GREENHOUSE GAS PROTOCOL

Corporate Standard Technical Working Group

Meeting #11

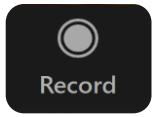
GHG Protocol Secretariat team:
Iain Hunt, Hande Baybar, Allison Leach, Matt Ramlow

October 27, 2026

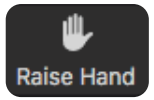
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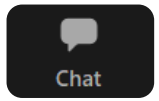
Meeting information



This meeting is **recorded**.



Please use the **Raise Hand** function to speak during the call.



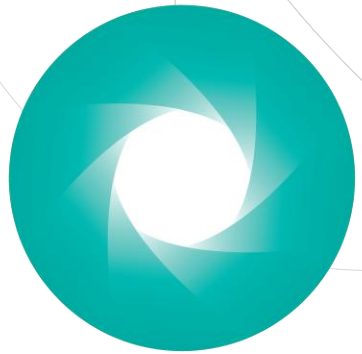
You can also use the **Chat** function in the main control.



Recording, slides, and meeting minutes will be shared after the call.

Agenda

• Introduction and housekeeping	10 minutes
• Land-related topics	80 minutes
• Tracking emissions over time	60 minutes
• Verification and assurance	20 minutes
• Wrap up and next steps	10 minutes



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GREENHOUSE GAS PROTOCOL

Housekeeping: Guidelines and procedures

- We want to make **TWG meetings a safe space** – our discussions should be open, honest, challenging status quo, and 'think out of the box' in order to get to the best possible results for GHG Protocol
- Always **be respectful**, despite controversial discussions on content
- TWG members should **not disclose any confidential information** of their employers, related to products, contracts, strategy, financials, compliance, etc.
- In TWG meetings, **Chatham House Rule** applies:
  - "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed."
- **Compliance and integrity** are key to maintaining credibility of the GHG Protocol
  - Specifically, all participants need to follow the **conflict-of-interest policy**
  - **Anti-trust rules** have to be followed; please avoid any discussion of competitively sensitive topics*

* Such as pricing, discounts, resale, price maintenance or costs; bid strategies including bid rigging; group boycotts; allocation of customers or markets; output decisions; and future capacity additions or reductions

Zoom logistics and recording of meetings

Zoom Meetings

- All participants are muted upon entry
- Please turn on your video
- Please include your full name and company/organization in your Zoom display name

Raise your hand in the participants feature and unmute yourself to speak



Use the chat function to type in your questions



Meetings will be recorded and shared with all TWG members for:

- Facilitation of notetaking for Secretariat staff
- To assist TWG members who cannot attend the live meeting or otherwise want to review the discussions

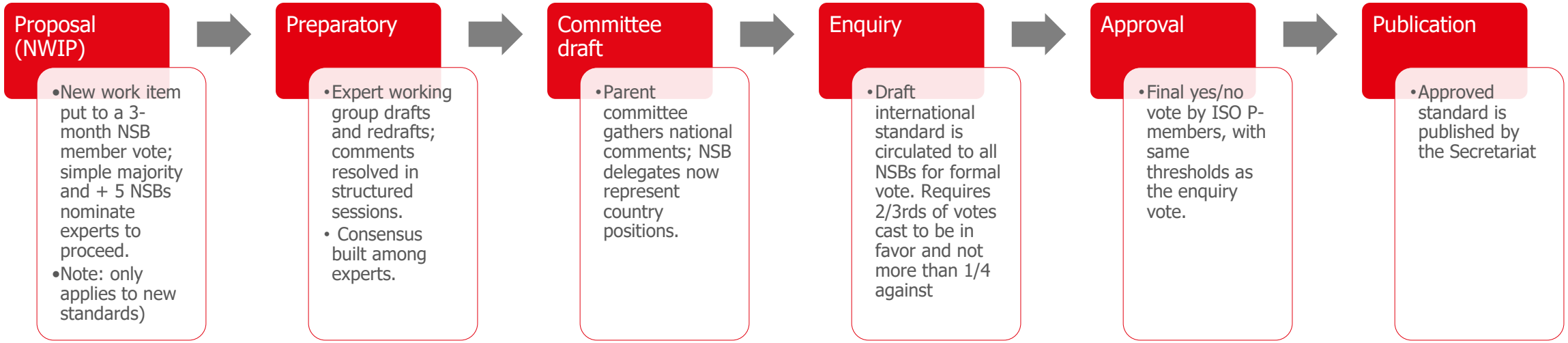
UPDATE: Recordings will be available upon request only. Please email baybar@wbcsd.org to request the recording.

GHG Protocol Decision-Making Criteria

1A. Scientific integrity	1B. GHG accounting and reporting principles	2A. Support decision making that drives ambitious global climate action	2B. Support programs based on GHG Protocol and uses of GHG data	3. Feasibility to implement
Ensure scientific integrity and validity, adhere to the best applicable science and evidence … and align with the latest climate science.	Meet the GHG Protocol accounting and reporting principles of **accuracy**, **completeness**, **consistency**, **relevance**, and **transparency**. Additional principles should be considered where relevant: conservativeness (for GHG reductions and removals), permanence (for removals), and comparability (TBD). …	Advance the public interest by informing and supporting decision making that drives ambitious actions by private and public sector actors to reduce GHG emissions and increase removals in line with global climate goals. …	Promote interoperability with key mandatory and voluntary climate disclosure and target setting programs … while ensuring policy neutrality. Approaches should support appropriate uses of the resulting GHG data and associated information by various audiences …	Approaches which meet the above criteria should be feasible to implement, meaning that they are accessible, adoptable, and equitable. … For aspects that are difficult to implement, GHG Protocol should aim to improve feasibility, for example, by providing guidance and tools to support implementation.

Note: This is a summary version. For further details, refer to the full decision-making criteria included in the annex to the Governance Overview, available at https://ghgprotocol.org/our-governance.

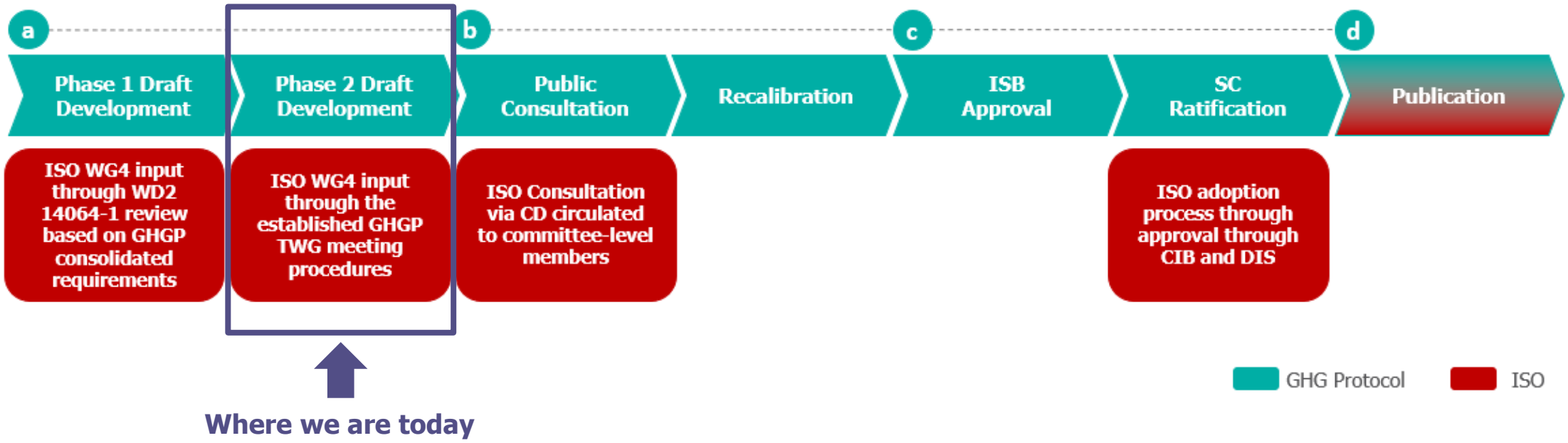
How ISO builds consensus



- The process for updating ISO 14064-1 is currently at **preparatory stage**
- Between March 31 and May 11, ISO WG 4 were provided a copy of existing GHG Protocol standards text that combined existing, published requirements and recommendations, and any requirements or recommendations that had, by that time, been established through GHGP's ongoing revision process.
- After the commenting process was closed, comments were analyzed by the WG4 LT. This amounted to ~3000 total comments across the corporate suite of standards
- Comments were discussed and addressed in comment resolution sessions, where each topic was presented before experts provided live feedback on discussed GHGP text, existing ISO WD-1 text, and any other options developed by the WG4 LT. Polls were conducted as needed.
- Where consensus was achieved the agreed text was finalized in-meeting. Where consensus was not achieved, unresolved options were retained while text for each option was updated based on comments resolution.

GHG Protocol – ISO partnership: Corporate Standards

- **GHG Protocol leads the development of Corporate Standards** through its established TWGs and ISB, in accordance with its Standard Development and Revision Procedure
- **ISO's integration** into each step of the standard development process is summarized in the figure below.
- **ISO will follow its own rules and procedures** as set out in the ISO/IEC Directives.



See section 9 (Workplan and timeline) in the Standard Development Plan for the consolidated Corporate Standard for more information.

Process for reviewing ISO feedback

Objective: Review, discuss, and poll on ISO WG4 outcomes/draft text alongside corresponding outcomes/draft text from the Corporate Standard TWG

For **every topic**:

Text comparison, showing:

- ISO WG4 WD2 text
- GHGP Corporate Standard TWG preliminary outcome

Note that discussion and polling are not planned for topics in alignment.

For topics with **misalignment** between ISO WG4 WD2 and GHGP preliminary outcome:

Content that will be presented:

- **GHGP** option (presented by GHGP Secretariat)
- **ISO** WG4 WD2 option (presented by ISO experts)
- **Hybrid option**, as applicable (presented by GHGP Secretariat)

TWG member **input**

- Clarifying **questions** on outcomes (ISO experts respond to questions on ISO outcomes)
- TWG member **discussion**
- **Polls** on the options (GHGP, ISO, hybrid if applicable)

ISO 14064-1 Working Draft 2 (WD2)

TWG Meeting	Topic	Relevant clauses in WD2
9. September 15, 2026	Subgroup 3 - Operational boundaries; Reported GHGs, GWPs, and other indirect climate forcers	6.4, 5.2, 5.3
	Subgroup 1 - Principles	4
10. October 6, 2026	Subgroup 2 - Organizational boundaries (consolidation approaches, leased assets)	5.4
	Subgroup 3 – Calculation methods and data quality	6.6, 6.7, 6.8, 6.9
11. October 27, 2026	Subgroup 1 - Tracking emissions over time	8
	Subgroup 2 - Verification and assurance	9
	Cross-cutting – Land Sector and Removals Standard topics in the Corporate Standard	
12. November 24, 2026	Review of ISO feedback TBD	TBD

- Document prepared by ISO/TC 207 SC 7/WG4 following ISO rules and procedures as **input to the GHG Protocol TWG process**
- Document is **strictly confidential per ISO rules** and shall not be shared beyond the TWG
- The organization/format of the final standard is TBD
- Please review **READ ME document** on SharePoint prior to reading

Schedule of upcoming meetings

Meeting #	Date	Topics
9	September 15, 2026	Review of ISO feedback Subgroup 3 - Operational boundaries; Reported GHGs and GWPs Subgroup 1 - Principles
10	October 6, 2026	Review of ISO feedback Subgroup 2 - Organizational boundaries (consolidation approaches, leased assets) Subgroup 3 – Calculation methods and data quality
11	October 27, 2026	Review of ISO feedback Subgroup 1 - Tracking emissions over time Subgroup 2 - Verification and assurance Cross-cutting – Land Sector and Removals Standard topics in the Corporate Standard
12	November 24, 2026	Review of ISO feedback TBD

Meeting times

(Sept – Nov meetings):

- 09:00-12:00 ET
- 15:00-18:00 CET
- 21:00-00:00 CHN

Note: *The Autumn time change in the US occurs on November 1st and will affect the meeting time in other time zones. Please refer to the calendar invites for the correct time in your time zone.*

Today's objectives

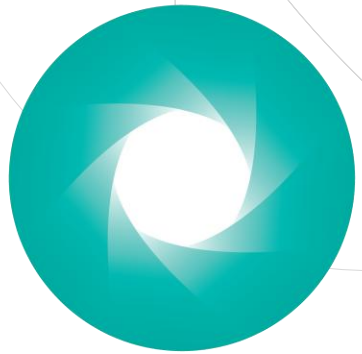
Review, discuss, and poll on ISO WG4 outcomes/draft text alongside corresponding outcomes/draft text from the Corporate Standard TWG on the following topics:

1. Tracking emissions over time (Subgroup 1)
2. Verification and assurance (Subgroup 2)
3. Land Sector and Removals Standard topics in the Corporate Standard (Cross-cutting)

ISO WG4 experts will be presenting the ISO WG4 position.

Agenda

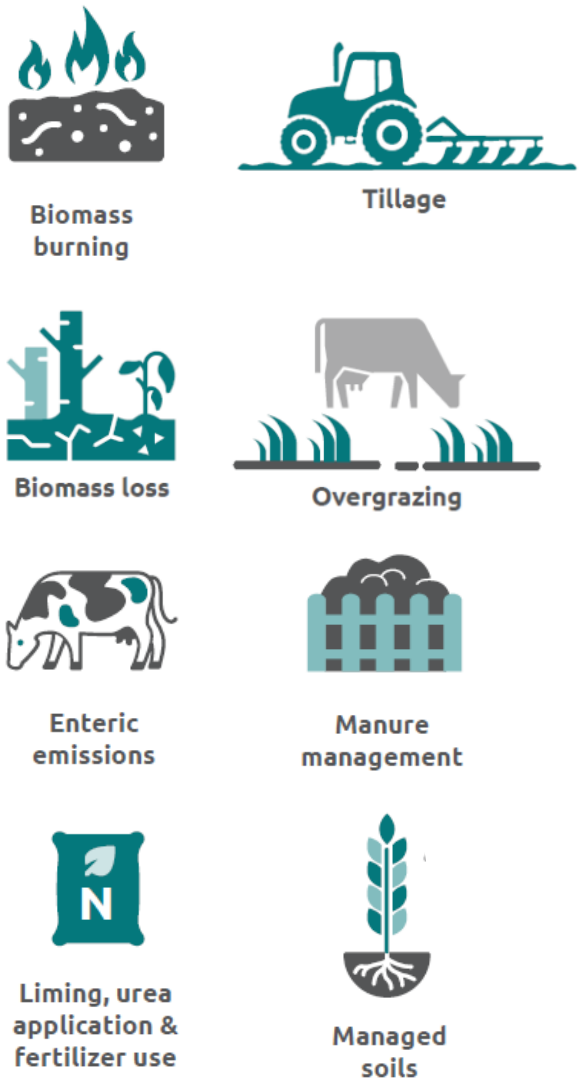
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Land-related topics

Topic	Discussion/polls
Background on land emissions	Clarifying questions
Scope 1 categories • Stationary combustion emissions • Mobile combustion emissions • Process emissions • Fugitive emissions • Land emissions	Discussion and polls
Land emissions accounting	Discussion and polls
Land emissions disclosures • Scope 1, scope 2, and scope 3	Discussion and polls
Biogenic product CO_2 emissions	Discussion and polls
CO_2 removals and CO_2 capture with geological storage	Discussion only



Land-related topics:

Background/context

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Land-related topics: The process

TODAY

LSR Standard	CS TWG	ISB	CS TWG	S3 TWG	ISB
Published in January 2026 Defines accounting and reporting requirements for land emissions and removals	Preliminary outcome to adopt **scope 1 land emissions category** Promotes alignment with LSR Standard and ISO 14064-1	Voted to have CS TWG address the following topics for **organizations where the LSRS does NOT apply**: • Land emissions • Biogenic product emissions	CS TWG will consider the following **land-related topics**: • Scope 1 categories • Land emissions accounting • Land emissions categorization • Biogenic product emissions • Removals	CS TWG preliminary outcomes will inform S3 TWG discussion on: **Land emissions disaggregation for scope 3**	**All preliminary outcomes will be presented** to the ISB by December 2026 in preparation for public consultation

Land Sector and Removals Standard: What does it cover?

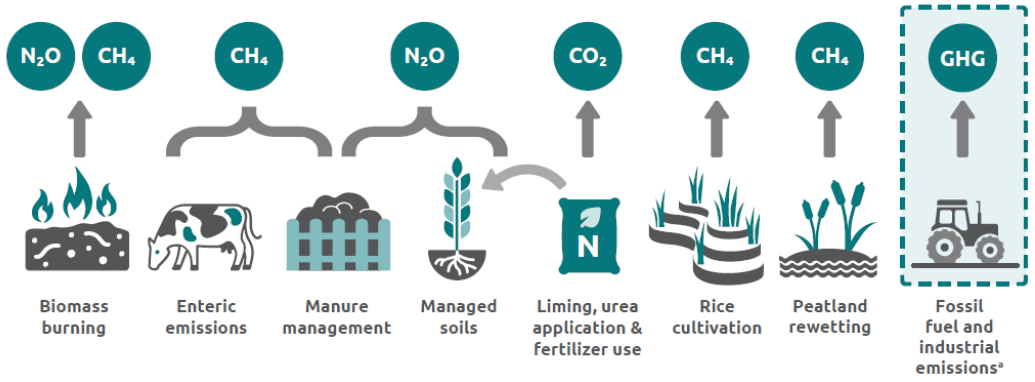
Published January 2026

Land emissions

Emissions related to agricultural land use and land management in the following categories for the **physical GHG inventory**:

- Land use change emissions
- Land management net biogenic CO_2 emissions
- Land management production emissions (Fig 10.1)
- Biogenic product emissions

Figure 10.1 Examples of land management production emission sources



Removals and related topics

Accounting and reporting requirements and guidance on removals

Removals = The transfer of a greenhouse gas from the atmosphere to storage within a non-atmospheric pool.

Types of removals:

- **Land management CO_2 removals** = Net CO_2 removals resulting from net land carbon stock increases due to ongoing land management practices.
- **CO_2 removal with geologic storage** = Net CO_2 removals resulting from annual net increases to carbon stored in geologic carbon pools from carbon derived from biological or technological CO_2 sinks.

Related topics:

- **CO_2 capture with geologic storage** = CO_2 collected at a source (preventing an emission) and that continues to be stored in a non-atmospheric carbon pool.

(LSR Standard, Figure 10.1)

LSR-related topics: GHG Protocol standards and the LSR Standard

Applicability

- The LSR Standard currently applies to companies based on **Requirement 1** (see next slide).
- For companies the LSR Standard doesn't apply to, they are only subject to the requirements on LSR-related topics in the corporate suite of standards.

Updates for companies the LSR Standard doesn't apply to

- As part of the standards update process, one preliminary outcome from the Corporate Standard TWG is to **add a "land emissions" category for scope 1**.

		GHG Protocol standards and guidance		
Accounting category		**Corporate Standard (*Revised Edition, 2004*)**	**Scope 3 Standard (*First Edition, 2011*)**	**Land Sector and Removals Standard (*Version 1, 2026*)**
Fossil fuel and industrial emissions		Required for scope 1 and 2 emissions, at a minimum	Required for scope 1, 2, and 3 emissions	Required for scope 1, 2, and 3 emissions
Land emissions		Not fully addressed	Not fully addressed	Required
Removals		Optional; reported separately	Optional; reported separately	Optional; reported if requirements are met
Land use		Not addressed	Not addressed	Required
Land carbon leakage		Not addressed	Not addressed	Required, if relevant
Total emissions		Not addressed	Not addressed	Optional; required if aggregating or netting values
Gross CO_2 fluxes	**Biogenic product CO_2 emissions**	Required for direct biogenic product CO_2 emissions; reported separately	Required for direct and indirect biogenic CO_2 emissions; reported separately	Required for scopes 1, 2, and 3; reported separately from the physical GHG inventory if requirements are met
	TCDR-based product CO_2 emissions	Not addressed	Not addressed	Required, if relevant
Product carbon storage		Not addressed	Not addressed	Optional; reported if requirements are met
Reversals		Not addressed	Not addressed	Required, if relevant

(LSR Guidance, Table 4.8)

LSR Standard applicability requirement

REQUIREMENT 1

Applicability of the Land Sector and Removals Standard and Guidance

Companies[5] reporting a corporate- or organization-level GHG inventory in conformance with the Greenhouse Gas Protocol **shall** follow the *Land Sector and Removals Standard* and *Guidance* if the company has significant* land sector activities in its operations or value chain and/or if the company chooses to account for and report CO_2 removals or CO_2 capture with geologic storage in the current year or has done so in previous years.

Companies with land sector activities in their operations or value chain that do not follow and report in conformance with the *Land Sector and Removals Standard* and *Guidance* **shall** disclose and justify why those activities are not significant.

****Significant*** *= When an estimated emission, removal, or other metric's value has a* ***sufficiently large influence*** *on a company's total inventory to be worthy of attention, considering their business goals and the intended uses of inventory data. This can be determined based on its* ***magnitude*** *relative to total emissions, removals, or other metrics in terms of the* ***absolute level****, the* ***trend****, or the* ***uncertainty****. – LSR glossary, pg 21*

(LSR Standard, Chapter 1)

LSR Standard applicability guidance

Examples of cases where the LSR Standard would apply:

Sector	Relevant chapters	Example companies
Agriculture and other land-based sectors	1–20	• Companies that own or control significant areas of land (e.g., agricultural producers or land developers) • Companies that purchase, consume, process, or sell significant amounts of food, fiber, feed, bioenergy, or other agricultural products (e.g., food and beverage companies, consumer goods companies, bioenergy producers and consumers, biomaterial producers and consumers, retailers, or food service companies) • Companies that supply significant amounts of products to agricultural producers • Companies that manage significant areas of land to increase carbon stored in biomass or soil
Technological CO_2 removal and CO_2 capture with geologic storage	1–6, 11, 12, 14–20	• Companies that own or control technological CO_2 removal operations • Companies that purchase, consume, process, or sell products that store CO_2 that was technologically removed • Companies that store captured fossil CO_2, captured biogenic CO_2, or CO_2 that was technologically removed in geologic reservoirs

(LSR Guidance, Table 1.2)

Land Sector and Removals Standard: Land emissions category

The following categories are reported WITHIN the physical GHG inventory:

	Physical GHG inventory					
	Emissions					Removals
Accounting category	Fossil fuel and industrial emissions[a]	Land emissions				Removals
Accounting subcategory		Land use change emissions[b]	Land management net biogenic CO_2 emissions	Land management production emissions	Biogenic product emissions[c]	Land management CO_2 removals
Scope 1						
Scope 2						
Scope 3						
Reference	Corporate & Scope 3 Standards	Chapter 7	Chapter 9	Chapter 10	Chapter 11	Chapter 12 & 13

(LSR Standard, Figure 4.1)

Activity types:

- Fossil fuel and industrial emissions are already addressed in current Scope 1 activity types
- LSR introduces "Land emissions" activity type

Land emissions category:

- **Land emissions** = The release of GHGs into the atmosphere from the land and biogenic products, including the sum of land use change GHG emissions, land management net biogenic CO_2 emissions, land management production GHG emissions, and biogenic product emissions

Land emissions subcategories:

- **Land use change** = A transition from one land use category to another, such as from forest to grassland or forest to cropland
- **Land management net biogenic CO_2** = Net biogenic CO_2 emissions resulting from net land carbon stock losses due to ongoing land management practices
- **Land management production emissions** = CH_4, N_2O, and non-biogenic CO_2 emissions due to ongoing land management practices (e.g., livestock manure management, fertilizer application, enteric fermentation)
- **Biogenic product** = A good or material during the use phase of the product life cycle that contains biogenic carbon

Note for fossil fuel & industrial emissions: Companies are required to report F&I emissions due to land management activities (e.g., tractor emissions under either F&I emissions (preferred) or "LM production" emissions. Must also disclose where those emissions are reported.

Land Sector and Removals Standard: Other accounting categories

The following categories are then reported OUTSIDE the physical GHG inventory:

	Additional accounting categories							
Accounting category	Land use	Land carbon leakage	Total emissions	Gross CO_2 fluxes			Product carbon storage	Reversals
Accounting subcategory	Land occupation			Biogenic product CO_2 emissions[c]	Gross biogenic land CO_2 emissions	Gross biogenic land CO_2 removals	Biogenic product carbon storage	Reversals of land management CO_2 removals
Scope 1								
Scope 2[d]								
Scope 3								
Reference	Chapter 8	Chapter 8	Chapter 20	Chapter 11	Chapter 9	Chapter 13	Chapter 15	Chapter 12

(LSR Standard, Figure 4.1)

Required categories Optional categories Not applicable

- **Land use** = A land sector accounting category representing the amount of agricultural land occupied by the company for products it produces or sources.
- **Land carbon leakage** = A land sector accounting category representing a specific type of leakage resulting from corporate actions that displace food or feed production to locations beyond the lands in their operations or value chain, leading to agricultural expansion and land use change. Such leakage is driven by increased demand for agricultural products and a fixed amount of global land.
- **Total emissions** = The sum of: Fossil fuel and industrial emissions; Land use change emissions; Land management net biogenic CO_2 emissions; Land management production emissions; Biogenic product CH_4 and N_2O emissions; CO_2 removals (if relevant); Land carbon leakage.
- **Gross CO_2 fluxes** = A land sector and technological removals accounting category representing the sum of one-directional transfers of CO_2 or its constituent carbon from one carbon pool to another.
- **Product carbon storage** = A land sector and technological removals accounting category representing changes in carbon stored in product carbon pools during the use phases of the product life cycle, including recycling and reuse, from carbon derived from biogenic or technological CO_2 sinks.
- **Reversals** = A land sector and technological removals accounting category representing an emission from a carbon pool that stores carbon associated with a removal or CO_2 capture that was previously reported by the reporting company, in cases where the carbon pool is no longer within the company's operations or value chain.

LSR-related topics: ISO feedback on GHG Protocol approaches

LSR-related Topic	ISO Feedback Aligned	ISO Feedback Misaligned	
		GHG Protocol	ISO feedback
Land emissions	• **Land emissions** are **required**, including emissions from land use change, land use and agricultural production. • **Disaggregated reporting within the GHG inventory** for land emissions.	• Terms / definitions and where to report (see slide 40 for terminology mapping). • Details for how certain land emissions are quantified vary (e.g., LUC emissions must use dLUC and sLUC approaches).	• Terms / definitions and where to report (see slide 40 for terminology mapping). • Details for how certain land emissions are quantified vary (e.g., LUC emissions must use internationally recognized methods).
Biogenic product emissions	• **Biogenic product CO_2** emissions are **separately reported** from the GHG inventory. • **Disaggregated reporting within the GHG inventory** for **biogenic product CH_4 and N_2O** emissions.	• Biogenic product CO_2 emissions are **required** to be reported separately from the inventory (CS, S2, S3 and LSR). • Biogenic product CH_4 and N_2O emissions are **reported as a subcategory under land emissions** (LSR).	• Biogenic product CO_2 emissions **can*** be reported separately from the inventory. • **Disaggregated reporting** of biogenic product CH_4 and N_2O emissions from fossil and other industrial emissions **for each emission source**.
CO_2 removals	• **Separate reporting** of fossil fuel and industrial emissions from removals. • Use of **stock change accounting** to quantify removals based on net changes in carbon stocks on productive agricultural lands.**	• Accounting for and reporting removals are **optional** (LSR). • Removals must **meet various safeguards** to be reported (LSR). • Change in harvested wood product carbon stocks accounted for as **product carbon storage** (LSR).	• Accounting for and reporting land-based removals is **required**. • Removals must be **based on reputable sources and methods documented**. • Change in harvested wood product carbon stocks accounted for as an **emission** or **removal**.

* Under ISO terminology "can" denotes possibility and capability (e.g.., it is possible to), which is distinct from "may".

** One of the annexes ISO proposed states that a reference land use is not applicable for Statement #1 and #2 (i.e., that activity-based accounting is not allowed), so this is not aligned for forest land and non-productive land uses.

LSR-related topics: Proposal to the ISB to address LSR-related topics

		Track 1: Companies where LSR Standard does not apply	Track 2: Companies where the LSR Standard does apply
Process		Corporate Standard TWG to discuss relevant LSR Standard requirements and ISO feedback to determine if revisions to existing requirements within the corporate suite of standards are necessary. ISB to then review/approve TWG proposal. **Corporate Standard TWG** → **ISB**	ISB provides a decision based on existing GHG Protocol requirements. **ISB**
Content	Land emissions	How to account for and report emissions from land use change (e.g. GHG emissions deforestation), land use (e.g., cropland soil carbon degradation) and agricultural practices (e.g., GHG emissions from livestock, N_2O emissions from fertilizer)?	"Companies reporting a corporate- or organization-level GHG inventory in conformance with the Greenhouse Gas Protocol **shall** follow the *Land Sector and Removals Standard* and *Guidance* if the company has significant land sector activities in its operations or value chain and/or if the company chooses to account for and report CO_2 removals or CO_2 capture with geologic storage in the current year or has done so in previous years." (LSR Standard, Requirement 1)
	Biogenic product emissions	How to account for and report biogenic CO_2 emissions and biogenic CH_4 and N_2O emissions?	
	CO_2 removals	Not relevant, as this would trigger the LSR Standard	

ISB Pulse check: Proposal to the ISB to address LSR-related topics

ISB pulse check results

?

1. For companies where LSR Standard <u>does not</u> apply: Do you support proposed plan (i.e., bring land-related topics to the CS TWG)**?**

A. Support — ISB members supported this with 7 of 10 ISB members approving

B. Oppose

C. Abstain

2. For companies where the LSR Standard <u>does</u> apply: Do you support this requirement for the consolidated Corporate Standard?

*"Companies reporting a corporate- or organization-level GHG inventory in conformance with the Greenhouse Gas Protocol **shall** follow the Land Sector and Removals Standard and Guidance if the company has significant land sector activities in its operations or value chain and/or if the company chooses to account for and report CO_2 removals or CO_2 capture with geologic storage in the current year or has done so in previous years."*

A. Support — ISB members supported this with 10 of 10 ISB members approving

B. Oppose

C. Abstain

Land-related topics:

Scope 1 categories

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Operational/reporting boundary: Scope 1 disaggregation (draft text)

GHG Protocol
Consolidated Corporate Standard Section 4

- *The organization **shall** report the following information on its scope 1 emissions:*
  - *Scope 1 emissions disaggregated by the following categories:*
    - *Stationary combustion,*
    - *Mobile combustion,*
    - *Process emissions,*
    - *Fugitive emissions, and*
    - *Land emissions.**

ISO
ISO14064-1:WD2 Clause 6.4.2

- *The organization **shall** quantify and report its GHG emissions and GHG removals within Scope 1 disaggregated by subcategories and classes according to Table 1.*

See Table 1 on following slide for scope 1 categories

GHGP and ISO are **aligned** on requiring disaggregation of scope 1 emissions by scope 1 category
However, the **scope 1 category definitions are different**

*Land emissions is a new scope 1 category, following preliminary outcome from CS TWG

Operational/reporting boundary: Scope 1 categories (draft text)

GHG Protocol	ISO14064-1:WD2		Table 1	
Scope 1 categories	#	**Scope 1 subcategories***	**GHG emission or GHG removal class****	
			Class I	**Class II**
Stationary combustion emissions	1.1	Combustion from stationary equipment	Applicable	Applicable for non-CO_2 GHG emissions
Mobile combustion emissions	1.2	Combustion from mobile transport equipment	Applicable	Applicable for non-CO_2 GHG emissions
Process emissions	1.3	Industrial, agricultural and forestry processes	Applicable	Applicable for non-CO_2 GHG emissions
Fugitive emissions	1.4	Anthropogenic processes with fugitive GHG emissions (unintentional)	Applicable	Applicable for non-CO_2 GHG emissions
Land emissions	1.5	LULUC and HWP+	NOT applicable	Applicable for net CO_2 emissions / removals*** from LULUC and HWP+
NA	1.6	Other removal processes***	NOT applicable	Applicable for net CO_2 emissions / removals from other removal processes

Class I = fossil and industrial GHG emissions
Class II = Land-based GHG sources and GHG sinks

* ISO uses the term "scope 1 subcategories." In this meeting, the GHGP terminology (i.e., "scope 1 categories") will be used.
** **Emission classes** will be discussed later in the meeting (see discussion slide 55).
*** **Removals** will be discussed more generally later in the meeting (see discussion slide 77).

Scope 1 subcategories: Stationary combustion emissions / Combustion from stationary equipment

GHG Protocol
Corporate Standard Chapter 6 and Glossary

Stationary combustion emissions

Definition

- *Burning of fuels to generate electricity, steam, heat, or power in stationary equipment such as boilers, furnaces etc.*

ISO
ISO14064-1:WD2 Clause B.2.1

Combustion from stationary equipment

Definition

- *This Scope 1 subcategory includes GHG emissions from combustion of any type of fuel burnt in stationary equipment within the organizational boundary (e.g., heaters, gas turbines, boilers, which typically are done to generate heat, mechanical work, or steam).*
- *There are two classes of GHG emissions in this subcategory that are reported separately from each other (see Table 1):*
  - *Fossil and other industrial GHG emissions,*
  - *Non-CO_2 GHG emissions (e.g., CH_4, N_2O) from combustion of biomass (See 5.2).*

NOTE: CO_2 emissions from combustion of biomass is not reported in this subcategory, but can be provided as an additional information for cross-checking purposes (See 5.2)

Classes will be considered separately (see discussion slide 55).
The first focus is the definition.

Orange text is used for emphasis or comparison throughout the section.

Scope 1 subcategories: Mobile combustion emissions / Combustion from mobile transport equipment

GHG Protocol
Corporate Standard Chapter 6 and Glossary

Mobile combustion emissions

Definition

- *Burning of fuels by transportation devices such as cars, trucks, trains, airplanes, ships etc.*

ISO
ISO14064-1:WD2 Clause B.2.2

Combustion from mobile transport equipment

Definition

- *This Scope 1 subcategory includes GHG emissions from mobile transport equipment within the organizational boundary (e.g., motor vehicles, trucks, ships, aircraft, locomotives, fork lift trucks).*

NOTE 1: Mobile transport equipment does not include pipelines.

- *GHG emissions from journeys in vehicles not included within the organizational boundary are reported as scope 3 emissions (e.g., business travel, employee commuting, client or visitors transport, upstream leased assets).*
- *There are two classes of GHG emissions in this subcategory that are reported separately from each other (see Table 1):*
  - *Fossil and other industrial GHG emissions,*
  - *Non-CO_2 GHG emissions (e.g., CH_4, N_2O) from combustion of biomass (See 5.2)*

NOTE 2: CO_2 emissions from combustion of biomass is not reported in this subcategory, but can be provided as an additional information for cross-checking purposes (See 5.2)

Classes will be considered separately (see discussion slide 55).
The first focus is the definition.

Orange text is used for emphasis or comparison throughout the section.

Scope 1 categories: Stationary and mobile

Discussion



Polls



#	Topic	Options	Draft definition
1	Which option do you prefer for defining scope 1 **stationary combustion emissions**?	a. GHGP option: **Stationary combustion emissions**	*Burning of fuels to generate electricity, steam, heat, or power in stationary equipment such as boilers, furnaces etc.*
		b. ISO option: **Combustion from stationary equipment**	*This Scope 1 subcategory includes GHG emissions from combustion of any type of fuel burnt in stationary equipment within the organizational boundary (e.g., heaters, gas turbines, boilers, which typically are done to generate heat, mechanical work, or steam).*
		c. Hybrid option: **GHGP name with ISO definition**	See above
2	Which option do you prefer for defining scope 1 **mobile combustion emissions?**	a. GHGP option: **Mobile combustion emissions**	*Burning of fuels by transportation devices such as cars, trucks, trains, airplanes, ships etc.*
		b. ISO option: **Combustion from mobile transport equipment**	*This Scope 1 subcategory includes GHG emissions from mobile transport equipment within the organizational boundary (e.g., motor vehicles, trucks, ships, aircraft, locomotives, fork lift trucks).* *GHG emissions from journeys in vehicles not included within the organizational boundary are reported as scope 3 emissions (e.g., business travel, employee commuting, client or visitors transport, upstream leased assets).*
		c. Hybrid option: **GHGP name with ISO definition**	See above

Note: Approach to addressing topics from the Land Sector and Removals Standard (e.g., removals) in the consolidated Corporate Standard is pending, with some LSRS topics to be considered in a future meeting

Scope 1 subcategories: Process emissions / Industrial, agricultural and forestry processes

GHG Protocol
Corporate Standard Chapter 6 and Glossary

Process emissions

Definition

- *Emissions generated from manufacturing processes, such as the CO_2 that is arises from the breakdown of calcium carbonate ($CaCO_3$) during cement manufacture.*

ISO
ISO14064-1:WD2 Clause B.2.3

Industrial, agricultural and forestry processes

Definition

- *This Scope 1 subcategory includes GHG emissions that are intentionally released from industrial processes including waste management (e.g., flaring) and venting within the organizational boundary.*

NOTE 1: Examples of industrial processes include but are not limited to cement and lime production, chemical production, manufacturing, oil and gas refining, and non-combustion processes involving the avoidance, replacement, destruction, decomposition or mitigation of industrial GHG emissions (e.g. N2O) and purification processes associated with carbon capture and storage (e.g. amine solution capture systems).

NOTE 2: Intentional flaring resulting in GHG emissions in this subcategory are typically generated by burning of gases (or in some cases liquids) in a thermal destruction device, including exploration and production flaring of associated gas (and in some cases liquids) from oil production or well testing.

NOTE 3: Intentional venting in industrial processes included in this subcategory are typically designed to release CH4 or CO2 contained in natural gas or hydrocarbon gas to the atmosphere through seals or vent pipes, equipment blow-down for maintenance, or direct venting of gas used to power equipment (such as pneumatic devices).

- *This Scope 1 subcategory also includes non-CO_2 GHG emissions (e.g., CH_4, N_2O) that are intentional and from agricultural and forestry processes and processing of biomass within the organizational boundary.*

NOTE 4: Examples of agricultural and forestry processes include but are not limited to putrefaction and fermentation, management of livestock and manure, application of nitrogen fertilizers, controlled burning of biomass, controlled waste management, or composting.

- *There are two classes of GHG emissions in this subcategory that are reported separately from each other (see Table 1):*
  - *Fossil and other industrial GHG emissions,*
  - *Non-CO_2 GHG emissions (e.g., CH_4, N_2O) from agricultural and forestry processes and processing of biomass (See 5.2)*

Classes will be considered separately (see discussion slide 55). The first focus is the definition.

Orange text is used for emphasis or comparison throughout the section.

Scope 1 subcategories: Fugitive emissions / Anthropogenic processes with fugitive GHG emissions (unintentional)

GHG Protocol
Corporate Standard Chapter 6 and Glossary

Fugitive emissions

Definition

- *Emissions that are not physically controlled but result from the intentional or unintentional releases of GHGs. They commonly arise from the production, processing transmission storage and use of fuels and other chemicals, often through joints, seals, packing, gaskets, etc.*

ISO
ISO14064-1:WD2 Clause B.2.4

Anthropogenic processes with fugitive GHG emissions (unintentional)

Definition

- *This Scope 1 subcategory includes fugitive GHG emissions that are unintentional and from anthropogenic processes within the organizational boundary.*

NOTE: Examples of these anthropogenic processes include, but are not limited to, equipment leaks from oil and gas production and uncontrolled decomposition of waste material from such sources as landfills, composting facilities, waste water treatment, and other waste management processes.

- *There are two classes of GHG emissions in this subcategory that are reported separately from each other (see Table 1):*
  - *Fossil and other industrial GHG emissions*
  - *Non-CO_2 GHG emissions (e.g., CH_4, N_2O) from agricultural and forestry processes and processing of biomass (See 5.2).*

Classes will be considered separately (see discussion slide 55).
The first focus is the definition.

Orange text is used for emphasis or comparison throughout the section.

Scope 1 Category Mapping – GHGP and ISO reporting categories

	GHG Protocol proposal	ISO	
	Emissions	Class I (fossil fuel & industrial)	Class II (land-based)
Scope 1	**Stationary combustion emissions**	Fossil and industrial GHG emissions from combustion from **stationary equipment**	**Non-CO_2** GHG emissions from **land-based** GHG sources from stationary equipment
	Mobile combustion emissions	Fossil and industrial GHG emissions from combustion **from mobile transport equipment**	**Non-CO_2** GHG emissions from **land-based** GHG sources from mobile transport equipment
	Process emissions	Fossil and industrial GHG emissions from **industrial, agricultural and forestry processes**	**Non-CO_2** GHG emissions from **land-based** GHG sources from industrial, agricultural and forestry processes
	Fugitive emissions	Fossil and industrial GHG emissions from **anthropogenic processes with fugitive GHG emissions (unintentional)**	Non-CO_2 GHG emissions from **land-based** GHG sources from anthropogenic processes with fugitive GHG emissions (unintentional)
	Land emissions, including: • Land use change emission • Land management net CO_2 emission • Land management production emissions • Biogenic product N_2O and CH_4 emissions	NA	**Net CO_2 emissions and removals** from: • Land use change • Land use • Harvested wood products and other products with biomass (HWP+)
	NA	NA	Net CO_2 emissions and removals from other removal processes

Note: Orange text is used for emphasis on where CH_4 and N_2O emissions from land-based GHG sources would be reported such as CH_4 and N_2O emissions from livestock production systems, N_2O from fertilizer use, CH_4 emissions from rice production systems, CH_4 and N_2O emissions from biomass burning, etc.

ISO WG4
Scope 1 categories

Scope 1 categories: Separating out intentional and unintentional fugitive emissions

Preliminary outcome

Summary of outcome (select text)

Two categories were defined such that intentional and unintentional fugitive emissions are reported in the following:

- **Industrial, agricultural and forestry processes**, which includes industrial flaring and venting and non-CO2 emissions from agricultural, forestry, and biomass burning
- **Anthropogenic processes with fugitive GHG emissions (unintentional)**, which includes equipment leaks and uncontrolled decomposition

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Rationale

- GHG Protocol defines fugitive emissions as "intentional or unintentional" releases, which overlaps with process emissions. Intent decides the category. One test (intent) makes the subcategories mutually exclusive, as 6.2 requires, so nothing is reported twice.
- Intentional releases are cut through process design and operating decisions (for example, replacing venting with capture). Unintentional releases are cut through leak detection and repair, maintenance and containment. Reporting them apart shows which lever applies.
- Intentional releases are usually engineered or metered flows. Unintentional releases rely on leak surveys and emission factors. The split supports accuracy and transparency (4.5, 4.6).

Implications and concerns

- Both list venting and flaring under fugitive emissions, which ISO now puts in 1.3. A mapping table is needed for comparability with past reporting and with national inventories.
- Organizations that move venting and flaring between categories may need to recalculate their base year (8.2).
- Composting appears in both 1.3 ("controlled waste management, composting") and 1.4 ("uncontrolled decomposition… composting facilities"). The controlled/uncontrolled test needs guidance for waste.
- Flaring is also combustion. Some reporters may expect it in combustion. The draft should confirm that flaring is in 1.3 only.

ISO WG4
Scope 1 categories

Scope 1 categories: Addition of agriculture and forestry into industrial processes category

Preliminary outcome

Summary of outcome (select text)

Industrial processes category includes the following:

- **Industrial emissions** (e.g., cement production)
- **Agricultural emissions** (e.g., non-CO2 emissions from manure management, fertilizer application, composting)
- **Biomass processing** (e.g., non-CO2 emissions from combustion of biomass for energy)
- **Forestry** (e.g., non-CO2 emissions from wildfires, controlled burns, fertilizer application)

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Rationale

- Non-CO_2 gases are not captured by stock change (G.5), which is reported in 1.5, so Non-CO_2 gases are reported instead in 1.3 in the activity-based subcategory where the process happens labelled separately as emissions from land-based sources.
- Non-CO2 ag and forestry is in the industrial/ag category rather than LULUCF because the latter a measurement of CO2 fluxes, quantified as C stock change; this mirrors IPCC that separates LULUCF and Ag sector emissions outside of C stock change

Implications and concerns

- Land-sector emissions are spread out as they sit across 1.1–1.5, so users need the Class II aggregation (5.2 "may") to see the full land picture.
- LSRS groups these emissions as "land management production emissions" within land emissions.
- Wildfire non-CO_2 emissions have no clear home. The draft treats exceptional events under land use (G.2) but does not say where the related non-CO_2 emissions go.

Scope 1 categories: Process and fugitive emissions

Draft for TWG discussion

Discussion

Polls

For ALL organizations:

#	Topic	Options
1	How should **intentional and unintentional releases of GHGs** be categorized?	a. GHGP option: **In a single category** (fugitive emissions)
		b. ISO option: Separated across **two categories** (industrial, agricultural and forestry processes category and anthropogenic processes with fugitive GHG emissions (unintentional) category)

For organizations the LSR Standard does not apply to:

#	Topic	Options
2	How should non-CO_2 **agricultural and forestry** emissions be categorized?	a. GHGP option: Include in **land emissions category**
		b. ISO option: Include in **industrial/process emissions category**
3	Which option do you prefer for defining scope 1 **process/industrial emissions**?	a. GHGP option: **Process emissions** (with more detail)
		b. ISO option: **Industrial, agricultural and forestry processes**
4	Which option do you prefer for defining scope 1 **fugitive emissions**?	a. GHGP option: **Fugitive emissions** (with more detail)
		b. ISO option: **Anthropogenic processes with fugitive GHG emissions (unintentional)**

Scope 1 subcategories: Land emissions / LULUC and HWP+

GHG Protocol
LSR Standard Chapter 4

Land emissions

Definition

- *The release of GHGs into the atmosphere from the land and biogenic products, including the sum of land use change GHG emissions, land management net biogenic CO_2 emissions, land management production GHG emissions, and biogenic product emissions*

LSRS defines the following **land emissions accounting subcategories**:

- *Land use change emissions*
- *Land management net biogenic CO_2 emissions*
- *Land management production emissions*
- *Biogenic product emissions*

ISO
ISO14064-1:WD2 Clause B.2.5

LULUC and HWP+

Definition

- *This Scope 1 subcategory includes direct CO_2 emissions and CO_2 removals from land use, land use change, and can include harvested wood and other products with biomass (HWP+) within the organizational boundary.*
- *CO_2 emissions and CO_2 removals from LULUC within the organizational boundary can be reported separately as:*
  - *CO_2 emissions or CO_2 removals from land use change,*
  - *CO_2 emissions or CO_2 removals from land use.*
- *When quantified, CO_2 emissions and CO_2 removals from harvested wood products and other products with biomass (HWP+) within the organizational boundary can be reported separately from CO_2 emissions or CO_2 removals from LULUC within this subcategory.*
- *Requirements and guidance on quantifying GHG emissions and GHG removals from LULUC and HWP+ are provided in Annex G and guidance for agriculture and forestry is provided in Annex H*

Classes will be considered separately (see discussion slide 55).
The first focus is the definition.

Orange text is used for emphasis or comparison throughout the section.

Terminology Mapping: LSR Standard and ISO LSR-related terms

LSR Standard		ISO	
Accounting category	**Accounting subcategory**	**Subcategory name**	**Text description**
Land emissions	Land use change emission	LULUC and HWP+	Net CO_2 emission from land use change
Land emissions	Land management net biogenic CO_2 emission	LULUC and HWP+	Net CO_2 emission from land use
Land emissions	Land management production emissions	Industrial, agricultural and forestry processes; or Anthropogenic processes with fugitive GHG emissions	Non-CO_2 GHG emissions from land-based sources
Land emissions	Biogenic product CH_4 and N_2O emissions *(also includes biogenic CO_2 emissions where upstream lifecycle land emissions and leakage are not accounted for and reported)*	Combustion from stationary equipment; Combustion from mobile equipment; or Anthropogenic processes with fugitive GHG emissions	Non-CO_2 GHG emissions from biomass combustion for energy
Gross CO_2 fluxes	Biogenic product CO_2 emissions	NA *(can separately report)*	CO_2 emissions from biomass combustion for energy
NA	NA *(included in LM CO_2 removals, as relevant)*	LULUC and HWP+	Net CO_2 removals from land use change
CO_2 removal	Land management CO_2 removal	LULUC and HWP+	Net CO_2 removals from land use
CO_2 removal	Technological CO_2 removal	Other removal processes	Net CO_2 removals from other removal processes
Product carbon storage	Biogenic product carbon storage	LULUC and HWP+	Net CO_2 removals from harvested wood product and other products with biomass (HWP+)
Product carbon storage	Negative biogenic product carbon storage	LULUC and HWP+	Net CO_2 emission from harvested wood product and other products with biomass (HWP+)

Note: ISO considers scope 1, scope 2 and scope 3 to be categories. ISO does not have subcategories for reporting within LULUC and HWP+ but does define emissions Class I and II (see discussion slide 55).

Scope 1 Category Mapping – GHGP and ISO reporting categories

	GHG Protocol proposal	ISO	
	Emissions	Class I (fossil fuel & industrial)	Class II (land-based)
Scope 1	**Stationary combustion emissions**	Fossil and industrial GHG emissions from combustion from **stationary equipment**	**Non-CO_2** GHG emissions from **land-based** GHG sources from stationary equipment
	Mobile combustion emissions	Fossil and industrial GHG emissions from combustion **from mobile transport equipment**	**Non-CO_2** GHG emissions from **land-based** GHG sources from mobile transport equipment
	Process emissions	Fossil and industrial GHG emissions from **industrial, agricultural and forestry processes**	**Non-CO_2** GHG emissions from **land-based** GHG sources from industrial, agricultural and forestry processes
	Fugitive emissions	Fossil and industrial GHG emissions from **anthropogenic processes with fugitive GHG emissions (unintentional)**	**Non-CO_2** GHG emissions from **land-based** GHG sources from anthropogenic processes with fugitive GHG emissions (unintentional)
	Land emissions, including: • Land use change emission • Land management net CO_2 emission • Land management production emissions • Biogenic product N_2O and CH_4 emissions	NA	**Net CO_2 emissions and removals** from: • Land use change • Land use • Harvested wood products and other products with biomass (HWP+)
	NA	NA	Net CO_2 emissions and removals from other removal processes

Note: Orange text is used for emphasis on where CH_4 and N_2O emissions from land-based GHG sources would be reported.
Green text is used for emphasis on where CO_2 emissions from land-based GHG sources would be reported.
Purple text is used for emphasis on where CH_4 and N_2O emissions from land-based/biogenic products would be reported
Red text is used for emphasis on where CO_2 removals would be reported (see discussion slide 77), this discussion only pertains to classification of scope 1 emissions.

Subgroup 3
Scope 1

Scope 1 land emissions category

Preliminary outcome

Add "land emissions" category to scope 1

Land emissions = "The release of GHGs into the atmosphere from the land and biogenic products, including the sum of land use change GHG emissions, land management net biogenic CO_2 emissions, land management production GHG emissions, and biogenic product emissions" –*Land Sector and Removals (LSR) Standard*

Rationale

- **Aligned** with Land Sector and Removals Standard
- Recognizes important **source of emissions**
- **Promotes transparency** and **consistency** of the inventory
- Supports **users of the data** by allowing them to interpret emissions results

Level of support from Subgroup 3

Should the category "Land Emissions" be added to the activity types for scope 1 emissions?

Subgroup 3 Meeting 13
- **15 of 18: Support** *(9 fully, 6 with edits)*
- 1 of 18: Opposed
- 2 of 18: Abstained

Full TWG Meeting 6
- **45 of 53: Support** *(34 fully, 11 with edits)*
- 4 of 53: Opposed
- 4 of 53: Abstained

Implications and concerns

- Additional requirements in the LSR Standard are triggered when an organization has "significant" land emissions
- → Guidance will be needed for reporters with **non-significant land emissions**
- **Alignment needed** with **ISO WG4 position** (LULUC and HWP+ category includes forest land)

For more information, see Subgroup 3 Meeting 13 and 14 and Full TWG Meeting 6 minutes and slides

Scope 1 categories: Land emissions

Discussion



#	Text provision
1	**Do you have any questions or concerns about this proposal for the consolidated Corporate Standard, which is based on the ISB outcome on removals?** Proposal: **Maintain GHGP definition of "land emissions"** *The release of GHGs into the atmosphere from the land and biogenic products, including the sum of land use change GHG emissions, land management net biogenic CO_2 emissions, land management production GHG emissions, and biogenic product emissions* Rationale: • The ISO definition of LULUC and HWP+ includes netting of removals. • The ISB outcome was to require any company calculating removals to follow the LSR Standard, which the ISO definition is not aligned with.

Note: **Removals** will be discussed more generally later in the meeting (see discussion slide 77).

Land-related topics:

Land emissions accounting

GREENHOUSE GAS PROTOCOL

Land emissions accounting

GHG Protocol
Proposal for Corporate Standard building on the LSR Standard

- *The organization **shall** account for scope 1 and scope 3 land emissions, if applicable to their operations or value chain.*
- *Organizations reporting an organization-level GHG inventory in conformance with the Greenhouse Gas Protocol **shall** follow the Land Sector and Removals Standard and Guidance if the organization has significant land sector activities in its operations or value chain.*
- *For organizations the LSR Standard does not apply to, the organization **[should / may]** refer to the LSR Standard and LSR Guidance for accounting requirements and guidance for the following accounting subcategories of land emissions:*
  - *Land use change emissions (see Chapter 7)*
  - *Land management net biogenic CO_2 emissions (see Chapter 9)*
  - *Land management production emissions (see Chapter 10)*
  - *Biogenic product emissions*** (see Chapter 11)*

* Land management removals are optional and subject to additional requirements following the LSR Standard (TDB, see discussion slide 77)

** Product carbon storage accounting is optional, it is reported separately from CO_2 removals and is subject to additional requirements following the LSR Standard

*** Classes will be considered separately (see discussion slide 55).

ISO
ISO14064-1:WD2 Section 5.2 and Annex G

- *The organization **shall** quantify GHG emissions or GHG removals* from land use and land use change and HWP+ carbon pool** in accordance with Annex G. (Section 5.2)*
- *Specific guidance concerning GHG emissions or GHG removals from agriculture and forestry is provided in Annex H. (Section 5.2)*

GHG emissions and GHG removals from land-based GHG sources and GHG sinks include the following:

- *CO_2 emissions or CO_2 removals* from land use change*
- *CO_2 emissions or CO_2 removals* from land use*
- *CO_2 emissions or CO_2 removals from harvested wood products and other product with biomass (HWP+)** (Annex G)*
- *Non-CO_2 GHG emission from land use, land use change and use of disposal of products with biomass****

* Land-based CO_2 and other GHG removals are required and subject to additional requirements in Annex G (TDB, see discussion slide 77)

** CO_2 removals from harvested wood products and other product with biomass are recommended and subject to additional requirements in Annex G

*** Classes will be considered separately (see discussion slide 55).

Orange text is used for emphasis or comparison throughout the section. Teal text indicates newly proposed text.

GHGP
Land emissions

Land emissions accounting

Proposed Options

Require companies to account for **scope 1 and scope 3 land emissions**

Options for TWG consideration:

1. For companies the LSR Standard does not apply, *recommend* or *allow for* them to **account** for land emissions following the **LSR Standard requirements.**
2. *Require, recommend or stay silent on* reporting the accounting approaches used to quantify land emissions.

Level of support

Should the category "Land Emissions" be added to the activity types for scope 1 emissions?

Subgroup 3 Meeting 13
- **15 of 18: Support** *(9 fully, 6 with edits)*
- 1 of 18: Opposed
- 2 of 18: Abstained

Full TWG Meeting 6
- **45 of 53: Support** *(34 fully, 11 with edits)*
- 4 of 53: Opposed
- 4 of 53: Abstained

Rationale

- This approach allows for **alignment** with the LSR Standard which has recently been published and the ISB has already indicated unanimous support for requiring the LSR Standard
- Recommending alignment with LSR standard requirements **promotes standardization** of land emissions accounting and **promotes comparability** across companies and sectors
- Allowing for options gives **more flexibility** for companies with non-significant land sector impacts

Implications

- Organizations with **significant land emissions** are required to follow the LSR Standard, which contains more prescriptive accounting requirements and requires disaggregation by scope 1 land subcategories
- Organizations with **non-significant land emissions** would either be:
  - Option 1: recommended to follow the more prescriptive land emissions accounting and reporting requirements in the LSR Standard, or
  - Option 2: have options for additional flexibility

ISO WG4
Land emissions

Land emissions accounting *(Land use change, land use, harvested wood product+ emissions and non-CO_2 GHG emissions from land-based sources)*

Preliminary outcome

Summary of outcome (select text)

- *The organization **shall** quantify and report CO_2 emissions or CO_2 removals from land use and land use change (LULUC), based on the net change in carbon stocks within the relevant GHG reservoirs over the reporting period.*
- *The organization **shall** quantify and report non-CO_2 GHG emissions from land-based sources such as CH_4 from enteric fermentation, N_2O from application of nitrogenous fertilizers, and both CH_4 and N_2O from combustion of biomass.*
- *The organization **shall** quantify GHG emissions or GHG removals from land use and land use change and HWP+ carbon pool in accordance with **Annex G**.**

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Rationale

- Land CO_2 flows affect the climate, so they belong in a complete inventory of emissions and removals within the boundary for the reporting period (principle 4.3).
- Land-based sources and sinks are not limited to agriculture and forestry. Mining, quarrying, clearing land for manufacturing sites or, development, etc. can also cause them (5.2 Note 2), so requirements to report these emissions are not tied to the sector.
- The same rules for determining the inclusion of all GHG sources and sinks apply to land-based sources and sinks, and GHG sources or sinks with insignificant emissions or removals may be excluded (6.1 – general; 6.4.2 – scope 1; 6.4.3 – scope 2; 6.4.4 – scope 3).
- Harvested wood products and other biomass products (HWP+) are a "should" to alleviate burdens of estimating HWP+ stocks for orgs with low quantities of HWP+.

Implications and concerns

- GHG Protocol requires the LSRS only for organizations with significant land sector activities. ISO has one approach for everyone.
- Burden on organizations with little land activity to prove as Scope 1 land is often minor (settlements, campuses). Guidance on simplified or default methods would help.
- Natural disturbances can move the numbers on year-over year. The exceptional-events provision (G.2) helps but more guidance may be needed.

LSR-related Topics: Land emissions accounting (draft text)

Discussion



Polls



For organizations the **LSR Standard does not apply** to:

#	Questions	Options	Draft text
1	Which option do you support for accounting for land emissions for **organizations with non-significant land emissions**?	**a. Should** account for land emissions following the LSR Standard and Guidance **b. May** account for land emissions following the LSR Standard and Guidance	*For organizations the LSR Standard does not apply to, the organization **[should / may]** refer to the LSR Standard and LSR Guidance for accounting requirements and guidance for the following accounting subcategories of land emissions…*
2	Which option do you support for **reporting the approaches used** to account for land emissions?	**a. Shall** disclose method/standard used for land emission accounting **b. Should** disclose method/standard used for land emission accounting **c. Stay silent** (methods disclosure is already required generally)	*[The organization **[shall / should]** report the standard and/or methods used to account for land emissions.]*

Note: This is a "shall" for organizations with significant land emissions, which triggers applicability of the Land Sector and Removals Standard

All poll questions include an option to Abstain.

Land-related topics:

Land emissions disclosures

GREENHOUSE GAS PROTOCOL

Land emissions disclosures: Scope 1 accounting categories / Class I & II

GHG Protocol
Corporate Standard chapter X

NA

Classes are not formally defined in Corporate Standard.

Under the LSR Standard:
- Land-based GHG sources are included in land emissions and
- Land-based GHG sinks are included in land management CO_2 removals.

ISO
ISO14064-1:WD2 Clause X

- *The organization **shall** quantify and report its GHG emissions and GHG removals within Scope 1 disaggregated by subcategories and **classes** according to Table 1.*

Class I = fossil and industrial GHG emissions
Class II = Land-based GHG sources and GHG sinks

Orange text is used for emphasis or comparison throughout the section.

Land emissions disclosures: Scope 1 accounting categories / Class I & II

GHG Protocol	ISO14064-1:WD 2 Table 1			
Scope 1 categories	#	**Scope 1 subcategories**	**GHG emission or GHG removal class**	
			Class I*	**Class II***
Stationary combustion emissions	1.1	Combustion from stationary equipment	Applicable	Applicable for non-CO_2 GHG emissions
Mobile combustion emissions	1.2	Combustion from mobile transport equipment	Applicable	Applicable for non-CO_2 GHG emissions
Process emissions	1.3	Industrial, agricultural and forestry processes	Applicable	Applicable for non-CO_2 GHG emissions
Fugitive emissions	1.4	Anthropogenic processes with fugitive GHG emissions (unintentional)	Applicable	Applicable for non-CO_2 GHG emissions
Land emissions	1.5	LULUC and HWP+	NOT applicable	Applicable for net CO_2 emissions / removals from LULUC and HWP+
NA	1.6	Other removal processes	NOT applicable	Applicable for net CO_2 emissions / removals from other removal processes

Class I = fossil and industrial GHG emissions
Class II = land-based GHG sources and GHG sinks

Scope 1 and Scope 2 Category Mapping – GHGP and ISO reporting categories

	GHG Protocol proposal		ISO	
	Emissions	CO_2 Removals	Class I (fossil fuel & industrial)	Class II (land-based)
Scope 1	Stationary combustion emissions	NA	Fossil and industrial GHG emissions from combustion from stationary equipment	Non-CO_2 GHG emissions from land-based GHG sources from stationary equipment
	Mobile combustion emissions		Fossil and industrial GHG emissions from combustion from mobile transport equipment	Non-CO_2 GHG emissions from land-based GHG sources from mobile transport equipment
	Process emissions		Fossil and industrial GHG emissions from industrial, agricultural and forestry processes	Non-CO_2 GHG emissions from land-based GHG sources from industrial, agricultural and forestry processes
	Fugitive emissions		Fossil and industrial GHG emissions from anthropogenic processes with fugitive GHG emissions (unintentional)	Non-CO_2 GHG emissions from land-based GHG sources from anthropogenic processes with fugitive GHG emissions (unintentional)
	Land emissions, including: • Land use change emission • Land management net CO_2 emission • Land management production emissions • Biogenic product N_2O and CH_4 emissions	Land management CO_2 removals	NA	Net CO_2 emissions and removals from: • Land use change • Land use • Harvested wood products and other products with biomass (HWP+)
	NA	CO_2 removals with geologic storage	NA	Net CO_2 emissions and removals from other removal processes
Scope 2	Emissions from purchased electricity, steam, heat or cooling, including: • Fossil and industrial emissions • Biogenic product N_2O and CH_4 emissions	NA	Fossil and industrial GHG emissions from consumed electricity	Non-CO_2 GHG emissions from land-based GHG sources from consumed electricity
			Fossil and industrial GHG emissions from consumed energy other than electricity	Non-CO_2 GHG emissions from land-based GHG sources from consumed energy other than electricity

Note: ISO considers scope 1 and scope 2 to be categories and LULUC and HWP+ to be subcategories. ISO does not have subcategories for reporting LULUC and HWP+ emissions and removals.
Orange text is use for emphasis on where CH_4 and N_2O emissions from land-based GHG sources would be reported.
Green text is use for emphasis on where CO_2 emissions from land-based GHG sources would be reported.
Purple text is used for emphasis on where CH_4 and N_2O emissions from land-based/biogenic products would be reported.
Biogenic product CO_2 emission are separately reported (except if adopting the LSR Standard approach, see discussion slide 69)
Red text is used for emphasis on where CO_2 removals would be reported (see discussion slide 77), this discussion only pertains to classification of scope 1 and scope 2 emissions.

Subgroup 3
Scope 1

Optional reporting of scope 1 subcategories

Preliminary outcome

Add "land emissions" category to scope 1

"May" statement on scope 1 subcategories (for orgs with non-significant land emissions)

*The organization **may** [report/disclose] the following information on its scope 1 emissions:*

- *Scope 1 emissions further disaggregated by **self-defined subcategories** and/or by the **land emissions subcategories** defined in the Land Sector and Removals Standard*

Land emissions subcategories = Land use change, land management net biogenic CO_2, land management production emissions, and biogenic product. *–LSR Standard*

Rationale

- **Interoperable** with Land Sector and Removals Standard and **ISO WG4 position**
- **Promotes transparency** and **consistency** of the inventory
- Supports **users of the data** by allowing them to interpret emissions results
- **Feasibility** is supported with "may" statement

Level of support

Should the category "Land Emissions" be added to the activity types for scope 1 emissions?

Subgroup 3 Meeting 13
- **15 of 18: Support** *(9 fully, 6 with edits)*
- 1 of 18: Opposed
- 2 of 18: Abstained

Full TWG Meeting 6
- **45 of 52: Support** *(38 fully, 7 with edits)*
- 3 of 52: Opposed
- 4 of 52: Abstained

Should there be disaggregated reporting of land emissions subcategories?

Subgroup 3 Meeting 13: Land emissions subcategories (split opinions)
- 2 of 17: Shall
- 3 of 17: Should
- **9 of 17: May**
- 1 of 17: Stay silent
- 2 of 17: Abstain

Full TWG Meeting 6: Do you support "may" for land emissions subcategories?
- **45 of 53: Support** (34 fully, 11 with edits)
- 4 of 53: Oppose
- 4 of 53: Abstain

Implications and concerns

- Organizations with **significant land emissions** are required to follow the LSR Standard, which requires disaggregation by scope 1 land subcategories
- Guidance will be needed for reporters with **non-significant land emissions**

For more information, see Subgroup 3 Meeting 13 and 14 and Full TWG Meeting 6 minutes and slides

ISO WG4
Classes of emissions

Classes of emissions: Scope 1 categories

Preliminary outcome

Summary of outcome (select text)

- *The organization **shall** quantify and report its GHG emissions and GHG removals within Scope 1 disaggregated by subcategories and **classes** according to Table 1 .*
- Class I = fossil and industrial GHG emissions
- Class II = Land-based GHG sources and GHG sinks, with two approaches:
  - Applicable for non-CO2 GHG emissions (stationary, mobile, industrial, and fugitive emissions categories)
  - Applicable for net CO2 emissions/ removals from LULUC and HWP+ (LULUC and HWP+ and other removals categories)

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Rationale

- Class I covers fossil and other industrial emissions. Class II covers land-based sources and sinks plus other removal processes (5.2 Note 1). The separation follows IPCC practice and makes reporting more transparent.
- The carbon cycles at different speeds, the risk of removals reversing is different, and uncertainty is different, so combining the classes would hide meaningful information.
- Class II in subcategories 1.1–1.4 is non-CO_2 only. Biogenic CO_2 is not reported here because it is already in the stock change. Class II in subcategories 1.5 and 1.6 is CO_2. 1.5 is the net result of carbon stock change, which can be either an emission or a removal. Class I does not apply to 1.5 or 1.6 (Table 1).
- The subcategory-by-class grid provides transparency

Implications and concerns

- Mixed sources need guidance, for example co-firing biomass with fossil fuel, or landfill and wastewater CH_4 from mixed biogenic and fossil waste.
- Class I is gross and Class II CO_2 is net. Any aggregated total should be labelled so removals do not hide fossil emissions.

Land emissions disclosures: Scope 1 and scope 2 options

For organizations the **LSR Standard does not apply** to:

Discussion



Polls



#	Question	Options
1	Which option do you prefer for GHG **emission classes** for **scope 1** categories?	a. GHGP option: Classes **are not used**. Land-based GHG sources and biogenic product N_2O and CH_4 emissions are included in **land emissions**. b. ISO option: **Defined GHG emission classes** for each scope 1 category, where **Class I** applies to fossil and industrial GHG emissions and **Class II** applies to land-based GHG sources and sinks. Biogenic product N_2O and CH_4 distributed **across scope 1 categories**.
2	Which option do you support for reporting **land emissions subcategories* for scope 1**?	**a. Should** disaggregate scope 1 land emissions by land emissions subcategories in **accordance with the LSR Standard** (i.e., recommend disaggregated reporting of biogenic product N_2O and CH_4 emissions) **b. May** further disaggregate in accordance with the LSR Standard **and/or self defined subcategories*** **c. Stay silent**
3	Which option do you prefer for **disaggregating land emissions** for **scope 2**?	a. LSRS / ISO option: **Shall** disaggregate land emissions for scope 2 b. Hybrid option 1: **Should** disaggregate land emissions for scope 2 c. Hybrid option 2: **May** disaggregate land emissions for scope 2 d. CS/S2/S3 status quo: **Stay silent**
4	If land emissions are disaggregated for **scope 2**, what **classification system** should be used?	a. LSRS option: Disaggregate scope 2 emissions into **"Fossil and industrial emissions"** and **"Land emissions"**** b. ISO option: Disaggregate scope 2 emissions into **GHG emissions Class I and Class II**

*CS TWG outcome for scope 1 was a "may" statement on scope 1 subcategories.
**The only relevant land emissions subcategory for scope 2 is biogenic product emissions (CH_4 and N_2O)

Land emissions disclosures: Scope 3 land emissions reporting

GHG Protocol*
Proposal for Corporate Standard building on the LSR Standard

- *[For organizations the LSR Standard does not apply to, the organization **[shall / should / may]** report scope 3 emissions for each scope 3 category disaggregated by fossil fuel and industry emissions and land emissions, as applicable to their value chain.]*
- *[The organization **[should / may]** report the following information on its scope 3 emissions:*
  - *For organizations the LSR Standard does not apply, scope 3 emissions further disaggregated by land emissions accounting subcategories defined in the LSR Standard [and/or self defined subcategories].]*

ISO
ISO14064-1:WD2 Section 5.2, 6.2 and Annex C

- *For Statement #1, the organization **shall** classify its GHG emissions and GHG removals into Scope 1, Scope 2, Scope 3 and their associated subcategories as presented below in Table 1. (Section 5.2)*

There are two classes of GHG emissions or GHG removals in each subcategory that are reported separately from each other as (5.2 and Table 1 in 6.2):
— Class I (fossil and other industrial GHG emissions)
— Class II (land-based GHG sources and GHG sinks and other removal processes)
*Class II above **can** be further divided into non-CO_2 GHG emissions (e.g., CH_4, N_2O) and net CO_2 emissions/removals resulting from LULUC (5.2) within each subcategory. (Annex C.1)*

Table 1 (Section 6.2)

Category	Subcategory number and name		GHG emission or GHG removal class	
			Class I	**Class II**
Scope 3	3.1	Purchased products	Applicable where significant	Applicable where significant[a]
	3.2	Capital goods	Applicable where significant	Applicable where significant[a]
	…	…	…	…

[a] This subcategory includes non-CO_2 GHG emissions and net CO_2 emissions/removals from LULUC when it is significant for the organization to report. This subcategory can include net CO_2 emissions/removals from HWP+ and other removal processes if quantified by the organization

Orange text is used for emphasis or comparison throughout the section. Teal text indicates newly proposed text.
*Draft GHGP text applies only to organizations with non-significant land sector activities (i.e., LSRS does not apply)

Scope 3 Reporting Category Mapping - LSR Standard and ISO LSR-related terms

	GHG Protocol proposal			ISO	
	Emissions		CO_2 Removals	Class I	Class II
	Fossil Fuel and Industrial Emission	Land Emission			
Scope 3 (for each scope 3 category, as relevant)	Fossil fuel and industrial emissions includes: • Stationary combustion emissions • Mobile combustion emissions • Process emissions • Fugitive emissions	Land emissions includes: • Land use change emission • Land management net CO_2 emission • Land management production emissions • Biogenic product N_2O and CH_4 emissions	Optional Apply the Land Sector and Removals Standard to report: • Land management CO_2 removals • CO_2 removals with geologic storage	Fossil and industrial GHG emissions from • Stationary equipment • Mobile transport equipment • Industrial, agricultural and forest processes • Anthropogenic processes with fugitive GHG emissions (unintentional)	LULUC and HWP+ emissions and removals including: • Land use change emission • Land use emissions • Harvested wood products and other biomass(HWP+) • Non-CO_2 GHG emissions from land-based GHG sources • Land use change removals • Land use removals • Harvested wood products and other products with biomass (HWP+) removals • Other removal processes

Note: ISO considers scope 1, scope 2 and scope 3 to be categories. ISO does not have subcategories for reporting within LULUC and HWP+ emissions and removals.
Orange text is use for emphasis on where CH_4 and N_2O emissions from land-based GHG sources would be reported.
Green text is use for emphasis on where CO_2 emissions from land-based GHG sources would be reported.
Purple text is used for emphasis on where CH_4 and N_2O emissions from land-based/biogenic products would be reported.
Biogenic CO_2 emission are separately reported (except if adopting the LSR Standard approach, see discussion slide 55)
Red text is used for emphasis on CO_2 removals (see discussion slide 77) this discussion pertains to classification of scope 1 and scope 2 emissions.

Removals will be discussed more generally later in the meeting
For this comparison, our focus is on categorizing the emissions

GHGP
Scope 3 land emissions

Scope 3 land emissions reporting

Proposed Options

Require organizations to account for **scope 3 land emissions**

Options for TWG consideration:

1. Either *require, recommend, allow for* or *stay silent on* **disaggregated reporting** of **scope 3 emissions** by land-based and fossil sources.
2. Whether to disaggregate by *fossil fuel and industrial and land emissions* or *Class I and II* for scope 3 emissions.
3. Either *recommend, allow for* or *stay silent on* **disaggregated reporting** of **scope 3 land emissions reporting** by subcategories aligned with the LSR Standard (i.e., land use change emissions, land management net biogenic CO_2 emissions, land management production emissions and biogenic product emissions)

Level of support

No direct polling of the Corporate Standard TWG on scope 3 land emissions, see earlier slides on scope 1 land emission polling results.

Rationale

- This approach allows for alignment with the LSR Standard which has recently been published and the ISB has already indicated unanimous support for requiring the LSR Standard
- Recommending alignment with LSR Standard requirements promotes standardization of land emissions accounting and promotes comparability across companies and sectors
- Allowing for options gives more flexibility for companies with non-significant land sector impacts

Implications

- Organizations with **significant land emissions** are required to follow the LSR Standard, which contains more prescriptive accounting requirements and requires disaggregation by scope 1 land subcategories
- Organizations **non-significant land emissions** would either be:
  - Recommended to follow the more prescriptive land emissions accounting and reporting requirements in the LSR Standard, or
  - Have options for additional flexibility

ISO WG4
Classes of emissions

Classes of emissions: Scope 3 land emissions reporting

Preliminary outcome

Summary of outcome (select text)

- *For Statement #1, the organization **shall** classify its GHG emissions and GHG removals into Scope 1, Scope 2, Scope 3 and their associated subcategories as presented below in Table 1.*

For scope 3 emissions reporting in Table 1 the footnote for Class II states:

"This subcategory includes non-CO_2 GHG emissions and net CO_2 emissions/removals from LULUC when it is significant for the organization to report. This subcategory can include net CO2 emissions/removals from HWP+ and other removal processes if quantified by the organization"

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Rationale

- Class II is included in scope 3 reporting in keeping with 4.3 (principle of completeness). The two classes are kept separate for transparency.
- Screening may use spend-based or environmentally extended input-output (EEIO) data (6.4.4 Step 2). Spend-based data may be used for scope 3 where activity data are unavailable (6.9.1). Where activity data cannot reasonably be obtained, the best available secondary data or a proxy is used and disclosed. Supplier product carbon footprints following ISO 14067, which reports biogenic and land use change emissions separately, can feed the class split directly (Annex N).

Implications and concerns

- Spend-based factors does not provide LULUC CO_2. Most EEIO models report by gas, so agricultural CH_4 and N_2O can sometimes be separated, but they usually leave out LULUC CO_2. Class II net CO_2 therefore needs commodity-level land use change factors or proxies, which may be applied inconsistently.
- "Limited access to data" cannot justify excluding a class (6.4.4), which raises effort for data-poor reporters

Land emissions disclosures: Scope 3 options

For organizations the **LSR Standard does not apply** to:

Discussion

Polls

#	Text provision	Options	Draft text
1	Which option do you support for **disaggregating land emissions for scope 3**?	a. LSRS/ISO option: **Shall** disaggregate scope 3 land emissions b. Hybrid option 1: **Should** disaggregate scope 3 land emissions c. Hybrid option 2: **May** disaggregate scope 3 land emissions d. CS/S2/S3 status quo: **Stay silent**	*[The organization **[shall/should/may]** report scope 3 emissions for each scope 3 category disaggregated by…]* [see question 2 for how to disaggregate]
2	If land emissions are disaggregated for scope 3, what **classification system** should be used?	a. GHGP option: **Fossil fuel and industrial emissions** and **land** scope 3 emissions	*…disaggregated by **fossil fuel and industrial emissions and land emissions**, as applicable to their value chain.*
		b. ISO option: **Class I and Class II** scope 3 emissions	*…disaggregated by **Class I and Class II emissions**, as applicable to their value chain.*
3	If land emissions are disaggregated for scope 3, which option do you support for reporting **land emissions subcategories* for scope 3**?	**a. Should** disaggregate land emissions by land emissions subcategories in **accordance with the LSR Standard** **b. May** further disaggregate in accordance with the LSR Standard **and/or self-defined subcategories*** **c. Stay silent**	*The organization **[should/may]** report the following information:* - ***Scope 3** emissions further disaggregated by the **land emissions subcategories** defined in the LSR Standard [and/or self-defined subcategories].*

All poll questions include an option to Abstain.
*CS TWG outcome for scope 1 was a "may" statement on scope 1 subcategories.

Land-related topics:

Biogenic product emissions

GREENHOUSE GAS PROTOCOL

Biogenic product emissions

Biogenic product = A good or material during the use phase of the product life cycle that contains biogenic carbon (i.e., carbon in, or derived from, living organisms or biological processes, but not including fossilized materials or those from fossil sources).

Examples of biogenic fuels: Ethanol, biodiesel, renewable natural gas (RNG), sustainable aviation fuel (SAF), biogas

How are the combustion emissions from biogenic fuels reported?

- **Biogenic CO_2** emitted by combustion of the carbon contained in the biofuel, and is part of the short-term carbon cycle
- **CH_4 and N_2O** are also emitted at combustion, and NOT part of the short-term carbon cycle



Corporate Standard approach to biogenic emissions

Required information:

- Emissions data for **direct CO_2 emissions** from biologically sequestered carbon (e.g., CO_2 from burning biomass/biofuels), reported **separately from the scopes**.

What about biogenic CH_4 and N_2O?

- Corporate Standard does not comment specifically on CH_4 and N_2O biogenic emissions.

Scope 3 Standard approach to biogenic emissions

Required information:

- For each scope 3 category, total emissions of GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) reported in metric tons of CO_2 equivalent, **excluding biogenic CO_2 emissions** and independent of any GHG trades, such as purchases, sales, or transfers of offsets or allowances
- For each scope 3 category, any **biogenic CO_2 emissions reported separately**

What about biogenic CH_4 and N_2O?

- Scope 3 Standard clarifies guidance with the following text:
- "The requirement to report biogenic CO_2 emissions separately refers to CO_2 emissions from combustion or biodegradation of biomass only, **not to emissions of any other GHGs (e.g., CH_4 and N_2O)**, or to any GHG emissions that occur in the life cycle of biomass other than from combustion or biodegradation (e.g., GHG emissions from processing or transporting biomass)." – *Scope 3 Standard, page 62*

Biogenic product emissions: Current GHG Protocol requirements

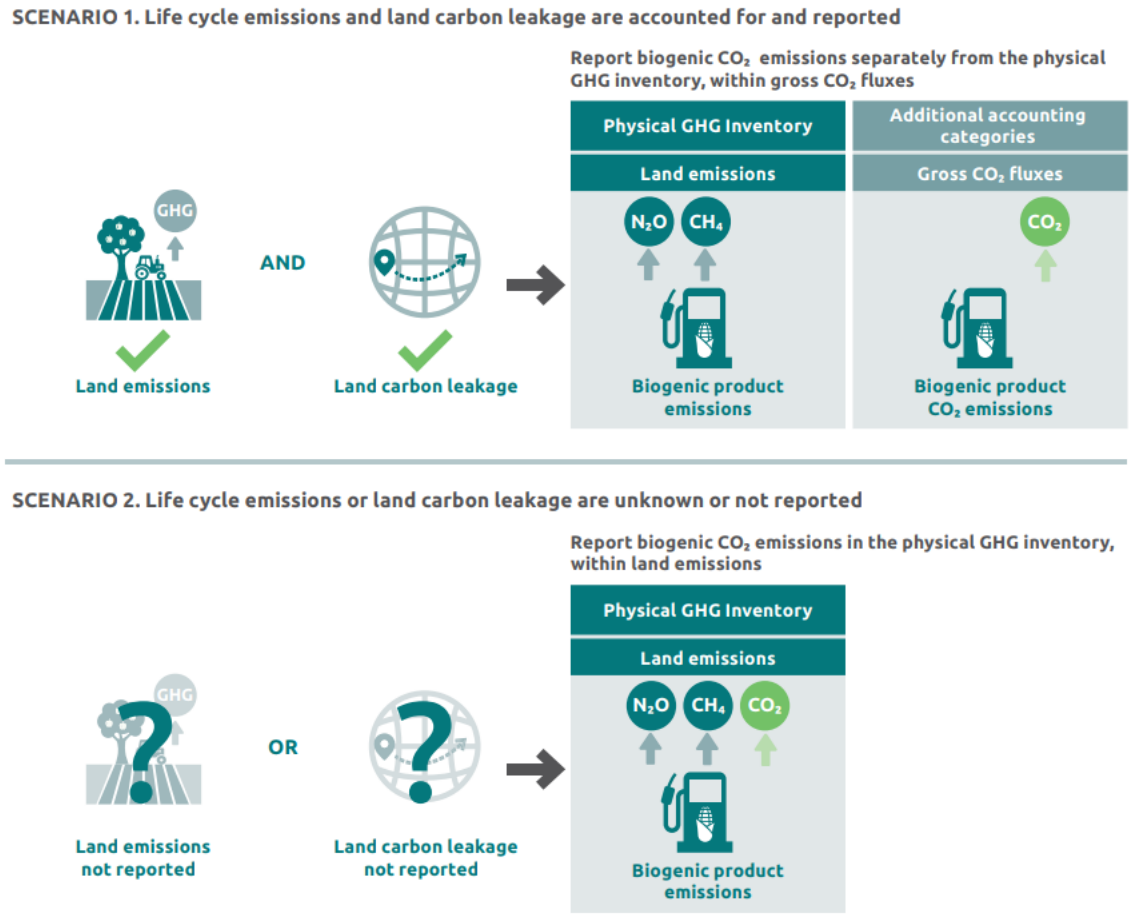
LSR-related Topic	Corporate Standard	Scope 2 Guidance	Scope 3 Standard
Biogenic product emissions	"Direct CO_2 emissions from the combustion of biomass **shall not** be included in scope 1 but reported separately (see chapter 9)." "A public GHG emissions report that is in accordance with the *GHG Protocol Corporate Standard shall* include the following information: • … • Emissions data for direct CO_2 emissions from biologically sequestered carbon (e.g., CO_2 from burning biomass/biofuels), reported separately from the scopes."	"Based on the *Corporate Standard*, any CH_4 or N_2O emissions from biogenic energy sources use **shall** be reported in scope 2, while the CO_2 portion of the biofuel combustion **shall** be reported outside the scopes." "Companies **should** document if any GHG emissions other than CO_2 (particularly CH_4 and N_2O) are not available for, or excluded from, location-based grid average emissions factors or with the market-based method information."	"The *GHG Protocol Corporate Standard* requires that direct CO_2 emissions from the combustion of biomass be included in the public report, but reported separately from the scopes, rather than included in scope 1. The separate reporting requirement also applies to scope 3." "Biogenic CO_2 emissions (e.g., CO_2 from the combustion of biomass) that occur in the reporting company's value chain **shall not** be included in the scopes, but **shall** be included and separately reported in the public report." "The requirement to report biogenic CO_2 emissions separately refers to CO_2 emissions from combustion or biodegradation of biomass only, not to emissions of any other GHGs (e.g., CH_4 and N_2O), or to any GHG emissions that occur in the life cycle of biomass other than from combustion or biodegradation (e.g., GHG emissions from processing or transporting biomass)."

Biogenic product emissions: LSR Standard (1/2)

Requirement 17: Biogenic product emissions accounting

Companies that purchase, consume, process, or sell biogenic products (excluding food and feed products and biogenic waste) **shall** account for biogenic product emissions associated with such products according to the following requirements:

- **Biogenic product CO_2 emissions**: Companies **shall** account for scope 1, scope 2, and scope 3 biogenic product CO_2 emissions from combustion, decomposition, or other processes, using biogenic product CO_2 emission factors by type of biofuel or biomaterial. Companies **shall** report biogenic product CO_2 emissions in one of the following two accounting categories, depending on whether or not the company reports all scope 3 life cycle GHG emissions and other metrics:
  - **Separately as "gross CO_2 fluxes"**: Companies **shall** report "biogenic product CO_2 emissions" under "gross CO_2 fluxes" (separately from "emissions") in the scope corresponding to the point of oxidation, if they meet the following criteria associated with the biogenic product:
    - **Life cycle GHG emissions**: The company **shall** account for and report all life cycle GHG emissions associated with the biogenic product, including land use change emissions and the annual net land carbon stock changes of sourcing lands, and
      - The company **should** have information on where the biogenic product was sourced from (at a minimum, country of origin, or more precise levels of traceability), and
    - **Land carbon leakage**: The company **shall** account for and report land use and land carbon leakage (where required) associated with the biogenic product.
  - **As "land emissions"**: If companies do not meet both criteria above, they **shall** report "biogenic product emissions" under "land emissions" (within "emissions") in the scope corresponding to the point of oxidation.



(LSR Standard, Chapter 11)

Biogenic product emissions: LSR Standard (2/2)

Requirement 17: Biogenic product emissions accounting

Companies that purchase, consume, process, or sell biogenic products (excluding food and feed products and biogenic waste) **shall** account for biogenic product emissions associated with such products according to the following requirements:

- **Biogenic product CO_2 emissions**: Companies **shall** account for scope 1, scope 2, and scope 3 biogenic product CO_2 emissions… (see previous slide)
- **Biogenic product CH_4 and N_2O emissions**: Companies **shall** account for direct and indirect biogenic product CH_4 and N_2O emissions from combustion, decomposition, or other processes, using biogenic product CH_4 and N_2O emission factors by type of biofuel or biomaterial. Companies **shall** report biogenic product CH_4 and N_2O emissions in the scope corresponding to the point of oxidation.
- **Life cycle GHG emissions, land use, and land carbon leakage of biogenic products**: Companies **shall** account for all life cycle GHG emissions, land use, and land carbon leakage (where required) of biogenic products and report the upstream life cycle GHG emissions, land use, and leakage in either scope 3, category 1 or scope 3, category 3 as follows:
  - **Biomaterials**: For biomaterials consumed by the reporting company, report upstream life cycle GHG emissions, land use, and leakage in scope 3, category 1 (Purchased goods and services).
  - **Bioenergy feedstocks**: For bioenergy consumed by the reporting company, report upstream life cycle GHG emissions, land use, and leakage in scope 3, category 3 (Fuel- and energy-related activities not included in scope 1 or scope 2).
- **Any other scope 1, scope 2, or scope 3 emissions**: If applicable.

Food and feed products and biogenic waste: Companies that purchase, consume, process, or sell biogenic food or feed products and/or that acquire, use, or dispose of biogenic waste **shall** account for biogenic product emissions associated with such products or materials according to the following requirements:

- **Biogenic product CO_2 emissions:** Companies **shall** account for and report biogenic product CO_2 emissions that occur in the reporting company's operations or value chain under "gross CO_2 fluxes" separately from the physical GHG inventory.
  - Biogenic product CO_2 emissions from food and feed products intended for human or animal consumption **may** be excluded.
- **Biogenic product CH_4 and N_2O emissions:** Companies **shall** account for and report biogenic product CH_4 and N_2O emissions in the "biogenic product emissions" accounting subcategory under "land emissions" in the physical GHG inventory.

(LSR Standard, Chapter 11)

Biogenic product emissions: Proposal

GHG Protocol*
Proposal for Corporate Standard building on the LSR Standard

- *The organization **shall** account for biogenic product CO_2 emissions (e.g., CO_2 from the combustion of biomass) that occur in the organization's operations or value chain.*
- *For organizations the LSR Standard does not apply to, the organization **shall** report biogenic product CO_2 emissions [following the requirements in the LSR Standard / separately].*
- *The organization **shall** account for scope 1, scope 2 and scope 3 biogenic product CH_4 and N_2O emissions.*
- *The organization **shall** report scope 1, scope 2 and scope 3 biogenic product CH_4 and N_2O emissions within "land emissions" in the physical GHG inventory.*

ISO
ISO14064-1:WD2 Section 5.2

- *CO_2 emissions from combustion of biomass for energy **can**** be quantified and reported as an additional information for cross-checking purposes. To avoid double-counting, CO_2 emissions from combustion of biomass for energy **shall** not be included in the organization's GHG inventory from energy, because they are included in GHG quantification of LULUC and HWP+ (IPCC 2019, 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 2[20]).*
- *Emissions of non-CO_2 GHGs from biomass combustion for energy (e.g., CH_4), where relevant, **shall** be quantified and reported separately from fossil and other industrial emissions.*

Table 1 (Section 6.2)

Category	Subcategory number and name		GHG emission or GHG removal class	
			Class I	Class II
Scope 1	1.1	Combustion from stationary equipment	Applicable	Applicable for non-CO_2 GHG emissions
	1.2	Combustion from mobile transport equipment	Applicable	Applicable for non-CO_2 GHG emissions
	…	…	…	…

Orange text is used for emphasis or comparison throughout the section. Teal text indicates newly proposed text.

* Draft GHGP text applies only to organizations with non-significant land sector activities (i.e., LSRS does not apply)

** "Can", as defined in ISO standards, indicates possibility or capability, whereas "may" indicates permission or allowance.

GHGP Topic

Biogenic product emissions

Preliminary outcome from GHG Protocol standards

1. *Require* companies to account for **biogenic product CO_2 emissions**
2. *Require* companies to account for biogenic product CH_4 and N_2O emissions within **land emissions**

Options for TWG consideration:

1. Either **always separately report** biogenic CO_2 emissions or separately report them following the **conditional requirements** of the LSR Standard.
2. Either *recommend, allow for* or *stay silent on* disaggregated reporting of biogenic CH_4 and N_2O emissions (where these would fall within the **biogenic product emissions** subcategory) (see previous discussion slide 55 and 60).

Level of support

During the development of the LSR Standard **77%** of pilot testers and reviewers supported approaches that **required** accounting for biogenic product CO_2 emissions.

See slide 138 for results during public consultation on the draft LSR Guidance.

Rationale

- Biogenic CO_2 emissions are required to be reported as an information item under UNFCCC for transparency.
- Biogenic CO_2 emissions are separately reported under the assumption that associated upstream biogenic land emission are already accounted for in scope 3.
- Biogenic CH_4 and N_2O are not counterbalanced by upstream gross biogenic CO_2 removals from plant grow and still have a radiative forcing impact on the climate thus are included with other emissions.

Implications

- Organizations with **significant land emissions** are required to follow the LSR Standard, which requires companies to meet conditional requirements to separately report biogenic CO2 emissions. Biogenic CH_4 and N_2O emissions are required to be reported in a disaggregated subcategory in land emissions.
- Organizations with **non-significant land emissions** would either be:
  - Option 1: recommended to follow the LSR Standard, or
  - Option 2: always separately report biogenic CO_2 emissions and have options for disaggregated reporting of biogenic CH_4 and N_2O

ISO WG4
Biogenic products

Biogenic product emissions *(gross emissions from combustion of biomass biofuels or biogas)*

Preliminary outcome

Summary of outcome (select text)

- *CO_2 emissions from combustion of biomass for energy **can** be quantified and reported as an additional information for cross-checking purposes.*
- *CO_2 emissions from combustion of biomass for energy **shall not** be included in the organization's GHG inventory from energy*
- *Emissions of non-CO_2 GHGs from biomass combustion for energy (e.g., CH_4), where relevant, **shall** be quantified and reported separately from fossil and other industrial emissions*

Rationale

- Carbon in biomass burned for energy left the land carbon stock at harvest, so it is already counted as emitted in the LULUC stock change (and rarely in HWP+). Counting it again at combustion would double count.
- The LULUC stock change quantification includes losses of all biomass from that land, regardless of its use or inclusion in a GHG inventory. If the land-based sources or sinks associated with purchased biomass were excluded under the significance test, that means the stock change, when accounting for all losses – including the purchased biomass – did not indicate significant emissions.
- This matches IPCC as biomass combustion CO_2 is captured under AFOLU, not reported in the energy sector.
- Non-CO_2 gases from biomass combustion remain a "shall" as stock change does not capture them, and they are reported apart from fossil emissions because the carbon was removed from the atmosphere recently.

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Implications and concerns

- The "already counted" argument holds when the upstream land stock change is actually quantified. For purchased biomass, that change sits in scope 3 Class II and may be excluded under the significance test, which would leave the combustion CO_2 invisible.
- Bioenergy-intensive reporters would not show gross biogenic CO_2 unless they disclose it voluntarily.

Biogenic product emissions: Biogenic product CO_2 emissions (all scopes)

Discussion

Polls

For organizations the **LSR Standard does not apply** to:

#	Questions	Options	Draft text
1	**Which option do you support for accounting for biogenic product CO_2 emissions?**	a. GHG Protocol option*: **shall** account for biogenic CO_2 emissions b. ISO option: **can** account for biogenic product CO_2 emissions	*The organization [**shall** / **can****] account for biogenic product CO_2 emissions (e.g., CO_2 from the combustion of biomass) that occur in the reporting organization's operations or value chain.*
2	**Which option do you support for reporting for biogenic CO_2 emissions?**	**a. Shall report conditionally** (i.e., in the physical GHG inventory or separately) following the LSR Standard	*The organization **shall** report biogenic product CO_2 emissions following the requirements in the **LSR Standard**.*
		b. Should follow the LSR Standard requirements (i.e., conditional approach), but if not, **shall** report separately	*The organization **should** report biogenic product CO_2 emissions following the requirements in the **LSR Standard**.* *If not, the organization **shall** report biogenic product CO_2 emissions **separately**.*
		c. Shall separately report	*The organization **shall** report biogenic product CO_2 emissions **separately**.*

* GHGP Protocol option refers to Corporate Standard (2004), Scope 2 Guidance (2015), and Scope 3 Standard (2011) approach

** "Can", as defined in ISO standards, indicates possibility or capability, whereas "may" indicates permission or allowance.

All poll questions include an option to Abstain.

Land-related topics:

CO_2 removals and CO_2 capture with geological storage

GREENHOUSE GAS PROTOCOL

CO_2 Removals: LSR Standard

Please refer to the LSR Standard for the full requirement text related to the follow requirements pertaining to CO_2 removals accounting and reporting:

- **Removals accounting** – Includes elements related to the general accounting approach, lifecycle GHG emissions, operational boundaries, scope 3 removals, removals by storage type and excluded GHG pools and gases. (see Requirement 19)
- **Scope 3 removals traceability** – Requires traceability throughout the full CO_2 removals and storage pathway from the sink to where the carbon is stored. (see Requirement 20)
- **Data quality for removals** – Requires CO_2 removals are accounted for using empirical data specific to the sinks and pools where carbon is stored and quantitative uncertainty estimates. (see Requirement 21)
- **Scope 3 allocation for removals** – Requires companies avoid double counting of scope 3 removals and no over-allocating removals occurring in the same spatial boundary. (see Requirement 22)
- **Permanence for removals –** Requires ongoing storage monitoring and that companies account for losses of stored carbon. (see Requirement 23)
- **Land accounting for biogenic carbon storage –** Requires accounting for lifecycle GHG emission, land use and land carbon leakage (when required) if accounting for captured biogenic CO_2 with geologic storage. (see Requirement 24)
- **Reporting requirements for removals –** Includes elements related to lifecycle GHG emissions, removals by storage type, reversals and information on how they met some of the above requirements. (see Section 12.2.2)

(LSR Standard, Chapters 12-14)

CO_2 removals

GHG Protocol
Proposal for Corporate Standard building on the LSR Standard

*Organizations **may** account for and report CO_2 removals. If so, CO_2 removals **shall** be reported separately from emissions within the GHG inventory, following the Land Sector and Removals Standard and Guidance.*

*Organizations reporting an organization-level GHG inventory in conformance with the Greenhouse Gas Protocol **shall** follow the Land Sector and Removals Standard and Guidance if the organization chooses to account for and report CO_2 removals in statement #1 or #2 for the current or previous years.*

ISO
ISO14064-1:WD2 Section 5.2

- *The organization **shall** quantify and report CO_2 emissions or CO_2 removals from land use and land use change (LULUC), based on the net change in carbon stocks within the relevant GHG reservoirs over the reporting period. (Section 5.2)*
- *The organization **shall** quantify GHG emissions or GHG removals from land use and land use change and HWP+ carbon pool in accordance with Annex G. (Section 5.2)*
- *All GHG emissions or GHG removals from land-based GHG sources and GHG sinks (i.e., CO_2 emissions or CO_2 removals from LULUC and HWP+ and non- CO_2 GHG emissions from land-based GHG sources and GHG sinks) and other GHG removals **shall** be reported separately from fossil and other industrial GHG emissions within the GHG inventory (see 6.2).*
- *The organization **may** also provide aggregated GHG values for each category of its GHG inventory.*

Scope 1 categories: Other removals

GHG Protocol
Corporate Standard

NA

Scope 1 category for removals not applicable for Corporate Standard

All removals are required to be reported separately, following Land Sector and Removals Standard

ISO
ISO14064-1:WD2 Clause B.2.5

Other removal processes

Definition

- *This Scope 1 subcategory includes other GHG removals within the organizational boundary, not from LULUC or HWP+ (see B.2.5).*

NOTE 1: Examples of technological removals include, but are not limited to bioenergy with carbon capture and storage, direct air carbon capture and storage, and enhanced weathering.

NOTE 2: Fossil CO2 capture and storage are not included in this subcategory since it is not a CO2 removal and reflected in scope 1 emissions.

Orange text is used for emphasis or comparison throughout the section.

CO_2 capture with geologic storage

GHG Protocol
Proposal for Corporate Standard building on the LSR Standard

Organizations reporting an organization-level GHG inventory in conformance with the Greenhouse Gas Protocol shall follow the Land Sector and Removals Standard and Guidance if the organization chooses to account for CO_2 capture with geologic storage and not report emissions for the captured CO_2 in statement #1 or #2 for the current or previous years.

ISO
ISO 14064-1:WD2 Section B.2.6

NA

The "Other removal processes" subcategory 1.6 does include the note:

Fossil CO_2 capture and storage are not included in this subcategory since it is not a CO_2 removal and reflected in scope 1 emissions

GHGP
CO_2 removals

CO_2 removals and CO_2 capture with geologic storage

Preliminary outcome from GHG Protocol standards

1. *Option* to account for **CO_2 removals** and CO_2 capture with geologic storage
2. *Required* to follow the **LSR Standard**, if companies choose to account for CO_2 removals or CO_2 capture with geologic storage in statement #1 or #2.
3. *Required* to **separately report** CO_2 removals from CO_2 emissions following the LSR Standard requirements

Rationale

- The LSR Standard stakeholder process determined additional safeguards are necessary to ensure permanence and balance conservativeness and accuracy to report CO_2 removal and CO_2 capture with geologic storage.
- This approach requires companies choosing to report CO_2 removals to follow the LSR Standard and the ISB has already indicated unanimous support for requiring the LSR Standard

Level of support

In their September 22nd meeting ISB members unanimously approved the approach to **require** companies that choose to accounting for and report CO_2 removals and CO_2 capture with geologic storage to follow the **Land Sector and Removals Standard and Guidance**.

Implications

- Organizations choosing to account for and report CO_2 removals are required to follow the LSR Standard, and there are no other pathways to report CO_2 removals within statement #1 or #2.
- Organizations choosing to account for and report product carbon storage are required to follow the LSR Standard, where this is accounted for and reported as a separate category from CO_2 removals.
- Organizations choosing to account for fossil CO_2 capture with geologic storage and not report CO_2 that is captured and stored are required to follow the LSR Standard.

ISO WG4
Removals

CO_2 removals

Preliminary outcome

Summary of outcome (select text)

- *The organization **shall** quantify and report CO_2 emissions or CO_2 removals from land use and land use change (LULUC), based on the net change in carbon stocks within the relevant GHG reservoirs over the reporting period.*
- *The organization **shall** quantify GHG emissions or GHG removals from land use and land use change and HWP+ carbon pool in accordance with **Annex G**.*

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Rationale

- An inventory records what physically happened within the boundary during the reporting period requiring emissions without removals would be inconsistent and would bias results.
- No permanence test for reporting. An inventory is not a claim about the future. If a removal later reverses, it appears as an emission in that later year's stock change. This is consistent with IPCC.
- Claims are handled elsewhere. Net zero claims, carbon neutrality claims and credits fall under other standards (ISO 14060, ISO 14068, ISO 14064-2).
- Removals are reported separately from fossil and other industrial emissions (Class I and II).
- In scope 3, removals are tested on their absolute value and not offset against emissions for determining significance (6.4.4).

Implications and concerns

- Reversals can escape the inventory. If land is divested, a later reversal falls outside the boundary. Base year recalculation (8.2) partly addresses this.
- Removals are uncertain. Soil carbon in particular is hard to measure (G.2 Note 4), so uncertainty disclosure (6.7) becomes more important.
- Scope 3 removals may be claimed more than once. Several buyers of the same commodity could each report the same removal. Guidance on traceability is needed.

LSR-related Topics: CO_2 **removals and** CO_2 **capture with geologic storage** (draft text)

Discussion



#	Text provision
1	**Do you have any questions or concerns about this ISB outcome or the proposed draft text for the consolidated Corporate Standard?** *Organizations **may** account for and report CO_2 removals. If so, CO_2 removals **shall** be reported separately from emissions within the GHG inventory, following the Land Sector and Removals Standard and Guidance.* *Organizations reporting an organization-level GHG inventory in conformance with the Greenhouse Gas Protocol **shall** follow the Land Sector and Removals Standard and Guidance if the organization chooses to account for and report CO_2 removals in statement #1 or #2 for the current or previous years.* *Organizations reporting an organization-level GHG inventory in conformance with the Greenhouse Gas Protocol **shall** follow the Land Sector and Removals Standard and Guidance if the organization chooses to account for CO_2 capture with geologic storage and not report emissions for the captured CO_2 in statement #1 or #2 for the current or previous years.*

Agenda

• Introduction and housekeeping	10 minutes
• Land-related topics	80 minutes
• **Tracking emissions over time**	**60 minutes**
• Verification and assurance	20 minutes
• Wrap up and next steps	10 minutes

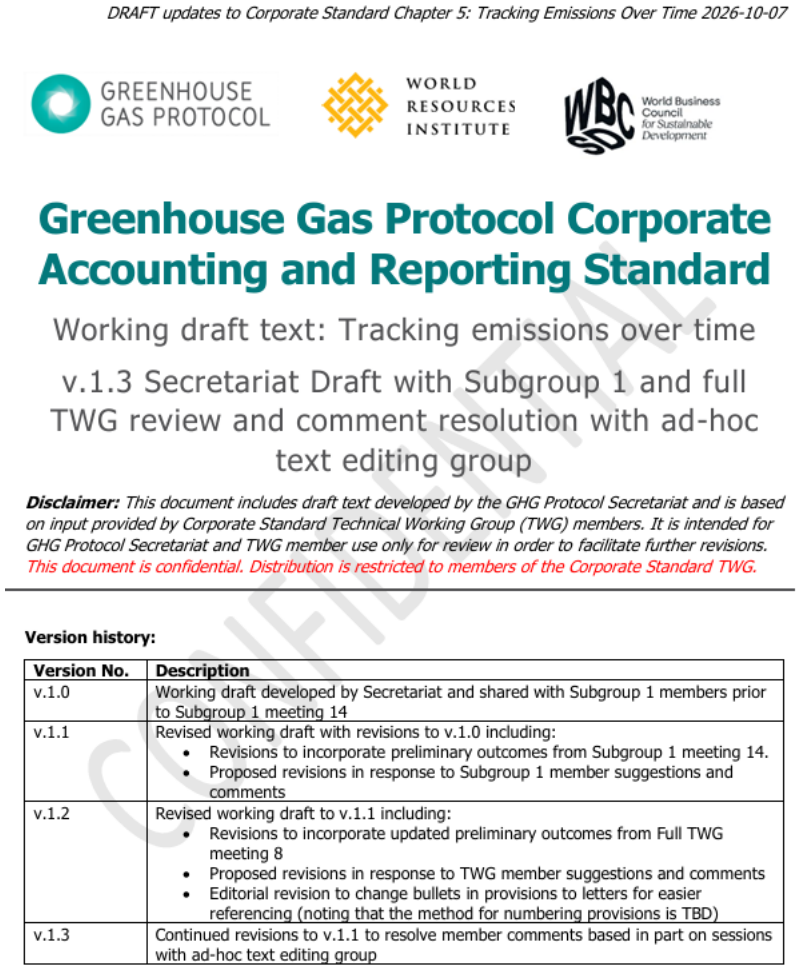


GREENHOUSE GAS PROTOCOL

Subgroup 1 phase 2 topics: Tracking emissions over time

Topic	Subtopic	GHG P and ISO options for discussion and polling?	Notes
Selecting and establishing a base year	Base period and multi-year average	Yes	ISO allows a part of year as base year
	Earliest relevant point in time as base year	Yes	ISO silent on topic
	Inventory and target base year	Yes	ISO silent on topic
	Base years by scope/category	Yes	ISO silent on topic
	Reestablishing the base year	Yes	GHG P specifies situations for reestablishing the base year, ISO provides a general statement
Review and recalculation of base year emissions	Base year recalculation events	Yes	ISO silent on recalculation for changes in categories/activities included in inventory
	Significance thresholds	Yes	ISO silent on topic
	Options for when data unavailable	Yes	ISO silent on topic
	Timing of recalculation for structural changes	Yes	ISO silent on topic
	Emissions profile over time (years to recalculate/report)	Yes	ISO silent on topic
GHG targets	GHG targets	Yes	GHG P includes a 'should', ISO a 'can' statement
GHG intensity	GHG intensity metrics	Yes	ISO silent on topic

Working draft text: Tracking emissions over time



DRAFT updates to Corporate Standard Chapter 5: Tracking Emissions Over Time 2026-10-07

GREENHOUSE GAS PROTOCOL · WORLD RESOURCES INSTITUTE · World Business Council for Sustainable Development

Greenhouse Gas Protocol Corporate Accounting and Reporting Standard

Working draft text: Tracking emissions over time

v.1.3 Secretariat Draft with Subgroup 1 and full TWG review and comment resolution with ad-hoc text editing group

Disclaimer: *This document includes draft text developed by the GHG Protocol Secretariat and is based on input provided by Corporate Standard Technical Working Group (TWG) members. It is intended for GHG Protocol Secretariat and TWG member use only for review in order to facilitate further revisions. This document is confidential. Distribution is restricted to members of the Corporate Standard TWG.*

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Version history:

Version No.	Description
v.1.0	Working draft developed by Secretariat and shared with Subgroup 1 members prior to Subgroup 1 meeting 14
v.1.1	Revised working draft with revisions to v.1.0 including: • Revisions to incorporate preliminary outcomes from Subgroup 1 meeting 14. • Proposed revisions in response to Subgroup 1 member suggestions and comments
v.1.2	Revised working draft to v.1.1 including: • Revisions to incorporate updated preliminary outcomes from Full TWG meeting 8 • Proposed revisions in response to TWG member suggestions and comments • Editorial revision to change bullets in provisions to letters for easier referencing (noting that the method for numbering provisions is TBD)
v.1.3	Continued revisions to v.1.1 to resolve member comments based in part on sessions with ad-hoc text editing group

Version history:

- V1.0 Secretariat draft reviewed by Subgroup 1 members
- V1.1 Updated based on Subgroup 1 member review and outcomes from Subgroup 1 meeting 14
- V1.2 Updated based on Full TWG member comments and outcomes from Full TWG meeting 8
- **V1.3 Updated following comment resolution in ad-hoc text editing group**

For today's meeting: Some remaining unresolved items following the text review process will be considered in addition to reviewing ISO feedback.

Tracking emissions over time

Selecting and establishing a base year

Selecting and establishing a base year: General requirements

GHG Protocol
Corporate Standard ch.5 working draft sections 1.1, 1.3

[1.1.1] *The organization **shall** establish a historical base year for GHG emissions for comparative purposes, to meet program requirements, or other intended uses of the GHG inventory.*

[1.1.2] *In establishing the base year, the organization **shall**:*

a. *Select a base year for which [reliable/verifiable*] GHG emissions data is available.*
b. *Select a base year that reflects typical conditions or operations (e.g., avoiding years with anomalous or one-off events).*
c. *Develop a GHG inventory for the base year consistent with the provisions of this document, quantifying base year emissions using data representative of the organization's current [reporting boundary/organizational and operational boundaries].*

ISO
ISO 14064-1:WD2 Clause 8.1

*The organization **shall** establish a historical base year for GHG emissions and GHG removals for comparative purposes or to meet GHG programme requirements or other intended uses of the GHG inventory.*

In establishing the base year, the organization:

- ***shall** quantify base-year GHG emissions and GHG removals using data representative of the organization's current reporting boundary, typically single-year data, a consecutive multi-year average or a rolling average;*
- ***shall** select a base year for which verifiable GHG emissions or GHG removals data are available;*
- ***shall** explain the selection of the base year;*
- ***shall** develop a GHG inventory for the base year consistent with the provisions of this document.*

*If sufficient information on historical GHG emissions or GHG removals is not available, the organization **may** use its first GHG inventory period as the base year.*

Orange text is used for emphasis or comparison.
* This meeting includes a poll on "reliable" versus "verifiable". The current Corporate Standard uses "verifiable". If the TWG prefers "verifiable", "assurable" may also be considered depending on how the topic of verification/assurance is covered in the standard.

Selecting and establishing a base year: Base period and multi-year average

GHG Protocol
Corporate Standard ch.5 working draft section 1.2

[1.2.1] *The organization may either select a single year as their base year or select an average of annual emissions over several consecutive years [(e.g., 3-5 years)] [in cases where a single year's data would be unrepresentative of the organization's typical emissions profile].*

ISO
ISO14064-1:WD2 Clause 8.1

*Base-year GHG emissions or GHG removals **may** be quantified based on a specific period (e.g. a year or part of a year where seasonality is a feature of the organization's activity) or averaged from several periods (e.g. several years).*

*The organization **may** select a single year or a multi-year average to smooth out unusual fluctuations.*

Orange text is used for emphasis or comparison.

ISO WG4
Base year selection

Base period

Preliminary outcome

Summary of outcome

*Base-year GHG emissions or GHG removals **may** be quantified based on a specific period (e.g. a year or part of a year where seasonality is a feature of the organization's activity) or averaged from several periods (e.g. several years).*

Rationale

- Accommodates for highly seasonal or cyclical business models (by excluding inactive months that may distort an annual benchmark)
- Provides operational flexibility to establish an immediate baseline using first set of complete/available/verifiable data rather than delaying reporting to wait for full calendar year and/or using rough estimations
- Supports consistency and comparability as long as the boundaries and structure of the "partial" base year are consistently maintained and applied in future reporting periods
- Supports different "intended uses" / purpose for reporting

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

WG4 were presented with Option 1 (GHG P) and Option 2 (ISO) in WD2 for review. WG4 decided to keep Option 2 (ISO) clauses in Section 8 with only minor edits made to draft.

Implications and concerns

- None identified

Selecting and establishing a base year: Base year as earliest relevant point in time, inventory base year and target base year

GHG Protocol
Corporate Standard ch.5 working draft section 1.2

[1.2.2] *The organization **should** select as base year the earliest point in time relevant to the organization's reporting objectives for which they have [reliable/verifiable*] data.*

[1.2.3] *If the organization sets GHG targets, they **may** select the same year for the target base year as that established for the GHG inventory, or may select a different year (e.g., to align with requirements or guidelines from target setting programs). If the organization selects a different year for its target base year, they **may** reestablish the base year for the GHG inventory to align with the target base year, following provision [1.1.2].*

ISO
ISO14064-1:WD2

N/A – ISO14064-1:WD2 does not include text on selecting the earliest relevant point in time as base year or a target base year vis-à-vis an inventory base year.

* This meeting includes a poll on "reliable" versus "verifiable". The current Corporate Standard uses "verifiable". If the TWG prefers "verifiable", "assurable" may also be considered depending on how the topic of verification/assurance is covered in the standard.

Subgroup 1, Phase 1
Base year selection

Base year as earliest relevant point in time, inventory base year and target base year

Package of preliminary outcomes

Distinguish between an **inventory base year and a target base year**, but allow for **flexibility**

*If the organization sets GHG targets, they **may** select the same year for the target base year as that established for the GHG inventory, or **may** select a different year (e.g., to align with requirements or guidelines from target setting programs. If the organization selects a different year for its target base year, it **may** reestablish the base year for the GHG inventory to align with the target base year.*

Maintain **recommendation** ('should') for earliest relevant point in time with reliable/verifiable data as base year.

*The organization **should** select as base year the earliest relevant point in time for which they have [reliable/verifiable data].*

Level of support

Preliminary outcome	Subgroup 1	Full TWG
Provide the **option** for organizations to select the **same or different years** for inventory base year and target base year	• **9 of 11 (82%) support** • 1 of 11 (9%) oppose • 1 of 11 (9%) abstain	• **45 of 47 (96%) support** • 1 of 47 (2%) oppose • 1 of 47 (2%) abstain
Recommend that organizations select as base year the **earliest relevant point in time** with [reliable/verifiable] data	• **16 of 19 (84%) support** • 1 of 19 (5%) oppose • 2 of 19 (10%) abstain	• **42 of 42 (100%) support** • 0 of 22 (0%) oppose • 0 of 42 (0% abstain

Rationale

- **Maintain an inventory base year as a concept**, recognizing the key purpose of GHG inventory data to **track changes over time** (whether or not an organization has GHG targets).
- Encourage organizations to track emissions over **longer timeframes** (i.e., longer than target setting cycles).
- Provide flexibility to organizations who establish targets to have to **maintain only one base year**.

Implications and concerns

- Allows for base years to be **periodically reestablished** with target setting cycles, concerns that **fewer organizations** are likely to maintain a longer emissions profile over time.

For more information, see minutes and slides from Subgroup 1 meetings 6, 7, and 14 and Full TWG meetings 3 and 8.

Selecting and establishing a base year: Base years by scope/category

GHG Protocol
Corporate Standard ch.5 working draft section 1.2

[1.2.4] *The organization **should** establish the same base year for scope 1, scope 2, and scope 3 emissions to enable comprehensive and consistent tracking of total corporate GHG emissions across all three scopes. However, if the organization has already established a base year for [scope 1 and scope 2 emissions and/or certain emission categories], they **may** select a more recent year for [scope 3 and/or other emission categories] (e.g., the first year for which the organization has complete and [reliable/verifiable] [scope 3/category-specific] emissions data). [Alternatively, the organization **may** reestablish the base year to a more recent year for [for scope 1 and 2 emissions/categories with an already established base year] to use the same year across [scopes/categories]]. The organization **should** establish the same base year for all scope 3 categories.*

ISO
ISO14064-1:WD2 Clause

N/A – ISO14064-1:WD2 does not include text on selecting/ establishing a base year by scope/category.

ISO WG4
Base year selection

Selecting and establishing a base year

Preliminary outcome

Summary of outcome

ISO 14064-1:W2 is **silent** on the below items that are included in proposed GHG P provisions based on Corporate Standard TWG preliminary outcomes:

- Recommendation to select earliest relevant point in time with reliable/verifiable data as base year
- Selecting an inventory base year vis-à-vis a target base year
- Base year selection by scope/category

Rationale

- Supports different "intended uses" / purpose for reporting
- Accommodates for different or complex business structures, partial fiscal periods, varying data availability/quality
- The proposed GHG Protocol clauses can also be considered as guidance for base year selection

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

WG4 were presented with Option 1 (GHG P) and Option 2 (ISO) in WD2 for review. WG4 decided to keep Option 2 (ISO) clauses in Section 8 with only minor edits made to draft.

Implications and concerns

- Less prescriptive and more flexibility introduces variations between reporting organizations and may jeopardize comparability

Reestablishing the base year

GHG Protocol
Corporate Standard ch.5 working draft sections 1.2, 2.2, 1.3

[1.2.3, excerpt] *If the organization sets GHG targets, they **may** select the same year for the target base year as that established for the GHG inventory, or **may** select a different year… If the organization selects a different year for its target base year, they **may** reestablish the base year for the GHG inventory to align with the target base year, following provision [1.1.2].*

[1.2.4, excerpt] *The organization **should** establish the same base year for scope 1, scope 2, and scope 3 emissions to enable comprehensive and consistent tracking of total corporate GHG emissions across all three scopes. However, if the organization has already established a base year for [scope 1 and scope 2 emissions and/or certain emission categories], they **may** select a more recent year for [scope 3 and/or other emission categories]… [Alternatively, the organization **may** reestablish the base year to a more recent year for [for scope 1 and 2 emissions/categories with an already established base year] to use the same year across [scopes/categories]].*

[2.2.3, excerpt] *If sufficient emissions data, activity data, or emission factors are not available to recalculate base year emissions, then:…*

*b. If a single change or cumulative changes would significantly compromise the relevance of the base year inventory and consistency of the time series, the organization **may** reestablish the base year to a more recent year, following provision [1.1.2].*

[1.3.1, excerpt] *The organization shall report the following information related to the base year:*

b. If the base year has been reestablished since the organization's last GHG report as permitted by provision [1.2.3] and provision [2.2.3b] and the rationale for reestablishing the base year.

ISO
ISO14064-1:WD2 Clause 8.1

*The organization **may** change its base year, but **shall** justify any change to the base year.*

Orange text is used for emphasis or comparison.
Teal text is used to identify new provisions/text proposed as part of text review process – to be polled on.

Base year selection: Discussion and polls

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer for an option to use the **first GHG inventory period as base year**?	a. GHGP option: **Stay silent** b. ISO option: Specify **option** ('may') to use first GHG inventory period as base year	**ISO option:** *If sufficient information on historical GHG emissions or GHG removals is not available, the organization **may** use its first GHG inventory period as the base year.*
2	Which of the following options do you prefer for an option to use a **part of a year as base year**?	a. GHGP option: Do ***not*** specify a part of a year as an option b. ISO option: Specify a part of a year as an **option** ('may')	**ISO option (excerpt):** *Base year GHG emissions or removals **may** be based on a specific period (e.g. a year or **part of a year**…)*
3	Which of the following options do you prefer for specifying the **earliest relevant point in time** as base year?	a. GHGP option: **Recommendation** ('should') to select the earliest relevant point in time b. ISO option: **Stay silent**	**GHGP option:** *The organization **should** select as base year the earliest point in time relevant to the organization's reporting objectives for which they have [reliable/verifiable] data.*
4	Which of the following options do you prefer for selecting a **target base year vis-à-vis an inventory base year**?	a. GHGP option: **Include a provision** with options ('may' statements) b. ISO option: **Stay silent**	**GHGP option (excerpt):** *If the organization sets GHG targets, they may select the same year for the target base year as that established for the GHG inventory, or may select a different year…*
5	Which term do you prefer – **reliable or verifiable**?*	a. GHGP option 1: **Reliable** b. GHGP option 2 and ISO option: **Verifiable**	*In establishing the base year, the organization **shall**: Select a base year for which [**reliable/verifiable**] GHG emissions data is available.*

* This meeting includes a poll on "reliable" versus "verifiable". The current Corporate Standard uses "verifiable". If the TWG prefers "verifiable", "assurable" may also be considered depending on how the topic of verification/assurance is covered in the standard.

Base year selection: Discussion and polls

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer for **base year selection by scope/category**?	a. GHGP option: **Recommend** the same base year across scopes/categories b. ISO option: **Stay silent**	**GHGP option (excerpt):** *The organization should establish the same base year for scope 1, scope 2, and scope 3 emissions...* See provision 1.2.4 on slide 87 for complete text.
2	Should language be added to provision 1.2.4 to specify that the base year **may be reestablished to align the base year across scopes/categories**?	**a. Yes**, add language **b. No**, do *not* add language	*[Alternatively, the organization may reestablish the base year to a more recent year for [for scope 1 and 2 emissions/categories with an already established base year] to use the same year across [scopes/categories]].*
3	Which **overall approach** should be taken to provisions for **reestablishing the base year**? (Rank choice)	a. GHGP option: Include **provisions to specify situations** when the base year may be reestablished b. ISO option: Include a **general provision** that the base year may be reestablished c. Hybrid option: Include **both general and specific** provisions	**GHGP option:** See GHG P text on slide 89 (provisions 1.2.3, 1.2.4. 2.2.3) **ISO option:** *The organization may change its base year, but shall justify any change to the base year.*

Tracking emissions over time

Review and recalculation of base year emissions

Base year recalculation events

GHG Protocol
Corporate Standard ch.5 working draft section 2.1

[2.1.1] *The organization **shall** recalculate base year emissions when the following changes (either a single change or several cumulative changes [over one or more years]) occur and have a significant impact on the inventory (defined using a significance threshold) [, unless unpracticable to do so]:*

a. Structural changes in the reporting organization, such as mergers, acquisitions, divestments, outsourcing, and insourcing except in cases where operations acquired, divested, insourced, or outsourced did not exist in the base year.

b. Changes in calculation methodologies or improvements in data accuracy.

c. Discovery of errors.

d. Changes in the categories or activities included in the inventory except in cases where a different base year is established for new categories included.

e. Any other changes [identified through governance, assurance, or management review] that would otherwise compromise the consistency and relevance of the reported GHG emissions information.

[2.1.2] *The organization **shall not** recalculate base year emissions for organic growth or decline (e.g., due to changes in facility production levels or opening or closing of facilities).*

[2.1.3] *When insourcing or outsourcing of activities or other structural changes shift emissions between scopes (e.g., shifting emissions from scope 3 to scopes 1 and 2 for insourcing or vice-versa for outsourcing), the organization [shall/should] also apply these shifts to base year emissions.*

ISO
ISO14064-1:WD2 Clause 8.2

*To ensure the representativeness of the base-year GHG inventory, the organization **shall** develop, document and apply a base year review and recalculation procedure to quantify substantial cumulative changes in base year GHG emissions and GHG removals resulting from:*

- *a structural change in reporting or organizational boundaries (i.e. merger, acquisition or divestiture), or*
- *a change in calculation methodologies or GHG emission factors, or*
- *the discovery of an error or a number of cumulative errors that are collectively substantial.*

*The organization **shall not** recalculate its base-year GHG inventory to quantify changes in facility production levels, including the closing or opening of facilities.*

*The organization **shall** document base-year recalculations in subsequent GHG inventories.*

Orange text is used for emphasis or comparison.
Teal text is used to identify new provisions/text proposed as part of text review process

Base year recalculation events: Proposed new text

[2.1.1] *The organization **shall** recalculate base year emissions when the following changes (either a single change or several cumulative changes [over one or more years]) occur and have a significant impact on the inventory (defined using a significance threshold) [, unless unpracticable to do so]:*

a. Structural changes in the reporting organization, such as mergers, acquisitions, divestments, outsourcing, and insourcing except in cases where operations acquired, divested, insourced, or outsourced did not exist in the base year.

b. Changes in calculation methodologies or improvements in data accuracy.

c. Discovery of errors.

d. Change in the categories or activities included in the inventory except in cases where a different base year is established for new categories included.

e. Any other changes [identified through governance, assurance, or management review] that would otherwise compromise the consistency and relevance of the reported GHG emissions information.

- Phrase "*over one or more years*" proposed in response to TWG member questions during text review process about **cumulative changes occurring over multiple years**.
  - Note: The ad-hoc text editing group was **skeptical** of including proposed text due to concerns that it could create an **additional documentation burden** in the context of assurance engagements.
- Phrase "*unless unpracticable to do so*" proposed in response to TWG member comments that **provision 2.2.3** providing recommendations and options for situations when sufficient data is unavailable for recalculation **may contradict the "shall" statement in 2.1.1.**
  - [2.2.3, excerpt] *If sufficient emissions data, activity data, or emission factors are not available to recalculate base year emissions, then:…*
  - Note: The ad-hoc text editing group was **skeptical** of the proposed text as it would **soften the requirement** for base year recalculation

Teal text is used to identify new provisions/text proposed as part of text review process

ISO WG4
Base year recalculation

Base year recalculation events

Preliminary outcome

Summary of outcome

ISO 14064-1:W2 provisions on **base year recalculation events** are **silent** on the below items included in proposed GHG P provisions based on Corporate Standard TWG preliminary outcomes:

- Recalculation for changes categories/activities included in the inventory
- A catchall statement for other types of events that would compromise the consistency/relevance of the GHG inventory

Rationale

- The original ISO base year recalculation events are already fundamentally aligned with the core triggers identified by GHG P
- In line with general approach to this section - prioritizing transparency and requiring company to report justification for changes rather than prescriptive guidance. The proposed GHG Protocol clauses can also be considered as guidance for base year selection
- Since WG4 did not accept earlier clauses (e.g., using earliest base year…), subsequent clauses become unnecessary

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

WG4 were presented with Option 1 (GHG P) and Option 2 (ISO) in WD2 for review. WG4 decided to keep Option 2 (ISO) clauses in Section 8 with only minor edits made to draft.

Implications and concerns

- None identified

Base year recalculation events: Discussion and polls

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer for base year recalculation for **changes in categories or activities** included in the inventory?	a. GHGP option: **Require** ('shall') recalculation for changes in categories or activities included in the inventory b. ISO option: **Stay silent**	**GHGP option:** *The organization **shall** recalculate (for…) Changes in the categories or activities included in the inventory except in cases where a different base year is established for new categories included.*
2	Which of the following options do you prefer for a **catchall statement** on recalculation events?	a. GHGP option: **Include** a catchall statement b. ISO option: **Stay silent**	**GHGP option:** *The organization **shall** recalculate (for…) Any other changes that would otherwise compromise the consistency and relevance of the reported GHG emissions information.*
3	Which of the following options do you prefer for recalculation when **structural changes shift emissions between scopes**? (Rank choice)	a. GHGP option 1: **Require** ('shall') that shift between scopes apply to base year emissions b. GHGP option 2: **Recommend** ('should') that shift between scopes apply to base year emissions c. ISO option: **Stay silent***	**GHGP option:** *When insourcing or outsourcing of activities or other structural changes shift emissions between scopes (e.g., shifting emissions from scope 3 to scopes 1 and 2 for insourcing or vice-versa for outsourcing), the organization [**shall/should**] also apply these shifts to base year emissions.*
4	Which of the following do you prefer for **documentation of base year recalculations in subsequent inventories**?	a. GHGP option: **Stay silent** b. ISO option: **Require** ('shall') documentation of base-year recalculations in subsequent inventories	**ISO option:** *The organization **shall** document base-year recalculations in subsequent GHG inventories.*

* Provision was introduced after sharing GHG P materials for ISO WD2. Hence, provision was not considered by ISO WG4.

Base year recalculation events: Discussion and polls

Discussion



Polls



#	Topic	Options	Draft text
1	Should provision 2.1.1 be updated to refer to cumulative changes **over one or more years**?	**a.** **Yes**, add reference to cumulative changes over one or more years **b.** **No**, do *not* add reference to cumulative changes over one or more years	[2.1.1] *The organization **shall** recalculate base year emissions when the following changes (either a single change or several cumulative changes [over one or more years]) occur and have a significant impact on the inventory (defined using a significance threshold) [, unless unpracticable to do so]:…*
2	Should provision 2.1.1 be updated with qualifying language that base year recalculation is required **unless unpracticable to do so**?*	**a.** **Yes**, add qualifying language that base year recalculation is required unless unpracticable to do so **b.** **No**, do *not* add qualifying language that base year recalculation is required unless unpracticable to do so	

* If there is support of adding qualifying language, editorial revisions to the draft phrasing of bracketed text "unless unpracticable to do so" will be considered.

Base year recalculation policy and significance thresholds

GHG Protocol
Corporate Standard ch.5 working draft section 2.1, 2.2, 2.3

[2.1.4] *The organization **shall** develop a base year recalculation policy that includes the following elements and apply it in a consistent manner:*

a. Defines quantitative significance threshold(s) for structural, methodological, and other changes that trigger base year recalculation.

b. Clearly articulates the basis (e.g., including any additional qualitative criteria or considerations) for each type of change that triggers recalculations.

c. References any relevant regulatory or program-specific requirements informing the recalculation policy.

[2.1.5] *The organization [**shall/should**] define and apply quantitative significance thresholds as follows:*

a. Apply significance thresholds separately for scope 1, scope 2, and scope 3 emissions (i.e., a change to the organization's base year emissions that exceeds the significance threshold for any of the emissions scopes triggers a recalculation of base year emissions for that scope).

b. Apply a single significance threshold across structural, methodological, and other types of changes (i.e., cumulative changes [over one or more years] of different types that exceed the significance threshold trigger a recalculation of base year emissions).

[2.2.2] *The organization **should** set significance threshold levels at 5% or less of the organization's total reported scope 1, scope 2, or scope 3 emissions in the base year.*

[2.3.1, excerpt] *The organization **shall** report the following information related to base year recalculations:*

a. The base year recalculation policy including the significance threshold(s) for changes listed in provision [2.1.1] that trigger base year recalculation.

ISO
ISO14064-1:WD2 Clause 8.2

*To ensure the representativeness of the base-year GHG inventory, the organization **shall** develop, document and apply a base year review and recalculation procedure to quantify substantial cumulative changes in base year GHG emissions and GHG removals resulting from:*[1]

- *a structural change in reporting or organizational boundaries (i.e. merger, acquisition or divestiture), or*
- *a change in calculation methodologies or GHG emission factors, or*
- *the discovery of an error or a number of cumulative errors that are collectively substantial.*

1. Base year recalculation events are addressed on a separate slide.

Orange text is used for emphasis or comparison.

Subgroup 1, phase 2
Base year recalculation

Base year recalculation policy and significance thresholds

Package of preliminary outcomes

Provide **more prescriptive specifications** related to significance thresholds including:

- **Requirement** to establish a **quantitative** significance threshold as part of base year recalculation policy
- Establish a **recommended significance threshold** of 5% or less of scope 1, scope 2, or scope 3 emissions
- **Separate application** of significance thresholds by emissions **scope**, with recalculation only triggered for scopes(s) where significance threshold exceeded
- Application of a **single significance threshold** across all **types of events** triggering a base year recalculation

Level of support

Preliminary outcome	Subgroup 1	Full TWG
Requirement for quantitative significance threshold	13 of 18 (72%)	36 of 51 (71%) support
5% as recommended significance threshold level	16 of 18 (89%) for scopes 1 and 2 11 of 19 (57%) for scope 3	29 of 42 (69%) support
Separate application of significance thresholds by scope	8 of 18 (44%) requirement 6 of 18 (33%) recommendation	21 of 43 (49%) requirement 12 of 35 (28%) recommendation
Application of a single significance threshold across all types of recalculation events	8 of 18 (44%) requirement 8 of 18 (44%) recommendation	22 of 43 (51%) requirement 15 of 35 (35%) recommendation

Majority support

Majority support *for provision, split opinions on a requirement versus a recommendation*

Rationale

- Promote better standardization (and more **comparable** GHG **information**)
- Promote time series consistency, **tightening loopholes** that would allow organizations to avoid recalculating base year emissions

Implications and concerns

- Concerns that some organizations use **qualitative criteria** to determine when to recalculate base year emissions
- **Interactions** of significance threshold levels with **other quantities**: exclusion thresholds, uncertainty, materiality thresholds for verification

For more information, see minutes and slides from Subgroup 1 meetings 7, 11, and 14 and Full TWG meetings 3, 5 and 8.

ISO WG4
Base year recalculation

Base year recalculation policy and significance thresholds

Preliminary outcome

Summary of outcome

ISO 14064-1:W2 provisions on base year review and recalculation procedures are **silent** on the topic of **significance thresholds** for recalculation.

Rationale

- Requiring a quantitative significance threshold to be applied would present problems for areas with higher uncertainty or volatility, such as Scope 3 or for companies with higher growth
- Focus should be on transparency and consistent application of qualitative threshold and/or company base year recalculation policy to ensure the base year changes are made in line with company context
- May be indirectly and unintentionally impacting verifier's assessment of significance / materiality

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

WG4 were presented with Option 1 (GHG P) and Option 2 (ISO) in WD2 for review. WG4 decided to keep Option 2 (ISO) clauses in Section 8 with only minor edits made to draft.

Implications and concerns

- None identified

Base year recalculation policy and significance thresholds: Discussion and polls

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer for **significance thresholds** for base year recalculation?	a. GHGP option: **Provide specifications on significance thresholds** including: • Require a quantitative significance threshold • Separate application of significance thresholds by emissions scope • Application of a single significance threshold across all types of recalculation events • Recommended significance threshold of no more than 5% of scope 1, scope 2, or scope 3 emissions b. ISO option: **Stay silent**	See GHGP text on slide 98 (provisions 2.1.4, 2.1.5, and 2.2.2)

Recommendations and options for when data is unavailable for base year recalculation

GHG Protocol
Corporate Standard ch.5 working draft sections 2.2, 2.3

[2.2.3] *If sufficient emissions data, activity data, or emission factors are not available to recalculate base year emissions, then:*

- *The organization **should** estimate base year emissions if feasible (i.e., if data exists to produce a reasonable proxy estimate). To estimate base year emissions, the organization **should** establish a reliable GHG inventory for recent year(s) and then scale based on [the most representative available] proxy data (e.g., production volumes) to the base year.*
- *If a single change or cumulative changes would significantly compromise the relevance of the base year inventory and consistency of the time series, the organization **may** reestablish the base year to a more recent year, following provision [1.1.2].*
- *If the impact of an individual change is not expected to be significant, the organization **may** acknowledge the change without recalculation.*

[2.3.1, excerpt] *The organization **shall** report the following information related to base year recalculations:*

d. Acknowledgement of any changes that would have contributed to triggering a base year recalculation, but where recalculation was not performed (e.g., due to lack of sufficient data).

ISO
ISO14064-1:WD2

N/A – ISO14064-1:WD2 does not include text on options for when data is unavailable for base year recalculation.

Subgroup 1, phase 2
Base year recalculation

Options for when data unavailable for base year recalculation

Package of preliminary outcomes

Hierarchy of options for when emissions data, activity data, or emission factors are not available to recalculate base year emissions:

- **Proxy estimation as recommended option** ('should'), if feasible to develop a reasonable estimate
- **Scaling** from recent years' inventory as **recommended estimation method** ('should')
- **Reestablishing the base year as an option** ('may') when consistency and relevance would be significantly compromised
- **Acknowledging no recalculation as option** ('may') for changes that are individually not significant

Rationale

- **Prioritize time series consistency** while **providing flexibility** to organizations considering data availability challenges

Level of support

Level of support for over hierarchy of options

Subgroup 1:

- **13 of 17 (76%) support**
- 0 of 17 (0%) oppose
- 4 of 17 (24%) abstain

Full TWG:

- **34 of 39 (87%) support**
- 4 of 39 (10%) oppose
- 1 of 39 (3%) abstain

Note: While Subgroup 1 members expressed majority support for the package as a whole, opinions were split on the reestablishing the base year and acknowledging no recalculation as options when polled separately.

Implications and concerns

- Some members expressed **concerns with acknowledging no recalculation as an option** as it leads to inconsistency

For more information, see minutes and slides from Subgroup 1 meetings 9, 11, and 14 and Full TWG meeting 8.

Timing of base recalculation for structural changes

GHG Protocol
Corporate Standard ch.5 working draft section 2.2

[2.2.4] *If a significant structural change occurs during the year, then:*

a. *The organization **should** recalculate base year emissions in the year that the structural change occurred unless it is not feasible to do so (e.g., if historical data is unavailable following an acquisition, if there are legal restrictions on data access) .*
b. *The organization **should** recalculate base year emissions for the entire year rather than for the remainder of the reporting period after the structural change occurred to avoid having to recalculate base year emissions again in the succeeding year. The organization **should** also recalculate current year emissions for the entire year to maintain consistency with the base year recalculation.*
c. *Alternatively, the organization **may** recalculate base year and current year emissions for only the portion of the year after the structural change occurred, and then recalculate emissions for the full year in the following year.*
d. *If it is not possible to make a recalculation in the year of the structural change (e.g., due to a lack of data for an acquisition), the organization **may** recalculate emissions in the following year or when data for a full year is available.*

ISO
ISO14064-1:WD2

N/A – ISO14064-1:WD2 does not include text on the recency of the base year or inventory base year and target base year.

Subgroup 1, phase 2
Base year recalculation

Timing of base year recalculation for structural changes

Package of preliminary outcomes

Maintain current provisions in Corporate Standard (chapter 5 and Appendix E) for situations when structural changes occur mid year (with minor edits to provide flexibility*) including:

- **Recommendation** to recalculate in the **year of the structural change** if feasible
- **Recommendation** to recalculate for the **entire year**
- **Option** to recalculate for only the **portion of the year** after the change
- **Option** to recalculate in the **following year** or when a full year's data is available

* Specifying recalculation in the year of the structural change if feasible, option to allow recalculation after a full year's data is available.

Level of support

Preliminary outcome	Subgroup 1	Full TWG
Recommendation to recalculate in year of structural change	12 of 17 (71%)	35 of 40 (88%)
Recommendation to recalculate for entire year	15 of 17 (88%)	35 of 40 (88%)
Option to recalculate for only portion of year after change	14 of 17 (82%)	33 of 40 (83%)
Option to recalculate in following year or when data available	12 of 17 (71%)	38 of 40 (95%)

Majority support for all provisions

Rationale

- Promote **best practice** by recommending recalculation in the year of a structural change, while **recognizing feasibility challenges** (e.g., lack of data)

Implications and concerns

- Recommendation to recalculate for entire year does not align with **financial accounting**, where structural changes take effect from the date of the change
- Maintain status quo with minor edits to promote flexibility – **no major feasibility challenges** anticipated

For more information, see minutes and slides from Subgroup 1 meeting 12 and Full TWG meeting 8.

Base year and base year recalculations: Reporting requirements

GHG Protocol
Corporate Standard ch.5 working draft sections 1.3, 2.3

[1.3.1] *The organization **shall** report the following information related to the base year:*

a. The selected base year and the rationale for selecting the particular year or average of consecutive years.

b. If the base year has been reestablished since the organization's last GHG report as permitted by provision [1.2.3] and provision [2.2.3b] and the rationale for reestablishing the base year.

c. GHG emissions for the base year, [consistent with the provisions of this document] and with the organization's base year emissions recalculation policy.

[2.3.1] *The organization **shall** report the following information related to base year recalculations:*

a. The base year recalculation policy including the significance threshold(s) for changes listed in provision [2.1.1] that trigger base year recalculation.

b. Appropriate context for any significant changes that triggered base year recalculations.

c. Any recalculations of base year emissions, including the rationale for recalculation and which assumptions and values were changed, with a comparison of updated values to original values.

d. Acknowledgement of any changes that would have contributed to triggering a base year recalculation, but where recalculation was not performed (e.g., due to lack of sufficient data).

ISO
ISO14064-1:WD2 Clause 10.5.1

*GHG report content **shall** include the following:*

l) the historical base year selected and justification (8.1);

m) a base year review and recalculation procedure (8.2);

n) details of events that triggers base year recalculations;

Emissions profile over time (other years to recalculate/report)

GHG Protocol
Corporate Standard ch.5 working draft sections 2.2, 2.4

[2.2.1] *The organization **should** recalculate emissions for recent years (e.g., reporting periods for which comparative information is presented in financial reporting) and other historical years relevant to the organization's reporting objectives, consistent with the organization's base year recalculation policy and the provisions in this document that apply to the recalculation of base year emissions.*

[2.4.1] *The organization **should** report the following information related to tracking emissions over time:*

a. *Recalculated emissions for recent years (e.g., reporting periods for which comparative information is presented in financial reporting) and other historical years relevant to the organization's reporting objectives.*
b. *Historical unadjusted emissions (i.e., without recalculation) for [the base year, recent years, and any other] prior years relevant to reporting objectives.*
c. *A target-relevant time series (e.g., recalculated emissions for the target base year) if relevant (i.e., if the organization has active GHG targets).*

ISO
ISO14064-1:WD2

N/A – ISO14064-1:WD2 does not include text on other years to recalculate/report.

Subgroup 1, phase 2
Base year recalculation

Emissions profile over time: reporting provisions

Package of preliminary outcomes

Recommended reporting elements ('should' statements) to provide additional information on an emissions profile over time including:

- **Recalculated emissions** for **recent years** (e.g., last 1-3 years)
- **Recalculated emissions** for **other historical years** relevant to the organization's reporting objectives
- **Historical unadjusted emissions** (i.e., without recalculation) for the base year, recent years, and any prior years relevant to reporting objectives
- A **target relevant time series** (e.g., recalculated emissions for the target base year) if the organization has GHG targets

Level of support

Preliminary outcome	Subgroup 1	Full TWG
Recommended reporting of recalculated emissions for **recent years**	14 of 14 (100%)	37 of 50 (74%)
Recommended reporting of recalculated emissions for **other historical years**	12 of 15 (80%)	34 of 50 (68%)
Recommended reporting of **historical unadjusted emissions** (without recalculation) for relevant prior years	13 of 16 (81%)	31 of 50 (62%)
Recommended reporting of a **target-relevant time series**	13 of 14 (93%)	45 of 50 (90%)

Majority support for all provisions

Rationale

Support use cases for GHG data including:

- Reporting of GHG information alongside **financial information** (where "comparative information" for recent reporting periods is presented)
- Development of **GHG intensity metrics** (which may require unadjusted historical emissions to ensure consistent boundaries for numerator/denominator
- Reporting progress against **GHG targets**

Implications and concerns

Questions regarding whether **recalculated or historical unadjusted emissions** are more appropriate for reporting alongside "comparative" **financial information** – both recommended per proposed provisions

For more information, see minutes and slides from Subgroup 1 meetings 10 and 11 and Full TWG meeting 5.

ISO WG4
Base year recalculation

Base year recalculation

Preliminary outcome

Summary of outcome

ISO 14064-1:W2 is **silent** on the below items that are included in proposed GHG P provisions based on Corporate Standard TWG preliminary outcomes:

- Recommendations/options for when sufficient data is unavailable for base year recalculation
- Timing of base year recalculation for structural changes
- Recalculation/reporting of other historical years (beyond base year)

Rationale

- In line with general approach to this section - prioritizing transparency and requiring company to report justification for changes rather than prescriptive guidance.
- The proposed GHG Protocol clauses can also be considered as guidance for base year selection

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

WG4 were presented with Option 1 (GHG P) and Option 2 (ISO) in WD2 for review. WG4 decided to keep Option 2 (ISO) clauses in Section 8 with only minor edits made to draft. This meant minimal / no edits to related clauses in Section 10.

Implications and concerns

- Not recommending retroactive adjustments to recent reporting periods will lead to problems with historical trend consistency and comparability as well as challenges with inaccurate corporate emissions record overtime

Base year recalculation – other: Discussion and polls

Discussion

Polls

#	Topic	Options	Draft text
1	Which of the following options do you prefer for addressing situations when sufficient **data is unavailable** for recalculation?	a. GHGP option: **Provide recommendations/options** b. ISO option: **Stay silent**	See GHGP text on slide 102 (provision 2.2.3)
2	Which of the following options do you prefer for addressing **timing** of base year recalculations for structural changes?	a. GHGP option: **Provide recommendations/options** b. ISO option: **Stay silent**	See GHGP text on slide 104 (provision 2.2.4)
3	Which of the following options to you prefer for reporting an emissions **profile over time**?	a. GHGP option: **Recommendations to report** recalculated emissions and historical unadjusted emissions for recent years and other prior years where relevant b. ISO option: **Stay silent**	See GHGP text on slide 107 (provisions 2.2.1 and 2.4.1)

Tracking emissions over time

GHG targets

GHG Targets

GHG Protocol
Corporate Standard ch.5 working draft section 3.2

[3.2.1] *The organization **should** set targets to reduce GHG emissions [in the context of GHG inventory objectives].*

[3.2.2] *If the organization chooses to set GHG reduction targets, they **should** consider the following:*

- *Target boundary (emissions scopes, categories, etc. included in the target)*
- *Target type (i.e., absolute target, intensity target)*
- *Target timeframe (target base year, completion year, duration of the target)*
- *Target level (the numerical value of the reduction target)*

[3.2.3] *If the organization chooses to set GHG reduction targets, they **should** refer to the latest versions of relevant target setting standards for guidance.*

ISO
ISO14064-1:WD2 Clause 8.3

*The organization **can**[1] set targets to reduce GHG emissions.*

NOTE [6] provides requirements and guidance for net-zero aligned targets for organizations.[2]

*For setting the target, the following criteria **should** be considered:*

- *climate science;*
- *reduction potential;*
- *international, national context;*
- *sectorial context (e.g. voluntary sectorial commitment, cross-sectorial effect).*

1. "Can", as defined in ISO standards, indicates possibility or capability, whereas "may" indicates permission or allowance.
2. Note in ISO text links to a reference to ISO/DIS 14060, Net zero aligned organizations.

Orange text is used for emphasis or comparison.

Subgroup 1, phase 2 GHG Targets

Setting GHG targets

Preliminary outcome

Recommend that organizations set GHG targets

*The organization **should** set targets to reduce GHG emissions [in the context of inventory objectives].*

Level of support

Subgroup 1:
What general specification should the Corporate Standard provide on the setting of GHG targets?

- **11 of 18 (61%) recommendation ('should')**
- 7 of 18 (39%) optional ('may')
- 0 of 18 (0%) abstain

Full TWG:
Do you support the preliminary Subgroup 1 outcome to recommend that organizations set GHG targets?

- **41 of 50 (82%) support**
- 8 of 50 (16%) oppose
- 1 of 50 (2%) abstain

Note: Subgroup 1 also expressed majority support for providing general criteria/considerations and referring users to external programs for guidance on targets (in lieu of providing any detailed requirements/recommendations) – Full TWG has not been polled on this.

Rationale

- Promotes **best practice**.
- A **key purpose** of developing a GHG inventory is to inform forward-looking targets, driving **climate action**.
- A recommendation provides **flexibility** to organizations of varying levels of maturity.

Implications and concerns

- Concerns from opposing members that GHG Protocol is **not a target setting body**.

For more information, see minutes and slides from Subgroup 1 meeting 12, 13, and 14 and full TWG meeting 6.

GHG targets: Reporting requirements

GHG Protocol
Corporate Standard ch.5 working draft section 3.3

[3.3.1] *If the organization chooses to set GHG target(s), it **shall** report [the following information for each target/information on each target such as the following]:*

- *Target boundary*
- *Target base year*
- *Target completion year*
- *Type of target*
- *[Annual/yearly] progress in reaching the target*

ISO
ISO14064-1:WD2 Clause 8.3

*If the organization reports a target, the following information **shall** be specified and reported:*

- *period covered by the target, including the target reference year and the target completion year;*
- *type of target (intensity or absolute);*
- *category of emissions included in the target;*
- *the amount of reduction and its unit expressed in accordance with the type of target.*

ISO WG4
GHG targets

GHG targets

Preliminary outcome

Summary of outcome

*The organization **can** set targets to reduce GHG emissions.*

Rationale

- Recognizes and further emphasizes that the distinct role of this standard is emissions quantification
- Avoids overstepping into target setting (e.g., covered by other standards such as ISO 14060 and SBTi) and risk further fragmentation and confusion in this topic.
- Maintains this quantification standard as one that supports multiple "intended uses", which may include target setting
- Conditional reporting requirements are general in nature and does not risk overlap with existing target setting standards

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

WG4 were presented with Option 1 (GHG P) and Option 2 (ISO) in WD2 for review. WG4 decided to keep Option 2 (ISO) clauses in Section 8 with only minor edits made to draft.

Implications and concerns

- None identified

GHG targets: Discussion and polls

Discussion

Polls

#	Topic	Options	Draft text
1	Which of the following options do you prefer for a general provision on **GHG targets**?	a. GHGP option: **Recommend** targets ('should' statement) b. ISO option: **'Can'*** statement	*The organization [**should/can**] set targets to reduce GHG emissions*
2	Which of the following options do you prefer for **reporting information on GHG targets**?**	a. GHGP option 1 and ISO option: Specify **required** reporting elements b. GHGP option 2: List **example** reporting elements	*If the organization chooses to set GHG target(s), it **shall** report [**the following information for each target/ information on each target such as the following**]…*

* "Can", as defined in ISO standards, indicates possibility or capability, whereas "may" indicates permission or allowance.
** This question was posed in the feedback survey for Full TWG meeting 8, but a limited number of responses were received and opinions were split. Question is being posed again to get a more complete data set.

Tracking emissions over time

GHG intensity metrics

GHG intensity metrics

GHG Protocol
Corporate Standard ch.5 working draft sections 4.1, 4.4

[4.1.1] *If the organization chooses to report GHG intensity [metrics/performance metrics/ratios], the numerator (GHG emissions) and denominator (unit of physical activity or economic value)* ***shall*** *have consistent boundaries.*

[4.1.2] *[If the organization has set an intensity-based target, the methodology used to quantify the [reported] intensity [metric/performance metric/ratio] [**shall/should**] be consistent with the methodology used to set the target.]*

[4.4.1] *The organization **should** report GHG intensity [metrics/performance metrics/ratios] if relevant to reporting objectives [(e.g., supporting targets, interpreting performance over time, benchmarking)]. GHG intensity [metrics/performance metrics/ratios] may be reported at the organization level or at the product level.*

[4.4.2] *If the organization chooses to report GHG intensity [metrics/performance metrics/ratios]:*

- *[The organization [shall/should] report the denominator used and the rationale for its selection.]*
- *[Where consistent boundaries are not [applicable/feasible], the organization [shall/should] [disclose/report] the nature of any boundary difference to enable appropriate interpretation of the [metrics/performance metrics/ratios] by intended users.]*
- *[When the organization reports GHG intensity [metrics/performance metrics/ratios] to track performance over time, the organization [shall/should] also report both changes in the numerator (emissions) and denominator (unit of physical activity or economic value), along with an explanation.]*

ISO
ISO14064-1:WD2

N/A – ISO14064-1:WD2 does not include text on GHG intensity metrics.

Note: ISO 14064-1:2018 includes the following under recommended reporting information (clause 9.3.2):

The organization should consider including in the GHG report:

g) description and presentation of additional indicators, such as efficiency or GHG emission intensity (emissions per unit of production) ratios

Orange text is used for emphasis or comparison.

Subgroup 1, phase 2
GHG intensity metrics

Reporting of GHG intensity metrics

Preliminary outcome

Recommend that organizations report GHG intensity metrics if relevant.

*The organization **should** report GHG intensity [metrics/ performance metrics/ ratios] [if relevant to reporting objectives]. GHG intensity [metrics/performance metrics/ratios] **may** be reported at the organization level or at the product level.*

Rationale

- GHG intensity metrics can **serve multiple use cases**, including:
  - Performance tracking over time
  - Calculation of scope 3 emissions
  - Comparison between organizations

Level of support

Subgroup 1:
- **16 of 18 (89%) support**
- 0 of 18 (0%) oppose
- 2 of 18 (11%) abstain

Full TWG:
- **37 of 42 (88%) support**
- 2 of 42 (5%) oppose
- 3 of 42 (7%) abstain

Implications and concerns

- **Challenges with making reliable comparisons** on the basis of emissions intensity (both over time and between organizations): Measures must be taken to promote **consistency** (e.g., same boundaries for numerator and denominator).
- **Questions** on whether organization-level GHG emissions intensity is a **valid basis for scope 3 calculations**.
- Guidance on **relevant applications** needs to be provided.

For more information, see minutes and slides from Subgroup 1 meetings 13 and 14 and Full TWG meeting 8.

ISO WG4
GHG intensity metrics

GHG intensity metrics

Preliminary outcome

Summary of outcome

ISO 14064-1:WD2 2 is **silent** to the topic of GHG intensity metrics.

The following language from ISO 14064-1:2018 (clause 9.3.2) is not included in ISO 14064-1:W2:

The organization should consider including in the GHG report:

description and presentation of additional indicators, such as efficiency or GHG emission intensity (emissions per unit of production) ratios

Rationale

- Other indicators such as emission intensity measures will need to be considered in light of multi-statement approach

Level of support from ISO WG4

N/A - This topic was not discussed at WG4 as it was not included for review in WD2

Implications and concerns

- N/A

GHG intensity metrics: Discussion and polls

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer for reporting **GHG intensity metrics**?	a. GHGP option: **Recommend** reporting of intensity metrics if relevant b. ISO option: **Stay silent**	**GHGP option:** *The organization **should** report GHG intensity [metrics/ performance metrics/ratios] if relevant to reporting objectives [(e.g., supporting targets, interpreting performance over time, benchmarking)]. GHG intensity [metrics/performance metrics/ratios] may be reported at the organization level or at the product level.*

Agenda

• Introduction and housekeeping	10 minutes
• Land-related topics	80 minutes
• Tracking emissions over time	60 minutes
• **Verification and assurance**	**20 minutes**
• Wrap up and next steps	10 minutes



GREENHOUSE GAS PROTOCOL

Verification and assurance: Overview

Main topics being addressed under verification and assurance are:

General provision

Obtaining independent/third-party verification or assurance:

Whether to require (shall), recommend (should), provide as option (may) or be silent

Split opinions

Reporting provisions

Required, recommended or optional information to be reported on independent/third-party verification or assurance:

1. Whether it was obtained *Split opinions*
2. If not, explain why it was not obtained *(now removed)* *Majority support for not including*

Verification and assurance

GHG Protocol

Under discussion

Options under consideration for a **general provision**:

- **Include a provision** ('should' or 'may' statement) on obtaining independent verification or assurance

  *Example provision: The organization [**should/may**] obtain independent verification or assurance.*

- **Be silent** on obtaining independent verification or assurance

Options under consideration for a **reporting provision**:

- **Require** reporting whether it was obtained
- **Recommend** reporting
- **Optional** to report
- **Be silent**

ISO

ISO14064-1:WD2 Section 9

- *The organization **should** obtain independent verification of its GHG statements. Verification **can be first-, second-or third-party**. **If** the organization discloses its GHG statements to the **public**, then it **should** obtain third-party verification.*
- *If the verification is obtained, the organization **shall report whether** third-party verification was performed, the type and level of assurance obtained, the audit standards applied, the relevant competencies of the verifiers, and the opinion issued by the verification bodies.*
- *To review GHG emissions and GHG removals information, impartially and objectively, the organization **shall** conduct a verification consistent with the needs of the intended user. Principles and **requirements** are described in [1].*
- ***Requirements** for verification bodies are described in [3].*
- ***Requirements** for the competence of validation teams and verification teams are described in [4]. The organization, when selecting a verification body, **should** consider the sector-specific competence of the verification team relative to the activities being verified, in accordance with [4].*
- *The organization **should** ensure the accuracy of historical data and information related to GHG statements. A programme of verification **can** comprise an element of the organization's quality assurance and quality control procedures. The organization **should** include in its programme of verification:*
  - *results of the organization's climate action and*
  - *required disclosures.*

Orange text is used for emphasis or comparison.

[1] ISO 14064-3 – Part 3: Specifications with guidance for the verification and validation of greenhouse gas statements
[3] ISO 14065, General principles and requirements for bodies validating and verifying environmental information
[4] ISO 14066, Environmental information — Competence requirements for teams validating and verifying environmental information

Verification and assurance
General provision

Obtaining independent verification/assurance *(reminder)*

Preliminary outcome

Split opinions on whether to **include a provision** (shall/should/may) or **be silent** on obtaining independent verification/assurance

Example provision: The organization [should/may] obtain independent verification or assurance.

Level of support

Subgroup 2

How to address obtaining verification/assurance

Meeting 13

- Require: 0 of 20
- **Recommend: 6 of 20**
- **Optional: 5 of 20**
- **Be silent: 9 of 20**
- Abstain: 0 of 20

Split opinions

Meeting 14

- Provide as guidance *[should or may]* : 7 of 19
- **Be silent: 12 of 19**
- Abstain: 0 of 19

Majority support

Full TWG

Meeting 6

Be silent on obtaining verification and assurance

- 48% support
- 44% oppose
- 8% abstain

Split opinions

Arguments for being silent

- Topic extends **beyond GHG accounting and reporting**.
- Verification and assurance provisions **should be determined by regulators** and other programs, **not by GHG Protocol**.
- It could be provided as **separate guidance outside** the Corporate Suite of Standards.

Arguments for including a provision

- **Promotes** provision of **more credible data**
- **Support** reporters by promoting verification and assurance as best practice or as option especially **less-experienced, voluntary or first-time reporters**
- **Consistent** with GHG Protocol's **longstanding treatment** of the topic
- Helps **address stakeholder requests** for further clarity and guidance on the topic
- **[New] ISO WG4 position**: change from "may" to "**should**" *

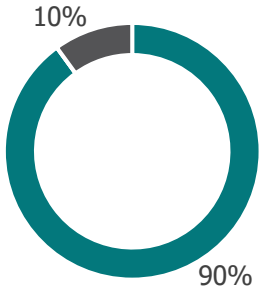
For more information, see Subgroup 2 Meeting 13 and 14 and Full TWG Meeting 6 minutes and slides.
See pre-read slides for more information on how verification/assurance is covered in key standards and frameworks and DMC analysis.
* ISO's proposed text includes references to additional ISO verification-related standards (i.e., 14064-3, 14065, 14066)

ISB level of support and feedback - obtaining verification/assurance

Pulse check results *(Meeting 24)*

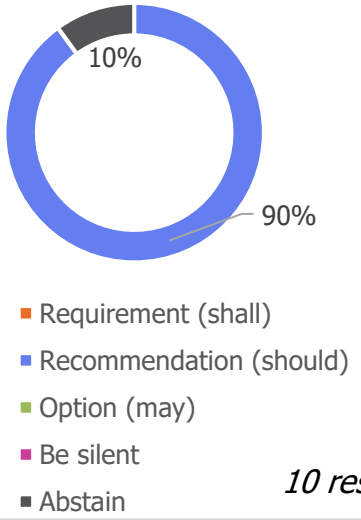
Is including a provision on obtaining verification or assurance ***the role of GHG Protocol****?*

Majority support



How should ***obtaining verification and assurance be addressed*** *in the Corporate Standard?*

Majority support for recommending



10 responses

ISB feedback

Support for including a provision (i.e., 'should statement')

- It would be **unusual** for an accounting and reporting standard **to be silent** on verification and assurance
- Recommendation can set a **baseline for good practice** across various use cases while **remaining accessible** for les experienced reporters

Potential implications of including a provision

- 'Verification' and 'Assurance' processes, standards and providers differ and there is a **need to disambiguate the two terms** and cross-refer to established external standards

Verification and assurance
Reporting provisions

Reporting provisions on verification/assurance

Preliminary outcome

- **Split opinions** on **whether** to require/recommend/optional reporting on whether independent assurance was obtained
- **Do not** require/recommend/optional **reporting on a rationale if** independent assurance was **not obtained**

Level of support

Report on whether

SG2 Meeting 14

Split opinion

- 1 of 19: Require
- 6 of 19: Recommend
- 1 of 19: Optional
- 11 of 19: Be silent
- 0 of 19: Abstain

TWG Meeting 7

Split opinion

- **15 of 48: Require**
- **15 of 48: Recommend**
- 3 of 48: Optional
- 15 of 48: Be silent
- 0 of 48: Abstain

Report on why not obtained

SG2 Meeting 14

Majority support

- 1 of 19: Require
- 3 of 19: Recommend
- 1 of 19: Optional
- **14 of 19: Be silent**
- 0 of 19: Abstain

TWG Meeting 14

Majority support

- **39 of 47: Support for being silent**
- 7 of 47: Oppose being silent
- 1 of 19: Abstain

Rationale

Whether it was obtained:

- **Include provision (shall/should/may):** Valuable information to some; ensures transparency
- **Be silent**: Not the role of GHGP; both the organization and assurance provider would include the assurance statement/opinion/report as part of their GHG reports so no need to require

Rationale on why it was not obtained:

- **Be silent**: Not the role of GHGP; not useful information
  - Does not change the fact that information is not assured
  - Rationale could be as simple as "not sufficient resources"

Implications and concerns

- Lack of information on **whether** independent assurance was obtained—along with key details—could **inhibit transparency**
- **Being silent** is **not consistent** with **GHGP's longstanding treatment** of the topic "verification and assurance" aiming to promote awareness

ISO WG4
Verification

Verification

Preliminary outcome

Summary of outcome (select text)

- *The organization **should** obtain independent verification of its GHG statements. Verification can be first-, second-or third-party. **If** the organization discloses its GHG statements to the **public**, then it **should** obtain **third-party** verification.*
- *The organization **should** ensure the accuracy of historical data and information related to GHG statements.*
- *The organization **should** include in its programme of verification:*
  - *results of the organization's climate action and*
  - *required disclosures.*
- **Reporting:** ***If*** *the verification is obtained, the organization **shall report** whether third-party verification was performed, the type and level of assurance obtained, the audit standards applied, the relevant competencies of the verifiers, and the opinion issued by the verification bodies.*

Rationale

- Users increasingly need assurance that the reported figures can be relied on. A "should" makes verification good practice but leaves the choice with the organization, so programme neutrality is kept.
- First-, second- or third-party verification is acceptable. Third-party verification is recommended only for public disclosures.
- This links to ISO 14064-3, 14065 and 14066 already set out the verification process and verifier requirements.
- The organization reports the type and level of assurance, the audit standard and the opinion, which prevents unqualified "verified" claims.
- Progress on targets and Statement #3 impacts are the figures most used in public claims. Asking that they be verifiable concerns data quality, not policy, so it stays neutral.

Level of support from ISO WG4

Consensus reached by WG4; no polls were conducted

Implications and concerns

- Cost and capacity: Verification adds cost for SMEs, and verifiers with certain area of expertise may be scarce.
- ISO uses "verification" and GHG Protocol uses "assurance"; the terms need harmonizing.

Verification and assurance – general and reporting provisions: Discussion and polls

Discussion

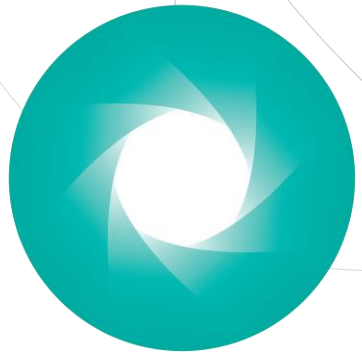
Polls

#	Topic	Options	Proposed draft text *(where applicable)*
1	**General provision:** Which of the following options do you prefer for a provision on **obtaining independent* verification or assurance**?	a. GHGP option 1 and ISO option**: **Recommend** *(should)* obtaining independent verification or assurance b. GHGP option 2: **Optional** *(may)* c. GHGP option 3: **Be silent** *Option to "require ('shall statement') independent verification or assurance" removed due to no TWG or ISB support*	*The organization [**should/may**] obtain independent verification or assurance.*
2	**Reporting provision**: Which option do you prefer for **reporting** on **whether verification/assurance was obtained**?	a. GHGP option 1 and ISO option: **Require** *(shall)* reporting b. GHGP option 2: **Recommend** *(should)* reporting c. GHGP option 3: **Optional** *(may)* reporting d. GHGP option 4: **Be silent**	*The organization [**shall/should/may**] report whether independent verification or assurance was performed, [the level of assurance obtained, the competencies of the verification/assurance provider, and the opinion issued by the verification/assurance provider].*

* Detailed term: Independent assurance and third-party verification.
** ISO WG4 proposal is to ***recommend*** **verification** for all reporters (i.e., first-, second-, or third-party), and to ***recommend*** **third-party verification** for publicly shared reports.

Agenda

• Introduction and housekeeping	10 minutes
• Land-related topics	80 minutes
• Tracking emissions over time	60 minutes
• Verification and assurance	20 minutes
• **Wrap up and next steps**	**10 minutes**



GREENHOUSE GAS PROTOCOL

Next steps

Items to be shared by GHG Protocol Secretariat

- Final slides, minutes, and recording from this meeting
- Feedback survey

TWG member action items

Respond to feedback survey (Deadline: **Friday, November 13th** EOD)

Note: *Responses received by end of day on Monday, November 2nd will be included in preliminary poll results reported in pre-read materials for the November ISB meeting*

Next meeting

Date: Tuesday, November 24th

Time: 09:00-12:00 ET, 15:00-18:00 CET, 21:00-00:00 CHN

TWG meetings #9 to 12 will be held at a single 3-hour time slot

GREENHOUSE GAS PROTOCOL

Thank you!

Iain Hunt, iain.hunt@wri.org

Hande Baybar, baybar@wbcsd.org

Allison (Alley) Leach, allison.leach@wri.org

Matt Ramlow, matt.ramlow@ghgprotocol.org



Annex A

Land-related topics

GREENHOUSE GAS PROTOCOL

Land use change emissions accounting

LSR Standard

LSR Standard chapter 7 (Requirements 10 & 11)

Requirement 10: Land use change emissions accounting

*Companies **shall** account for land use change emissions according to the following requirements:*

- *GHG emissions: Companies **shall** account for CO_2, CH_4 and N_2O emissions caused by LUC.*
- *Carbon pools: Companies **shall** account for LUC CO_2 emissions based on the total land carbon stock decrease across all land carbon pools…*
- *Time period: Companies **shall** account for LUC emissions that occurred within the LUC assessment period… Companies **shall** allocate the LUC emissions to each year in the LUC assessment period using linear discounting…*
- *Spatial boundary: Companies **shall** account for scope 1 LUC emissions on lands they own or control and scope 3 LUC emissions on lands in their value chain…*
- *Calculation approach: Companies **shall** use either a direct land use change (dLUC)… or statistical land use change (sLUC) calculation approach…*
- *Re-baselining: Companies **shall** re-baseline when there is a change in…*

Requirement 10 also contains specific requirements for LUC emissions associated with animal products and water reservoir emissions.

Requirement 11: Subcategory land use change emissions accounting

*Companies **shall** account for subcategory land use change emissions according to the following requirements:*

- Requirement 11 contains specific requirements for forest land, grassland and wetland subcategory land use change.

ISO

ISO14064-1:WD2 Section 5.2 & Annex G

- *The organization **shall** quantify and report CO_2 emissions or CO_2 removals from land use and land use change (LULUC), based on the net change in carbon stocks within the relevant GHG reservoirs over the reporting period. (Section 5.2)*
- *The GHG emissions or GHG removals occurring as a result of land use change (LUC) within the last decades (see NOTE 2) **shall** be assessed in accordance with internationally recognized methods, such as the IPCC Guidelines for National Greenhouse Gas Inventories. (Annex G.3)*
- *If site-specific data are applied, they **shall** be transparently documented. If a national approach is used, the data **shall** be based on reputable sources considered to be scientifically rigorous and **shall** be documented. The time period selected for analysis **shall** be documented and justified. (Annex G.3)*
- *For land use change, the organization **shall** quantify the associated GHG emissions or GHG removals (total carbon stock change) for the entire transition period (e.g., 20 years) and **may** amortize these to each reporting period within the transition period (e.g., by applying an equal 1/20 of total carbon stocks change to each year over the 20 years, or applying a decreasing share over time). (Annex G.3)*
- *All choices and assumptions, including applied methodologies, **shall** be justified and documented. (Annex G.3)*

Orange text is used for emphasis or comparison throughout the section.
See Section 7.2 of the LSR Standard for full text of the accounting and reporting requirements

Land management net biogenic CO_2 emissions (Land use emissions)

LSR Standard
LSR Standard chapter 9 (Requirements 14 & 15)

Requirement 14: Land management net biogenic CO_2 emissions accounting

*Companies **shall** account for land management net biogenic CO_2 emissions on productive agricultural lands according to the following requirements:*

- *Accounting approach: Companies **shall** account for land management net biogenic CO_2 emissions based on annual or annualized net land carbon stock losses occurring in the reporting year using stock-change accounting methods…*
- *Spatial boundaries: See Requirement 5 to define the scope 1 and scope 3 spatial boundaries…*
- *Carbon pools and land use: Companies **shall** account for the net land carbon stock change for the following carbon pools…*
- *No emissions: If carbon stocks increase, companies **can** choose to report zero emissions…*

Requirement 15: Anthropogenic impacts on agricultural land

*All changes in land carbon stocks on productive agricultural land in the reporting year are considered anthropogenic. Companies **shall** fully account for all net land carbon stock losses on all agricultural lands in the reporting year, including changes due to degradation and carbon stock losses from fires, storms, and other natural disturbances.*

ISO
ISO14064-1:WD2 Section 5.2 & Annex G

- *The organization **shall** quantify and report CO_2 emissions or CO_2 removals from land use and land use change (LULUC), based on the net change in carbon stocks within the relevant GHG reservoirs over the reporting period. (Section 5.2)*
- *The CO_2 emissions or CO_2 removals from land use and land use change **shall** be quantified as the change in carbon stocks aggregated across five carbon pools: living above-ground biomass, living below-ground biomass, deadwood, leaf litter, and soil organic matter. (Annex G.1)*
- *The time period selected for analysis **shall** be documented and justified. At a minimum, it **should** include at least one full rotation period for processes that involve growing crops. (Annex G.2)*
- *If a national approach for quantification of change in soil or biomass carbon is used, the data **shall** be based on reputable sources considered to be scientifically rigorous and **shall** be documented. (Annex G.2)*
- *GHG emissions and GHG removals occurring as a result of exceptional events (e.g., drought, wildfire) on land remaining in the same land use class **should** be quantified and **may** be reported either in applicable subcategory for land use or separately from the inventory as additional information. (Annex G.2)*

Orange text is used for emphasis or comparison throughout the section.
See Section 9.2 of the LSR Standard for full text of the accounting and reporting requirements

Land management production emissions (non-CO_2 GHG emissions from land-based sources)

LSR Standard
LSR Standard chapter 10 (Requirement 16)

*Companies **shall** account for land management production emissions according to the following requirements:*

- *Emissions sources: Companies **shall** account for land management production emissions from the following sources:*
  - *CH_4 and N_2O emissions from livestock, including emissions due to enteric fermentation, manure managed in controlled settings, and manure deposited by livestock on pastures, paddocks, and rangelands*
  - *N_2O and non-biogenic CO_2 emissions from soil management, including N2O emissions due to nitrogen inputs and internal soil processes on managed soils, and CO_2 emissions resulting from soil amendments, such as lime, urea, and other inputs*
  - *CH_4 and N_2O emissions from biomass burning and fires*
  - *CH_4 emissions from rice production*
  - *CH_4 emissions from peatland rewetting*
- *Animal products: Companies that raise livestock, practice aquaculture, or have animal products in their value chain **shall** account for land management production emissions on lands used for livestock grazing and croplands used for feed production consumed by the livestock or other animals over their life cycle.*

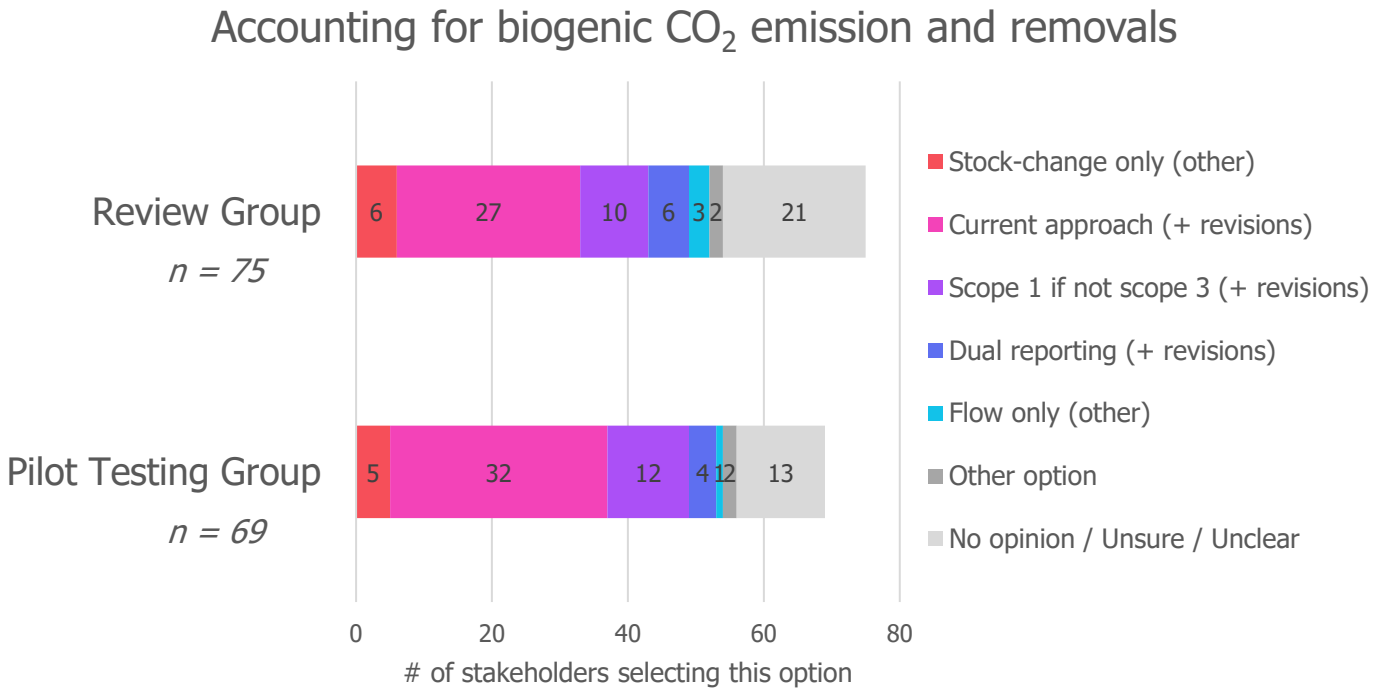
ISO
ISO14064-1:WD2 Section 5.2 & Annex G

- *The organization **shall** quantify and report non-CO_2 GHG emissions from land-based sources such as CH_4 from enteric fermentation, N_2O from application of nitrogenous fertilizers, and both CH_4 and N_2O from combustion of biomass.*
- *GHG emissions result from land use, land use change, and use and disposal of products with biomass that are not captured by quantifying changes in the land carbon stock and the harvested wood product pool. Examples of these GHG emissions include GHG emissions from:*
  - *enteric fermentation (CH_4),*
  - *application of nitrogenous fertilisers (N_2O),*
  - *manure management (CH_4 and N_2O),*
  - *rice cultivation (CH_4),*
  - *biomass combustion (CH_4, N_2O, NO_x), and*
  - *biomass decay in waste streams (CH_4). (Annex G.5)*

Orange text is used for emphasis or comparison throughout the section.

Open Question #1 – Biogenic CO_2 accounting and reporting

Q1) For companies with land-sector impacts, which of the following options should be pursued to account for and report biogenic CO_2 emissions and removals in the final Guidance?



Summary of findings:

- 57% of pilot testers and 50% of reviewers, who selected an option, preferred the **current approach** or that with some revisions
  - 18% of pilot testers and 11% of reviewers who selected the current approach proposed some revisions
- Of the stakeholders selecting **alternative options** from the current approach, more opted for **stricter flow-based accounting rules** rather than stock-change only
- Only 12 pilot testers commented on these options for technologically removed CO_2 accounting and reporting where the results were similar
- Most stakeholders who responded to open question #1 selected an option (72-81%)

Results based on feedback to open question #1 from Review Group and Pilot Testing Inventory Questionnaire

Note: The "Current approach" in the 2022 draft LSR Guidance required companies to account for "all direct and indirect gross CO_2 emission" and separately report these emissions.

Product Carbon Storage

LSR Standard
LSR Standard chapter 15

Requirement 24: Product carbon storage accounting

*If companies choose to account for and report product carbon storage for agricultural or TCDR-based products, they **shall** meet the following requirements:*

- *Accounting approach: Companies **shall** account for the annual net product carbon stock change…*
- *Data quality: Companies **shall** account for and report product carbon storage using information regarding the biogenic or TCDR-based carbon content of their sold products…*
- *Losses of stored carbon: If the total biogenic and/or TCDR-based product carbon stock decreases in the reporting year… companies **shall** report negative product carbon storage…*

Requirement 25.PS: Land accounting for agricultural product carbon storage

*When estimating net biogenic product carbon stock changes, companies **shall** only include biogenic carbon from agricultural products that meet the requirement for complete life cycle GHG emissions reporting, including land carbon leakage (where required), and no significant land use change emissions (see Requirement 25).*

- *This requirement does not apply to biogenic CO_2 or carbon associated with waste materials…*

ISO
ISO14064-1:WD2 Section 5.2 and Annex G

- *The organization **should** quantify and report CO_2 emissions or CO_2 removals from the harvested wood product and other products with biomass (HWP+) carbon pool, which if quantified, **shall** be quantified based on the net change in carbon stocks within the HWP+ carbon pool within the reporting boundary.*
- *When chain of custody models are used for harvested wood products and other products with biomass (HWP+) carbon pool, the organization **shall** follow Annex N .*
- *Short-lived harvested wood products and products with biomass (e.g., non-annual crop energy products) **may** be excluded from the harvested wood product and other products with biomass GHG quantification due to the immaterial effect on the climate when CO_2 removed from the atmosphere is returned to the atmosphere within a few years.*
- *If CO_2 emissions (or CO_2 removals) are excluded from the GHG quantification for specific bio-based product carbon stocks, the CO_2 removals (or CO_2 emissions) of those same specific product with biomass carbon stocks **shall** also be excluded.*
- *Organisations **should** use the most representative data available to calculate the net carbon stock change in the HWP+ carbon pool. All choices and assumptions, including applied methodologies and parameters (e.g., half-lives, recycling rates), **shall** be justified and documented.*

Orange text is used for emphasis or comparison throughout the section.
See Section 15.2 and 15.3 of the LSR Standard for full text of the accounting and reporting requirements and recommendations

Annex B

Corporate Standard TWG Meeting 10: Preliminary poll results

GREENHOUSE GAS PROTOCOL

Meeting 10 poll results: Formulas and scope 1 data selection

Subtopic	Question	Preliminary poll results
Quantification formula	Which of the following options do you prefer on the topic of a formulas for quantification of GHG emissions?	• **29 of 45: GHGP option: Stay silent in the standard, but include formulas in guidance.** • 16 of 45: ISO option: Include text on formulas for calculating GHG emissions in the standard. • 0 of 45: Abstain
Scope 1 data collection	Which of the following options do you prefer on the topic of a scope 1 data selection and collection?	• **34 of 43: GHGP option: "Shall" statement** • 8 of 43: ISO option: "Should" statement • 1 of 43: Abstain
Best available / representative data	Which of the following options do you prefer on the topic of best available or representative data?	• **30 of 43: GHGP option: Representative data** • 13 of 43: ISO option: Best available data • 0 of 43: Abstain
Site-specific data	Which of the following options do you prefer on a provision on site-specific data?	• **29 of 41: GHGP option: Site-specific data provision** • 10 of 41: ISO option: Stay silent • 2 of 41: Abstain
Accessible data	Which of the following options do you prefer on a provision on accessible data?	• **31 of 40: GHGP option: Accessible data provision** • 8 of 40: ISO option: Stay silent • 1 of 40: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.

Meeting 10 poll results: Reporting on scope 1 data

Subtopic	Question	Preliminary poll results
Artificial intelligence provision	Which of the following options do you prefer on the topic of disclosure about the use of artificial intelligence?	• 4 of 45: GHGP option 1: Simple requirement • **11 of 45: GHGP option 2: Requirement with examples** • **15 of 45: GHGP option 3: Requirement and recommendation** • **15 of 45: ISO option: Stay silent** • 0 of 45: Abstain
Detailed AI text	If option (b) or (c) is supported in the previous question, do you support the bracketed text?	• **19 of 42: Fully support** • **12 of 42: Support with minor edits** • 6 of 42: Oppose • 5 of 42: Abstain
Reporting on data sources	Which of the following options do you prefer on the topic of reporting on sources of data?	• **32 of 43: GHGP option: Shall disclose sources and description of emission factors** • 9 of 43: ISO option: Shall document sources • 2 of 43: Abstain
Reporting on heating values	Which of the following options do you support on the topic of heating values draft text?	• **32 of 43: GHGP option: Accounting requirement and reporting recommendation** • 9 of 43: ISO option: Stay silent • 2 of 43: Abstain
Reporting on oxidation values	Which of the following options do you support on the topic of oxidation factors?	• **22 of 42: GHGP option: Reporting recommendation** • **19 of 42: ISO option: Stay silent** • 1 of 42: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.

Meeting 10 poll results: Scope 1 monetary activity data

Subtopic	Question	Preliminary poll results
Scope 1 monetary activity data	Which of the following options do you prefer on the topic of scope 1 monetary activity data?	• **22 of 43: GHGP option 1: Physical units only** • **19 of 43: ISO option and GHGP option 2: Allow monetary activity data and prohibit spend-based emission factors** • 2 of 43: Abstain
Monetary activity data and scope 1 screening assessment	Should organizations be allowed to use spend-based emission factors for the scope 1 and scope 2 screening assessment?	• **27 of 43: Yes, for the screening assessment only** • 16 of 43: No, spend-based emission factors should never be used for scope 1 and scope 2 • 0 of 43: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.

Meeting 10 poll results: Scope 1 data quality

Subtopic	Question	Preliminary poll results
Data quality indicators	Should GHGP adopt the data quality indicators provision proposed by ISO?	• **17 of 42: GHGP option: Stay silent** • **20 of 42: ISO option: Adopt provision** • 5 of 42: Abstain
Improving data quality over time	Do you support the GHGP provisions on improving data quality over time?	• **31 of 42: Fully support** • **8 of 42: Support with minor edits** • 1 of 42: Oppose • 2 of 42: Abstain
Data quality improvement targets	Do you support the GHGP provisions on data quality improvement targets?	• **20 of 40: Fully support** • **5 of 40: Support with minor edits** • 6 of 40: Oppose • 10 of 40: Abstain
Quality versus currentness of data	Do you support the new provision on quality versus currentness of data?	• **16 of 39: Fully support** • **6 of 39: Support with minor edits** • **9 of 39: Oppose** • 8 of 39: Abstain
Data quality reporting recommendations	Do you support maintaining the GHGP data quality reporting recommendations?	• **26 of 40: Fully support** • **7 of 40: Support with minor edits** • 3 of 40: Oppose • 4 of 40: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.

Meeting 10 poll results: Uncertainty

Subtopic	Question	Preliminary poll results
Recommend or require uncertainty	Which of the following options do you prefer on the topic of uncertainty assessment?	• **29 of 41: GHGP option: Recommend uncertainty assessment** • 9 of 41: ISO option: Require uncertainty assessment • 3 of 41: Abstain
Recommend quantitative uncertainty assessment	Do you support adding a recommendation to conduct a quantitative uncertainty assessment?	• **29 of 42: Fully support** • **5 of 42: Support with minor edits** • 6 of 42: Oppose • 2 of 42: Abstain
Type of uncertainty assessment option	Do you support adding a recommendation to conduct a quantitative uncertainty assessment?	• **21 of 42: GHGP option: "May statement" for any type of uncertainty assessment** • **13 of 42: ISO option: Require qualitative uncertainty assessment in the absence of a quantitative assessment** • **6 of 42: Hybrid option: "May" statement for qualitative uncertainty assessment** • 2 of 42: Abstain
Uncertainty by scope	Do you support adding a recommendation to conduct a quantitative uncertainty assessment?	• **22 of 41: GHGP option: Stay silent** • **17 of 41: ISO option: Should separately by scope and may by subcategory** • 2 of 41: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.

Meeting 10 poll results: Disaggregation by scope 1 data source tier

Subtopic	Question	Preliminary poll results
Require or recommendation scope 1 data source tier disaggregation	Which of the following options do you prefer on the topic of scope 1 disaggregation by data source tier?	• **25 of 44: GHGP option: Require disaggregation** • **14 of 44: ISO option: Recommend disaggregation** • 5 of 44: Abstain
Primary emission factors description	How should emission factors for the primary data tier be defined?	• **32 of 43: GHGP option: "Representative emission factors expressed in physical units", where representative is defined as technological, geographical, etc.** • 10 of 43: ISO option: "GHG emission factors expressed in physical units" • 1 of 43: Abstain
Unclassified tier	Which of the following options do you prefer on the topic of an unclassified tier?	• **27 of 43: GHGP option: Include unclassified tier** • 10 of 43: ISO option: Remove unclassified tier • 6 of 43: Abstain
Reporting for unclassified tier	Which of the following options do you prefer on the topic of an unclassified tier?	• **22 of 41: Requirement: [Shall report the rationale for reporting any emissions under the unclassified data source tier.]** • **7 of 41: Recommendation: [Should report the rationale for reporting any emissions under the unclassified data source tier.]** • 12 of 41: Abstain
Level of disaggregation	Should scope 1 disaggregation by data source tier be at the scope 1 level or scope 1 category level?	• **21 of 41: Scope 1 level (e.g., total scope 1 emissions that are primary data)** • **14 of 41: Scope 1 category level (e.g., stationary combustion primary data, stationary combustion secondary data)** • 6 of 41: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.

Meeting 10 poll results: Scope 1 calculation methods

Subtopic	Question	Preliminary poll results
General approach to scope 1 methods*	Which option do you prefer as a general approach to scope 1 methods?*	• **26 of 33: GHGP option: Recommend scope 1 calculation method hierarchy** • 5 of 33: ISO option: Provide general guidance on the selection of a GHG quantification model • 2 of 33: Abstain
Direct measurement versus calculation method*	Which option do you prefer on the approach to direct measurement versus calculation methods?*	• **25 of 33: GHGP option: Use direct measurement if already doing so, otherwise use calculation method** • 6 of 33: ISO option: Direct measurement preferred • 2 of 33: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.
*Poll question posed in feedback survey only

Meeting 10 poll results: Consolidation

Subtopic	Question	Preliminary poll results
General provision	Do you support the following draft text provision to establish the relationship between organizational boundary and operational boundary?	• **38 of 47: Fully support** • **7 of 47: Support with minor edits** • 1 of 47: Oppose • 1 of 47: Abstain
General provision	Which option do you support in the following draft text provision? *The organization [shall/should] use a consistent consolidation approach across its scope 1, scope 2, and scope 3 inventories.*	• **40 of 45: GHGP option 1: "Shall" statement** • 5 of 45: ISO option and GHGP option 2: "Should" statement • 0 of 45: Abstain
General provision	Which of the following options do you prefer on including a provision to highlight the relationship between consolidation approach and the intended use of the GHG inventory?	• **27 of 46: GHGP option: Stay silent** • **16 of 46: ISO option: Recommend consolidation approach to be consistent with intended use** • 3 of 46: Abstain
Equity share	Which of the following options do you support for the equity share approach?	• **35 of 47: GHGP option: Eliminate equity share** • 11 of 47: ISO option: Maintain equity share • 1 of 47: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.

Meeting 10 poll results: Organizational boundaries

Subtopic	Question	Preliminary poll results
Consolidation: General provision	Do you support the following draft text provision to establish the relationship between organizational boundary and operational boundary?	• **38 of 47: Fully support** • **7 of 47: Support with minor edits** • 1 of 47: Oppose • 1 of 47: Abstain
Consolidation: General provision	Which option do you support in the following draft text provision? *The organization [shall/should] use a consistent consolidation approach across its scope 1, scope 2, and scope 3 inventories.*	• **40 of 45: GHGP option 1: "Shall" statement** • 5 of 45: ISO option and GHGP option 2: "Should" statement • 0 of 45: Abstain
Consolidation: General provision	Which of the following options do you prefer on including a provision to highlight the relationship between consolidation approach and the intended use of the GHG inventory?	• **27 of 46: GHGP option: Stay silent** • **16 of 46: ISO option: Recommend consolidation approach to be consistent with intended use** • 3 of 46: Abstain
Consolidation approach: Equity share	Which of the following options do you support for the equity share approach?	• **35 of 47: GHGP option: Eliminate equity share** • 11 of 47: ISO option: Maintain equity share • 1 of 47: Abstain
Consolidation approach: Additional provision to financial control*	Which of the following options do you prefer on the topic of additional (separate) reporting on emissions under financial control by owned interests and minority interests held by other parties?	• **20 of 33: GHGP option: Stay silent** • 11 of 33: ISO option: Recommend additional (separate) reporting of emissions by owned interests and minority interests owned by other parties • 2 of 33: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.
*Poll question posed in feedback survey only

Meeting 10 poll results: Organizational boundaries

Subtopic	Question	Preliminary poll results
Consolidation: Additional recommendation	Which of the following options do you prefer for the additional consolidation provision on the basis of fair representation?	• **15 of 48: Reconsider additional consolidation recommendation** • **26 of 48: GHGP option: Recommend ('should') consolidation in addition to the recommended financial control approach** • **7 of 48: ISO option: Require ('shall') consolidation additional to the financial control approach** • 8 of 48: Abstain
Consolidation: Additional recommendation	Which scopes should the additional consolidation provision apply to?	• **31 of 48: GHGP option: Scope 1 and scope 2 emissions only** • 10 of 48: ISO option: All scopes (scope 1 2 3) • 7 of 48: Abstain
Consolidation: Additional recommendation	Which of the following options do you prefer for the reporting of emissions as per additional consolidation?	• **34 of 47: GHGP option: Report additional consolidation information separately from inventory values (maintain a single consolidation approach based inventory values)** • 8 of 47: ISO option: Include in the inventory values • 5 of 47: Abstain
Consolidation: Operational control provision	Do you support using a 'may' statement to highlight the permissible standalone consolidation approach options while further promoting the recommended consolidation approach?	• **34 of 46: GHGP option: Yes, include a 'may' statement** • 9 of 46: ISO option: No, do not include a 'may' statement • 3 of 46: Abstain

Teal text indicates majority support; **orange** text indicates split opinions.