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A proposed set of standard accounts for the revised SEEA

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A PROPOSED SET OF STANDARD ACCOUNTS FOR THE REVISED SEEA

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Note prepared for the London Group meeting, Wiesbaden,
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Introduction

1. The SEEA-2003 provides an authoritative and comprehensive guide to the emerging and evolving discipline of integrated environmental and economic accounting. It is therefore quite appropriate that the SEEA-2003 contain a substantial number of tables covering a range of matters, including: various pro-forma of SEEA accounts; examples of country practice; and suggestions on possible tables to aspire to. In total the SEEA-2003 contains 157 tables. Clearly, the SEEA-2003 is a highly informative handbook containing elements of statistical standard and of compilation guide, as well as delivering a rich discourse on the theory, principles and practices of environmental economic accounting. However, the elevation of the SEEA-2003 to an international statistical standard requires that the revised SEEA (referred to throughout this document as the 'SEEA Rev') contain a set of standard tables delivering a comprehensive and cohesive set of integrated environmental economic data, while also avoiding unnecessary production of information.

2 This document proposes a set of standard tables for the SEEA Rev. It draws largely upon various tables contained in the SEEA-2003 and on various documents and discussions that have taken place during the present SEEA revision process. The set of tables developed here substantially follows the list of tables for the revised SEEA as contained in the draft annotated outline of volume 1 of the revised SEEA presented to the June 2009 meeting of the UNCEEA.

Standard tables for the SEEA Rev

3. If the SEEA Rev is to become a statistical standard, it must present a set of standard tables representing the body of information required for an effective, functioning set of integrated environmental economic accounts. There are two elements to such a presentation. Firstly, the SEEA Rev must outline the set of tables needed to effectively inform contemporary policymaking involving the economy and the environment. Secondly, the SEEA Rev needs to describe a set of statistical outputs that are realistically achievable by a substantial number of national statistical agencies.

4. When the SEEA is elevated to the status of statistical standard, it will be necessary to implement an extensive implementation program as well as data collection and an ongoing data quality assessment framework. The latter will assess conceptual compliance and the scope of countries' implementation of the standard. (Such compliance might involve the international statistical community nominating a certain number of key statistical outputs of the SEEA Rev as 'core outputs' and judging a country 'SEEA compliant' if a pre-determined portion of these core outputs

are regularly published to an acceptable standard.) It is not the place of this document to speculate on what might be contained in such a minimum set of outputs. However, SEEA reporting should not be an exclusive club for a small number of countries and, in particular, it is highly desirable that those countries with substantial natural resources and/or those facing significant environmental pressures should think of the standard SEEA tables as being realistically achievable.

5. Upon its elevation as an international statistical standard, the SEEA will comprise the first such comprehensive standard on integrated environmental and economic accounting. As with most international statistical standards, it should be expected that the range of standard outputs in the SEEA Rev will increase through subsequent updates of the standard, as these types of accounts grow in maturity and number within statistical agencies, and as this type of information grows in acceptance and influence among policymakers.

6. The attached set of SEEA standard tables should be seen as an opening statement on what should be included and the form that these tables might take. They are intended to provoke discussion and are expected to be further developed and refined in moving closer to a final version of the SEEA Rev. These tables have been compiled prior to drafting of any chapters of the SEEA Rev and prior to the final resolution of a number of identified SEEA update issues.

Standard tables and the various SEEA sub-modules and compilation guides

7. In addition to the SEEA-2003, there are various SEEA-related sub-modules and guides either in existence, in progress, or under proposal—such as the SEEA-Energy (in progress)—as well as SEEA-Water, which is currently an interim international statistical standard. There are also plans for a SEEA standard devoted to Material Flow Accounts (MFA). These SEEA sub-modules relate to a particular natural resource type (or accounting technique) and go into greater depth than the SEEA, for example, they may describe relationships between the environmental system and the economy (e.g. hydrological or material flow system), they may provide additional product or industry detail, etc.. The related discussion in these sub-modules would be expected to provide greater insight into the nature of specific products and a more sophisticated accounting to support specialised policy interests. The SEEA-2003 was produced prior to the production of any specific SEEA sub-modules and therefore attempts a greater level of statistical detail than is now necessary in the SEEA Rev in respect of energy, water and MFA.

8. In this note, the tables presented for energy and water are a simplification of the standard tables developed in the context of the SEEA-Energy and the SEEA-Water. It should be noted that the development of various SEEA sub-modules has provided considerable input in advancing the research agenda of the SEEA. For example the issue of the definitions and classification of waste as well as the classification of physical flows has been discussed extensively as a result of the SEEA-MFA drafting.

9. Note that the SEEA-Fish was developed along the same principles as the SEEA-2003 and at present remains a handbook. While it contains very useful information, including definitions and classifications, it does not suggest standard

tables. Nor are specific standard supply and use tables for fish are suggested for the SEEA Rev—instead, the standard supply and use tables for 'all products' will capture broad details for fish (physical measures only). Standard asset accounts could be modified to capture detail on changes to fish stock for: type of fish species; type of fishing operation; and so. There may also be a case for standard tables presenting resource rent earned from fishing operations.

10. Suggested standard tables presented here in many cases do not explicitly list industries, products etc. by name. The focus at this point is on describing the basic form of the account, rather than necessarily coming up with agreed and definitive classifications to suit all countries and all applications. It is clear that the SEEA Rev standard—when complete—must present standard accounts with a (highly aggregated) level of industry detail. Individual countries can then choose to produce additional detail for some (or all) of the accounts and products. So, clearly, industry and other classificatory detail is something that needs to be agreed upon—but equally the level of industry detail to be used is not presently our highest priority in building the standard tables. For tables in the SEEA Rev, classifications definitely become an issue where no acceptable classification currently exists, however, this is not usually the case and in most cases, countries will simply use standard international statistical classifications or appropriate classifications that correspond to these standard classifications. At present, there are a number of outstanding matters related to classifications. For example, the Oslo Group is responding to two relevant matters: a standard definition of the energy sector; and an (aggregated) classification of energy products. There are also some remaining issues related to classification of waste, where the CPC is not completely adequate.

Standard and supplementary tables in the SEEA Rev?

11. It is important that the tables selected as 'standard' SEEA tables should have a history of use, preferably by a number of countries (de Haan, 2007, LG/11/3). That is, it must be clear that these tables *can* be produced and *do* serve demonstrated uses. The exception to this rule relates to those tables which inform questions of high policy relevance. However, in addition to the 'standard' SEEA tables, the SEEA Rev could present a number of supplementary tables containing presentations that provide additional detail or an alternative viewpoint, compared to the standard SEEA tables. SEEA-W follows this approach. Although no supplementary tables are presented here, this approach is a way of guiding users on possible types of extensions to the standard SEEA tables, including introducing tables of a more detailed or developmental nature.

[*Should the SEEA Rev consider the use of supplementary tables in addition to standard tables?*]

Adding detail to the SEEA standard tables

12. Standard tables are generally presented here in a simple format. This represents the starting point for the construction of such tables—individual countries could of course extend or alter the level of detail as appropriate for their circumstances. For example, countries may choose to present additional industry

detail, or greater detail on species/products, or to make distinctions between commercial and non-commercial operations, by institutional sector, and so on.

Use of standard identifying codes throughout the SEEA Rev

13. Each data item contained in tables of the SEEA Rev should be allocated a unique identifying code. This will assist the use and promotion of the SEEA Rev internationally. It is also consistent with practice within the 2008 SNA and, indeed, as far as possible, codes used should be consistent between the two systems (acknowledging that the SEEA Rev will have a large number of data items that do not exist in the SNA).

14. The excel files in attachment 2 contain details of proposed standard tables for the SEEA Rev. These tables are numbered, though this is only for ease of reference during the revision process. The numbering sequence will not carry forward to the SEEA Rev—nor does it indicate any priority or hierarchy among the tables presented.

One or two asset boundaries for the SEEA Rev?

15. The SEEA-2003, in effect, has two asset boundaries—one for (SNA) economic assets, and a second for those SEEA assets that fail to satisfy the definition of an SNA asset. At present, the SNA and the SEEA apply different accounting treatments for similar processes and transactions, depending on whether the asset in question is an SNA asset or 'only' a SEEA asset. For example, the treatment of payments made for the right to use a natural resource is contingent upon whether the resource in question is an SNA asset. The London Group meeting in Wiesbaden will discuss the merits of maintaining the present arrangement or of, alternatively, adopting consistent treatment (within the SEEA Rev) of all assets considered to be 'SEEA assets'. But the decision holds implications for the form and content of standard tables in the SEEA Rev. For example, annual payments made for the right to access fish stocks owned by the government should be considered payment of rent, since these stocks are economic assets. In contrast, annual payments for the right to emit carbon to the atmosphere are not treated as payment of rent in the 2008 SNA (since the atmosphere is not an SNA asset). The SEEA Rev can choose to follow the SNA treatment or to recommend that since the atmosphere is a SEEA asset, these payments be treated as rent in the SEEA Rev.

16. Clearly, monetary accounts in the SEEA Rev will be different, depending whether we adopt one or the other of these two fundamentally different viewpoints on the nature of the SEEA asset boundary. This document presents accounts on the assumption that the SEEA Rev will maintain the present 'two asset boundary' arrangement, while acknowledging that the issue is a discussion in progress.

17. Moving on from the question of asset boundary, monetary transactions recorded in the SEEA generally follow standard SNA principles, but with some modifications made to show additional detail for such things as environmental protection expenditures (which are SNA transactions, but not separately identified in the SNA), and to reflect some differences in concept being utilised. For example, extending the production boundary in the SEEA to include uncultivated natural growth in natural resources, and requiring that the value of depletion of non-produced

natural assets be charged against the output of extractive enterprises. These modifications mean that monetary accounts in the SEEA Rev will, in any case, differ somewhat from corresponding accounts of the 2008 SNA.

[*What are the implications for standard monetary accounts in the SEEA Rev of abandoning the 'two asset boundaries' approach of the SEEA-2003 and instead applying consistent treatment across all 'SEEA assets'?*]

Indicators and standard tables of the SEEA Rev

18. Standard tables of the SEEA Rev should support a range of 'simple to understand' indicators capable of gaining ready acceptance among data users (Schenau, 2007, LG/13/22). These indicators will be described in volume 3 of the SEEA Rev and linked to the standard tables in volume 1 from which relevant supporting aggregates are derived. A list of these indicators is included among the excel files in attachment 2. Note that this is a checklist and not a standard table of the SEEA Rev.

SEEA Rev standard tables related to climate change

19. Generally speaking, standard tables in the SEEA Rev will have been produced over a period of time using well established methodologies. However, this is not really the case for those tables designed to inform policy related to emission trading schemes, where only a small number of countries have only very recently developed tables dedicated to this purpose.

20. Nevertheless, the overwhelming policy importance attached to emission trading schemes and the special ability of integrated environmental economic accounts to inform this area of policy, means that the SEEA Rev must include standard data items on this matter.

21. Scientific data can inform on whether atmospheric carbon is increasing or falling, and on what physical changes are happening to temperatures, acidification, water flows, and so on. Economic data are well equipped to inform on changes to the size, structure and performance of the economy. However, the matter of decoupling—central to our strategies to avoid potentially catastrophic climate change—can *only* be informed using integrated environmental and economic information systems. A central feature of the SEEA must therefore be a body of information that informs policymakers on the performance of emission trading schemes (and similar schemes) in managing carbon emissions while at the same time preserving the capacity of human-made economic systems to satisfy material needs and wants. The London Group meeting in Wiesbaden will discuss volume 3 of the SEEA Rev, including policy applications related to climate change. Standard tables in volume 1 of the SEEA Rev must provide the data necessary to support policy analyses related to climate change as described in volume 3 of the SEEA Rev. Table 26 (Linking CO2 emissions and the economy) and table 27 (Stocks and flows of emission permits) presented in Attachment 2 are not necessarily suggested as standard tables in volume 1 but the information contained in these tables is considered necessary to inform relevant climate change related analyses in volume 3 of the SEEA Rev.

[*Should the data considered necessary to inform policy analyses related to emission trading appear as a standard table in volume 1 of the SEEA Rev?*]

SEEA Rev standard tables related to carbon stocks and flows

22. A simple table of stocks and flows of carbon is suggested for inclusion among the standard tables in the revised SEEA. The suggested table provides opening and closing stock of fossil carbon and other carbon. Additions and removals from carbon stock are recorded and a closing balance for carbon stock derived. The type and level of detail shown in the account would likely vary from country to country and depend on where carbon is being stored and the types of carbon flows taking place (this classificatory detail also creates the link to the economy). For example, a country with large stands of forest might record details of carbon sequestered in these forests—showing carbon sequestered through natural growth and released through harvesting and forest fires. Carbon stocks and flows could be separately detailed in relation to atmosphere, natural forests, cultivated forests, other biota and so on.

23. Although there has been little work to date on systematically and comprehensively linking stocks and flows of carbon, this type of account is considered important enough to include as a standard table. Its inclusion is perhaps more for aspirational reasons but the power of the SEEA to formally link relevant stocks and flows would seem to require the inclusion and identification of an item as important as carbon.

[*Should standard accounts in the SEEA Rev include a general table linking stocks and flows of carbon?*]

List of standard tables for the SEEA Rev and brief description

Flow accounts:

24. Flow accounts (physical and monetary) are presented in respect of the main blocks making up the flow accounts i.e. energy, water and other material products. However, standard tables for flow accounts in the SEEA Rev need not adopt exactly the same table format in respect of each of materials, energy and water. Those sub-modules of the SEEA relating to energy, water, and MFA—when complete—should provide the basis (and inputs) to standard tables of the SEEA, although the sub-modules will each utilise more specialised presentations. Note that the tables presented here generally identify the 'environment' as an agent on a par with industries, for example, in the physical supply and use tables for water products it is explicitly stated that abstraction of water is 'from the environment' and that the supply of water from one economic unit to another is a flow 'within the economy'. This detail provides additional clarity about the character of various flows, though it increases the size of the tables and in most cases it might be considered reasonably clear which flows are entering or exiting the environment.

25. Two possible presentations are provided for flows of materials. The first presentation shows the environment as a supplier of materials to the economy (in this context, the 'environment' is shown alongside the various suppliers from within the

economy) and the use table correspondingly shows those transactors within the economy (industries, households etc.) who use these materials supplied by the environment. The second presentation largely mimics the presentation used for the energy flows and shows losses/returns to/from the environment. It does not specifically identify extractions from the environment. The first presentation is suggested as preferred because it identifies material flows to and from the environment without becoming cumbersome.

[*Should standard accounts in the SEEA Rev include the 'environment' as an agent on a par with industries?*]

26. As far as possible, the basic structure of tables should be same for physical and monetary accounts. This provides a more cohesive and integrated presentation of environmental and economic information and provides greater scope for supporting analyses based on hybrid reporting of flows.

27. The suggested energy tables from the SEEA-Energy as presented at the London Group meeting in Brussels (Gravgård, 2008, LG/13/8) are our starting point. In particular, a bridge table between aggregates in the energy balances and the SEEA is considered important. Some of the more detailed energy flow accounts of the SEEA-Energy look very appropriate as standard tables in the SEEA-E (rather than the SEEA Rev). The recommended physical measurement unit for energy in the SEEA Rev is simply Joules.

28. Note that the energy tables cannot be completely standardised yet since there is no agreed classification of energy products. (The Oslo Group is currently developing a classification of energy products.)

Emission accounts:

29. Standard accounts presented for emissions suggest including emissions (air, water) to other economic units and to the environment. Flows of solid waste (and wastewater) are separately identified. These accounts should be adaptable, depending on conditions and policy interests in specific countries i.e. the types of emissions, the industry groupings etc. selected for inclusion in these accounts needs to be flexible. Specific tables are recommended for emissions to air and water.

30. It is important to describe the link between the following two bases of reporting for CO2 emissions: IPCC (Kyoto protocol) and the SEEA. A separate presentation to the London Group meeting in Wiesbaden will introduce tables for air emission accounts. This type of information is considered crucial to informing policy related to emissions, emission trading and the decoupling of emissions from economic output.

Monetary flow accounts:

31. Monetary flow accounts are presented for flows of materials, energy and water, as described above. Accounts of the 2008 SNA are relevant to the SEEA Rev—these have been listed in Attachment 1 but not placed in the attached excel files.

32. Standard accounts related to the Environmental Goods and Services Sector (EGSS) and to Environmental Protection Expenditure (EPE) and Resource Management Expenditure (NRM) are presented using the Classification of Environmental Activities (CEA). This classification combines CEPA and CRUMA and it was agreed at the September 2009 Expert Group meeting on International Economic and Social Classifications that the CEA would replace the CEPA and the CRUMA. The starting point for the EGSS / EPE / NRM accounts is Eurostat's *Handbook on Environmental Goods and Services* which defines (pp 29-30) the EGSS as comprising provision of environmental protection and resource management activities. However, the accounts suggested in this handbook are too detailed for the majority of countries outside of Europe and therefore standard tables suggested here for the SEEA Rev considerably reduce this level of detail and complexity. In particular, no details are suggested by institutional sector; or ancillary or market/non-market status; and government EGSS is not broken down into connected, adapted, end-of-pipe technology etc.. It is suggested that one table present key economic aggregates by type of activity by industry of producing units and a second table would present these economic aggregates by type of activity by the environmental domain targeted by the expenditures.

33. A table is presented showing the range of environment-related payments made by industry (and households)—it aims to show, for various industries, the burden/contribution related to environmental commitments. Environmentally-related taxes are presented here according to the tax base used to levy the tax and therefore include payments for emission permits under an emission trading scheme (assuming the SEEA Rev follows the 2008 SNA treatment). These environmentally-related taxes are juxtaposed against all other taxes to indicate their comparative importance. Taxes could also be shown according to the industry of the tax payer. The table gathers together a range of taxes, subsidies, rents and other transfers—all related to environmental obligations or benefits.

34. Although subsidies are included in the table mentioned immediately above, a standard table specifically addressing environmentally-related subsidies is not presented here—mainly because this area is still very much a developmental one. Nevertheless, this is a vitally important body of information for environmental economic accounting and subsidies are on the agenda for the London Group meeting in Wiesbaden.

Hybrid accounts:

35. Hybrid accounts are critically important to the SEEA since they go to the core of what makes integrated environmental economic accounting a powerful tool i.e. information jointly informing economic and environmental policy concerns. The choice of 'standard' hybrid accounts for the SEEA Rev raises a dilemma. Is it possible to suggest hybrid accounts that will, of themselves, inform most types of analyses reasonably expected from these types of accounts? Or are there too many potential analyses across various countries and situations for all to be properly addressed by standard accounts? An alternative approach is to place all potentially relevant information into the hybrid account and to utilise volume 3 of the SEEA Rev in developing a comprehensive range of possible hybrid analyses.

36. It is recommended that hybrid accounts in volume 1 of the SEEA Rev draw together relevant physical and monetary information into standard accounts reflecting a concise and workable format. However, these standard hybrid accounts cannot reflect the full range of hybrid analyses applicable to individual countries. It is therefore recommended that standard hybrid accounts do not embody a 'one-size-fits-all' approach to hybrid analyses (for example, by presenting certain ratios or unit price information). And it is therefore important that accompanying text in the SEEA Rev state that the standard hybrid accounts simply gather information required for hybrid analyses and that countries need to develop specific hybrid analyses most useful to their own circumstances. That is, they should reflect the range of available data and the most relevant policy concerns. Volume 3 of the SEEA Rev will assume great importance in guiding countries of potential analyses combining monetary and physical information to inform various policy concerns.

[*For hybrid accounts, should standard tables in volume 1 of the SEEA Rev simply draw together the range of potentially useful physical and monetary information, leaving volume 3 to develop a range of potential hybrid analyses?*]

37. Standard hybrid accounts are presented for each of: material products; energy products and water products. The suggested standard hybrid flow accounts generally follow the same format as the monetary and physical supply and use tables for various environmental products, i.e. by broad components of supply and use and by type of product. The hybrid accounts suggested here generally draw together monetary and physical flows, though for some products it is very useful to also draw in certain types of stock information. For example, the value of produced capital used to extract, process and deliver natural resource(s) could be compared with revenue earned from these processes. And stocks of renewable and non-renewable natural resources could be compared with present extraction levels (in both physical and monetary terms). A range of related monetary information is also potentially relevant (e.g. relevant subsidies, taxes and rents).

Indicators in the SEEA Rev Volume 1:

38. London Group has agreed to introduce a short list of key aggregates and indicators into volume 1 of the SEEA Rev. These aggregates and indicators must, of course, be derivable from standard tables in the revised SEEA. The list of key aggregates and derived ratios provided in the attached excel file is drawn entirely from the paper presented to the London Group meeting in Brussels (2008, Schenau, LG/13/22).

Asset accounts:

39. SEEA Rev Asset accounts provide opening and closing stock positions for each asset, and a full accounting for the changes between these positions. In concept, these can be produced in both physical and monetary terms.

40. The aggregated asset accounts presented here relate to land; mineral and energy resources; water; and biological resources—produced and non-produced. Among the standard asset accounts for specific types of natural assets, there is no

example for ‘biological resources’. Instead, relevant asset accounts will relate specifically to timber and aquatic resources (i.e. a subset of ‘biological resources’). This is because among accounts for non-produced biological resources, timber and aquatic resources are the most highly developed examples. For these asset accounts, the type of detail presented (e.g. by species type, by maturity, by cultivated/uncultivated etc.) will vary from country to country and will depend upon factors such as data availability and national policy concerns. Where appropriate and possible, the majority of produced assets should be presented in a highly aggregated form within the asset account in order to de-emphasise their presence.

41. Note that the SEEA asset classification as used here throughout the various asset accounts should be considered provisional rather than final.

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ATTACHMENT 1: LIST OF STANDARD TABLES FOR VOLUME 1 OF THE REVISED SEEA

This attachment suggests a list of standard outputs for inclusion in volume 1 of the revised SEEA.

Physical flow accounts

Supply and use tables for products [comprehensive and/or in respect of selected products of interest]

- Supply and use of material products / natural resources (tonnes)
- Supply and use of energy (terrajoules)
- Supply and use of water (cubic metres)

Bridge table Energy balances to SEEA for primary supply, conversion and end use of energy

Supply and use table for residuals

Emissions accounts

- Emissions to air
- Emissions to water
- Bridge table for CO2 emissions: IPCC to SEEA basis
- Net emissions by residents and net accumulation on the national territory, by selected emissions

Stocks and flows of carbon

Material flow accounts

- Economy-wide material flow accounts [*]

Monetary flow accounts

Supply and use tables for products [comprehensive and/or in respect of selected products of interest]

- Supply and use of material products
- Supply and use of energy
- Supply and use of water

SNA accounts

Production account *

[Identify production of environmental goods & services

Identify natural growth in renewable natural resources as 'production']

Income accounts *

[Identify environmental taxes

Identify environmental subsidies

Identify environmental protection expenditures

Identify natural resource management expenditures

Identify flows related to emission permits

Identify depletion of non-produced environmental assets

Property income transfers related to shared ownership of non-produced environmental assets

Identify compensation of employees (and employment) re production of environmental goods and services

Identify rent related to non-produced environmental assets]

Capital account *

[Identify depletion-related adjustments

Identify environmentally-related capital transfers, capital formation, capital disposals etc)

Financial account *

Financial leases related to shared ownership non-produced environmental assets

Transactions related to emission permits (see also table above "Stocks and flows of emissions permits")

Impact on changes in assets / liabilities and net worth

[*] Table listed as a standard table for the SEEA Rev but no example is presented in the attached Excel files.

Environmental goods and services and natural resource management activity – key economic aggregates, by industry.

Environmental goods and services and natural resource management activity – key economic aggregates, by environmental domain.

National expenditure on environmental protection expenditure and natural resource management products.

Financing of national on environmental protection expenditure and natural resource management products.

Environmental taxes, subsidies and other environmentally-related transactions, by industry

Hybrid accounts
Hybrid supply and use of products, [for economy, selected products]
- Hybrid supply and use of materials
- Hybrid supply and use of energy products
- Hybrid supply and use of water products

Hybrid account of economic production and flows of residuals *

Hybrid industry-by-industry input-output tables *
Input-output identities
- Environmental requirements of products *
- Environmental requirements of consumption *
  - Decomposition of production-related emissions *

Indicators in volume 1 of the SEEA Rev (checklist)

Asset accounts

SEEA asset account - presented in both monetary and physical terms (where possible).

Summary asset account providing details for broad types of environmental assets.

Detailed asset accounts produced in respect of each the following environmental assets:
- Mineral and energy resources
- Water (physical only)
- Aquatic resources (physical only)
- Timber

SEEA Land use / land cover
SEEA Land use, by industries and households

Information required for climate change analyses in volume 3 of the SEEA Rev:

- Data series required for linking CO2 emissions to the economy
- Stocks and flows of emissions permits

* Table listed as a standard table for the SEEA Rev but no example is presented in the attached Excel files.

ATTACHMENT 2: STANDARD TABLES IN EXCEL FORMAT: VOLUME 1 OF THE REVISED SEEA

The attached excel files contain tables making up suggested standard tables for volume 1 of the SEEA Rev. In a number of cases, the tables suggested in attachment 1 have not yet been worked into a format for presentation in attachment 2.

Flow accounts; physical, monetary and hybrid

SEEA standard tables flow accounts (LG15_25a_Add1.xls)

Table 1 Physical supply table for materials
Table 2 Physical use table for materials
Table 3 Monetary supply table for material products
Table 4 Monetary use table for material products
Table 5 Hybrid account for supply and use of materials

Table 6 Physical supply table for energy
Table 7 Physical use table for energy
Table 8 Monetary supply table for energy
Table 9 Monetary use table for energy
Table 10 Hybrid account for supply of energy
Table 11 Hybrid account for use of energy
Table 12 Bridge table: Energy balances to SEEA for primary supply, conversion and end use of energy

Table 13 Physical supply table for water products
Table 14 Physical use table for water products
Table 15 Monetary supply table for water products
Table 16 Monetary use table for water products
Table 17 Hybrid account for supply and use of water products

Emissions accounts

SEEA standard tables emissions (LG15_25a_Add2.xls)

Table 18 Supply (origin) table for residuals
Table 19 Use (destination) table for residuals
Table 20 Emissions to air, by sector and industry of supply
Table 21 Gross and net emissions to water
Table 22 Emissions by ISIC 37, sewerage services
Table 23 Bridge table for CO2 emissions: IPCC (Kyoto protocol) to SEEA basis
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