



Corporate Standard Technical Working Group

Meeting #10

GHG Protocol Secretariat team:

Iain Hunt, Hande Baybar, Allison Leach

October 6, 2026

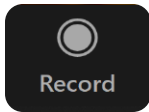


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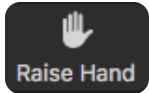


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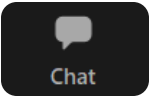
Meeting information



This meeting is **recorded**.



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



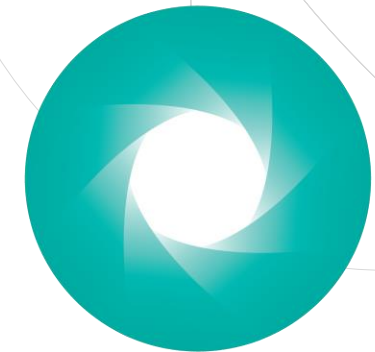
You can also use the **Chat** function in the main control.



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

Agenda

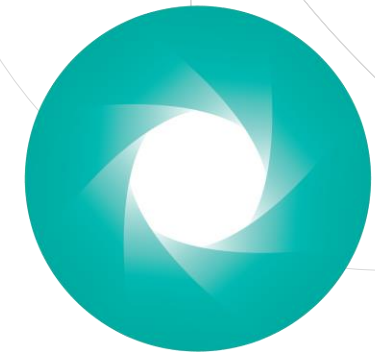
- Introduction and housekeeping 10 minutes
- Organizational boundaries 80 minutes
- Calculation methods and data quality 80 minutes
- Wrap up and next steps 10 minutes



GREENHOUSE GAS PROTOCOL

Agenda

- **Introduction and housekeeping** 10 minutes
- Organizational boundaries 80 minutes
- Calculation methods and data quality 80 minutes
- Wrap up and next steps 80 minutes



GREENHOUSE GAS PROTOCOL

Housekeeping: Guidelines and procedures

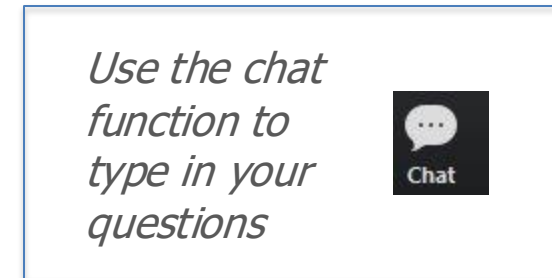
- We want to make **TWG meetings a safe space** – our discussions should be open, honest, challenging status quo, and ‘think out of the box’ in order to get to the best possible results for GHG Protocol
- Always **be respectful**, despite controversial discussions on content
- TWG members should **not 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



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

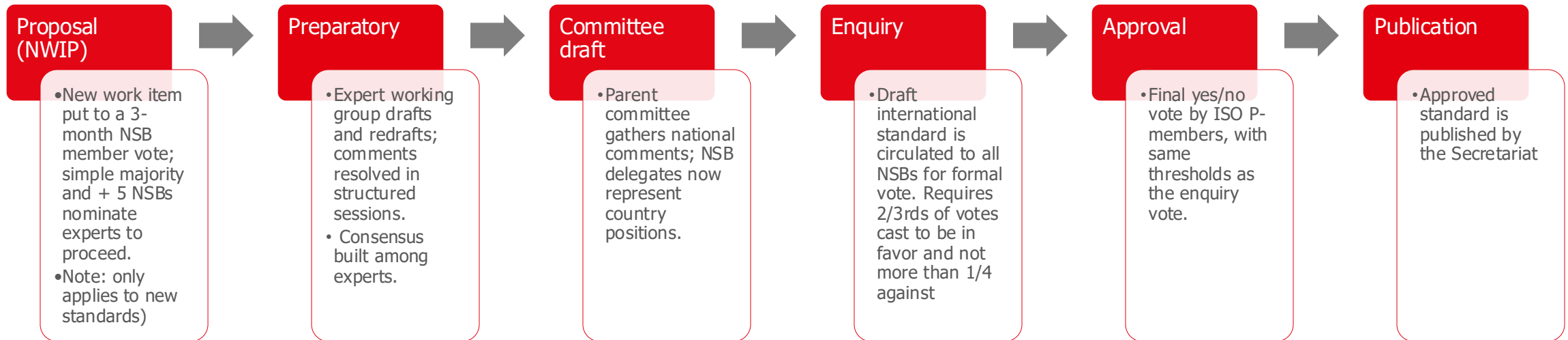
UPDATE: Recordings will be available upon request only. Please email baybar@wbcsd.org to request the recording.

GHG Protocol Decision-Making Criteria



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

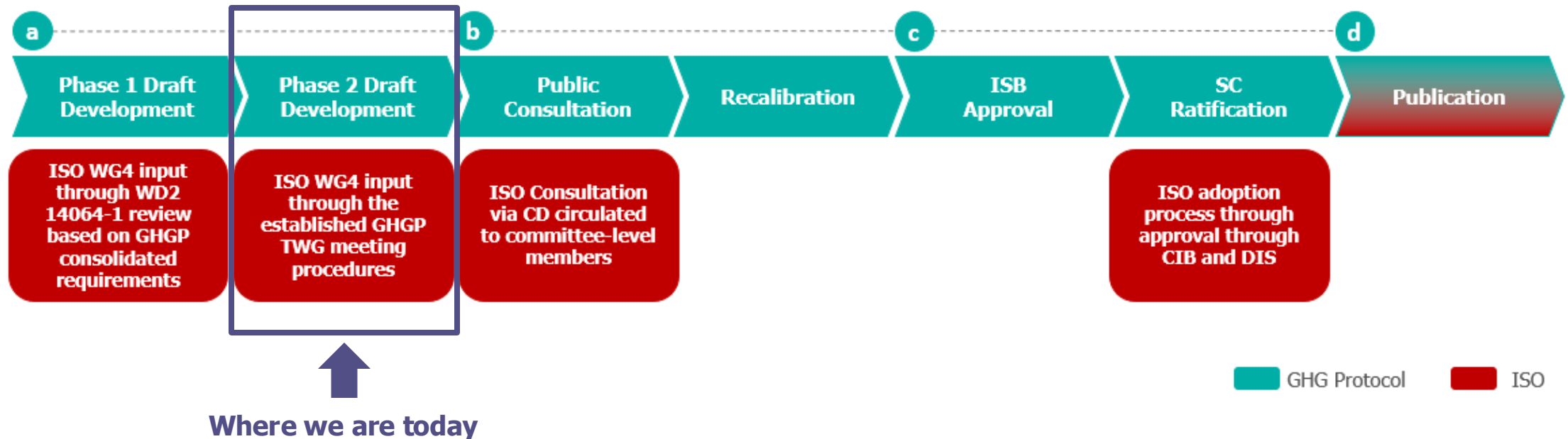


- The process for updating ISO 14064-1 is currently at **preparatory stage**
- Between March 31 and May 11, ISO WG 4 were provided a copy of existing GHG Protocol standards text that combined existing, published requirements and recommendations, and any requirements or recommendations that had, by that 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.

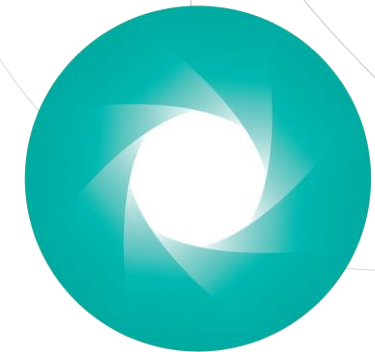
Today's objectives

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. Organizational boundaries (Subgroup 2)
2. Calculation methods and data quality (Subgroup 3)

Agenda

- Introduction and housekeeping 10 minutes
- **Organizational boundaries** 80 minutes
- Calculation methods and data quality 80 minutes
- Wrap up and next steps 10 minutes



GREENHOUSE GAS PROTOCOL

Subgroup 2 Phase 1 topic

Topic	Subtopic	GHGP and ISO options for discussion and polling?
Organizational boundaries	General aspects	Yes [ISO option includes equity share as an option]
	Consolidation package (e.g., recommended approach)	Yes [ISO option includes equity share; additional consolidation for “fair representation” is required on top of a recommended financial control and is included in the inventory]
	Financial control approach	Yes [ISO proposes a minor addition]
	Operational control approach	No, GHGP and ISO options are aligned

Note: Polls will also be held on specific new text provisions that originate from the Corporate Standard and amendments or the Ad Hoc Text Editing Group

Organizational boundary: Consolidation - general (draft text)

GHG Protocol

Corporate Standard chapter 3 section 1

- The organization **shall** account for its consolidated GHG emissions *based on control*. Control can be defined in terms of financial control or operational control.
- [GHG emissions from any [entity, operation, asset or contractual arrangement] that the organization controls (i.e., financial control or operational control) **shall** be included in its scope 1 and 2 emissions. GHG emissions from any [entity, operation, asset or contractual arrangement] the organization has an interest (e.g., wholly or partially owns) but does not control (e.g., investments) **shall be excluded** from its scope 1 and scope 2 emissions and **shall** be included in its scope 3 inventory.] *
- The organization **should** conduct a screening assessment ... to determine the consolidation approach that enables fair representation of its GHG emissions. **
- The organization [**shall/should**] use a consistent consolidation approach across its scope 1, scope 2, and scope 3 inventories.

ISO

ISO14064-1:WD2 Clause 5.4.1

- The organization **shall** define its organizational boundaries.
- The consolidation approach **shall** be consistent with the intended use of the GHG inventory.
- The organization **shall** quantify and report its consolidated GHG emissions *based on control or equity share* approach. Control is defined in terms of financial control or operational control.
- Emissions from any asset the organization controls (i.e., financial control or operational control) **shall** be included in its direct GHG emissions (Scope 1 emissions), but emissions from any asset the organization wholly or partially owns but does not control (e.g., investments) **shall** be excluded from its direct GHG emissions and shall be included in its scope 3 GHG inventory.
- The organization **should** use a consistent consolidation approach across Scope 1, Scope 2, and Scope 3 GHG inventories.

ISO option includes the equity share approach.

Note: Bullet 4 does not address the equity share approach.

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

* This provision is recommended by the Secretariat to establish the relationship with [operational/inventory/reporting boundaries].

** Provision simplified to focus on key content.

Organizational boundary: Consolidation - specific (draft text)

GHG Protocol

Corporate Standard chapter 3 section 1

- The organization **shall** account for its consolidated GHG emissions *based on control*. Control can be defined in terms of financial control or operational control. *
- The organization **should** apply the financial control approach.
- Additionally, [if it enables the organization] to provide a fair representation of the organization's GHG emissions, the organization **should separately** (i.e., as additional information not to be included in the inventory) account for all required *scope 1 and scope 2 emissions* from [entities, operations, assets or contractual arrangements] under the reporting organization's *operational control* that are not under financial control.
- The organization **may** apply the operational control approach in lieu of financial control.

ISO

ISO14064-1:WD2 Clause 5.4.1

- The organization **shall** quantify and report its consolidated GHG emissions *based on control or equity share approach*. Control is defined in terms of financial control or operational control. *
- The organization **should** apply the financial control consolidation approach, whereby it quantifies and reports on all required GHG emissions and GHG removals from entities under the organization's financial control (i.e., included in their consolidated financial statements).
- When financial control fails to provide a fair representation of the organizational boundary, the organization **shall apply the operational control or equity share approach additional to financial control**.

* Provision is also listed on previous slide and is repeated here to present specific "package" of rules for choosing and applying the consolidation approach.

GHGP
Consolidation package

Proposed package for setting organizational boundary

Preliminary outcome

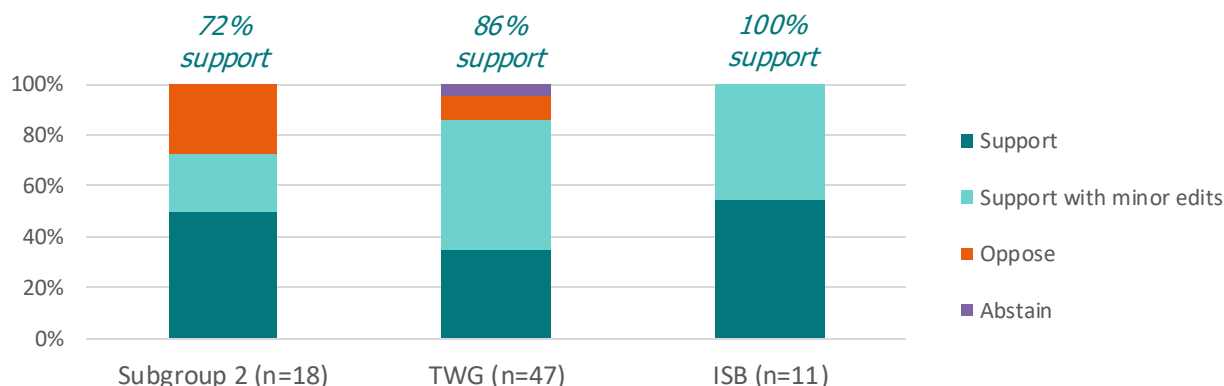
1. *Require* consolidation based on **control** (*eliminate equity share*)
2. *Recommend* **financial control**
3. *Recommend* **add-on reporting** under **operational control** where relevant
4. Maintain **operational control** as a **standalone option** where relevant
5. **Disclosure requirement** on rationale for applying a different approach

Note: Revisions also include updates to the definitions of financial control and operational control.

Rationale

- Maintain optionality to **support diverse applications** of the standard
- **Promote standardization** and **enhance comparability** of GHG information
- Recommend a **best practice approach** for companies to disclose a **complete picture of emissions** under their control and **promote transparency**

Level of support *



Potential implications

- Recommended best practice approach **more complex** than status quo (*when add-on reporting applies*)
- Continued **coordination with external programs** needed to promote **interoperability**
- Some **optionality maintained**, not all reporters expected to adopt recommended best practice approach
- Equity share approach **eliminated** (*captured by mapping to financial control and requiring scope 3 category 15 reporting*)

* Each individual item in the consolidation package received majority support from both CS TWG and ISB.

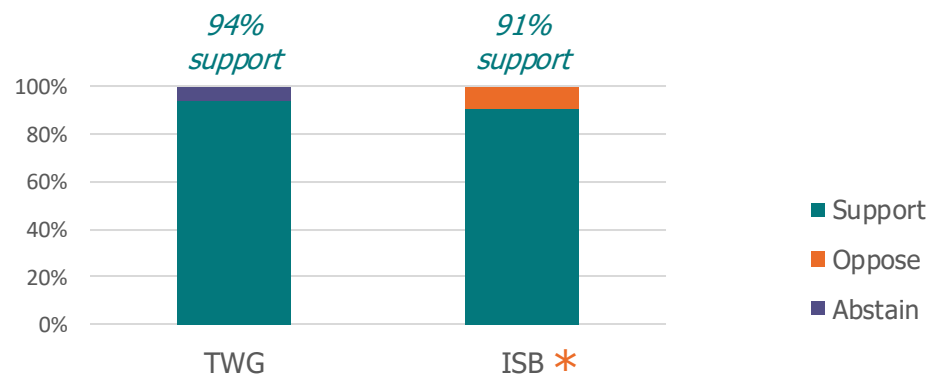
GHGP
Consolidation approach

Equity share approach

Preliminary outcome

Eliminate the equity share approach

Level of support



Rationale

- Equity share is **effectively embedded in the revised financial control approach**, with non-consolidated investments captured in required scope 3 category 15 reporting.
- Avoids underreporting** of scope 1 and 2 emissions (e.g., emissions from not wholly-owned but controlled entities are consolidated based on equity owned) **
- Avoids scope 1 and 2 accounting **complexities** arising from frequent ownership % changes
- Promotes **comparability** by providing less options
- Very limited adoption** (2% of CDP 2023 public responders)

Potential implications

- Alignment challenges** with key external programs **while maintaining interoperability**
- ISO WG4 position** is to maintain equity share

* ISB pulse check question: Do you support maintaining optionality between the financial and operational control approaches.

** ISO WG4 proposes *recommending* emissions under financial control could be separated by owned interest and minority interest owned by other parties, further embedding the intent of the equity share approach in the revised financial control approach.

Recent updates to organizational boundary requirements of key programs

	ESRS	SBTi
Initial/ Interim requirements	Emissions reporting boundary (ESRS E1 v1.6 Exposure Draft): “The organisational boundary to be used in disclosing [GHG emissions] shall be the reporting undertaking... which is equivalent to the financial control (consolidation) boundary of the GHG Protocol” (AR 19), requirement to separately report scope 1 and scope 2 emissions based on operational control when “due to specific facts and circumstances” financial control “fails to convey a fair presentation of emissions deriving from operated assets that are outside of the reporting undertaking”	Two options were under consideration for defining organizational and operational boundaries (Corporate Net-Zero Standard v2.0 consultation draft): • Option 1: Organizational and operational boundaries defined according to GHG Protocol Corporate Standard • Option 2: Organizational and operational boundaries are consistent with scope of entities* in financial statements
Updated requirements	Emissions reporting boundary (revised ESRS E1 AR19, September 2026): “Chapter 5 of ESRS 1 General Requirements defines the reporting boundary to be applied, corresponding to financial control as per the GHG Protocol Corporate Accounting and Reporting Standard (2004). Alternatively , the undertaking may use the equity share or operational control approach as defined in the GHG Protocol Corporate Accounting and Reporting Standard (2004).”	Organizational and operational boundaries (CNZS v2.0 C3.1, June 2026) “Organizational and operational boundaries shall be defined in alignment with applicable GHG Protocol Standards, using the most recent and effective versions available, or as required for compliance with applicable national or subnational regulatory frameworks .”

Both updates move toward Aligned, simplified consolidation requirements

- **Aligned:** Main objective of these revisions is **alignment** with leading global GHG reporting standards (*i.e.*, GHG Protocol and IFRS S2) **rather than** reconsidering the **merits of** reintroducing the **equity share approach**
- **Simplified:** Currently no **key external program**, including ESRS, **adopts a complex** (e.g., dual or layered) **consolidation approach**

* “entities, operations, assets and other holdings”



Do you think the additional consolidation recommendation should be reopened for discussion?



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ISO WG4
Organizational boundary

Organizational boundary: Consolidation (general and specific)



Preliminary outcome

Summary of outcome (select text highlighting key divergence)

- The organization **shall** quantify and report its consolidated GHG emissions based on control or equity share approach.
- The organization **should** apply the financial control consolidation approach...
- When financial control fails to provide a fair representation of the organizational boundary, the organization **shall** apply the operational control or equity share approach additional to financial control.

Level of support from ISO WG4

Consensus reached by WG4, no polls conducted

WG4 were presented option 1 (GHG P) and option 2 (ISO) in WD2 but decided to merge these 2 options to hold financial control as recommended.

Rationale

- Equity approach still provides value for financial institution since scope 1 reporting is viewed as the main responsibility of the organization
- EU regulation mentions equity approach "Alternatively, the undertaking may use the equity share or operational control approach as defined in the GHG Protocol (2004)." — Draft ESRS Annexes, AR 19 (6 May 2026)
- It is included as an additional information based on the rest of the test where financial control is recommended and any deviation requires justification
- Removing equity approach may lead to contradiction with existing regulation.
- WG4 members argued that removing equity approach can result in underreporting

Implications and concerns

- None identified

Organizational boundary: Consolidation - general (draft text)

Discussion



Polls



#	Text provision	Options
1	Do you support the following draft text provision to establish the relationship between organizational boundary and operational boundary? <i>[GHG emissions from any [entity, operation, asset or contractual arrangement] that the organization controls (i.e., financial control or operational control) shall be included in its scope 1 and 2 emissions. GHG emissions from any [entity, operation, asset or contractual arrangement] the organization has an interest (e.g., wholly or partially owns) but does not control (e.g., investments) shall be excluded from its scope 1 and scope 2 emissions and shall be included in its scope 3 inventory.]</i>	a. Fully support b. Support with minor edits c. Oppose
2	Which option do you support in the following draft text provision? <i>The organization [shall/should] use a consistent consolidation approach across its scope 1, scope 2, and scope 3 inventories.</i>	a. GHGP option 1: Shall (GHGP Secretariat proposal) b. ISO option and GHGP option 2: Should (current Scope 3 Standard text)
3	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?	a. GHGP option: Stay silent b. ISO option: Recommend consolidation approach to be consistent with intended use

All poll questions include an option to Abstain.

Organizational boundary: Equity share approach (draft text)

Discussion



Polls



Text provision	Options
Which of the following options do you support for the equity share approach?	a. GHGP option: Eliminate equity share b. ISO option: Maintain equity share * c. Abstain

* To be maintained both as an add-on to financial control and as permissible standalone option.

Organizational boundary: Additional consolidation provision (draft text)

Discussion



GHGP option: Additional recommendation to **separately** report **scope 1 and 2 emissions** under **operational control** (not under financial control) (fair representation)

ISO option: Requirement to report **emissions** under **operational control or equity share additional to** financial control

Polls



#	Text provision	Options
1	Which of the following options do you prefer for the additional consolidation provision on the basis of fair representation?	a. GHGP option: Recommend ('should') consolidation in addition to the recommended financial control approach b. ISO option: Require ('shall') consolidation additional to the financial control approach c. Reconsider additional consolidation provision (e.g., feasibility and benefits trade-offs)
2	Which scopes should the additional consolidation provision apply to?	a. GHGP option: Scope 1 and scope 2 emissions only b. ISO option: All scopes (scopes 1-2-3)
3	Which of the following options do you prefer for the reporting of emissions as per additional consolidation ?	a. GHGP option: Report additional consolidation information separately from inventory values (i.e., maintain a single consolidation approach-based inventory values) b. ISO option: Include in the inventory values

All poll questions include an option to Abstain.

Organizational boundary: Consolidation approach options (draft text)

Discussion



Polls



Text provision	Options
Do you support using a 'may' statement to highlight the permissible standalone consolidation approach option while further promoting the recommended consolidation approach?	a. GHGP option: Yes, include a 'may' statement (<i>i.e., The organization may apply the operational control consolidation approach <u>in lieu of financial control.</u></i>) b. ISO option: No, do not include a 'may' statement c. Abstain

Organizational boundary: Reporting (draft text)

GHG Protocol

Corporate Standard chapter 3 section 1

- The organization **shall** report the following information on organizational boundaries:
 - The consolidation approach used.
 - The justification for choosing not to apply the recommended consolidation approach, if applicable.
- If additional recommendation to separately report scope 1 and scope 2 emissions under operational control but not under financial control if enables fair representation is applicable, the organization **should separately** (i.e., as additional information not to be included in the inventory values) report all required scope 1 and scope 2 emissions from [entities, operations, assets and contractual arrangements] under the reporting organization's operational control that are not under financial control.
- The organization **should** report the outcomes of a screening assessment comparing the entities, operations and assets under the reporting organization's financial control and operational control as part of its justification for choosing not to apply the recommended consolidation approach.

ISO

ISO14064-1:WD2 Clause 5.4.1

- The organization **shall** report the consolidation approach used.
- Organizations choosing not to apply the recommendations to consolidate GHG emissions and GHG removals* based on financial control and if relevant separately report GHG emissions and GHG removals under operational control (not already included under financial control) or **equity share approach shall** report their rationale for choosing a different approach. The rationale **should** include the outcomes of a screening assessment comparing the entities, operations, and assets under the organization's **financial control and operational control**.**

ISO approach broadly aligns with GHG Protocol provisions (except from maintaining the equity share approach.

** Does not refer to the equity share approach.

* Whether to refer to removals and related terms (e.g., sinks, reservoirs) pending approach to integrating cross-cutting content from the Land Sector and Removals Standard (LSRS) into the consolidated Corporate Standard. Topic to be considered at a future meeting.

Organizational boundary: Financial control approach (draft text)

GHG Protocol Corporate Standard chapter 3 section 2

- The organization **shall** be considered to have financial control over an [entity or operation] if it consolidates that [entity or operation] in its financial statements.
- To determine the organizational boundary under the financial control approach, the organization **shall**:
 - Define its organizational boundary for GHG accounting using the same methods adopted in its consolidated financial statements.
 - Account for GHG emissions from [entities and operations] that are consolidated in the organization's financial statements, whether as a single entity or a consolidated group of entities, under scope 1, scope 2 and scope 3.
 - Account for GHG emissions from the following entities and operations in its organizational boundaries in accordance with the financial accounting and reporting [standard/framework] applied by the organization: wholly-owned subsidiaries, wholly-owned operations, and investees that are not wholly-owned but whose assets, liabilities, costs, and revenues are consolidated in the financial statements (i.e., using the same consolidation method applied in financial accounting).
 - Exclude GHG emissions from [entities and operations] in which the reporting organization has an interest but lacks financial control (e.g., equity method investments under U.S. GAAP or IFRS, unconsolidated investees, associates, joint ventures) from scope 1 and scope 2 emissions. Account for these GHG emissions under scope 3 category 15 (Investments).

ISO ISO14064-1:WD2 Clause 5.4.2

- An organization has financial control over an entity or operation if it consolidates the latter in its financial statements. The organization applying the financial control approach **shall** define its organizational boundary for GHG quantification using the same methods adopted in its consolidated financial statements. GHG emissions and GHG removals associated with entities and operations that are consolidated in the organization's consolidated financial statements, whether as a single entity or a consolidated group of entities, **shall** be quantified under scope 1, scope 2 and scope 3, as applicable.
- This organizational boundary is defined by the financial accounting and reporting standard applied in the organization's financial reporting, and includes wholly-owned subsidiaries and operations, as well as investees or investment in projects that are not wholly-owned but whose assets, liabilities, costs, and revenues are consolidated in the financial statements in accordance with the applicable accounting standards.
- Under the financial control approach, GHG emissions associated with an investee or investment in projects that is not wholly-owned but is consolidated in the financial statements by the organization **shall** be consolidated in the GHG inventory using the same methods as financial accounting. *The organization **should** provide an additional (separate) disclosure of GHG emission from the investee or investment in projects included in the GHG inventory, separated by owned interests and minority interests held by other parties.**
- If included in the organizational boundary, GHG emissions and GHG removals associated with entities and operations in which the organization has an interest but lacks financial control (e.g., equity method investments under U.S. GAAP or IFRS, such as unconsolidated investees, associates, joint ventures), **shall** be excluded from scope 1 and scope 2 emissions and **shall** be quantified under subcategory 3.15.

* Earlier GHGP text also included this provision which was taken out for simplification.

ISO WG4
Financial control

Organizational boundary: Financial control approach



Preliminary outcome

Summary of outcome

- *The organization **should** provide an additional (separate) disclosure of GHG emission from the investee or investment in projects included in the GHG inventory, separated by owned interests and minority interests held by other parties.*

Rationale

- Original text came from GHG P option 1 when developing WD2, WG4 agreed to keep this text that seemed useful at this time.
- This is a recommendation so WD2 did not receive any comments to remove it and was kept as is when option 1 and 2 are merged.
- Removing this does not change the result as it was originally provided by GHG P option 1 text

Level of support from ISO WG4

- Consensus reached by WG4, no polls conducted
- WG4 were presented option 1 (GHG P) and option 2 (ISO) in WD2 but decided to merge these 2 options and this text was part of option 1 in WD2 and there was no comments to remove it, so it was kept since it is a recommendation.

Implications and concerns

- None identified

Organizational boundary: Financial control approach (draft text)

Discussion



Polls



Text provision	Options
Which of the following options do you prefer on the topic of additional (separate) reporting on emissions <u>under financial control</u> by owned interests and minority interests held by other parties?	a. GHGP option: Stay silent b. ISO option: Recommend additional (separate) reporting of emissions by owned interests and minority interests owned by other parties c. Abstain

Organizational boundary: Operational control approach (draft text)

GHG Protocol

Corporate Standard chapter 3 section 3

- The organization **shall** be considered to have operational control over an [entity, operation, assets or contractual arrangement] if:
 - The organization directly or indirectly has the power or practical ability to direct or implement the [entity's, operation's, asset's or contractual agreement's] policies, processes, or day-to day activities, particularly those that impact the [entity's, operation's, assets or contractual agreement's] GHG emissions—regardless of legal ownership or formal authority structures. *
 - In arrangements involving multiple parties, the organization has the greatest power or practical ability to direct or implement policies, processes, day-to-day activities or GHG emissions-related decisions. **

* The topic of key guidance (and examples) on how to implement the operational control approach will be further discussed by the full TWG.

** The topic of key guidance (and examples) on how to implement the operational control approach in multi-party arrangements will be further discussed by the full TWG.

ISO

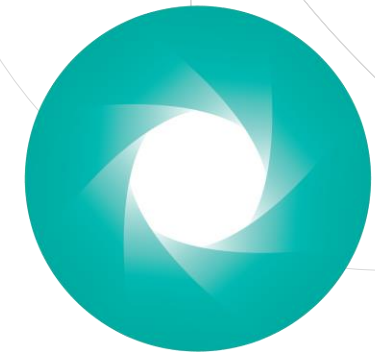
ISO14064-1:WD2 Clause 5.4.3

- An organization has operational control over an operation, entity or a contractual arrangement if the former directly or indirectly has the power or practical ability to direct or implement the latter's policies, processes, or day-to day activities of the operation, particularly those that impact the operation's greenhouse gas emissions— regardless of legal ownership or formal authority structures.
- In arrangements involving multiple parties, the entity with the greatest power or practical ability to direct or implement policies, processes, or day-to-day activities or emissions-related decisions **shall** be considered to have operational control.

ISO proposal aligns with GHG Protocol definition

Agenda

- Introduction and housekeeping 10 minutes
- Organizational boundaries 80 minutes
- **Calculation methods and data quality 80 minutes**
- Wrap up and next steps 10 minutes



GREENHOUSE GAS PROTOCOL

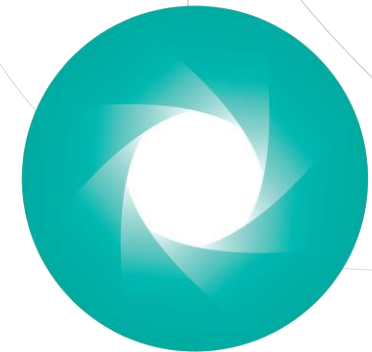
Subgroup 3 topics: Calculation methods and data quality

Topic	Quantification of GHG emissions	GHGP and ISO options for discussion and polling?	Notes
Identifying and calculating GHG emissions	Formulas for quantification	Yes	GHGP does not have this
	Scope 1 data selection and collection	Yes	ISO has “should” and omits site-specific, accessible data
	Scope 1 monetary activity data	Yes – priority for discussion	GHGP split opinions
	Reporting on scope 1 emissions	Yes	ISO does not have AI, heating value, oxidation factors
Managing inventory quality	Data quality improvement	Yes	GHGP does not have data quality indicators
	Uncertainty	Yes – priority for discussion	ISO requires; GHGP recommends
	Scope 1 data source tiers	Yes – priority for discussion	ISO recommends; GHGP requires
Scope 1 calculation methods and hierarchy	Scope 1 calculation methods	Yes	ISO removed “Guidance on the selection, collection and use of data for GHG quantification of scope 1 emissions”
	Scope 1 calculation method hierarchy	Yes	Not included in ISO

Note: Polls will also be held on specific new text provisions that originate from the Corporate Standard and amendments or the Ad Hoc Text Editing Group

Calculation methods and data quality:

Identifying and calculating GHG emissions



GREENHOUSE GAS PROTOCOL

Formulas for quantification of GHG emissions

GHG Protocol Corporate Standard chapter TBD

NA

GHG Protocol does not include provisions on the GHG emission formulas in the standard text.

Note: This has not been considered previously as part of the Corporate Standard TWG scope of work.

ISO ISO14064-1:WD2 Clause 6.8

- There are two steps for calculating GHG emission or GHG removal.
 - The first step is to convert GHG activity data into GHG emission (or GHG removal) (see Formula (1)).
 - $GAS = AD \times EF$ (1)
 - Where: GAS = quantity of GHG emissions (or GHG removals), AD = GHG activity data, EF = GHG emissions factor
 - The second step considers GWP of each GHG and allows the conversion of GHG emission into climatic impact, identified in tonnes of CO₂ equivalent (tCO₂e) Using Formula (2) :
 - $CO_2e = \sum(GAS_i \times GWP_i)$ (2)
 - Where: CO₂e = greenhouse gas emission in CO₂ equivalent; GAS_i = quantity of greenhouse gas i, GWP_i = global warming potential of the gas i
- GHG emission are expressed in CO₂ equivalent units, in addition to reporting separately by individual GHG.

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

ISO WG4
Scope 1 data

Formulas for quantification of GHG emissions



Preliminary outcome (select text)

GHG calculation formulas

- *There are two steps for calculating GHG emission or GHG removal.*
 - *The first step is to convert GHG activity data into GHG emission (or GHG removal) using Formula (1): $GAS = AD \times EF$*
 - *The second step considers GWP of each GHG and allows the conversion of GHG emission into climatic impact, identified in tonnes of CO₂ equivalent (tCO₂e) using Formula (2): $CO_2e = \sum(GAS_i \times GWP_i)$*

[See previous slide for details]

Rationale

- GHG emissions and GHG removals are either measured or modeled, this calculation shows how the modeling is done when activity data and GHG emission factor is used.
- Calculation is not normative* and shows one way of doing the calculation and helpful for the practitioners when activity data and GHG emission factors are used in the main text to see how it is applied.
- Provides additional guidance regarding how GHG emission factors and activity data is used
- This text can be further improved if GHG emission factors are already expressed in CO₂e, which is not covered in this equations

Level of support from ISO WG4

Consensus reached by WG4, no polls conducted

This was part of original ISO14064-1 WD1 added during revision and was kept as comments to WD1 and WD2 comments resolved based on consensus to this section

Implications and concerns

- None identified

*A normative reference in ISO standards is a document that must be understood and applied to correctly implement the main standard

Formulas for quantification of GHG emissions

Discussion



#	Topic	Options
1	Which of the following options do you prefer on the topic of a formulas for quantification of GHG emissions?	a. GHGP option: Stay silent in the standard, but include formulas in guidance.
		b. ISO option: Include text on formulas for calculating GHG emissions in the standard.

Polls



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

Identifying and calculating scope 1 emissions

GHG Protocol Corporate Standard chapter 6

- The organization **shall** undertake an exercise to identify its scope 1 emission sources in the following activity types: stationary combustion, mobile combustion, process emissions, fugitive emissions, and land emissions.
- The organization **should** identify the [most] appropriate **scope 1 calculation method** [using/and] the best available data¹.
- The organization **should** select activity data and emission factors, as applicable, that are the most **representative** in terms of technology, time, and geography; most complete; and most reliable.
- The units of the activity data and emission factor **shall** match.
- The organization **should** use **site-specific data**².
- The organization **may** use **accessible [data/emission factors]** [where no other data can be found]³.

¹ **Best available data** are the most representative in terms of technology, time, and geography; most complete; and most reliable.

² **Site-specific data** is primary data obtained within the organizational boundary. Site-specific data can be collected from a facility/equipment or can be averaged across facilities/equipment that have similar functions. They can be measured or modeled. (Source: ISO 14064-1:2018)

³ **Accessible data**: Publicly available; free to use; and from a credible source (such as a government agency, system operator, or recognized registry).

ISO ISO14064-1:WD2 Clause 6.9.2

- The organization **should** first identify GHG sources and GHG sinks within its Scope 1 in the following activity types: combustion from stationary equipment; combustion from mobile transport equipment; industrial, agricultural and forestry processes; anthropogenic processes with fugitive GHG emissions (unintentional); LULUC and HWP+; and other removal processes.
- The organization **should** then identify the most appropriate **GHG quantification model** and data.
- Finally, the organization **should** select representative emission factors and conversion factors, as applicable. The emission factor **shall** match the units of the activity data and the calculation method selected.
- The organization **should** use the **best available data** when quantifying its GHG emissions and GHG removals
- The organization **should** select emission factors that are the most representative in terms of technology, time, and geography; most complete; and most reliable.

ISO option does not include site-specific data or accessible data
Note that the above text is specific to scope 1

Orange text is used for emphasis or comparison.

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

GHGP
Scope 1 data

Identifying and calculating scope 1 emissions

Preliminary outcome

Draft text on identifying and calculating scope 1 emissions

- The organization **shall** undertake an exercise to **identify its scope 1 emission sources** in the following activity types: stationary combustion, mobile combustion, process emissions, fugitive emissions, and land emissions.
- The organization **should** identify the [most] appropriate scope 1 **calculation method** [using/and] the best available data.
- The organization **should** select activity data and emission factors, as applicable, that are the **most representative** in terms of technology, time, and geography; most complete; and most reliable.
- The units of the emission factor and activity data **shall** match.
- The organization **should** use **site-specific data**.
- The organization **may** use **accessible [data/emission factors]** [where no other data can be found].

Site-specific data is primary data obtained within the organizational boundary. Site-specific data can be collected from a facility/equipment or can be averaged across facilities/equipment that have similar functions. They can be measured or modeled.*

Best available data are the most representative in terms of technology, time, and geography; most complete; and most reliable.

Accessible data: Publicly available; free to use; and from a credible source (such as a government agency, system operator, or recognized registry).

Level of support

Subgroup 3 majority support across separate polls for provisions #1-4, best available data definition, site-specific data provision and definition, and accessible data provision and definition

Full TWG Meeting 7 majority support for package

- **43 of 47: Support** (30 fully, 13 with edits)
- 2 of 47: Oppose
- 2 of 47: Abstain

Rationale

- Provides clearer guidance on best practices for scope 1 calculations
- Promotes **accuracy, completeness, relevance,** and **consistency**
- Supports **feasibility** with “may” statement on accessible data
- Mostly aligned with **ISO WG4 position**

Implications and concerns

- Alignment needed with **ISO WG4 position**, (e.g., “should” statement for provision 1, terminology, ISO 14064-1 no longer refers to site-specific data)
- TWG members suggested **simplifying the text** (e.g., combine provisions #2 and #3)

ISO WG4
Scope 1 data

Scope 1 data selection and collection



Preliminary outcome (select text)

Recommendation for identifying scope 1 emissions

- The organization **should** first identify GHG sources and GHG sinks within its Scope 1 in the following activity types...
- The organization **should** then identify the most appropriate GHG quantification model and data.
- Finally, the organization **should** select representative emission factors and conversion factors, as applicable. The emission factor **shall** match the units of the activity data and the calculation method selected.
- The organization **should** use the best available data...
- The organization **should** select emission factors that are the most representative...

Level of support from ISO WG4

Consensus reached by WG4, no polls conducted

Rationale

- GHG quantification definition requires identifying GHG emissions (from GHG sources) and GHG removals (from GHG sinks) and there is a requirement to quantify scope 1 emissions meaning it shall identify along with document, measure or model and classify. In this recommendation it is stating that one can identify GHG sources and GHG sinks based on 6 subcategories which is a recommendation.
- WD2 notes to use best available data as site specific data that is primary data only and sometimes secondary data may be used instead recommends to use the best available data

GHG quantification: identifying, documenting, measuring or modelling, and classifying greenhouse gas emission (3.1.4), GHG removal (3.1.5), and related metrics using standardized methods

Note 1 to entry: The information is typically used as the basis for a GHG report (3.5.13) or GHG statement (3.5.7). Note 2 to entry: Related metrics can include GHG activity data (3.5.1) and GHG emission factor (3.1.8). Note 3 to entry: Use of the verb 'quantify' in this document refers to the actions of GHG quantification (3.3.1).

Implications and concerns

- Recommendations in this clause providing guidance on how to calculate scope 1 emissions
- Text is mostly aligned with GHG P thus implications are the same

Scope 1 data selection and collection (draft text)

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer on the topic of a scope 1 data selection and collection ?	a. GHGP option: "Shall" statement	<i>The organization shall undertake an exercise to identify its scope 1 emission sources in the following activity types: stationary combustion, mobile combustion, process emissions, fugitive emissions, and land emissions.</i>
		b. ISO option: "Should" statement	<i>The organization should first identify GHG sources and GHG sinks within its Scope 1 in the following activity types: combustion from stationary equipment; combustion from mobile transport equipment; industrial, agricultural and forestry processes; anthropogenic processes with fugitive GHG emissions (unintentional); LULUC and HWP+; and other removal processes.</i>
2	Which of the following options do you prefer on the topic of best available or representative data ?	a. GHGP option: Representative data	<i>The organization should select activity data, emission factors, [and conversion factors], as applicable, that are the most representative in terms of technology, time, and geography; most complete; and most reliable.</i>
		b. ISO option: Best available data	<i>The organization should use the best available data when quantifying its GHG emissions.</i>
3	Which of the following options do you prefer on a provision on site-specific data ?	a. GHGP option: Site-specific data provision*	<i>The organization should use site-specific data.*</i>
		b. ISO option: Stay silent*	NA
4	Which of the following options do you prefer on a provision on accessible data ?	a. GHGP option: Accessible data provision	<i>The organization may use accessible [data/emission factors] [where no other data can be found].</i>
		b. ISO option: Stay silent	NA

*GHGP adopted a site-specific data provision to promote alignment with ISO 14064-1:2018, but ISO 14064-1:WD2 has omitted a provision on site-specific data

Reporting on scope 1 emissions

GHG Protocol Corporate Standard chapter 6

- The organization **shall** use fuel consumption data and factors that use the same heating value basis.
- The organization **shall** report the following information on identifying and calculating its scope 1 emissions:
 - Sources of data, including activity data, emission factors, and GWP values used to calculate emissions.
 - Description of the emission factors used to calculate scope 1 emissions.
 - Whether artificial intelligence (AI) was used to prepare the organization's GHG inventory, including information such as what tools were used, how they were used [(e.g., identifying emission factors, calculating emissions, drafting report)], [whether AI-generated output was reviewed by a qualified person, and the proportion of emissions calculated using AI, by scope].
- The organization **should** report the following information on identifying and calculating its scope 1 emissions:
 - Whether lower heating values (LHV; also known as net calorific value) or higher heating values (HHV; also known as gross calorific value) were used to calculate its scope 1 emissions.
 - The oxidation factors used to calculate scope 1 emissions.

ISO ISO14064-1:WD2 Clause 6.9.1

The organization **shall** identify and document its data for each GHG source or GHG sink based on the reporting boundary selected in 5.5 for Statement #1 or Statement #2, if applicable.

ISO option does not include provisions on reporting of emission factor sources, the use of artificial intelligence, heating values, or oxidation factors.

Note that ISO 14064-1:WD2 includes reporting requirements but states that reporting recommendations and options are still under development.

Orange text is used for emphasis or comparison.

*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

GHGP
Scope 1 data

Reporting on scope 1 emissions

Preliminary outcome

Draft text on reporting scope 1 emissions (plus one accounting requirement)

- The organization **shall** use fuel consumption data and factors that [are on/use] the same heating value basis.
- The organization **shall** [report/disclose] the following information on identifying and calculating its scope 1 emissions:
 - **Sources of data**, including activity data, emission factors, and GWP values used to calculate emissions.
 - [Any proprietary or custom] **emission factors** used to calculate scope 1 emissions.
 - Whether **artificial intelligence (AI)** was used to calculate the organization's emissions, including [information such as] what tools were used, how they were used, [and whether AI-generated output was reviewed by a qualified person].
- The organization **should** [report/disclose] the following information on identifying and calculating its scope 1 emissions:
 - Whether lower **heating values** (LHV; also known as net calorific value) or higher heating values (HHV; also known as gross calorific value) were used to calculate its scope 1 emissions.
 - The **oxidation factors** used to calculate scope 1 emissions.

Rationale

- Provides clearer guidance on best practices for disclosure of scope 1 emission calculations
- Promotes **transparency** and supports users of the data
- Mostly aligned with **ISO WG4 position**

Implications and concerns

- Alignment needed with **ISO WG4 position**, (e.g., silent on use of artificial intelligence)
- TWG members suggested edits to the disclosure requirement on the use of **artificial intelligence**, with some suggesting it be deleted and others suggesting more specificity

Level of support

Subgroup 3 majority support across separate polls for provisions #1-4, best available data definition, site-specific data provision and definition, and accessible data provision and definition

Full TWG Meeting 8 majority support for package

- **30 of 38: Support** (22 fully, 8 with edits)
- 7 of 38: Oppose
- 1 of 38: Abstain

ISO WG4
Scope 1 data

Reporting on scope 1 emissions



Preliminary outcome (select text)

*The organization **shall** identify and document its data for each GHG source or GHG sink based on the reporting boundary selected in 5.5 for Statement #1 or Statement #2, if applicable*

ISO does not include disclosure requirements on the use of artificial intelligence, heating values, and oxidation factors.

Rationale

- Reporting section was left for later stage of development as WG4 knew this would be subject to change based on the requirements
- Reporting on every emission factor and activity data that includes sales volume information to the public in the GHG report may be confidential (business critical) that is not feasible for organizations
- WD2 draft notes to document explain the sources of GWPs which would be disclosed to the verifier not to the public

Level of support from ISO WG4

Documenting and explain GWPs is already recommended in clause 5.3 which would be to the verifier not to the public. AI implications were not discussed.

Implications and concerns

- Disclosing activity data to the public may not be feasible as these are confidential information for organizations
- If GHG P text is only asking for data sources for activity data then it should be clarified, it reads as if actual data would need to be disclosed to the public.

Reporting on scope 1 emissions: Artificial intelligence

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer on the topic of disclosure about the use of artificial intelligence ?	a. GHGP option 1: Simple requirement	Shall report: • <i>Whether artificial intelligence (AI) was used to prepare the organization's GHG inventory.</i>
		b. GHGP option 2: Requirement with examples	Shall report: • <i>Whether artificial intelligence (AI) was used to prepare the organization's GHG inventory, including information such as what tools were used, how they were used [(e.g., identifying emission factors, calculating emissions, drafting report)], [whether AI-generated output was reviewed by a qualified person, and the proportion of emissions calculated using AI, by scope].</i>
		c. GHGP option 3: Requirement and recommendation	Shall report: • <i>Whether artificial intelligence (AI) was used to prepare the organization's GHG inventory.</i> Should report: • <i>If artificial intelligence was used to prepare the organization's inventory, information such as what tools were used, and how they tools were used [(e.g., identifying emission factors, calculating emissions, text editing, report drafting)], [whether AI-generated output was reviewed by a qualified person, and the proportion of emissions calculated using AI, by scope].</i>
		d. ISO option: Stay silent	NA
2	If option (b) or (c) is supported, do you support the bracketed text ?	a. Fully support b. Support with minor edits c. Oppose	<i>... [(e.g., identifying emission factors, calculating emissions, drafting report)], [whether AI-generated output was reviewed by a qualified person, and the proportion of emissions calculated using AI, by scope].</i>

Reporting on scope 1 emissions: Other topics

Discussion



Polls



#	Topic	Options	Draft text
1	Which of the following options do you prefer on the topic of reporting on sources of data ?	a. GHGP option: Shall disclose sources and description of emission factors	Shall report: - Sources of data, including activity data, emission factors, and GWP values used to calculate emissions. - Description of the emission factors used to calculate scope 1 emissions.
		b. ISO option: Shall document sources	The organization shall identify and document its data for each GHG source or GHG sink based on the reporting boundary selected in 5.5 for Statement #1 or Statement #2, if applicable.
2	Which of the following options do you support on the topic of heating values draft text ?	a. GHGP option: Accounting requirement and reporting recommendation	- The organization shall use fuel consumption data and factors that [are on/use] the same heating value basis. Should report: - Whether lower heating values (LHV; also known as net calorific value) or higher heating values (HHV; also known as gross calorific value) were used to calculate its scope 1 emissions.
		b. ISO option: Stay silent	NA
3	Which of the following options do you support on the topic of oxidation factors ?	a. GHGP option: Reporting recommendation	Should report: The oxidation factors used to calculate scope 1 emissions.
		b. ISO option: Stay silent	NA

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

Scope 1 monetary activity data

GHG Protocol Corporate Standard chapter 6

Split opinions

Option A: Physical units only

- The organization **shall** collect scope 1 activity data that is in physical units.
- The organization **shall not** collect monetary scope 1 activity data.
- Spend-based emission factors shall not be used to calculate scope 1 emissions.

Option B: Allow monetary activity data; Prohibit spend-based emission factors

- The organization **should** collect scope 1 activity data that is in physical units.
- The organization **may** collect monetary scope 1 activity data.
- If scope 1 activity data is collected in monetary units, then it **shall** be converted to physical units.
- Spend-based emission factors **shall not** be used to calculate scope 1 emissions.
- The organization **shall** report any conversion factors used to convert scope 1 monetary activity data to physical units.

ISO

ISO14064-1:WD2 Clause 6.9.1 and 6.9.2

Clause 6.9.1

- The organization **may** use spend-based data for the screening step (see 6.4.4) to identify hot spots or establish organization's exclusion threshold. However, the organization **shall not** use spend-based emissions factors to quantify and report its scope 1 emission and scope 2 emission in Statement #1 or Statement #2, considering the high uncertainty of spend-based emission factors.
- Note: Spend-based GHG emission factors are expressed in financial units such as kg CO₂e/\$ price for energy.

Clause 6.9.2

- The organization **should** collect scope 1 activity data that is in physical units.
- If scope 1 activity data are collected in monetary units, then it **shall** be converted to physical units.

Aligns with **GHGP Option B**

However, no disclosure requirement for monetary conversion factors

GHGP
Scope 1 data

[Split opinions] Use of **scope 1 monetary activity data**

Preliminary outcome

Split opinions between two options (note: both options **prohibit scope 1 spend-based EFs**)

- A. Physical units only
- B. Allow monetary activity data and prohibit spend-based emission factors

Disclosure requirement: *The organization **shall** report any conversion factors used to convert scope 1 monetary activity data to physical units.*

Arguments for Option A
(physical units only)

- Most supports **accuracy**
- Has significant **feasibility challenges** due to data availability

Level of support from Subgroup 3

Approach	Subgroup 3 Meeting 14	Full TWG Meeting 7
A. Physical units only	6 of 18	19 of 45
B. Allow monetary activity data; prohibit spend-based EFs	9 of 18	21 of 45
C. Allow monetary activity data; allow spend-based EFs	1 of 18	NA
Abstain	2 of 18	5 of 45

Subgroup 3 Meeting 14
Disclosure of conversion factors (monetary to physical units)

- **11 of 17: Shall disclose**
- 5 of 17: Should disclose
- 0 of 17: May disclose
- 1 of 17: Abstain

Full TWG Meeting 7
Support for **shall disclose** conversion factors

- **32 of 45: Support** (29 fully, 3 with edits)
- 5 of 45: Oppose
- 8 of 45: Abstain

Arguments for Option B
(allow monetary activity data; prohibit spend-based EFs)

- **Accuracy is potentially hindered** (based on quality of monetary conversion factors)
- Promotes **feasibility**
- **Aligned** with **ISO WG4 position**

ISO WG4
Scope 1 data

Scope 1 monetary activity data



Preliminary outcome

Allow scope 1 monetary activity data; prohibit scope 1 spend-based EFs

- The organization **may** use spend-based data for the screening step (see 6.4.4) to identify hot spots or establish organization's exclusion threshold. However, the organization **shall not** use spend-based emissions factors to quantify and report its scope 1 emission and scope 2 emission in Statement #1 or Statement #2, considering the high uncertainty of spend-based emission factors.
 - Note: Spend-based GHG emission factors are expressed in financial units such as kg CO₂e/\$ price for energy.
- The organization **should** collect scope 1 activity data that is in physical units.
 - If scope 1 activity data are collected in monetary units, then it shall be converted to physical units.

Rationale

- Spend-based emission factors were considered but not accepted by WG4 due to their high uncertainty and their dependence on market prices, currency fluctuations, and other financial variables rather than actual energy consumption.
- However, an exception was adopted: where organizations only have financial expenditure data available, they **shall** convert monetary activity data (e.g. electricity costs) into physical energy units (kWh or MWh) using known tariff rates and then apply standard energy-based emission factors.
- The spend-based approach was recognized as suitable for screening and significance assessments, but not for the final quantification and reporting of scope 1 emission or scope 2 emissions.

Level of support from ISO WG4

Consensus was reached, no polls taken.

Implications and concerns

- Spend-based emission factors for scope 1 and scope 2 emissions can create fluctuations giving inconsistent results.

Scope 1 monetary activity data

Discussion



Polls

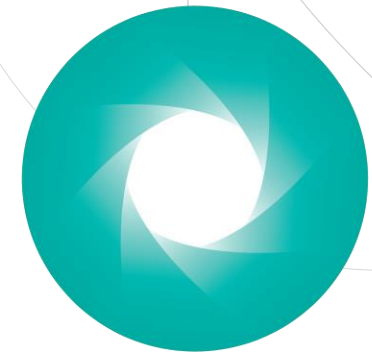


#	Topic	Options	Draft text
1	Which of the following options do you prefer on the topic of scope 1 monetary activity data ?* *CS TWG had split opinions between options A and B	a. GHGP option 1: Physical units only	- The organization shall collect scope 1 activity data that is in physical units. - The organization shall not collect monetary scope 1 activity data. - Spend-based emission factors shall not be used to calculate scope 1 emissions.
		b. ISO option and GHGP option 2: Allow monetary activity data and prohibit spend-based emission factors	- The organization should collect scope 1 activity data that is in physical units. - The organization may collect monetary scope 1 activity data. - If scope 1 activity data is collected in monetary units, then it shall be converted to physical units. - Spend-based emission factors shall not be used to calculate scope 1 emissions.
2	Should organizations be allowed to use spend-based emission factors for the scope 1 and scope 2 screening assessment ?	a. Yes, for the screening assessment only b. No, spend-based emission factors should never be used for scope 1 and scope 2	GHGP text: NA ISO text: The organization may use spend-based data for the screening step (see 6.4.4) to identify hot spots or establish organization's exclusion threshold.

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

Calculation methods and data quality:

Managing inventory quality



GREENHOUSE GAS PROTOCOL

Improving scope 1 data quality

GHG Protocol Corporate Standard chapter 6

- The organization **should** improve the data quality of the inventory over time by replacing lower quality data [in historic inventories] with higher quality data [in the current inventory].*
- The organization **should** prioritize data quality improvement for activities that have relatively low data quality and that have relatively high emissions.*
- The organization **should** define data quality improvement targets, considering its specific context, [and should review targets periodically].*
- The organization **may** use year-on-year or medium-term data quality improvement targets.*
- [The organization **should** prioritize the quality of the data over the currentness of the data.]**
- The organization **should** report the following information related to scope 1 data quality:
 - Information on the quality of the inventory (e.g., information on the causes and magnitude of uncertainties in emission estimates).***
 - An outline of policies in place to improve inventory quality.***

ISO ISO14064-1:WD2 Clause 6.9.2

- The organization **should** first apply *data quality indicators* and assess data quality when selecting scope 1 emission factors, then review the quality of data used in the inventory after data has been collected, using the same data quality assessment approach.
- Organizations **should** seek to improve the data quality of the inventory over time by replacing lower quality data with higher quality data.
- Organizations **should** prioritize data quality improvement for activities that have relatively low data quality and that have relatively high emissions.
- Where the organization have identified that data quality could be improved, it **should** set data quality improvement targets considering the organization context.
- Organizations **may** use year-on-year or mid-term horizon data quality improvement targets.

*Source: Scope 3 TWG draft text

**Source: TWG member suggestion and ad hoc text editing group

***Source: Corporate Standard page 64 and Scope 3 Standard page 120.

Orange text is used for emphasis or comparison. Pink text is used to identify new proposed provisions to be polled on.

GHGP
Data quality

Recommendations to improve data quality

Preliminary outcome

Recommendation to improve data quality over time

- The organization **should** improve the data quality of the inventory over time by replacing lower quality data [in historic inventories] with higher quality data [in the current inventory].*
- The organization **should** prioritize data quality improvement for activities that have relatively low data quality and that have relatively high emissions.*
- The organization **should** define data quality improvement targets, considering its specific context, [and should review targets periodically].*
- The organization **may** use year-on-year or medium-term data quality improvement targets.*
- [The organization **should** prioritize the quality of the data over the currentness of the data.]*

Level of support

Subgroup 3 – type of recommendation

- **9 of 16: Support general recommendation**
- 2 of 16: Recommend reporters increase % “measured” tier
- 5 of 16: Recommend reporters increase % “measured” OR “specific” tier
- 0 of 16: Abstain

Full TWG – general recommendation

- **44 of 47: Support**
(38 fully, 6 with edits)
- 3 of 47: Oppose
- 0 of 47: Abstain

Rationale

- **Promotes accuracy** with recommendation to improve data quality.
- **Feasibility** is promoted by not setting any requirements for improving data quality.
- Data quality improvements can be tracked through disaggregated reporting of emissions by **data quality tiers**.
- Aligned with **ISO WG4 position**

Implications and concerns

- **ISO WG4 position** also recommends the use of data quality indicators to select scope 1 emission factors

ISO WG4
Data quality**Data quality indicators****Preliminary outcome****Recommendation to apply data quality indicators**

- The organization **should** first apply data quality indicators and assess data quality when selecting scope 1 emission factors, then review the quality of data used in the inventory after data has been collected, using the same data quality assessment approach.

Rationale

- WD2 gives recommendation (not a requirement) to apply data quality indicators to assess the data.
- This gives practitioners guidance on how to collect data consistently.

Level of support from ISO WG4

Consensus was reached, no polls taken.

Implications and concerns

- Recommendation helps practitioners use consistent methods to assess data quality.

Improving scope 1 data quality

Discussion



Polls



#	Topic	Options	Draft text
1	Should GHGP adopt the data quality indicators provision proposed by ISO?	a. GHGP option: Stay silent	NA
		c. ISO option: Adopt provision	<i>The organization should first apply data quality indicators and assess data quality when selecting scope 1 emission factors, then review the quality of data used in the inventory after data has been collected, using the same data quality assessment approach.</i>
2	Do you support the GHGP provisions on improving data quality over time ?*	a. Fully support b. Support with minor edits c. Oppose	<i>The organization should improve the data quality of the inventory over time by replacing lower quality data [in historic inventories] with higher quality data [in the current inventory].</i> <i>The organization should prioritize data quality improvement for activities that have relatively low data quality and that have relatively high emissions.</i>
3	Do you support the GHGP provisions on data quality improvement targets ?*	a. Fully support b. Support with minor edits c. Oppose	<i>The organization should define data quality improvement targets, considering its specific context, [and should review targets periodically].</i> <i>The organization may use year-on-year or medium-term data quality improvement targets.</i>
4	Do you support the new provision on quality versus currentness of data ?	a. Fully support b. Support with minor edits c. Oppose	<i>[The organization should prioritize the quality of the data over the currentness of the data.]</i>
5	Do you support maintaining the GHGP data quality reporting recommendations ?	a. Fully support b. Support with minor edits c. Oppose	Should report: - Information on the quality of the inventory (e.g., information on the causes and magnitude of uncertainties in emission estimates). - An outline of policies in place to improve inventory quality.

*Full TWG Meeting 5 found majority support for a general provision on improving data quality over time, but the Full TWG has not yet been polled on the draft text

Uncertainty

GHG Protocol Corporate Standard chapter 7

- The organization **should** conduct an uncertainty assessment.
- *[The uncertainty assessment **should** be a quantitative uncertainty assessment.]**
- The organization **may** conduct [any type of uncertainty assessment / a qualitative uncertainty assessment].
- The organization **should** report the following information related to scope 1 data quality:
 - Results of an uncertainty assessment, including the type of uncertainty assessment completed and the level of uncertainty.

ISO ISO14064-1:WD2 Clause 6.7

- The organization **shall** assess the uncertainty associated with the GHG quantification model and **should** conduct a quantitative assessment that determines the uncertainty for Scope 1, Scope 2 and Scope 3, **separately**. The organization **may** conduct its quantitative uncertainty assessment **separately** for each **subcategory** of Scope 1, Scope 2 and Scope 3.
- If the organization does not conduct a quantitative uncertainty assessment, it **shall** document and explain the reason and **shall** conduct a qualitative uncertainty assessment.
- The organization **shall** report results of its uncertainty assessment.
- The organization **can** apply the principles and methodologies of [21] in completing the uncertainty assessment.

“can” indicates a possibility or a capability

[21] refers to ISO/IEC Guide 98-3:2008, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

*Source: TWG member suggestion and ad hoc text editing group
Orange text is used for emphasis or comparison. Pink text is used to identify new proposed provisions to be polled on.

GHGP
Data quality

Recommended uncertainty assessment

Preliminary outcome

Recommendation to complete uncertainty assessment, with the type of assessment at the discretion of the reporter

- The organization **should** conduct an uncertainty assessment.
- [The uncertainty assessment **should** be a quantitative uncertainty assessment.]*
- The uncertainty assessment **may** be [any type of uncertainty assessment / a qualitative uncertainty assessment].*

Rationale

- **Promotes transparency** of the emissions results.
- **Supports users of the data** in understanding the accuracy of the inventory.
- **Promotes feasibility** by allowing companies to select which type of uncertainty assessment they conduct.

Level of support

Subgroup 3
Narrowed options on
uncertainty assessment

**11 of 16: Recommend
uncertainty assessment**

3 of 16: Define but do not
specifically recommend
2 of 16: Abstain

Subgroup 3
Type of uncertainty
assessment

**11 of 16: Leave up to the
reporter**

3 of 16: Quantitative method
0 of 16: Qualitative method
0 of 16: Specific method
2 of 16: Abstain

Full TWG Meeting 5
Support for general
recommendation

**31 of 46: Support
(27 fully, 4 with edits)**

9 of 46: Oppose
6 of 46: Abstain

Implications and concerns

- **ISO WG4 position** is to **require** an uncertainty assessment
- Uncertainty assessment is not specifically recommended in the Corporate Standard.
- GHG Protocol provides two uncertainty assessment tools: Pedigree Matrix and Gaussian Method.
- Scope 3 TWG outcome on uncertainty assessment is pending.

ISO WG4
Data quality

Required uncertainty assessment



Preliminary outcome

Requirement to conduct uncertainty assessment

- The organization **shall** assess the uncertainty associated with the GHG quantification model and **should** conduct a quantitative assessment that determines the uncertainty for Scope 1, Scope 2 and Scope 3, separately. The organization **may** conduct its quantitative uncertainty assessment separately for each subcategory of Scope 1, Scope 2 and Scope 3.
- If the organization does not conduct a quantitative uncertainty assessment, it **shall** document and explain the reason and **shall** conduct a qualitative uncertainty assessment.
- The organization **shall** report results of its uncertainty assessment.
- The organization **can** apply the principles and methodologies of [21] in completing the uncertainty assessment.

Level of support from ISO WG4

Consensus was reached, no polls taken. WG4 discussed value of quantitative uncertainty assessment and decided to make that a recommendation and only require qualitative uncertainty assessment

Rationale

- WG4 acknowledged the difficulty of quantitative uncertainty assessment and left it as a recommendation. However, WG4 agreed to require at least a qualitative uncertainty assessment so that data quality can be improved overtime
- To be able to improve data quality over time at least qualitative uncertainty is needed

Implications and concerns

- Qualitative uncertainty assessment may not be feasible and the results are highly dependent on how GHG emission factors' uncertainty is calculated.

Uncertainty assessment

Discussion



Polls



#	Topic	Options	Draft text / notes
1	Which of the following options do you prefer on the topic of uncertainty assessment ?	a. GHGP option: Recommend uncertainty assessment	The organization should conduct an uncertainty assessment.
		b. ISO option: Require uncertainty assessment	The organization shall assess the uncertainty associated with the GHG quantification model ...
2	Do you support adding a recommendation to conduct a quantitative uncertainty assessment ?	a. Fully support b. Support with minor edits c. Oppose	- GHGP: [The uncertainty assessment should be a quantitative uncertainty assessment.] - ISO: The organization ... should conduct a quantitative assessment ...
3	What type of uncertainty assessment should be permitted as an option ?	a. GHGP option: "May statement" for any type of uncertainty assessment	The organization may conduct any type of uncertainty assessment .
		b. ISO option: Require qualitative uncertainty assessment in the absence of a quantitative assessment	If the organization does not conduct a quantitative uncertainty assessment, it shall document and explain the reason and shall conduct a qualitative uncertainty assessment.
		c. Hybrid option: "May" statement for qualitative uncertainty assessment	The organization may conduct a qualitative uncertainty assessment.
4	Should the uncertainty assessment be conducted separately by scope ?	a. GHGP option: Stay silent	NA
		b. ISO option: Should separately by scope and may by subcategory	- The organization shall assess the uncertainty associated with the GHG quantification model and should conduct a quantitative assessment that determines the uncertainty for Scope 1, Scope 2 and Scope 3, separately. - The organization may conduct its quantitative uncertainty assessment separately for each subcategory of Scope 1, Scope 2 and Scope 3.

Scope 1 data source disaggregation

GHG Protocol Corporate Standard chapter 7

The organization **shall** disaggregate and report scope 1 emissions into three tiers by data source using the following classification:

- Calculated using primary data.¹ Primary data is a quantified value of a process or an activity obtained from a direct measurement or a calculation based on direct measurements. When calculated, primary scope 1 emissions are quantified using estimation methods based on primary activity data and representative emission factor(s), expressed in physical units.
- Calculated using secondary data.² Secondary data is data obtained from sources other than primary data.
- Unclassified can include emissions from the above tiers if an organization is unable to disaggregate.

The organization **shall not** double-count emissions across data source tiers, and figures **shall** be expressed in mass units of CO₂e (e.g., t CO₂e) rather than percentages.

Footnotes:

¹ Examples of primary activity data include emissions data collected from direct measurement, MMBtu natural gas as reported on an invoice, or gallons of gasoline as reported on a receipt.

² Examples of secondary activity data include any conversions from monetary units, an estimation of MMBtu of natural gas based on the allocation of building space to tenants, an estimate of refrigerant leakage based on an average rate, and any use of proxy data or scaling.

ISO ISO14064-1:WD2 Clause 10.5.2.1

- The organization **should** disaggregate and report its scope 1 emissions by data source using the following classification:
 - Calculated using primary data: Scope 1 emission in this class are directly measured (primary data) or quantified using GHG quantification model(s) based on primary data for GHG activity data and GHG emission factors expressed in physical units.
 - Calculated using secondary data: Scope 1 emission in this class are quantified using GHG quantification model(s) based on secondary data for GHG activity data or GHG emission factors expressed in physical units.
- If scope 1 emission are disaggregated for reporting, the organization **shall not** double count scope 1 emissions across data sources, and disaggregation results **should** be reported in mass units of CO₂e (e.g., tonne CO₂e) rather than percentages of scope 1 emission.

Primary data = quantified value of a process or an activity obtained from a direct measurement or a calculation based on direct measurements

Note 1 to entry: primary data can include GHG emission factor or GHG activity data

Note 2 to entry: In the context of GHG quantification of an organization, primary data can be obtained from the organization's operations and value chain.

Secondary data = data obtained from sources other than primary data

Note 1 to entry: Such sources can include databases and published literature validated by competent authorities

GHGP
Data quality

Required disaggregated scope 1 reporting by data source tiers

Preliminary outcome

Require disaggregated reporting of scope 1 emissions by revised data source tiers

The organization **shall** disaggregate and report Scope 1 emissions into three tiers by data source using the following classification:

- Calculated using primary data
- Calculated using secondary data
- Unclassified

Rationale

- Promotes **transparency**
- Supports **users of the data** by allowing them to interpret emissions results
- Promotes **feasibility** with simplified approach and “unclassified” tier
- Uses **ISO definitions** of primary data and secondary data

Level of support

Subgroup 3
Which data quality tiers?

- **11 of 15: Alternative data quality tiers** (primary, secondary)
- 2 of 15: Original data quality tiers (measured, specific, other)
- 2 of 15: Abstain

Subgroup 3
Unclassified tier?

- **11 of 18: Yes**
- 5 of 18: No
- 2 of 18: Abstain

Subgroup 3
Requirement or recommendation?

- **11 of 18: Shall report data quality tiers**
- 5 of 18: Should report data quality tiers
- 2 of 18: Abstain

Full TWG Meeting 7
Support for “shall”

- **34 of 46: Support** (23 fully, 11 with edits)
- 10 of 46: Oppose
- 2 of 46: Abstain

Implications and concerns

- **Data management** can be onerous, particularly for SMEs; costs can divert from decarbonization
- Unclassified tier effectively makes data quality tiers **optional**
- **Definitions** are aligned with ISO. However, “primary data” and “secondary data” can be defined differently in other programs and sectors.
- **ISO WG4 position** is for “**should**” statement and **removes** “unclassified” tier

For more information, see Subgroup 3 Meetings 12 and 14 minutes and slides



WORLD
RESOURCES
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World Business
Council
for Sustainable
Development

ISO WG4
Data quality

Scope 1 emissions disaggregated reporting by source



Preliminary outcome (select text)

Recommendation to disaggregate by data source

*The organization **should** disaggregate and report its scope 1 emissions by data source using the following classification:*

- *Calculated using primary data*
- *Calculated using secondary data*

*If scope 1 emissions are disaggregated for reporting, the organization **shall not** double count scope 1 emissions across data sources, and disaggregation results should be reported in mass units of CO₂e (e.g., tonne CO₂e) rather than percentages of scope 1 emissions.*

Rationale

- Scope 1 is already disaggregated into 5 subcategories and 2 classes for emissions and 6 GHG gases in WD2, so further disaggregation will create increased data complexity, which may complicate how the results are reported if required. Recommendation gives opportunity to provide aggregated reporting on primary and secondary data
- Uncertainty requirement (at least qualitative) addresses data quality issues.
- Allowing “unclassified” may allow not reporting primary and secondary data at all, especially if required. Recommending and, when reported, only primary and secondary data helps address data quality issue this requirement is trying to resolve

Level of support from ISO WG4

Consensus was reached, no polls taken.

Implications and concerns

- Not practical to report disaggregated emissions in subcategories, classes of emissions, 6 GHGs and data type for each class
- Emissions may all end up in “unclassified” if provision is required
- Recommendation without unclassified provides path to simpler reporting when organizations decide to do it

Scope 1 disaggregation by data source tier

Discussion



Polls

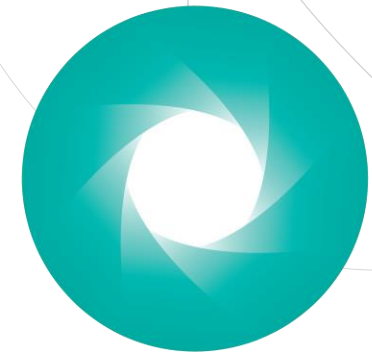


#	Topic	Options
1	Which of the following options do you prefer on the topic of scope 1 disaggregation by data source tier ?	a. GHGP option: Require disaggregation
		b. ISO option: Recommend disaggregation
2	How should emission factors for the primary data tier be defined?	a. GHGP option: " Representative emission factors expressed in <i>physical units</i> ", where representative is defined as technological, geographical, etc.
		b. ISO option: " <i>GHG emission factors expressed in physical units</i> "
3	Which of the following options do you prefer on the topic of an unclassified tier ?	a. GHGP option: Include unclassified tier
		b. ISO option: Remove unclassified tier
4	If the unclassified tier is maintained, do you support a reporting requirement on unclassified emissions?	a. Requirement: <i>[Shall report the rationale for reporting any emissions under the unclassified data source tier.]</i> b. Recommendation: <i>[Should report the rationale for reporting any emissions under the unclassified data source tier.]</i> c. Abstain
5	Should scope 1 disaggregation by data source tier be at the scope 1 level or scope 1 category level ?	a. Scope 1 level (e.g., total scope 1 emissions that are primary data) b. Scope 1 category level (e.g., stationary combustion primary data, stationary combustion secondary data)

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

Calculation methods and data quality:

Scope 1 calculation methods and hierarchy



GREENHOUSE GAS PROTOCOL

Scope 1 calculation methods

GHG Protocol Corporate Standard chapter 6

- The organization **should** use the first method (see Appendix B) for which primary activity data is available in the **scope 1 calculation method hierarchy*** (see Appendix C), by scope 1 category.
- If the organization is already collecting direct measurement emissions data for another purpose (e.g., for facility-level regulatory reporting), then the organization **should** report the same emissions data in its greenhouse gas inventory. If the organization is not already collecting direct measurement emissions data, then the organization **should** use the best available scope 1 calculation method.
- The organization **may** use a scope 1 calculation method not included in the scope 1 calculation method hierarchy.
- The organization **shall** report the following information related to scope 1 calculation methods and hierarchy:
 - Methodologies used to calculate or measure scope 1 emissions, providing a reference [or link] to any calculation tools used[, including proprietary tools].
- The organization **should** report the following information related to scope 1 calculation methods and hierarchy:
 - [If the best available scope 1 method was not used, a rationale for choosing an alternative method.]

ISO ISO14064-1:WD2 Clause 6.6

- The organization **shall** select or develop one or more GHG quantification models for the quantification approach where it is not practical and applicable to obtain direct measurement of its GHG emissions and GHG removals.
- A model is a representation of how the source or sink data used for quantification are converted into GHG emissions or GHG removals. A model is a simplification of physical processes that has assumptions and limitations.
- The organization **shall** explain and document the justification for the selection or development of the model, **should** consider the following model characteristics:
 - a) how the model reasonably represents GHG emissions and GHG removals in accordance with the stated methodology, assumptions, and principles;
 - b) its limits of application;
 - c) its uncertainty and rigour;
 - d) the reproducibility of results;
 - e) the acceptability of the model;
 - f) the origin and level of recognition of the model;
 - g) the consistency with the intended use.

NOTE: Several types of models make use of activity data multiplied by emission factors.

This text applies to the entire GHG inventory

*See the following slide for the GHGP scope 1 calculation method hierarchy

Scope 1 calculation method hierarchy by activity type

Activity type	Scope 1 direct measurement hierarchy <i>Note: Only preferred over calculation methods if already available</i>	Scope 1 calculation method hierarchy <i>Use the first method for which primary activity data is available</i>
Stationary combustion 	1. Continuous Emissions Monitoring System (CEMS) 2. Periodic sampling with sensors, scaled to annual emissions	1. Fuel carbon content method (CO₂ only) 2. Fuel energy content method 3. Fuel-based method
Mobile combustion 	1. Continuous Emissions Monitoring System (CEMS) 2. Periodic sampling with sensors, scaled to annual emissions	Carbon dioxide: 1. Fuel carbon content method (CO₂ only) 2. Fuel energy content method 3. Fuel-based method 4. Distance-based method* Methane and nitrous oxide: 1. Distance-based method* 2. Fuel-based method
Process emissions 	1. Continuous Emissions Monitoring System (CEMS) 2. Periodic sampling with sensors, scaled to annual emissions	1a. Mass balance calculation method 1b. Stoichiometry method 2. Process-specific method
Fugitive emissions 	1. Continuous Emissions Monitoring System (CEMS) 2. Periodic sampling with sensors, scaled to annual emissions	1a. Remote sensing method 1b. Mass balance calculation method 2. Fugitive emission rate method

*Distance-based method for mobile combustion is only applicable for on-road vehicles (e.g., cars, trucks, trains).
Note: Land emissions activity type is not yet considered here

GHGP
Scope 1 methods

Scope 1 calculation method definitions and hierarchy

Preliminary outcome

Draft definitions of the following scope 1 calculation methods:

Direct measurement, mass balance, stoichiometry method, fuel carbon content method, fuel energy content method, fuel-based method, distance-based method, process-specific method, fugitive emission rate method, spend-based method, remote sensing method

Majority support for the scope 1 calculation method hierarchy

Rationale

- Promotes **consistency** with a common list of scope 1 methods
- **Supports reporters** with a clear list of scope 1 methods
- Supports **feasibility** with flexibility for the methods used

Level of support

Subgroup 3 majority support across separate indicative polls on each of the scope 1 calculation method definitions

Subgroup 3 majority support for the scope 1 calculation method hierarchy, with polls conducted for each category (e.g., stationary combustion)

Full TWG Meeting 8
Scope 1 calc method **definitions**

- **32 of 35: Support**
(28 fully, 4 with edits)
- 0 of 35: Oppose
- 3 of 35: Abstain

Full TWG Meeting 8
Scope 1 calc method **hierarchy**

- **29 of 35: Support**
(25 fully, 4 with edits)
- 2 of 35: Oppose
- 4 of 35: Abstain

Implications and concerns

- **Alignment needed** with **ISO WG4 position** on terminology.
- ISO **removed** the following information annex from **ISO WG4 position**: "Guidance on the selection, collection and use of data for GHG quantification of scope 1 emissions"

GHGP
Scope 1 methods

Recommendation to use scope 1 calculation method hierarchy

Preliminary outcome

Draft text on calculation method hierarchy

- The organization **should** use the first method for which primary activity data is available in the scope 1 calculation method hierarchy, by scope 1 category.
- The organization **may** use a scope 1 calculation method not included in the scope 1 calculation method hierarchy.
- If the organization is already collecting direct measurement emissions data for another purpose (e.g., for facility-level regulatory reporting), then the organization **should** report the same emissions data in its greenhouse gas inventory. If the organization is not already collecting direct measurement emissions data, then the organization **should** use the best available scope 1 calculation method.

Majority support for disclosure requirements on methods used (poll results not shown)

Rationale

- Promotes **consistency** and **supports reporters** with guidance on best practices for scope 1 calculation methods
- Supports **feasibility** with flexibility for the methods used

Implications and concerns

- **Alignment needed** with **ISO WG4 position** on terminology.
- **ISO removed** the following information annex from **ISO WG4 position**: "Guidance on the selection, collection and use of data for GHG quantification of scope 1 emissions"

Level of support

Subgroup 3 Meeting 14
Support of recommendations on direct measurement vs calculation

- **17 of 18: Support**
(15 fully, 2 with edits)
- 0 of 18: Oppose
- 1 of 18: Abstain

Full TWG Meeting 8
Support of "should use... scope 1 calculation method hierarchy"

- **30 of 35: Support**
(27 fully, 3 with edits)
- 0 of 35: Oppose
- 5 of 35: Abstain

Full TWG Meeting 8
Support of recommendations on direct measurement vs calculation

- **31 of 35: Support**
(28 fully, 3 with edits)
- 0 of 35: Oppose
- 4 of 35: Abstain

For more information, see Subgroup 3 Meeting 14 and Full TWG Meeting 8 minutes and slides

ISO WG4
Scope 1 methods

Selection or development of GHG quantification models



Preliminary outcome (select text)

*The organization **shall** select or develop one or more GHG quantification models for the quantification approach where it is not practical and applicable to obtain direct measurement of its GHG emissions and GHG removals.*

A model is a representation of how the source or sink data used for quantification are converted into GHG emissions or GHG removals. A model is a simplification of physical processes that has assumptions and limitations.

*The organization **shall** explain and document the justification for the selection or development of the model, **should** consider the following model characteristics [...].*

Rationale

- Detailed guidance is usually not included in generic ISO standards, where this topic was part of an Annex B which would be later developed if needed.
- Prescriptive calculation methods were not discussed WG4 thus left for later as guidance if needed
- Overarching requirements are setup to document and explain to the verifier about the GHG quantification model
- ISO-GHG P Terminology coordination is in progress

Level of support from ISO WG4

Consensus was reached, no polls taken.

Implications and concerns

- Scope 1 calculation methods being too prescriptive can be a separate guidance document
- Some scope 1 emission calculation methods are regulated, and prescriptive details may contradict regulatory frameworks

Scope 1 calculation methods

Discussion



Polls

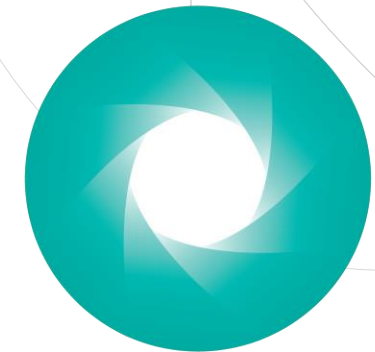


#	Topic	Options
1	Which option do you prefer as a general approach to scope 1 methods ?	a. GHGP option: Recommend scope 1 calculation method hierarchy
		b. ISO option: Provide general guidance on the selection of a GHG quantification model
		c. Abstain
2	Which option do you prefer on the approach to direct measurement versus calculation methods ?	a. GHGP option: Use direct measurement if already doing so , otherwise use calculation method
		b. ISO option: Direct measurement preferred
		c. Abstain

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

Agenda

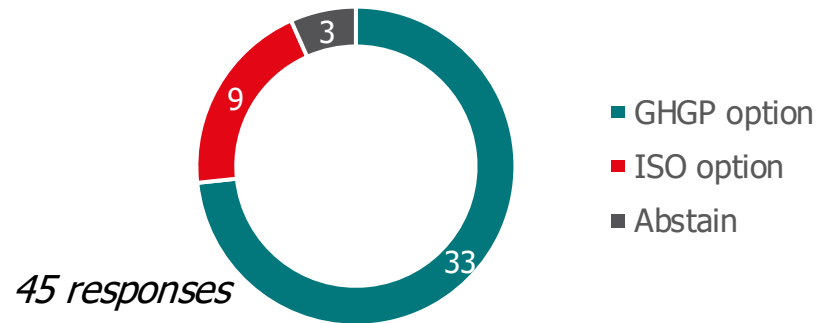
- Introduction and housekeeping 10 minutes
- Organizational boundaries 80 minutes
- Calculation methods and data quality 80 minutes
- **Wrap up and next steps 10 minutes**



GREENHOUSE GAS PROTOCOL

Meeting 9 poll results: Principles

General provisions on GHG accounting and reporting principles



GHG option: As with financial accounting and reporting, generally accepted GHG accounting principles are intended to underpin and guide GHG accounting and reporting to ensure that the reported information provides a fair representation of an organization's GHG emissions. The principles described below are intended to guide the accounting and reporting of an organization's GHG inventory.

*The organization **shall** follow the principles of relevance, completeness, consistency, transparency and accuracy when compiling a GHG inventory.*

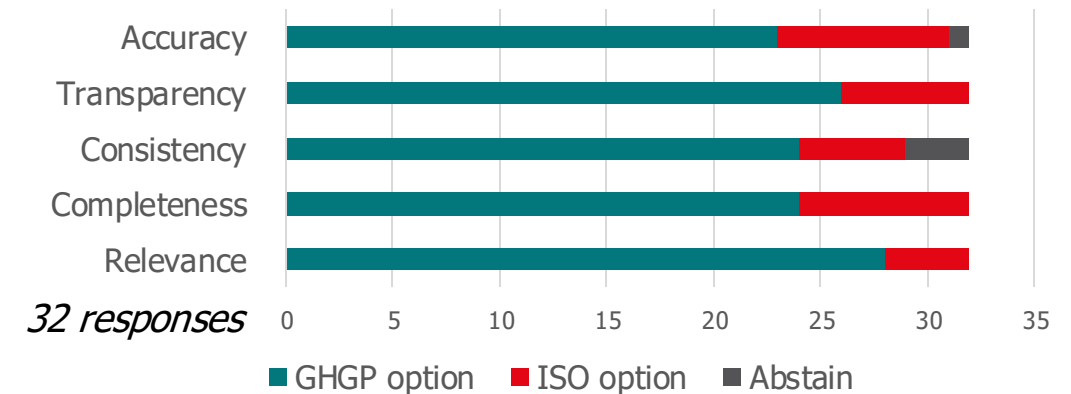
ISO option: The application of principles is fundamental to ensure that GHG-related information is a true and fair account. The principles are the basis for, and will guide the application of, the requirements in this document.

Orange text is used for comparison or emphasis.

Definitions of individual principles

Note: Questions on individual principles were not posed during the meeting due to time constraints. Responses are from the feedback survey only.

See [Meeting 9 slides 53-57](#) for text from GHG Protocol and ISO defining each principle.



- **Key point in support of GHGP options:** GHGP formulations provide sufficient clarity for principles to be operationalized.
- **Key point of concern with GHGP options:** Some principles include language that define requirements or recommendations – these should exist elsewhere in the standard, not as part of principles.

Meeting 9 poll results: Operational / reporting boundary

Subtopic	Question	Preliminary poll results
General	Which of the following options do you prefer on the topic of a general statement requiring disaggregation of emissions by scope?	35 of 49: GHGP option: Stay silent 14 of 49: ISO option: The organization shall quantify ... 0 of 49: Abstain
Scope 1 disaggregation	Which of the following options do you prefer on the topic of summing across scopes?	31 of 48: GHGP option: Stay silent 16 of 48: ISO option: Additionally, the organization may report its total GHG emissions combining one or more scopes. 1 of 48: Abstain
Scope 1 categories	Rank the following options in order of preference for the scope 1 and scope 2 emissions boundary.	GHGP option: 18 of 44 most preferred, 13 second preferred, 10 least preferred, 3 abstain ISO option: 4 of 42 most preferred, 8 second preferred, 25 least preferred, 5 abstain Hybrid option: 21 of 44 most preferred, 19 second preferred, 0 least preferred, 4 abstain
Scope 1 and 2 emissions boundary	Should exclusions be framed in terms of an exclusion threshold or inclusion threshold?	27 of 44: Exclusion threshold 10 of 44: Inclusion threshold 7 of 44: Abstain
Scope 1 and 2 by GHG	Rank the following options in order of preference for options on reporting by GHG for scope 2.	GHGP option: 16 of 46 most preferred, 10 second preferred, 18 least preferred, 2 abstain ISO option: 12 of 45 most preferred, 11 second preferred, 22 least preferred, 0 abstain Hybrid option: 18 of 44 most preferred, 25 second preferred, 1 least preferred, 0 abstain
Operational boundary name*	Which of the following options do you prefer for the term op boundaries?	9 of 32: Operational boundaries 16 of 32: Reporting boundaries 5 of 32: Inventory boundaries 2 of 32: Abstain

*Note: Poll question posed on feedback survey only

Meeting 9 poll results: Reported GHGs

Subtopic	Question	Preliminary poll results
List of relevant GHGs	Do you support the following draft text provisions? <i>The organization shall report the following information on its emissions:</i> <i>[List of GHGs covered by the UNFCCC [for national inventories] that are relevant to the organization.]</i>	35 of 47: Fully support 7 of 47: Support with minor edits 4 of 47: Oppose 1 of 47: Abstain
Other GHGs reported consistently	Do you support the following draft text provisions? The organization should report the following information on its emissions: <i>[If reported, emissions from other GHGs should be reported consistently across years, along with a [rationale/justification] for any changes in the other GHGs reported.]</i>	33 of 47: Fully support 5 of 47: Support with minor edits 5 of 47: Oppose 4 of 47: Abstain

Meeting 9 poll results: GWP

Subtopic	Question	Preliminary poll results
20-year GWP	Which option do you support for draft text on reporting with 20-year GWP values?	40 of 47: GHGP option: Recommend reporting with 20-year GWP values for reporters with significant methane emissions 5 of 47: ISO option: Stay silent on reporting with 20-year GWP values 2 of 47: Abstain
IPCC AR for missing GWPs	Do you support the following draft text? <i>[If GWPs for a particular gas are not provided in the chosen IPCC Assessment Report, the organization shall select the GWP values from the most recent IPCC Assessment Report for that gas [, relative to the chosen IPCC Assessment Report].</i>	35 of 46: Fully support 5 of 46: Support with minor edits 4 of 46: Oppose 2 of 46: Abstain
IPCC AR justification	Do you support a “should” or “shall” statement for documentation of the use of GWP values from an IPCC Assessment Report other than the most recent report?	21 of 46: GHGP option: Should 22 of 46: ISO option: Shall 3 of 46: Abstain
Other metrics disclosure	Do you support the following draft text? <i>The organization shall report the following information on GWP values:</i> <i>[The source of other metrics (e.g., GTP, GWP*), if used.]</i>	32 of 43: Fully support 5 of 43: Support with minor edits 4 of 43: Oppose 2 of 43: Abstain

Meeting 9 poll results: Indirect climate forcers

Subtopic	Question	Preliminary poll results
Aviation multiplier	Rank the following options in order of preference for options on the use of an aviation radiative forcing multiplier/index.	- GHGP option 1: Should: 12 of 44 most preferred, 8 second preferred, 19 least preferred, 5 abstain GHGP option 2: Organizations with significant aviation emissions should: 18 of 43 most preferred, 19 second preferred, 3 least preferred, 3 abstain - ISO option and GHGP option 3: May: 13 of 42 most preferred, 10 second preferred, 16 least preferred, 3 abstain
Aviation separate reporting	Which option do you support on separate reporting for emissions calculated with an aviation radiative forcing multiplier/index?	28 of 42: GHGP option: Shall separately report 10 of 42: ISO option: Stay silent 4 of 42: Abstain
Indirect climate forcers disclosure	Do you support the following draft text provision? <i>The organization shall report the following information on reported indirect climate forcers:</i> <i>[Whether other indirect climate forcers were accounted for, and if so, which other indirect climate forcers and the [rationale/justification] for selecting those forcers.]</i>	32 of 45: Fully support 8 of 45: Support with minor edits 1 of 45: Oppose 4 of 45: Abstain
Indirect climate forcers justification*	Do you support the addition of the text "and the [rationale/justification] for selecting that factor" in the following draft text provision? <i>The organization shall report the following information on reported indirect climate forcers:</i> <i>Whether an aviation radiative forcing [multiplier/index] was used, and if so, the specific factor used [and the [rationale/justification] for selecting that factor].</i>	25 of 32: Fully support 1 of 32: Support with minor edits 4 of 32: Oppose 2 of 32: Abstain

*Note: Poll question posed on feedback survey only

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 TBC)

Next meeting

Date: Tuesday, October 27th

Time: 09:00-12:00 ET, 15:00-18:00 CET, 21:00-00:00 CHN Wed Oct 28th

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

Thank you!

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Change log

Slide #	Change	Details
11	New	New slide on ISO 14064-1:WD2 (Working Draft 2)
21	Update	Updated placeholder slide with ISO outcomes slide on "Organizational boundary: Consolidation (general and specific)"
24	V2 Update	Updated poll questions for simplification
28	Update	Updated placeholder slide with ISO outcomes slide on "Organizational boundary: Financial control approach"
35	Update	Updated placeholder slide with ISO outcomes slide on "Formulas for quantification of GHG emissions"
39	Update	Updated placeholder slide with ISO outcomes slide on "Scope 1 data selection and collection"
40	V2 Update	Revised options in poll question 1 to focus on shall versus should. Added column with draft text for clarity.
43	Update	Updated placeholder slide with ISO outcomes slide on "Reporting on scope 1 emissions"
45	V2 Update	Description of poll options updated for some questions to be more descriptive
48	Update	Updated placeholder slide with ISO outcomes slide on "Scope 1 monetary activity data"
53	Update	Updated placeholder slide with ISO outcomes slide on "Data quality indicators"
57	Update	Updated placeholder slide with ISO outcomes slide on "Required uncertainty assessment"
61	Update	Updated placeholder slide with ISO outcomes slide on "Scope 1 emissions disaggregated reporting by source"
62	V2 Update	Added new poll question asking about the level of disaggregation by scope 1 data source tier
68	Update	Updated placeholder slide with ISO outcomes slide on "Selection or development of GHG quantification models"
71-75	V2 Update	New slides with preliminary poll results from CS TWG Meeting 9