Indicators in the SEEA: identifying the main aggregates in the SEEA Part I

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Explanation of symbols

.	= data not available
*	= provisional figure
x	= publication prohibited (confidential figure)
–	= nil or less than half of unit concerned
–	= (between two figures) inclusive
0 (0,0)	= less than half of unit concerned
blank	= not applicable
2005-2006	= 2005 to 2006 inclusive
2005/2006	= average of 2005 up to and including 2006
2005/'06	= crop year, financial year, school year etc. beginning in 2005 and ending in 2006
2003/'04–2005/'06	= crop year, financial year, etc. 2003/'04 to 2005/'06 inclusive

Due to rounding, some totals may not correspond with the sum of the separate figures.

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Indicators in the SEEA: identifying the main aggregates in the SEEA Part I

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Abstract

The system of environmental and economic accounting (SEEA) provides a range if important accounting aggregates which can logically be defined within the SEEA's accounting identities. One key recommendation made in this paper is that these main aggregates should be explicitly pointed out as potential indicators in Part I of the revised SEEA (standard for environmental accounts). For this purpose specific tables should be introduced to highlight these main accounting aggregates. In this paper an overview is given of key aggregates from the physical flow accounts of which it is recommended that they should be explicitly exposed in the SEEA text of Part I. In Part III (applications of environmental accounts) a more elaborate discussion on SEEA indicators and indicator analyses will take place.

Keywords: SEEA, indicators.

1. Introduction

Indicators play a key role in bridging the gap between statistics and their users. First of all, they reduce the number of measurements and parameters that normally would be required to give an exact presentation of a situation (e.g. OECD, 2003). Secondly, they simplify the communication process by which the results of measurement are provided by the user. Indicators for the environment can be used at international and national levels in state of the environmental reporting, measurement of environmental performance and reporting on progress towards sustainable development. Indicators derived from the environmental accounts may play a key role as they are part of an integrated framework and their linkages between economic and social issues (Schoer, 2006).

At its 11th meeting the London group discussed a paper on indicators drafted by Statistics Netherlands (Schenau and Hoekstra, 2007). This paper was a first step to develop a more coherent treatment of indicators in the revised SEEA. Firstly, the purpose of indicators in general and environmental indicators in particular was discussed. Secondly, an overview of all indicators discussed in the

[1] With contributions by Peter Comisari, Rutger Hoekstra, Mark de Haan, Roel Delahaye and Joe St. Lawrence.

SEEA2003 was provided. Thirdly, the issues and problems related to environmental indicators in the revised SEEA were summarized.

This paper is a follow up of the work started in Johannesburg. Following the conclusions of the London group meeting in Johannesburg, this paper will focus on the identification of key aggregates that can be derived from the standard tables that will be presented in Part I of the revised SEEA. For the section on indicators in Part III only a general outline is given which will have to be elaborated in a subsequent issue paper.

2. Conclusions from the 11th Meeting of the London Group, Johannesburg

During the London group meeting in March 2007 in Johannesburg the following conclusions regarding indicators in de revised SEEA were reached:

- There was a general consensus that indicators are an important outcome of the compilation of the accounts and should be included in the revised SEEA.
- Aggregates resulting directly from accounting identities should be presented as part of the standard (Part I). Aggregates, similar to GDP, are the direct result of the compilation of the accounts and are coherent and consistent over time.
- Indicators, including ratio indicators such as resource intensity and productivity indicators are applications of the accounts and should be discussed in Part III of the revised SEEA.
- While promoting a clear description of the strength inherent to the indicators derived from the compilation of the accounts (e.g. comparability and consistency), the London Group did not think that it was the Group's role to recommend a list of indicators. Rather it considered useful to provide an overview of the types of indicators that can be derived from the accounts and suggested to develop links with existing selected indicator lists in the Annexes.

3. Indicators in the revised SEEA

Following the conclusions of the London Group meeting in Johannesburg, in Part I accounting identities and tables will be structured in such a way that they will explicitly reflect the most important key accounting aggregates. These key-aggregates will also be identified and discussed in small paragraphs in the text. This accounting design is quite similar to that of the System of National Accounts (SNA). In the SNA economic transactions are ordered in such a way that the System provides in a systematic way a range of balancing items that are considered to represent meaningful aggregates for economic policy analysis.

Accordingly, there will be a strong link of indicators with the standard tables that will be included in the text of the SEEA Part I. Aggregates (or indicators) that can be directly derived from the standard tables will be identified and explained. Examples are the *net emission totals*, *total sum of waste recycled*, *national expenditure on environmental protection* or the *national saving net of total natural resource depletion*. In addition, some important indicators that can

be directly derived from individual tables by combining important aggregates will be pointed out, for example the *recycling rate of solid waste* and the *life length of an asset*. (Composite) indicators derived from combining data from *different* tables will not be discussed in Part I (see next paragraph). This will be the domain of SEEA Part III.

It is foreseen that in SEEA Part III a general discussion will follow on deriving indicators from the SEEA and their policy applications. This discussion may include the following issues:

- general introduction on indicators;
- aggregation issues, ratio indicators (such as eco-efficiency and productivity measures);
- comparisons with international indicator sets;
- indicators derived from economic analyses and modelling applications.

This SEEA restructure paper discusses the representation of key aggregates as they should be defined and embedded in the SEEA Standard accounts (Part I). This discussion also addresses the recommended units of account such as the global warming potentials. The selection of accounting units is crucial when for example addressing specific environmental pressures.

4. Physical flow accounts

Material flow accounts as presented in the current SEEA chapter 3 generate several key aggregates. This section discusses accounting aggregates from a conceptual framework perspective but also from the perspective of the various sub-accounts, namely EW-MFAacc, residual accounts, and the accounts for water en energy.

The basic representation of the material flow accounts are the physical supply and use tables, showing the origin and the destination of the different physical flows. Flows are recorded by type of material (products, natural resources, ecosystem inputs and residuals) and by economic activities (production branches, final use categories, flows with ROW). The conceptual framework provides a complete overview of all physical flows occurring between the economy and the environment, inside the economy and between the economy and the ROW. The complete set of physical flow accounts is given in table 3.12 (matrix representation) and table 3.13 (supply and use tables) of SEEA2003.

Table 1 of this paper lists the key aggregates that can be derived from the complete set of physical flow tables. There are, however, several problems associated with these key aggregates that makes them less suitable as important key indicators. First of all, the total material use by industries is subject to *double counting*. For example, natural resources are converted into products, and products are subsequently converted into other products etc. The total material use by industries is thus not a meaningful figure that can be used as an indicator. Similarly, the total material supply sums up in weight terms the supply of products and residuals, which gives no useful information either.

Table 1: Key aggregates that can be derived form the complete set of supply and use tables for physical flows.

	Key aggregate	Description
1	**Total material supply**	Total material supply of the economy
2	Total products	Total supply of products by industries and imports
3	Total residuals	Total residual supply by residents and ROW
4	Total industries	Total supply of products and residuals by industries
5	Total consumption	Total supply of residuals by consumption
6	Capital	Total supply of residuals by capital (land fill sites)
7	ROW	Total supply of products and residuals by ROW
8	**Total material use**	Total material use of the economy
9	Total products	Total material use of products by industries, consumption, capital formation and exports
10	Total natural resources	Total material use of natural resources by industries, consumption, and non residents
11	Total ecosystem inputs	Total material use of ecosystem imputs by industries, consumption, and non residents
12	Total residuals	Total material use of residuals by industries, capital formation, residents abroad and cross boundary flows
13	Total industries	Total material use by industries
14	Total consumption	Total material use by consumption
15	Capital	Total material use by capital formation
16	ROW	Total material use by ROW
17	Natural environment (=24)	Net accumulation of residuals in the national environment
18	**Net increase by consumption**	Consumer durables
19	**Net increase in capital**	Supply of residuals from landfill sites
20	**Net export of product**	Physical trade balance
21	**Net extraction by non-residents**	Net extraction by non-residents
22	**Net residuals by residents in ROW**	Net residuals by residents in ROW
23	**Net cross boundary outflow by env. media**	Net cross boudary outflow by env. Media
24	**Net accumulation of residuals in the national environment**	Net accumulation of residuals in the national environment

Secondly, there are several *aggregation issues*, which makes the aggregates less suitable for indicators. It is not useful to aggregate all residuals, as these will be emitted to different environmental media (soil, air, water) and will attribute to different environmental problems. Similarly, it is not so meaningful to aggregate all natural resource inputs (e.g. sand, crude oil, and groundwater). It is more helpful to look at supply and use tables for specific substances (energy resources, greenhouse gasses, solid waste, etc.), and derive meaningful indictors from these tables.

Concluding, the accounting identities within the conceptual supply-use framework do not directly provide the useful aggregates that can serve as significant indicators. It is more useful to discuss potential important key aggregates in the sections on specific supplementary accounts, such as the flow

accounts for residuals, energy, water, and economy wide material flow accounting. This will be done in the subsequent subsections.

4.1 Economy wide material flow accounts

Economy-wide material flow accounts (EWMFA) provide an aggregate overview in tonnes of annual material inputs and outputs to an economy, including inputs and outputs to and from the environment. EWMFA constitutes the basis from which several material flow based indicators can be derived. Table 2 gives an overview of these indicators. Indicators including hidden flows are not discussed here, as these hidden flows represent flows outside the SEEA's boundaries.

The main accounting identity underlying EWMFA is the following:

Import + Direct Extraction = Export + Direct emission + Material accumulation in the economic sphere

This identity shows that material flows within the economic system are not part of the EWMFA system in which the economic sphere remains basically a 'black box'.

The EWMFA type of indicators presented in table 2 are still under debate. The relationship between mass and environmental pressure is not constant and therefore the use of mass as a representative unit for environmental pressures is a fairly weak one. One the other hand it is argued that the total material consumption of an economy is a rough macro aggregate for the natural resource dependency of an economy. It is therefore proposed to a) include this short list of indicators in Part I and briefly point out the aggregation issues involved, which are b) more elaborately discussed in Part III of the revised SEEA.

Some of the EWMFA indicators listed in table 2 suffer from the same kind of double counting problems mentioned above. From this viewpoint the Direct Material Consumption indicator is conceptually sound and can for example be compared to GDP. If one wants to derive one key aggregate from EWMFA it is recommendable to put forward the Direct Material Consumption indicator. In addition, net additions to stock and the physical trade balance can be recommended as supplementary main aggregates.

Table 2: Indicators derived from the EWMFAcc system.

	Key aggregate	Units	Description
1	Direct material input	kg	Domestic extraction plus imports
2	Domestic processed output	kg	Total output of materials from the economy to the environment
3	Total material output	kg	DPO plus exports
4	Domestic material consumption	kg	DMI minus exports
5	Net additions to stock	kg	Physical growth rate of the economy
6	Physical trade balance	kg	Imports minus exports

4.2 Accounts for residuals

Physical flow accounts for residuals show the origin and destination of different types of pollutants or waste categories. The origin (supply) table distinguishes

between residuals originating from consumers, producers and other sources (landfills). The destination (use) table shows pollutants that are either reabsorbed by the economy or end up in the environment. The main accounting identity underlying the physical flow accounts for residuals is the following:

Transboundary inflow + gross emissions by residents = transboundary outflow + reabsorpion + accumulation on national territory

The supply and use tables for residuals provide several key-aggregates, namely 1) the gross emissions by residents, 2) the net emissions by residents, and the 3) net accumulation on the national territory. In addition the absorption or reuse of residuals provides important information on the recycling / reuse of materials. The net cross boundary flow shows whether residuals are imported or exported by environmental media (see Table 4).

The gross emissions by residents are equal to the total output of residuals caused by economic activities. A problem with this aggregate is that it may be subject to double counting. For example, waste generated by households and companies is collected and processed by the waste disposal industries. This industry also produces waste such as slacks and other residues which cannot be processed any further. So, this residual is double counted in the accounts.

Table 3: Net emissions by residents and net accumulation on national teritory, 2005.

	NO_x	SO_2	NH_3	P	N
	mln kg				
Emissions by consumers	66	1	9	13	125
Emissions by producers	518	149	126	58	597
Emissions by other sources	0	0	0	3	-6
Gross emissions by residents	584	150	135	74	716
Absorption by producers (-)	0	0	0	21	116
Net emissions by residents	**584**	**150**	**135**	**53**	**600**
Emission transfers from the ROW	203	133	24	16	342
Emission transfers to the ROW	575	126	71	15	483
Net accumulation on national territory	**212**	**157**	**88**	**54**	**459**

Source: Statistics Netherlands, 2006.

To prevent double counting, the gross emission by residents can be corrected by subtracting the amount of residuals that is reabsorbed by the economy (see table 3). For example, most of the solid waste produced by economic activities is recycled or burned in waste incineration plants. Only a small part of the waste contributes to the environmental burden with respect to landfills. So, the net emission by residents gives a better indication for the pressure of waste on the

environment. The correction for absorption by the economy only plays a role for emissions to water or the production of solid waste, and not for emissions to air as these are always directly emitted into the atmosphere[2].

Table 4: Key aggregates from the accounts for residuals.

	Key aggregate	Units	Description
1	Gross emissions	kg or equivalents	Total gross output of residuals caused by the national economy
2	Absorption	kg or %	Percentage (or total) of the residuals reused by economic activities
3	Net emissions	kg or equivalents	Gross emissions minus absorption / reuse
4	Net accumulation on national territory	kg or equivalents	Gross emissions plus/minus transboundary flows minus absorption /use
5	Net cross boundary outflow by env. media	kg or equivalents	Inflow of residuals from ROW minus outflow of residuals to ROW

When considering regional environmental problems, the net emissions by residents may not always be an appropriate indicator. For example, the SO_2 emitted by seagoing vessels will probably not very much contribute to local air pollution problems. This can be corrected for by subtracting the emissions caused by residents abroad and adding the emissions caused by non-residents on the national territory. However, it should be noted that these aggregate indicators are no longer consistent with National accounts definitions based on the resident principle. Also, these totals can simply be derived from the environmental statistics.

In addition, the net emissions by residents can be corrected by trans-boundary emissions not caused by economic activities. This gives the net accumulation on the national territory. These are for example the deposition of pollutants transported from abroad by air or the influx of water pollutants by rivers. For some environmental problems, such as acidification, these inputs from abroad may have an important contribution. By correcting for the import and export of these emissions, a better estimate can be made.

Pollutants may contribute to a different extent to certain environmental problems. For example, the emission of one kilogram methane contributes much more to the greenhouse effect than the emission of one kilogram of carbon dioxide. Aggregation based on scientific weights may provide useful indicators. A discussion on aggregation based on scientific weight and indicators, measured in equivalent units, should be included in Part I of SEEA.

4.3 Energy

The energy accounts can be compiled on different levels, namely a) gross energy accounts, and b) net energy accounts. The gross energy accounts are equal to the supply and use tables for energy products as described in the conceptual framework. As discussed, these flows are subject to double counting

[2] Possibly, the future storage of CO_2 in the subsoil has to be treated as absorption by the economy. This issue needs further elaboration in the revised SEEA.

as one kind of energy is converted into another. Consequently, aggregates from the gross tables (total gross energy supply or total gross energy use) are no useful aggregates for indicators.

The net energy accounts show all energy that is actually consumed for final purposes and imported (use table), and all energy that is extracted within a country and is imported (supply table). In contrast to the gross energy accounts, there is no double counting. The net energy accounts are a kind of economy wide material flow accounts for energy. Only energy entering the economy (imports and extraction) and energy leaving the economy (exports and energy use for final purposes) are recorded. The aggregation issue is not a problem as energy products can be aggregated according to their energy content (joules). The main accounting identity underlying the net flow accounts for energy is the following:

Imports + Direct Extraction = Exports + Final use + Energy losses due to conversions

Table 5 lists key aggregates from the net energy accounts that should be pointed out as useful indicators.

Table 5: Key aggregates from the energy flow accounts.

	Key aggregate	Units	Description
1	Total domestic energy extraction	Joule	The domestic extraction of all primary energy products (renewable and non-renewable).
2	Total energy requirement of the economy	Joule	Equals imports of energy products + domestic energy extraction This is also equal to the total net energy consumption + exports of energy products
3	Total net energy consumption	Joule	The total net energy consumption of the economy: final energy use + conversion losses
4	Percentage of renewable energy consumption	%	Renewable energy consumption as percentage of the total net energy consumption
5	Import dependancy	%	Imports of energy as percentage of the total energy requirement or net energy consumption

Water

SEEA-W provides a list of important indicators that can be derived from the physical flow accounts for water (Annex III). However, this list is mainly concerned with ratio indicators and thus should not be discussed in Part I. Here, we will only discuss the key aggregates that can be derived from the supply and use tables for water. The main accounting identity underlying the flow accounts for water is the following:

Total abstraction + Use of water received from other economic units = Supply of water to other economic units + Total returns + Water consumption

Table 6 lists key aggregates that can be derived from the physical flow tables for water (see also table 3.1 in SEEA-W). The total use of water and total

supply of water are subject to double counting and therefore less suitable as an indicator.

Table 6: Key aggregates from the water flow accounts.

	Key aggregate	Units	Description
1	Total water abstraction	m3	Total water abstraction by the economy (groundwater and surfacewater)
2	Total use of water received from other economic units	m3	Total water use supplied by other econoic units
3	Total water use	m3	Total water use by the economy (use of groundwater, surfacewater, tapwater, other water)
4	Total supply of wastewater to other economic units	m3	Supply of wastewater to sewerage
5	Total returns	m3	Total return of water to the environment
6	Reused water / total water supply to economic units	%	Percentage of water reused for economic activities
7	Total water supply	m3	Total water supply to the economy (supply of water to other economic units and to the environment)
8	Total water consumption	m3	Difference between total water supply and total water use

4.4 Monetary accounts (environmental expenditure and other environmental related transactions)

Key aggregates that can be derived from these monetary accounts are the total amounts, such as the total amount of environmental expenditure, the total amount of environmental taxes, the total amount of environmental subsidies, total value added of the eco-industries etc.

The most interesting indicators for these accounts, however, are ratio indicators such as the share of environmental taxes and environmental subsidies in the total amount of taxes, the share of environmental expenditure in the total intermediate consumption of companies, and the implicit tax rate for energy. As discussed, these ratio indicators should be discussed in Part III of the revised SEEA.

4.5 Asset accounts and depletion

The environment contains various resources including minerals, water, land and ecosystems. These resources provide essential functions to the economy, mankind and other forms of life. The use of these resources reduces their future capacity (temporarily or permanently) to provide these functions, and constitutes depletion.

With the exception of mineral and energy resources, all environmental resources are considered to be renewable. They can experience natural growth

and mortality, and if used sustainably they essentially have infinite lives[3]. Mineral and energy resources however, are considered to be non-renewable. Once they are used they are gone forever.

Table 7 gives an overview of the important accounting identities from the asset accounts (see also table 7.5 in SEEA-2003). For most natural assets changes due to transitions and other changes in stock level are less important aggregates.

Table 7: Key aggregates from the assets accounts.

	Key aggregate	Units	Indicator for
1	Opening stock	kg or monetary	Level of the resource available at the beginning of the accounting perios
2	Changes due to transactions	kg or monetary	Acquisitions/ gross fixed capital formation /changes in inventories
3	Additions to stock level	kg or monetary	Discoveries/ reclassifications / natural growth
4	Deductions from stock level	kg or monetary	Extraction / reclassifications
5	Other changes in stock level	kg or monetary	Catastrophic losses / degradation of produces assets / change in classification
6	Closing stock	kg or monetary	Level of the resource available at the end of the accounting perios

Suggested Depletion Indicators

In any attempt to apply the following list of indicators, it is important to understand the possible levels of aggregation that can occur. Indicators may be produced in respect of individual resources e.g. oil, gold, coal etc, or some degree of aggregation may be used e.g. depletion of non-metallic minerals (based on valuation?).

Higher level aggregation supports a 'headline' style of reporting, however resource specific information is potentially distorted or lost. One important way to express the economic significance of natural resources and natural resource depletion is by way of calculating natural resource depletion adjusted national accounts balancing items: domestic product, national income and saving. These adjusted balancing items provide an overview of the share of income or saving that is related to the value losses of natural resources due to extraction. It is expected that the calculation of natural resource depletion adjusting income and saving measuring will become part of the SEEA standard. For this purpose special tables will be introduced into the System that explain the scope of these SEEA balancing items and their mutual relationships. These adjusted national accounts balancing items are expected to serve as very important indicators for those economies that heavily rely on the exploitation of natural resources.

Lower level aggregation supports a more informed analysis of depletion, but requires more detailed supporting data. Ultimately the indicator needs to paint an accurate picture that is useful for policy purposes.

[3] Based upon the premise that a balanced environmental system is self-sustaining.

It is also worth noting the distinction between indicators for renewable resources and indicators for non-renewable resources. This division is a logical consequence of the inherent differences between renewable and non-renewable environmental resources described earlier.

All suggested indicators (table 8) use physical data to support the desired ratios. Physical data are more widely available than monetary data and provide the basis for powerful indicators of depletion.

Table 8: Indicators derived from the main aggregates for depletion.

	Indicators	Units	Description
	Renewables		
1	(Natural Growth - Harvest) / Opening Stock	Physical units, %	the gain or loss of stock over the period as a percentage of the opening stock
2	Harvest / Opening Stock	Physical units, %	The percentage of opening stock that was harvested in the period.
3	Natural Growth / Harvest	Physical units, %	Natural growth as a percentage of harvest.
4	Remaining Stock / Harvest	Physical units, years, %	the number of years remaining until exhaustion at the prevailing rate of harvest
5	Natural Growth / Remaining Stock	Physical units, %	The gain or loss of stock (through natural growth and mortality) as a percentage of the remaining stock.
6	Remaining Stock / Natural Growth	Physical units, years, %	the number of years it would take for natural growth (at current levels) to recreate the size of the remaining stock
	Non-Renewables		
7	Extraction / Opening Stock	Physical units, %	The percentage of opening stock that was extracted in the period
8	Remaining Stock / Opening Stock	Physical units, %	The percentage of opening stock that remains at the end of the period
9	Remaining Stock / Extraction	Physical units, years, %	Indicates the number of years remaining until exhaustion at the prevailing extraction rate

5. Conclusions

The system of environmental and economic accounting provides a range if important accounting aggregates which can logically be defined within the SEEA's accounting identities. One key recommendation made in this paper is that these main aggregates should be explicitly pointed out as potential indicators in Part I of the revised SEEA. For this purpose specific tables should be introduced to highlight these main accounting aggregates. Table 9 gives an overview of key aggregates from the physical flow accounts of which it is recommended that they should be explicitly exposed in the SEEA text of Part I. In Part III a more elaborate discussion on SEEA indicators and indicator analyses will take place.

Table 9: Overview of the key aggregates and derived indicators from the physical flow accounts recommended to be explicitly exposed in SEEA part I..

	Key aggregate or derived indicator	Units	Description
EWMFA			
1	Domestic material consumption	kg	DMI minus exports
2	Net additions to stock	kg	Physical growth rate of the economy
3	Physical trade balance	kg	Imports minus exports
Residual accounts			
4	Net emissions	kg or equivalents	Gross emissions minus absorption / reuse
5	Absorption / recycling	kg or %	Percentage (or total) of the residuals reused by economic activities
6	Net accumulation on national territory	kg or equivalents	Gross emissions plus/minus transboundary flows minus absorption /use
7	Net cross boundary outflow by env. Media	kg or equivalents	Inflow of residuals from ROW minus outflow of residuals to ROW
Energy accounts			
8	Total domestic energy extraction	Joule	The domestic extraction of all primary energy products (renewable and non-renewable)
9	Total energy requirement of the economy	Joule	Equals imports of energy products + domestic energy extraction. This is also equal to the total net energy consumption + exports of energy products
10	Total net energy consumption	Joule	The total net energy consumption of the economy: final energy use + conversion losses
11	Percentage of renewable energy consumption	%	Renewable energy consumption as percentage of the total net energy consumption
12	Import dependancy	%	Imports of energy as percentage of the total energy requirement or net energy consumption
Water accounts			
13	Total water abstraction	m3	Total water abstraction by the economy (groundwater and surfacewater)
14	Total use of water received from other economic units	m3	Total water use supplied by other econoic units
15	Total supply of wastewater to other economic units	m3	Supply of wastewater to sewerage
16	Total returns	m3	Total return of water to the environment
17	Reused water / total water supply to economic units	%	Percentage of water reused for economic activities
18	Total water consumption	m3	Difference between total water supply and total water use

6. Future issues

- A discussion on indicators derived from hybrid accounts seems useful.
- The various chapters of Part I should include tables in which key accounting aggregates are explicitly exposed. A set of these tables should be developed.
- The same holds for indicators from monetary accounts.
- The explanation of the indicators and their applications in Part III (ratio indicators, indicators derived from analysis etc.) has to be worked out.

7. Questions for the London Group

1. Does the London group agree with the proposal presented in this paper to describe important key aggregates that can be directly derived from the standard tables in SEEA Part I and include a broader discussion on indicators and their uses in SEEA Part III?

2. Does the London group agree that key aggregates for physical flow accounts are best exposed in special tables or sub-accounts (and not directly from the conceptual framework)?

3. Has the London group additional suggestions for identifying key aggregates that could serve as building blocks for SEEA indicators**?**

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