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SEEA CF Update

Joint London Group & SEEA CF Technical Committee Meeting

Guidance note discussion : Issue A9.1 & A9.3 – Consistency with 2025 SNA – Natural Resources

9 September 2026

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Issue A9: Consistency with the 2025 SNA update issues

Issue description October 2024:

"In the 2025 SNA revision, several issues have been addressed in the area of natural capital and the environment, and the updated SEEA CF must consider the implications. The issues include a) Biological resources, b) Economic ownership / depletion natural resources, c) Treatment of emission trading schemes, d) Treatment of renewable energy resources as assets, e) Valuation of natural resources, and f) Distinction between taxes and services. In addition, there is a need to understand the implications of changes to the asset classification of the 2025 SNA, as there is a need for a harmonized asset classification for the SNA/SEEA from a SEEA perspective, i.e. the inclusion of natural resources / ecosystems / renewable energy resources etc. In addition, there may be overlaps in terminology between the SEEA CF and 2025 SNA which need to be clarified.

To ensure consistency with the SNA it should be investigated if the changes in the 2025 SNA have an impact on the SEEA. First an overall impact assessment of the proposed changes will be done. Based on this assessment, changes to the SEEA may be proposed. Some of the SNA changes do not impact the SEEA (i.e., cases where SNA will adopt SEEA 2012), but for other proposed changes there will be an impact. In addition, alternative (or additional) recordings may be proposed."

Approach to the drafting of A9 Guidance Note

- Clear that there are many issues to examine and considering all within one Guidance Note (GN) appears too challenging for processes of review and consultation
- Propose to apply a four stream approach:

  i. GN A9.1: Focus on **accounting for natural resources** and in co-operation with TT-D
     - Cover biological resources (including research agenda topics), economic ownership and depletion, renewable energy resources, valuation of natural resources, specific taxes and subsidies
     - Note treatment of radio spectra and atmosphere already covered in Issue D8

  ii. GN A9.2: Focus on **accounting for environmental transactions** and in co-operation with TT-C
     - Cover emission trading and emission permits, sustainable finance and climate offsets

  iii. GN A9.3: Focus on **classifications, terminology and definitions**
     - Cover SNA asset classification, terminology and definitions, statistical units

  iv. GN A9.4: **All other issues**
     - Cover recording of catastrophes, leasing of land, stranded assets, accounting for land, SUT/IOT globalisation, household electricity and sustainability data

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Accounting for depletion

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Recording the depletion of natural resources

- **Changes in the 2025 SNA**
  - The SNA has adopted the definition of depletion from the 2012 SEEA CF

    Depletion (P8), in physical terms, represents the decrease in the quantity of the stock of a non-produced natural resource over an accounting period that is due to the extraction of the natural resource by economic units occurring at a level greater than that of its growth. In monetary terms, it corresponds with the decline in future economic benefits, due to extraction in excess of its growth, that can be earned from a resource, the value of which is based on the physical flows of depletion using the price of the natural resource in situ.
  - The SNA has introduced the recording of negative depletion in the context of renewable resources
  - The SNA has introduced the concept of an underlying asset which may be depleted. For example, forest land may be subject to depletion (para 7.288)
  - The SNA includes depletion as a cost of production to be deducted in deriving net measures of production and income for the extractors of a resource
  - The associated OECD Compilation Guide discusses a range of issues about the concept and implementation of depletion following the 2025 SNA.

Accounting for depletion : Proposals (1)

- It is proposed that the updated SEEA CF clearly explain that the appropriate interpretation of the definition of depletion is that the <u>physical change in the stock</u> must be <u>due to the use of natural resources as inputs to economic activity</u> and may incorporate both <u>quantitative and qualitative changes</u>.

- It is proposed that this concept of depletion is explained in relation to each natural resource in the relevant sections.

- The GN also proposed an amended definition of depletion for consideration as part of the Global Consultation process
  - *Depletion, in physical terms, represents the using up of a natural resource due to the use of that resource as an input to economic activity. In monetary terms, depletion represents the decline in future economic benefits that can be earned from a natural resource as a result of a decline in the capacity of that resource to provide inputs to economic activity.*

Accounting for depletion : Proposals (2)

- It is proposed to include a discussion of the depletion of land in the updated SEEA CF but limiting the discussion of the depletion of land to agricultural and forest land.

- It is proposed that further discussion on recording depletion in the context of land use change in the context of the SEEA CF update link to discussion in the Eurostat Natural Resources Task Force and provide recommendations as part of a separate note on accounting for depletion and degradation

- It is proposed to advance the discussion of degradation in GN A9.4.

Accounting for depletion : Proposals (3)

- It is proposed to describe the measurement of the depletion of water resources in physical terms
- It is proposed that recommendations on the measurement of the depletion of water resources in monetary terms should be held over until the outcomes from that work are discussed.

- It is proposed that the SEEA CF should incorporate the additional considerations on measuring depletion for biological resources following the OECD Guide, in particular in discussing accounting for the depletion of timber resources and forest land.

- It is proposed that the SEEA CF should acknowledge more basic methods for measuring depletion for non-cultivated biological resources.

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Accounting for economic ownership

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Recording the economic ownership of natural resources

- **Changes in the 2025 SNA**
  - Introduction of the split ownership (asset) approach – where the value of an asset is allocated to economic units based on the share of expected economic benefits

- **Proposals**
  - It is proposed that the updated SEEA CF incorporate the split asset approach for the allocation of natural resource values to multiple economic owners of all natural resources, not only mineral and energy resources.
  - It is proposed to use the term "split ownership" approach in the SEEA CF to avoid an interpretation that the asset itself is being split in physical terms. At the same time, it is noted that the initial response from the ISWGNA was not in favour of changing the term.
  - To support compilers in applying the split ownership approach, it is proposed that the updated SEEA CF reference more detailed discussion proposed to be developed in the context of the update of the GFSM.

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Permits to use natural resources

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Permits to use natural resources

- **Changes in the 2025 SNA**
  - General treatment has changed to remove the option of recording permits as assets separate from the associated natural resource
  - All payments for the use of natural resources to be recorded as payments of rent unless there is the sale of an asset
  - For radio spectra, recording of a permits/licence as an asset separate from the natural resource remains an option.

- **Proposals**
  - It is proposed to review and update the text in Chapter 4 to align with the updated discussion in the 2025 SNA Chapter 27.
  - Concerning radio spectra - proposals will be considered in GN A9.4

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Valuation of natural resources

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Valuation of natural resources

- **Changes in the 2025 SNA**
  - Clarifications of core concept of exchange value
  - Inclusion of estimate of return to capital for non-market producers in the sum-of-costs approach
  - OECD Guide has more detailed guidance on NPV calculations and assumptions, including on the derivation of resource rent

- **Proposals**
  - Overall, incorporate developments in line with 2025 SNA
    - It is proposed that a more detailed review is undertaken of the associated descriptions and explanation of valuation of natural resources comparing the SEEA CF text and the content developed in the preparation of the 2025 SNA and the OECD Guide.
    - It is proposed to broaden the discussion in the SEEA CF to consider other approaches to the valuation of environmental assets using content from the OECD Guide and also update the discussion on measurement using NPV.
    - It is proposed to ensure that the description of specific taxes and subsidies aligns with the updated treatments in the 2025 SNA.
    - It is proposed that the SEEA CF should be updated to ensure that the explanation of the decomposition of the change in NPV reflects an ex post perspective.
    - It is proposed that some text be included in the updated SEEA CF to highlight any implications of the new sum-of-costs approach without providing an extensive discussion.

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Overview of Tranche #2 feedback

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A9.1: Outcomes from global consultation

Question	Yes	No	Not sure
Do you agree with the proposed description of depletion?	53	1	7
Do you agree to amend the SNA 2025 definition of depletion?*	31	23	7
Do you agree to describing the depletion of water resources in physical terms?	49	3	8
Do you agree to include the split ownership approach more fully?	51	1	9
Do you agree to use the term "split ownership" rather than "split asset"?	47	3	10
Do you agree to apply the 2025 SNA changes wrt permits to use natural resources?	49	4	8
Do you agree to apply various clarifications for accounting for natural resources?	55	1	5

A9.1: Key topics for further investigation

- Distinguishing depletion, degradation and other changes in volume by type of environmental asset
- Further guidance on the measurement of negative depletion
- Examining the implications of treating all payments for use of natural resources as rent on the recording of environmental taxes
- Clarifying existing and considering additional methods for the valuation of natural resources
- Describing approaches to dealing with negative estimates of resource rent (and their interpretation in accounting terms)

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Environmental assets and natural capital

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Environmental assets and natural capital

- **Considerations**
  - > Need for an "umbrella" term noting the role of such a term in external communications
  - > What is the appropriate definition – SEEA CF "environmental assets" or 2025 SNA "natural capital"
  - > Use of the phrase "naturally occurring" with regard to the inclusion of cultivated biological resources and certain ecosystem types
  - > Connections to the multiple capitals framework and the role of the SEEA CF

- **Proposals**
  - > It is proposed to ask through the Global Consultation whether the term "environmental assets" or the term "natural capital" should be used in the updated SEEA CF as the "umbrella" term for the measurement scope
  - > It is proposed to amend the definition of environmental assets to include explicit reference to the inclusion of cultivated biological resources.
  - > It is proposed to include in the updated SEEA CF a brief introduction to the multiple capitals/wealth accounting framework (referencing content from the 2025 SNA Chapter 2)

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Coverage of the term "natural resources"

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Coverage of the term “Natural resources”

- **Changes in the 2025 SNA**
  - At the top level of the classification of non-financial assets the 2025 SNA presents:
    - Produced non-financial assets (excluding produced natural resources)
    - Non- produced non-financial assets (excluding non-produced natural resources)
    - Natural resources
  - The asset class Natural resources now covers cultivated biological resources
  - Relative to the SEEA CF it also includes radio spectra and renewable energy resources

Coverage of the term “Natural resources” - Proposals

- Discussion and feedback has not been conclusive in terms of the appropriate coverage of the term natural resources with some experts preferring to stay with the current SEEA CF scope of natural resources and some preferring alignment with the SNA.

- To better explain the accounting for natural resources, it is proposed to introduce the following clarifications:
  - A full correspondence of asset classes between the 2025 SNA and the SEEA CF
  - A discussion of differences in the scope of measurement in physical and monetary terms
  - An explanation of the links between flows such as natural inputs and ecosystem services, particularly in the context of physical flow accounts.
  - A description of accounting for changes in ownership of environmental assets
  - A description of the continuum between environmental assets and economic assets
  - An explanation of the links to the derivation of indicators – e.g. those related to depletion.

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Classification of environmental assets

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Current SEEA CF Classification of (Individual) Environmental Assets

1	**Mineral and energy resources**
1.1	Oil resources
1.2	Natural gas resources
1.3	Coal and peat resources
1.4	Non-metallic mineral resources (excluding coal and peat resources)
1.5	Metallic mineral resources
2	**Land**
3	**Soil resources**
4	**Timber resources**
4.1	Cultivated timber resources
4.2	Natural timber resources
5	**Aquatic resources**
5.1	Cultivated aquatic resources
5.2	Natural aquatic resources
6	**Other biological resources** (excluding timber resources and aquatic resources)
7	**Water resources**
7.1	Surface water
7.2	Groundwater
7.3	Soil water

Compared to 2025 SNA:

- Land and soil resources are separated in the SEEA CF
- Biological resources are classified by type of resources and then into cultivated and natural
- Renewable energy resources are not a separate class – any value is incorporated into land values
- Radio spectra is not included

Classification of environmental assets - Proposals

- Given the similarities between the approach to classification of natural resources/environmental assets at the first level of the classification, it is **tentatively** proposed to retain the current SEEA CF classification noting:
  - The retention of the distinctive treatment of land as space in the SEEA CF
  - The potential for sub-classes of land, mineral and energy resources and biological resources to be reworked (next sections)
  - The potential to include a class for other natural resources pending the discussion on the treatment of radio spectra.

- It is also proposed to relabel the classification to be the "Classification of <u>Individual</u> Environmental Assets".

Classification of land

- In the 2025 SNA the asset land encompasses both land and soil
- The 2012 SEEA CF separates land (as space) and soil resources at the top level of the asset classification
- While accounting for soil in physical terms has conceptual merit (notwithstanding limited application in practice), measurement in stand alone monetary terms is not expected.
- Alternative characterizations of land as space are common in practice, most commonly expressed in physical terms.

Proposed land classes for SEEA CF
1. Land (monetary)
1.1 Land use (physical)
1.2 Land cover (physical)
1.3 Land ownership/tenure (by ISIC) (physical)
1.4 Soil resources (physical)

Classification of mineral and energy resources

Proposals

- The more detailed set of classes in the 2025 SNA for mineral and energy resources provides a generally richer set of information compared to the SEEA CF and it is proposed that these classes also be applied in the SEEA CF

- Advice is needed on whether to develop additional more detailed classes for mineral and energy resources, for example concerning critical minerals.

2025 SNA Classification of Mineral and energy resources

- AN32 Mineral and energy resources
  - AN321 Non-renewable mineral and energy resources
    - AN321S1 Coal and lignite resources
    - AN321S2 Oil and natural gas resources
      - AN321S21 Oil resources
      - AN321S22 Natural gas resources
    - AN321S3 Mineral resources
    - AN321S9 Other non-renewable mineral and energy resources
  - AN322 Renewable energy resources
    - AN321S1 Wind energy resources
    - AN321S2 Solar energy resources
    - AN321S3 Water energy resources
    - AN321S4 Geothermal energy resources
    - AN321S9 Other renewable energy resources

Classification of biological resources

Issue description

- The SEEA CF classifies biological resources by type of resource (timber, aquatic) and then by cultivated and non-cultivated status
- The 2025 SNA classifies biological resources by type of product produced : repeat products – e.g. wool, milk, apples, or once-only – e.g. meat, fish, timber.
- The SNA classification reflects (a) that the accounting treatments in the recording of output are different by type of product; and (b) that the SNA places a higher focus on agricultural activity compared to the SEEA.
- The classification in the 2025 SNA is similar to the classification of biological resources in the 2008 and 1993 SNAs which were not applied in the SEEA CF

Proposals

- It is proposed to retain the classification approach for biological resources in the current SEEA CF, i.e. by type of resource
- It is proposed to establish a correspondence between the SEEA CF and SNA classes of biological resources to support compilation and alignment.

2025 SNA Classification of Biological Resources

AN33 Biological resources
- AN331 Biological resources yielding repeat products
  - AN3311 Animal resources yielding repeat products
  - AN3312 Tree, crop and plant resources yielding repeat products
- AN332 Biological resources yielding once-only products
  - AN3321 Cultivated biological resources yielding once-only products
  - AN3322 Non-cultivated biological resources yielding once-only products
- AN333 Work-in-progress on cultivated biological resources
  - AN3331 Work-in-progress on cultivated biological resources yielding repeat products
  - AN3332 Work-in-progress on cultivated biological resources yielding once-only products

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Accounting for biological resources

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Accounting for biological resources

- **Changes in the 2025 SNA**
  - 2025 SNA has no change to the asset boundary in monetary terms – consistent with 2008 SNA and SEEA CF
  - No change to the accounting entries required for recording cultivated or non-cultivated biological resources
  - A change has been made in the criteria to apply in making the distinction between cultivated and non-cultivated biological resources to recognize cultivated resources where there is a clear "*continuum from intensive to extensive forms of control, responsibility and management*" (2025 SNA, para 11.208)
    - This change does not affect aquatic (fish) resources
    - This change means that all timber resources within scope of the SNA (i.e. economic assets) are treated as cultivated. Consequently,
      - The timing for the recording of output is changed for those timber resources previously treated as natural
      - The value of timber resources is recorded on the balance sheet as work in progress
      - No depletion of timber resources is recorded, instead it is recorded as changes in work in progress (forest land can be depleted)

Accounting for biological resources - Proposals

- It is proposed to ask through the Global Consultation whether to retain the current treatment in the SEEA CF concerning the criteria to be applied in distinguishing between cultivated and non-cultivated biological resources or whether to adopt the new criteria of the 2025 SNA.

- The text in SEEA CF 5.378-385 should be improved to make the distinction between timber resources and the underlying asset of forest land clear

- It is proposed that a description of the relevant accounting entries to link the asset accounts and the supply and use tables is included in the updated SEEA CF.

- It is proposed to add some limited text on accounting for agriculturally-related cultivated biological resources (livestock, orchards, crops, etc) in the current section on other biological resources and highlight the links to other documents (e.g. SEEA AFF).

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Treatment of renewable energy resources

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Treatment of renewable energy resources

- **Changes in the 2025 SNA**
  - Addition of a new class of natural resources – renewable energy resources
  - Extensive advice in the OECD Guide concerning the compilation of estimates

- **Proposals**
- Given that the value of renewable energy resources is already recognised as part of the environmental asset land in the SEEA CF 2012, it is proposed to align with the 2025 SNA and include renewable energy resources as a distinct asset class.

- It is also proposed to incorporate an explanation of the relationship between the concept of a stock of renewable energy resources and the definitions of environmental and economic assets.

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Overview of Tranche #2 feedback

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A9.3: Outcomes from global consultation

Question	Yes	No	Not sure
Do you prefer the term environmental assets compared to natural capital?*	43	10	7
Do you agree to use an amended definition of environmental assets rather than the SNA definition of natural capital?	43	9	8
Do you agree the term natural resources should exclude cultivated biological resources?*	25	27	8
Do you agree to retain the concept of land as space?	51	5	4
Do you agree to recognize soil resources as a characteristic of land?	50	6	4
Do you agree to the proposed revisions to the classification of environmental assets	General support		
Do you agree to retain the 2012 SEEA CF criteria to delineate between cultivated and non-cultivated biological resources? *	31	23	6
Do you agree to include renewable energy resources as a separate asset class?	54	2	4
Do you agree to apply various clarifications for accounting for natural resources?	57	1	2

A9.3: Key topics for further investigation

- Clarifying the implications arising from treating soil resources as a characteristic of land, particularly in relation to the depletion of soil resources (e.g. in forest land)
- Clarifying the conceptual basis for the proposed classification of land
- Clarifying the accounting for renewable energy resources in physical terms
- Consider the use of approaches to forestry management practice to support the delineation between cultivated and non-cultivated timber resources
- Consider developing criteria to explain variation from the 2025 SNA

DISCUSSION