DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS

Global Consultation Comment Form

Revised SEEA Chapter 1 - 6

Deadline for responses: 7 December 2011
Send responses to: seea@un.org

Your name:	Environmental-Economic Accounts
Your country/organization:	UNSD
Contact (e.g. email address):	seea@un.org

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.

As a general comment, we are pleased with the draft Chapters of the SEEA Central Framework. Chapters 2-6 are very solid technically and well written.

See detailed comments are provided below.

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.

SEEA – Comments Chapters 1-6

Chapter 1

The audience of Chapter 1 or at least the audience we would like to reach with Chapter 1 are not only the compilers of environmental accounts but rather those working in environment or other ministries that are responsible for designing strategies for sustainable development/green economy/green growth, resource management decisions, etc. The compilers of environmental-economic accounts may need to use this Chapter to promote the buy-in of the integrated information approach to the policy makers or scientists' experts in specific environmental topics.

Having in mind the above audience, we feel that the style of the chapter is too "national accounty". It starts introducing concepts such as supply and use tables that are not really familiar to those producing and compiling environmental information. It should dwell much more on the policy relevance of the SEEA, its systems' approach to accounting for the environment and on the value added of integrated information as opposed to "silos approach" to environmental data.

Upfront the the conceptual framework for the environment as a system and the policy need for applying a system approach have to be set out leading up to the conceptual notion of national accounts for the environment.

The SEEA should be portrayed as the umbrella framework for the environment and the organising framework for basic environmental statistics as the SNA is the statistical framework for the economy and the organising framework for basic economic data. The

SNA applies concepts, definitions, classifications and accounting rules to the measurement of national accounts for the economy. Similarly, the SEEA applies concepts, definitions, classifications and accounting rules to the measurement of the environment. With the SEEA being an umbrella framework in its own right for the environment, the text should avoid making statements such as that the SEEA is a satellite of the SNA, "based on the SNA" or “extends the SNA”. It should be mentioned that the SEEA and SNA are harmonised to ensure maximum coherence and consistency between the two systems. However, differences between the two statistical systems do occur and are explained.

The chapter should introduce the broad policy use of environmental accounts in the multipurpose management of land and natural capital through the conservation and maintenance of natural resources : e.g. climate change; eutrophication; soil degradation, etc. It is important (though not always easy) to work these environmental themes into the narrative, otherwise the reader may be left with the impression of a manual that is about economic accounting rather than environmental accounting In this regard, the attached OECD paper (presenting the revised list of indicators by environmental theme) could be a good starting point to highlight that a broad array of policy questions are addressed in the revised SEEA. By way of example, when referring to emissions, the impacts of emissions on the environmental conditions should be made explicit– e.g. acidification, eutrophication, climate change, desertification, etc.

We also feel that we should mention up-front that the SEEA is a measurement framework for the environment that can be applied by all countries also those that have a poor data environment. We should state upfront that the compilation of the accounts for the environment can be incremental and could start with compilation of individual macro variables for the economy wide identities and balances (e.g. total energy use for the energy flow accounts or total water abstraction for the water account) which are important in their own right at national and international level. Subsequently, the macro identities and balances for water and energy may be disaggregated in the next step by economic activity for the flow accounts.

The sections 'SEEA as a system' and 'Overview of the SEEA' cover similar ground. Both are needed, but perhaps the 'Reader's Guide to the SEEA Central Framework' could be expanded (using material from the various chapter introductions) in order to prevent repetition.

Reporting the history of the SEEA is important in establishing its legitimacy - but we would suggest cutting back on the amount of space given to this history.

Upfront in the text we should mention that the SEEA consists of the SEEA Central Framework, the SEEA Experimental Ecosystem Accounts and the SEEA Extensions and Applications and explain the relationships between the Central Framework, the SEEA Experimental Ecosystem Accounts and SEEA Extensions and Applications as well as other environmental approaches such as the Drivers-Pressure-State-Response Framework and the Framework for the Development of Environment Statistics. We acknowledge that these are not yet available therefore Chapter 1 is difficult to finalize at this stage.

Chapter 2

The names of tables and figures should simply reflect their order within chapters, regardless of the section in which they appear. Therefore, for example, Figure 2.2.1 in

Chapter 2 should be relabelled as Figure 2.1.

Also as a general comment, it would be useful to define the terms when they appear, otherwise it is difficult for the reader to understand the text without the definitions. In this regard, we believe that it would be better to move the definitions and classifications, in particular those presented in Chapter 3 on natural inputs, products and residuals in Chapter 2.

Introduction: See comments related to Chapter 1 with regard to how we should present the SEEA. When discussing the various modules of the accounts, it would be useful to add an introduction which outlines their policy relevance and provides some examples of key aggregates and indicators that can be derived. Although it is much more technical in nature and style, it still should provide a better understanding of what policy each accounts informs.

Section 2.2. It would be useful to explain the SEEA as using a system's approach consisting of stocks and flows and interrelationships. This system's approach is known by the scientific community and thus more easily understood by the non-national accounts readers. In a next step , it can be elaborated that the SEEA uses the accounting rules to conceptual representation of the environmental information in a system's approach followed by a description of the boundary between the economy and the environment.

The explanation of the asset and production boundary has to be revisited as it seems to imply a hierarchy of boundaries.

Measurement unit. The term "measurement unit" has been used in two different ways in chapter 2. The first to refer to units of measure (such as tonnes, joules) and the second to refer to units that are observed for statistical purposes. This multiple use should be avoided.

Para 2.7: Imports is a more commonly recognized term internationally. Rephrase first sentence as: "Broadly, the economy functions through production and imports of goods and services…"

Para 2.14: The underlined terms (natural inputs, production, and residuals) should be defined here, where they first appear. The same definitions can be referenced later in the document (e.g. in Chapter 3).

Figure 2.2.1: Insert paragraph 1.23 from Chapter 1 here. The figure (and text) can be removed from Chapter 1. It is unnecessary to show this figure twice and it is more appropriate in Chapter 2.

Paras. 2.17-2.22, Table 2.5.1 , paras 2.104-2.106: Because the SEEA Experimental Ecosystem Accounts is currently being developed, we would suggest to limit reference to ecosystems to as little as possible.

Table 2.5.1. This table is not necessary incorrect, but seems out-of-place and misleading in Chapter 2. We suggest removing it. The point reflected in the first column (i.e. that, in the Central Framework, the asset accounts in monetary terms are more limited in scope than the asset accounts in physical terms) can be explained in words.

Para 2.26: This paragraph might be a bit misleading to some readers in listing demographic and employment information alongside the other tables and accounts of the Central Framework. Perhaps the text could be adjusted to reflect better the point that while there are no separate accounts specifically on demographic and employment information in the SEEA, they are key elements within the tables and for the usefulness of the system as a whole in particular for the derivation of coherent indicators. It is important that reference to the demographic and employment information is retained and elaborated further in Chapter 6.

Tables 2.3.1 & 2.3.2: Should be consistent with use of plural for supply and use table**s.** Thus, use PSUT**s** everywhere (as in the heading before paragraph 2.38) or not at all. We also would suggest deleting the word expenditure from table 2.3.1 for consistency with the headings in table 2.3.2.

Para 2.34: 4th sentence – word "equation" should be replaced with word "identity".

Para 2.40: Minor correction: "…, the generation of energy through the ***use*** of solar panels, etc."

Para 2.46: Replace final 4 words of paragraph from "is a complex task." with "is not a usual practice."

Para 2.47: The reference to the classifications ISIC and CPC should be moved up – it seems out of place to present it here strictly in relation to Supply and Use tables. Also, the point can be referenced in Section 2.6.3. It would also be useful to reference SIEC for energy products.

Para 2.61: The calculation of the balancing item has been defined in a very general way. The relevant inflows and outflows would be type of account specific. For example, for the production account saying "total value of all flows" runs the risk of including property income flows as well.

Para 2.60: Slight rewording: "…because these accounts record transactions that do not have a ***direct*** underlying physical base,…"

Para 2.90: 6th line – word "enterprise" should be replaced with word "establishment".

Para 2.98: 2nd sentence – words " one period" should be replaced with word "one accounting period".

Section 2.4.2: Suggest to bring in additional elements about combined presentations from Chapter 1 (e.g. from Para. 1.48)

Para 2.102: Given the definitions provided in 2.17-2.22, the first sentence of this paragraph is nonsensical. Suggest simply deleting the paragraph.

Para 2.128: 5th line - word "deposits" should be replaced with word "resources"

Para 2.129: May be a type in last sentence: *in Chapter 5.6*? Should read "in Section 5.6 in Chapter 5".

Para 2.138: Needs rephrasing to convey the correct meaning

Para 2.156: "and sequence of relevant economic accounts" should be added in the end of first sentence.

Section 2.6 discusses economic units, however it never defines. They should be defined.

Chapter 3

As a general comment, the chapter may be considered daunting for non accountants. The objective of maintaining the accounting identities, especially the input-output identity creates tables that are overly complicated with terminology and aggregates that are not intuitive for the environmental policy and scientific community. The chapter has the feel of being an intellectual exercise following strict accounting rules that reflect completeness, but the scientific and policy relevance of the information included in the tables are doubtful. If we want to be comprehensive and rigorous in presenting the conceptual accounting structure, we should also clearly say that some of the information is usually not collected (e.g. classification of natural inputs – inputs from air, soil carbon) and spell out what are the reasons to include it (e.g. balancing the inputs and the outputs, etc.).

The sections on key aggregates need further elaboration. The aggregates presented are accounting constructs rather than relevant aggregates for policies. We feel that this section should be strengthened.

The structure and content of the tables – especially the energy and water one should be looked at again. Detailed comments have been provided to the editor.

Introduction – The text in the introduction should be strengthened in particular with regard to explaining what are the benefits of the flow accounts in terms of what policies they inform and what are the types of macro and sectoral aggregates that can be derived. Also, it should explain what the purpose of the tables is: they are for exposition of the conceptual framework rather than for compilation purpose. The compilation could be done for macro aggregates for the total economy, which can be incrementally disaggregated on the basis of policy need and data availability. This message is to be put upfront otherwise there is a risk of scaring away countries with less developed statistical systems.

As indicated earlier This chapter should present the accounting rules for the flow accounts as the system's approach for the national accounts of the environment, which are harmonised with those rules applied in the SNA to the extent possible.

Definition of natural resource inputs (para 3.45)– is tautological. It also seems to imply that environmental assets are defined as natural resources which is not true. It should also be spelled out clearly that natural resource inputs consist of extraction used in production and natural resource residuals (these are not defined anywhere)

Consumer durables: There is no discussion on the treatment of flows pertaining to consumer durables in the context of residual flows and flows relating to accumulation. The treatment of these types of flows should be explained briefly in the SEEA.

Intra-sectoral flows of water. The current treatment of these flows is not consistent with recording principles in the SNA, which would require that all flows between units should be recorded. It is suggested that clarification on the reason of inconsistencies is explained in the text.

Emissions to water. There are a range of boundary issues in the measurement of emissions to water including the treatment of flows in seas and oceans, the treatment of flows from activity in water (e.g. dredging), the treatment of emissions related to urban run-off, and the treatment of emissions from fixed assets that should be clarified in Section 3.6.

Inputs from soil and from air – some examples to explain what is included and for what reasons may help better understand the logic behind their inclusion. Should also possibly mention the case of soil water which is considered as part of natural resource inputs (under water).

Para 3.87 should better explain the difference between gross releases (emissions to the environment and economic units) vs. net (which are simply emissions in the terminology used).

Para 3.92 is unclear.

Energy

Para 3.95 The definition of residual heat is unclear (and the term is also doubtful). This has been a major source of confusion. It should be make clear that the residual heat is added as a residual to indicate all energy that exits the system – either as a result of transformation or end use.

It should be clarified that energy products used for non-energy purposes consist either of products (such as naphtha used to produce plastics) and thus are incorporated into non-energy products or lubricants (not used as sources of heat) not incorporated into non-energy products.

ISIC breakdown in the energy tables should reflect the energy industries identified in IRES. Add the energy industry classification in the text. In the balances, the breakdown is presented based mainly on the type of uses and technology and not by economic activities.

Establishments and enterprises are used interchangeably. They are different and, following the SNA establishments should be the preferred unit in the supply and use tables.

3.4. water consumption is no longer used in the SEEA.

In the tables indicate what grey cells represent.

Water

Para 3.185 Please break the paragraph into two separate paragraphs: a first paragraph should describe flows within the environment (in asset accounts) and the second paragraph the flows between the environment and the economy and within the economy (in PSUT). It could be reworded as follows:

The inland water resource system comprises surface water (rivers, lakes, artificial

reservoirs, snow, ice, glaciers), groundwater and soil water within the territory of reference. All flows associated with the inland water system are recorded in the asset accounts for water resources, including flows to and from accessible seas and oceans. *Flows include precipitation, evapo-transpiraton, flows within water bodies (infiltration and runoff), inflows and outflows from other territories. This is discussed in greater detail in Chapter 5.*

The PSUT records the abstraction of water from the inland water system by economic units, the distribution and use of this water by various economic units and the returns of water to the inland water system.

Para 3.189. It would be useful to explain in the text that water used by ISIC 35 could have different uses that impact the recording of water use, e.g. for hydropower generation (non-consumptive use) or for cooling. Therefore, it is analytically and policy relevant to break down ISIC 35 according to what it produces (e.g. gas and steam vs. hydropower). This also applies to 3.193.

Also, ISIC 36 refers to water supply to agriculture, other activities and households. The text should explain that these types of supplies should be separated for international comparison and policy relevant purposes.

Urban runoff – the recording is now a residual recovered from the environment. In the SEEA-Water, it is recorded as an abstraction by ISIC 37. The treatment in accordance with SEEA Water should be maintained.

Green and Blue water. We would suggest to include in the text a paragraph after para 3.196 to explain that it may be relevant to distinguish between green and blue water: blue water is the water which is abstracted from surface and ground water and green water is abstraction from soil water. It is important when comparing countries in different climatic zones to understand the differences in water efficiency in agriculture: is the water used for agriculture obtained from precipitation or abstraction/supplied by others?

Para 214 – there is no need to explain how urban runoff is calculated. We would suggest deleting the para.

Para 3.215 and table We prefer the use of the term hydrological water consumption with the same definition as in the SEEA-Water and IRWS :" the concept of water consumption gives an indication of the amount of water that is lost by the economy during use in the sense that it has entered the economy but has not returned either to inland water resources or to the sea. This happens because during use, part of the water is incorporated into products, evaporated, transpired by plants or simply consumed by households or livestock. It can be computed for each economic unit and for the whole economy". Delete the sentence: "For analytical purposes……..into products" as this is very difficult to collect.

Para 3.220 The aggregate economic use of water is irrelevant. We would suggest deleting this paragraph and add different aggregates in the section on water aggregates. We will provide suggestions to the editor and editorial board.

Para 3.222 (including reuse water) in the case of household may be deleted as this is rarely the case.

Chapter 4

Decommissioning and terminal costs. In the text concerning terminal costs four scenarios are described relating to alternative accounting treatments. The explanation of the final two scenarios would benefit from more clearly relating the proposed treatment to the changing value of the underlying fixed asset.

EPEA accounting entries. Although there is quite a fulsome description of the various accounting entries relating to EPEA, some additional clarification would be useful around the precise definition of gross fixed capital formation for the various types of producers and in relation to the specific transfers in the EPEA compared to the transfers discussed in Section 4.4.

Table 4.3.3 and Table 4.3.4 – the table is not clear. It presents the users and producers as well as institutional sectors and industries in the same table. It needs to be explained in the text. A note should be added at the end of the table to explain what are grey cells for.

Para 4.148 – it may be useful to add in the Annex the list of relevant taxes.

Para 4.151 i. – Delete second sentence it does not add anything to the text. It is confusing.

Table 4.4.2 – Explain the column headings. Also it may be useful to have a table presenting the taxes by economic activity as indicated in the text

Para 4.162 first sentence replace received with receivable and paid with payable.

Para 4.172. Second sentence add: Such a transaction should be recorded in the capital accounts.

Para 4.181 i. delete the sentence “If these payments are intended to reduce or inhibit discharge and emissions in the future”.

Para 4.181 iii. You may want to consider the text we have written for the SEEA-Water, which has been recently clarified before the SEEA-Water publication. See attached file.

Chapter 5

In several cases, the definitions of key terms (e.g. depletion) should be moved forward, because often these terms are used many times in the text before they are defined. Generally, and where appropriate, the definitions should appear where the term is first utilized in the chapter.

It may also be useful to provide more explicit definitions (in bold) for certain key terms, including "degradation", "resource rent" and "soil resources". While the current explanations are clear, it might be helpful to the users to include explicit definitions that are incorporated into the glossary.

Suggest to delete para. 5.28. This statement is unnecessary and will likely cause confusion. If there are any cultivated biological resources that "do not interact with the broader

biological and physical environment" whatsoever, than an example can be provided with a more simple statement indicating that it is not considered an environmental asset.

Definition of depletion: It is important to elaborate on the relationship between the definition of depletion in physical and monetary terms.

The Sustainable Yield figure (Figure 5.4.1, page 187) is mislabelled. "Sustainable yield" is the label for the curve itself (not the vertical axis). The vertical axis must represent the maximum extractable harvest given a certain stock/asset in order for the figure to make sense.

We recommend adding text to clarify that the term "rent"(used in this chapter in the SNA sense) as distinct from "resource rent" or "economic rent". These are important distinctions, because one purpose for measuring resource rent is to determine the portion that is captured/generated by the resource, whereas "rent" (in the SNA sense) refers to the amount payable/receivable to/by the economic owner of the resource.

We suggest to include a descriptive summary of of the NPV Annex within the main body of the Chapter, particularly the conceptual rational behind the method. Although the method is complex, its description is important for the chapter.

Since estimation of the resource life is necessary for the NPV, the text on this should be moved up to the section on NPV rather than only appearing in the section on Minerals and Energy (para 5.218-5.219). There is also a problem with the explanation. In the first sentence (para. 5.218), suggest to replace the word "average" with "expected". One way of assuming an expected resource life is to take an average of current or expected extraction rates, but there may also be other considerations in mapping an expected extraction path.

For consistency, suggest to rename Table 5.6.2: "Land Cover Classification" unless there is a specific and substantive reason to call them "types" in this presentation. If there is a reason, it should be explained.

Paragraph 5.306 is not quite correct because the market valuations of land will not incorporate those non-market benefits of ecosystem services (i.e. the benefits unrelated to "economic value" in the way it is defined in the chapter). Thus, we suggest rephrasing as follows:
"...changes of quality of land implicitly reflect the capacity for a given area of land to provide **economic value** to its owners, and the associated values of land will**, in theory,** take this capacity into account."

Table 5.7.1 (page 232) requires a more precise explanation. Currently, the rows in the account are explained only through examples. The examples should either be comprehensive or the explanations should provide precise definitions for each term in the table.

Para 5.470 passive use is nowhere defined. It should be deleted.

Para 5.484 ii Please reword the sentence: “The majority of precipitation falls on the soil, but generally would be recorded as run-off to rivers, especially in cases of flooding.” The majority of precipitation falls on the soil and then it either runs-off to rivers or infiltrates into ground water”.

Para 5.485 ii Please retain only the first two lines of the text: Evaporation/Actual evapotranspiration is the amount of evaporation and actual evapotranspiration that occurs in the territory of reference during the accounting period" and delete the rest. It describes un-necessary details.

It seems counter-intuitive that the timber accounts include orchards, rubber plantations, trees in parks, etc. While we understand this is carried over from the practices of FRA, it seems inappropriate for SEEA. Perhaps, where possible, the SEEA can recommend that the timber be separately identified for these "other" sources, such as where the primary purpose is not timber production.

Valuation of extraction. The accounting logic presented in the chapter and the decomposition of the change in value over an accounting period presented in Annex 5.1 suggest that extraction should be valued using a price that reflects the price of the resource "in the ground". Conflicting advice is provided in the sections relating to individual resources such as mineral and energy resources, timber resources and aquatic resources, where it is recommended that extraction should be valued using the unit resource rent. The text for these individual resources should be amended to align with the general model.

Discount rates. The annex on discount rates would benefit from an additional sentence to note that individual discount rates implicitly contain assumptions relating to intergenerational and equity preferences rather than suggesting that these preferences are ignored when an individual discount rate is used.

Felling residues in asset accounts for timber resources. As the current text stands there is an inconsistency in the accounting proposed for timber resources. This arises because the definition of felling residues means that they are, in fact, a quantity of timber resources within the scope of the volume of standing timber at the beginning of the period. Only recording the removals thus accounts for only a proportion of the reduction in the volume of standing timber (putting aside any other changes in assets). To fully account for reductions in the volume of standing timber felling residues should also be deducted in the asset account.

Annex A.5.2 para 2 – The explanation is unclear. It seems to refer to price changes (e.g. inflation) rather than discount rate.

Chapter 6

Final consumption expenditure and actual consumption are different concepts in SNA, which should be explained in the text. We would prefer to present the actual consumption as it will allow to record the transfers from government to households for the payments of water and electricity.

Also, the heading "accumulation" and "capital formation" should be used consistently across the tables.

Two tables in Chapter 6 are identical to those in Chapter 2: table 6.2.1 - table 2.3.2 - table3.2.1 and table 6.2.2 - table 2.3.4. To overcome this duplication, simplified tables could be included in Chapter 2 and the more elaborated tables in Chapter 6.

Para 6.51-6.59: Are the same as in chapter 2(2.77-2.85)

Table 6.2.1 Delete “Production (incl. household production on own accounts)” in second line, rename the first cell in last row as “collection & treatment of waste and other residuals”.

Table 6.5.1: Add “environment” in the column, add “natural resource” below physical supply.

Table 6.5.2: Uranium should be in tonnes

Table 6.5.3 give a footnote to “Total returns” and “ Water consumption”, since these two concepts do not appear the previous texts.

Table 6.5.3 has "Water consumption" in the row. The term “Water consumption” is no longer used in the SEEA

Para 6.132 “A separate column is included to record household own-accounts production of forest products, which may include the collection of fuelwood, for example” . This sentence should be deleted, because household production is already recorded in industries.

Table 6.5.4 A few suggestions. “Natural growth” could be extended to “natural growth of timber” . Add “Total” in the column before“ type of forest land”; separate “Currency units and physical units ”. The difference between 3 and 4 is not clear.

Chapter 6 at present does not discuss the extension and application of the accounts to the social dimension and in particular demographic and employment information. It would be useful to give a sense in this chapter of how the SEEA can answer questions related to access and availability to/of safe drinking water and sanitation, energy and food. This could be further elaborated in the SEEA Extension and Applications.