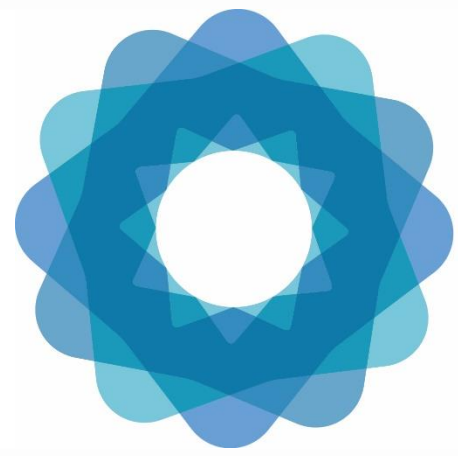




System of
Environmental
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SEEA CF Update

SEEA CF Technical Committee

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

17 November 2025



United Nations

Issue A9: Consistency with the 2025 SNA update issues

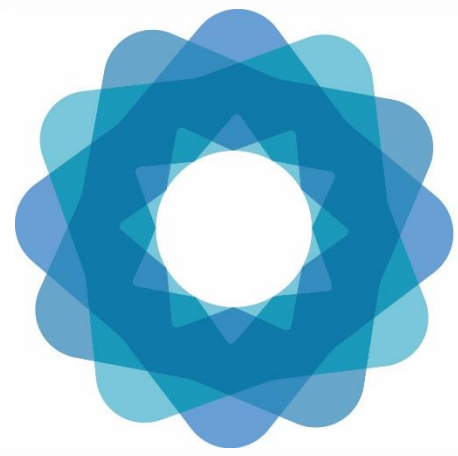
Issue description October 2024:

“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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Issue A9.1 : Natural resources



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Key changes on economic ownership and depletion of natural resources

Economic ownership and the depletion of natural resources:

- SEEA CF considers environmental assets from a physical existence entry point whereas SNA starts from an economic owner perspective.
- SEEA CF doesn't generally describe accounting for the value of assets to institutional units – i.e. it is economy-wide
- Generally speaking the 2025 SNA does not change the economy-wide value of natural resources
- Two main conceptual changes in 2025 SNA
 - > Split asset approach – matching the value of an asset to the share of expected economic benefits
 - > Depletion recorded as a cost of production against the extractor in the first instance then allocated to all economic owners

Proposals – split asset approach

- Since the split asset approach was already introduced in the 2012 SEEA CF, it is proposed to endorse the change in the 2025 SNA including its wider application beyond mineral and energy resources
- The series of accounting entries shown in SNA Table 27.1 should be further explained, in particular the rationale for the treatment of the transfer of value from legal owner to extractor as an other change in volume entry.
- Propose to reduce the discussion of the sequence of economic accounts as it concerns adjustments for depletion given the changes in the 2025 SNA.

Framing the definition of depletion

- The 2012 SEEA CF took an important step in linking the measurement of depletion with physical changes in the stock of natural resources and not only to the change in the net present value of the stock
 - > *“Depletion, in physical terms, is the decrease in the quantity of the stock of a 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 regeneration.” (SEEA CF, 5.76)*
- The SNA has adopted the same definition and also introduced the idea of an underlying asset which may be depleted. For example forest land may be subject to depletion (para 7.288).
- Generally, the discussion in the SNA (in Chapter 7) is closely aligned with the discussion of depletion in the SEEA CF Chapter 5 with a focus on patterns of growth in biological resources.
- The OECD Compilation Guide highlights a distinction between depletion and degradation in part in relation to the distinctions between the SEEA CF and the SEEA EA.
- Another distinction that has been identified is that depletion should refer to changes in quantity (i.e. less stock) and degradation should refer to changes in quality (i.e. worse stock).
- The focus of measurement of depletion for the SEEA CF and the SNA, is on changes in the stock that arise due to extraction/harvest by economic units (NB: there are also other changes in volume (OCV) to record). This focus means that measurement concerns the use of natural resources for generating income in scope of the SNA production boundary.
- Wider losses in benefits, including those “beyond the fence”, arising from changes in the physical stock of associated ecosystems are not considered.

Framing the definition of depletion

- Consider a generic notion of a combined or composite asset. This may have one component (e.g. coal, fish stocks) or multiple components (e.g. timber resources, forest land and soil resources).
- To frame the concepts and accounting entries we have the following model noting the aim to fully explain changes between opening and closing stocks (which are assumed to be known).
 - > Depletion could be set equal to entry A (current SEEA CF). Note for non-renewables A equals extraction and B is zero.
 - > Depletion could be extended to include entry B (to apply an interpretation of the 2025 SNA with respect to depletion of forest land)
 - > Entry B might also be referred to as degradation – however, following the wording of the 2025 SNA this might imply that it should not be included as a cost of capital arising from the use of the natural resources in production.
 - > Note that this model also can be applied for composite assets where a produced asset is involved (e.g. plantation timber or livestock). The difference is that entry A. is recorded as work in progress. The overall effect on net value added is unchanged.

	Opening stock	Changes due to extraction activity		OCV	Revaluations	Closing stock
Quantity changes (harvested resource)		A. Extraction less Growth				
Quality changes (composite asset)			B. Reduction in future harvests/extraction			

Framing the definition of depletion

- A specific variation concerns changes in land use – e.g. due to deforestation. In this case another change in quantity must be incorporated - **entry C**. The following treatments are proposed:
 - > The opening stock of land should refer to the area currently under “productive uses” – e.g. forest land, agricultural land, land for housing. In forestry this means *areas not available for wood supply* (FNAWS) are excluded.
 - a. A switch between productive uses (e.g. FAWS -> Ag) is recorded as an economic disappearance and appearance (OCV).
 - b. A switch from non-productive to productive (e.g. peatland -> Ag) is recorded as an economic appearance (OCV).
 - c. A switch from productive to non-productive (e.g. FAWS -> FNAWS) is recorded as an economic disappearance (OCV).
 - > Any stocks and changes in stocks of resources associated with the change in land use (e.g. timber resources) are recorded under row #1 (incl. entry A which is recorded as depletion attributed to the new economic activity (e.g. ag)). In case b. an economic appearance of the resources will also be needed.
 - > Entry B is only recorded in periods where the same land use is expected to continue into the future.

	Opening stock	Changes due to extraction activity		OCV	Revaluations	Closing stock
Quantity changes (harvested resource)		A. Extraction less Growth		New stocks of resources		
Quantity changes (land area)				C. Change in land area		
Quality changes (composite asset)			B. Reduction in future harvests/extraction			

Depletion – next steps

Proposals

- Pending discussion at the SEEA CF TC, it is proposed to
 - > Further articulate the options for recording depletion and degradation and reconcile the various perspectives, including through the use of numerical examples
 - > Examine further the implications for the sequence of accounting entries in the GFS for natural resources owned by government units
 - > Provide options for improving the definition of depletion or least the description of depletion
 - > Review Annex 5.1 on the decomposition of changes in NPV and the measurement of depletion
 - > Clarify whether depletion should be measured for all natural resources, including water
- In collaboration with the GFSM update process, describe the relevant considerations in determining the treatment of government units involved in the management of natural resources and hence the potential implications of including measures of depletion in estimating the output of non-market producers using the sum-of-costs approach

Treatment of biological resources

- 2025 SNA has no change to the asset boundary in monetary terms – consistent with 2008 SNA and SEEA CF
- A change has been made in 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)
- Relative to the current discussion in the SEEA CF, the further discussion of accounting for timber resources highlights
 - > The description on the link between timber resources and forest land needs improvement, including clarification of the associated composite (underlying) asset
 - > The link between the value of the standing timber and the NPV of future rotations needs clarification
 - > The need to improve the description of the link between entries in the asset accounts and the supply and use tables
- A decision is needed on whether to apply the 2025 SNA boundary for cultivated biological resources or to retain the current SEEA CF approach
 - > There is extensive text in the SEEA CF and a number of table structures that would need to be changed to reflect this change in treatment.

Valuation of natural resources

- No fundamental changes to the conceptual basis for valuation in the 2025 SNA but a range of clarifications including:
 - > Definition of exchange values
 - > The inclusion of a return to capital in the valuation of output by non-market producers using the sum-of-costs
 - > Measurement of depreciation and capital services on produced assets; guidance on NPV and discount rates
- Some specific SEEA CF related issues require further investigation in collaboration with the GFSM update
 - > Definition of resource rent in relation to specific taxes and subsidies
 - > Treatment of taxes when there is a non-government legal owner
 - > Description of alternatives to the use of the net present value approach and the residual value method for estimating resource rent
- Need to consider the implications of the change in the sum-of-costs approach in the measurement of environmental expenditures

Treatment of individual environmental assets

Accounting for timber resources:

- Changes to cultivated / non-cultivated are fundamental but measurement scope unchanged
- Continue to reinforce the distinction between timber resources and forest land – already in SEEA CF
- Clarify the entries for depletion of forest land
- Recognise important developments in discussion of the valuation of timber resources and different methods
- Consider full accounting implications of cases where there are multiple beneficiaries of timber resources

Accounting for aquatic (fish) resources:

- No effect of changes to cultivated / non-cultivated allocation
- Use 2025 SNA to provide greater clarity around the treatment of quotas and the valuation of the resource and associated flows of rent
- Need to consider contribution of SEEA CF to recording data associated with non-resident fishing in EEZ

Accounting for renewable energy resources:

- 2025 SNA includes renewable energy resources as a distinct asset class
- SEEA CF has a discussion of recording relevant values but incorporates any additional resource rent into the value of associated land (SEEA CF para 5.225-234).
- Main question is whether these resources satisfy the definition of environmental assets.

Accounting for radio spectra:

- In 2025 SNA no change in treatment and so permit to use is still recorded as an asset. This does not apply to other natural resources
- Radio spectra not included as an environmental asset in SEEA CF
- Could be included to align scope with the 2025 SNA natural resources scope but treatment approach needs to be determined.

Questions