

Meeting: International Public Sector Accounting
Standards Board

Meeting Location: Virtual Meeting

Meeting Date: June 15–18 and 22, 2021

Agenda Item 5

For:

- ☐ Approval
☒ Discussion
☐ Information

NATURAL RESOURCES

Project summary	The objective of the Natural Resources project is to research and address issues relating to the potential recognition and measurement of natural resources.	
Task Force members	<ul style="list-style-type: none"> • Lindy Bodewig, IPSASB Member (Task Force Chair) • Adrienne Cheasty, IPSASB Member • Neema Kiure-Mssusa, IPSASB Member • Patricia Siqueira Varela, IPSASB Member • Hironobu Takahashi, EY Japan • Marc Wermuth, IPSASB Member 	
Meeting objectives	Topic	Agenda Item
Project management	Natural Resources: Project Roadmap	5.1.1
	Instructions up to Previous Meeting	5.1.2
	Decisions up to Previous Meeting	5.1.3
Decisions required at this meeting	Description of Natural Resources, Living Resources, and Subsoil Resources	5.2.1
	Proposed Scope of Chapter 4 of the [draft] CP on Water	5.2.2
	Control of Water in its Natural State	5.2.3
	Revisions to Previously Presented Sections of the Draft Natural Resources Consultation Paper	5.2.4
Other supporting items	Extract from the [Draft] Natural Resources Consultation Paper: Introduction, Chapters 1-4, and Appendices A-D	5.3.1

**NATURAL RESOURCES:
PROJECT ROADMAP**

Meeting	Completed Actions or Discussions / Planned Actions or Discussions:
March 2020	1. Approval of Natural Resources project brief
June 2021	1. Phase 1: Development of comprehensive Consultation Paper (CP) covering Subsoil Resources, Living Resources, and Water
September 2021	1. Approval of Phase 1 CP
March 2022	1. CP comment period (four months ending January 2022)
December 2022	1. Phase 2: Development of Exposure Draft (ED) covering one topic from the comprehensive CP
March 2023	1. Approval of Phase 2 ED
September 2023	1. ED comment period (four months ending July 2023)
March 2024	1. Review of responses to Phase 2 ED
June 2024	1. Approval of Phase 2 Final Standard: Subsoil Resources

INSTRUCTIONS UP TO PREVIOUS MEETING

Meeting	Instruction	Actioned
March 2021	1. Draft a Preliminary View (PV) in the subsoil resources chapter on the decision to provide guidance on the cost of exploration, evaluation, development, and production activities. The PV will include the decision to provide guidance, potential options on how the guidance should be incorporated into IPSAS, and a Specific Matter for Comment (SMC) asking constituents for views on these options.	1. Added to chapter 2 of the CP. Also see Agenda Paper 5.2.3.
March 2021	2. Work with the Task Force to amend the draft CP to be more succinct.	2. Revised and restructured the CP. See Agenda Paper 5.2.3 and 5.3.1.
March 2021	3. Discuss the generic issue of exploited vs unexploited natural resources in the early section of the document and include proposals on this issue.	3. Incorporated into the revision of general description of natural resources and living resources. See Agenda Paper 5.2.1.
March 2021	4. Revise wording in the introduction regarding Public Financial Management (PFM) issues to be less specific about the potential structures used. Also remind readers of the IPSASB's overall objective is to strengthen PFM via adoption of IPSAS.	4. See Agenda Paper 5.2.3 and 5.3.1.
March 2021	5. Include forward references to later section on narrative General Purpose Financial Report (GPFR) information as an alternative to balance sheet recognition throughout the earlier chapters of the CP.	5. Incorporated into chapter 1 of the CP. See Agenda Paper 5.2.3 and 5.3.1.
March 2021	6. Amend subsoil resources roadmap diagram and incorporate unexploited resources into the logic flow of the life cycle. Also include a disclaimer that there are some aspects such as jurisdictional differences may not have been explained as the diagram is intended to only provide a general view. Integrate this better with the section to improve narrative flow.	6. Amended roadmap diagram and moved to Appendix C. See Agenda Paper 5.2.3 and 5.3.1.

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March 2021	7. Consider if certain sections, such as the background material on IFRS and GFS guidance and discussion on geological modelling, can be moved to an appendix.	7. Relocated sections to the appendices. See Agenda Paper 5.2.3 and 5.3.1.
March 2021	8. Clarify the drafting to note that for subsoil resources, "exploitation" refers to the extraction of the resources.	8. Incorporated into the explanatory paragraphs regarding the general description of natural resources. See Agenda Paper 5.2.1.
March 2021	9. Strengthen the text on the potential to recognize unexploited resources under the Conceptual Framework and solicit constituent feedback on whether they are aware of reasons to be more open to the recognition of unexploited subsoil resources.	9. Amended chapter 1 to provide more details on the Conceptual Framework and chapter 2, specifically SMC 1 and 2. See Agenda Paper 5.2.3 and 5.3.1.
March 2021	10. Consider and provide proposals on how conservation activities should be accounted for.	10. Incorporated into Appendix D. See Agenda Paper 5.2.3 and 5.3.1.
March 2021	11. Revise the Living Resources chapter to clarify and provide examples of what, if any, unexploited living resources might be capitalized under a Natural Resources IPSAS, instead of being accounted for under another IPSAS.	11. Incorporated into the amendments to Chapter 3: Living Resources. See Agenda Paper 5.2.3 and 5.3.1.
March 2021	12. Revise the structure of the chapter on living resources to be consistent with the subsoil resources chapter.	12. Incorporated into the amendments to Chapter 3: Living Resources. See Agenda Paper 5.2.3 and 5.3.1 (March 2021).
December 2020	1. Amend the example timeline on sovereign powers to clarify the principles and reflect the feedback from the CAG regarding the underlying resources and revenue recognition.	1. Added to Appendix A of the draft CP. Also see Agenda Paper 6.2.2 (March 2021).
December 2020	2. Amend the CP to capture the IPSASB's discussions on project scope and the decision to not provide guidance on broader public finance management issues, sustainability, and intergenerational equity.	2. Revised the introduction of the draft CP. Also see Agenda Paper 6.2.2 (March 2021).
December 2020	3. Develop a roadmap to clarify and illustrate where the Natural Resource project fits and to explain how it links with other IPSASB pronouncements.	3. Added to chapter 2 of the draft CP. Also see Agenda Paper 6.2.2 (March 2021).

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December 2020	<p>4. Clarify the analyses on:</p> <ul style="list-style-type: none"> ○ Whether unextracted subsoil resources are a resource, as defined in the Conceptual Framework; ○ Whether an entity can demonstrate control over unextracted subsoil resources; and ○ Whether unextracted subsoil resources can be reliably measured. Present the updated analyses to the IPSASB in March 2021. 	<p>4. Amended chapter 2 of the draft CP. Also see Agenda Paper 6.2.2 (March 2021).</p>
December 2020	<p>5. Develop an analysis on the potential incorporation of IFRS 6, Exploration for and Evaluation of Mineral Resources, into IPSAS literature and reconsider the Preliminary View on whether exploration, evaluation, development, and extraction activities are relevant to the public sector.</p>	<p>5. See Agenda Paper 6.2.1 (March 2021).</p>
September 2020	<p>1. Regarding sovereign powers:</p> <ul style="list-style-type: none"> ○ Clarify the distinction between the ability to issue licenses and the transaction of issuing licenses, and include more detailed consideration of when an asset could exist and be recognized ○ Include more detailed analysis of measurement considerations; ○ Use language that is consistent with other IPSASB projects; ○ Cross-reference to discussion of a similar issue in the Social Benefits project; and ○ Include an analysis sovereign powers, possibly in the Appendix to the CP. 	<p>1. Added to Appendix A of the draft CP. Also see Agenda Paper 6.2.2 (March 2021).</p>

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September 2020	<p>2. Regarding the informal survey:</p> <ul style="list-style-type: none"> ○ Expand introduction to provide more information regarding the purpose of the survey as well as information on surface and subsurface rights; ○ Add question regarding the current public sector accounting practices for unextracted subsoil resources in the jurisdiction; ○ Postpone the deadline to October 30, 2020; and ○ In addition to IPSASB members and technical advisors, circulate the survey to key jurisdictions where natural resources are significant. 	<p>2. The survey was revised and distributed to IPSASB members, technical advisors, and other key jurisdictions where natural resources are significant on September 24, 2020. The responses to the survey have been incorporated into Chapter 2 of the [draft] Natural Resources Consultation Paper.</p>
September 2020	<p>3. Regarding the draft consultation paper:</p> <ul style="list-style-type: none"> ○ Revise the draft introduction and chapter 1 for comments from IPSASB members; ○ In the analysis of sovereign powers, distinguish between sovereign powers in their own right from activities arising from the use of sovereign powers, and expand on the discussion of control and when an item can be recognized as an element; ○ Expand on the application of existing IPSAS guidance on costs (potential cash outflows). 	<p>3. See revised draft CP and Agenda Paper 6.2.2 (March 2021).</p>

DECISIONS UP TO PREVIOUS MEETING

Meeting	Decision	BC Reference
March 2021	1. Discuss exploration and evaluation expenditures, as well as development and production costs in the CP.	1. Discussion has been added to chapter 2 of the CP.
March 2021	2. Include a preliminary view proposing to provide guidance on cost of related activities subject to any specific IASB plans to revisit its current guidance in IFRS 6 and IFRIC 20.	2. Added to chapter 2 of the CP.
March 2021	3. Unextracted subsoil resources can be a resource as described in the Conceptual Framework.	3. Incorporated into SMCs within chapter 2 of the CP.
December 2020	1. Subject to the instructions from December 2020, the IPSASB agreed that the example timeline reflected the IPSASB's decision on sovereign powers from September 2020 and should be incorporated into the draft CP.	1. The example timeline has been included in Appendix A of the draft CP.
September 2020	1. The IPSASB decided that a government's sovereign power, in and of itself, does not meet the criteria for recognition as an asset.	1. Analysis has been included in Appendix A of the draft CP.
September 2020	2. The IPSASB approved the distribution of the subsoil resources legal framework survey to IPSASB members, technical advisors, and other individuals as identified by the staff.	2. The findings from the survey have been incorporated into Chapter 2 of the draft CP.
September 2020	3. Subject to instructions provided at the meeting, no major changes were proposed for the overall structure of the draft CP.	3. BC to be included in draft ED.
March 2020	1. Approved Natural Resources – Project Brief and Outline, subject to editorial and drafting changes as noted in instructions to staff. Initial focus should be on scoping, and a broad description can be developed later in the project.	1. BC to be included in draft ED.

Descriptions of Natural Resources, Living Resources, and Subsoil Resources

Question

1. Does the IPSASB agree with the proposed changes to the description of natural resources and living resources, as well as amendments to the explanatory text?

Recommendation

2. The Natural Resource Task Force (Task Force) recommends the IPSASB to:
 - (a) Include the proposed text to better explain the general description of natural resources in the Natural Resources Consultation Paper (CP);
 - (b) Amend the description of living resources and related explanatory text as proposed; and
 - (c) Leave the description of subsoil resources unchanged from the version presented in March 2021.

Background

3. At the March 2021 meeting, the IPSASB instructed staff to clarify the concept of what natural resources are considered exploited or unexploited. The staff and Task Force have addressed this instruction by revising and clarifying the descriptions of natural resource and living resources, as described in this paper.

Analysis

General Description of Natural Resources

4. The revised general description of natural resources and explanatory text can be found in paragraphs 1.11-1.20 of the draft CP. Based on discussions with the Task Force, staff recommend revising the general description of natural resources as follows:

“A natural resource can be generally described as an item which as the following attributes:

- (a) Is naturally occurring;
 - (b) Remains in its natural state; and
 - (c) Is a resource as described in the IPSASB’s Conceptual Framework.”
5. The above description and the explanatory text were revised to incorporate the following key concepts:
 - (a) **Origination of a Natural Resource:** As explained in 1.12 of the CP, “naturally occurring” means coming into existence without the actions of humankind. Natural resources are naturally occurring, the description should therefore clarify that they are items which are not produced or manufactured (not humanmade).
 - (b) **Avoiding the Term “Exploitation”:** When revising the general description of natural resources, the staff and Task Force agreed to move away from the concept of “exploitation” because the term is very broad and not well-defined or clearly understood. Some Task Force members noted that the term has a negative connotation which implies a certain level of unfairness. One Task Force member also noted that in certain languages, “exploitation” is often

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associated with only commercial or for-profit activities, which is not necessarily the case for the public sector. Moving away from the term “exploitation” resolves these issues.

- (c) **Remaining in Its Natural State:** The revised description focuses on whether the natural resource is still in its natural state, as an item is either in its natural state, or it is not. Whether an item remains in its natural state depends on whether it has been subjected to any human intervention, which the staff clarified to mean modifying the quantity and/or quality of a natural resource. This delineation moves away from the concept that there can be various degrees of human intervention, which will come into play when describing living resources (see discussion starting at paragraph 6 below). The staff and Task Force also added examples of what constitutes human intervention for subsoil resources, living resources, and water in paragraph 1.13 of the draft CP.
- (d) **Resource as Described in the Conceptual Framework:** The last attribute of a natural resource is that the item is a resource as described in the IPSASB’s Conceptual Framework. Staff have clarified that when the attributes are considered together, a natural resource is an item which is capable of generating economic benefits or service potential *but have not yet been subjected to human intervention*. This explanation further emphasizes the delineation between a natural resource which is still in its natural state and a resource is no longer in its natural state.
- (e) **The Unit of Account which has been Subjected to Human Intervention:** The staff also added paragraph 1.14 to explain that a natural resource is not taken out of its natural state in its entirety if only a part of the resource has been subjected to human intervention. This explanation was added to address situations where, for example, an uncultivated forest is still considered a natural resource if only a number of trees have been removed from the forest.
- (f) **Expanded Discussion of Related Activities:** The section on the general description has also been expanded to explicitly state that the costs of activities relating to natural resources are separate from the underlying resources themselves, and that certain costs may be within the scope of existing IPSAS depending on their nature. The previous version only noted that the costs of exploration, evaluation, development, and extraction of subsoil resources will be addressed in chapter 2 of the CP.

Description of Living Resources

- 6. Similar to the general description of natural resources, the IPSASB also instructed staff to clarify the concept of an unexploited living resource. Consistent with the reasoning noted in paragraph 5(b) above, the description of a living resource was revised to move away from the exploitation concept and focuses on whether the living resource is still in its natural state.
- 7. The revised description of living resources and the explanatory text can be found in paragraphs 3.1-3.6 of the CP. Staff recommend revising the description of living resources as follows:

“A living resource is described as a living organism (e.g., an animal or plant) which:

- (a) Is naturally occurring;
- (b) Remains in its natural state (i.e., the resource’s natural biological transformation has not yet been changed due to human intervention); and
- (c) Is a resource, as described in the IPSASB’s Conceptual Framework.”

8. The above description and accompanying text were revised to incorporate the following key concepts:

- (a) **Consistency with the General Description of Natural Resources:** The structure and tone of above description has been revised to be consistent with the revised general description of natural resources.
- (b) **Explanation of Human Intervention in the Context of Living Resources:** Further explanation has been added to clarify what is meant by human intervention for living resources. Unlike subsoil resources and water, living resources undergo biological transformation. Therefore, human intervention is not only limited to the extraction of the living resource. Any human actions which change a living resource's natural biological transformation will remove the resource from its natural state. The text has also been revised to incorporate the definitions of "biological transformation" and "harvest" from IPSAS 27, *Agriculture*.

The clear delineation between items which have or have not been subjected to human intervention is consistent with the distinction between cultivated and uncultivated (or non-cultivated) resources in International Statistical Standards.¹ Specifically, paragraph 10.182 of the System of National Accounts 2008 states that non-cultivated biological resources consist of "animals, birds, fish and plants that yield both once-only and repeated products over which ownership rights are enforced *but for which natural growth or regeneration is not under the direct control, responsibility and management of institutional units.*" [Emphasis added.] Items whose natural growth or regeneration has been directly controlled or managed are no longer considered non-cultivated resources.

- (c) **Addition of Examples of what would Remove a Living Resource from its Natural State:** As instructed by the IPSASB, paragraphs 3.4-3.6 have been revised to provide specific examples of actions which would remove a living resource from its natural state. These paragraphs also refer to appendix D, which explains the potential accounting for living resources which have been removed from their natural state.

Description of Subsoil Resources

9. The description of subsoil resources in paragraphs 2.1-2.2, as well as the discussion of the distinction between the underlying resource and costs of related activities in paragraphs 2.3-2.4 and appendix C of the CP, have not substantively changed from the previous version. The current description of a subsoil resource is as follows:

"The term "subsoil resources" broadly refers to all non-living natural items which occur within the earth, both in dry land and the seabed. Subsoil resources include metalliferous ore, such as mineral and metal deposits, and fossil fuels, such as petroleum, coal, and natural gas.

To be considered a natural resource in the context of this CP, the subsoil resource must be in its natural state—i.e., prior to its extraction. Once a subsoil resource has been extracted, it is no longer

¹ International Statistical Standards broadly refer to the guidance found in the System of National Accounts 2008 (2008 SNA) and the Government Finance Statistical Manual 2014 (GFSM 2014). Under both the 2008 SNA and GFSM 2014, natural resources consist of natural occurring resources such as land, water resources, uncultivated (or non-cultivated) forests and deposits of minerals that have economic value. See Appendix B of the draft CP for a detailed summary of the statistical guidance relating to natural resources.

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a natural resource for accounting purposes and will often be accounted for as inventory under IPSAS 12.”

10. The Task Force debated whether it was necessary to expand the description to follow the consistent three-pronged formulation as the general description of natural resources, as well as those specific descriptions used in the living resources and water chapters. Ultimately, the Task Force agreed that it was not necessary to revise the above description, as the term subsoil resource is already commonly used and well-understood by constituents. Furthermore, the above description sufficiently captures all the items that ought to be included when considering subsoil resources. As a result, the staff and the Task Force recommend that the description of subsoil resources be left unchanged.

Decision Required

11. Does the IPSASB agree with the Task Force’s recommendations?

Proposed Scope of Chapter 4 of the [draft] CP on Water

Question

1. Does the IPSASB agree that the scope of Chapter 4 of the Natural Resources Consultation Paper, is water in its natural state?

Recommendation

2. The Natural Resources Task Force (Task Force) and staff recommend that the scope of Chapter 4 of the Natural Resources Consultation Paper ([draft] CP) is water in its natural state and:
 - (a) Which should be described as a chemical compound composed of hydrogen and oxygen that exists in gaseous (steam), liquid (water), and solid (ice) states and:
 - (i) Is naturally occurring, free flowing and is found in various natural forms, such as rivers, streams, estuaries, lakes, natural fountains, springs, seas, and glaciers;
 - (ii) Remains in its natural state (and has not been extracted through human action); and
 - (iii) Is a resource, as described in the IPSASB's Conceptual Framework; and
 - (b) Water that has been removed from its natural state falls outside the scope of this [draft] CP. Water-related activities are separate from the underlying water and are addressed by existing IPSAS.

Background

3. Few jurisdictions have developed a set of standards on the recognition, quantification, presentation, and disclosure of water volumes.² However, these standards do not relate to financial reporting, as these standards are used to produce reports which track water volume levels and flows for management purposes. The Task Force and staff have developed chapter 4 on water in the [draft] Natural Resources Consultation Paper (CP), which proposes the following guidance for accounting for water in its natural state:
 - (a) Proposed description of water (see paragraphs 4.1-4.4 of the [draft] CP);
 - (b) Clarification of water-related activities (see paragraphs 4.5-4.10 of the [draft] CP);
 - (c) Application of the asset recognition criteria to water, including consideration of whether water in its natural state can be controlled (see paragraphs 4.11-4.20) of the [draft] CP; and
 - (d) Measurement and potential disclosures (see paragraphs 4.21-4.22 of the [draft] CP).
4. The following paper explains the proposed description of water and clarifies the treatment of water-related activities which relate to the scope of chapter 4 of [draft] CP. The application of the asset recognition criteria to water, including the consideration whether water is in its natural state is controlled and can be reliably measured and potential disclosures are discussed in [Agenda Item 5.2.3](#).

² The Australian Water Accounting Standards Board and the South African government have implemented a set of standards to monitor and track water.

Analysis

Proposed Description of Water

5. The Task Force and staff developed a description for water to provide a way to determine, what is, and what is not, within the scope of chapter 4. To develop the description of water in paragraphs 4.1-4.4 of chapter 4 of the [draft] CP, the Task Force and staff:
 - (a) **Obtained an Understanding of Water in Various Literature.** The Task Force and staff analyzed the broad definitions/descriptions of water in the financial reporting guidance of National Standard Setters including Discussion Paper (DP) 10, *Accounting for Living and Non-Living Resources*, Government Finance Statistics Manual and other relevant literature; and
 - (b) **Formulated a Description for Water.** Water is a chemical compound that comprise hydrogen and oxygen and exists in gas, liquid, and solid states and:
 - (i) Is naturally occurring, free flowing and is found in various natural forms, such as rivers, streams, estuaries, lakes, natural fountains, springs, seas, and glaciers;
 - (ii) Remains in its natural state (and has not been extracted through human action); and
 - (iii) Is a resource, as described in the IPSASB's Conceptual Framework.
6. The Task Force and staff note that the above description of water in paragraph 5(b) is complete and accurate for financial reporting purposes because it:
 - (a) Acknowledges that water is a chemical compound that comprise hydrogen and oxygen (H₂O) and can be transformed between gaseous, liquid, and solid states;
 - (b) Fits within the general description of natural resources in paragraphs 1.11 of chapter 1 of the [draft] CP it is, "naturally occurring" and "remains in its natural state";³ and
 - (c) Aligns with the Conceptual Framework which states that water is a resource because it generates economic benefits and service potential.
7. The Task Force and staff also clarified that determining whether water meets the description of natural resource should not be influenced by the structure in which water is held, but rather by the occurrence of an action whereby the water is extracted. The Task Force and staff view is that water in humanmade structures like a dam or reservoir is in its natural state if it has not been extracted and if its free flowing (evaporates, seeps into the water table, and increases from rainfall, etc.).⁴

³ Paragraph 1.13 of chapter 1 of the CP states that, to remain in its natural state, a natural resource must not have been subjected to human intervention and in general, human intervention are actions which modify the quantity and/or quality of a natural resource. Therefore, a natural resource such as water is no longer in its natural state and no longer in the scope of chapter 4 on water when it is extracted through human intervention. IPSAS 12, *Inventories* provide accounting guidance for extracted water.

⁴ Therefore, the natural state (quantity or quality) of water is not changed when it is held in humanmade structures. The quantity and quality of water changes when it is extracted by human intervention through filtration or when it is transported in pipes from the humanmade structure.

Clarification of Activities Around Water

8. The Task Force and staff noted that there are various activities relating to water (e.g., costs incurred to improve the quality of water through treatment). The Task Force and staff noted in paragraphs 4.5- 4.10 of the [draft] CP that these activities are distinct from water in its natural state. Such costs or expenditures incurred related to activities relating to natural resources are separate from the underlying resources and are outside the scope of the [draft] CP. Many of these costs are also already addressed by existing IPSAS.
9. Therefore, the accounting for the costs of activities, including the consideration of whether these costs should be recognized as an asset or expensed, depend on the specific nature of these costs and whether they fall within a specific IPSAS. For example, the costs incurred to construct the structures to hold the water are accounted for as property, plant, and equipment within the scope of IPSAS 17, *Property, Plant, and Equipment*.⁵
10. Based on the analysis, the Task Force and staff agreed the following PV regarding the description of water:

Preliminary View 6—Chapter 4

The IPSASB's Preliminary View is that water is chemical compound that is composed of the elements hydrogen and oxygen and exists in gaseous (steam), liquid (water), and solid (ice) states. This CP addresses the potential accounting for water that:

- (a) Is naturally occurring, free flowing and is found in various natural forms, such as rivers, streams, lakes, estuaries, natural fountains, springs, seas, and glaciers;
- (b) Remains in its natural state (and has not been extracted through human action); and
- (c) Is a resource, as described in the IPSASB's Conceptual Framework.

Based on the above description, only water, which has service potential or is capable of generating economic benefits and has not yet been extracted, is considered a natural resource.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons.

Decision Required

11. Does the IPSASB agree with the Task Force and staff recommendations?

⁵ The IPSASB has a project to replace IPSAS 17, *Property, Plant, and Equipment* with ED 78, *Property, Plant, and Equipment*.

Control of Water in its Natural State

Question

1. Does the IPSASB agree that for financial reporting purposes, water in its natural state cannot be recognized as an asset because it cannot be controlled?

Recommendation

2. The Natural Resources Task Force (Task Force) and staff recommend that:
 - (a) Water in its natural state cannot be recognized as an asset because it cannot be controlled; and
 - (b) Since water in its natural state has economic value, it should be disclosed in the financial statements and/or in an entity's General Purpose Financial Reports (GPFRs) using the IPSASB's Recommended Practice Guidelines (RPGs).

Background

3. Paragraphs 4.11-4.22 of the [draft] Natural Resources Consultation Paper (CP) set out the analysis performed to determine whether water in its natural state can be recognized as an asset under IPSAS. The analysis was structured in line with the asset recognition criteria from the paragraph 6.2 of the Conceptual Framework and focused on the following considerations:
 - (a) Can water in its natural state satisfy the definition of an element, in this case an asset? (See paragraphs 4.11-4.20 of the [draft] CP); and
 - (b) Can water in its natural state be measurable in a way that achieves the qualitative characteristics and takes into account constraints on information in the GPFRs? (See paragraphs 4.21-4.22 of the [draft] CP).

Analysis

Consideration of Control

4. The Task Force and staff discussed the control guidance and control indicators in paragraphs 5.11⁶ and 5.12⁷ of *The Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities* (the Conceptual Framework) and applied the control indicators to consider if an entity can control water in its natural state.
5. The Task Force and staff concluded that water in its natural state cannot be controlled because water is free flowing (mobile) and reduces or increases due to natural causes such as evaporation, rainfall, seepage into the water table, ocean currents, or other movement due to gravitational or tidal forces.

⁶ Paragraph 5.11 of the IPSASB Conceptual Framework states that an entity controls the resource if it has the ability to use the resource, or direct other parties on its use, or prevent other parties from using the resource so as to derive service potential or economic benefits embodied in the resource in the achievement of its service delivery or other objectives.

⁷ Paragraph 5.12 of the IPSASB Conceptual Framework states that the indicators of control include: (a) Legal ownership; (b) Access to the resource, or the ability to deny or restrict others to access the resource; (c) The means to ensure that the resource is used to achieve its objectives; or (d) The existence of enforceable right to service potential or the ability to generate economic benefits arising from the resource.

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6. The Task Force and staff noted that entities which hold licenses to extract water only control and access the water that is extracted⁸ and do not control the water that remains in its natural state. Therefore, water in its natural state cannot meet the definition of an asset and cannot be recognized in the financial statements under IPSAS.
7. In addition to concluding that water in its natural state cannot be controlled by an entity, the Task Force and staff noted that water in its natural state also cannot be reliably measured because of its free flowing nature (its volumes increase from rainfall and decrease because of evaporation or water seeping into the water table, etc.)

Disclosure Considerations

8. The Task Force and staff noted that even though water in its natural state does not meet the definition of an asset and is not reliably measurable, it has significant economic value which should be disclosed in the financial statements for financial reporting purposes and/or in the RPGs for broader reporting (see paragraph 4.22 of the [draft] CP and see [Agenda Item 5.2.4](#) for a detailed discussion on disclosure of natural resources).
9. Based on the analysis, the Task Force and staff agreed the following PV regarding the description of water:

Preliminary View 7—Chapter 4

The IPSASB's Preliminary View is that water in its natural state cannot meet the definition of an asset because it cannot be controlled and cannot be reliably measured. Therefore, water should not be recognized in the financial statements.

However, water in its natural state has economic value and should be disclosed in the financial statements or GPFRs.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons.

Decision Required

10. Does the IPSASB agree with the Task Force and staff recommendations?

⁸ Water that is extracted is accounted for as inventory in terms of IPSAS 12, *Inventories*.

Revisions to Previously Presented Sections of the Draft Natural Resources Consultation Paper

Question

1. Does the IPSASB agree with the changes made to the [draft] Natural Resources Consultation Paper (CP) to address the instructions from the March 2021 IPSASB meeting?

Recommendation

2. The Natural Resources Task Force (Task Force) has reviewed the actions to address the instructions and recommend the amendments as summarized in the analysis below.

Background

3. At the March 2021 IPSASB meeting, the IPSASB provided the staff with a number of instructions on the introduction, chapters 1-3, and appendix A. These instructions are summarized in [Agenda Item 5.1.2](#).
4. The following paper and appendix walk through the changes to the revised draft CP since the March 2021 IPSASB Meeting. The most significant changes are discussed within the body of the paper, while a full listing of all changes have been included in the appendix.

Analysis

General Recognition and Measurement Principles from the IPSASB's Conceptual Framework

5. The main accounting issue being addressed by the Natural Resources project is whether items that fit within the description of natural resources can satisfy the recognition criteria and measurement principles in the Conceptual Framework and be recognized as assets in the General Purpose Financial Statements (GPFS). The Task Force noted that it would be helpful to remind readers of the general principles set out in the IPSASB's Conceptual Framework. Therefore, paragraphs 1.24-1.61 were added to summarize the general recognition and measurement principles from the Conceptual Framework.

Consideration of Uncertainty on Recognition and Measurement of Assets

6. The Conceptual Framework also has specific guidance on how existence uncertainty and measurement uncertainty should be considered into the recognition and measurement of assets in the financial statements. As existence uncertainty and measurement uncertainty are often applicable to natural resources, a summary of this guidance has been added to paragraphs 1.50-1.55.

Disclosure of Information on Natural Resources in the Financial Statements and/or in the Broader GPFRs

7. The staff and Task Force noted that the GPFS might not be able to provide all of the information needed for management of natural resources if some resources cannot be recognized as assets within the principles of the Conceptual Framework. However, even if some natural resources cannot be recognized as assets, the Task Force acknowledged that the unrecognized resources may have significant economic value, and that information regarding these resources can be useful for transparency, accountability, and decision-making purposes.
8. The Task Force noted that information regarding natural resources could be provided in note disclosures in the GPFS or in an entity's broader GPFRs, particularly through application of the IPSASB's Recommended Practice Guidelines (RPGs). Therefore, a discussion on the potential use

Agenda Item 5.2.4

of the RPGs and narrative GPFR information regarding natural resources has been added to chapter 1. (See discussion beginning at paragraph 1.62 of the CP.)

Decision Required

9. Does the IPSASB agree with the Task Force and staff's recommended amendments to the CP?

Appendix: All Revisions in the Draft Natural Resources Consultation Paper

1. The following appendix summarizes all the revisions made to the draft CP since the March 2021 IPSASB Meeting.

Introduction and Project Overview

2. As instructed by the IPSASB, the staff revised the discussion of Public Financial Management (PFM) issues to be less specific about the potential structures used by entities and to remind readers of the IPSASB's overall objective to strengthen PFM through the adoption of IPSAS. These changes are reflected in paragraphs 7-8 of the CP.
3. In response to the IPSASB's instruction to restructure and streamline the CP, the discussion of IFRS guidance applicable to subsoil resources has been relocated to appendix C of the CP.

Chapter 1: Natural Resources: General Description, Recognition, and Measurement

4. **Key Change (Discussed in Agenda Item 5.2.1):** The section on the Proposed General Description of Natural Resources (paragraphs 1.1-1.20) was updated to provide more clarity on what it means for a natural resource to remain in its natural state and to better explain the concept of human intervention.
5. **Key Change (Discussed in Paragraph 5 Above):** Paragraphs 1.24-1.61 were added to summarize the general recognition and measurement principles from the Conceptual Framework.
6. **Key Change (Discussed in Paragraph 6 Above):** A summary of guidance on how existence uncertainty and measurement uncertainty should be considered in the recognition and measurement of an element has been added to paragraphs 1.50-1.55.
7. **Key Change (Discussed in Paragraph 7 Above):** A summary of the IPSASB's RPGs has been added to chapter 1 starting at paragraph 1.62 of the CP.

Chapter 2: Subsoil Resources

8. As instructed by the IPSASB, the illustrative timeline of the mining process, background materials on IFRS, and the discussion on geological modelling have been relocated to appendix C. Various paragraphs on the recognition and measurement principles from the Conceptual Framework were also streamlined to avoid repeating the information that is now presented in chapter 1.
9. **Key Change:** As instructed by the IPSASB, the previous Preliminary Views (PVs) on: (1) whether subsoil resources can meet the definition of an asset and (2) whether subsoil resources can be measured in a way that achieves the qualitative characteristics and takes account of constraints on information have been reworked into Specific Matters for Comment (SMC) to solicit constituents' views on these matters. A discussion of existence uncertainty has also been added to the section on whether subsoil resources can meet the definition of an asset. These changes have been reflected in paragraphs 2.21-2.38 of the CP.
10. A discussion of the potential disclosure of information regarding subsoil resources in the financial statements or broader GPFRs and an SMC on this matter have been added. (See paragraphs 2.39-2.40 of the CP.)
11. **Key Change:** A section on the accounting for costs of activities related to subsoil resources and the potential adoption of IFRS 6, *Exploration for and Evaluation of Mineral Resources*, and IFRIC 20,

Stripping Costs in the Production Phase of a Surface Mine, has been added. (See paragraphs 2.41- 2.45.) As instructed by the IPSASB, this section includes a PV on the decision to provide guidance on the costs of exploration, evaluation, development, and production activities based on the applicable guidance from IFRS, subject to any specific IASB plans to revise these standards. Also as instructed by the IPSASB, a separate SMC was included to ask for constituents' views on how this guidance should be incorporated into IPSAS.

Chapter 3: Living Resources

12. In general, chapter 3 has been restructured to be consistent with the chapter on subsoil resources. As a result of this change, the illustrative timeline on living resources, and the flowchart showing how living resources which have been removed from their natural state could be accounted for using existing IPSAS guidance, has been moved to appendix D.
13. **Key Change (Discussed in Agenda Item 5.2.1):** Paragraphs 3.1-3.6 have been amended to revise the description of living resources and provide examples of items which could be considered living resources.
14. **Key Change:** The majority of this chapter (paragraphs 3.7-3.26) has been streamlined to avoid repeating the general recognition and measurement principles from the Conceptual Framework, which are now discussed in chapter 1. A section on existence uncertainty has also been added to paragraphs 3.18-3.20.
15. **Key Change:** Additional text has been added to the CP related to how a living resource can be measured in a way which achieves the qualitative characteristics and takes account of constraints on information in the GPFRs. A section on measurement considerations, which discusses the potential measurement bases applicable to living resources, has also been added. A discussion of the potential disclosures of living resources within the financial statements or as supplemental information in the broader GPFRs was also added. See paragraphs 3.27-3.32.

Appendix B: International Statistical Standards Guidance

16. **Key Change:** This appendix was added to provide a summary of the guidance on natural resources from the international statistical standards, which include guidance from 2008 SNA and GFSM 2014. This appendix is currently a work-in-progress and will be revisited as the chapters are finalized in the CP.

Appendix C: Supplemental Information on Subsoil Resources

17. The subsoil resources "roadmap", private sector practices, and resource estimation practices from the private sector have been moved out of chapter 2 into appendix C. As instructed by the IPSASB, the roadmap has been amended to better incorporate subsoil resources in their natural state into the logic flow of the diagram and a disclaimer has been added to explicitly note that some aspects such as jurisdictional differences may not have been explained in the diagram. The roadmap has also been revised to include the pre-exploration stage when the legal framework to issue licenses would have been set up, along with a reference to the discussion of this stage in appendix A.

Appendix D: Supplemental Information on Living Resources

18. Similar to the subsoil resources "roadmap", a timeline of living resources held for harvest was added to illustrate the typical stages in the harvest of a living resource. The purpose of this roadmap was to

clarify the differences between the activities related to living resources and the underlying living resources themselves.

19. The previous draft of the CP included a flowchart on the interaction between items which are within the scope of existing IPSAS and living resources. This previous flowchart showed that items which are not property, plant, and equipment, biological assets, or inventory are living resources. However, this logic flow does not align with the description of natural resources or living resources, which starts with a natural resource or living resource in its natural state. As a result, the direction of the flowchart was revised to start with a living resource then show how existing IPSAS can be applied to the item once it has been removed from its natural state.
20. **Key Change:** At the March 2021 meeting, the IPSASB instructed staff to consider and provide proposals on how conservation activities should be accounted for. Staff noted that in some jurisdictions, conservation activities are considered agricultural activities within the scope of IPSAS 27, *Agriculture*, as such activities often involve managing an organism's biological transformation for the purpose of producing additional biological assets. This view has been added to paragraph D.4 as well as the flowchart on the interaction of living resources with existing IPSAS guidance in appendix D of the CP.

Extract from the [Draft] Natural Resources Consultation Paper: Introduction, Chapters 1-4, and Appendices A-D

1. The IPSASB Staff has included the introduction, Chapters 1-4, and Appendices A-D from the [draft] Natural Resources Consultation Paper. This version reflects the Natural Resources Task Force's detailed review of the [draft] Consultation Paper (CP). As the IPSASB had previously reviewed certain sections of the CP, attached document is colour-coded as follows to highlight the changes from the previous version:
 - (d) Text that has not changed from been the previous version is highlighted in grey. This includes text that was merely moved within the document or formatting changes and minor revisions for spelling or grammar which do not change the content of the text;
 - (e) Text that was previously presented to the IPSASB and updated is highlighted in yellow. ***Please note that only substantive changes have been highlighted;*** and
 - (f) New text that has not been previously presented to the IPSASB is not highlighted.

Consultation Paper
[October] 2021
Comments due: [January 31, 2022]

Natural Resources

This document was developed and approved by the International Public Sector Accounting Standards Board® (IPSASB®).

The objective of the IPSASB is to serve the public interest by setting high-quality public sector accounting standards and by facilitating the adoption and implementation of these, thereby enhancing the quality and consistency of practice throughout the world and strengthening the transparency and accountability of public sector finances.

In meeting this objective, the IPSASB sets IPSAS™ and Recommended Practice Guidelines (RPGs) for use by public sector entities, including national, regional, and local governments, and related governmental agencies.

IPSAS relate to the general purpose financial statements (financial statements) and are authoritative. RPGs are pronouncements that provide guidance on good practice in preparing general purpose financial reports (GPFRs) that are not financial statements. Unlike IPSAS RPGs do not establish requirements. Currently all pronouncements relating to GPFRs that are not financial statements are RPGs. RPGs do not provide guidance on the level of assurance (if any) to which information should be subjected.

The structures and processes that support the operations of the IPSASB are facilitated by the International Federation of Accountants® (IFAC®).

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REQUEST FOR COMMENTS

This Consultation Paper, *Natural Resources*, was developed and approved by the International Public Sector Accounting Standards Board® (IPSASB®).

The proposals in this Consultation Paper may be modified in light of comments received before being issued in final form. **Comments are requested by [MMM DD, YEAR].**

Respondents are asked to submit their comments electronically through the IPSASB website, using the “[Submit a Comment](#)” link. Please submit comments in both a PDF and Word file. Also, please note that first-time users must register to use this feature. All comments will be considered a matter of public record and will ultimately be posted on the website. This publication may be downloaded from the IPSASB website: www.ipsasb.org. The approved text is published in the English language.

Guide for Respondents

The IPSASB welcomes comments on all of the matters discussed in this Consultation Paper, including all Preliminary Views and Specific Matters for Comment. Comments are most helpful if they indicate the specific paragraph or group of paragraphs to which they relate and contain a clear rationale.

The Preliminary Views and Specific Matters for Comment in this Consultation Paper are provided below. Paragraph numbers identify the location of the Preliminary View or Specific Matter for Comment in the text.

Preliminary View 1—Chapter X (following paragraph X)

The IPSASB’s Preliminary View...

Do you agree with the IPSASB’s Preliminary View?

If not, please provide your reasons, the list, and why.

Preliminary View X—Chapter X (following paragraph X)

The IPSASB’s Preliminary View...

Do you agree with the IPSASB’s Preliminary View?

If not, please provide your reasons, and state what guidance should be included, and why.

NATURAL RESOURCES

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Introduction and Project Overview

Why is this Project Being Undertaken?

1. In 2018, the IPSASB issued its Strategy Consultation and requested comments on the proposed Strategy and Work Plan. Based on the responses from constituents and initial research, the IPSASB added the natural resources project to its 2019-2023 Work Plan.
2. The key reasons for adding the project were as follows:
 - (a) **Significance of Natural Resources** - Based on preliminary research, the IPSASB noted that natural resources account for a significant proportion of economic resources in many jurisdictions.¹ Therefore, the recognition of natural resources as assets could lead to information regarding the financial position of a public sector entity which is more faithfully representative of the underlying economic reality, particularly in jurisdictions with resource-based and resource-rich economies.
 - (b) **Need for Guidance** - Based on responses to the strategy consultation, the IPSASB noted a lack of guidance over the accounting of natural resources, as respondents were concerned that there is a gap in the IPSASB's accounting guidance on the recognition, measurement, disclosure, and presentation of natural resources.
 - (c) **Lack of Information for Decision Making** - Some constituents noted that governments often have little idea of the monetary value of natural resources until after they are exploited (i.e., extracted, harvested, or utilized), and that the rights to access such resources are normally granted beforehand to third parties who then profit from their exploitation. As a result of the lack of information, governments are perceived as being incentivized to sell as much natural resources as possible, often without regard to financial, environmental, sustainability² or intergenerational fairness, because the resulting revenues are recognized with little or no offsetting expenses. Therefore, from a public interest perspective, the recognition—or, if recognition in the financial statements is not possible, more general reporting—of natural resources is an important issue, as information about these resources prior to their extraction or other use should inform policy decisions.
 - (d) **Priority for Policies on Long-Term Environmental Sustainability** - In light of the growing concern for climate change, many governments and public sector entities are prioritizing sustainable management of the natural environment in the development of their policies. While this project does not directly address environmental sustainability or climate change, the development of an accounting standard for the recognition and measurement of some natural resources will provide better information that can be used to inform public financial management decisions and policy making.
3. To address the concerns raised by constituents, the objective of the natural resources project is to develop IPSAS guidance relating to the accounting—i.e., the recognition, measurement, presentation, and disclosure—of natural resources prior to their exploitation.

¹ The IMF October 2018 Fiscal Monitor highlighted that for the 31 countries included in the report, natural resource economic assets were equal to 38% of Gross Domestic Product.

² In the context of this paragraph, sustainability refers to balancing between environmental protection and economic development. This is a different concept from fiscal sustainability as described in RPG 1, *Reporting on the Long-term Sustainability of an Entity's Finances*.

What is the Scope of This Project?

4. This project focuses on the accounting for tangible, naturally occurring resources, including subsoil resources, living resources, and water in their natural state.
5. Other resources such as air and the electromagnetic spectrum may be considered natural resources in other contexts. However, these have been excluded from this project, as the issues raised by constituents relate to the right to access these resources rather than the recognition and measurement of the underlying resources:
 - (a) While it is common for some governments to sell air rights for the purposes of air travel or infrastructure development, these rights embody the ability to legally access the airspace in the jurisdiction, rather than exploiting the underlying air itself. In other words, the use of the airspace for air travel depends on legal and technological limitations rather than consumption of the underlying air. The accounting for these rights would more appropriately fall within the scope of IPSAS 31, Intangible Assets.
 - (b) The electromagnetic spectrum includes visible light, microwaves, and radio waves, which can be used for telecommunication purposes. It is common for governments to control the commercial use of the spectrum in its jurisdiction through licenses and similar mechanisms. Like air rights, control over the use of the spectrum relates to the legal right to access the spectrum, and any related accounting issues would more appropriately fall within the scope of IPSAS 31. In addition, the spectrum is uniquely different from other resources in that it does not have tangible form and the limits on its use arise from the related telecommunications technology rather than limits on consumption of the spectrum itself.
6. In addition, the accounting for land is also excluded from the project, as land is already within the scope of IPSAS 17, *Property, Plant and Equipment*. Furthermore, a government's sovereign power to issue licenses is excluded. While the exercise of sovereign powers can facilitate transactions which can result in the recognition of an asset, such an asset would arise from the transaction itself rather than from the sovereign power. This is further explained in Appendix A: Accounting for a Government's Sovereign Power to Issue Licenses.
7. During the IPSASB's preliminary outreach, some constituents advocated for the CP to include the discussion of broader public financial management (PFM) issues such as maintaining long-term sustainability of natural resources and preservation of intergenerational equity for citizens.
8. The IPSASB acknowledges that its overall objective is to strengthen PFM through increasing the adoption of accrual-based IPSAS, and that maintaining long-term sustainability and intergenerational equity are important. However, as these issues do not directly relate to accounting for natural resources, this CP will not provide guidance on these broader PFM issues. The focus of this CP is to propose preliminary views based on the IPSASB's Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities (Conceptual Framework) on the accounting of natural resources. Application of these preliminary views and the guidance included in future IPSAS related to these topics are likely to provide useful information for improving PFM.

Approach Taken in this Consultation Paper

9. The first chapter of the CP focuses on a general description of what is considered a natural resource in the context of this project. Chapter 1 will then summarize the existing general principles on recognition and measurement within the Conceptual Framework that could be applied to the three

in-scope natural resources, as well as guidance from the IPSASB's Recommended Practice Guidelines (RPGs). This chapter also further articulates the project's scope.

10. Applying the general principles from chapter 1, chapters 2-4 of the CP will outline the IPSASB's PVs on the recognition and measurement specific to each of the types of natural resources within the scope of this project. The PVs are:
 - (c) Formulated primarily from the application of the general recognition and measurement principles from the Conceptual Framework;
 - (a) Informed by existing IPSASB guidance; and
 - (b) Consider the natural resources-related practices in various countries, including any national public sector accounting guidance and the private sector practices.
11. Chapter 5 will outline any overarching issues, including the IPSASB's PVs on any additional information related to natural resources that may be useful to the users of public sector GPFRs. The chapter will also consider whether to such information will be best includes as disclosures in the financial statements or as supplemental information presented in an entity's broader GPFRs.

Application of the IPSASB's Conceptual Framework

12. For the in-scope natural resources, this CP first focuses on determining when a natural resource meets the criteria to be recognized as an asset. This analysis is performed by applying the definition of an asset and the recognition criteria as set out in paragraphs 5.6 to 5.13 of the Conceptual Framework. The recognition analysis also considers factors which are specific to each natural resource. For example, the analysis of the recognition of subsoil resources as an asset considers jurisdictional laws and regulations and whether the resources can be controlled by an entity in the context of the applicable legal framework.
13. If the IPSASB reaches a PV that an in-scope natural resource can be recognized as an asset, the next step is to consider the measurement principles, as set out in chapter 7 of the Conceptual Framework, to formulate PVs on which measurement bases most appropriately reflect a natural resource's operational capacity or financial capacity or the cost of related services. For example, a government entity may derive value from a subsoil resource by selling the underlying mineral reserves or by selling licenses to a private sector entity, who will then develop and extract the resource. These different approaches to the realization of the value inherent in the subsoil resource could result in the selection of different measurement techniques. The measurement analysis also includes the consideration of factors such as the availability of the information required to determine a measurement basis, the cost of obtaining such information, as well as the reliability of this information.
14. For instances where the IPSASB reaches a PV that a certain in-scope natural resource did not meet the recognition criteria, the natural resource would not be recognized as an asset. Therefore, the CP will not discuss the measurement of these natural resource in the financial statements.
15. However, certain information relating to the measurement of natural resources may be useful to readers of the financial statements. Therefore, chapter 5 will consider if such information could be presented as note disclosures within the general-purpose financial statements or as supplemental information within an entity's broader GPFRs, such as the information prepared using the IPSASB's RPGs.

16. The last chapter of the CP will also focus on overarching issues which may apply to all three in-scope natural resources. These include the consistency of PVs with existing IPSAS, as well as other current IPSASB projects such as the Conceptual Framework – Limited Scope Update project and the Measurement project.

Consideration of Other Existing IPSASB Guidance

17. The objective of this project is to develop an IPSAS that directly addresses the recognition, measurement, presentation and disclosure of natural resources. However, existing IPSASB literature may also be applicable and will be incorporated into the detailed analysis in chapters 2-5 of this CP.

IPSAS Related to Natural Resources

18. While there are currently no IPSAS that provide explicit guidance on natural resources, there are a number of existing IPSAS that do apply to items and activities which relate to natural resources. For example, there is guidance in IPSAS regarding property, plant, and equipment, which were acquired or constructed to develop or extract natural resources, or the costs incurred to extract natural resources. Other existing IPSAS provide accounting guidance for items that are recognized *after* a natural resource has been removed from their natural state. For example, the IPSAS on agriculture and inventory provide guidance on harvested living resources or extracted subsoil resources and water. At a high level, existing IPSAS guidance that may be applicable are as follows:
19. IPSAS 17 is applicable to the capital assets acquired or constructed to explore, evaluate, or develop natural resources, while IPSAS 31, *Intangible Assets*, is applicable to resource-related intangible assets such as exploration licenses acquired by an entity.³ IPSAS 32, *Service Concession Arrangement: Grantor*, is also applicable to certain arrangements where an unrelated entity is extracting natural resources on behalf of a public sector entity. In addition, IPSAS 12, *Inventories*, is applicable to extracted natural resources while resources whose biological transformation is actively managed falls within the scope of IPSAS 27, *Agriculture*. However, it should be noted that the above noted standards do not explicitly apply to the underlying natural resources when in their natural state.
20. IPSAS 19, *Provisions, Contingent Liabilities and Contingent Assets*, is applicable to provisions and contingent liabilities which arise as a result of a public sector entity's legislation, policies or decisions regarding natural resources. For example, a government may announce plans to decommission or rehabilitate unused mines or open pits. As another example, a government may provide funding to farmers or public sector landowners to preserve any uncultivated forests located in their properties in their natural state. Depending on the details of the announcement and how such plans are communicated to third parties, certain announcements may result in constructive obligations which would require recognition in the financial statements.
21. IPSAS 21, *Impairment of Non-Cash-Generating Assets*, and IPSAS 26, *Impairment of Cash-Generating Assets*, provide guidance on the recognition, and if applicable reversal, of impairment

³ The IPSASB has issued an ED 78, *Property, Plant, and Equipment*, which includes proposals to replace IPSAS 17, *Property, Plant, and Equipment*, with a standard that includes additional guidance on measurement, infrastructure, and heritage assets. See <https://www.ifac.org/system/files/publications/files/ED-78-Property-Plant-Equipment.pdf> for more details.

losses, as well as related disclosures. If natural resources are to be recognized as assets, these standards will provide guidance on the consideration of impairment for these assets.

IPSASB Guidance in Development

22. The IPSASB currently has a number of projects on its work program which relate to the development or amendment of accounting standards in a number of areas. Certain draft standards and current IPSASB projects may also impact the IPSASB's PVs and should be considered. For example, the views on measurement of natural resources will need to be consistent with the proposed guidance in Exposure Draft 76, *Conceptual Framework Update: Chapter 7, Measurement of Assets and Liabilities in Financial Statements* (ED 76) and Exposure Draft 77, *Measurement* (ED 77). The proposed guidance on revenue and other IPSASB projects in development may also be relevant if the IPSASB concludes that certain natural resources should be recognized as assets.

Recommended Practice Guidelines

23. Recommended Practice Guidelines (RPGs) provide guidance on the broader aspects of financial reporting that are outside the core financial statements. RPGs are pronouncements that provide guidance on good practice in the preparation of GPFRs. However, unlike IPSAS, RPGs do not establish requirements, and compliance with RPGs is not required in order for an entity to assert that its financial statements comply with IPSAS. While financial statements are the cornerstone of sound financial reporting, they cannot provide all the information that users need to:
 - (a) Evaluate the long term fiscal sustainability or the ability of an entity to meet service delivery and financial commitments;
 - (b) Understand the financial position, financial performance, and cash flows presented in an entity's general purpose financial statements and gain further insights into the operations of the entity; and
 - (c) Report service objectives and the extent to which those service objectives have been achieved.
24. Therefore, the IPSASB has issued RPG 1, *Reporting on the Long-Term Sustainability of an Entity's Finances*, RPG 2, *Financial Statement Discussion and Analysis*, and RPG 3, *Reporting Service Performance Information*. Paragraph 1.62 provides an overview on how the guidance in the RPGs could be applicable to natural resources.

Other Non-Authoritative IPSASB Guidance

25. The objective of this project is to develop one or more IPSAS on the recognition, measurement, presentation, and disclosure of natural resources. However, the topics of sustainability and environmental management, in particular climate change, often comes to mind when contemplating the extraction of natural resources. The IPSASB staff developed a Staff Questions and Answers Document highlighting the IPSAS and RPGs which could be relevant to climate change responding to questions posed on existing IPSASB guidance. This document can be found at:

<https://www.ifac.org/system/files/publications/files/IPSASB-Staff-QA-Climate-Change-Relevant-Guidance.pdf>.

National Public Sector Accounting Guidance

26. The Standard of Generally Recognized Accounting Practice 110, *Living and Non-Living Resources* (GRAP 110) issued by the South African Accounting Standards Board classified natural resources into living and non-living resources. Under GRAP 110, non-living resources other than land are not recognized as assets, and the disclosure of information such as the nature and type of non-living resources, any related liabilities or contingent liabilities, and the amount of compensation received for the disposition of any non-living resources, are required.
27. For living resources, GRAP 110 sets out the criteria that must be met for a living resource to be recognized as an asset and requires living resource assets to be initially measured at cost, which includes the cost of acquisition and any costs directly attributable to bringing the living resource to the location and condition necessary for it to be capable of operating in its intended manner. Subsequent to initial recognition, an entity may choose to measure living resource assets at costs or fair value using a revaluation model if fair value can be reliably measured.
28. In the United States, the Federal Accounting Standards Advisory Board (FASAB) issues standards and guidance for the United States federal government and component entities. In Statement of Federal Financial Accounting Standards 38, *Accounting for Federal Oil and Gas Resources* (SFFAS 38), and Technical Bulletin 2011-1, *Accounting for Federal Natural Resources Other than Oil and Gas*, the FASAB requires federal government entities to report the present value of estimated royalties from proved oil and gas reserves and certain non-renewable resources in the entities' Required Supplementary Information, which are schedules that are outside the general purpose financial statements.
29. In addition, the Australian Water Accounting Standards Board developed a set of standards on the recognition, quantification, presentation, and disclosure of water volumes in the jurisdiction. The South African government has also implemented a similar set of standards to monitor and track water. However, neither of these standards relate to financial reporting, as these standards are used to produce reports which track water volume levels and flows for management purposes.

Consideration of Government Finance Statistics and System of National Accounts

30. Government Finance Statistics (GFS) and System of National Accounts (SNA) reporting are used by governments to produce financial information for macroeconomic analysis and evaluation of fiscal policy, especially the performance of the general government sector and the broader public sector of an economy.⁴ Meanwhile, financial statements produced using IPSAS are used for accountability and to support decision making.
31. While the information produced from GFS, SNA and IPSAS are used for different purposes, the statistical and financial reporting information have considerable overlap in that they are both based on financial accrual information, and they both pertain to a government's assets, liabilities, revenue, expenses and cash flows. As a result, significant benefits, such as a reduction in preparation time, effort and costs, can be achieved from using a single integrated financial information system to generate IPSAS financial statements, as well as SNA and GFS reports.

⁴ GFSM (2014), paragraph 1.2.

32. Where possible, the IPSASB have made efforts to harmonize the recently developed IPSAS with GFS and SNA by aligning various IPSAS requirements with statistical reporting guidelines, or by providing IPSAS accounting policy options which are consistent with statistical reporting guidance. Where such harmonization is not possible, the supplementary guidance is developed to ensure that differences can be understood and managed.⁵
33. In developing the PVs on recognition and measurement of the in-scope natural resources, it will be important to consider the existing GFS and SNA guidance on recognition and measurement, and whether it is possible to develop harmonized guidance that is consistent with the IPSASB conceptual framework. The detailed statistical accounting guidance on recognition and measurement can be found in [Appendix B: International Statistical Standards Guidance](#).

Private Sector Practices

34. In developing a potential standard on the recognition and measurement of natural resources, the practices dealing with natural resources in the private sector will also be considered in this CP.
35. In the private sector, the underlying natural resources are typically not directly accounted for under International Financial Reporting Standards (IFRS). The generally accepted view in the private sector is that the high degree of uncertainty and subjectivity over both the existence and the amount of the natural resource prior to their removal from their natural state which prevent the entity from recognizing these resources as assets.
36. However, there are a number of accounting standards and industry practices which apply to transactions and events that are indirectly related to natural resources. A detailed discussion of the private sector practices related to subsoil resources is included in [Appendix C: Supplemental Information on Subsoil Resources](#). [Appendix D: Supplemental Information on Living Resources](#), provides a similar discussion for living resources.

⁵ See paragraph 23 of Process for Considering GFS Reporting Guidelines During Development of IPSASs for more details: <https://www.ifac.org/system/files/publications/files/IPSASB-GFS-Policy-Paper.pdf>

Chapter 1: Natural Resources: General Description, Recognition, and Measurement

- 1.1. In this Natural Resources CP, the IPSASB has developed a proposed general description of natural resources. A formal definition of natural resources may be developed later in the project based on constituent feedback and once the IPSASB has formulated more PVs.
- 1.2. As noted in the introduction to this CP, due to the prominence of natural resources in some jurisdictions, as well as the growing focus on sustainability and the effective management of natural resources, the IPSASB decided that it would be in the public interest to develop guidance on natural resources. The objective of this project is to develop guidance that will provide better information to support decision-making and to enable transparency and accountability in how these natural resources are used and managed.
- 1.3. IPSAS literature currently does not have explicit guidance on natural resources or an explicit description or definition of what constitutes a natural resource. Therefore, by using a principled approach to develop a general description of natural resources and by proposing accounting guidance for these described items, the project effectively fills a gap in IPSAS literature.
- 1.4. To develop this general description, this CP draws from definitions of natural resources in more general, non-technical sources such as the plain English definition as well as definitions from economic texts. The general description also draws from international statistical standards such as the GFSM 2014 and 2008 SNA, as well as existing guidance developed by other international and national standards setters.

Definitions from Other Sources

Plain English Definition

- 1.5. The current plain English definition on Wikipedia combines the definitions from the Oxford and Student dictionaries with those from investorwords.com and yourdictionary.com. Wikipedia notes that natural resources are resources, or items with service potential or the ability to generate economic benefits, that exist without actions of humankind and includes all valued characteristics such as magnetic, gravitational, electrical properties and forces, etc. On earth, natural resources include sunlight, atmosphere, water, land, including all minerals along with all vegetation, crops and animal life that naturally subsists upon or within the identified characteristics and substances.⁶

Definition from Economic Literature

- 1.6. One economic text describes natural resources as follows:⁷

“Natural resources, such as forests and commercially exploitable fisheries, and environmental attributes such as air quality, are valuable assets in that they yield flow of services to the people. Public policies and the actions of individuals and firms can lead to changes in these service flows, thereby creating benefits and costs.”

Definitions from International Statistical Standards

- 1.7. The statistical standards guidance in GFSM 2014 and 2008 SNA currently define natural resources as follows:

⁶ https://en.wikipedia.org/wiki/Natural_resource; retrieved September 2020.

⁷ Freeman III, A. M., Herriges, J. A., & Kling, C. L. (2014). The Measurement environmental and resources value: theory and methods (3rd ed.). Oxon: Taylor & Francis, page 2.

- (a) Paragraph 7.90 of GFSM (2014) notes that natural resources comprise of land, mineral and energy resources, and other naturally occurring assets; and
- (b) Paragraphs 13.44-13.51 of SNA (2008) states that natural resources consist of naturally occurring resources such as land, water resources, uncultivated forests and deposits of minerals that have an economic value.

South African GRAP

- 1.8. GRAP 110 does not define natural resources, but the standard defines living and non-living resources as follows⁸:

“Living resources are those resources that undergo biological transformation...” and

“Non-living resources are those resources, other than living resources, that occur naturally and have not been extracted.”

- 1.9. Paragraph 10 of GRAP 110 further explains that after a non-living resource has been extracted, the resource no longer meets the definition of a non-living resource, The paragraph states:

“At the point of extraction, non-living resources such as water, minerals, oils and gas and other non-regenerative resources, no longer occur in their natural state and do not meet the definition of a non-living resource.”

FASAB Definition

- 1.10. The FASAB's Technical Bulletin 2011-1 does not define natural resources generally, but Federal Natural Resources are defined as follows⁹:

“Federal natural resources are resources that occur in nature (including nonrenewable and renewable natural resources) and meet all of the following criteria: (a) the federal government may exercise sovereign rights over the resources with respect to exploration and exploitation; (b) the federal government has the authority to derive revenues from the resources for its use; and, (c) the resources are contained on federal lands or the federal government substantially manages and/or controls the resources.”

Proposed General Description of Natural Resources

- 1.11. Based on the key aspects that are common among the above definitions, a natural resource can be generally described as an item which has the following attributes:

- (a) Is naturally occurring;
- (b) Remains in its natural state; and
- (c) Is a resource as described in the IPSASB's Conceptual Framework.¹⁰

- 1.12. Naturally occurring means that the resource came into existence without the actions of humankind.

- 1.13. To remain in its natural state, a natural resource must not have been subjected to human intervention. In general, human intervention include *any* actions which modify the quantity and/or quality of a natural resource and a resource either is or is not in its natural state. Specific examples of actions that are considered human intervention vary for each of the in-scope natural resources:

⁸ The definitions of living and non-living resources are found in paragraph 8 of GRAP 110.

⁹ FASAB Technical Bulletin 2011-1, Appendix C.

¹⁰ Conceptual Framework, paragraph 5.7.

- (a) For subsoil resources, the item remains in its natural state until it has been extracted from the ground by human actions;
 - (b) For living resources, human intervention refers to interference by humans in the living resource's natural biological transformation.¹¹ Human intervention encompasses not only harvesting a living resource, but also modifying the living resource's natural biological transformation prior to its harvest;¹² and
 - (c) Water remains in its natural state until it has been extracted by human actions.
- 1.14. A natural resource is not taken out of its natural state in its entirety if only a part of that resource has been subjected to human intervention. For example, if a number of trees have been harvested from an uncultivated forest, only the harvested trees have been taken out of their natural state. The remaining trees in the uncultivated forest are still considered a natural resource, as they have not yet been harvested.
- 1.15. Another attribute of natural resources is that they must be a resource as described in the Conceptual Framework—that is, they are capable of generating economic benefits or have service potential. When considering this characteristic along with the above discussion on remaining in their natural state, items can only be considered natural resources if they are capable of being extracted or harvested for their economic benefits or service potential *but have not yet been subject to human intervention*.
- 1.16. These attributes will be useful in setting boundaries for what are included or excluded from the project. The first and second attributes both reinforce the notion that this project only considers resources which have not already been subjected to human intervention, and therefore likely to be within the scope of an existing IPSAS. This delineation is important as the development of guidance on the described resources is expected to result in new information which improves transparency, accountability, and decision-making over natural resources.
- 1.17. The last attribute is important as it aligns the general description of natural resources with the recognition criteria in the Conceptual Framework. That is, if an item is not a resource, it will not be possible for the item to be recognized as an asset. However, the lack of recognition and measurement in the financial statements does not preclude the IPSASB from proposing presentation of information regarding natural resources in either the note disclosures to the financial statements or as supplementary information in an entity's broader GPFRs.
- 1.18. It should be noted that the description of natural resources from economic literature points to the fact that natural resources embody economic benefits or service potential, which is consistent with the definitions from plain English, statistical accounting, and South African GRAP. However, it also points to the fact that a natural resource may lead to potential economic outflows and give rise to the entity incurring expenditures.
- 1.19. These expenditures, which reflect activities relating to natural resources, are separate from the underlying natural resources and are generally already addressed by existing IPSAS. The accounting for these costs, including the consideration of whether these costs should be recognized as an asset or expensed, will largely depend on the specific nature of these costs and whether they

¹¹ Paragraph 9 of IPSAS 27, *Agriculture*, states, "Biological transformation comprises the processes of growth, degeneration, production, and procreation that cause qualitative or quantitative changes in a biological asset."

¹² Paragraph 9 of IPSAS 27 defines harvest as, "the detachment of produce from a biological asset or the cessation of a biological asset's life processes." The term can apply to both plants and animals.

fall within a specific IPSAS. For example, the costs incurred to construct or acquire fixed assets relating to natural resources, such as the equipment used to extract a resource, are addressed by IPSAS 17, as discussed in appendices C and D. General employee compensation is addressed by IPSAS 39, *Employee Benefits*, while other potential outflows are addressed by IPSAS 19 as noted in paragraph 20.

- 1.20. During the IPSASB staff's preliminary outreach activities, a number of constituents also suggested for the IPSASB to consider this issue in the CP, in particular the costs of exploration, evaluation, development, and extraction of subsoil resources. Although the costs of activities related to natural resources do not strictly fall in line with the above description of natural resources, chapter 2 of this CP considers the recognition of the costs of related activities in the context of subsoil resources.

Preliminary View 1—Chapter 1

The IPSASB's Preliminary View is that a natural resource can be generally described as an item which:

- (a) Is naturally occurring;
- (b) Remains in its natural state; and
- (c) Is a resource as described in the IPSAS's Conceptual Framework.

To remain in its natural state, a natural resource must not have been subjected to human intervention, which generally are actions that modify the quantity and/or quality of a natural resource. The specific actions which are considered human intervention vary for each of the natural resources within the scope of this CP.

Do you agree with the IPSASB's proposed general description of natural resources?

If not, please provide your reasons.

Application of the General Description to Resources within the Scope of the CP

- 1.21. The in-scope natural resources—subsoil resources, living resources, and water—fit within the above general description of natural resources when they meet the three attributes. These items meet the first and second attributes, as only the resources in their natural state—i.e., unextracted subsoil resources, uncultivated¹³ or unharvested living resources, and unextracted water—are considered in this project. Once removed from their natural state, these resources would be considered inventories or biological assets and agricultural produce.
- 1.22. Furthermore, the Conceptual Framework already alludes to the fact that subsoil resources, living resources and water can all be considered resources.¹⁴ The concept of a resource will be further analyzed below in the context of the asset recognition criteria in the Conceptual Framework.

Potential Natural Resources which are not within Scope of the CP

- 1.23. As noted in the introduction, items such as air and electromagnetic spectrum could be considered natural resources in other contexts, and these other resources do indeed fit into the above

¹³ Some living resources, such as cultivated forests, are considered biological assets and not natural resources. This is because even though they have not yet been harvested, the resource's biological transformation has been changed by human intervention and they are no longer in their natural state. See chapter 3 of this CP for details.

¹⁴ Paragraph 16 in the Preface to the Conceptual Framework refers to "natural... resources such as mineral reserves, water, fishing grounds, [and] forests."

attributes. However, as explained in paragraph 5, these items will not be covered in this project since they raise additional issues which will require further study.

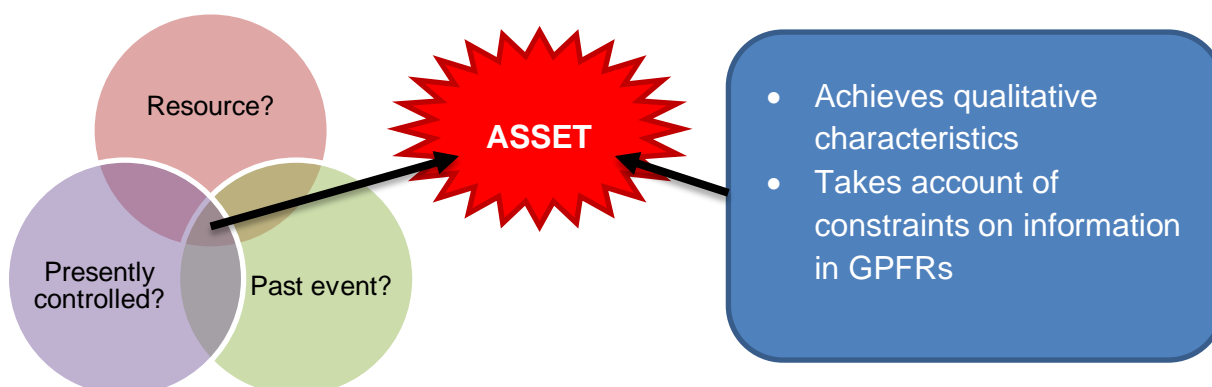
General Recognition Principles in the Conceptual Framework

- 1.24. The core accounting question in this CP is whether a natural resource can be recognized as an asset in general-purpose financial statements (GPFS) prepared under IPSAS. The IPSASB's Conceptual Framework provides the principles to be used in developing IPSAS, including principles on asset recognition and measurement. Therefore, before applying the principles to specific issues on the subsoil resources, living resources and water, it is important to discuss these general principles.

Recognition Criteria

To be Recognized as an Asset in the Financial Statements, an Item Must:

- 1) Meet the definition of an asset: 2) Be Measurable in a way that...



- 1.25. For an entity to recognize a natural resource as an asset in the financial statements, the natural resource must meet the recognition criteria in 6.2 of the Conceptual Framework, which states:
- “The recognition criteria [the criteria that must be satisfied in order for an element to be recognized in the financial statements] are that:
- An item satisfies the definition of an element; and
 - Can be measured in a way that achieves the qualitative characteristics and takes account of constraints on information in GPFs.”

The Definition of an Asset

- 1.26. The first recognition criterion is that an item must meet the definition of an element to be recognized. In the context of this CP, the focus is whether a natural resource can meet the definition of an asset, which is set out in paragraph 5.6 of the Conceptual Framework. That is, to be recognized as an asset, the natural resource must be a **resource** presently **controlled** by the entity as the result of a **past event**.

A Resource

- 1.27. Paragraph 5.7 of the Conceptual Framework defines a resource as “an item with service potential or the ability to generate economic benefits.” The Conceptual Framework further explains that physical form is not a necessary condition of a resource, and that the service potential or ability to

generate economic benefits can arise directly from the resource itself or from the rights to use the resource. Service potential is the capacity to provide services that contribute to achieving the entity's objectives without necessarily generating net cash inflows. Economic benefits can include the generation of cash inflows (e.g., from the sale of an asset for cash or other resources) or reductions in cash outflows (e.g., in the form of cost savings or synergies).

- 1.28. In general, the natural resources within the scope of this project *do* meet the definition of a resource as set out in the Conceptual Framework:
 - (a) Subsoil resources such as minerals or fossil fuels can generate economic benefits through sale. Extracted subsoil resources can also be used in construction or the manufacture of goods, or combusted as fuel;
 - (a) Some living resources can be harvested for a wide variety of uses. For example, an uncultivated forest can be harvested and processed into timber, which then can be used in construction or sold;
 - (b) Water can be treated and be used as drinking water. In addition, water can also be sold for economic benefits.
- 1.29. The natural resources within the scope of this project may also have service potential. For example, extracted subsoil resources could be used by an entity in construction activities and certain harvested living resources can be used in manufacturing processes.

Presently Controlled by the Entity

- 1.30. For a resource to be recognized as an asset by an entity in the financial statements, it must be controlled by the entity. The Conceptual Framework notes that control of a resource entails the ability to use the resource (or direct other parties on its use) so as to derive the benefit of the service potential or economic benefits embodied in the resource.¹⁵
- 1.31. To determine if an entity has control over a resource, paragraph 5.12 of the Conceptual Framework provides a list of indicators that should be considered:
 - (a) Legal ownership;
 - (b) Access to the resource, or ability to deny or restrict access to the resource;
 - (c) The means to ensure that the resource is used to achieve its objectives; and
 - (d) The existence of an enforceable right to service potential or the ability to generate economic benefits arising from a resource.
- 1.32. For a natural resource, the factors such as legal ownership or access to resources are often directly impacted by laws and regulations that are specific to the natural resource. For example, many jurisdictions have legislation that sets out how an entity can obtain control over a subsoil resource. Other legislation may also restrict an entity's ability to realize a natural resource's service potential or economic benefits. The detailed consideration of control over subsoil resources, living resources, and water are explored in chapters 2-4 of this CP.

¹⁵ Conceptual Framework, paragraph 5.11.

Past Event

- 1.33. The definition of an asset also requires that an entity presently controls the resource as the result of a past event. Entities can gain control of a resource through a variety of means, including by purchasing them in an exchange transaction, by developing the resource, or obtaining control through a non-exchange transaction.¹⁶
- 1.34. Natural resources are resources which have not yet been subjected to human intervention. Therefore, it is possible for an entity to gain control of a natural resource through methods other than acquisition, which is the typical means to obtain control of an asset. The analysis in chapters 2-4 considers the best way to define past events as they are relevant to natural resources. For example, consideration will be given to whether control arose through the exercise of sovereign powers, as suggested in paragraph 5.13 of the Conceptual Framework.

Capable of Being Measured in a Way that Achieves the Qualitative Characteristics and Takes Account of Constraints on Information in GPFRs

- 1.35. The second recognition criterion is that for an item to be recognized as an element, it is necessary to be able to attach a monetary value to that item. The measurement of this monetary value needs to achieve the qualitative characteristics of information, as set out in chapter 3 of the Conceptual Framework, which are **relevance, faithful representation, understandability, timeliness, comparability, and verifiability**. The basis of measurement should also consider the constraints on information in the GPFRs, which include materiality, cost-benefit considerations, and achieving an appropriate balance between the qualitative characteristics.¹⁷
- 1.36. The following discussion summarizes the qualitative characteristics of information which are expected to have the most impact on natural resources and briefly explains how these characteristics may be applicable. The information is drawn from the Conceptual Framework and Exposure Draft 76, *Conceptual Framework Update: Chapter 7, Measurement of Assets and Liabilities in Financial Statements* (ED 76).

Relevance

- 1.37. Information is relevant if it is capable of making a difference in achieving the objectives of financial reporting through the information's confirmatory and/or predictive value. Confirmatory value refers to the ability to confirm or change past expectations, while predictive value refers to the ability to provide information on an entity's anticipated future service delivery activities, objectives and costs, and the amount and sources of the resources that are intended to be allocated to providing these future services.¹⁸
- 1.38. In the context of a natural resource, a measurement basis is relevant if it can fairly reflect the resource's contribution to the entity's cost of services, operational capacity, and financial capacity.¹⁹
- 1.39. In general, if an entity gains control of a natural resource because of the laws and regulations and incurred little or no acquisition costs, it is unlikely that there is a material amount to be recognized

¹⁶ Conceptual Framework, paragraph 5.13.

¹⁷ Conceptual Framework, paragraphs 3.6-3.42.

¹⁸ Conceptual Framework, paragraph 3.6-3.8. Furthermore, paragraph 2.1 of the Conceptual Framework notes that, "The objectives of financial reporting by public sector entities are to provide information about the entity that is useful to users of GPFRs for accountability purposes and for decision-making purposes."

¹⁹ ED 76, paragraph 7.3.

from a historical cost perspective. The discovery of new resources may also lead to obtaining control of a natural resource without incurring material acquisition costs (as the costs of exploration may be recognized as a separate asset as discussed in chapter 2). Furthermore, such a historical cost measure would not reflect the economic benefit or service potential embodied by the natural resource. Therefore, it is unlikely that historical cost would be relevant for natural resources.

- 1.40. For natural resources which are typically removed from their natural state for the purpose of being sold—for example, mineral ore or fossil fuels—a current value measurement basis such as fair value may be the most relevant. This is because as fair value is defined as “the price that could be received to sell an asset in an orderly transaction between market participants at measurement date,”²⁰ and therefore would most readily reflect the asset’s ability to generate economic benefits through sale.
- 1.41. Other natural resources may be controlled for their operational capacity. For example, an entity which controls an uncultivated forest may choose to leave it in its natural state to maintain natural diversity or for the purpose of absorbing carbon dioxide. For these types of natural resources, a current operational value is likely to be the most relevant in providing information on operational capacity.²¹
- 1.42. As what is considered relevant for each type of in-scope resource differs significantly, the detailed consideration of measurement for subsoil resources, living resources, and water is addressed in detail in chapters 2-4.

Faithful Representation

- 1.43. Faithful representation refers to being representative of the economic and other phenomenon in a complete and neutral manner that is free from material error. Information that faithfully represents an economic or other phenomenon depicts the substance of the underlying transaction, other event, activity, or circumstance.²²
- 1.44. For the measurement basis of a natural resource to faithfully represent the underlying economic and other phenomenon, the basis will need to reflect the quantity of the resource, as well as the quality of the resource.

Verifiability

- 1.45. For a measurement basis to be verifiable, different knowledgeable and independent observers could reach general consensus (although not complete agreement) that the measurement represents the economic and other phenomena that it purports to represent without material error or bias or that an appropriate measurement method has been applied without material error or bias.²³
- 1.46. For some natural resources, it may be difficult to have a measurement basis that is verifiable. There may be situations where a standardized measurement technique does not exist and independent, qualified parties with the same set of data could arrive at vastly different estimates. In these cases, it may not be possible to recognize the natural resource as a verifiable measurement basis does not exist.

²⁰ ED 76, paragraph 7.36

²¹ ED 76, paragraph 7.53.

²² Conceptual Framework, paragraph 3.10.

²³ Conceptual Framework, paragraph 3.26.

Constraints on Information

- 1.47. To be useful, the measurement of a natural resource will need to balance the qualitative characteristics in a way that results in the most useful information. For example, as noted in paragraph 1.39, it is possible for a natural resource to be measured using historical cost, which would faithfully represent the cost of acquisition and be understandable and verifiable. However, such a measure would likely not be relevant.
- 1.48. An entity should also consider if the measurement of a natural resource will lead to material information. Information is material if its omission or misstatement could influence the discharge of accountability by the entity or the decision that users make based on the entity's GPFRs.²⁴ In many cases, a natural resource will likely be material due to the quantity and value of the resources.
- 1.49. Finally, an entity will need to consider the cost of obtaining the information necessary to develop an appropriate measurement basis. Application of the cost-benefit constraint involves assessing whether the benefits of reporting information are likely to justify the cost incurred to provide and use the information.²⁵ For natural resources, the selection of a measurement basis will be constrained by the costs of obtaining the information necessary to measure the resource.

Uncertainty and Asset Recognition

- 1.50. The Conceptual Framework identifies two sources of uncertainty that are relevant in the recognition of an element: uncertainty over the existence of an element and measurement uncertainty.
- 1.51. Uncertainty over the *existence* of an element is addressed by considering all available evidence, facts, and circumstances at reporting date to make a neutral judgement about whether an item satisfies all the essential characteristics of an element. In other words, uncertainty over the existence of an element should be considered in the first recognition criterion when determining whether the item satisfies the definition of an element.²⁶
- 1.52. When finalizing chapter 6 of the Conceptual Framework, the IPSASB decided that a standardized probability threshold should *not* be adopted for recognition purposes. Rather, the IPSASB concluded that an assessment of all available evidence in determining whether an element exists and takes account of uncertainty about the flows of service potential or the ability to generate economic benefits is a more appropriate approach. The IPSASB also noted that existence uncertainty could relate to more than one specific characteristic of an element.²⁷
- 1.53. The Conceptual Framework's basis for conclusions explains that when determining if an item meets the definition of an asset, there could be uncertainty over whether a resource presently exists, uncertainty over whether the entity controls the resource, or uncertainty over the existence of a past event giving rise to control. All three sources of uncertainty should be considered when determining if the item meets the definition of an asset.
- 1.54. Regarding measurement uncertainty (i.e., the uncertainty over the *amount* of service potential or economic benefits represented by the element), the Conceptual Framework states that such uncertainty is reflected in the measurement of the element. For an asset, once it has been

²⁴ Conceptual Framework, paragraph 3.32.

²⁵ Conceptual Framework, paragraph 3.39.

²⁶ Conceptual Framework paragraphs 6.5 and BC6.2.

²⁷ Conceptual Framework, paragraphs BC6.3-BC6.7.

determined that an item can be measured in a way that achieves the qualitative characteristics and takes into account constraints on information, an entity should also assess whether a measurement technique can be used to appropriately reflect the uncertainty inherent within the information available at reporting date. In rare instances, an item is not recognized if the level of measurement uncertainty in a single point estimate is so large that the relevance and faithful representativeness of the measure become questionable.²⁸

- 1.55. Both existence uncertainty and measurement uncertainty can have a significant impact on the recognition of certain natural resources as an asset in the financial statements. For example, subsoil resources are typically underground and cannot be directly observable or readily accessible. Some living resources and water are also mobile, so it could be difficult to ascertain control over these resources or measure the quantities under an entity's control. As the nature of subsoil resources, living resources, and water differ significantly, the resource-specific issues regarding uncertainty will be discussed in more detail in chapters 2-4 of this CP.

General Measurement Principles

- 1.56. Once an entity has concluded that an item meets the definition of an asset and can be measured in a way that achieves the qualitative characteristics of information in GPFRs, the final step in the recognition and measurement of an asset is to select an appropriate basis of measurement.
- 1.57. For this decision, this CP will draw upon ED 76, as the IPSASB has proposed to replace chapter 7 of the Conceptual Framework with the concepts in the exposure draft. As noted in ED 76:

“7.2 The objective of the measurement is:

To select measurement bases that most fairly reflect the cost of services, operational capacity, and financial capacity of the entity in a manner that is useful in holding the entity to account, and for decision-making purposes.

7.3 The selection of a measurement basis for assets and liabilities contributes to meeting the objectives of financial reporting in the public sector by providing information that enables user to assess:

 - Cost of services—the cost of services provided in the period in historical or current terms;
 - Operational capacity—the capacity of the entity to support the provision of services in future periods through physical and other resources; or
 - Financial capacity—the capacity of the entity to fund its activities.

7.4 The selection of measurement bases also includes an evaluation of the extent to which the information provided achieves the qualitative characteristics while taking into account the constraints on information in financial reports.”
- 1.58. ED 76 also notes that on initial measurement, an item is measured at its transaction price (which, in the context of natural resources, is the price paid to acquire the asset), unless the transaction price does not faithfully present relevant information about the entity in a manner that is useful in holding the entity to account, and for decisions-making purposes.²⁹

²⁸ Conceptual Framework paragraphs 6.6 and 6.8.

²⁹ ED 78, paragraph 7.5.

- 1.59. Subsequent to initial measurement, there are three key decisions to be made regarding measurement:³⁰
- (a) Measurement model—At the highest level, a decision needs to be made between measuring the natural resource using a historical cost model or a current value model;
 - (b) Measurement bases—Once a measurement model has been selected, a specific measurement approach, or a measurement basis, needs to be selected. The measurement bases include historical costs basis under the historical cost model, or current operational value, and fair value under the current value model. The measurement basis selected should best meet the qualitative characteristics while taking into account the constraints on information in financial reports; and
 - (c) Measurement techniques—After selecting a measurement basis, an entity needs to select a specific method to estimate the amount at which the asset is measured. The selection of a measurement technique depends on the characteristics of the asset and the availability of observable data.

Application of the General Measurement Principles to Natural Resources

- 1.60. As noted in paragraph 1.39, there could be situations where an entity obtains control over a natural resource without incurring material acquisition costs. In these situations, initial measurement at the transaction price may not be appropriate, as recognition of a natural resource at nominal value may not faithfully present relevant information about the asset. Thus, as noted in paragraphs 1.40-1.41, a current value approach may be a more appropriate measurement model at initial recognition.
- 1.61. The selection of measurement bases and techniques will vary significantly based on the specific facts and circumstances surrounding each natural resource. As a result, for natural resources where the IPSASB preliminarily concludes that recognition as an asset is possible, chapters 2-4 of the CP will consider what measurement bases are the most appropriate and whether it is feasible for an entity to obtain the information necessary to estimate these measurement bases using the measurement techniques available.

Reporting of Natural Resources in Broader GPFRs

- 1.62. Regardless of the decisions on recognition and measurement of natural resources in the financial statements, the IPSASB acknowledges that natural resources have significant economic value, and that information regarding natural resources should be provided either in the note disclosures of the financial statements or in the broader GPFRs. The IPSASB's existing RPGs provide additional guidance on broader financial reporting which might be useful in the context of natural resources as follows:

³⁰ ED 78, paragraphs 7.7-7.12.

RPG	Objective of RPG	Example where RPG could be Applied for Natural Resources
RPG 1, <i>Reporting on the Long-Term Sustainability of an Entity's Finances.</i>	Provide guidance on the long-term fiscal sustainability information of a public sector entity's finances. ³¹	<ul style="list-style-type: none"> • Projections of natural resource-related future cash outflows and inflows and underlying assumptions over a predetermined time horizon; and • Narrative discussions of revenue, service and debt dimensions related to natural resources.³²
RPG 2, <i>Financial Statement Discussion and Analysis.</i>	Provides an explanation of significant items, transactions and events affecting the financial statements to enable users to understand the financial position, financial performance and cash flows. ³³	<p>To provide:</p> <ul style="list-style-type: none"> • An overview of the entity's operations and the environment it operates in;³⁴ • Information about the entity's objectives and strategies, as they apply to natural resources;³⁵ • An analysis of the entity's financial statements including significant changes and trends in an entity's financial position, financial performance, and cash flows;³⁶ and • A description of the entity's principal risks and uncertainties relating to natural resources that affect an entity's financial statements.³⁷

³¹ See paragraphs 21-26 and 56 of RPG 1.

³² The dimensions of revenue, service and debt are interrelated because changes in one dimension affect the other dimensions.

³³ See paragraph 13 of RPG 2.

³⁴ See paragraphs 16(a) and 19 of RPG 2.

³⁵ See paragraphs 16(b), 20 and 21 of RPG 2.

³⁶ See paragraphs 16(c), 22-26 of RPG 2.

³⁷ See paragraphs 16(d), 27-31 of RPG 2.

RPG	Objective of RPG	Example where RPG could be Applied for Natural Resources
RPG 3, <i>Reporting Service Performance Information</i> .	Provides guidance on reporting service performance information to assist users to assess an entity's service performance efficiency and effectiveness. ³⁸	<p>With respect to services and performance objectives relating to natural resources, to provide information on the:</p> <ul style="list-style-type: none"> • Services provided by the entity;³⁹ • Entity's service performance objectives;⁴⁰ • Inputs, Outputs, Outcomes and Efficiency⁴¹; and • Extent of its achievement of these objectives.⁴²

- 1.63. The presentation of information on natural resources, either in note disclosures in the financial statements or as supplemental information in an entity's broader GPFRs, is discussed in chapter 5 of the CP.

³⁸ See paragraphs 1 of RPG 3.

³⁹ See paragraphs 1 of RPG 3.

⁴⁰ See paragraphs 8, 23-26 of RPG 3.

⁴¹ See paragraphs 8, 11, 12, 13, 14, 15, 16, 17, 18, 19 of RPG 3

⁴² See paragraphs 1, 8 and 10 of RPG 3.

Chapter 2: Subsoil Resources

Description of Subsoil Resources

- 2.1. The term “subsoil resources” broadly refers to all non-living natural items which occur within the earth, both in dry land and the seabed. Subsoil resources include metalliferous ore, such as mineral and metal deposits, and fossil fuels, such as petroleum, coal, and natural gas.
- 2.2. To be considered a natural resource in the context of this CP, the subsoil resource must be in its natural state—i.e., prior to its extraction. Once a subsoil resource has been extracted, it is no longer a natural resource for accounting purposes and will often be accounted for as inventory under IPSAS 12.

Clarification of what is Considered a “Subsoil Resource”

- 2.3. During the initial outreach stage of the Natural Resources project, the IPSASB staff noted confusion among constituents in distinguishing between the underlying subsoil resources, the costs incurred for activities relating to subsoil resources, and other related assets such as exploration and extraction licenses. Therefore, before the analysis of whether subsoil resources can be recognized or measured, it is important to clarify what exactly is meant by “subsoil resources”.
- 2.4. In general, the underlying subsoil resources—that is, the physical metalliferous ore and fossil fuels—are not accounted for until they have been removed from their natural state. To illustrate the various activities related to subsoil resources and how these are distinct from the underlying resources themselves, an illustrative timeline is included in [Appendix C: Supplemental Information on Subsoil Resources](#). This timeline and the accompanying discussion explain the typical stages in the extraction process and how the related activities are accounted for under existing IPSAS or IFRS.

Application of the Asset Recognition Criteria to Subsoil Resources

- 2.5. Applying the general principles set out in chapter 1 of the CP, for a subsoil resource to be recognized as an asset under IPSAS, the item must:
 - (a) Satisfy the definition of an asset (i.e., a resource that is presently controlled by the entity as the result of a past event); **and**
 - (b) Be measurable in a way that achieves qualitative characteristics and takes account of constraints on information in the GPFRs.
- 2.6. As noted in paragraph 1.27-1.28, subsoil resources generally can generate economic benefits or have service potential. However, as noted in paragraphs 1.50-1.53, the Conceptual Framework requires the consideration of any issues with existence uncertainty that could impact the assessment of whether the definition of an asset has been met.
- 2.7. Keeping the above concepts in mind, the key considerations regarding the recognition and measurement of subsoil resources are as follows:
 - (a) Can an entity demonstrate control over a subsoil resource prior to their extraction?
 - (b) Is there a past event that gave rise to the entity’s control over the subsoil resource?

- (c) Are there any concerns with existence uncertainty that may prevent a subsoil resource from meeting the definition of an asset?
- (d) Can an entity appropriately measure a subsoil resource in a way which balances the qualitative characteristics while taking materiality and cost-benefit considerations into account?

2.8. The following analysis considers each of these questions to arrive at a PV regarding the recognition of subsoil resources as assets under IPSAS.

Consideration of control

2.9. The general concept of control is discussed in paragraph 1.30 and the indicators of control from the Conceptual Framework are summarized in paragraph 1.31. While consideration of the above factors is more extensive than a strict legalistic analysis, most of the indicators are directly impacted by the legal environment in a jurisdiction. For example, ownership and the existence of enforceable rights are directly impacted a jurisdiction's laws and regulations. Certain laws and regulations, such as a jurisdiction's licensing framework, may also grant access or deter unauthorized access to a resource.

2.10. In many jurisdictions, the ownership and management of subsoil resources are governed by surface and subsurface rights. Surface rights relate to the use of the surface area of the land while subsurface rights, sometimes known as mineral rights, relate to the exploration, development and/or extraction of subsoil resources. To gain a preliminary understanding of the various legal frameworks around the world, the IPSASB staff issued an informal survey to get feedback from IPSASB Members and Technical Advisors regarding these factors in their respective jurisdictions. Based on the responses from the survey, the jurisdictions were classified into the following categories:

- (a) **Category A: Subsoil Resources are Owned by the Government and the Government has Access Rights** – For jurisdictions in this category, it appears the government (at either the federal or state/provincial level) has ownership of unextracted subsoil resources. The laws and regulations in these jurisdictions also provide the government the means to gain access to the subsoil resources. (e.g., through expropriation of land).
- (b) **Category B: Subsoil Resources are Owned by the Government, but Access is Impacted by the Holders of Surface Rights** – For jurisdictions in this category, the laws and regulations confer control of unextracted subsoil resources to the government. However, individuals or private enterprises holding surface rights can prevent the government from accessing the subsoil resources within their land.
- (c) **Category C: Subsoil Resources are Controlled by Holders of Surface Rights** – For this category, the laws and regulations specify that subsoil resources are controlled by the holders of surface rights. Some jurisdictions in this category also allow surface right holders to separate subsurface rights and sell them to third-parties.
- (d) **Category D: Subsoil Resources are Managed by the Government in the Capacity of a Custodian but Ownership Resides with the Jurisdiction's Citizens** – For jurisdictions in this category, the laws and regulations specify that subsoil resources are managed by the government, but only in the capacity of a custodian for current and future generations.

2.11. Based on the above, it appears that it would be possible for some public sector entities operating within a legal framework that is aligned with Category A to demonstrate that they have control over

subsoil resources. For these jurisdictions, the laws and regulations confer legal ownership, access, and enforceable rights to the service potential or economic benefits from subsoil resources to the governments.

- 2.12. For other jurisdictions such as those in Category B, the assessment of control is less clear, as a government may have ownership of the subsoil resources, but land ownership rights held by other entities can prevent the government from exercising its control. In these jurisdictions, it would be difficult to argue that a government has control over the subsoil resources within the land owned by individuals and other entities until the government has negotiated access rights with the landowners. In these jurisdictions, subsoil resources within state-owned lands would still be controlled by the government.
- 2.13. For Category C, the subsoil resources within lands that are owned by individuals and private enterprises would not be controlled by the government. However, the subsoil resources within state-owned lands would still be controlled by the government.
- 2.14. For Category D, governments that are only acting as a custodian of subsoil resources for its citizens will find it difficult to argue that the subsoil resources are their asset.
- 2.15. It is worth highlighting that the legal interpretation of a jurisdiction's surface and subsurface rights, as well as how its legal framework is applied in practice, will need to be carefully analyzed before concluding on whether the government controls the subsoil resources. For example, in one response to the survey, it was noted that the jurisdiction's constitution and land-related legislation assert that the government is acting as a custodian. However, in practice, the constitution and legislation have been interpreted to mean that the government has legal ownership of subsoil resources in the jurisdiction.
- 2.16. The relationship between the above categories and the control indicators are summarized in the following table. The indicator on means to achieve objectives is excluded as it is largely dependent on the specific facts and circumstances for each public sector entity. For example, a government entity would typically have the economic resources to develop and utilize its subsoil resources.

	Category A	Category B	Category C	Category D
Ownership	✓	✓	✗	✗
Access	✓	Depends*	✗	✗
Enforceable Rights	✓	Depends*	✗	✗

*In these jurisdictions, the existence of access rights and enforceable rights to service potential or economic benefits will depend on the results of negotiations with the holders of surface rights.

Consideration of whether there has been a past event giving rise to control

- 2.17. For an item to meet the definition of an asset, there must have been a past event which conferred control of the item to the reporting entity. Paragraph 5.13 of the Conceptual Framework states:

"Entities can obtain assets by purchasing them in an exchange transaction or developing them. Assets may also arise through non-exchange transactions,

including through the exercising of sovereign powers... An asset arises when the power is exercised, and the rights exist to receive resources.”

2.18. Applying the above principle and the discussion of control from paragraphs **Error! Reference source not found.**-2.16 to subsoil resources, in jurisdictions where the laws and regulations confer control of subsoil resources to a public sector entity, the exercise of sovereign powers⁴³ to establish the laws and regulations could result in a past event which results in control over the resources.

2.19. In some cases, the existence of a past event is relatively straightforward. For example, a government could enact legislation to specify that ownership of land also confers ownership of any subsoil resources within the land. The government also enacts legislation allowing the expropriation of land from its citizens in exchange for market consideration then subsequently carries out an expropriation. In this case, the expropriation, which effectively compels citizens to sell their property to the government, would be considered the past event which results in obtaining control over both the land and subsoil resources within the land.

2.20. In other cases, the existence of a past event is less clear. For example:

In Country A, the government concludes from a geological study that there is indication of mineral deposits within its jurisdiction. In response, the government amends its constitution to specify that:

- (a) All mineral resources, regardless of their location within Country A, are owned by the state;
- (b) Landowners have the rights to the surface area of the land but no rights to the underground resources;
- (c) In cases where mineral deposits are located within lands owned by individuals or private enterprises, the state has the right to expropriate land for nominal value and have full control over the development, extraction, processing, and utilization of the mineral resources.

In this extreme example, the government would fall within Category A since the government has ownership of the subsoil resources and the ability to expropriate any land in its jurisdiction for nominal value—i.e., the government has a substantive right to gain access over these resources at any time. Therefore, the government concludes that the amendment of the constitution was the past event which conferred control of the subsoil resources in Country A to the state. In practice, such an extreme example would be rare, as it would usually be difficult for a government to enact legislation which lets it unilaterally seize land for little to no consideration. Furthermore, most jurisdictions are likely to already have established laws and regulations over land ownership and subsoil resources.

Consideration of existence uncertainty

2.21. As noted in paragraph 1.52, the Conceptual Framework does not have a standardized probability threshold for recognition purposes and the assessment of whether an element exist should take into account all available evidence. For subsoil resources, the issue of existence uncertainty is particularly important because most subsoil resources in their natural state are often underground and cannot be observed by conventional means.

⁴³ While the exercise of a sovereign power can factor into the determination of control over subsoil resources, the sovereign power itself is not an asset. This issue is analyzed in [Appendix A](#) of this [draft] Consultation Paper.

- 2.22. While geological studies and other techniques could be used to gain some information on whether subsoil resources exist and estimate the resources' quantities, there is still a level of uncertainty associated with these studies and techniques. (See Measurement considerations section below.)
- 2.23. During the development of this CP, one constituent noted that, in their view, an entity can never have control over subsoil resources, as the entity does not readily have physical access to the underground resources. Without physical access to the subsoil resource, it is difficult to verify that the resource actually exist, and thus difficult to conclude that control exists.
- 2.24. As the above discussion is based on a limited number of responses from an informal survey, the IPSASB noted that it would be prudent to solicit constituents' views on the matter and incorporated this issue into the Specific Matter for Comment following paragraph 2.25.

Overall conclusion on whether a subsoil resource can meet the definition of an asset

- 2.25. Based on the above preliminary research, a number of constituents are of the view that an item of subsoil resource can be an asset as defined in the Conceptual Framework. However, there were also concerns from other constituents over the existence of an inflow of economic benefits or service potential (i.e., whether the subsoil resource is a "resource" as defined in the Conceptual Framework) or whether control over a subsoil resource can exist. Therefore, the IPSASB would like to formally solicit feedback from constituents on this matter in the following Specific Matter for Comment.

Specific Matter for Comment 1—Chapter 2

Based on the discussion in paragraphs 2.5-2.20, one potential view is that an unextracted subsoil resource can meet the definition of an asset because: (1) it is a resource as defined in the Conceptual Framework; (2) it is possible in certain scenarios for an entity to demonstrate that it has control over the resource; and (3) it is possible for there to be a past event which gave rise to control.

Alternatively, it could be argued that because of the uncertainty over the existence of subsoil resources, an entity which does not readily have physical access to the resource will have difficulties verifying that the resource exists and challenges in demonstrating that it has control over the resource. Under this view, an item of subsoil resource cannot meet the definition of an asset for the purposes of recognition in the financial statements.

In your view, is it possible for an unextracted subsoil resource to meet the definition of an asset?

Please provide the reasons supporting your view.

Capable of Being Measured in a Way that Achieves the Qualitative Characteristics and Takes Account of Constraints on Information in GPFRs

- 2.26. Once it has been determined that an item satisfies the definition of an asset, an entity must also be able to reliably measure the item for it to be recognized in the financial statements. Applying the principles set out in paragraphs 1.35-1.47, for a subsoil resource to be recognized as an asset in the financial statements, it is necessary to attach a monetary value to the subsoil resource which achieves the qualitative characteristics while considering the constraints on information.
- 2.27. For the measurement of subsoil resources, the qualitative characteristics which are the most applicable are relevance, faithful representation, and verifiability.

- 2.28. As noted in paragraphs 1.39-1.40, a current value would be a more relevant measurement model for subsoil resources. However, for a current value to faithfully represent the economics of subsoil resources, the value should approximate the economic benefit or service potential embodied in the resources. Determination of this estimated value will involve:
- (a) Estimating the quantities of subsoil resources that can be ultimately extracted, taking into account whether it is physically feasible to extract the resources;
 - (b) The estimated price at which extracted resources can be sold, which is impacted by macroeconomic factors such as the estimated market price of the resource, as well as entity-specific factors such the estimated timing of when resources are extracted, as well as the grade of the extracted resources; and
 - (c) The estimated costs of extraction and depending on the legal requirement in the jurisdiction, restoration costs.
- 2.29. The above factors, particularly the quantities of unextracted subsoil resources, are all subjected to a high degree of uncertainty. The need to estimate the quantities of a resource is not a common issue when dealing with the measurement of an asset or liability. In a typical scenario where a valuation is required for financial reporting purposes—for example, valuation of financial instruments or estimation of a pension liability—the number of the units of account for the particular asset or liability being measured (e.g., the number of shares or the number of employees in a pension plan) is known, and the measurement uncertainty arises from the value of each unit of account.
- 2.30. In the private sector, while the underlying subsoil resources are not recognized, a number of internationally accepted estimation approaches are used to estimate the quantities of unextracted resources. These estimation approaches are used primarily for investment and resource allocation decision-making purposes and also impact financial reporting as an input into the amortization of capitalized costs of exploration, evaluation, development and production activities (see paragraph 2.41) and other subsoil resources-related capital assets.
- 2.31. The details of these estimation approaches are summarized in [Appendix C, in the section on Resource Estimation Practices in the Private Sector](#). In summary, while there are robust estimation approaches which produce information that is appropriate for management decision-making purposes, the geologist and engineering community have indicated that these estimates may not be appropriate for use in the financial statements. This is because the same set of data can result in materially different estimates based on interpretation by difference specialists.
- 2.32. Applying this line of thinking to the measurement of unextracted subsoil resources, , it may be difficult for an entity to develop an estimate of resources that can faithfully represent the quantities that may exist.
- 2.33. Furthermore, as resource and reserve estimates from geological models can materially change due to different assumptions and interpretations of data, it may also be difficult for an entity to develop a measurement basis which is verifiable.
- 2.34. The IPSASB recognizes that geological reports are useful for purposes such as performance reporting and price setting for the sale of extraction rights. However, because of the above-noted difficulties with faithful representation and verifiability, even when an entity can demonstrate that a subsoil resource exists and that it has control over resource, it would be extremely difficult to recognize these subsoil resources as assets in IPSAS financial statements due to the lack of an

appropriate measurement basis. However, it might be possible to disclose information on such assets, including providing estimates in GPFRs.

Comparison of the above view with other accounting frameworks

- 2.35. The view that it would be difficult to recognize subsoil resources is consistent with the IASB's Discussion Paper which also concluded that unextracted minerals, oil and gas (and other non-regenerative natural resources) should not be recognized in the financial statements, as historical cost generally does not provide relevant information, while entity-prepared current values are not viewed as representationally faithful due to the subjectivity and degree of estimation involved.⁴⁴
- 2.36. Similarly, GRAP 110 concluded that unextracted minerals, oil, gas, and other non-regenerative resource cannot be recognized. The South African Accounting Standards Board concluded that an entity is unlikely to conclude that it controls subsoil resources, and more importantly for this discussion, that an entity is unlikely to be able to reliably measure these resources due to the uncertainty from geological estimates.⁴⁵
- 2.37. As noted in paragraph 28, SFFAS 38 and Technical Bulletin 2011-1 requires federal government entities in the United States to disclose the present value of estimated royalties from proved oil and gas reserves and certain non-renewable resources in supplemental schedules which are outside the general purpose financial statements. In their basis for conclusions, FASAB explained that these amounts are not recognized in the financial statements due to the inability to reliably measure these reserves and resources.⁴⁶ The FASAB originally considered amending the SFFAS 38 and Technical Bulletin 2011-1 to require recognition or disclosure within the financial statements, but as at [May 2021 **(to be updated when finalizing the CP)**], the board has not yet revisited the statement or technical bulletin.

Overall conclusion regarding recognition of subsoil resources

- 2.38. Based on the above discussion, the IPSASB notes that for subsoil resources, it would be difficult to develop a measurement basis that is relevant, faithfully representative of the underlying economics and verifiable. However, the IPSASB also noted that it would be helpful to solicit feedback from constituents on this matter. Therefore, the IPSASB would welcome input into the following Specific Matter for Comment.

Specific Matter for Comment 2—Chapter 2

The IPSASB noted that regardless of whether a public sector entity can demonstrate that a subsoil resource exists or that it controls a subsoil resource, it would be difficult to develop a relevant, faithfully representative, and verifiable measurement basis for the resource using information from geological studies

⁴⁴ IASB Discussion Paper DP/2010/1, *Extractive Activities*, paragraph 4.83.

⁴⁵ GRAP 110.BC15-BC16.

⁴⁶ SFFAS 38, paragraphs A36 and A38.

and models. Based on this view, it would be difficult for a subsoil resource to meet the criteria to be recognized as an asset under IPSAS.

In your view, are there any alternative measurement approaches that could be used to develop a measurement basis that would be appropriate for financial reporting purposes?

If so, please provide a detailed explanation of your alternative measurement approach. Please also comment on whether this alternative approach resulted in recognized amounts in the financial statements that have been audited without qualification of the audit opinion.

Measurement and Potential Disclosures

- 2.39. As noted in paragraph 2.38, the IPSASB highlighted that it would be very challenging to develop a measurement basis for a subsoil resource that would be relevant, faithfully representative, and verifiable, and thus it would be difficult to recognize a subsoil resource as an asset. Therefore, there is no need to consider measurement of the subsoil resource within the financial statements.
- 2.40. Despite not being recognized as an asset in the financial statements, the disclosure of information regarding subsoil resources could be useful for users of the GPFRs. The detailed consideration of disclosures within the GPFS is explored in chapter 5 of this CP. For presentation of supplemental information outside the GPFS in the broader GPFRs, the applicability of the IPSASB's RPGs 1-3 is discussed in chapter 1 starting at paragraph 1.62.

Specific Matter for Comment 3—Chapter 2

The IPSASB noted that despite not being recognized as an asset in the financial statements, the disclosure of information regarding subsoil resources could be useful for users of the GPFRs. Such information could be presented as supplemental information using the IPSASB's RPGs or as additional financial statement disclosures, as discussed in chapter 5.

Do you agree that the information regarding subsoil resources would be useful for users of the GPFRs and should be presented as supplemental information or disclosed in the financial statements?

Accounting for the Costs of Activities Related to Subsoil Resources

- 2.41. In the preliminary outreach stages of the project, the IPSASB noted that some public sector entities in certain resource-rich jurisdictions have recently entered into production sharing or co-production agreements with private companies, rather than the traditional licensing or royalty agreements. From the public sector entities' perspective, such agreements may be accounted for as joint arrangements, so the accounting for the activities relating to subsoil resources, including exploration, evaluation, and development, will be relevant in the public sector.
- 2.42. The IPSASB considered the following IFRS guidance applicable to exploration and evaluation expenditures, as well as development and production costs:
- (a) Under IFRS 6, *Exploration for and Evaluation of Mineral Resources*, entities have an accounting policy choice to capitalize exploration and evaluation expenditures;
 - (b) Development costs which meet the capitalization criteria in IAS 38, *Intangible Assets*, are required to be capitalized. (It should be noted that IPSAS 31, *Intangible Assets*, is drawn primarily from IAS 38, so this guidance is already in current IPSAS);

- (c) Based on the guidance in IFRIC 20, *Stripping Costs in the Production Phase of a Surface Mine*, certain production costs involving the removal of waste materials can be capitalized as inventory or a non-current asset. Direct costs of extraction are also capitalized as inventory; and
- (d) Under certain conditions, the above capitalized costs are subject to recoverability assessments and impairment testing.

For a more detailed discussion of the above IFRS guidance, please see paragraphs C.1-C.4 of [Appendix C: Supplemental Information on Subsoil Resources](#).

- 2.43. The IPSASB reached a preliminary view to adopt the above IFRS guidance, subject to any specific IASB plans to revise the above standards, particularly IFRS 6. This decision was based on the fact that the guidance from IFRS 6 and IFRIC 20 fills a gap in the current IPSASB literature. Furthermore, in the outreach performed by the IASB, constituents in the private sector generally agreed that IFRS 6 resulted in information that was useful to both preparers and users of IFRS financial statements. Therefore, the IPSASB noted that guidance which was aligned with IFRS 6 should also result in useful information for preparers and users in the public sector. Finally, maintaining alignment with IFRS is one of the key themes of the IPSASB's strategic objective, so alignment with the above guidance is consistent with the IPSASB's previous strategic decisions.

Preliminary View 2—Chapter 2

The IPSASB's preliminary view is to provide guidance on exploration and evaluation expenditures, as well as development and production costs, based on the guidance from IFRS 6, *Exploration for and Evaluation of Mineral Resources*, IAS 38, *Intangible Assets*, and IFRIC 20, *Stripping Costs in the Production Phase of a Surface Mine*, subject to any specific IASB plans to revise these standards.

Do you agree with the IPSASB's adoption of this guidance?

If not, please provide your reasons.

- 2.44. There are a number of potential options on how the guidance from IFRS 6 and IFRIC 20 could be incorporated into IPSAS:
- (a) One option is to incorporate the guidance from IFRS 6 and IFRIC 20 along with any guidance on the underlying natural resources in one newly developed IPSAS on natural resources;
 - (b) As noted in paragraphs C.1-C.4 of [Appendix C: Supplemental Information on Subsoil Resources](#), the costs of natural resource-related activities are of a different nature and separate from the underlying natural resources. This difference and separation would suggest that a logical way to incorporate the guidance would be to develop a separate IPSAS specifically on the guidance from IFRS 6 and IFRIC 20;
 - (c) Alternatively, the guidance can be incorporated by direct reference to IFRS 6 and IFRIC 20 in an existing IPSAS such as IPSAS 1, *Presentation of Financial Statements*.
- 2.45. The IPSASB noted that all of the above options are viable and would like to solicit constituents' feedback in the following Specific Matter for Comment:

Specific Matter for Comment 4—Chapter 2

With respect to the guidance on exploration, evaluation, development, and production costs, the IPSASB noted the following options for incorporating this guidance into IPSAS:

- (a) Incorporate the guidance on natural resource-related activities with the guidance developed for natural resources in one IPSAS;
- (b) Develop a separate IPSAS specifically for the guidance from IFRS 6 and IFRIC 20; or
- (c) Directly refer to IFRS 6 and IFRIC 20 in an existing IPSAS, such as IPSAS 1, *Presentation of Financial Statements*.

Which of the above options do you prefer? Are there any other approaches that could be used to incorporate IFRS 6 and IFRIC 20 into IPSAS?

Please provide the reasons supporting your view.

Chapter 3: Living Resources

Description of Living Resources

- 3.1. A living resource is described as *a living organism (e.g., an animal or plant) which:*
- (a) Is naturally occurring;
 - (b) Remains in its natural state (i.e., the resource's natural biological transformation has not yet been changed due to any human intervention); and
 - (c) Is a resource, as described in the IPSASB's Conceptual Framework.
- 3.2. IPSAS 27, *Agriculture*, defines biological transformation as, "the processes of growth, degeneration, production, and procreation that cause qualitative or quantitative changes in a biological asset."⁴⁷ As noted in paragraphs 1.12, human intervention refers to interference by humans in the living resource's natural biological transformation. Such intervention encompasses not only harvesting a living resource, but also modifying the living resource's natural biological transformation prior to its harvest.⁴⁸
- 3.3. Furthermore, living organisms can only be considered living resources if they are capable of being developed and harvested for their economic benefits or service potential, *but their biological transformation has not yet been subject to human interference.*
- 3.4. The specific actions that constitute "human interference" depends on the facts and circumstances specific to the living resource. For example, a virgin forest could be considered a resource as the trees could generate economic benefits or service potential. The trees would remain in their natural state if:
- (a) The management of the forest is limited to actions such as counting the number of trees or measuring their natural growth; and
 - (b) The biological transformation of the trees has not yet been interfered by human activity—that is, the forest has not been fertilized, pruned, treated for disease, etc.
- 3.5. If the soil in a part of the forest is fertilized to promote tree growth, the trees growing in the fertilized area are no longer in their natural state, and it may be more appropriate to account for these specific trees and the related activities under other existing IPSAS (see [Appendix D: Supplemental Information on Living Resources](#)).
- 3.6. As another example, an entity may erect a barrier to restrict access to the animals in a reservation. If the barrier fences off an area that is significantly larger than the range where the animals would naturally roam, the barrier would not interfere in the animals' biological transformation. However, if the barrier prevents the animals from moving in their natural migration path or redirects the animals to a food source that is outside their natural grazing areas, the barrier would be considered human interference and the animals would no longer be in their natural state.

⁴⁷ IPSAS 27, paragraph 9.

⁴⁸ Paragraph 9 of IPSAS 27 defines harvest as, "the detachment of produce from a biological asset or the cessation of a biological asset's life processes." The term can apply to both plants and animals.

Preliminary View 3—Chapter 3

Based on the discussions in paragraphs 3.1-3.6, the IPSASB's Preliminary View is that a living resource is a living organism which:

- (a) Occurs naturally;
- (b) Remains in its natural state (i.e., the resource's natural biological transformation has not yet been changed due to any human intervention); and
- (c) Is a resource, as described in the IPSAS's Conceptual Framework.

Based on the above description, only a living organism, which has service potential or is capable of generating economic benefits, and whose biological transformation has not yet been subject to human interference, are considered a living resource.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons.

Clarification of what is Considered a "Living Resource"

- 3.7. During the initial outreach stage of the Natural Resources project, the IPSASB staff noted confusion among constituents in distinguishing between the underlying living resources, the costs of activities related to living resources, and living organisms which are no longer living resources as their biological transformation have been subjected to human intervention. The delineation of these items is discussed in detail in [Appendix D: Supplemental Information on Living Resources](#).

Application of the Asset Recognition Criteria to Living Resources

- 3.8. For a living resource to be recognized as an asset under IPSAS, the item must:

- (c) Satisfy the definition of an element, in this case an asset; and
- (d) Be measurable in a way that achieves the qualitative characteristics and takes account of constraints on information in GPFRs.

- 3.9. As noted in paragraph 1.21-1.22, living resources generally can generate economic benefits or have service potential. Also, as noted in paragraphs 1.41-1.44, the Conceptual Framework requires the consideration of any issues with existence uncertainty that could impact the assessment of whether the definition of an asset has been met.

- 3.10. Keeping the above concepts in mind, the key considerations regarding the recognition and measurement of living resources are as follows:

- (a) Can an entity demonstrate control over a living resource?
- (b) Is there a past event that gave rise to the entity's control over a living resource?
- (c) Are there any concerns with existence uncertainty that may prevent a living resource from meeting the definition of an asset?
- (d) Can an entity appropriately measure a living resource in a way which balances the qualitative characteristics while taking materiality and cost-benefit considerations into account?

- 3.11. The following analysis considers each of these questions to arrive at a PV regarding the recognition of living resources as assets under IPSAS.

Consideration of control

3.12. The general concept of control is discussed in paragraph 1.30 and the indicators of control from the Conceptual Framework are as follows:

- (a) Legal ownership;
- (b) Access to the resource, or the ability to deny or restrict others to access the resource;
- (c) The means to ensure that the resource is used to achieve its objectives; or
- (d) The existence of enforceable right to service potential or the ability to generate economic benefits arising from the resource.

3.13. The above list of indicators is not comprehensive and need not all be met simultaneously to demonstrate control of a living resource. Similar to subsoil resources, whether the above indicators exist will largely depend on the specific facts and circumstances relating to the living resource, as well as the laws and regulations of the jurisdiction in which the entity and/or living resource is located.

3.14. In general, an entity's ability to direct the use or disposal of a living resource in a manner it sees fit demonstrates the existence of legal ownership and enforceable rights. In the simplest of cases, the unfettered ability to sell a living resource for cash or other resources would be a strong indicator of control over the living resource. Similarly, the ability to harvest a living resource for one's own use would also be a strong indicator of control.

3.15. An entity's ability to access the living resource or to prevent others from access is also an indicator of control. For example, an entity could physically deny access to a living resource by setting up fences and other physical barriers. Alternatively, there may be laws and regulations with enforceable penalties which act as a deterrent for others who may wish to access the resource. For an example of how physical restriction of access to a living resource is possible without removing the living resource from its natural state, please see paragraph 3.6.

3.16. Finally, the indicator regarding the means to ensure that a resource is used to achieve an entity's objectives will be dependent on the specific facts and circumstances of the public sector entity.

Consideration of whether there has been a past event giving rise to control

3.17. For an item to meet the definition of an asset, there must have been a past event which conferred control of the item to the reporting entity. The existence of a past event of living resources is relatively straightforward. For living resources, a past event can occur through:

- (a) Legislation, government policy or similar means where the entity is granted control over living resources to meet its service delivery objectives to manage and preserve the asset for the benefit of present and future generations;
- (b) Acquisition where the asset is acquired through purchase;
- (c) Non-exchange transaction or where an asset is received at no or for a nominal consideration, for example through a donation; or
- (d) A living resource having the ability to reproduce naturally, such as when offspring is born.

Consideration of existence uncertainty

- 3.18. Because many living resources are readily observable, the issue of existence uncertainty is not as prevalent for living resources as for subsoil resources. However, there could be situations where existence uncertainty is still applicable. For example, an entity may control an uncultivated forest where truffles have historically been found. Truffles grow entirely underground and there is no set pattern of where or if they will develop. Therefore, it may be difficult, if not impossible, to conclude that a certain number of truffles exist in the forest before they have been found.
- 3.19. There could also be instances where it is unclear if an entity truly controls a living resource. For example, an entity could have legal ownership and enforceable rights over certain animals within their property. However, these animals are free to roam about, and it is possible that they may wander out of the property or even into another legal jurisdiction. In these situations, it would be difficult to conclude that the entity truly controls the animals.
- 3.20. As noted in paragraph 1.51, when there is uncertainty regarding the existence of a living resource, all available evidence, facts and circumstances will need to be considered, and an entity will need to apply judgment in the determination of whether an item can be considered an asset.

Overall conclusion on whether living resources meet the definition of an asset

- 3.21. Based on the above discussion, in many situations where existence uncertainty is not applicable, it is clear that a living resource could be a resource which is presently controlled by an entity as the result of a past event. That is, it is possible for a living resource to meet the definition of an asset.

Preliminary View 4—Chapter 3

Based on the discussion in paragraphs 3.8-3.21, the IPSASB's Preliminary View is that, subject to specific facts and circumstances involving existence uncertainty, it is possible for a living resource to meet the definition of an asset as set out in the Conceptual Framework.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons.

Consideration of whether Living Resources are Measurable

- 3.22. The second recognition criterion is that the asset should be measured in a way that achieves the qualitative characteristics, which includes consideration of whether the item can be reliably measured and takes account of constraints on information in GPFRs. In other words, to recognize a living resource in the financial statements, it is necessary to attach a monetary value to the item. This implies that the entity must be able to find an appropriate measurement basis.
- 3.23. Unlike subsoil resources, the quantification of some living resources may be more straight forward. Many living resources such as trees and other vegetation are immobile and readily observable or accessible. In these situations, it will be more likely that there is information available to quantify the living resource with a relatively high degree of certainty. However, as another example, it may be difficult to count animals which can freely roam in and out of a jurisdiction. Unless there is some tracking mechanism, an entity may have difficulties to determine the quantities of a living resource.
- 3.24. Furthermore, many living resources can be harvested then sold in an active market (e.g. the trees from an uncultivated forest can be harvested then processed and sold as lumber). For these living resources, it would be relatively straightforward to develop a measurement basis which can faithfully represent the resource's underlying value and is verifiable.

- 3.25. Based on the above, it appears to be possible to develop a measurement basis that is relevant, representatively faithful, and verifiable. Therefore, an entity should be able to measure the certain living resources in a way that achieves the qualitative characteristics and takes account of constraints on information in GPFRs.

Conclusion on the Recognition of a Living Resource as an Asset

- 3.26. Based on the discussion in paragraphs 3.8-3.25, the IPSASB concludes that:
- (a) For certain living resources prior to their exploitation, it is possible for an entity to demonstrate that the living resource is a resource which is controlled by the entity as a result of a past event; and
 - (a) Such a living resource prior to its exploitation can be measured in a way that achieves the qualitative characteristics and takes account of constraints on information in GPFRs.

Preliminary View 5—Chapter 3

Based on the discussions in paragraphs 3.8-3.25, the IPSASB's Preliminary View is, subject to consideration of existence and measurement uncertainty, certain living resources meet the definition of an asset and are capable of being measured in a way that achieves the qualitative characteristics and takes account of constraints on information in the GPFRs. Therefore, certain living resources can be recognized as assets within the general purpose financial statements.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons.

Measurement

- 3.27. As noted in Preliminary View 4, certain living resources can be recognized as an asset within the general purpose financial statements. The following discussion considers the application of the general measurement principles, summarized in paragraphs 1.56-1.61, to living resource. As the specific details on the selection of an appropriate measurement basis will depend on the nature of the specific living resource and the information available, the following discussion is limited to the high-level factors and suggested approaches that should be considered when selecting a measurement basis.
- 3.28. As noted in paragraph 1.57, a measurement basis should reflect the cost of services, operational capacity, or financial capacity of an entity, and the selection of the basis should reflect the entity's objectives for holding the asset:
- 3.29. For living resources that are primarily held for sale, fair value may be the most appropriate measurement basis, as it reflects the price that could be received to sell an asset in an orderly transaction between market participants. If a living resource is directly traded on an open market, the market price would be most indicative of the resource's fair value. For other living resources, there may not be a direct market for the living resource itself, but the living resource could be harvested then processed into an item that is then traded in an open market. In such cases, the quoted market price for the processed item could be adjusted for the cost of harvest and processing to arrive at a proxy for a fair value measure of the living resource.
- 3.30. For living resources which are typically held for their operational capacity, a current operational value may be more appropriate. Unlike fair value, the development of a current operational value

will vary significantly depending on the specific use of the living resource. For example, an entity may determine that it is holding an uncultivated forest for the purpose of carbon dioxide absorption. In such a situation, the entity will need to determine if there is an appropriate method of quantifying the carbon dioxide expected to be absorbed by the forest then attach a monetary value to this quantity. Such a monetary value may be derived from the price of carbon offsetting credits, if it has been determined that the prices in a carbon offset credit trading scheme can serve as an appropriate proxy.

- 3.31. In general, the development of a current operational value may involve significant management judgment and subjectivity. If an entity concludes that it is not feasible to develop a current operational value that is relevant, representatively faithful, and verifiable, but a relevant, representatively faithful, and verifiable fair value is available, the entity should consider if the fair value measure can be used as a proxy for living resource's current operational value.

Disclosures

- 3.32. For living resources that are recognized within the financial statements, the detailed consideration of disclosures within the GPFS is considered in chapter 5 of this CP. For other living resources, despite not being recognized as an asset for financial reporting purposes, the disclosure of information regarding unrecognized resources could be useful for users of the GPFRs. For presentation of supplemental information outside the GPFS in the broader GPFRs, the applicability of the IPSASB's RPGs 1-3 is discussed in chapter 1 starting at paragraph 1.62.

Chapter 4: Water

Description of Water

- 4.1. In general terms, water is a chemical compound that is composed of the elements hydrogen and oxygen and exists in gaseous (steam), liquid (water), and solid (ice) states. This CP addresses the potential accounting for water that:
 - (a) Is naturally occurring, free flowing and is found in various natural forms, such as rivers, streams, estuaries, lakes, natural fountains, springs, seas, and glaciers;
 - (b) Remains in its natural state (and has not been extracted through human action); and
 - (c) Is a resource, as described in the IPSASB's Conceptual Framework.
- 4.2. Determining whether water meets the description of natural resource is not only influenced by the structure in which water is held, but also by the occurrence of an action whereby the water is extracted. Therefore, water held in humanmade structures may still be in its natural state if it has not been extracted.
- 4.3. Water resources that have been extracted do not meet the description of a natural resource, and these resources are not within the scope of this chapter of the CP. The process of extraction involves human intervention and determines the point when water should be recognized as inventory within the scope of IPSAS 12, *Inventories*.⁴⁹
- 4.4. Water in its natural state is a resource as described in the IPSASB's Conceptual Framework because it is capable of being extracted for generating economic benefits or service potential, but have not yet been extracted.

Clarification of what is Considered "Water"

- 4.5. During the initial outreach stage of the Natural Resources project, the IPSASB staff noted confusion among constituents in distinguishing between the underlying water and the costs of activities related to water (for example, the cost of improving the quality of water through treatment of water).
- 4.6. Legislation exists in many jurisdictions that requires certain public sector entities to regulate water in its natural forms such as rivers, streams, natural fountains, and springs. There is currently no accounting guidance for such water resources in their natural state, which is the subject matter for this chapter.
- 4.7. Water which has been extracted and held in humanmade structures such as reservoirs is not in the scope of this chapter and is accounted for as inventory (see paragraph 4.2).
- 4.8. From time to time an entity may, as part of its mandate or service delivery objective, undertake activities to ensure that the quality of the water in its natural state in rivers and dams is maintained or treated. This does not change the natural state (quantity or quality) of the water. The costs incurred to maintain or treat water are not in the scope of this chapter of the CP because the activities to treat the water are distinct and do not infer that water will be brought to its natural state when its maintained and treated. The costs incurred to treat water will probably be expensed

⁴⁹ Paragraph 9 of IPSAS 12, *Inventories* defines inventory as assets (a) in the form of materials or supplies to be consumed in the production process; (b) in the form of materials or supplies to be consumed or distributed in the rendering of services; (c) held for sale or distribution in the ordinary course of operations; or (d) in the process of production for sale or distribution.

because the entity does not control the water that is free flowing. See paragraphs 4.13-4.16 for consideration of control.

- 4.9. In contrast, costs incurred to treat water that has been extracted are capitalized as inventory if the costs incurred meet the recognition principle.⁵⁰ For example, treatment costs incurred for water that has been extracted and held in man-made structures may be capitalized as inventory if the costs are recoverable, (that is, it is probable that future economic benefits or service potential associated with the item will flow to the entity and the cost of the item can be measured reliably) and expensed as the water is consumed or sold.
- 4.10. The structures holding the water are accounted for as property, plant, and equipment within the scope of IPSAS 17. Public sector entities may also issue licenses to other public or private sector entities to extract water from their jurisdiction. The sale of the water licenses is recognized as revenue in terms of IPSAS 9.⁵¹ The entity that holds the right or license to extract the water, treats the license as an intangible asset in IPSAS 31. The entities that extract the water will account for the water as inventories in terms of IPSAS 12.

Preliminary View 6—Chapter 4

Based on the discussions in paragraphs 4.1-4.10, the IPSASB's Preliminary View is that water is chemical compound that is composed of the elements hydrogen and oxygen and exists in gaseous (steam), liquid (water), and solid (ice) states. This CP addresses the potential accounting for water that:

- (a) Is naturally occurring, free flowing and is found in various natural forms, such as rivers, streams, lakes, estuaries, natural fountains, springs, seas, and glaciers;
- (b) Remains in its natural state (and has not been extracted through human action); and
- (c) Is a resource, as described in the IPSASB's Conceptual Framework.

Based on the above description, only water, which has service potential or is capable of generating economic benefits and has not yet been extracted, is considered a natural resource.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons.

Application of the Asset Recognition Criteria to Water

- 4.11. For water in its natural state to be recognized as an asset under IPSAS, the item must:
 - (a) Satisfy the definition of an element, in this case an asset; and
 - (b) Be measurable in a way that achieves the qualitative characteristics and takes account of constraints on information in GPFRs.
- 4.12. As noted in paragraphs 1.27-1.28, water generally can generate economic benefits or have service potential because water can be treated and used as drinking water and sold for economic benefits. Also, as noted in paragraphs 1.50-1.53, the IPSASB Conceptual Framework requires the

⁵⁰ Paragraph 18 of IPSAS 12, *Inventories* states that the cost of inventories comprise all costs of purchase, costs of conversion, and other costs incurred in bringing the inventories to their present location and condition.

⁵¹ The IPSASB has issued Exposure Draft 70, *Revenue with Performance Obligations*, which proposes to supersede IPSAS 9 with recognition and measurement requirements for revenue transactions with performance obligations. See the following website for more details: <https://www.ipsasb.org/publications/exposure-draft-70-revenue-performance-obligations>

consideration of any issues with existence uncertainty that could impact the assessment of whether the definition of an asset has been met.

- 4.13. Keeping the above concepts in mind, the key considerations regarding the recognition and measurement of water are as follows:
- (a) Can an entity demonstrate control over water?
 - (b) Is there a past event that gave rise to the entity's control over water?
 - (c) Are there any concerns with existence uncertainty that may prevent water from meeting the definition of an asset?
 - (d) Can an entity appropriately measure water in a way which balances the qualitative characteristics while taking materiality and cost-benefit considerations into account?
- 4.14. The following analysis considers each of these questions to arrive at a PV regarding the recognition of water as assets under IPSAS.

Consideration of control

- 4.15. As discussed in paragraphs 1.30-1.31 an entity obtains control over an asset through:
- (a) Legal ownership;
 - (b) Access to the resource, or the ability to deny or restrict others to access the resource;
 - (c) The means to ensure that the resource is used to achieve its objectives; or
 - (d) The existence of enforceable right to service potential or the ability to generate economic benefits arising from the resource.
- 4.16. An entity is unlikely to demonstrate that it controls water that it finds in its natural state before it is extracted. This is because water is free flowing (mobile) and reduces or increases as a result of natural causes such as evaporation, rainfall, seepage into the water table, ocean currents, or other movement due to gravitational or tidal forces.
- 4.17. Entities that have a license to extract water only control and access to the water that is extracted. The water that is extracted is inventory.
- 4.18. Based on these observations, it can be concluded that water held in its natural state should not be recognized by an entity in its financial statements because control is unlikely to exist unless there has been human intervention.

Consideration of whether there has been a past event giving rise to control

- 4.19. Based on the above conclusion that water in its natural state cannot be controlled (see paragraphs 4.16-4.18), there is no need to consider if there has been a past even giving rise to control.

Overall conclusion on whether water meets the definition of an asset

- 4.20. Based on the above discussion, it appears that water in its natural state does not meet the definition of an asset as it cannot be controlled.

Measurement and Potential Disclosures

- 4.21. As noted in paragraphs 4.16-4.18, the IPSASB noted that it would be difficult to recognize water in its natural state as an asset because it cannot be controlled. It is also difficult to attach monetary value and reliably measure water in its natural state because it is free flowing (its volumes increase from rainfall and decrease because of evaporation or water seeping into the water table).
- 4.22. Despite not being recognized as an asset for financial reporting purposes, the disclosure of information regarding unextracted water (water in its natural state) could be useful for users of the GPFRs. The detailed consideration of disclosures within the GPFS is explored in chapter 5 of this CP. For presentation of supplemental information outside the GPFS in the broader GPFRs, the applicability of the IPSASB's RPGs 1-3 is discussed in chapter 1 starting at paragraph 1.62.

Preliminary View 7—Chapter 4

Based on the discussions in paragraphs 4.11-4.20, the IPSASB's Preliminary View is that water in its natural state cannot to meet the definition of an asset because it cannot be controlled and cannot be reliably measured for financial reporting purposes. Therefore, water should not be recognized in the financial statements.

However, water in its natural state has economic value and should be disclosed in the financial statements and GPFRs.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons.

Chapter 5: Other Considerations

5.1. [Placeholder]

Consistency with Current IPSAS

5.2. [Placeholder]

Consistency of recognition and measurement proposals with existing IPSAS

5.3. [Placeholder]

5.4. [Placeholder]

Consistency of measurement proposals with the Measurement Project and the limited scope update of the Conceptual Framework

5.5. [Placeholder]

5.6. [Placeholder]

Consideration of Whether Current IPSAS Adequately Address Derecognition if Natural Resources are Recognized as Assets

5.7. [Placeholder]

5.8. [Placeholder]

Disclosure Considerations for Natural Resources which do not Meet the Asset Recognition Criteria

5.9. [Placeholder]

Other Issues

5.10. [Placeholder]

5.11. [Placeholder]

Appendix A: Accounting for a Government's Sovereign Power to Issue Licenses

Background

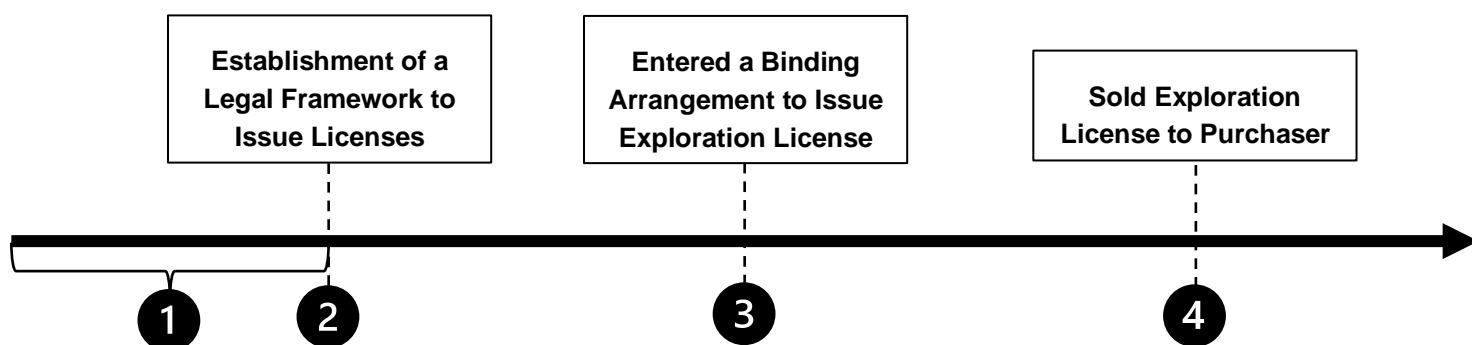
- A.1. In the Conceptual Framework, the IPSASB had previously decided that a government's sovereign power, in and of itself, did not meet the criteria to be recognized as an asset. The IPSASB's decision was driven by the conclusion that there was no past event to support the recognition of an asset. In their basis for conclusions, the IPSASB further explained that a government's inherent powers do not give rise to assets until these powers are exercised and the rights exist to receive service potential or economic benefits.⁵² While this CP will not re-open the IPSASB's previous decision, it would be helpful to apply the IPSASB's thinking specifically to a government's sovereign power to issue licenses in the context of natural resources.
- A.2. In practice, these natural resource-related licenses could include items such as mineral exploration or extraction rights, logging permits, fishing or hunting licenses, or rights to extract water. The following discussion uses a license to explore for subsoil resources.
- A.3. It is important to note that this example is meant to only cover the narrow issue of the recognition of government sovereign powers and does not address the potential recognition of the underlying subsoil resources, which is discussed in chapter 2 of this CP. Chapter 2 also includes a discussion of the costs of related activities, which is also not covered in this example. Finally, this example does not go into detail on the recognition of revenue when licenses are sold, as the IPSASB currently has a separate project on revenue.⁵³

Example

- A.4. A government entity plans to exercise its sovereign powers to establish a legal framework to issue exploration licenses to unrelated entities. Prior to the establishment of this framework, there is no legal mechanism for the government entity to issue exploration licenses.
- A.5. The following timeline illustrates the typical events leading up to the sale of exploration licenses and provides commentary regarding the recognition of an asset at each step in the timeline. As noted above, the principles in the Conceptual Framework would prevent recognition of an asset for the sovereign power on its own.
- A.6. However, as illustrated below, once the entity has exercised its sovereign power by setting up a framework to issue licenses, this legal framework facilitates the sale of licenses, which in turn results in the recognition of an asset.

⁵² IPSASB Conceptual Framework, paragraph BC5.18.

⁵³ More details on the revenue project can be found at <http://www.ipsasb.org/consultations-projects/revenue>.

Timeline

- (1) Prior to an establishment of the legal framework, there is no legal mechanism for the government entity to issue exploration licenses—i.e., it would not be possible for an exploration license to exist within the laws of the jurisdiction. Therefore, during this period, it would not be possible to recognize any asset, as there is no resource controlled by the entity as the result of a past event.
- (2) Upon establishment of a legal framework to issue licenses, it will be possible for an exploration license to legally exist within the jurisdiction. At this stage in the timeline, the government entity may start negotiating with other entities to sell exploration licenses. However, at this point, as no past event has occurred, there continues to be no asset to be recognized. Furthermore, the government entity will have no information on how to measure any asset, such as how many, if any, licenses will be sold, when licenses would be sold, how much licenses will be sold for, or whether licenses will be sold for a fixed or variable amount. As a result, even upon the establishment of a legal framework to issue licenses, as no past event has occurred and no information exists to measure any potential asset, the government entity would not be able to recognize any asset.
- (3) At this point, a government's sovereign power in itself still cannot be recognized as an asset. However, the exercise of the sovereign power through the establishment of the legal framework has made it possible for the government to sell licenses. Once the government has entered into a binding arrangement to sell a license to a purchaser, the government entity needs to consider if there is any impact from a revenue accounting perspective. It should be clarified that any such accounting impact would be driven by the binding arrangement and does **not** represent the recognition of the government's sovereign power.
- (4) Upon the issuance of a license, the government entity will typically recognize an asset for the consideration (e.g., cash received or accounts receivable) from the licensee. While the issuance of the license and subsequent recognition of the cash or account receivable asset are made possible by the exercise of the sovereign power, it should be noted that the recognized asset itself does **not** embody the sovereign power. Rather, the asset represents either the cash received or the account receivable, or the unconditional right to receive cash.

Appendix B: International Statistical Standards Guidance

Introduction

- B.1. Informed by the Conceptual Framework and the GFS Policy Paper, the IPSASB reviewed the appropriate guidance related Natural Resources in the System of National Accounts 2008⁵⁴ (2008 SNA), the System of Environmental-Economic Accounting 2012–SEEA Central Framework⁵⁵ (SEEA Central Framework), and the Government Finance Statistics Manual 2014⁵⁶ (GFSM 2014). As currently all international statistical standards are under revision, this appendix will focus on the 2008 SNA guidance and its linkage to the SEEA guidance relevant for this Consultation Paper in order to better make the link to the main issues under discussion to revise the 2008 SNA presented also in this Appendix. The GFSM 2014 guidance is addressed at the end of this appendix on an exception basis compared to the 2008 SNA.
- B.2. The IPSASB considered the 2008 SNA, the SEEA Central Framework, and the GFSM 2014 related to each item of natural resource within the scope of this Consultation Paper. Excerpts from the 2008 SNA and SEEA Central Framework with the main guidance considered in the development of the CP is included below.

Identification and Objectives of the International Statistics Standards

- B.3. The 2008 SNA is the statistical framework that provides comprehensive, consistent and flexible set of macroeconomic accounts to measure economic activity and designed for economic analysis, decision-taking, and policymaking. It has been produced and released under the auspices of the United Nations, the European Commission, the Organization for Economic Co-Operation and Development, the International Monetary Fund and the World Bank.
- B.4. The SEEA Central Framework is the first international statistical standard for environmental-economic accounting designed for understanding the interactions between the environment and the economy for policymaking, analysis and research. It has been produced and released under the auspices of the United Nations, the European Commission, the Food and Agriculture Organization of the United Nations, the Organization for Economic Co-Operation and Development, the International Monetary Fund and the World Bank Group.
- B.5. The GFSM 2014 describes a specialized macroeconomic statistical framework designed to support fiscal analysis. It has been issued by the International Monetary Fund.

2008 SNA Guidance

General Description of Natural Resources

- B.6. According to the 2008 SNA.10.14–10.15, natural resources are one type of non-produced assets together with (i) contracts, leases and licences, and (ii) purchased goodwill and marketing assets.
- B.7. According to the 2008 SNA.10.14–10.15, natural resources are one type of non-produced assets together with (i) contracts, leases and licences, and (ii) purchased goodwill and marketing assets.

⁵⁴ <https://unstats.un.org/unsd/nationalaccount/docs/sna2008.pdf>

⁵⁵ https://seea.un.org/sites/seea.un.org/files/seea_cf_final_en.pdf

⁵⁶ <https://www.imf.org/external/Pubs/FT/GFS/Manual/2014/gfsfinal.pdf>

- B.8. Natural resources consist of naturally occurring resources such as land, water resources, uncultivated forests and deposits of minerals that have an economic value.
- B.9. According to 2008 SNA.10.166–10.169, natural resources only qualify as economic assets if:
- (a) Ownership rights have been established and are effectively enforced; and
 - (a) Economic benefits are provided to their owners.
- B.10. This means that naturally occurring resources are not economic assets if:
- (a) It is not feasible to establish ownership rights over them (for example, air or oceans); or
 - (b) They do not actually belong to any institutional unit (for example, no institutional unit is able to enforce ownership rights because they remain so remote or inaccessible); or
 - (c) It is not possible to extract and sell because of lack of technology, scientific knowledge, or economic infrastructure (for example, deposits of minerals that are not commercially exploitable in the foreseeable future).
- B.11. The 2008 SNA distinguishes several types of natural resources:
- (a) Land;
 - (b) Mineral and energy resources;
 - (c) Non-cultivated biological resources;
 - (d) Water resources; and
 - (e) Other natural resources (radio spectra and other).
- B.12. The paragraphs below describe the 2008 SNA guidance on natural resource types that are related to items of natural resources described in this Consultation Paper.

Mineral and Energy Resources

- B.13. According to 2008 SNA.10.179, mineral and energy resources consist of mineral and energy reserves located on or below the earth's surface that are economically exploitable, given current technology and relative prices. For example, known reserves of coal, oil, gas or other fuels and metallic ores, and non-metallic minerals.
- B.14. The 2008 SNA records in the capital account the acquisitions and disposals of deposits of mineral and energy resources in which the ownership of such assets passes from one institutional unit to another.
- B.15. The discovery of new exploitable deposits, whether as a result of systematic scientific explorations, or surveys, or by chance, or because of technological progress or relative price changes become economic to extract are recorded in the other changes in the volume of assets account.⁵⁷
- B.16. Additionally, the depletion of the mineral and energy resource as a result of extraction for purpose of production is recorded in the other changes in the volume of assets account.⁵⁸

⁵⁷ 2008 SNA.12.18

⁵⁸ 2008 SNA.10.179

- B.17. The 2008 SNA measures the subsoil mineral and energy resources in the balance sheet by determining the present value of the expected net returns resulting from the commercial exploitation of those resources.⁵⁹
- B.18. In the specific case where the entity extracting the resource is different from the owner of the resource and there is no wholly satisfactory way in which to show the value of the asset split between the legal owner and the extractor, the whole resource is shown on the balance sheet of the legal owner and the payments by the extractor to the owner show as rent.⁶⁰ For example, in some countries the state is the owner of the resources and permits corporations to extract the oil resources.

Non-cultivated Biological Resources

- B.19. According to 2008 SNA.10.182, non-cultivated biological resources consist of animals, birds, fish and plants that yield both once-only and repeat products over which ownership rights are enforced but for which natural growth or regeneration is not under the direct control, responsibility and management of institutional units. For example, virgin forests and fisheries within the territory of the country that are currently, or are likely soon to be, exploitable for economic purposes.
- B.20. The 2008 SNA records in the capital account the acquisitions and disposals of non-cultivated biological resources in which the ownership of such assets passes from one institutional unit to another.⁶¹
- B.21. The natural growth of non-cultivated biological resources is recorded in the other changes in the volume of assets account because they are not under the direct control, responsibility and management of an institutional unit.⁶² Additionally, the depletion of the non-cultivated biological resource as a result of harvesting, forest clearance, or other use beyond sustainable levels of extraction is recorded in the other changes in the volume of assets account.⁶³
- B.22. The 2008 SNA measures the non-cultivated biological resources in the balance sheet by determining the present value of the expected net returns resulting from the commercial exploitation of those resources.⁶⁴

Water resources

- B.23. According to 2008 SNA 10.184, water resources consist of surface and groundwater resources used for extraction to the extent that their scarcity leads to the enforcement of ownership or use rights, market valuation and some measure of economic control. For example, rivers, lakes artificial reservoirs and other surface catchments in addition to aquifers and other groundwater resources.⁶⁵
- B.24. In case it is not possible to separate the value of surface water from the associated land, the whole should be allocated to the category representing the greater part of the total value.

⁵⁹ 2008 SNA 10.49

⁶⁰ 2008 SNA 10.50

⁶¹ 2008 SNA.10.182

⁶² 2008 SNA.12.19

⁶³ 2008 SNA.12.27

⁶⁴ 2008 SNA.13.51

⁶⁵ 2008 SNA.A3.84

- B.25. The 2008 SNA records in the capital account the acquisitions and disposals of water resources in which the ownership of such assets passes from one institutional unit to another.⁶⁶
- B.26. The discovery of water resources is recorded in the other changes in the volume of assets account.⁶⁷ Additionally, the depletion of the water resource caused by economic activity (physical removal and using up of the assets) is recorded in the other changes in the volume of assets account.
- B.27. The 2008 SNA measures the water resources in the balance sheet by determining the present value of the expected net returns resulting from the commercial exploitation of those resources.⁶⁸ In case the net returns is not possible to measure, estimates based on access fees may be used.⁶⁹

SEEA Central Framework

General description of environmental assets and natural resources

- B.28. According to SEEA Central Framework.2.17, environmental assets are the naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity. The SEEA Central Framework considers environmental assets from two perspectives:
- (a) Individual components of the environment that provide materials and space to all economic activities (for example, mineral and energy resources, timber resources, water resources and land); and
 - (b) The interactions between individual environmental assets within ecosystems, and on the broad set of material and non-material benefits that accrue to the economy and other human activity from flows of ecosystem services.⁷⁰

General description of asset accounts

- B.29. The intent of asset accounts is to record the opening and closing stock of environmental assets and the different types of changes in the stock over an accounting period.⁷¹
- B.30. The basic form of an asset account compiled for individual types of environmental assets is as follows:

⁶⁶ 2008 SNA.10.184

⁶⁷ 2008 SNA.12.19

⁶⁸ 2008 SNA.13.51

⁶⁹ 2008 SNA.A3.84

⁷⁰ SEEA Central Framework.2.21

⁷¹ SEEA Central Framework.2.49

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Opening stock of environmental assets
Additions to stock
Growth in stock
Discoveries of new stock
Upward reappraisals
Reclassifications
<i>Total additions of stock</i>
Reductions of stock
Extractions
Normal loss of stock
Catastrophic losses
Downward reappraisals
Reclassifications
<i>Total reductions in stock</i>
Revaluation of the stock*
Closing stock of environmental assets

* Only applicable for asset accounts in monetary terms.

General description of sequence of economic accounts

- B.31. The sequence of economic accounts in the SEEA follows the broad structure of the sequence of accounts in the 2008 SNA to record transactions such as payments of rent for the extraction of natural resources, payments of environmental taxes, and payments of environmental subsidies and grants from government units to other economic units to support environmental protection activity.
- B.32. The basic SEEA sequence of economic accounts is as follows:

Production account (elaborated in supply and use tables)	
Main entries	Output, intermediate consumption, consumption of fixed capital, depletion
Balancing items/aggregates	Gross value added, gross domestic product, depletion-adjusted net value added, depletion-adjusted net domestic product
Distribution and use of income accounts	
Main entries	Compensation of employees, taxes, subsidies, interest, rent, final consumption expenditure, consumption of fixed capital, depletion
Balancing items/aggregates	Depletion-adjusted net operating surplus, depletion-adjusted net national income, depletion-adjusted net saving
Capital account	
Main entries	Acquisitions and disposals of produced and non-produced assets
Balancing item/aggregate	Net lending/borrowing
Financial account	
Main entries	Transactions in financial assets and liabilities
Balancing item/aggregate	Net lending/borrowing

- B.33. The sequence of accounts can be complemented by balance sheets that record the values of all assets and liabilities at the beginning and end of an accounting period. The balancing item for a balance sheet is net worth, representing the total value of all assets less the value of all liabilities.⁷²
- B.34. The SEEA Central Framework records the flows and stocks in both physical and monetary terms.

⁷² SEEA Central Framework.2.69

- B.35. Physical flows are reflected in the movement and use of materials, water and energy corresponding to natural inputs, products and residuals.⁷³ Monetary flows are recorded in a manner completely consistent with the SNA definition of economic flows⁷⁴ with two types being distinguished: transactions and other flows.
- B.36. The stocks of physical terms stocks refer to the total quantity of assets at a given point in time⁷⁵. The measurement of stocks in monetary terms focuses on the value of individual environmental assets and changes in those values over time.⁷⁶

Measurement in monetary terms

- B.37. The values reflected in the accounts are, in principle, the current transaction values or market prices for the associated goods, services, labour or assets that are exchanged.⁷⁷ Strictly speaking, market prices for transactions are defined as amounts of money that willing buyers pay to acquire something from willing sellers. The exchanges should be made between independent parties on the basis of commercial considerations only, sometimes called “at arm’s length”.⁷⁸
- B.38. In the Central Framework, consistent with the 2008 SNA, the scope of valuation is limited to the benefits that accrue to economic owners. An economic owner is the institutional unit entitled to claim the benefits associated with the use of an asset in the course of an economic activity by virtue of accepting the associated risks.⁷⁹
- B.39. The benefits underlying the definition of economic assets are economic benefits. Economic benefits reflect a gain or positive utility arising from economic production, consumption or accumulation. For environmental assets, economic benefits are recorded in the accounts in the form of operating surplus from the sale of natural resources and cultivated biological resources, in the form of rent earned on permitting the use or extraction of an environmental asset, or in the form of net receipts (i.e., excluding transaction costs) when an environmental asset (e.g., land) is sold.⁸⁰

Classification of environmental assets in the SEEA Central Framework

- B.40. The SEEA Central Framework classifies the environmental assets as follows:⁸¹

⁷³ SEEA Central Framework.2.88

⁷⁴ SEEA Central Framework.2.96

⁷⁵ SEEA Central Framework.2.99

⁷⁶ SEEA Central Framework.2.104

⁷⁷ SEEA Central Framework.2.143

⁷⁸ SEEA Central Framework.2.144

⁷⁹ SEEA Central Framework.5.32

⁸⁰ SEEA Central Framework.5.33

⁸¹ SEEA Central Framework.5.15

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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

- B.41. Natural resources are a subset of environmental assets. Natural resources include all natural biological resources (including timber and aquatic resources), mineral and energy resources, soil resources and water resources. All cultivated biological resources and land are excluded from scope.⁸²
- B.42. Biological resources include timber and aquatic resources and a range of other animal and plant resources such as livestock, orchards, crops and wild animals. Like most environmental assets, they provide physical inputs to economic activity. However, for biological resources, a distinction is made between whether the resources are cultivated or natural, based on the extent to which there is active management over the growth of the resource.⁸³

Relationship between environmental and economic assets

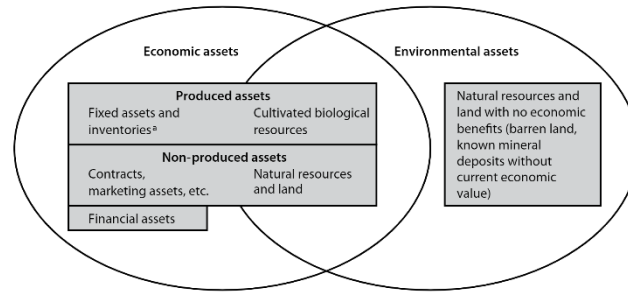
- B.43. Many environmental assets are also economic assets. In particular, natural resources and land are considered non-produced assets, and cultivated biological resources may be either fixed assets or inventories, depending on their role in production. The figures below displays the relationship between the classes of environmental assets and the high-level asset classes within the SNA. All environmental assets that are classed as cultivated must be recorded as either fixed assets or inventories.⁸⁴

⁸² SEEA Central Framework.5.18

⁸³ SEEA Central Framework.5.24

⁸⁴ SEEA Central Framework.5.38

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^a Other than cultivated biological resources.

GFSM 2014

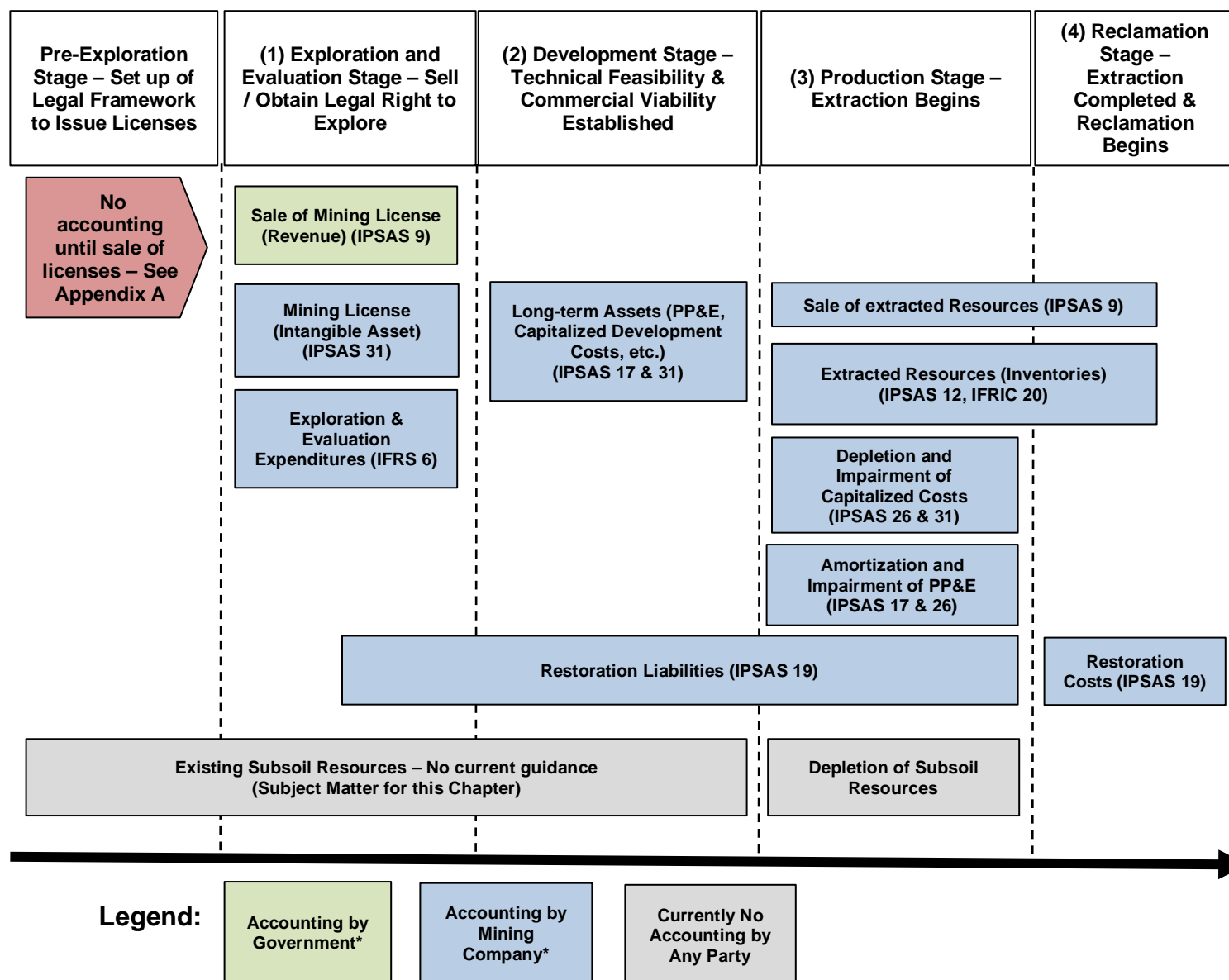
- B.44. In broader terms, GFSM 2014 is consistent with 2008 SNA in terms of accounting for natural resources. The only relevant difference between both statistical standards is related to classification.
- B.45. GFSM 2014 classifies natural resources as follows:
- (a) Land;
 - (b) Mineral and energy resources;
 - (c) Other naturally occurring assets;
 - (i) Noncultivated biological resources
 - (ii) Water resources
 - (iii) Other natural resources
 - a. Radio spectrum
 - b. Natural resources not elsewhere classified

Appendix C: Supplemental Information on Subsoil Resources

Clarification of what is Considered a “Subsoil Resources” – Example Timeline

- C.1. To illustrate the various concepts of what is and is not a “subsoil resource”, the following example timeline summarizes the main stages in the mining process and the key events or activities undertaken by the parties involved. While the general stages and key events in both mining and oil and gas industries are similar, please note that there may be other activities and processes applicable specifically to the oil and gas industry. These considerations are not discussed in the following example. Some aspects such as jurisdictional differences are also not explained in the following discussion as the example is only meant to provide a general overview.

Illustrative Timeline of the Mining Process



*Accounting based on current IPSAS & IFRS. A private sector mining company would typically report under IFRS, but references to the equivalent IPSAS are provided to illustrate the subject matter of this chapter.

Pre-Exploration Stage – Before a government can sell the legal right to explore to entities, it will need to establishment of a licensing framework. Until a license is sold or issued, there is no transaction to be accounted for. This is discussed in detail in [Appendix A: Accounting for a Government's Sovereign Power to Issue Licenses](#). It should be noted that under existing accounting guidance, the physical subsoil resources that are in their natural state—that is, one of the three subject matters of this CP—are not accounted for by any party.

- (1) **Exploration & Evaluation Stage** – The mining process typically begins with an entity (e.g., the “Mining Company”) obtaining the legal right to explore an area for subsoil resources from a government entity (the “Government”). At this stage, the Mining Company performs activities such as surveys and geological studies to determine if there are any technically feasible and commercially viable resources—i.e., resources which can physically be extracted at a cost below their expected realizable value.

For illustration purposes, this timeline assumes that the Mining Company reports their accounting results using IFRS. From the Mining Company’s perspective, the legal right (i.e., the license) is typically accounted for as an intangible asset under IAS 38, *Intangible Assets*. At this stage, the Mining Company would also account for the costs of exploration or evaluation activities using IFRS 6, *Exploration for and Evaluation of Mineral Resources*. If the activities were performed by a public sector entity (either directly or through a joint arrangement), the potential treatment of exploration and evaluation activities are discussed in this CP starting at paragraph 2.41.

From the Government’s perspective, prior to the sale of the legal right, there is no revenue to be recognized under IPSAS 9, *Revenue from Exchange Transactions*.⁸⁵ This is because the existence of a government’s sovereign powers allowing it to sell licenses does not give rise to a past event until the licenses are sold. See [Appendix A](#) of this CP for further information on sovereign powers.

- (2) **Development Stage** – Once the technical feasibility and commercial viability of a site has been established, the site progresses to the development stage and the Mining Company begins to construct infrastructure to facilitate access to the mine site, as well as processing facilities in preparation for the extraction of resources.

The costs incurred by the Mining Company at this stage are capitalized as a long-term asset using the principles from the IASB’s Conceptual Framework and IAS 38.⁸⁶ It should be emphasized that these costs relate entirely to the development activities and do not relate to the underlying subsoil resources. These development costs are recognized as assets when their development is technically feasible, and they are commercially viable, and it is probable that the costs will be recoverable.

Subsequent to initial measurement, the geological studies are typically updated periodically, and the results are normally disclosed as part of regulatory requirements. The Mining Company will also use the information from the geological studies when considering if the

⁸⁵ The IPSASB currently has a project to replace IPSAS 9. More details on the revenue project can be found at <http://www.ipsasb.org/consultations-projects/revenue>.

⁸⁶ IFRS 6, paragraph 10.

estimated useful life of its capitalized development costs continues to be appropriate, and if applicable, in any impairment analysis of these capitalized costs.

However, the underlying mineral resources are not recognized under IFRS. While the feasibility study and other geological studies provide some information to support the recoverability of costs incurred, they do not provide information with sufficient reliability or precision to support the recognition of the unextracted subsoil resources within an area as a separate asset. This is further discussed in beginning in paragraph C.5 of this appendix.

At this stage, unless the Government issues a separate license for the Mining Company to move on to the development stage, or unless the Government is involved in the development activities, there are typically no transactions or events which would impact the Government.

- (3) **Production Stage** – Once the necessary infrastructure and processing facilities have been established, the Mining Company will begin extraction of the underlying subsoil resources, and the production stage of the mine begins. As resources are extracted, they are recognized by the Mining Company as inventory under IAS 2, *Inventories*. During this stage, the Mining Company will typically continue to update its geological studies for regulatory compliance purposes as well as for its analysis of the capitalized development costs' useful life and potential impairment. If the extraction involves surface mining, the Mining Company may also need to remove surface waste materials to gain access to mineral deposits. The costs incurred in this waste removal activity is accounted for as a long-term asset or inventory under IFRIC 20, *Stripping Costs in the Production Phase of a Surface Mine*, depending on whether there are any recoverable resources within the waste material.

It is important to note that upon extraction, the cost of the recognized inventory consists of any direct extraction costs as well as depletion of the capitalized development costs—i.e., a systematic allocation of the capitalized development costs based on an estimate of total extractable resources. Even at this stage, any unextracted subsoil resources are not recognized due to the reasons noted above in the development stage.

Similar to the development stage, the accounting by the Government entity at the production stage will depend on whether the Mining Company requires a separate license to begin production. In some cases, the initial legal right issued in the exploration stage includes subsequent payments to the Government based on actual quantities of resources extracted.

- (4) **Reclamation Stage** – At this stage, the amount of commercially viable resources left is minimal and the mine is considered depleted. Typically, the Mining Company would be responsible for activities such as remediation and restoration of the area, while the Government would monitor the execution and completion of these activities.

C.2. In the example timeline above, “subsoil resources” narrowly refers to the physical mineral resources which are within the earth prior to their extraction. In the production stage in the timeline, these mineral resources become inventory assets once they have been extracted and are no longer considered subsoil resources. Furthermore, although closely related to subsoil resources, the costs incurred for exploration, evaluation, development, and extraction activities are not themselves considered subsoil resources.

Private Sector Practices and Accounting under IFRS

C.3. As noted in paragraph 35 of the introduction, the underlying natural resources are typically not recognized or measured under IFRS due to concerns over existence and measurement uncertainty. Under IFRS, the following accounting requirements are applicable for items or transactions which *indirectly* relate to the underlying natural resources:

- (e) In situations where a developed property with natural resources or a property with potential resources is acquired, IFRS 3, *Business Combinations*, requires the recognition of the property at fair value. The recognized fair value is based on the estimated quantities of resources valued at long-term commodity prices at the time of acquisition and supported by the amount of consideration exchanged in the business combination. While these estimates are periodically updated, these updates are only used for impairment and depletion purposes and are not used for revaluation of the asset or to recognize any new assets. This is because, absent the exchange of consideration, the resource and reserve estimates are not sufficiently reliable to support revaluation or recognition of an asset;
- (f) Expenditures related to the exploration and evaluation of a property with potential natural resources are accounted for using IFRS 6, *Exploration for and Evaluation of Mineral Resources*⁸⁷, which provides entities with an accounting policy choice to recognize these expenditures as an asset or expense as they are incurred. IFRS 6 also refers to the IASB's Conceptual Framework for Financial Reporting (IASB's Conceptual Framework) as well as IAS 38, *Intangible Assets*, for guidance on the recognition of assets arising from the development of resources;
- (g) IFRIC 20, *Stripping Costs in the Production Phase of a Surface Mine*, provides guidance on the recognition and measurement of costs incurred to remove surface materials during the development and production phases of a mine; and
- (h) Similar to the IPSASs as discussed in paragraphs 17-21 of the introduction to the CP, IAS 16, *Property, Plant and Equipment*, IAS 38, *Intangible Assets*, IAS 2, *Inventories*, IAS 41, *Agriculture*, IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, and IAS 36, *Impairment of Assets*, provide guidance on items or transactions which indirectly relate to natural resources.

C.4. In addition to the above accounting practices, many jurisdictions require the disclosure of information relating to natural resources in their broader GPFRs. For example, while the specific requirements of each jurisdiction can vary broadly, the following information is typically required in the regulatory filings of mining entities in the private sector⁸⁸:

- (a) An estimate of reserves and resources, as prepared by a qualified person (e.g., a professional geologist). Reserves are quantities of minerals estimated with a high level of geological confidence while resources are estimates at lower levels of geological confidence;
- (a) Technical reports which include an assessment of whether exploitation of the natural resource will be feasible. Technical reports are required to be filed upon first-time reporting in the jurisdiction or upon a material change (as defined by regulation in each jurisdiction) in reserves or resources; and

⁸⁷ It should be noted that IFRS 6 defines mineral resources to include minerals, as well as oil, natural gas and similar non-regenerative resources.

⁸⁸ Based on requirements from National Instrument 51-102 for Canadian mining companies.

- (b) In cases where not enough information is available to formulate an estimate of reserves, a preliminary economic assessment which contains an estimate of resources and discusses the potential viability of a project.

Resource Estimation Practices in the Private Sector

- C.5. There is currently no available technological means to quantify subsoil resources with complete accuracy without first extracting the resources from the ground. As a result, the quantity of the units of account for a subsoil resource (i.e., the amount of resources in the ground) needs to be estimated, and it is possible for the true quantity of resources to differ significantly from estimated amounts.
- C.6. A number of internationally accepted estimation approaches exist to estimate the quantities of unextracted resources based on geological studies and models, including the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Resources as developed by the Australasian Joint Ore Reserves Committee (JORC Code), and models developed by the Society of Petroleum Engineers Classification System (SPE), World Petroleum Congresses (WPC), and the American Association of Petroleum Geologists (AAPG).
- C.7. These models are commonly used by entities which invest in the exploration and development of subsoil resources, and the degree of confidence in the estimated quantities and grade quality of resources, as well as the costs to develop these resources, depends on the level of geological testing performed. While the details of the models for mineral ore and fossil fuel deposits do differ, in general, the modelling process involves:
 - (a) Obtaining a number of samples by drilling in an area where subsoil resource deposits could potentially exist;
 - (b) Analysis of these samples to determine if any deposits exist in the locations probed by the drilling tests. If resources are found in the samples, the concentration of the resources is analyzed to determine if further testing and modelling should be performed. It is also important to note that in the modelling process, the only resources that are known to exist with 100% certainty are the amounts that have been extracted and found in these samples;
 - (c) Consideration of any other available geological data on the area being tested. Such data could include information from seismic tomography (imaging the subsurface of the earth using data produced by earthquakes or explosions), ground penetrating radar readings, and observation of vegetation growth anomalies for certain minerals resources;
 - (d) Consideration of the extraction technologies available and extraction methods that can be applied in the area; and
 - (e) Based on the data from steps (a) to (d) above, the quantity and quality of deposits in the area are estimated. These estimates are then combined with any estimates of potential costs to derive an estimate of recoverable resources. An entity exploring for subsoil resources will typically focus on recoverable resources, as this estimate takes into account the economic viability and physical feasibility of extracting the resources.
- C.8. As discussed in the illustrative timeline in paragraphs C.1-C.2, the information from these models is used as a basis to estimate the useful life and recoverability of capitalized development costs in financial reporting in the private sector. However, despite the use of these models, the level of

uncertainty over the quantities of unextracted subsoil resources continues to be too high for recognition of subsoil resources in the private sector.

- C.9. As noted in a presentation by a former Chair of the JORC, “Resource [and] reserve estimates are estimates, not calculations. New information or a different geological interpretation can materially change estimates. There is no single correct resource or reserve estimate for a given deposit.” In financial accounting terms, this view means that **resource and reserve estimates derived from geological studies and models are not verifiable measures**, as experts with the same set of data could come up with materially different results. This issue also highlights that **it would be difficult to develop an estimate which faithfully represents the underlying economic information**—that is, the actual quantities of unextracted subsoil resources.
- C.10. The presentation then elaborates that the estimation of mineral resources and reserves is akin to trying to determine the contents of a large room by penetrating the room with large knitting needles. The needles and other available data on the room, analogous to available geological data, can be used to estimate the room’s contents, but until the entire room is excavated, a high degree of uncertainty continues to exist.⁸⁹

⁸⁹ Stephenson, Pat, Associate Principal Geologist at AMC Consultants. *Mineral Resources, Mineral Reserves or Pie in the Sky?* January 2017, https://www.e4m.fsg.ulaval.ca/fileadmin/documents/Evenements/Distinguished_Lecture_presentation_to_E4m_Laval_University_Quebec_City_PS.pdf. PowerPoint Presentation to the Faculté des Sciences et de Génie -Université Laval.



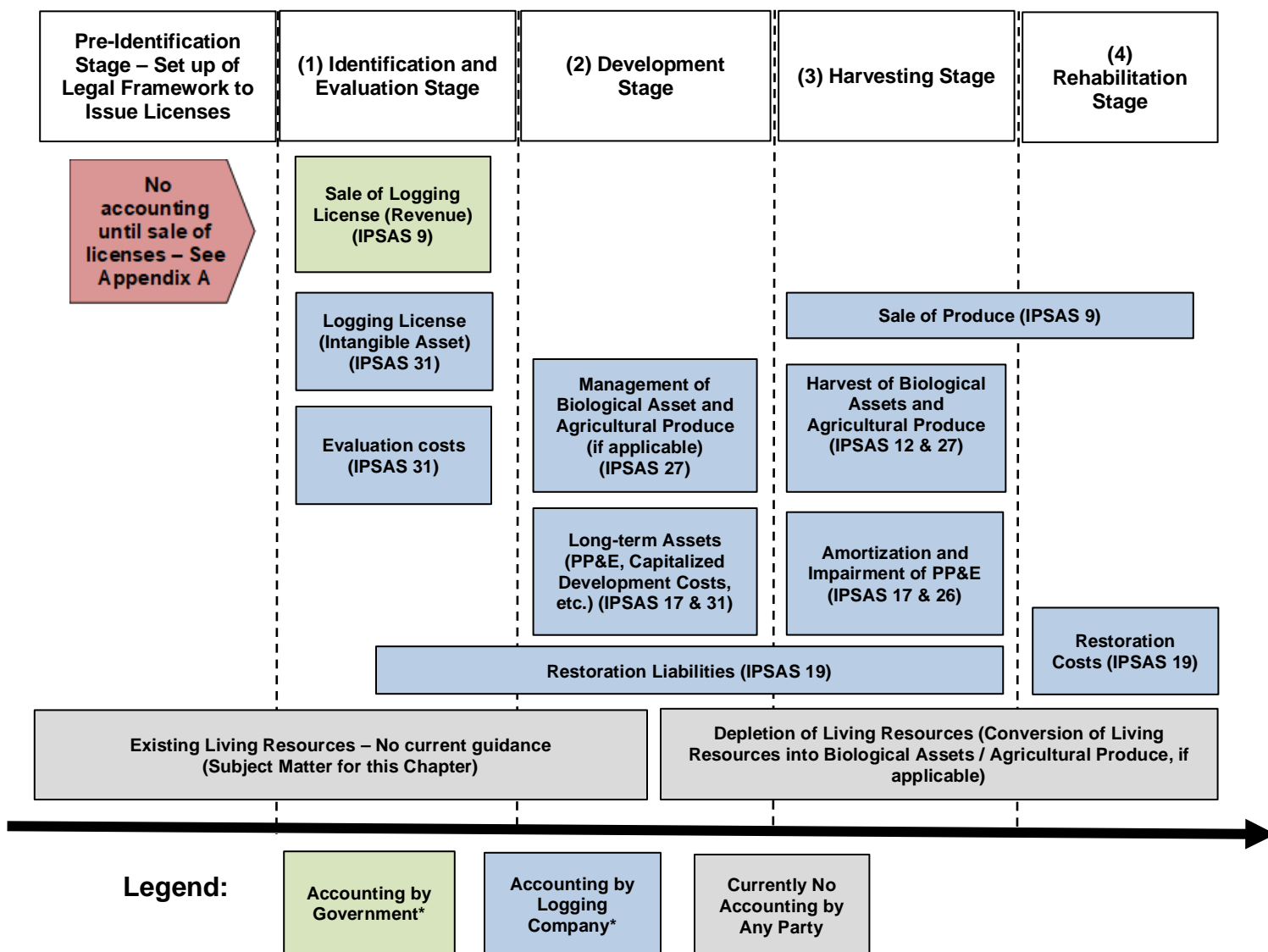
Pictorial Analogy of a Resource Estimation Model - The “knitting needles” (the grey lines) in the picture represents the drilling tests used to estimate the quantities of subsoil resources in geological models, and the individuals are analogous to deposits of subsoil resources. In this analogy, objects that intersect with the needles will be detected and the resulting data will be combined with any other available information on the room (analogous to geological data) to construct a model of the contents of the room. The picture illustrates that even though a model could provide an estimate on some of the room’s contents, a great deal of uncertainty remains over how many individuals are actually in the room.

- C.11. Because of the difficulties in developing a faithfully representative and verifiable estimate, both preparers and auditors in the private sector have not been able to rely on these estimates for asset recognition in the financial statements. This is consistent with the IASB’s view that subsoil resources cannot be recognized in the financial statements. (See paragraph 2.35 for more details.)

Appendix D: Supplemental Information on Living Resources

Clarification of what is Considered a “Living Resource”

- D.1. During the initial outreach stage of the Natural Resources project, the IPSASB staff noted confusion among constituents in distinguishing between the underlying living resources and the costs incurred for activities related to these resources. For example, an entity may construct infrastructure to access an uncultivated forest. The entity may also compensate the rangers employed to ensure that no other parties are accessing the forest.
- D.2. These costs, while related to the uncultivated forest, are not part of the underlying living resource itself. Therefore, before the analysis of whether living resources can be recognized or measured, it is important to clarify what exactly is meant by living resources.
- D.3. To illustrate the various concepts, the following example timelines summarize the main stages and key events in the process for how a living resource (specifically an uncultivated forest) can be harvested for economic benefits or service potential. Furthermore, there may be jurisdiction-specific factors which could impact certain living resources (e.g., legislation prohibiting the harvest of endangered species). The following timeline is not meant to address all situations and is only meant to provide a general overview.
- D.4. It should be noted that some living resources are held for preservation or conservation rather than held with the intent for harvest. Based on preliminary research, conservation activities are considered agricultural activities within the scope of IPSAS 27 in some jurisdictions, as the biological transformation of the living resource being conserved is managed by an entity for the conversion into additional biological assets.

Illustrative Timelines of Living Resources held for Harvest

*Accounting based on current IPSAS & IFRS. A private sector forestry company would typically report under IFRS, but references to the equivalent IPSAS are provided to illustrate the subject matter of this chapter.

Pre-Identification Stage – Before a government can sell the legal right to harvest a living resource to entities, it will need to establish a licensing framework. Until a license is sold or issued, there is no transaction to be accounted for. See [Appendix A: Accounting for a Government's Sovereign Power to Issue Licenses](#) for more details.

- (1) **Identification and Evaluation Stage** – The logging process typically begins with an entity identifying a potential area that suitable for logging and evaluating whether there are any commercially viable resources (i.e., resources which can be physically harvested at a cost below their expected realizable value). Once the logging entity concludes that commercial logging is viable, it will typically purchase a logging license from the government entity as described in the Pre-Identification Stage.

At this point, the government entity will typically account for the sale of a license using IPSAS 9, *Revenue from Exchange Transactions*. For illustration purposes, this timeline

assumes that the logging entity reports its accounting results using IPSAS. From the logging entity's perspective, the legal right (i.e., the license) is typically accounted for as an intangible asset under IPSAS 31, *Intangible Assets*. At this stage, the logging entity may also capitalize certain evaluation costs if they meet the capitalization criteria in IPSAS 31.

- (2) **Development Stage** – Once the commercial viability of a site has been established and a license has been acquired, the site progresses to the development stage and the logging entity begins to construct infrastructure to facilitate access to the logging site, as well as processing facilities in preparation for the logging or harvesting of resources. These infrastructure and processing facilities are within the scope of IPSAS 17, *Property, Plant, and Equipment*.

At the development stage, an entity may begin to actively manage the growth of a living resource. If any of these management activities interfere with the natural biological transformation of the forest, some of these activities may result in conversion of the trees into biological assets or agricultural produce within the scope of IPSAS 27, *Agriculture*. However, in a typical logging scenario, there is often little or no management of the biological transformation, and trees are harvested directly from their natural state.

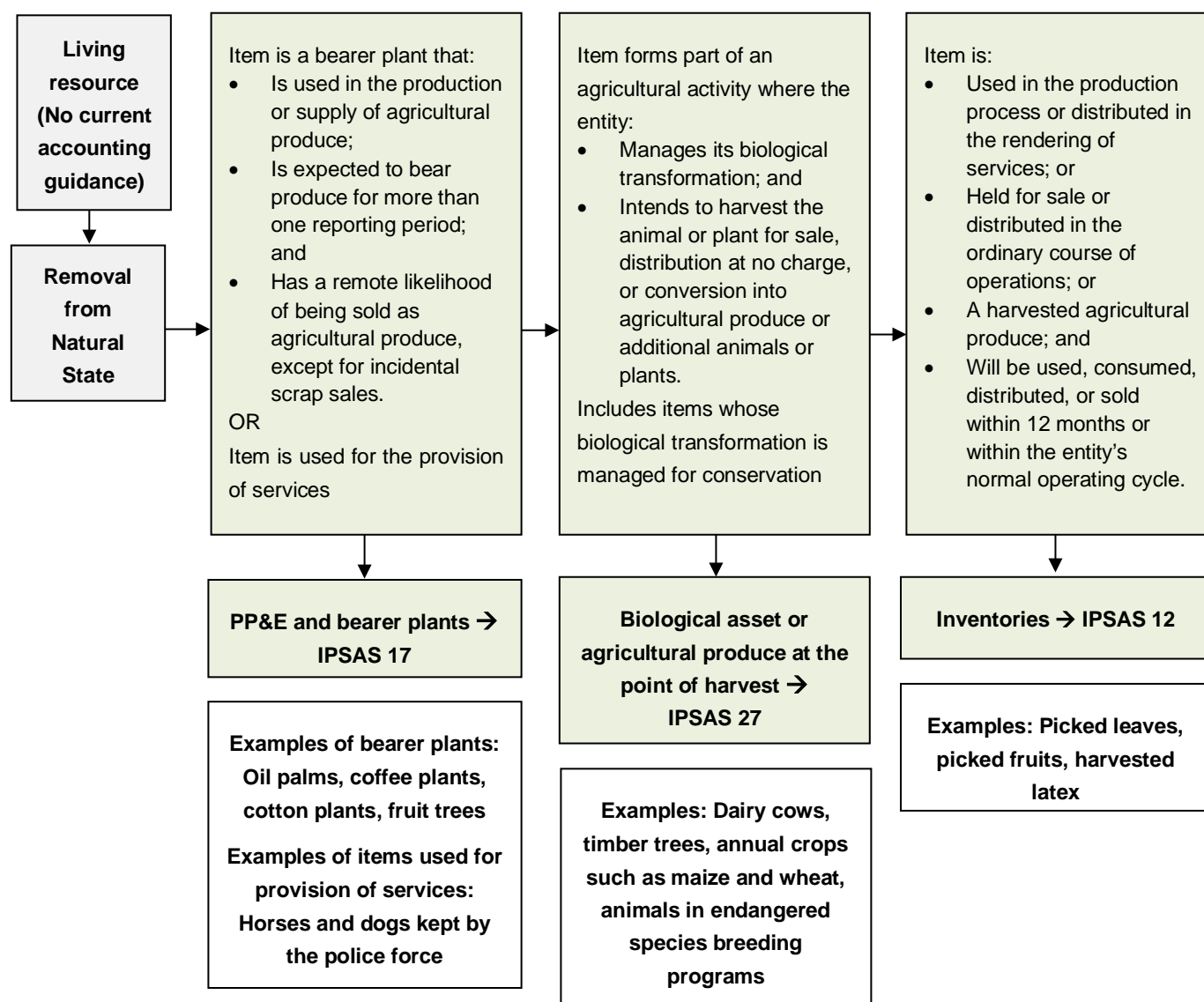
- (3) **Harvesting Stage** – Once the necessary infrastructure and processing facilities have been established, the logging entity will begin harvesting the trees. Paragraph 10(b) of IPSAS 27 specifies that the harvest from unmanaged sources is not an agricultural activity. Therefore, the harvested trees will be recognized as inventory under IPSAS 12, *Inventories*. For other living resources, it is possible for the harvested items to be used as bearer plants, which would be within the scope of IPSAS 17, or as biological assets, which will be within the scope of IPSAS 27.
- (4) **Rehabilitation Stage** – At this stage, the amount of commercially viable resources left is minimal and the living resource has been depleted. Typically, the logging entity would be responsible for activities such as remediation and restoration of the area, while the Government would monitor the execution and completion of these activities.

- D.5. The above example timeline shows that the living resources are separate from the activities that are performed to develop and prepare the resource for harvest. There is currently no existing accounting guidance regarding the living resource while it is still in its natural state (for logging, this would be prior to harvest), and living resources are currently not recognized in the financial statements.

Interaction of Living Resources with Existing IPSAS Guidance

D.6. Once a living resource has been taken out of its natural state, the item would fall within the scope of IPSAS 12, IPSAS 17, or IPSAS 27, depending on its intended use as explained in the following flowchart.

Diagram Illustrating the Application of Existing IPSAS to Living Resources that have been Removed from their Natural State



D.7. Certain harvested agricultural produce can be further processed into products that could be used or sold. For example, picked leaves may be processed into tea leaves and harvested latex can be processed into rubber products. These resulting products are typically accounted for as inventories within the scope of IPSAS 12.

D.8. It should also be noted that IPSAS 27 does not provide explicit guidance on the accounting for costs relating to agricultural activities, which includes conservation activities. However, as the biological asset is measured at fair value less costs to sell, the decision to capitalize or expense

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these costs will have no impact on the net operating results or financial position of an entity. This is because any capitalized costs will result in an equal adjustment in the gain or loss arising from the change in the fair value less costs to sell of the biological asset.

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