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Submitted online to: <https://www.ipsasb.org/publications/exposure-draft-ed-92-tangible-natural-resources>

Re: Response to International Public Sector Accounting Standards Board Exposure Draft (ED) 92, *Tangible Natural Resources*.

Dear Sir / Madam,

Thank you for the opportunity to review and comment on the International Public Sector Accounting Standards Board (IPSASB) Exposure Draft (ED 92), “Tangible Natural Resources.” It is commendable that IPSASB has identified “Tangible Natural Resources” to be within scope relative to developing new accounting guidelines and standards. Natural resources play a key role in tackling climate change, where they serve “double duty”, by (1) building community resilience (for example, by soaking up water during major rainfall events that might otherwise contribute to residential flooding) and, (2) reducing greenhouse gases in the atmosphere (through sequestration). Additionally, preservation and restoration of natural assets is critical to maintaining several other ecosystem services that are integral to the mandate of public sector entities, for example providing clean drinking water, good air quality, and recreational opportunities, as well as supporting biodiversity, which underpins ecosystem structure and function.

Tackling climate change and reversing biodiversity loss will require investment to preserve, restore and enhance tangible natural resources and the services they provide to society via public sector entities. Public sector accounting has a key role to play in establishing protocols to assign financial value to natural resources, and in ensuring that this valuation is presented in a transparent and consistent manner to interested stakeholders.

While we have focused on responding to the specific questions posed by the exposure draft, **we want to specifically stress the need to bring reference to tangible natural resources and nature-related disclosures into**



climate-related disclosures once each of the guidelines have matured (i.e., subsequent to the initial implementation period). A structured approach is recommended to ensure that implementation is scalable for public sector entities.

The inter-relationship between climate and nature is such that we cannot adequately address one without the other. We see there is an even more urgent need to preserve our tangible natural resources in light of climate-related changes.

A top-of-mind consideration for climate-related financial disclosure for municipalities is the future costs associated with maintaining the condition of existing naturally occurring resources such that council mandated levels of service are maintained or enhanced. We believe this should be integrated into financial disclosures. It would be reasonable for reporting public sector entities (PSEs) to identify and measure their inventory of tangible natural resources, as well as indicate their condition against their objectives to support management decisions (e.g., improve the size and / or quality of natural areas).

We believe it is a missed opportunity if the IPSASB continues to perpetuate the approach of the ISSB in keeping climate and nature separate at this stage when they could readily be cross-referenced within the new climate and nature-related standards being proposed.

Specific Matter for Comment 1: Scope (paragraphs 3-5):

This Exposure Draft is broadly applicable to all tangible natural resources which are not within the scope of any other existing IPSAS. (See paragraphs 3-4, BC8, and BC34.) Do you agree with the proposed scope? If not, what alternative scoping approach would you propose and why?

As a result of the proposed scope, tangible natural resources held for conservation are one common example of items which could fall within the scope of this Exposure Draft. What other items would you anticipate being accounted for through this Exposure Draft?

This Exposure Draft includes an [Alternative View](#) regarding its scope and the definition of tangible natural resources.

No, we do not agree with the proposed scope. It is our opinion that the “service potential” of tangible natural resources, as it relates to the ecosystem services provided and associated disclosure requirements, would be best addressed in a bespoke standard – ED 92.

While we can see how the proposed scope is intended to avoid duplication with other IPSAS, we are concerned about how and whether the multiple ecosystem services delivered by tangible natural resources will be consistently addressed when other existing IPSAS are applied, in comparison to when ED 92, a bespoke standard for tangible natural resources, is applied.

Tangible natural resources typically provide **multiple ecosystem services** that are of financial value and could be expressed as “service potential”. According to the [UN System of Environmental-Economic Accounting - Ecosystem Accounting](#)¹ internationally accepted methodology, ecosystem services are categorized and defined as follows (a reference list of ecosystem services is provided in Table 6.3 of this publication):

- *Provisioning services are those ecosystem services representing the contributions to benefits that are extracted or harvested from ecosystems.*
- *Regulating and maintenance services are those ecosystem services resulting from the ability of ecosystems to regulate biological processes and to influence climate, hydrological and biochemical cycles and thereby maintain environmental conditions beneficial to individuals and society.*
- *Cultural services⁷² are the experiential and intangible services related to the perceived or actual qualities of ecosystems whose existence and functioning contribute to a range of cultural benefits.*

Provisioning services are frequently already assigned a financial value, while regulation and maintenance services and cultural services are less frequently financially valued. It is our concern that a PSE will not necessarily be directed to consider the “service potential” of a full suite of these less traditionally valued ecosystem services under existing IPSAS (i.e. where ED 92 is not applied), thus leading to ongoing undervaluation of tangible natural resources. We anticipate that green spaces located in or near urban areas will be of increasing value as buffers against extreme heat and intense rainfall, but also as a place for physical and mental health respite for growing urban populations.

Most tangible natural resources may also be considered multi-use assets as they deliver multiple services. Determining the “Primary Use” of a tangible natural resource in each case may be challenging and lead to fragmented treatment of tangible natural resource classes under different standards. E.g. reporting of a lake used for drinking water under IPSAS 45 vs a lake not used for drinking water but delivering similar other ecosystem services under ED 92.

For the above reasons, it is our opinion that the service potential of tangible natural resources, as it relates to the ecosystem services provided and associated disclosure requirements, would be best addressed in a bespoke standard – ED92 – rather than relying on these services being adequately covered under existing standards like IPSAS 45. These aspects of service potential could be specifically excluded from the other standards, as is proposed for heritage assets, to avoid duplication. Economic benefits from commercial extractive and harvesting services (provisioning services) for which there is an established commercial market may be reported under existing IPSAS and cross-referenced in ED 92.

¹ United Nations et al. 2024. “System of Environmental-Economic Accounting— Ecosystem Accounting (SEEA EA).” Accessed at: <https://seea.un.org/ecosystem-accounting>

We believe reference to ecosystem services in ED 92 in a way that is in-keeping with established international accounting procedures, that are already being implemented by national level public sector entities, would bring clarity to the standard. This would also help facilitate linkages between PSE accounts and the national accounts that are already being compiled. The current focus on “conservation” in ED 92 appears somewhat limited – this could be reframed as the act of managing the continued provision of multiple ecosystem services for both present AND future generations. In Canada, we term this “natural asset management”, a practice that is integrated within asset management planning. Future details can be found in the publications:

- Eyquem, J. L. 2024. “Getting Nature into Financial Reporting: Natural Asset Disclosures for Local Governments.” Intact Centre on Climate Adaptation, University of Waterloo. Prepared for Standards Council of Canada in partnership with Natural Assets Initiative and KPMG LLP. Accessed at: https://www.centreintactadaptationclimat.ca/wp-content/uploads/2025/01/IntactCentre_Getting-Nature-into-Financial-Reporting_jan2025_Report-1.pdf
- Natural Assets Initiative (NAI). 2024. “Nature is infrastructure: How to include natural assets in asset management plans”. Accessed at: <https://naturalassetsinitiative.ca/wp-content/uploads/2024/04/NAI-NAM-guidance-docapril-2024.pdf>
- CSA Group. 2023. “CSA W218:23 Specifications for natural asset inventories.” National Standard of Canada. Accessed at: <https://www.csagroup.org/store/product/2705376/>

Specific Matter for Comment 2: Definitions (paragraph 6):

This Exposure Draft defines a natural resource as an item which is naturally occurring and embodies service potential, the capability to generate economic benefits, or both, and a tangible natural resource as a natural resource with physical substance.

Do you agree with the proposed definitions? If not, why not?

This Exposure Draft includes an [Alternative View](#) regarding its scope and the definition of tangible natural resources.

No, we do not agree with the proposed definitions and would like to share alternative definitions in the below section.

We welcome the removal of the original terminology relating to natural resources in their natural state. We generally agree with the definition of a natural resource as something that occurs naturally (it is not human-made) and has value because it provides benefits in two possible ways: service potential or economic benefits.

We recommend including guidance linking the definition of the term “service potential” (the capability of a resource to provide services that contribute to achieving the entity’s objectives, without necessarily generating net cash inflows) with the definition of “ecosystem services” (the contributions of ecosystems to the benefits

that are used in economic and other human activity - from United Nations et al. (2024) [System of Environmental-Economic Accounting – Ecosystem Accounting \(SEEA EA\)](#)².

We recommend IPSASB considers amending and expanding its definitions. Proposed definitions for natural resources and ecosystem service potential are provided below with amendments shown in **blue**:

- A **naturally occurring** resource is an item which:
 - (a) Is **not human-made and may require human intervention to maintain, enhance, protect, and restore it (includes living organisms and non-living components in a defined geographical area)**; and
 - (b) Embodies **ecosystem** service potential, or the capability to generate economic benefits, or both
- **Ecosystem service potential is the output or capacity of a tangible natural resource to provide services to achieve the entity’s mandate or objectives, which include provisioning services (material or energy outputs that are extracted or harvested from an ecosystem), regulating and maintenance services (benefits obtained through moderation or control of ecosystem processes), and cultural services (experiential and intangible cultural benefits contributed by ecosystems, including opportunities for recreation, tourism, aesthetic or artistic appreciation, and spirituality) as defined by the United Nations.**

We are concerned that the term “natural resource” itself is closely associated with the energy, extraction, and industrial processing industries (e.g. oil and gas, forestry, mining, manufacturing). Using this term in the context of conservation, preservation, or restoration may be confusing to those unfamiliar with the concept of ecosystem services. This could be addressed by using the term “naturally occurring resource” instead, and through additional reference to ecosystem services and the existing [UN System of Environmental-Economic Accounting - Ecosystem Accounting](#), as previously highlighted.

We would caution against using the example of a gold mine to illustrate economic benefit since this brings to mind the commercial, extractive and consumptive use of natural resources, which is not the key focus of this standard. A more appropriate example may be revenue generated by a national or near-urban park that could be used as part of measuring the value of recreation-related cultural services.

We would recommend that guidance is provided to support the inclusion of naturally occurring resources that have been degraded and subsequently restored or proactively managed through human intervention. These types of resources are common in human settled landscapes, in particularly urban and peri-urban areas, and may provide significant ecosystem services to the associated communities. Examples of these naturally occurring resources include urban parks, ravines, riverbanks, and wetlands.

² United Nations et al. 2024. “System of Environmental-Economic Accounting— Ecosystem Accounting (SEEA EA).” Accessed at: <https://seea.un.org/ecosystem-accounting>

Specific Matter for Comment 3: Depreciation (paragraph 23):

This Exposure Draft includes a rebuttable presumption that the tangible natural resources recognized within the scope of this [draft] Standard have indefinite useful lives on the basis that they are generally not used or consumed in the same manner as tangible assets within the scope of other IPSAS. Therefore, these tangible natural resources are not depreciated.

Do you agree with the proposed rebuttable presumption that tangible natural resources should not be depreciated? If not, why not?

No, we disagree with the proposed rebuttable presumption that natural assets have indefinite useful lives and do not degrade over time for the reasons below.

Depreciation of naturally occurring resources may be appropriate in certain cases where ecosystems can be foreseeably degraded over time as a result of external factors, such as the ongoing impacts of climate change, sea level rise, or biodiversity loss. Due to these ongoing pressures, some tangible natural resources may actually have a defined life (and could be depreciated to represent the ongoing loss of service potential), even if efforts are taken to preserve them and avoid direct damage. For example, a wetland and the ecosystem services that it offers may be degraded by extended periods of drought that alter the biotic and abiotic components of the ecosystem.

We believe there is also a need to recognize changes in environmental factors, such as rising temperatures or heavy precipitation, in entities' useful life estimates. Although accounting standards normally emphasize the need for changes in useful life estimates to be considered more permanent, climate change is evolving and could have material impacts even over shorter periods of time (e.g., 10-20 years), for example accelerated sea level rise causing "coastal squeeze" of coastal wetland habitats. We also noted that useful life estimates may also be extended where climatic conditions become more favourable for certain ecosystems over time. Forward-looking scenario analysis could be used to assess nature-related risks and allocate the financial value and appropriate method for the depreciation accordingly.

In addition, we note that according to paragraph 34, "An entity is required to review tangible natural resources with an indefinite useful life annually for indications of impairment or conditions that define and limit the useful life of the underlying asset". This could be used to address instances of abrupt change to assets (e.g. mass tree fall in forested areas due to high winds during a hurricane or human intervention such as development that degrades the asset).

We believe some practical considerations are required relating to the frequency of review of the condition (or monitoring) of the naturally occurring resource. We believe this should be based on the probability of significant change between the times when the condition of the asset is assessed. In cases where annual measurement is not feasible, PSEs should explain why they are unable to provide the updated disclosure.

Specific Matter for Comment 4: Exemption from Certain Disclosures (paragraph 51):

As explained in paragraph BC31, this Exposure Draft exempts an entity from disclosing certain information which may lead to further degradation of tangible natural resources which are rare or endangered.

Do you agree with the proposed disclosure exemption? If not, why not?

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We agree with the proposed disclosure exemption, especially as PSEs have an obligation to protect rare or endangered tangible natural resources.

Specific Matter for Comment 5: Cross-References to IPSAS 45, *Property, Plant, and Equipment* (paragraphs 15 and 54):

This Exposure Draft includes cross-references to the guidance in IPSAS 45 on the determination of cost in an exchange transaction and the disclosure requirements for current value. This guidance was incorporated by cross-reference as the acquisition of tangible natural resources is expected to be rare in the public sector, and there is familiarity with the principles on the determination of cost, which are consistent with those found in IPSAS 45.

Do you agree that these cross-references are sufficiently clear? If not, how should the above guidance be incorporated into the Final Standard?

We do not agree with the cross-reference or appropriateness of the use of exchange transactions.

In relation to tangible natural resources, exchange transactions are likely to undervalue the service potential of the resources since these services are not traditionally traded in markets and unlikely to be appropriately captured in market pricing. Use of this method is likely to perpetuate the undervaluation of tangible natural resources.

We would rather support the alternative view that the standard should apply to assets held for operational capacity measured at current operational value (the amount the entity would pay for the remaining service potential of an asset at the measurement date). "Fair value" is not likely to represent a fair value for tangible natural resources, since ecosystem services are not traded in markets.

This approach would support consistency in the measured value of tangible natural resources - the provision of ecosystem services is independent of whether they have been purchased or not. For example, an intact woodland that is sold by a private owner to a PSE for preservation should not be represented as of lower value (due to applying the exchange transaction cost) than a similar area of woodland that was already held by a PSE.

We note that Canada's Public Sector Accounting Standards, however, do not yet support subsequent revaluation of assets after initial recognition, so amendments may need to be considered by the Public Sector Accounting Board when they eventually review IPSASB's guidance for localization purposes.

However, we also note that, although the use of “current operational value” helps to address some of the valuation-related concerns in preference to “fair value”, the approach also does not fully capture the benefits associated with tangible natural resources. As a result, we would recommend the IPSASB consider transitioning to allow PSEs to measure their tangible natural resources at their “ecosystem service value”. When current operational value is used, there will be a risk of the PSE not recognizing the full range of ecosystem services and associated value of benefits associated with the naturally occurring resource as it affects and is affected by the ecosystem. We think that a tangible natural resource has significant potential when you consider its ecosystem service-related benefits, which should be reflected in the asset’s value over time.

Specific Matter for Comment 6: Transition (paragraph 60):

This Exposure Draft allows the application of its requirements on a modified retrospective approach, by recognizing tangible natural resources which meet the recognition criteria on the date of initial application of the [draft] Standard at their deemed cost, or on a full retrospective basis in accordance with IPSAS 3, *Accounting Policies, Changes in Accounting Estimates and Errors*.

Do you agree that the option to apply the proposed guidance on a modified retrospective basis will result in useful information? If not, why not?

Yes, we agree that the option to apply the proposed guidance using a Modified Retrospective approach will result in useful information.

Our preference is, however, for IPSASB to promote and prioritize the use of the Modified Retrospective approach to ease transition efforts and offer PSEs the option to transition using a Full Retrospective approach.

Specific Matter for Comment 7: Amendment to the Description of ‘Heritage Asset’ in IPSAS 45, *Property, Plant, and Equipment* (Appendix B):

The IPSASB proposes to amend the description of ‘heritage asset’ in IPSAS 45 so that heritage assets which are also tangible natural resources are accounted for within the scope of this [draft] Standard.

Do you agree with the proposed amendment? If not, why not?

We agree with amendments so that heritage assets which are also tangible natural resources are accounted for within the scope of ED92. The “heritage” services would be covered in the cultural ecosystem services discussed at the beginning of this response.

For further information on work in Canada that is directly relevant to this IPSASB project, please see the recent report [“Getting Nature into Financial Reporting: Natural Asset Disclosures for Local Governments”](#) (Eyquem,

2025)³, to which the undersigned organizations contributed. The National Standard of Canada “[Specifications for natural asset inventories](#)” (CSA Group, 2023)⁴ may also be of interest.

Specific Matter for Comment 8: Sufficiency of Proposed Implementation Guidance and Illustrative Examples:

The non-authoritative guidance in this [draft] Standard was developed for topics that are potentially complex and difficult to apply in practice, are areas of concern for constituents, or where additional non-authoritative guidance could be useful.

Do you agree that the proposed implementation guidance and illustrative examples are sufficient? If not, what other topics would be helpful and why?

No, we do not agree that the proposed implementation guidance and illustrative examples are sufficient.

Specific areas for attention are discussed below:

Link to ecosystem service valuation and established natural capital accounting

We believe ED 92 should reference ecosystem services in a way that is in-keeping with established international natural capital accounting procedures, that are already being implemented by national level public sector entities, would bring clarity to the standard. IPSASB’s proposed standard does not currently scope-in broader ecosystem service valuation – leaving it to specialized sustainability frameworks - and should consider opportunities for future integration as methodologies improve over time. Without this integration we will continue to undervalue our naturally occurring resource assets.

Further guidance regarding indefinite and defined lifespans and depreciation

We believe further guidance is required relating to how PSEs assess the value of naturally occurring resources that do not have a defined lifespan, in particular the timescale over which service potential should be considered in these circumstances.

It is also in our opinion that natural resources, including those that are conserved, may have a finite lifespan due to changes in environmental factors or stressors, such as climate change and resource depletion, that reduce the service potential of these natural resources over time. We would like IPSASB to consider expanding its examples

³ Eyquem, J. L. 2024. “Getting Nature into Financial Reporting: Natural Asset Disclosures for Local Governments.” Intact Centre on Climate Adaptation, University of Waterloo. Prepared for Standards Council of Canada in partnership with Natural Assets Initiative and KPMG LLP. Accessed at: https://www.centreintactadaptationclimat.ca/wp-content/uploads/2025/01/IntactCentre_Getting-Nature-into-Financial-Reporting_jan2025_Report-1.pdf

⁴ CSA Group. 2023. “CSA W218:23 Specifications for natural asset inventories.” National Standard of Canada. Accessed at: <https://www.csagroup.org/store/product/2705376/>

of these types of forward-looking scenarios, especially as PSEs may require support to assess how they could incorporate scenario-based analysis to refine useful life estimates over time. Potential examples that could be considered within the scope of the standard are as follows:

- Diseases, pests, or changes in weather conditions shortening the lifespan of trees; and
- Rising sea levels predicted to risk the existence of coastal wetlands, for example through coastal squeeze

Further guidance on current operational value

As not all PSEs will be familiar with the “current operational value” measurement approach, we recommend IPSASB to provide more guidance materials during the initial launch of the standard. We also again note our recommendation that IPSASB work towards using « ecosystem service value » in preference.

Further guidance on “reliable” measurement

We recommend that further guidance is required around measurement and methodologies that may be considered “reliable” for different ecosystem services that are provided by tangible naturally occurring resources.

Addressing water and water-related naturally occurring resources

We have a concern that the standard’s Implementation Guidance (IG5-9) currently includes language that appears to exclude consideration of water as a tangible natural resource for reporting purposes. We understand that this text applies to considering the free-flowing water itself as a tangible natural resource rather than an intention to exclude consideration the service potential represented by water supply (quality and quantity) from recognition within the standard. The supply of drinking water from rivers, lakes and aquifers is frequently highly regulated with associated legal water rights and restrictions on access. We therefore understand that the service potential provided by tangible natural resources rivers, lakes and aquifers) in supplying water (the ecosystem service), would have the potential to be covered by ED92. We recommend that IPSASB provides clarity around this issue since water supply and provision of future water supply is a key issue for public sector entities.

Facilitating implementation of the Standard and provision of templates

We anticipate that the adoption of this standard will be challenging for many PSEs who do not have experience in assessing the service potential of tangible naturally occurring resources. Implementation may be facilitated through a stepwise approach, grounded in accounting and ecological principles, with accompanying templates or worksheets to assist PSEs in completing different steps. The templates could be organized by biome. Templates for small, medium and large population local governments would also be helpful.

A phased approach for increasing sophistication of reporting on tangible naturally occurring resources may be adopted, as is set out in the recent publication [“Getting Nature into Financial Reporting: Natural Asset Disclosures for Local Governments”](#) (Eyquem, 2025)⁵.

Incorporating Indigenous perspectives

In view of the fact that the territories of Indigenous peoples and local communities contain 80% of the world’s remaining biodiversity and intersect about 40% of all terrestrial protected areas and ecologically intact landscapes, we recommend that the standard provide further guidance relating to addressing the role and stewardship of Indigenous peoples and incorporation of Indigenous ways of knowing.

We recommend that in a future phase of the development of this standard, that IPASB require PSEs to disclose how it assesses local Indigenous knowledge, cultures, and traditional practices when assessing and disclosing information pertaining to tangible natural resources.

As a minimum, the standard should provide the option for PSEs to include Indigenous perspectives on the value of land and natural resources in its tangible natural resources disclosures in addition to disclosures prescribed by the standard.

Unintended consequences

We wanted to express that there may be unintended consequences that result from this standard. Specifically, there may be a need for national tax regulators to revisit how taxes on capital gains are calculated. Based on the requirements noted under this standard, we note that there may be complications with respect to the capital gains associated with a sale or an allocation of lands for conservation purposes. In Canada, for instance, individuals can allocate land they still own for non-development in perpetuity. In some cases, landowners still pay taxes on that land based on its appraised / market value. Higher valuation of that land considering ecosystem services should not result in philanthropic individuals paying more taxes.

We believe that ED 92 offers a strong foundation for accounting for tangible naturally occurring resources. However, by incorporating additional examples with detailed scenarios, more detailed consideration of the areas highlighted above, and more specific measurement guidance the ED 92 could better address preparers’ needs.

⁵ Eyquem, J. L. 2024. “Getting Nature into Financial Reporting: Natural Asset Disclosures for Local Governments.” Intact Centre on Climate Adaptation, University of Waterloo. Prepared for Standards Council of Canada in partnership with Natural Assets Initiative and KPMG LLP. Accessed at: https://www.centreintactadaptationclimat.ca/wp-content/uploads/2025/01/IntactCentre_Getting-Nature-into-Financial-Reporting_jan2025_Report-1.pdf



If we can be of further assistance, please do not hesitate to reach out.

Yours faithfully,

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