1.13, line 5

Proposition: Please replace "benefits" by "goods and services." "ecosystems and their capacity to deliver goods and services ~~benefits~~ to humanity."

Rationale: Same rationale as in paragraph 1.10. Moreover in this paragraph there should be no mixing up of "benefits of the SEEA" with the "benefits of ecosystems".

Paragraph 1.14, first bullet point

Proposition: Please replace "~~the~~ measurement framework" by "a measurement framework": "First, the basic intent of the SEEA is to provide a ~~the~~ measurement framework for

sustainable development".

Rationale: Sustainable development as a multi-dimensional concept has to be measured both within and outside accounting frameworks (the latter in a more qualitative way).

Paragraph 1.14, 7th bullet point

Proposition: Please add "environmentally" before "more sustainable".

Seventh, the SEEA framework can be used to monitor the extent to which patterns of production, consumption and accumulation are becoming ecologically more sustainable.

Rationale: While the SEEA is very useful in the context of the ecological dimension of sustainability, it does not address the social dimension of sustainability (e.g. issues social disparity or like child labour are of course not included here).

1.3 The SEEA as a system

1.3.1 Scope and coverage of the SEEA

Paragraph 1.19

Proposition: Please add the following: Many of these individual components may be regarded as environmental assets that provide materials, energy, information and space to all economic activities.

Rationale: Comprehensiveness

Paragraph 1.19 in connection with 1.20

Proposition: Please amend paragraph 1.20 as follows:

Second, a country's environment can be viewed as a collection of ecosystems, each defined within a given area. Ecosystems provide ~~not only materials and space but also non-material benefits to the economy through ecosystem~~ additional goods and services to enterprises, households and governments These goods and services are not owned by a specific beneficiary and therefore are not or not fully incorporated in market prices such as water purification or pollination. Many of these additional goods and services form the basis of non-material benefits. Examples are the recreation function of landscapes or the ethical importance of species conservation. Ecosystems may be of many different types depending on the climate, topography, the degree of human intervention, and other factors. Ecosystems function through the interaction between the various individual components and hence, in concept, both perspectives are complementary rather than competing views of the same physical environment.

Rationale: Not only "material" and "non-material" are the relevant categories that lead to differences in the accounting of ecosystems and individual assets. Even more relevant is the distinction between private and public goods as outcomes of individual assets and ecosystems

Paragraph 1.20

We propose the following amendments

~~Second, a country's environment can be viewed as a collection of ecosystems, each defined within a given area. Individual components as well as ecosystems provide materials, energy, space and non-material services to economy and society like food, timber, flood protection, water purification, pollination, recreation, cultural values of landscapes or ethical and possible future economic values of biodiversity. Ecosystems provide not only materials and space but also non-material benefits to the economy through ecosystem services such as water purification and pollination.~~

Rationale: We feel the first sentence fits better into paragraph 1.20; the rest is for concreteness

1.3.2 Types of SEEA accounts

Asset accounts in physical and monetary terms

Paragraph 1.28

Proposition: Please add "degradation" as a cause of resource depletion: "For non-renewable

resources the quantity of depletion is equal to the quantity of resource extracted or degraded for example by land-use change (soils, species) but for renewable resources the quantity of depletion must take into account the underlying population, its size, rate of growth and associated sustainable yield. With regard to ecosystem services the respective concept is degradation.

Rationale: Non-renewable resources are often reduced by destruction and in particular by land-use changes. A remark on the distinction between depletion and degradation which is also made later in 1.44 helps for better understanding the differences between central Framework and Experimental Accounts and the way to account for all kinds of depletion and degradation.

Paragraph 1.29

Proposition: Please add the case of degradation as a special kind of depletion with regard to ecosystem services and "benefits" as non-monetary source of value: The compilation of asset accounts in monetary terms can also provide valuable information to assist in the understanding of the relationship between rates of extraction/degradation and current economic activity and in understanding the economic costs of extraction and degradaton on future incomes and benefits.

Rationale: Degradation: See our comment on paragraph 1.28. Benefits: Environmental assets are valuable not only for future monetary income but also for benefits that may be public goods and do therefore not enter into income measurement.

Paragraph 1.31, last line

Proposition: Please replace "income streams" by "streams of benefits". The method described in the SEEA is the net present value (NPV) method which calculates the value of an asset based on the future ~~income~~ streams of income and other benefits that are expected to accrue from the use of the asset."

Rationale: Chapter 1 deals with the Central Framework and with Experimental Accounts. The concept of NPV is principally applicable in both frameworks; not only to income generated by individual assets but also to non-market benefits from ecosystem services. As pointed out in the following paragraph 1.32, and consistent with the concept of Total Economic Value (TEV), not only financial benefits but the full range of benefits should be incorporated in the analysis.

Accounting for Ecosystems

Paragraph 1.43, 5th line and 6th line

Proposition: Please replace "~~known~~ as" by "by delivering" and "~~benefits~~" by "goods and services": Ecosystems provide benefits to humanity ~~known~~ by ecosystem services through environmental processes and functions. Ecosystem goods and services ~~benefits~~ are supplied in many ways and vary from ecosystem to ecosystem."

Rationale: As pointed out above, the concepts of "goods and services" should not be mixed up with the benefits they provide.

Paragraph 1.43, 7th line and 6th line

Proposition: Please replace "~~Ecosystem services are generally grouped into four main types~~" by "Ecosystem goods and services may be grouped in different ways. One way commonly used outside the accounting frameworks is..." and add at the end: "The choice of a particular form of grouping can raise problems of double-counting, a question that is analysed in Volume 2."

Rationale: This introductory chapter is not an appropriate place to codify a particular way of grouping ecosystem goods and services. Moreover, the particular way of grouping described in this paragraph (taken from MA 2005) has often been criticised for leading systematically to double-counting.

The relationship between the accounts

Paragraph 1.48, 2nd bullet

Proposition: Please add the case of degradation, as follows: "Measurement of flows of natural inputs in the PSUT is consistent with the measurement of extraction or degradation in the asset accounts and the interaction with ecosystems."

Rationale: Degradation, due e.g. to land-use change is an important source of changes in stock of environmental assets and links the explanation in 1.48 also to the Experimental Accounts.

Paragraph 1.48, 4th bullet

Proposition: Please add the case of restoration, as follows: "Measures of the flows of natural inputs and residuals can also be related to transactions recorded in functional accounts for environmental protection and resource management, including the restoration of ecosystems, investment in cleaner technologies and flows of environmental taxes and subsidies."

Rationale: Restorations of ecosystems are important transactions related to the environment assets, similar to investments in cleaner technologies,

2.2 Overview of the SEEA Framework

Paragraph 2.7

Please add the following:

Broadly, the economy depends on healthy ecosystems and functions through the provisioning, production and importation of goods and services

Rationale: Introduce here the environments basic role for the economy.

Paragraph 2.17

We generally support the proposed definition of environmental assets, but please add that these assets are often more or less strongly transformed by human activities: ***Environmental assets are the (naturally occurring) living and non-living components of the Earth, together comprising the bio-physical environment, that may provide benefits to humanity.***

Proposition: Please add the following: Many environmental assets are more or less heavily transformed by economic activities (for example: water courses, soils, semi natural and agricultural ecosystems) The term "~~naturally occurring~~" might be deleted.

Rationale: In many regions, such as Europe there exist almost no ecosystem that is still fully "naturally occurring". Most of them - from forests to grassland and agricultural land are ecosystems that are highly influenced by human activity.

End of Paragraph 2.17

Proposition: Please complement as follows: Examples include mineral and energy resources, timber resources and water resources used by enterprises, households or the government.

Rationale: Make visible, that not only enterprises but also households may directly benefit from environmental assets.

Paragraph 2.18

Proposition: Please amend as follows: "This focus reflects the ~~material~~ individual benefits from ~~the use of~~ environmental assets that are used as private goods ~~natural~~ and accrue to their owner inputs for the economy but. This focus does not consider the non-material all the additional benefits that accrue to individual firms or persons or the public and are not intended outputs of production or market activities from the use of environmental assets (for example, benefits from environmental services such as water purification, storage of carbon, and flood mitigation effects of alluvial floodplains). In the following these latter benefits are called public benefits to clearly distinguish them from individual benefits that stem from market activities."

Rationale: The distinction between material and non-material does not make sense here: Even traditional, financially oriented economic accounts contain non-material benefits (such as from services), whereas public goods of environmental assets (to be included in vol 2. of SEEA), include both material and non-material benefits.

Paragraph 2.21

Proposition: Please amend the second sentence as follows: " The second perspective on

environmental assets is described in SEEA Experimental Ecosystem Accounts. These accounts consider ~~the non-material~~ those additional benefits of the environment that are not the intended outputs of production processes and market interactions, ~~in addition to the material benefits~~. The measurement focus is on ecosystems.

Rationale: See the rationale for our proposition on paragraph 2.18

Paragraph 2.22

Proposition: We propose to align the definition of ecosystem services with the more recent literature (e.g. TEEB) by replacing "benefits" by "contributions" or by "goods and services" (see also our comment on paragraph 1.43, 7th line and 6th line): ***Ecosystem services are the benefits direct and indirect contributions to human well-being supplied by the functions of ecosystems. and received by humanity***

Paragraph 2.22, last sentence

Proposition: Please amend the last sentence as follows: ~~Generally, Many~~ provisioning services are related to the material benefits of environmental assets supply their benefits as market goods or as individually owned inputs in production processes, whereas the case of the other types of ecosystem services are related to the non-material benefits of environmental assets often supply their benefits as more or less public goods.

Rationale: See the rationale for our proposition on paragraph 2.18

Paragraph 2.23

Proposition: Please amend as follows: " Economic activity may degrade environmental assets such that they are not able to deliver the same range, quantity or quality of ecosystem services on an ongoing basis. A focus on ecosystems that includes both individual and public material and non-material benefits of environmental assets provides a basis for analysis of the extent to which economic activity may reduce ecosystem capacity to produce ecosystem services."

Rationale: See the rationale for our proposition on paragraph 2.18. The distinction between individual benefits/goods and public benefits/goods is more suitable to characterize the differences between Central Framework and Experimental Accounts in this context.

2.3 Main accounts and tables of the SEEA Central Framework

Paragraph 2.26, point (ii)

Proposition: Please complement as follows: "(ii) asset accounts for individual environmental assets (...)"

Rationale: This helps to better distinguish between Central Framework and Experimental Accounts.

Paragraph 2.29 first sentence

Proposition: Please amend as follows: This section introduces the different tables that are part of the SEEA central framework and shows the nature of the integration between them. The explanation is stylised, as the reality is more complex, but the basic logic and intent of the approach explained in this section applies throughout the SEEA. The tables can also be used in a modified way in the Experimental Accounts.

Rationale: Harmonization: The need to modify the tables is stated in other parts of the text.

2.3.3 Asset accounts

2.57, Table 2.3.4

Proposition: Please add the following note to table 2.3.4

"*** The distinction between produced assets and environmental assets does not mean that environmental assets could not be enhanced by human activities. Examples for the enhancement of environmental assets are biological measures to enhance soil fertility or the restoration of alluvial floodplains for habitat development and flood mitigation."

Rationale: Reflect the impact of human activities on environmental assets

2.3.4 The sequence of economic accounts

Paragraph 2.66 States that the capital accounts records how saving is used to *purchase* assets.

Proposition: Please specify how non-traded parts of capital (e.g. public goods) are taken into account.

Rationale: Since natural capital also includes goods that are not visible through financial transaction it should be clarified if and how they can be taken into account. If they are excluded here, this should be clearly communicated.

Paragraph 2.4.2, Table 2.3.2

Proposition: Please fill in the field Natural inputs x Households with "direct consumption".

Rationale: Some natural inputs (such as water or wild crops) are directly consumed by households

Paragraph 2.5.7, table 2.3.4

Proposition: Please fill in the field Natural inputs x Households/Final consumption with "direct consumption".

Rationale: Some natural inputs (such as water or wild crops) are directly consumed by households

The same proposition applies also to paragraph 3.3.2, table 3.2.1.

2.5 Accounting for flows and stocks

2.5.2 Flows

Paragraph 2.88 states that natural inputs are physical inputs used for the *production* process.

Proposition: Please add the aspect of *consumption*.

Rationale: Some natural inputs (such as water or wild crops) are directly consumed without economic production process. This should be taken into account. Consequently the definition circulated in July 2011 stated that "Ecosystem inputs are comprised of substances taken in by the economy from the environment for purposes of production and consumption."

2.5.3 Stocks

Paragraph 2.102, first sentence

We support the message: "Environmental assets also encompass ecosystems and ecosystem services." Maybe the sentence could be formulated even better, since ecosystem services are normally considered as flows, not as stocks.

Chapter 3: Physical flow accounts

3.1 Introduction

Paragraph 3.1

Proposition: Please introduce the idea of non-material flows by adding the following sentences to this paragraph

Many flows from natural assets to the economy and the society are non-material flows including the flow of information. Examples are the cultural and aesthetic value of landscapes and its function for different kinds of recreation, the option to use natural assets in the future, the value of natural assets as a heritage to future generations, the importance of biodiversity as an intrinsic value or the insurance value of ecosystem stability. Some of these flows are incorporated into market prices for example options for the future use of assets that can be transacted on markets as individual goods. But many of them do not have a specific owner and are therefore public goods without market prices. These flows are accounted in the Experimental Ecosystem Accounts.

Rationale: Adding the idea of non-material flows here makes the explanation more compatible with ecosystem services accounting in the Experimental Accounts and helps to transfer the principles of flow accounting in the central framework to flow accounting in the

Experimental Accounts.

Paragraph 3.2

Proposition: Please amend as follows: The usefulness of the accounting of physical flows ~~this information~~ is considerably strengthened when it is organised using the same framework as used to assess economic flows in monetary terms.

Rationale: This change is needed for grammatical reasons if paragraph 3.1 is complemented in the way proposed above.

3.2 The physical flow accounting framework

3.2.2 Definition and classification of natural inputs

Paragraph 3.43 defines natural inputs as follows: *Natural inputs are all physical inputs that are moved from their location in the environment as a part of economic production processes or are directly incorporated into economic production processes.*

Proposition: Please add the aspect of *consumption*.

Rationale: Some natural inputs (such as water or wild crops) are directly consumed without economic production process. This should be taken into account. Consequently the definition circulated in July 2011 stated that "Ecosystem inputs are comprised of substances taken in by the economy from the environment for purposes of production and consumption."

Paragraph 3.240 Economic boundary with respect to air emissions and the relation to the UNFCCC emission inventories (para 3.255).

Proposition: Guidance as to how to transform the UNFCCC emission inventories into the SEEA framework would be much appreciated

Rationale: This may help to generate consistent accounting.

3.5.3 Physical supply and use table for water

Paragraph 3.190: Hydroelectric power generation: Note that in many countries such data will not be available for public use (e.g. due to security reasons) or that such data will be rather meaningless in case of multiple use (e.g. cascade hydropower systems in the Alps).

Paragraph 3.220 und 3.221: It would be helpful if the difference between *hydrological water consumption* and *economic use of water* could be better explained.

5.2 Assets in the System of Environmental and Economic Accounts

5.2.1 Introduction

Paragraph 5.8, second phrase:

Proposition: Please complement as follows: "In the Central Framework, environmental assets are considered from the perspective of the individual components that comprise the environment and of the individual benefits that accrue to the respective natural assets, with no account taken of the interactions between these individual components as part of ecosystems and the additional services that are not owned by the beneficiary and are not results of market processes.

Rationale: See above

Paragraph 5.18

Paragraph 5.18 states: "Natural resources are a sub-set of environmental assets. *Natural resources include all natural biological resources (including timber and aquatic resources), mineral and energy resources, soil resources and water resources. All cultivated biological resources and land are excluded from scope.*"

Proposition: Please evaluate, if the following complement makes sense here: "...except where they are elements of ecosystems which provide additional ecosystem services that go

beyond the individual benefits of these assets. Such ecosystem services associated with cultivated biological resources and land are accounted in Volume 2."

Paragraph 5.31

Proposition: Please replace "benefits" by "goods and services"

Rationale: See above

Figure 5.2.1: Relationship between environmental and economic assets

Proposition: Please replace "~~with no economic value~~" by "as far as they are public goods"

Rationale: Many environmental assets are partly or fully public goods, which means that their market value is zero or undervalued. This does not at all mean that they have no economic value. All environmental assets are combined with some kind of benefits. All these benefits can (potentially) be valued with the help of economic methods and in monetary terms.

Paragraph 5.441

Proposition: Please address the case where an asset has a value both as a private and as a public good, e.g. as follows: " Consequently, there may be environmental assets that are recorded in the Central Framework in physical terms but which have zero value in monetary terms to their owner and hence are excluded from environmental assets measured in monetary terms.

Rationale: Many environmental assets (e.g. land) have both a private value to their owner and a value for other persons, being a public good. With the proposed complement the public goods issue can be understood more precisely.