



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
STATISTICS DIVISION  
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System of  
Environmental  
Economic  
Accounting

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# SEEA Central Framework Update

## Draft Guidance Note

### Issue A9.1:

Consistency with the 2025 SNA update issues –  
Natural resource accounting concepts

## **SEEA Perspective**

Version for discussion at the SEEA CF Technical Committee meeting on 23 & 27 March 2026.

# GUIDANCE NOTE Issue A9.1: Consistency with the 2025 SNA update issues – Natural resource accounting concepts

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## Proposals for consideration by the SEEA CF Technical Committee

### Accounting for depletion

1. It is proposed that the updated SEEA CF clearly explain that the appropriate interpretation of the definition of depletion is that the physical change in the stock must be due to the use of natural resources as inputs to economic activity and may incorporate both quantitative and qualitative changes.
2. It is proposed that this concept of depletion is explained in relation to each natural resource in the relevant sections.
3. Feedback from the SEEA CF TC is requested in terms of whether to pursue the development of an alternative definition of depletion. On balance however, the drafting team would propose to align to the definition of the 2025 SNA to support consistency and connection across statistical standards.
4. 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.
5. It is proposed that the SEEA CF should acknowledge more basic methods for measuring depletion for non-cultivated biological resources.
6. Feedback from the SEEA CF TC is requested in terms of whether to pursue an investigation of the merits of changing the SEEA CF's concept of land as space to align with the SNA.
7. Pending further discussion, 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.
8. It is proposed to describe the measurement of the depletion of water resources in physical terms
9. 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.
10. 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 degradation
11. It is proposed to advance the discussion of degradation in a separate note.
12. It is proposed that the discussion of the sequence of economic accounts in SEEA CF Chapter 6 (Table 6.3) be significantly reduced and instead only introduce the topic of the sequence of accounts and, for details, refer compilers to the relevant sections of the 2025 SNA.

## Economic ownership of natural resources

13. 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.
14. 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.
15. To support compilers in applying the split ownership approach, it is proposed that the updated SEEA CF reference more detailed discussion to be developed in the context of the update of the GFSM.

## Permits to use natural resources

16. It is proposed to review and update the text in Chapter 4 to align with the updated discussion in the 2025 SNA Chapter 27.

## Valuation of natural resources

17. 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.
18. 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.
19. It is proposed to incorporate relevant content on the measurement of NPV from the OECD Guide in the updated SEEA CF.
20. It is proposed to ensure that the description of specific taxes and subsidies aligns with the updated treatments in the 2025 SNA.
21. 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.
22. 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.

## GUIDANCE NOTE Issue A9.1: Consistency with the 2025 SNA update issues – Natural resources

### 1 Introduction

1. The purpose of this Guidance Note is to provide guidance on the treatment of issue A9 “Consistency with the 2025 SNA update issues” in the update of the SEEA 2012 Central Framework (SEEA CF) with a focus on issues concerning natural resources.
2. The short description of issue A9 from October 2024 recognises a range of issues that concern the accounting treatment of natural resources. That description notes:

“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.”
3. There is a range of other issues concerning the consistency of the updated SEEA CF with the 2025 SNA that will be discussed in separate Guidance Notes. GN A9.2 will focus on accounting for environmental transactions and cover topics concerning emission trading and emission permits, sustainable finance, and climate offsets. GN A9.3 will focus on changes concerning classifications, terminology and definitions for natural resources. GN A9.4 will focus on all other issues and will include discussion of the recording of catastrophes, leasing of land, stranded assets, accounting for land, the treatment of the atmosphere as an asset, SUT/IOT globalisation, household electricity and sustainability data.
4. The updated 2025 SNA was adopted by the UN Statistical Commission in March 2025 and there is now a baseline version of the SNA that can be used for consideration of the issues raised above and any other issues of consistency that might be identified.
5. In determining the appropriate scope of this Guidance Note, it was identified that the 2025 SNA provides a complete list of changes from the 2008 SNA and also describes a research agenda from which some of the topics listed are relevant for consideration in the update of the SEEA CF. Further, as part of the SNA update process, the OECD led the drafting of a Compilation Guide concerning Measuring natural resources in the national accounts (referred to in this GN as the “OECD Guide”). The OECD Guide was published in late 2025. The content of the OECD Guide contains useful information to support the update of the SEEA CF.
6. In the development of the SEEA over the past 30 years there has been a consistent intent to apply the underlying accounting principles and rules of the SNA noting the potential for some differences in specific treatments such as concerning the recording of depletion. The general consistency in accounting across the SEEA and SNA allows data from both systems to be more

readily combined and hence support more comprehensive and integrated analysis of the links between the environment and the economy.

7. The SEEA CF was drafted using as its basis the treatments described in the 2008 SNA. As part of the update of the SEEA CF, the changes in the 2025 SNA must be considered to ensure ongoing alignment. This is particularly relevant at this time given the range of changes to the accounting for natural resources that were included in the 2025 SNA (noting that a number of these SNA changes were motivated by developments in the SEEA over the past 15 years).
8. The broad proposal for consideration under issue A9 is determining which changes reflected in the 2025 SNA should be incorporated into the updated SEEA CF. Whether all of the relevant changes in the 2025 SNA should be incorporated is to be determined but there is a strong expectation that the implications of changes to the SNA should be examined closely through the SEEA CF update process. With this objective in mind, this Guidance Note discusses:
  - a. whether the changes to the SNA concerning natural resources are of relevance to the SEEA CF update; and if so,
  - b. what changes to the SEEA CF might be needed.
9. The Guidance Note does not intend to open up for discussion the changes that have been adopted in the 2025 SNA. Thus, it is taken as given that the 2025 SNA is the definitive SNA treatment (although it is noted that some details remain under discussion, for example concerning the treatment of emission permits). The focus is therefore on the extent to which the treatment in the 2025 SNA should also be included in the SEEA CF update. To the extent that a different treatment may be applied in the updated SEEA CF, the rationale for this difference is discussed.
10. In this context, the general intent in the GN is to provide a rationale for any deviations from the 2025 SNA that the updated SEEA CF might apply including clarifying any implications that may arise from not aligning with the 2025 SNA. Relevant considerations include ensuring internal consistency and coherence across the SEEA CF and responding to users and policy needs.
11. A related matter concerns the role of the SEEA CF relative to the SNA, particularly in relation to accounting for natural resources. The 2012 SEEA CF provided significant additional discussion on a range of accounting issues compared to the 2008 SNA. While the 2025 SNA has expanded its discussion of certain aspects of environmental-economic accounting, there remains scope for the SEEA CF to provide additional detail and explanation of the 2025 SNA treatments, including in cases where the conceptual alignment between the SEEA CF and 2025 SNA is endorsed.
12. In parallel to the update of the SEEA CF, the Government Finance Statistics Manual (GFSM) is also being updated. There are a number of topics under discussion in the GFSM that are similar to those being considered in the SEEA CF update process, including the accounting treatments for natural resources. For both manuals, the treatments in the 2025 SNA are the underlying starting point. Since these update processes are occurring in parallel, the Guidance Note has been drafted collaboratively. However, at this stage, due to the differences in the accounting

solutions that need to be considered within the two communities, separate Guidance Notes have been prepared.

13. Ultimately, treatments in both manuals will be determined through related but separate decision-making processes and differences in treatment are possible. More generally, in light of the connections between the SEEA CF and the GFSM, including on issues other than natural resources, consideration will also be given to explicitly describing the connections (and any differences in treatment) in the introduction to the SEEA CF.
14. With a focus on natural resources, the Guidance Note considers the following issues and topics.
  - a. General introduction to accounting for natural resources (Section 2)
  - b. The depletion of natural resources (Section 3)
  - c. Recording the economic ownership of natural resources (Section 4)
  - d. The treatment of permits to use natural resources (Section 5)
  - e. The valuation of natural resources (Section 6)

## 2 Accounting for natural resources

### 2.1 General context

15. In considering the consistency between the SEEA CF and the SNA in accounting for natural resources<sup>1</sup> a key distinction lies in the difference between environmental assets and economic assets. In the SEEA CF, natural resources are a sub-set of environmental assets and have a measurement scope that is determined by the physical presence of the natural resource. The entry point for accounting in the SEEA CF is thus the existence of a physical stock<sup>2</sup> and the accounts record the size and value of a natural resource for a country (or other region) as a whole.
16. In the SNA, in line with the general definition of economic assets (2025 SNA, 4.98), natural resources must have both an economic owner and a flow of economic benefits to which the economic owner is entitled. As for all economic assets, the entry point for accounting for natural resources is thus an economic owner (an institutional unit) and their balance sheet.

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<sup>1</sup> Note that the SEEA CF and the SNA use the term “natural resources” to refer to a different but overlapping set of assets. In the SNA it covers all types of environmental assets in scope of the integrated accounts, in the current SEEA CF it refers to individual environmental assets but excludes land and all cultivated biological resources. The current SEEA CF also does not treat renewable energy resources as a separate asset and excludes radio spectra which are both natural resources in the 2025 SNA. In this paper the term natural resources is used in line with its “umbrella” use in the SNA unless otherwise explained. Issues of terminology and scope are considered in a separate Guidance Note: A9.3.

<sup>2</sup> The term physical is used in a generic sense to cover measures in non-monetary terms. In some instances, particularly concerning renewable energy, the physical substance of the stock will be less evident.

17. The SEEA CF's different entry point to accounting for natural resources allows it to apply a broader measurement boundary in physical terms than in monetary terms since there is no requirement to attribute all physical stocks to an economic owner.
18. However, in monetary terms the SEEA CF has applied the same conceptual measurement scope as the SNA – i.e. natural resources in the SEEA CF are economic assets following the SNA. Thus, if a natural resource has a value that is recorded in the SNA as an economic asset, then that same value should be recorded in the monetary accounts for that natural resource in the SEEA CF.
19. Generally speaking, the SEEA CF doesn't describe accounting for the attribution of this value to individual units – either to establishments (or industries) or to institutional units (or institutional sectors). The consequence is that the descriptions in the SEEA CF can be used to underpin an economy wide (S1)<sup>3</sup> value for a national balance sheet in the SNA, i.e. for the total value of a natural resource for a country, but they do not provide values for specific types of economic owners – by industry or institutional sector.<sup>4</sup> Thus, the accounts of the SEEA CF and SNA for single type of natural resource can be directly aligned at the aggregate (S1) level.

### 3 Recording depletion of natural resources

#### 3.1 Changes in the 2025 SNA

20. One of the most significant changes in the 2025 SNA is the recognition of the depletion of natural resources as a cost of production for the extractor of non-produced natural resources rather than recording depletion as an other change in the volume of assets. Related to this, the 2025 SNA places more prominence on presenting net measures of economic activity and wealth which adjust gross measures, such as GDP, for both depreciation (formerly known as consumption of fixed capital) and depletion.
21. The 2025 SNA has also updated its definition of depletion. The 2025 SNA 7.286 states

*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.*

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<sup>3</sup> S1 is the SNA code used to describe the total economy.

<sup>4</sup> While a disaggregation by economic unit is not described, there is increasing interest in spatial disaggregation of data, i.e., at sub-national level. Such disaggregations are not currently described in the SEEA CF but further discussion of this potential building on the spatial approach to accounting described in the SEEA Ecosystem Accounting is being examined as part of the SEEA CF update under issue A4.

22. This definition is a direct adaptation, with minimal change, of the definition of depletion in physical terms in the SEEA CF 2012 (SEEA CF 5.76) combined with the description of the measurement of depletion in monetary terms in SEEA CF 5.80.

*5.76 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.*

*5.80 Depletion can also be measured in monetary terms by valuing the physical flows of depletion using the price of the natural resource in situ. This step is explained in detail in Annex A5.1. It is noted that the monetary value of depletion is equal to the change in the value of the natural resource that is due to physical depletion.*

23. Conceptually, the 2025 SNA has thus incorporated the general approach to accounting for the depletion of natural resources presented in the SEEA CF 2012. The differences in the 2025 SNA reflect (i) the merging of the definitions in physical and monetary terms; and (ii) a small change to specify at the opening of the definition that depletion refers only to non-produced natural resources. This change in wording reflects a separate change in the 2025 SNA wherein the term natural resources now covers both produced (cultivated) biological resources and non-produced (non-cultivated) biological resources in the SNA and the SEEA CF, and only non-produced natural resources are subject to depletion. Cultivated biological resources may be subject to depreciation.

24. Following the definition of depletion, the 2025 SNA describes the application of this general definition to a number of resource types (2025 SNA 7.287-295). Key points are:

- a. For non-renewable natural resources depletion in physical terms is equal to the quantity of the resource extracted. Increases in volume, for example due to discoveries, are not treated as regeneration and hence do not offset measures of depletion.
- b. For non-cultivated biological resources yielding once-only products, such as fish resources, the equality in physical terms between depletion and extraction does not hold and regeneration of the resources must be considered. Thus, only the amount of extraction that is above the level of growth is recorded as depletion with the possibility for recording negative depletion if growth exceeds extraction.
- c. This assessment of the relationship between growth and extraction should however consider the dynamics of the biological resource, for example using biophysical models, and conceptually depletion should relate to changes in capacity of the resource to regenerate.
- d. In some cases, biological resources yielding once-only products, such as timber resources, may have an “underlying asset”, e.g. forest land which embodies the biophysical characteristics of the area in which the biological resource is located. This underlying asset can be subject to depletion, i.e. the underlying asset may have a reduced capacity to support the growth of the biological resource into the future.
- e. However, areas of land themselves and also renewable energy resources are generally not subject to depletion.

- f. Changes in the stock of a natural resource due to unexpected events (e.g. extreme weather) and which are not the consequence of the extraction of natural resources by economic units are not incorporated in the measurement of depletion.

25. In addition, and separately from recording depletion, the 2025 SNA recognises (2025 SNA 13.32) that changes in the stock of land, water resources and other natural resources that may be due to natural events, including forest fires and erosion, may be considered as degradation and should be recorded in the other changes in the volume of assets and liabilities account.

## 3.2 Implications for the SEEA CF and proposals

### 3.2.1 Current SEEA CF discussion of depletion

26. The 2012 SEEA CF mainly discusses depletion in Section 5.4 “Principles of asset accounting”. That section provides the definition presented above and a short description of some considerations in the measurement of depletion of natural resources (SEEA CF 5.81-5.87). Some of this text has been incorporated directly into the 2025 SNA (see 2025 SNA 7.287-290). The SEEA CF also encourages the measurement of net measures of income and wealth and presents a depletion adjusted sequence of accounts (see SEEA CF Table 6.3).
27. Generally speaking however, the discussion of the asset accounts for individual natural resources through SEEA CF Chapter 5 (e.g. for mineral and energy resources and timber resources) does not describe in any detail how the general concept of depletion might be measured for those resources. Further, the asset accounts themselves do not contain entries for depletion. Rather, the asset accounts present entries for all additions and reductions in stock such that the change between the opening and closing stocks for a resource can be fully explained. While the measurement of depletion will be associated with the entries for additions and reductions, it is not a simple derivation aside from extractions of non-renewable mineral and energy resources. It is noted however, that the further development of the measurement of depletion as discussed below has no direct implications for the asset accounts. That is, the entries for additions and reductions in the current asset accounts are not affected.
28. This situation reflects that the SEEA CF focused more directly on a balance sheet perspective of natural resources in physical and monetary terms rather than the integrated accounting that links stocks of natural resources to associated economic activity and the production and income accounts. The 2008 SNA had the opposite focus with primary consideration of recording economic activity rather than describing the links to the use of natural resources. Making the link between these two entry points culminates in the measurement of depletion.

### 3.2.2 Implications of the extended treatment of depletion in the 2025 SNA and proposals

29. While the conceptualisation of depletion in the 2025 SNA aligns with that in the 2012 SEEA CF, the richness of discussion required to bring the production and income accounts and the balance sheets tightly together and hence resolve the measurement of depletion for individual

resources is not yet evident in the SEEA CF. The text of the 2025 SNA provides a new starting point by incorporating and elaborating on the text of the 2012 SEEA CF. However, the text has left some measurement considerations unresolved.

30. As part of the process of updating the 2008 SNA, the OECD established an Expert Group on Natural Capital (EGNC) which examined a range of measurement issues for various natural resources and, in late 2025, the OECD Guide was published to support the implementation of the 2025 SNA recommendations with regard to natural resources and depletion. Based on this work and further discussion in the context of the update of the SEEA CF the following topics have been identified for consideration in the SEEA CF update.
31. First, it is necessary to clarify the **concept of depletion**. Depletion can be measured in physical and monetary terms and has been defined with this distinction in mind. Therefore, to support the appropriate interpretation of the current definition it is proposed to clarify in the updated SEEA CF that the underlying concept depletion reflects the using up of a natural resource due to the use of that resource as an input to economic activity. The effect of using up the natural resource is that there is a reduction in the capacity to generate economic benefits in the future. Thus, depletion is analogous to the concept of depreciation in relation to the using up of fixed assets.
32. In determining its definition of depletion, the 2012 SEEA CF established that depletion required a physical change in the stock due to extraction of the resource, i.e. it could not be purely a function of price change, the passing of time or due to other change in volume of the stock (e.g. discoveries, catastrophic loss). Unfortunately, the current definition can be readily interpreted as implying that the physical change is limited to changes in quantity. This is unfortunate since there are a number of contexts in which depletion can be envisaged which involve changes other than changes in quantity only. An immediate example is changes in the quality of forest land due to forestry activity that limits the potential size of future harvests (e.g. excess use of fertilizers affecting soil health). Another example is the change in the population structure of a fish stock due to poor harvesting practices that limits the future reproductive potential of the fish stock. These changes in quality of the stock that may arise due to economic activity satisfy the concept of depletion just outlined. At the same time, what would not be included in depletion is changes in the quantity or quality of the stock that are not due to extraction activity, for example reduction in fish stocks due to declines in water quality. These changes may be considered as degradation and are discussed further below.
33. The general challenge in describing depletion is that since there are differences in the physical characteristics of each natural resource and hence the application of the current definition may not be straightforward.
34. In light of this challenge, **it is proposed that the updated SEEA CF clearly explain that the appropriate interpretation of the definition of depletion is that the physical change in the stock must be due to the use of natural resources as inputs to economic activity and may incorporate both quantitative and qualitative changes**. All other physical changes, such as those due to catastrophic events, should be recorded as other changes in the volume of assets

and liabilities. Further, **it is proposed that this concept of depletion is explained in relation to each natural resource in the relevant sections.**

35. In addition to further explanation of the concept of depletion along the lines proposed above, consideration may also be given to whether the definition of depletion – as presented in the SEEA CF and the 2025 SNA – should be amended. Discussion has revealed that while some amendment may be appropriate in light of the refinement of the concept just described, there is likely a significant advantage for the SEEA CF to retain alignment with the 2025 SNA in terms of the wording of the definition. **Feedback from the SEEA CF TC is requested in terms of whether to pursue the development of an alternative definition of depletion. On balance however, the drafting team would propose to align to the definition of the 2025 SNA to support consistency and connection across statistical standards.**
36. Second, the application of the definition of **depletion in the context of biological resources** can be challenging in cases where biological resources are cultivated but, at the same time, part of a composite asset involving a non-produced natural resource. The most common example is plantation timber resources grown on forest land. Since cultivated biological resources are not subject to depletion but non-produced natural resources are, some care is needed in calculating and attributing depletion appropriately. The OECD Guide has considered these issues and described measurement options. **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.**
37. As a specific example of these additional considerations, the SEEA CF implicitly assumes that in the case of measuring depletion for biological resources, such as fish resources, some form of biophysical modelling should be undertaken. However, discussion in the EGNC showed that this is too difficult for most statistical offices. In fact, compiling physical asset accounts for individual fish resources is likely not possible. The OECD Guide therefore considers biophysical modelling a Tier 3 (= advanced) method and recommends more basic methods such as assessing (or using information about) the status of individual fish stocks to estimate asset life and use that information to derive estimates of depletion directly (section 5.3.2) Similarly, **it is proposed that the SEEA CF should acknowledge more basic methods for measuring depletion for non-cultivated biological resources.**
38. Third, the 2025 SNA does not discuss **depletion of agricultural land** explicitly although there is a recognised potential for soils on agricultural land to be depleted as a result of their use as an input to agricultural production, for example through loss of top-soil or loss of soil nutrients. Incorporating a discussion of this issue could be readily included in the SEEA CF. However, it must be recognised that the SEEA CF conceptualises land in a different way than the SNA. In the SEEA CF, land as an environmental asset reflects the space in which economic activities and environmental processes take place (SEEA CF para 5.239). Thus, in the context of agricultural land, the framing in the SEEA CF is that it is a composite asset comprising land (as space) and soil resources (see SEEA CF para 5.301). In the context of depletion, it is generally accepted that land as space cannot deplete in which case depletion of agricultural land would focus on the

depletion of agricultural soils. A similar framing applies in the context of the depletion of forest land.

39. In terms of alignment with the SNA it may be relevant to reconsider the current treatment of land in the SEEA CF and rather than treating land as space, to treat land as in the SNA whereby no distinction is made between land and soil. This may be beneficial in terms of
    - a. Alignment with the 2025 SNA
    - b. The lack of development of accounts for soil resources
    - c. Potentially reducing confusion between land as space and land accounts for specific characteristics of land such as land use and land cover.
    - d. The potential to establish more direct classes for land from an economic perspective – e.g. for forestry land or agricultural land following the OECD-UNECE 2015 compilation guide.
  40. While there may be some benefits of alignment, making a change to the current SEEA CF with respect to land likely requires a more extended discussion and consideration of the implications which has not been completed at this stage. For example, consideration is needed of the benefits of the SEEA CF approach in providing a stronger conceptual framing for the organization of spatial data that then supports linkages among different SEEA accounts, including ecosystem accounts. As well, the concept of land as space is a logical extension of the idea of composite assets that was presented in the SEEA CF and is now emerging in the 2025 SNA in the distinction between timber resources and forest land.
  41. **Feedback from the SEEA CF TC is requested in terms of whether to pursue an investigation of the merits of changing the SEEA CF's concept of land as space to align with the SNA.**
  42. Pending further discussion, **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.**
  43. Fourth, there may be **depletion of water resources** in specific contexts through over-extraction of water. The OECD Guide proposes to exclude the depletion of water resources from the scope of measurement by convention as the 2025 SNA does not explicitly discuss the valuation of these resources. In a SEEA CF context, given the measurement scope covers accounts in both physical and monetary terms, **it is proposed to describe the measurement of the depletion of water resources in physical terms** considering both renewable and non-renewable resources (e.g. closed aquifers). Initial considerations have been included in GN D4 on the treatment of water as a produced asset. It is also recognised that water resources are highly challenging to value consistently as larger scales and this topic is being considered under issue D7. **Thus, 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.**
  44. Fifth, in the context of recording other changes in the volume of assets and liabilities, the 2025 SNA 13.25 notes the potential for areas of land to be used for different purposes over time, i.e. **land use change, for example from agricultural land to land for housing.** It recommends that
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changes in the value of land due to such changes be recorded as changes in volume rather than revaluation. This treatment may be appropriate from the perspective of accounting for changes in land values which would be expected to increase when land use changes. However, in cases where such land use changes lead to losses of natural resources that might otherwise have been used in economic activity (e.g. in cases of deforestation), an entry for depletion may be considered appropriate. Work on measuring depletion in the context of land use change is underway as part of the work program of the Eurostat Natural Resources Task Force. **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 degradation (see next topic).**

45. Sixth, the **concept of degradation** is very closely related to depletion. There have been different descriptions of the links between these concepts in the SEEA Central Framework, the SEEA Ecosystem Accounting, the SNA and in the OECD Guide. There are different factors that need to be considered in reconciling these concepts in the different documents including:
- a. Measurement in physical and monetary terms
  - b. Changes in quantity and quality
  - c. The scope of benefits being accounted for (including the link to ecosystem services)
  - d. The extent to which the change is driven by economic activity undertaken by the owner of the environmental asset
  - e. The extent to which the change is expected or unexpected/one-off
  - f. Links to concepts of negative externalities
  - g. The relationship between the degradation of land and the degradation of ecosystems
46. **Given the range of factors, it is proposed to advance the discussion of degradation in a separate note** noting also the links to the development of GN A1 on the link between the SEEA CF and the SEEA Ecosystem Accounting.
47. Beyond these conceptual issues, it is recognised that the text in the current SEEA CF should be reviewed to consider any advances in the discussion and measurement of depletion for these resources, including in the 2025 SNA (paragraphs 7.286-294, 11.236-238) and as a result of the drafting of the OECD Guide.
48. As well, given the changed treatment of depletion in the 2025 SNA and the description of a full sequence of accounts that adjust for depletion as a cost of production, **it is proposed that the discussion of the sequence of economic accounts in SEEA CF Chapter 6 (Table 6.3) be significantly reduced. Instead, it is proposed that the SEEA CF introduce the topic of the sequence of accounts and the associated net measures of income and net worth in line with the related discussion in the 2025 SNA and, for details, refer compilers to the relevant sections of the 2025 SNA.**

## 4 Recording the economic ownership of natural resources

### 4.1 Changes in the 2025 SNA

49. The 2025 SNA has introduced the “split asset” approach for recording the value of natural resources (2025 SNA 4.92-95) in the institutional sector accounts of the integrated framework of national accounts. In effect, this treatment extends the approach to accounting for natural resources introduced in the SEEA CF. Thus, the 2025 SNA now measures the total value of a natural resource for a country (in a manner aligned with the SEEA CF) and then allocates – “splits” - that value to multiple economic units in cases where there is more than one economic unit entitled to a share of the benefits from the use of the resource. Commonly, the asset value will be split between the legal owner of the resource (often government) and the economic owner, i.e. the extractor of the resource.
50. The introduction of the split asset approach is linked to the changed accounting for depletion in the 2025 SNA. That is, since the total asset value is split between two economic units, the change in the balance sheet of each unit as a result of extraction or harvest of the resource will also be split. Consequently, depletion will be recorded against both economic units. However, since the depletion is recorded as a cost of production, the full value of the depletion is initially recorded in the production accounts of the extractor. Then a series of entries in the allocation of earned income accounts, the capital accounts and the other changes in assets and liabilities account is recorded to ensure that the change in the balance sheet position of each economic unit reflects the appropriate allocation of the depletion charge to each unit’s share of the future benefits.
51. The set of accounting entries is shown in 2025 SNA Table 27.1. A refined version of these accounting entries is presented in Annex 1. This version of the entries has been developed as part of the discussions for the updated European System of Accounts. It was recognised that the SNA table did not articulate clearly enough the link between the recording of depletion borne by the legal owner and the relevant balancing items for each account. Depletion borne by the legal owner in the updated presentation is now shown as being “below the line” i.e. such that the recording does not affect gross measures of income.

### 4.2 Implications for the SEEA CF and proposals

52. As noted in Section 2, when describing accounting for natural resources in monetary terms, Chapter 5 of the SEEA CF focuses on the total value of a resource for a country and does not generally discuss issues of allocation of value to institutional units or sectors. The exception to this concerns accounting for mineral and energy resources where section 5.5.5 (para 5.216-5.224) discusses the allocation of income from the extraction of mineral and energy resources. This discussion includes SEEA CF Table 5.10 which shows a series of entries for recording depletion adjusted measures of income and saving in a case involving a government unit and an extractor.

53. Since there is a clear alignment between the intent of the SEEA CF and the more complete description of the split asset approach in the 2025 SNA, **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.** This wider application of the principles of the split asset approach would complement the general SEEA CF focus on the measurement of the total physical stock and economy-wide value of individual natural resources. In addition, **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.**
54. In the context of updating the content of SEEA CF Chapter 5, it is proposed that the content of section 5.5.5 should be moved earlier in the chapter such that it explicitly applies to all natural resources and the content should also be updated to align with the discussion of depletion-adjusted entries in the 2025 SNA sequence of accounts, including updating SEEA CF Table 5.10.
55. To provide additional support for compilers, it is also proposed to incorporate, and where relevant extend, the discussion of the split ownership approach contained in the 2025 SNA to better explain the various accounting entries. The current 2025 SNA description of the accounting entries is limited to two paragraphs describing the stylised example presented in 2025 SNA Table 27.1. However, since compiling a sequence of accounts is not generally a focus for SEEA CF, to support compilers in applying the split ownership approach **it is proposed that the updated SEEA CF reference more detailed discussion to be developed in the context of the update of the GFSM.**
56. While many of the entries are relatively easy to explain based on the concept of splitting ownership on the basis of the share of future economic benefits, additional explanation is considered appropriate for the entries associated with recording the transfer of value from legal owner to economic owner. Specifically, it is noted that there were two options considered in the SNA update process for recording this transfer of value (i) as an other change in volume of asset and liability (OCV); or (ii) as a transaction in the capital account. The text in the 2025 SNA (27.62) suggests that the rationale for the transfer of value is that the legal owner is “foregoing part of the future resource rent”. The idea of “foregoing” may suggest a deliberate exchange of value and hence a recording as a capital transfer in the capital account may be considered appropriate.
57. To provide additional context for the use of option (i) in the 2025 SNA, it is proposed to include an extended rationale that highlights a general reluctance to record the transfer of value as a gift and to recognise that, especially in the case of mineral and energy resources, the transfer of value would likely relate to those resources for which permissions for extraction have already been granted or for which the existence is explicitly recognised by past monetary transactions. Consequently, it would be possible to either record the appearance of the resource in the accounts of the legal owner via the other changes in the volume of assets and liabilities accounts and then record a capital transfer or to, more directly, record the split ownership as an other change in volume. On balance, this second option has been preferred.

## 5 Permits to use natural resources

### 5.1 Changes in the 2025 SNA

58. The third significant change to the accounting for natural resources in the 2025 SNA concerns accounting for permits to use natural resources. The 2008 SNA introduced additional recording options to respond to the different ways in which economic units gain access to and extract natural resources. Three main alternatives are described all involving an “original” legal owner and an extractor. In the first alternative the extractor secures all of the rights and benefits to the resource and this is recorded as a sale of an asset. In a second alternative, the legal owner can extend or withhold permission to continued use of the asset from one year to the next. In this case a resource lease is established in which the extractor/lessee makes regular payments that are recorded as rent. The most common context for recording resource leases concerns land. Indeed, the 2008 SNA defines resource leases as applying in cases where the resource has an infinite life – i.e. cannot be depleted.
59. In the third alternative the extractor/user obtains access for an extended period of time and while the legal owner retains some rights the extractor has control over the resource. This third alternative gained prominence in the context of determining the accounting for mobile phone licences. The relevant section of the 2008 SNA (Chapter 17 Section Q) has extensive discussion focused on the treatment of these licences. The agreed treatment was to create a new asset separate from the resource itself that is a permit to use a natural resource that has value separately from the resource. The 2008 SNA considers the range of criteria relevant to distinguishing between these three alternatives, particularly between alternatives 2 and 3.
60. In the 2025 SNA the three alternative contexts for the extraction and use of natural resources remain the same but the treatment of alternative 3 where there is a balance of rights shared between economic units has changed completely. In short, the 2025 SNA removes the option to record a permit or licence to use a natural resource as a separate asset. Instead, all benefits arising from the use of the resource, whether they accrue to the legal owner or the extractor, are attributed to the resource itself and the total value of the resource is then split according to the share of benefits to the different owners. Further discussion on the implications of applying the split ownership approach are discussed in section 4.
61. The criteria to distinguish alternatives 2 and 3 remain the same and hence it would be expected that the total value on the balance sheet in any given context is unchanged under the new treatment. What is changed is that the asset held by the extractor is now a share of the value of the resource rather than a distinct economic asset (i.e. the permit).
62. The 2025 SNA also amended the definition of a resource lease such that it can apply to all natural resources not only those with an infinite life. This change resolved an inconsistency in the 2008 SNA where rent was described in para 7.153 as being paid under a resource lease but including payments related to sub-soil assets (7.159-160) which do not have an infinite life. Related to this change, the 2025 SNA also broadened the definition of rent.

63. In the 2025 SNA rent now covers to all payments/receipts related to the use of non-produced non-financial assets (regardless of their life span). Further, payments to government that may be referred to as royalties, sur-taxes or permits that concern the use of natural resources are now all treated as rent in cases where the government is an economic owner of the resource (see 2025 SNA paras 8.173 and 30.90b).
64. The outstanding issue in relation to the removal of the option to record permits to use natural resources as assets is that the treatment of the recording of radio spectra was not updated in view of this wider change. This inconsistency was only recognised late in the 2025 SNA revision process and is now an issue on the SNA / BPM research agenda.

## 5.2 Implications for the SEEA CF and proposals

65. In the 2012 SEEA CF, payments related to permits to use environmental assets, including natural resources, are discussed in Chapter 4. The treatment described is a summary of the relevant content in the 2008 SNA Chapter 17. In light of the changes to the 2025 SNA described above, **it is proposed to review and update the text in Chapter 4 to align with the updated discussion in the 2025 SNA Chapter 27.** Specifically, in Section 4.4.5 concerning permits to extract and harvest natural resources it is proposed to summarise the relevant SNA text in a similar style to the current SEEA CF, i.e. by type of resource. In addition, text on rent (SEEA CF paras 4.160-163) will be reviewed and updated. Section 4.4.5 also discusses permits for the use of the environment as a sink with a particular focus on accounting for emission permits. This topic, including accounting for these permits in physical terms, will be discussed further in both GN A9.2 and in GN D8 on recording the atmosphere as an asset. These GN will be discussed in tranche #3 of the SEEA CF update process later in 2026. The discussion of emission permits will also consider the ongoing discussion of this topic in the SNA community.
66. Since the SEEA CF does not focus on the compilation of accounts within an integrated framework, there is no expected wider implication for the accounts of the SEEA CF from implementing this change to align with the 2025 SNA. Indeed, from the perspective of accounting for natural resources, the change in the 2025 SNA to assign all resource value to the resource itself aligns directly with the approach to valuing natural resources described in SEEA CF Chapter 5.
67. The SEEA CF does not include accounts for the asset class “Permits to use natural resources” since this is not considered an environmental asset. Separately, the SEEA CF does not include accounts for the radio spectra although discussion on whether the SEEA CF should treat radio spectra as an environmental asset is ongoing and is discussed in GN A9.3.

## 6 Valuation of natural resources

### 6.1 Changes in the 2025 SNA

68. The ongoing discussion of monetary valuation in the context of ecosystem accounting revealed that the expression of national accounts valuation principles in the SNA could be improved to resonate with a wider audience than national accountants. With this motivation and with other revision issues in mind, the 2025 SNA clarified a range of valuation aspects related to natural resources including the definition of exchange values, the inclusion of an estimate for the return to capital for non-market producers in applying the sum-of-costs approach and the measurement of depreciation and capital services on produced assets. Also, the OECD Guide contains more detailed guidance on the use of the net present value (NPV) of future resource rents for valuing natural resources including the choice of discount rate and the rate of return to produced assets to be applied in deriving estimates of resource rent.
69. However, notwithstanding the rich discussions on the valuation of ecosystems since the release of the SEEA Experimental Ecosystem Accounting in 2013, and the more extensive discussion and application of valuation based on the use of the net present value approach, there have in fact been no changes in concept to the valuation approach to be applied in an SNA context for natural resources. As well, the SNA still favours the use of observed market values in the estimation of exchange values for inclusion in the accounts.

### 6.2 Implications for the SEEA CF and proposals

70. The valuation of natural resources and environmental assets has been a long-standing area of discussion in the SEEA community. The SEEA CF provides a statement on the agreed understanding of the appropriate valuation approaches for natural resources and land, in particular it aims to add detail to the discussion of the topic as presented in the 2008 SNA. In this regard, SEEA CF Chapter 5, Section 5.4 provides an extensive discussion of the principles and approaches to the valuation of natural resources in the context of the SEEA CF.
71. Since the finalisation of the SEEA CF in 2012, there has been a rich ongoing discussion on the valuation of environmental assets particularly as it concerns the valuation of ecosystem assets and the recognition of monetary values for ecosystem services for which there are no markets or for which there are no direct links to marketed goods and services. This discussion has involved many experts from national accounting and environmental economics and many aspects of valuation have been discussed. From a conceptual perspective, a particular area of discussion has been clarifying the relationship between exchange and welfare values.
72. However, since monetary valuation of individual environmental assets in the context of the SEEA CF is intended to align fully with the SNA, and since in terms of general principles there have been no changes to the recommendations in the 2025 SNA, then no changes to the principles of valuation in the SEEA CF for the valuation of these assets are proposed.
73. At the same time, it is clear that the discussion of implementing these valuation principles in an SNA context has raised issues that are not discussed in the SEEA CF. **Consequently, it is**
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**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.** The following issues are most critical.

74. First, alternatives to the use of the net present value approach to value natural resources have been further investigated. The 2025 SNA describes a hierarchy of valuation methods ranging from observed market prices, market-equivalent prices, valuation based on past expenses (such as the written down replacement costs), nominal value, indirect valuation and finally the present value of future economic benefits.
75. The SEEA CF introduces these principles and valuation hierarchy in Section 5.4.3 and discusses the NPV approach specifically in Section 5.4.4. Then, in section 5.4.5 it discusses approaches to measuring resource rent. However, in this section it only describes alternative approaches to measuring resource rent for the purposes of applying the net present value approach and does not consider other methods which could be used to measure the value of natural resources without using resource rent and NPV methods. Therefore, **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.** At the same time, in the valuation of natural resources, it is noted that the 2025 SNA places a much greater emphasis on reflecting the full economic significance of the total resource rent for a resource which may commonly be different from an implicit resource rent that is evident in payments to legal owners or reflected in a market price.
76. Second, there have been advances in discussion on the application of the net present value method, including concerning discount rates and rates of return to produced and non-produced assets used as inputs to extraction of natural resources, that should be considered in updating the SEEA CF, in particular Section 5.4.4. The main recommendations from the OECD Guide are presented below. **It is proposed to incorporate relevant content on the measurement of NPV from the OECD Guide in the updated SEEA CF.**

*When rights to exploit a natural resource have been allocated by an open competition process or when rights are transferable, the value paid by the extractor may provide a proper valuation of the resource (i.e. of the part covered by the right). It is however recommended to calculate and compare the resource rent with rent payments (when the contract is annual) and apply a threshold: if rent payments are on average more than 90% of the resource rent, it may be assumed that economic ownership remains with the legal owner and there is no need to split the asset between legal owner and extractor.*

*User costs of capital consist of two elements: depreciation and a net return to capital used in production. Capital used in production may include both produced capital and non-produced capital such as purchased goodwill and marketing assets, although the latter are often immaterial and/or difficult to measure. The scope of produced assets is restricted to fixed assets on practical grounds, unless the use of non-produced assets is expected to be material. NB: the SEEA CF Table 5.5 needs to be slightly amended to align with the SNAs broader focus on user costs of capital, not just produced assets.*

*For estimating the rate of return to capital, it is recommended to apply the “Everything but” approach, When applying the “Everything but” approach, the rate of return is obtained by dividing the net operating surplus of all economic activities minus the activities of the natural resources industry and minus the net operating surplus of non-market production, by the net fixed assets of the same set of activities and sectors.*

*Discounting: Market-related risk is assumed to be captured by the rate of return to fixed capital, rather than by the discount rate used for valuing natural resource assets. For the common stable real discount rate for calculating natural resource assets and depletion, it is proposed to use 2%. In case countries prefer to choose their own rates, the following applies: If a government-prescribed discount rate for valuing natural resources exists, apply this rate. Otherwise, the rate used should be a stable rate. The preferred option is an average yield of government debt securities (real), representing a risk-free rate; in light of the long asset lives of natural resources, the securities should have a maturity of at least 10 years; the average should be taken over the last 10 years (minimum). Another alternative would be to apply a social rate of time preference; here it is recommended to apply the so-called Ramsey formula as expressed in OECD (2009).*

77. Third, the definition of resource rent should be clarified in relation to the inclusion/exclusion of specific taxes and subsidies. As context, for the derivation of resource rent, the SEEA CF 2012 (Table 5.5) recommends that specific subsidies on extraction should be deducted from gross operating surplus (GOS) and specific taxes on extraction should be added to GOS before the user costs of produced assets used in extraction are deducted. This approach was also included in the 2025 SNA, Chapter 4, paragraph A32 which repeats the content of SEEA CF Table 5.5.
78. During the drafting of the OECD Guide it became clear that there was a lack of clarity about the definition of specific taxes and subsidies in the context of resource extraction. This included the need to consider the implications of a separate change in the 2025 SNA wherein certain taxes are to be treated as payments of rent<sup>5</sup>. The treatment of concessional loans and tax abatements/reliefs also needs to be clarified in this context. **It is proposed to ensure that the description of specific taxes and subsidies aligns with the updated treatments in the 2025 SNA.**
79. Fourth, in relation to specific taxes, in cases where there are multiple extractors or the legal owner of a natural resource is not the government, clarity is needed on the appropriate treatment of taxes in deriving resource rent and resource rent shares in order to implement the split ownership approach.
80. Specifically, the 2025 SNA does not explicitly discuss the situation when government is not the legal owner, noting that it is possible for other sectors i.e. S11, S12, S14 and S15 to be the legal owner. This raises the issue (discussed in OECD Guide (section 3.6)) of what to do in cases where there are what the SEEA CF calls specific taxes paid to government which would be recorded as taxes on production and imports (SNA D21 or D29) in the national accounts.

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<sup>5</sup> See <https://s-circabc.europa.eu/ui/group/ca7c9cc4-b473-4abc-8e95-263dcd57d79d/library/64dc8502-f8ee-433f-bd4e-27bdffcd914/details>

81. In the resource rent calculation, following the SEEA CF and assuming these payments do not constitute a payment of rent, such specific taxes would be added back in and therefore lead to a higher resource rent and asset value. However this additional value would not properly reflect the asset value to the legal (and economic) owners of the resource since the tax payments do not flow to them but to the government. The OECD Guide therefore recommends that when government is not the legal owner, it is not appropriate to correct for these types of specific taxes when deriving the resource rent. It is proposed to include this clarification in the SEEA CF.
82. Fifth, further review of the decomposition of the change in net present value presented in SEEA CF Annex A5.1 suggests the distinction between *ex-ante* and *ex-post* depletion needs to be better explained. In general, measuring the asset value of natural resources by applying the net present value (NPV) method requires estimating the stream of economic benefits expected to be earned in the future. Therefore, the stream of future extraction (depletion) should be used in expected or *ex-ante* terms. However, within a consistent and integrated measurement framework, when moving one accounting period forward, decomposing the change of natural resources stock between the opening and closing period into various flow components requires that depletion should be used in realized or *ex-post* terms, because at the end of the accounting period, all flows occurred during the period, such as discoveries, losses, and extraction (depletion), are already known. **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.**
83. Finally, a separate valuation issue concerns the potential effects of applying the new sum-of-costs approach for non-market producers from the 2025 SNA which now includes the costs of depletion. In the context of the SEEA CF, it is expected that this may have an impact on the measurement of environmental expenditures including environmental protection and resources management expenditure, given that many of these expenditures will be undertaken by non-market producers including general government and NPISH. This will need to be investigated further in particular by SEEA CF Task Team-C. **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.**

## 7 Recommendations on conceptual treatments

<<NB: This section has not yet been drafted pending discussion of the issues described in the preceding sections. It is intended that draft recommendations are developed at the November meeting of the SEEA CF Technical Committee and further refined ahead of Global Consultation.>>

## 8 Other considerations in advancing the issue

<<NB: This section has not yet been drafted. It is not expected that many additional considerations, for example in terms of indicators and compilation guidance, will be identified. However, connections to the GFS revision process items and the development of the SEEA CF research agenda will be incorporated. >>

## 9 References

2012 SEEA CF

2025 SNA

GFSM 2014

2025 SNA Guidance Note WS14

GFSM update, Notice of Decision 1.24 Distinction between taxes, services and other flows

## Annex 1: Extract from ESA 202X: FOLLOW UP ON NATURAL RESOURCES: RECORDING OF DEPLETION

1. The 2025 SNA Table 27.1 T-accounts shows the recording of depletion when ownership of assets is split between the extractor and the legal owner. In the production account depletion appears fully in the production accounts of the extractor. In the capital account it is shared between the extractor and that borne by the owner. This switch takes place in the allocation of earned income account, before we reach B.5n in the sequence of accounts, and is coded in 2025 SNA as D.42dep.

2. The sequence of accounts tables in Annex 3 of the 2025 SNA shows the D.42dep entry having an impact on B.5g at sector level (while no impact is to be expected for the total economy), like any other D.4 entry. At the meeting, the NAWG viewed this as an error, as the impact of depletion should be only on net measures, not gross measures.

### Example<sup>6</sup>

The legal owner of a natural resource is government (S.13). An extractor (S.11) has rights to exploit the natural resource against a payment of a fee (D45 rent) of 18.

In the opening balance sheet, government has a natural resource asset (AN.3) of 800. The extractor has a produced fixed asset (AN.1) of 200.

The production account covers the extraction activity of the extractor. It has output (P.1) of 110, intermediate consumption (P.2) of 10, remuneration of employees (D.1) of 30, resulting in gross operating surplus (B.2g) of 70. Depreciation of fixed assets (P.51d) is 30 and total depletion of the natural resource from the activities of the extractor is 20, so that net operating surplus (B.2n) is 20. For simplicity, the government has no related production shown in the T-accounts.

Rent (D.45) of 18 is payable (and paid in the same accounting period) by the extractor to the government and is recorded in the allocation of earned income account.

### Case 1 – No split asset

Assuming that the return to capital used for the extraction of the natural resource is 22<sup>7</sup>, **resource rent here is equal to 18**, i.e. B.2g (70) less depreciation (30) less return to capital (22). The government receives a rent of 18. This implies that the government appropriates 100% of the resource rent, and therefore retains 100% of the economic ownership of the natural resource.

S.11 extractor	S.13 natural resource owner
<i>Opening balance sheet</i>	

<sup>6</sup> NB: the example uses the codes in the pre-edit version of the 2025 SNA. These codes may be changed in the final version. Eurostat and OECD contacted the SNA editors to possibly change the code for depletion (P.8) (and other codes) with the aim of the same code for depletion throughout the whole sequence of accounts.

<sup>7</sup> And assuming for simplicity the absence of specific taxes/subsidies on extraction

A		L		A		L	
AN.1	200			AN.3	800		
AF.2	0			AF.2	0		
		B.90	200			B.90	800
<b>Production and generation of earned income account</b>							
Expenditure		Revenue		Expenditure		Revenue	
		P.1	110				
P.2	10						
D.1	30						
B.2g	70			B.2g	0		
<i>P.51d Depreciation</i>	30						
<i>P8 Depletion</i>	20						
B.2n	20			B.2n	0		
<b>Allocation of earned income account</b>							
		B.2g	70			B.2g	0
D.45	18					D.45	18
B.5g	52			B.5g	18		
<i>P.51d Depreciation</i>	30						
<i>P8 Depletion</i>	20						
<i>D.42dep Depl. borne by the legal owner</i>	-20			<i>D.42dep Depl. borne by the legal owner</i>	20		
B.5n	22			B.5n	-2		
<b>Capital account</b>							
Δ Assets		Δ Liabilities		Δ Assets		Δ Liabilities	
B.8n Saving, net			22	B.8n Saving, net			-2
P.51d Depreciation	-30						
<b>P8+D42dep</b>	<b>0</b>			<b>P8+D42dep</b>	<b>-20</b>		
B.9 Net lending (+) / net borrowing (-)	52			B.9 Net lending (+) / net borrowing (-)	18		
<b>Financial account</b>							
Δ Assets		Δ Liabilities		Δ Assets		Δ Liabilities	
F.2	52			F.2	18		
		B.9f	52			B.9f	18
<b>Other changes in volume</b>							
Δ Assets		Δ Liabilities		Δ Assets		Δ Liabilities	
K.* (AN.3)	0			K.* (AN.3)	0		
<b>Closing balance sheet</b>							
Assets		Liabilities		Assets		Liabilities	
AN.1	170						
AN.3	0			AN.3	780		
AF.2	52			AF.2	18		

		B.90	222			B.90	798
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## Case 2 – Split asset

Assuming that the return to capital used for the extraction of the natural resource is 16, **resource rent here is equal to 24**, i.e. B.2g (70) less depreciation (30) less return to capital (16). The government receives a rent of 18. This implies that the economic ownership resources is split between the government who owns 75% of it (rent/resource rent=18/24) and the extractor who owns the remaining 25%.

Consequences:

1) Showing split ownership requires moving 25% of the value of the asset (=200) from the balance sheet of the government to the balance sheet of the extractor. The split asset recorded only in the absence of a market price, or evidence of a gift from government is recorded as an other change in volume.

Total depletion of 20 will be split between the extractor (for 25% of 20=5) and the government (for 75% of 20 =15). The value of the respective parts of the natural asset in the closing balance sheet is thus reduced respectively from 600 to 585 for the government and from 200 to 195 for the extractor.

2) 75% of depletion is borne by government. This means that the extractor has to shift 75% of the depletion to the legal owner. This shift is recorded in the Allocation of earned income account as an income transfer (as D.42dep). It should be recorded below B.5g, between B.5g and B.5n, as depletion only impacts on net measures, as shown in the table<sup>8</sup>.

While depletion borne by the legal owner (D.42dep) in the extractor’s Allocation of earned income account compensates with total depletion (P.8) and the two entries may be consolidated, it is important to show them separately for clarity of the process.

NB: the table proposed here describes a newly established agreement between the extractor and the government. If, on the contrary, the extraction had already been going on for several years before the current accounting period, with appropriation shares equal to 75% / 25 %, then the asset would already be split at the opening of the current period. There would be no need to record the “K\*” in the current period.

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<sup>8</sup> Currently, in the sequence of accounts annexed to the 2025 SNA, D.42dep is recorded above B.5g, as any other D.4 flow. Eurostat is flagging the issue to the SNA editors.

S.11 extractor				S.13 natural resource owner			
<b>Opening balance sheet</b>							
<b>A</b>		<b>L</b>		<b>A</b>		<b>L</b>	
AN.1	200			AN.3	800		
AF.2	0			AF.2	0		
		B.90	200			B.90	800
<b>Production and generation of earned income account</b>							
<b>Expenditure</b>		<b>Revenue</b>		<b>Expenditure</b>		<b>Revenue</b>	
		P.1	110				
P.2	10						
D.1	30						
B.2g	70			B.2g	0		
<i>P.51d Depreciation</i>	30						
<i>P8 Depletion</i>	20						
B.2n	20			B.2n	0		
<b>Allocation of earned income account</b>							
		B.2g	70			B.2g	0
D.45	18					D.45	18
B.5g	52			B.5g	18		
<i>P.51d Depreciation</i>	30						
<i>P8 Depletion</i>	20						
<i>D.42dep Depl. borne by the legal owner</i>	-15			<i>D.42dep Depl. borne by the legal owner</i>	-15		
B.5n	17			B.5n	3		
<b>Capital account</b>							
<b>Δ Assets</b>		<b>Δ Liabilities</b>		<b>Δ Assets</b>		<b>Δ Liabilities</b>	
B.8n Saving, net			17	B.8n Saving, net			3
P.51d Depreciation	-30						
<b>P8+D42dep</b>	<b>-5</b>			<b>P8+D42dep</b>	<b>-15</b>		
B.9 Net lending (+) / net borrowing (-)	52			B.9 Net lending (+) / net borrowing (-)	18		
<b>Financial account</b>							
<b>Δ Assets</b>		<b>Δ Liabilities</b>		<b>Δ Assets</b>		<b>Δ Liabilities</b>	
F.2	52			F.2	18		
		B.9f	52			B.9f	18
<b>Other changes in volume</b>							
<b>Δ Assets</b>		<b>Δ Liabilities</b>		<b>Δ Assets</b>		<b>Δ Liabilities</b>	
K.* (AN.3)	200			K.* (AN.3)	-200		
<b>Closing balance sheet</b>							
<b>Assets</b>		<b>Liabilities</b>		<b>Assets</b>		<b>Liabilities</b>	
AN.1	170						

AN.3	195			AN.3	585		
AF.2	52			AF.2	18		
		B.90	417			B.90	603

## Year 2

S.11 extractor				S.13 natural resource owner			
<b>Opening balance sheet</b>							
<b>A</b>		<b>L</b>		<b>A</b>		<b>L</b>	
AN.1	170						
AN.3	195			AN.3	585		
AF.2	52			AF.2	18		
		B.90	417			B.90	603
<b>Production and generation of earned income account</b>							
<b>Expenditure</b>		<b>Revenue</b>		<b>Expenditure</b>		<b>Revenue</b>	
		P.1	110				
P.2	10						
D.1	30						
B.2g	70			B.2g	0		
<i>P.51d Depreciation</i>	30						
<i>P8 Depletion</i>	20						
B.2n	20			B.2n	0		
<b>Allocation of earned income account</b>							
		B.2g	70			B.2g	0
D.45	18					D.45	18
B.5g	52			B.5g	18		
<i>P.51d Depreciation</i>	30						
<i>P8 Depletion</i>	20						
<i>D.42dep Depl. borne by the legal owner</i>	-15			<i>D.42dep Depl. borne by the legal owner</i>	-15		
B.5n	17			B.5n	3		
<b>Capital account</b>							
<b>Δ Assets</b>		<b>Δ Liabilities</b>		<b>Δ Assets</b>		<b>Δ Liabilities</b>	
B.8n Saving, net			17	B.8n Saving, net			3
P.51d Depreciation	-30						
<b>P8+D42dep</b>	<b>-5</b>			<b>P8+D42dep</b>	<b>-15</b>		
B.9 Net lending (+) / net borrowing (-)	52			B.9 Net lending (+) / net borrowing (-)	18		
<b>Financial account</b>							
<b>Δ Assets</b>		<b>Δ Liabilities</b>		<b>Δ Assets</b>		<b>Δ Liabilities</b>	
F.2	52			F.2	18		
		B.9f	52			B.9f	18

<i>Other changes in volume</i>							
<b>Δ Assets</b>		<b>Δ Liabilities</b>		<b>Δ Assets</b>		<b>Δ Liabilities</b>	
K.* (AN.3)				K.* (AN.3)			
<i>Closing balance sheet</i>							
<b>Assets</b>		<b>Liabilities</b>		<b>Assets</b>		<b>Liabilities</b>	
AN.1	140						
AN.3	190			AN.3	570		
AF.2	104			AF.2	36		
		B.90	434			B.90	606