GREENHOUSE GAS PROTOCOL

Corporate Standard Technical Working Group

Subgroup 3, Meeting #9

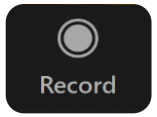
GHG Protocol Secretariat team:
Allison Leach, Iain Hunt, Hande Baybar

September 9th, 2025

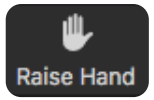
WORLD RESOURCES INSTITUTE

World Business Council for Sustainable Development

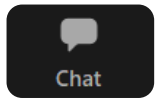
Meeting information



This meeting is **recorded**.



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

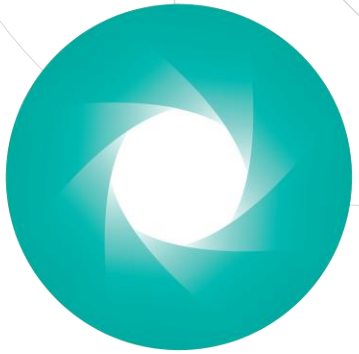


You can also use the **Chat** function in the main control.

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

Agenda

Introduction and housekeeping	10 minutes
Phase 2 proposed plan	10 minutes
Full TWG and ISB feedback	20 minutes
Data quality	70 minutes
Wrap-up and next steps	10 minutes



GREENHOUSE GAS PROTOCOL

Agenda

Introduction and housekeeping	**10 minutes**
Phase 2 proposed plan	10 minutes
Full TWG and ISB feedback	20 minutes
Data quality	70 minutes
Wrap-up and next steps	10 minutes

GREENHOUSE GAS PROTOCOL

Today's objectives

1. Review **feedback** from the Full TWG and ISB
2. Discuss options for **data quality** for scope 1:
   - Review and discuss **proposal from Scope 3 TWG**

Today, we will continue discussing options for data quality for scope 1

Housekeeping: Guidelines and procedures

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

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

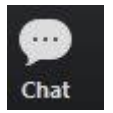
Zoom logistics and recording of meetings

Zoom Meetings

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

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

Use the chat function to type in your questions



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

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

Recordings will be available for a limited time after the meeting; ***access is restricted to TWG members only.***

Full TWG Preliminary Outcomes: Subgroup 1

Topic	July 15 Full TWG Preliminary Outcome	Next steps
Phase 1: Objectives	• ***Unanimous support*** for a draft objectives statement developed by Subgroup 1.	• Preliminary outcomes were shared with ISB in July • ISB feedback survey in progress
Phase 1: Principles	• ***Majority support*** for updating guidance for the relevance principle to provide clarification on the term "**materiality**". • ***Majority support*** for expanding the application of the consistency principle and updating guidance for the consistency principle to clarify the relationship between consistency in methods and **comparability** of information. • ***Majority support*** for updating guidance for the accuracy principle to include language on **conservativeness** and when companies should consider using conservative methods. • ***Split opinions*** on how to update principles to better distinguish between external **transparency and verifiability**, but with the most support for updating the transparency principle to provide a clearer distinction.	• Preliminary outcomes were shared with ISB in July • ISB feedback survey in progress
Phase 2: Tracking emissions over time	• ***Majority support*** that companies that a have base year established for GHG reduction targets should have the **option to use the same year** for their inventory base year or choose a different year. • ***Majority support*** for **eliminating the rolling base year** option as currently defined in the Corporate Standard. • ***Majority support*** for requiring companies to establish a **significance threshold** as part of their base year recalculation policy. • ***Majority support*** for defining a **prescriptive, quantitative significance threshold** in the Corporate Standard	• These phase 2 topics were not presented to the ISB and will continue to be discussed in Subgroup 1

Full TWG Preliminary Outcomes: Subgroup 2

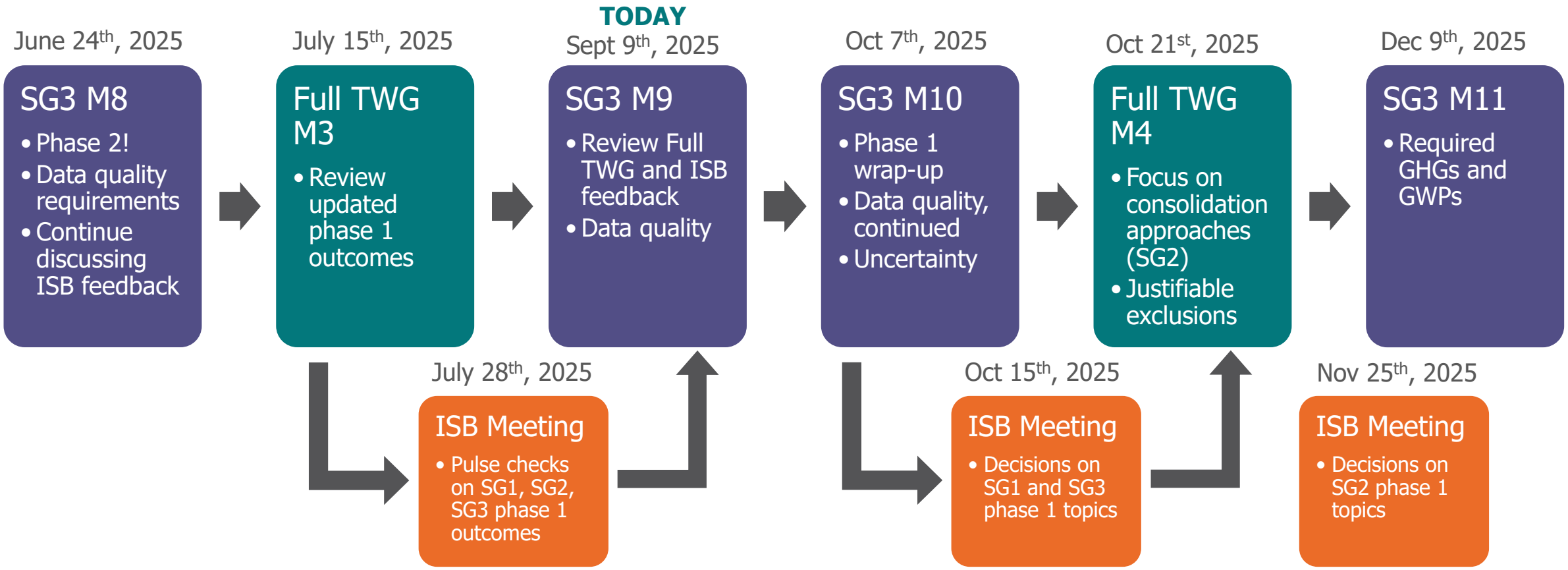
Topic	July 15 Full TWG Preliminary Outcome	Next steps
Phase 1: Financial control approach revision	• ***Majority support*** for the reference text as the direction for **revising the financial control approach**.	• Preliminary outcomes were shared with ISB in July • ISB feedback survey in progress
Phase 1: Operational control approach revision	• ***Majority support*** for the reference text as the direction for **revising the definition of operational control**.	• Preliminary outcomes were shared with ISB in July • ISB feedback survey in progress
Phase 1: Optionality in consolidation approaches	• ***Majority support*** for maintaining optionality in consolidation approaches in the Corporate Standard. The level of support was lower than the full TWG Meeting 2 outcomes.	• Preliminary outcomes were shared with ISB in July • ISB feedback survey in progress

Agenda

Introduction and housekeeping	10 minutes
Phase 2 proposed plan	**10 minutes**
Full TWG and ISB feedback	20 minutes
Data quality	70 minutes
Wrap-up and next steps	10 minutes

GREENHOUSE GAS PROTOCOL

Upcoming Schedule



Legend: Subgroup 3 | Full TWG | ISB

Note: There will be an **optional open discussion meeting on September 17th** on consolidation approaches

F. Data/calculation methodology (Subgroup 3, Phase 2)

Relevant chapters: chapter 6 (Identifying and Calculating GHG Emissions), chapter 7 (Managing Inventory Quality), and chapter 9 (Reporting GHG Emissions)

F.1. Updates to address **data quality and uncertainty** to consider:

- Data quality requirements and additional guidance related to the use of proxies or estimates.
- A data quality hierarchy.
- Additional disclosure requirements related to data quality and uncertainty.
- Additional guidance on developing uncertainty estimates.

F.2. Additional **guidance on calculation methods** and their applicability and consider providing a hierarchy of calculation methods.

F.3. Guidelines for **selecting appropriate emission factors** and disclosure requirements for emission factor sources.

F.4. Expanded **disclosure requirements** related to data sources, significant assumptions, descriptions of methodologies used, and disaggregating emissions obtained using different data collection and calculation methods (e.g., primary versus secondary data).

F. Data/calculation methodology, continued (Subgroup 3, Phase 2)

F.5. Updates to current requirements in the *Corporate Standard* on **required GHGs and global warming potential (GWP) values**:

- Integration and update of 2013 amendment on required GHGs into *Corporate Standard*.
- Revisit which GHGs companies are required to report on, considering GHGs not governed by the United Nations Framework Convention on Climate Change (UNFCCC).
- Revisit requirement for companies to report emissions from each required GHG individually.
- Clarification regarding which Intergovernmental Panel on Climate Change (IPCC) Assessment Report (AR) should be used for GWP values.
- Revisit the 100-year GWP as the only required metric and consider additionally a 20-year GWP, particularly for short-lived GHGs such as methane.

F.6. Accounting for **indirect climate forcers including radiative forcing in aviation**.

Proposed plan for Subgroup 3, Phase 2

Topic	How to address	Meeting # or timeline
F1. Data quality and uncertainty	**Subgroup 3 meetings**	SG3 meetings 9 & 10
F2. Guidance on calculation methods	**Task force**	• **Today: Volunteers?** • October – January: Monthly meetings • February: Task force reports out to Subgroup 3, meeting 13
F3. Guidelines for selecting appropriate emission factors		
F4. Expanded disclosure requirements		
F5. Required GHGs and GWPs	**Subgroup 3 meetings**	SG3 meetings 11 & 12
F6. Other indirect climate forcers	**Subgroup 3 meetings**	SG3 meeting 14

Agenda

Introduction and housekeeping	10 minutes
Phase 2 proposed plan	10 minutes
Full TWG and ISB feedback	**20 minutes**
Data quality	70 minutes
Wrap-up and next steps	10 minutes

GREENHOUSE GAS PROTOCOL

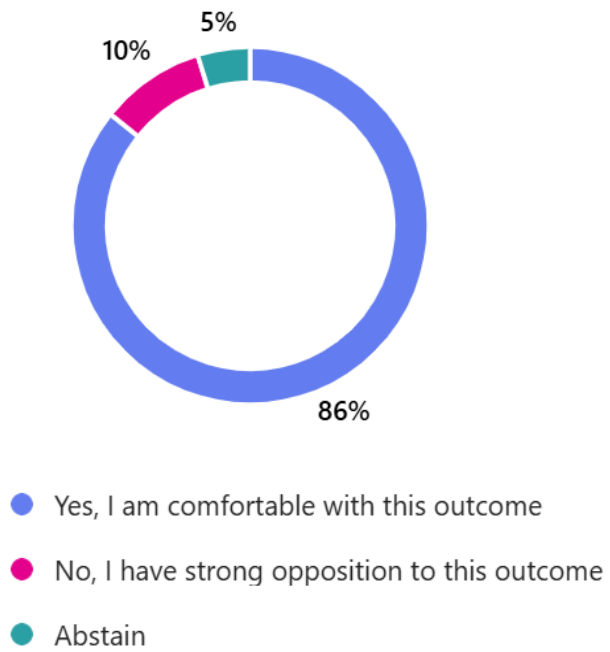
Subgroup 3 topics considered at Full TWG Meeting 3 and ISB July meeting

Topic	Subgroup 3 recommendations (preliminary)	Full TWG outcome	ISB outcome
Scope 3 requirement	**Require scope 3**	Majority support	Provisionally approved
	Revise "All significant scope 3" to "at least 95% of scope 3"	Majority support	Pulse check; pending
Differentiated scope 3 requirement	Adopt the **SBTi company categorization approach**, pending its finalization, to define eligibility for a less stringent scope 3 requirement	Majority support	Not presented
	Define less stringent level of scope 3 reporting as the **most relevant 3 scope 3 categories** with flexibility for data quality requirements	Majority support	Not presented
	Operationalize differentiated level of reporting with **conformance levels**	Majority support	Not presented
Justifiable exclusions for scopes 1 and 2	**Maintain** exclusions for scopes 1 and 2; make more prescriptive and quantitative	Majority support	Pulse check; pending
	Boundary: Define **separate exclusion thresholds** for scopes 1, 2, and 3	Majority support	Pulse check; pending
	Value: Define a **1% exclusion threshold** for scope 1 and scope 2	Majority support	Pulse check; pending
	Justification: Total scope 1 and scope 2 emissions shall be **quantified to justify exclusions**	Majority support	Pulse check; pending

Scope 3 requirement: Revise "All significant scope 3" to "at least 95% of scope 3"

Full TWG feedback survey

Majority support for **revised text** defining a scope 3 reporting requirement.



Strong opposition:

- Oppose quantitative materiality thresholds
- Concern that 5% threshold is arbitrary
- Proposal that quantitative threshold should be set by company
- Feasibility concerns

42 responses

ISB pulse check

Please note that the ISB feedback survey is still in progress, and this section will be updated after the meeting once the results become available.

Justifiable exclusions for scopes 1 and 2: Allow exclusions for scopes 1 and 2

Full TWG feedback survey

Majority support for **maintaining scope 1 and scope 2 exclusions** and making the exclusions more prescriptive and quantitative.

Strong opposition:

- Oppose quantitative exclusion threshold
- Proposal for principles-based approach
- All emissions should be required
- Concerns about feasibility for quantitative exclusion threshold approach

42 responses

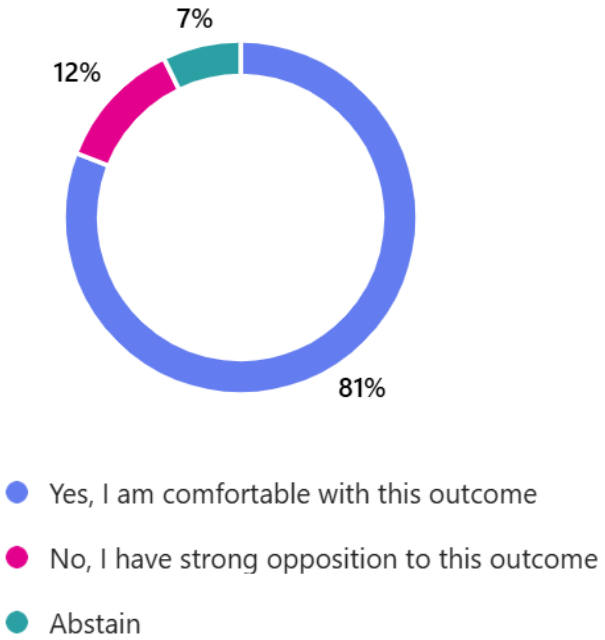
ISB pulse check

Please note that the ISB feedback survey is still in progress, and this section will be updated after the meeting once the results become available.

Justifiable exclusions for scopes 1 and 2: Boundary: Separate thresholds for scopes 1, 2, and 3

Full TWG feedback survey

Majority support for defining **separate quantitative exclusion thresholds** for scopes 1, 2, and 3.



Strong opposition:

- No specific comments on the boundary. Opposition is to quantitative exclusion threshold approach.

42 responses

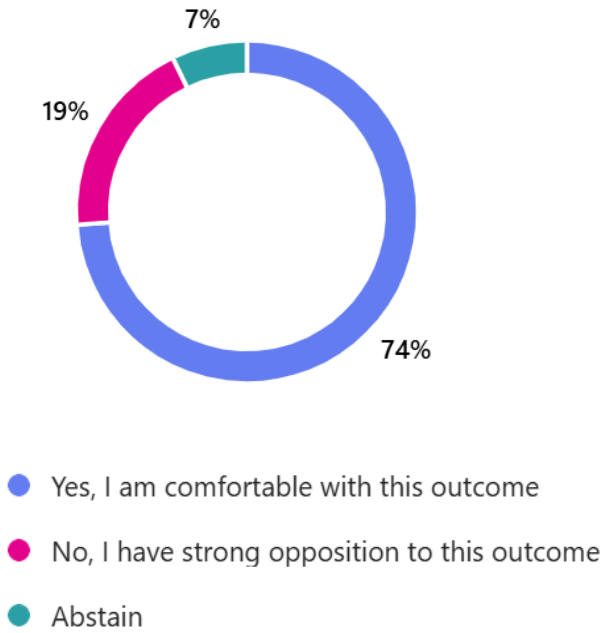
ISB pulse check

Please note that the ISB feedback survey is still in progress, and this section will be updated after the meeting once the results become available.

Justifiable exclusions for scopes 1 and 2: Value: 1% exclusion threshold

Full TWG feedback survey

Majority support for defining a **1% quantitative exclusion threshold** for scope 1 and scope 2.



Strong opposition:

- Uncertainty may be higher than 1% threshold
- Threshold should be defined by the company
- Uncertainty/error and exclusion may be conflated
- Proposal: Threshold should be higher (e.g., 5%) and combined with error

42 responses

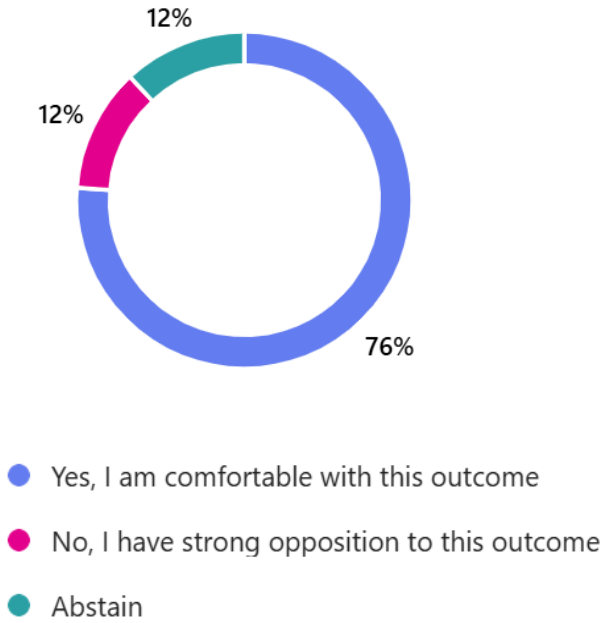
ISB pulse check

Please note that the ISB feedback survey is still in progress, and this section will be updated after the meeting once the results become available.

Justifiable exclusions for scopes 1 and 2: Justification: Require quantification of total emissions

Full TWG feedback survey

Majority support for requiring total scope 1 and scope 2 emissions to be **quantified to justify exclusions**.



Strong opposition:

- If emissions are quantified, they should be reported

42 responses

ISB pulse check

Please note that the ISB feedback survey is still in progress, and this section will be updated after the meeting once the results become available.

Differentiated scope 3 requirement: Eligibility using SBTi approach

Full TWG feedback survey

Majority support for adopting the **SBTi company categorization approach**, pending its finalization, to define eligibility for a less stringent scope 3 requirement.

Strong opposition:

- Not the role of GHG Protocol to define different levels of reporting
- Concern about aligning definition with one external program
- Concern about aligning with SBTi specifically
- Concern about complexity of SBTi eligibility approach

42 responses

ISB feedback

- *A pulse check was not posed on the differentiated scope 3 requirement*
- *This topic was presented as a case study in a broader discussion on whether it is the role of GHG Protocol to define different levels of reporting*

Differentiated scope 3 requirement: Most relevant 3 scope 3 categories

Full TWG feedback survey

Majority support for defining a less stringent scope 3 requirement as the **three most relevant scope 3 categories**.

Strong opposition:

- GHG Protocol should prepare small companies for complete reporting
- 3 scope 3 categories should be the minimum

42 responses

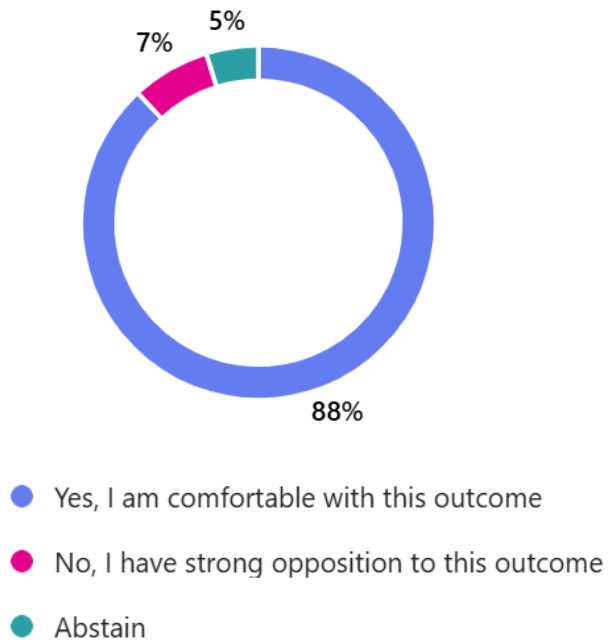
ISB feedback

- *A pulse check was not posed on the differentiated scope 3 requirement*
- *This topic was presented as a case study in a broader discussion on whether it is the role of GHG Protocol to define different levels of reporting*

Differentiated scope 3 requirement: Operationalize with conformance levels

Full TWG feedback survey

Majority support for operationalizing a less stringent scope 3 requirement with **conformance levels**, by reporter type.



Strong opposition:

- Not the role of GHGP to define conformance levels
- Conformance levels require clear, executable interpretations, implementation pathways, measurement criteria, and verification standards

42 responses

ISB feedback

- *A pulse check was not posed on the differentiated scope 3 requirement*
- *This topic was presented as a case study in a broader discussion on whether it is the role of GHG Protocol to define different levels of reporting*

How are external programs defining different levels of reporting?

Mandatory disclosure programs

- IFRS S2 provides **reporting relief for all companies**
- ESRS E1, US SEC*, and CARB **exempt small companies** from reporting using **different definitions** and thresholds for company size

Voluntary programs and target-setting initiatives

- SBTi and CDP define **less stringent requirements for small companies** using different eligibility criteria
- SBTi revised draft v2.0 company categorization approach considers company size, geography, and an emissions cap

GHG standard setters

- To the best of the Secretariat's knowledge, ISO and GRI **do NOT set different levels of requirements**
- This is notable because they are standard setters like GHG Protocol

IFRS CARB SCIENCE BASED TARGETS CDP ISO GRI

Note: Examples are not comprehensive; we welcome input

**In March 2025, US SEC voted to end defense of the Climate Disclosure Rule. However its structure and requirements could still provide useful insights. For more information, see Memo on Implementation of Standards Updates, Section 3 and Appendix B*

Different levels of reporting: The role of GHG Protocol?

Is it the role of GHG Protocol to define different levels of reporting by entity type?

Option 1A:	Option 1B:	Option 1C:
Yes, GHG Protocol should **define** different levels of reporting	**Yes,** GHG Protocol should **recommend** different levels of reporting to external programs	**No**, only external programs should define different levels of reporting

Rationale:

- **Increases feasibility** for companies with lower capacity
- GHG Protocol should define levels as the **leading standard setter**, and programs can choose which to adopt

Implications:

- **Less stringent requirements** hinder completeness and relevance
- **Interoperability concerns** with programs that set their own requirements for small companies
- **Cross-cutting precedent** for GHGP

Rationale:

- **Provide recommendations only** to leave levels and definitions to external programs, to decide in the context of their program objectives

Implications:

- **Reporting relief** across programs would continue to vary by program

ISB discussion: What do you think of these options?

Rationale:

- **Maintain status quo**: GHG Protocol currently defines a single conformance level
- **Align with other GHG standard setters**, which do not define different levels of reporting

Implications:

- **Feasibility would be hindered** for companies with lower capacity, which may lead to inconsistent application of GHG Protocol for companies not in conformance

For more information, see Memo on Implementation of Standards Updates, Section 5.1

Different levels of reporting: The role of GHG Protocol

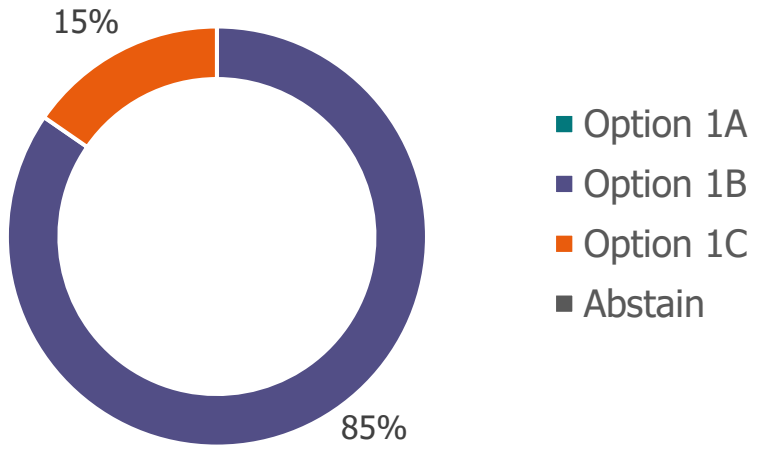
Is it the **role of GHG Protocol** to define different levels of reporting by entity type?

Option 1A:
Yes, GHG Protocol should **define** different levels of reporting

Option 1B:
Yes, GHG Protocol should **recommend** different levels of reporting to external programs

Option 1C:
No, only external programs should define different levels of reporting

ISB pulse check at meeting 13:
Majority support for GHG Protocol **recommending different levels of reporting** to external programs



13 responses, including ISB members and observing entities

Next steps:

Define what form a recommendation would take and who the audience would be

Agenda

Introduction and housekeeping	10 minutes
Phase 2 proposed plan	10 minutes
Full TWG and ISB feedback	20 minutes
Data quality	**70 minutes**
Wrap-up and next steps	10 minutes

GREENHOUSE GAS PROTOCOL

Our plan for today on data quality

Review what we discussed at Subgroup 3 Meeting 8

External program approaches to data quality

Scope 3 TWG proposal on data quality

Discuss whether Scope 3 TWG approach can/should apply to scopes 1 and 2

F. Data/calculation methodology (Subgroup 3, Phase 2)

Relevant chapters: chapter 6 (Identifying and Calculating GHG Emissions), chapter 7 (Managing Inventory Quality), and chapter 9 (Reporting GHG Emissions)

Scope of work:

F.1. Updates to address **data quality and uncertainty** to consider:

- Data quality requirements and additional guidance related to the use of proxies or estimates.
- A data quality hierarchy.
- Additional disclosure requirements related to data quality and uncertainty.
- Additional guidance on developing uncertainty estimates.

Data quality in GHG Protocol: Corporate Standard

Optional information for reporting:

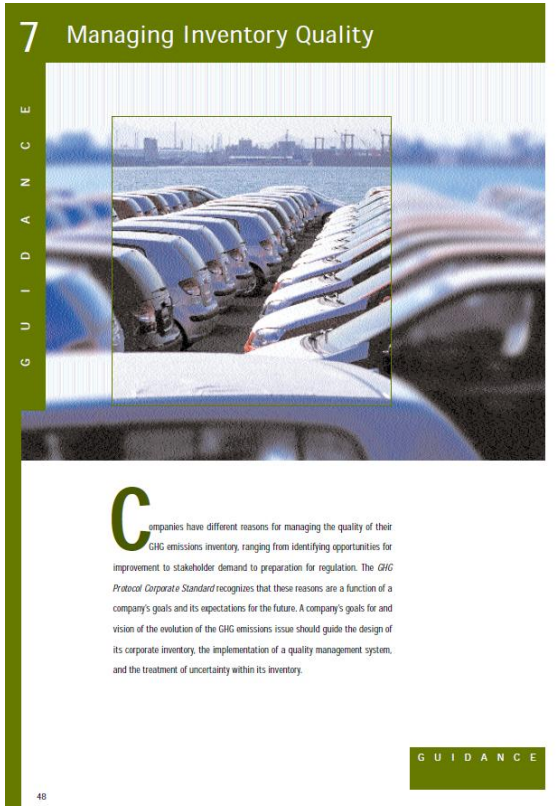
Information on the quality of the inventory (e.g., information on the causes and magnitude of uncertainties in emission estimates) and an outline of **policies in place to improve inventory quality**. (see chapter 7).

-*Corporate Standard*, page 63

Key concepts on data quality:

- Inventory quality
- Quality/data management system/plan
- Uncertainty*

Note: There are currently no data quality requirements; only guidance and recommendations


7 Managing Inventory Quality

GUIDANCE

Companies have different reasons for managing the quality of their GHG emissions inventory, ranging from identifying opportunities for improvement to stakeholder demand to preparation for regulation. The *GHG Protocol Corporate Standard* recognizes that these reasons are a function of a company's goals and its expectations for the future. A company's goals for and vision of the evolution of the GHG emissions issue should guide the design of its corporate inventory, the implementation of a quality management system, and the treatment of uncertainty within its inventory.

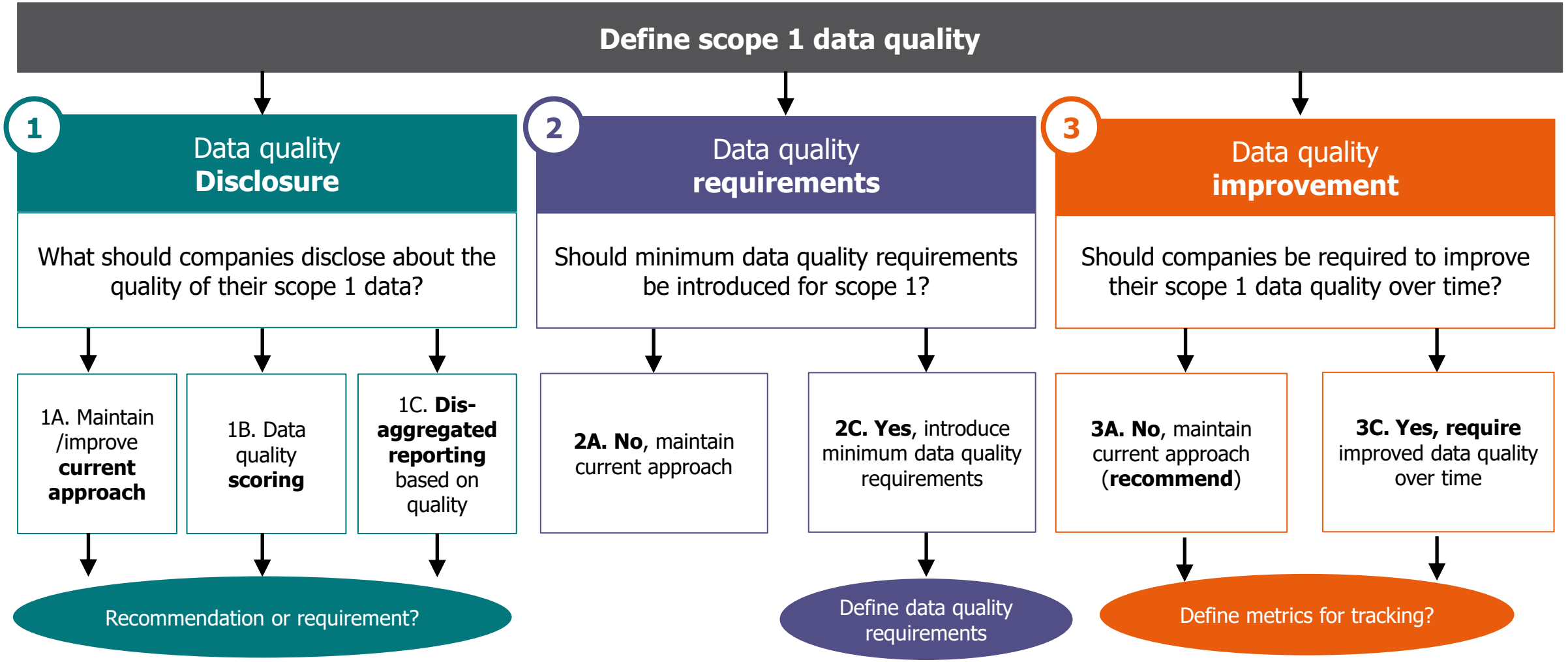
GUIDANCE

48

**Uncertainty will be considered in more detail at a future Subgroup 3 meeting*

Original conceptual diagram for data quality for Subgroup 3

Scope 3 TWG considered these same questions and has proposals, which we will start reviewing today



This may be revised following discussion of Scope 3 TWG data quality approach

Subgroup 3 initial categorization of scope 1 sources by data quality

This table was discussed at Subgroup 3 Meeting 8

Activity types	High quality data	Medium quality data	Low quality data
Stationary combustion	• Direct measurement • Energy content of fuel • Carbon content emission factors	• Volume/weight of fuel • Industry average emission factors	• Spend-based activity data • EEIO emission factors
Mobile combustion	• Direct measurement • Energy content of fuel • Carbon content emission factors	• Volume/weight of fuel • Industry average emission factors	• Distance traveled • Spend-based activity data • EEIO emission factors
Process emissions	• Direct measurement	• Volume/weight of material produced • Industry average emission factors	• Spend-based activity data • EEIO emission factors
Fugitive emissions	• Direct measurement	• Volume of refrigerant leaked • Weight of fertilizer • Volume of waste treated • Industry average emission factors	• Average leak rate by HVAC type • Number of animals • Spend-based activity data • EEIO emission factors

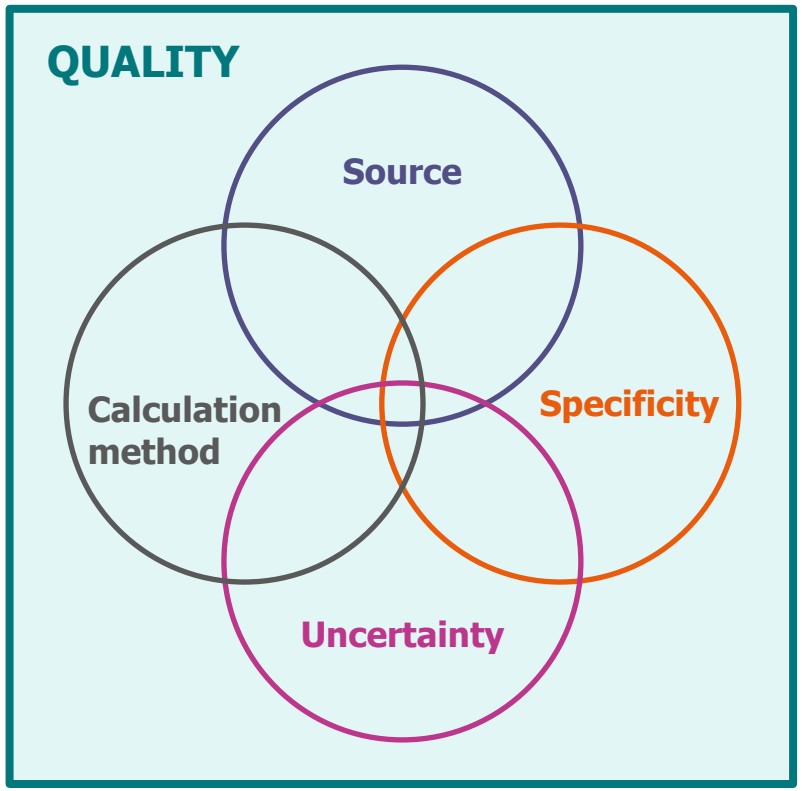
Drawbacks to this approach

→ **"Quality" can be subjective**

→ **There is quality variation within data sources and methods** (e.g., direct measurement is more likely to be high quality, but can be low quality due to equipment issues or user error)

Note: This table is intended to be a starting point for discussion. It combines activity data, emission factors, and methods.

Dimensions of data used to calculate GHG emissions



Dimension	Proposed definition
Source	Where the data comes from (e.g., supplier, database)
Specificity	Description of how applicable a data point is to the activity
Calculation methods	The approach used to calculate emissions (e.g., direct measurement, calculation)
Uncertainty	Quantitative definition: Measurement that characterizes the dispersion of values that could reasonably be attributed to a parameter. Qualitative definition: A general and imprecise term that refers to the lack of certainty in data and methodology choices, such as the application of non-representative factors or methods, incomplete data on sources and sinks, lack of transparency etc. *–Scope 3 Standard, page 141*

Data quality brings together all four dimensions and can therefore be complex to evaluate/quantify, classify, and communicate

= The degree to which the data and measurements are complete, reliable, and technologically, temporally, and geographically representative.

-See Scope 3 Standard Chapter 7, page 75

Adapted from Scope 3 TWG slide deck

Data quality indicators in the Scope 3 Standard

Table [7.6] Data quality indicators

Indicator	*Description*
Technological representativeness	The degree to which the data set reflects the actual technology(ies) used
Temporal representativeness	The degree to which the data set reflects the actual time (e.g., year) or age of the activity
Geographical representativeness	The degree to which the data set reflects the actual geographic location of the activity (e.g., country or site)
Completeness	The degree to which the data is statistically representative of the relevant activity. Completeness includes the percentage of locations for which data is available and used out of the total number that relate to a specific activity. Completeness also addresses seasonal and other normal fluctuations in data.
Reliability	The degree to which the sources, data collection methods and verification procedures[2] used to obtain the data are dependable.

Program requirements for data quality across scopes

Program	Data quality requirements
GHG Protocol	**Information on the quality of the inventory** (e.g., information on the causes and magnitude of uncertainties in emission estimates) and an outline of policies in place to improve inventory quality. *–Corporate Standard, page 63*
IFRS S2	29 (iii) disclose the approach it uses to measure its greenhouse gas emissions (see paragraphs B26–B29) including: (1) the **measurement approach, inputs and assumptions** the entity uses to measure its greenhouse gas emissions *-IFRS S2, page 14*
ESRS 2	*Disclosure Requirement BP-2 – Disclosures in relation to specific circumstances* 11. In accordance with ESRS 1 section 7.2 Sources of estimation and outcome uncertainty, the undertaking shall: (b) in relation to each quantitative metric and monetary amount identified: i. disclose information about the sources of measurement uncertainty (for example, the dependence of the amount on the outcome of a future event, on a measurement technique or on the availability and **quality of data** from the entity's upstream and/or downstream value chain); and ii. disclose the **assumptions, approximations and judgements** the entity has made in measuring it. *-ESRS 2, page 42-45*
GRI 102: Climate Change 2025	• The organization **shall report** standards, methodologies, assumptions, and calculation tools used, including the source of the emission factors used. *–GRI 102, Requirement 102-5-f, page 25* • The organization **should explain** why the standards, methodologies, assumptions, and calculation tools were chosen, including the source of the emission factors used. *–GRI 102, Guidance to 102-5-f, page 27*
SBTi CNZS	Data quality: Companies **should** select **data that is the most complete, reliable, and representative** in terms of technology, time, and geography. *–SBTi CNZS, page 22*
SBTI CNZS *draft v2.0*	CNZS-C10: Companies **shall aim to improve quality** and traceability of their GHG emissions data over time. *–CNZS draft v2, page 45*

Program requirements for direct emissions – a summary

Program	Full name	Level of application	Approach used
US EPA GHGRP*	US EPA Greenhouse Gas Reporting Program, Subpart C	Facility level	• Stationary combustion: **Tiers based on data specificity** • Industry: Sector-specific guidance
EU ETS*	EU Emissions Trading System	Facility level	**Three types of tiers**: • Direct measurement (**uncertainty**) • Fuel or material quantity (**uncertainty**) • Emission factors (**data specificity**)
IPCC*	IPCC Guidelines for National GHG Inventories (2006, 2019 refinement)	National level	• **Three tiers based on data specificity and method** • Sector-specific guidance for 3 tiers
TCR	The Climate Registry General Reporting Protocol	Company/ organization level	• **Different levels of methods** are specified • Mobile combustion example: Method A (actual fuel use) and Method B (estimation based on distance) • "Simplified estimation methods" in some cases

Are there other relevant programs with data quality requirements that we should consider?

*More details provided on the following slides

Program requirements for direct emissions: *Examples from EPA GHGRP*

EPA

Level of application: Facility level

Program	Sector	Who must report	Data quality requirements
US EPA GHG Reporting Program, Subpart C	**Stationary combustion**	Any facility that contains **one or more stationary fuel combustion sources** and meets the Subpart C source category definition (including source type and emissions threshold)	The tier methodology used must be reported. There are 4 tiers: • **Tier 4**: Continuous emission monitoring system (CEMS) • **Tier 3**: Fuel-specific data • **Tier 2**: Mix of default and fuel-specific data • **Tier 1**: Default values to calculate CO2 mass emissions
US EPA GHG Reporting Program, Subpart F	**Aluminum**	Facilities that **manufacture primary aluminum** using the Hall-Héroult manufacturing process (i.e., electrolysis in prebake and Søderberg cells, anode baking for prebake cells)	**Specific calculation methods are required by source** (e.g., CF_4 from anode effects, C_2F_6 from anode effects). Reporters can choose between the following methods for process CO_2 emissions: • CEMS, using Tier 4 from Subpart C • Specified calculation procedures Details about the production system must be reported, including the type of smelter used and consumption levels.
US EPA GHG Reporting Program, Subpart H	**Cement**	Any facility that **contains a cement production process** and meets the Subpart H source category definition	Two approaches, with larger producers required to use CEMS: • **CEMS**, for kilns that meet requirements, according to Subpart C • **Calculate** and report annual process CO_2 emissions as the sum of annual clinker emissions and raw material emissions If using calculation approach, additional disclosure required, including missing data procedures and calculation method by source.

Specific data quality requirements are defined for each sector

Program requirements for direct emissions: *Examples from EU ETS*

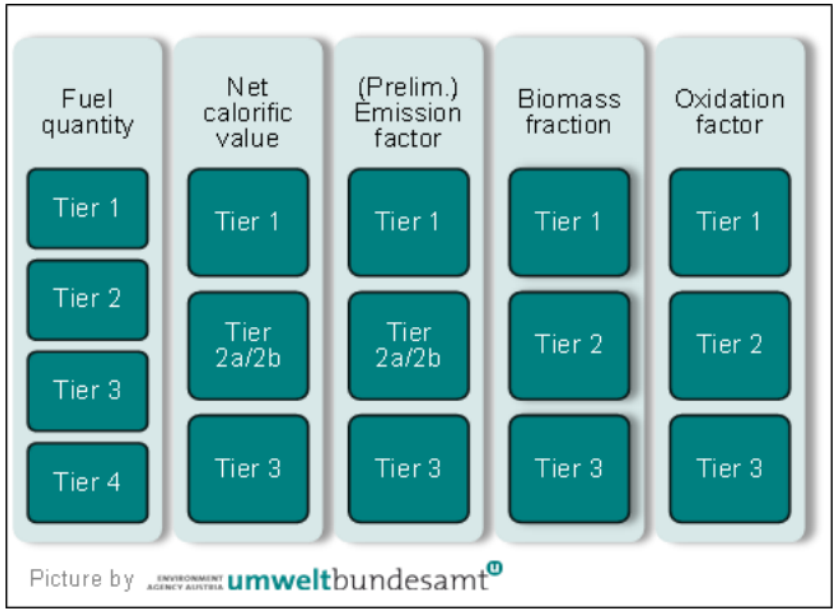
Level of application: Facility level

European Union Emissions Trading System (ETS) is a cap and trade program that requires affected companies to monitor and report their emissions on a yearly basis
Covers emissions from the **electricity and heat generation, industrial manufacturing, aviation, and maritime transport sectors***

Type	Data quality requirements

Stationary installations	• **Classification of installation** determines data quality requirements (i.e., "category A, B, or C" and "major, minor, or de minimis")
	• **Two methodologies** can be used, with the methodology sometimes specified by sector:
	  • Direct measurement
	  • Calculation (standard or mass-balance)
	• **'Tier'** means a set requirement used for determining activity data, calculation factors, annual emission and annual average hourly emission, released fuel amount and scope factor;
	  • **Tiers for direct measurement** are based on **uncertainty**
	  • **Tiers for fuel or material quantity** based on **uncertainty**
	  • **Tiers for calculation factors** determined by use of **sampling and analysis** (higher tiers) versus **default values** (lower tiers)

Tiers available for fuel quantity and select calculation factors for stationary installations



Source: EU ETS Monitoring and Reporting – Quick guide for stationary installations
*ETS2 will launch in 2027 to cover emissions from buildings, road transport, and additional sectors

Program requirements for direct emissions: *Examples from EU ETS*

Level of application: Facility level

Tiers for stationary installations (examples):

Direct measurement

Tiers for CEMS
(max uncertainty for each tier)

	Tier 1	Tier 2	Tier 3	Tier 4
CO_2 emission sources	±10 %	±7.5%	±5 %	±2.5%
N_2O emission sources	±10 %	±7.5%	±5 %	NA
CO_2 transfer	±10 %	±7.5%	±5 %	±2.5%

Source: EU Regulation 2018/2066 , Annex VIII

Calculation

Tiers for activity data (selected*)
(max uncertainty for each tier)

Activity/ source	Parameter	Tier 1	Tier 2	Tier 3	Tier 4
Combustion of fuels					
Commercial standard fuels	Amount of fuel	±7.5 %	±5 %	±2.5 %	±1.5 %
Production of iron and steel					
Fuel as process input	Each mass flow into and from the installation	±7.5 %	±5 %	±2.5 %	±1.5 %
Primary aluminum or alumina production					
PFC emissions (slope method)	Primary aluminum production and anode effect minutes	±2.5 %	±1.5 %		

Source: EU Regulation 2018/2066 , Annex II, Section 1

Tiers for emission factors
(based on data specificity)

Tier 1	One of the following: (a) Standard factors provided (b) Other constant values in accordance with points
Tier 2a	Country-specific emissions factors for the respective fuel/material
Tier 2b	Emission factors for the fuel derived based on one of the following: (a) Density measurement (oils, gases) (b) Net calorific value (coal)
Tier 3	One of the following: (a) Determination of emission factor in accordance with relevant provisions (b) Empirical correlation from 2b with limit to uncertainty

Source: EU Regulation 2018/2066 , Annex II, Section 2

*Tiers are also defined for other sectors and for calculation factors (e.g., net calorific value, oxidation factors, biomass fraction, carbon content)
See Appendix for more information on the classification and methodologies for stationary installations.

Program requirements for direct emissions: *Examples from IPCC*

Level of application: National level

- **IPCC defines three tiers for data quality**, with tier 3 being the best
- The specific guidance for each tier is **defined by sector**
- **Decision trees** for each sector indicate which tier is recommended, and in some cases required for "key categories"

Tier 3	**Most demanding tier.** Local activity data and technology-specific emission factors, or activity-specific emissions data (e.g., direct measurement)
Tier 2	**Intermediate tier**. Local activity data, with conversion factors sourced from national statistics
Tier 1	**Basic tier**. Activity data and emission factors from national statistics and industry averages

Volume 2: Energy

Volume 3: Industrial Processes and Product Use

Volume 4: Agriculture, Forestry, and Other Land Use

Volume 5: Waste

Sources: 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories
2006 IPCC Guidelines for National Greenhouse Gas Inventories

Program requirements for direct emissions: *Examples from IPCC*

Level of application: National level

Volume	Sector	Data quality requirements
Energy *Volume 2*	Stationary Combustion	• **Tier 3 =** fuel statistics and data on combustion technologies applied together with technology-specific emission factors; this includes the use of models and facility level emission data where available • **Tier 2 =** fuel combustion from national energy statistics, together with country-specific emission factors, where possible, derived from national fuel characteristics • **Tier 1 =** fuel combustion from national energy statistics and default emission factors;
Energy *Volume 2*	Mobile combustion	• **Same tier approach applies (3 tiers)** • Details vary by transport type (e.g., road transportation, off-road transportation, railways, aviation) • Approach can also vary for CO_2 versus CH_4 and N_2O

Energy *Volume 2*	Fugitive emissions	• **Same tier approach applies (3 tiers)**
		• In some cases, default Tier 1 emission factors could not be developed by the IPCC due to lack of information
		• **Coal mining example**:
		  • Tier 3 = direct measurements on a mine-specific basis
		  • Tier 2 = country- or basin-specific emission factors for the type of coal being mined
		  • Tier 1 = global average emission factors and country-specific activity data

Industrial Processes and Product Use *Volume 3*	Metal Industry Emissions	• Tiers for CO_2 are similar to combustion (i.e., Tier 3 = specific plant data; Tier 2 = Material-specific carbon contents; Tier 1 = Default emission factors and national production data)

Sources: 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories
2006 IPCC Guidelines for National Greenhouse Gas Inventories

Program requirements for scope 3 data quality

Program	Data quality requirements
GHG Protocol Scope 3 Standard	Companies shall publicly report for each scope 3 category, **the percentage of emissions calculated using data obtained from suppliers** or other value chain partners (p. 119, par. 11.1).
IFRS S2	The entity shall disclose information that enables users of general purpose financial reports to understand: • (a) the extent to which the entity's Scope 3 greenhouse gas **emissions are measured using inputs from specific activities** within the entity's value chain; and • (b) the extent to which the entity's Scope 3 greenhouse gas emissions are measured using inputs that are verified.
ESRS E1 (draft amended version)	(d) prioritise direct measurement of Scope 3 GHG emissions and, where this is not possible, further prioritise their inputs and assumptions based on the characteristics of the data (e.g. **data from specific activities** within the entity's upstream and downstream value chain, **timely data** that faithfully **represents the jurisdiction** of, and the **technology** used for, the upstream and downstream value chain activity and its GHG emissions, and data that has been **verified**). (draft amended version of ESRS E1)
GRI 102	The organization should report the **percentage of GHG emissions** in metric tons of CO_2 equivalent **obtained through primary data** for each of the 15 Scope 3 categories (GRI 102, D102-7, p. 32-33)
SBTI CNZS	Companies **should collect high-quality primary data** from suppliers and other value chain partners for scope 3 activities deemed most relevant and targeted for GHG reductions. Secondary data is permissible but it is better suited for scope 3 categories that are not significant in magnitude as it limits a company's ability to track performance. Please refer to Chapter 7 of the GHG Protocol Corporate Value Chain (Scope 3) Standard for further guidance on data quality issues. *–SBTi CNZS, page 22*

Most programs use one of two approaches:

- **Report % of emissions calculated using data from suppliers**
- **Prioritize high quality data**

Definitions of primary data and secondary data vary across programs

Program	Primary data	Secondary data
GHG Protocol Scope 3 Standard	Data from **specific activities** within a company's value chain	Data that is not from specific activities within a company's value chain. Examples include industry-average data (e.g., from published databases, government statistics, literature studies, and industry associations), financial data, proxy data, and other generic data.
IFRS S2	Primary data for Scope 3 greenhouse gas emissions includes **data provided by suppliers** or other entities in the value chain **related to specific activities** in an entity's value chain.	Secondary data for Scope 3 greenhouse gas emissions is data that is not obtained directly from specific activities within an entity's value chain
ESRS E1	Not defined	Not defined
GRI 102	Primary data is **obtained from suppliers** or other value chain entities related to the organization's activities.	Secondary data includes industry average data from published databases or government statistics and is not specific to the activity for which emissions are calculated.
SBTi *Draft version 2.0*	Primary data includes **data provided by suppliers** or others that directly relate to **specific activities** in the reporting company's value chain.	Secondary data includes industry-average-data (e.g. from published databases, government statistics, literature studies and industry associations), financial data, proxy data, and other generic data.
ISO 14064-1	Quantified value of a process or an activity obtained from a **direct measurement** or a calculation based on direct measurements.	Data obtained from sources other than primary data.

Most programs (except ISO) define primary and secondary data based on:

- **data specificity**
- **data obtained from value chain partners**

Data quality: Discuss external programs

Full Group Discussion

Discussion questions:

1. **What do you like** about the approaches taken by these external programs?
2. **What do you NOT like** about the approaches taken by these external programs?
3. **Do you think that reporting GHG emissions by tier helps provide transparency into data quality?**

Program	Level	Approach used
US EPA GHGRP	Facility level	• Stationary combustion: **Tiers based on data specificity** • Industry: Sector-specific guidance
EU ETS	Facility level	**Three types of tiers**: • Direct measurement (**uncertainty**) • Fuel or material quantity (**uncertainty**) • Emission factors (**data specificity**)
IPCC	National level	• **Three tiers based on data specificity and method** • Sector-specific guidance for 3 tiers

Scope 3 TWG proposal on data specificity

Scope 3 TWG PROPOSAL:

Disaggregate the scope 3 inventory data into **4 tiers,** based on **data specificity**

Proposed revised Standard text	Organizations **shall** report scope 3 inventory emissions disaggregated by the specificity of the data, **in four line items** (tiers) for each scope 3 category: • **Specific data:** Emissions calculated using specific activity data and specific emission factors. • **Non-specific data (name TBD):** Other (not specific data and not EEIO data) • **EEIO / Spend-based data:** Any emissions calculated using EEIO emission factors or other monetary proxy emission factors. • **Unknown / Unclassified ***
Rationale	Promotes transparency and allows inventory users to interpret emissions results
Feasibility concerns	• Data management (of both upstream/downstream data) can be onerous, particularly for SMEs; costs can divert from decarbonization • Not directly aligned with other standards (e.g., ISO 14083)

** This fourth classification is being proposed based on discussion with Scope 3 Group A on July 17th; it has not been voted upon by the entire Scope 3 TWG*

Group A – Revisions

Reporting requirements

A1. Disaggregation of scope 3 inventory data shall be done in 4 tiers, based on **data specificity**

A2. Introduce a reporting requirement to identify verified scope 3 emissions

A3. Recommend introducing an **uncertainty assessment add-on** (quantitative for large companies and qualitative for others) *

Recommendations (not requirements) for data quality improvement

A5. **Minimum data quality** recommendation

A6. **Data specificity improvement** recommendation

A7. **Data quality improvement** recommendation

Allocation

A8. Corporate level data allocation shall be maintained but restricted to only homogenous value chain partners

A9. Both physical and economic allocation should exist (NO CHANGE to existing *Standard*)

A10. Explicitly prohibit system expansion with substitution (this is a way of calculating avoided emissions)

Legend: *For discussion today* | *For discussion at a future meeting* | *Unboxed: Not relevant to Corporate Standard*

*Subject to development of a standardized method for quantifying uncertainty

See Appendix for details on A3, A5, A6, and A7 and for Scope 3 TWG survey results

Data quality: Options considered by Scope 3 TWG

Let's take a step back and review how the Scope 3 TWG came to this recommendation.

Option 1	Improved implementation of current requirements
Option 2	Data quality scoring
Option 3	Disaggregated reporting based on quality

Why option 1 was ruled out:

- Demand for greater standardization and consistency on "how" quality, specificity, etc. are reported

Why option 2 was ruled out:

- Complexity in defining and applying data quality scoring framework
- Low feasibility for user

→ Support for this approach. Considered the following indicators: **Data type, data source, calculation method, verification, data quality, and combination**

→ Support for the following vision:

- **Objective approach**
- **Easy to interpret**
- **Easy to implement**

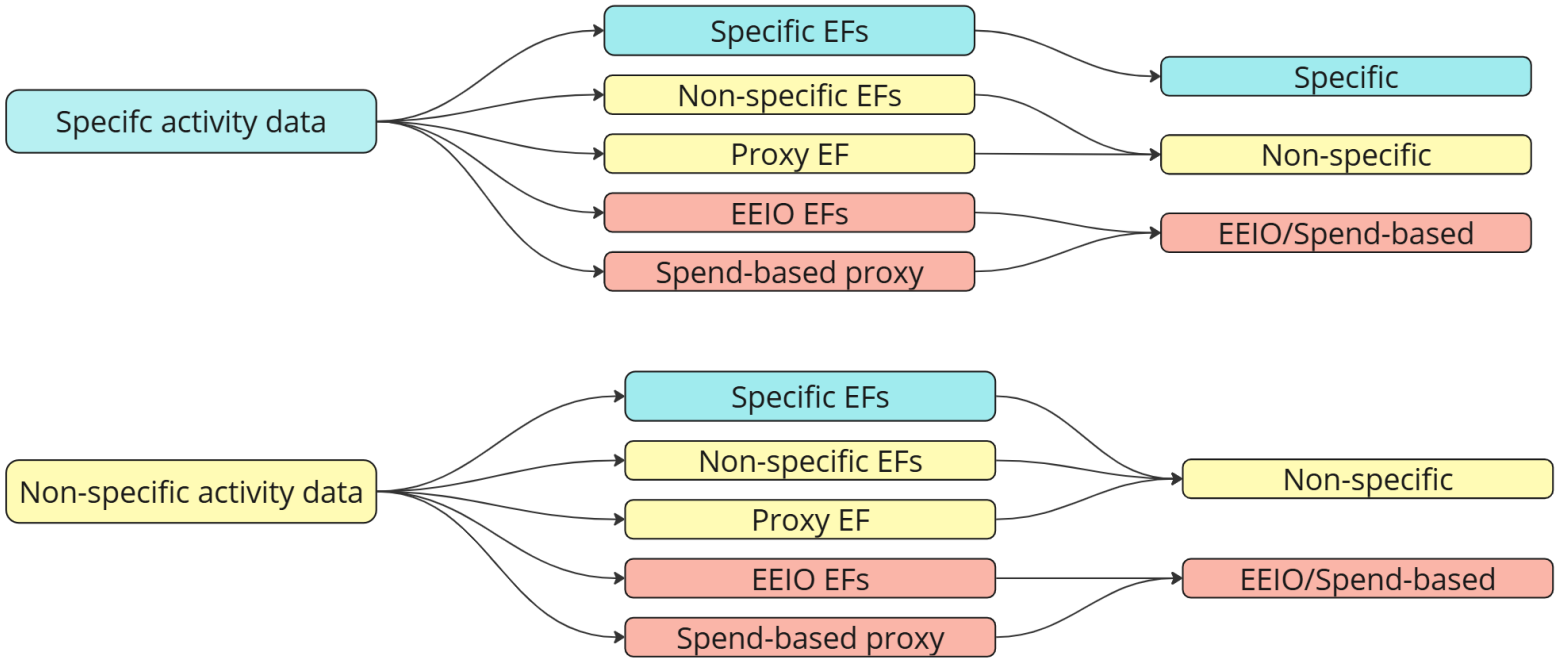
→ **Data specificity in 4 tiers**

Classification of data into 4 data specificity tiers

Four options:

- Specific
- Non-specific
- EEIO/spend-based
- Unknown/unclassified

Note: Tier names are not yet finalized and suggestions are welcome



Additional option to support feasibility: Unknown/unclassified

What are specific activity data?

Activity data is classified as specific if ALL the following are observed:

Time period	AND	Location	AND	Allocation	AND	Activity-specific rules
The time period of the measurement corresponds to the reporting period		The data is collected from a company's own premises or provided by value chain partners (upstream or downstream), for the specific site and technology/ process/ product/waste fraction, that is relevant to the reporting company		If data is allocated, the allocation is applied consistently among all outputs to avoid under- or over-reporting of emissions, using the allocation guidance		• **Fuel, energy, and material consumption**: Measured in physical units • **Process and fugitive emissions**: Measured in physical units, or modelled in chemical or physical modelling • **Waste**: Measured in physical units or modelled based on the product or process design, and adequately characterized in composition • **Services**: Measured in physical or economic units adequate to the function of the service

Note: Scope 3 TWG proposed additional rules for categories 9-12. See data specificity Draft Requirements (Rules) for more details.

What are specific emission factors?

Emission factors are classified as specific if they are compliant with the GHG Protocol corporate suite of standards, calculated using latest IPCC AR, and comply with the following requirements as applicable:

Combustion EFs	Fuel-specific
Process and fugitive EFs	Specific to the substance
Location-based electricity EFs	Regional and no more than 3 years old
Market-based electricity EFs	Compliant with the Scope 2 Standard
Waste treatment	Waste-specific by the partner, or waste-specific and technology-specific and geography-representative
Cradle-to-gate EFs shall be disaggregated and cascaded with the specific tier used when:	• Specific data and specific EF are used • Representative for the product (no families) • Previously made studies can be used if re-validated

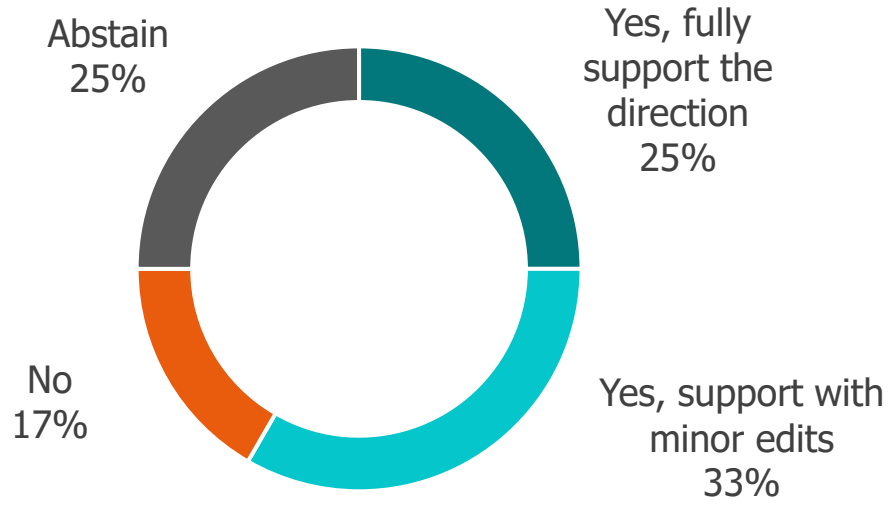
See data specificity Draft Requirements (Rules) for more details on requirements for specific emission factors.

Level of support for Scope 3 TWG and ISB

Disaggregation of scope 3 inventory by data specificity

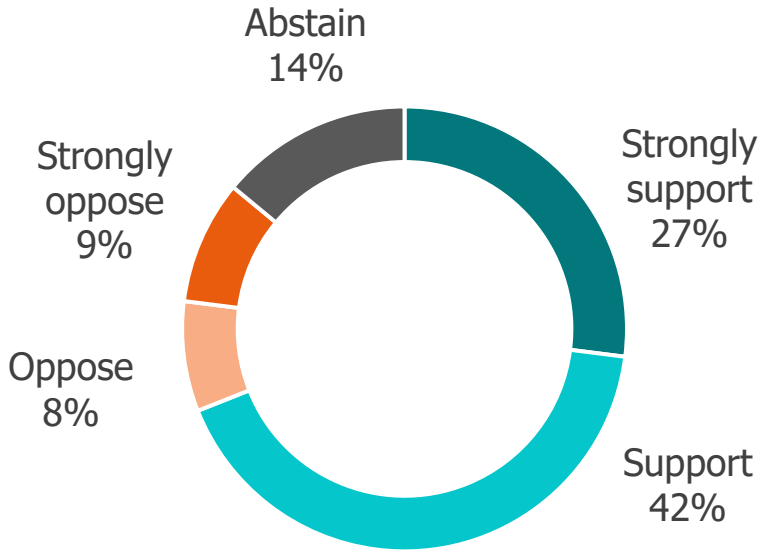
Pulse check at ISB July meeting:

Do you support the proposed TWG direction for the revision to require (A.1) disaggregation of scope 3 emissions?



Scope 3 TWG:

Do you support revision A.1 (disaggregation of scope 3 inventory in tiers)?



** Supporting v. opposing percentage values exclude abstentions in the denominator.*

Example of disaggregation by data specificity for illustrative purposes

Scope 3 example:

Category	GHG emissions (tCO_2e)	% provided by value chain partners*	% not provided by value chain partners
Category 1	**100**	**15%**	**85%**
Specific	10		
Non-specific (name TBD)	30		
EEIO/spend based	55		
Unknown/unclassified	5		
Category 2 (…)			

* Current requirement in Scope 3 Standard for data quality

Extended to scopes 1 and 2:

Source	GHG emissions (tCO_2e)
Scope 1	**100**
Specific	10
Non-specific (name TBD)	30
EEIO/spend based	55
Unknown/unclassified	5
Scope 2	…

Should scope 1 be disaggregated by stationary, mobile, fugitive, and process emissions?

Tiers comparison: Scope 3 TWG approach, EPA GHGRP, and EU ETS

Based on specificity of the data:

Scope 3 TWG proposal	EPA GHGRP: Stationary combustion	IPCC: National Guidelines for GHG Inventories	EU ETS: Stationary installations Emission factors
Specific	**Tier 4**: CEMS	**Tier 3:** Local activity data and technology-specific emissions factors, or activity-specific emissions data (e.g., direct measurement)	NA for emission factors
	Tier 3: Fuel-specific data		**Tier 3**: One of the following: (a) Determination of emission factor in accordance with relevant provisions (b) Empirical correlation from 2b with limit to uncertainty
			Tier 2b: Emission factors for the fuel derived based on one of the following: (a) Density measurement (oils, gases) (b) Net calorific value (coal)
Non-specific	**Tier 2**: Mix of default and fuel-specific data	**Tier 2:** Local activity data, with conversion factors sourced from national statistics	**Tier 2a**: Country-specific emissions factors for the respective fuel/material
	Tier 1: Default values to calculate CO_2 mass emissions	**Tier 1:** Activity data and emission factors from national statistics and industry averages	**Tier 1**: One of the following: (a) Standard factors provided (b) Other constant values in accordance with points
EEIO/ spend-based			
Unknown/ unclassified			

Based on uncertainty:

EU ETS: Stationary installations Direct measurement	EU ETS: Stationary installations Fuel or material quantity: *Combustion of fuels* ***example****
Tier 4: ±2.5%	**Tier 4**: ±1.5%
Tier 3: ±5%	**Tier 3**: ±2.5%
Tier 2: ±7.5%	**Tier 2**: ±5%
Tier 1: ±10%	**Tier 1**: ±7.5%

*Number of tiers and % uncertainty values vary by fuel and material

How would the Scope 3 TWG approach look if we applied it to our scope 1 data quality table?

Activity types	~~High quality~~ → Specific	~~Medium quality~~ → Non-specific	~~Low quality~~ → EEIO/Spend-based
Stationary combustion	• Direct measurement • Energy content of fuel • Carbon content emission factors • Volume/weight of fuel • Fuel-specific EFs	• Estimated fuel consumption • Industry average emission factors	• Spend-based activity data • EEIO emission factors
Mobile combustion	• Direct measurement • Energy content of fuel • Carbon content emission factors • Volume/weight of fuel • Fuel-specific EFs	• Distance traveled • Industry average emission factors	• Spend-based activity data • EEIO emission factors
Process emissions	• Direct measurement • Measured in physical units • Modeled in chemical or physical modeling	• Volume/weight of material produced • Industry average emission factors	• Spend-based activity data • EEIO emission factors
Fugitive emissions	• Direct measurement • Mass balance method • Volume of refrigerant leaked • Weight of fertilizer • Volume of waste treated • Specific EFs	• Industry average emission factors • Average leak rate by HVAC type • Number of animals	• Spend-based activity data • EEIO emission factors

Updates:

- **Tiers renamed** from 'high quality' to 'specific' (for example). *Note: Tier names are TBC.*
- **Orange text**: Moved from 'medium quality' to 'high quality'
- **Pink text**: Moved from 'low quality' to 'medium quality'
- **Green text**: New text from Scope 3 TWG proposal
- **Purple text**: Subgroup 3 member suggestions

Note: This table is intended to be a starting point for discussion. It combines activity data, emission factors, and methods.

Data quality revisions: Scope 3 TWG proposal

Full Group Discussion

Poll questions

Discussion and poll questions:

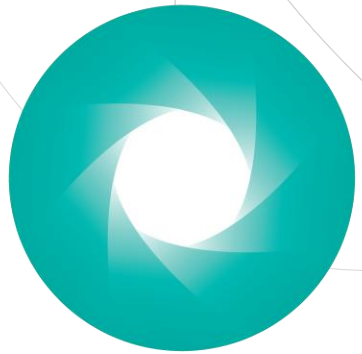
1. Do you support the Scope 3 TWG proposal to **disaggregate reporting by data specificity** for scope 3 reporting?
2. Do you agree with the **4 defined tiers** (specific, non-specific, EEIO/spend-based, unclassified/unknown)?
3. Do you think this approach can and should be extended to **scope 1**?
4. Are any revisions needed to the **specificity rules for activity data and emission factors** to extend the approach to scope 1?
5. Do you have any **feedback on the tier names** (i.e., specific, non-specific, EEIO/spend-based, unclassified/unknown)?

Scope 3 TWG proposal:

Disaggregate the scope 3 inventory data into **4 tiers,** based on **data specificity**

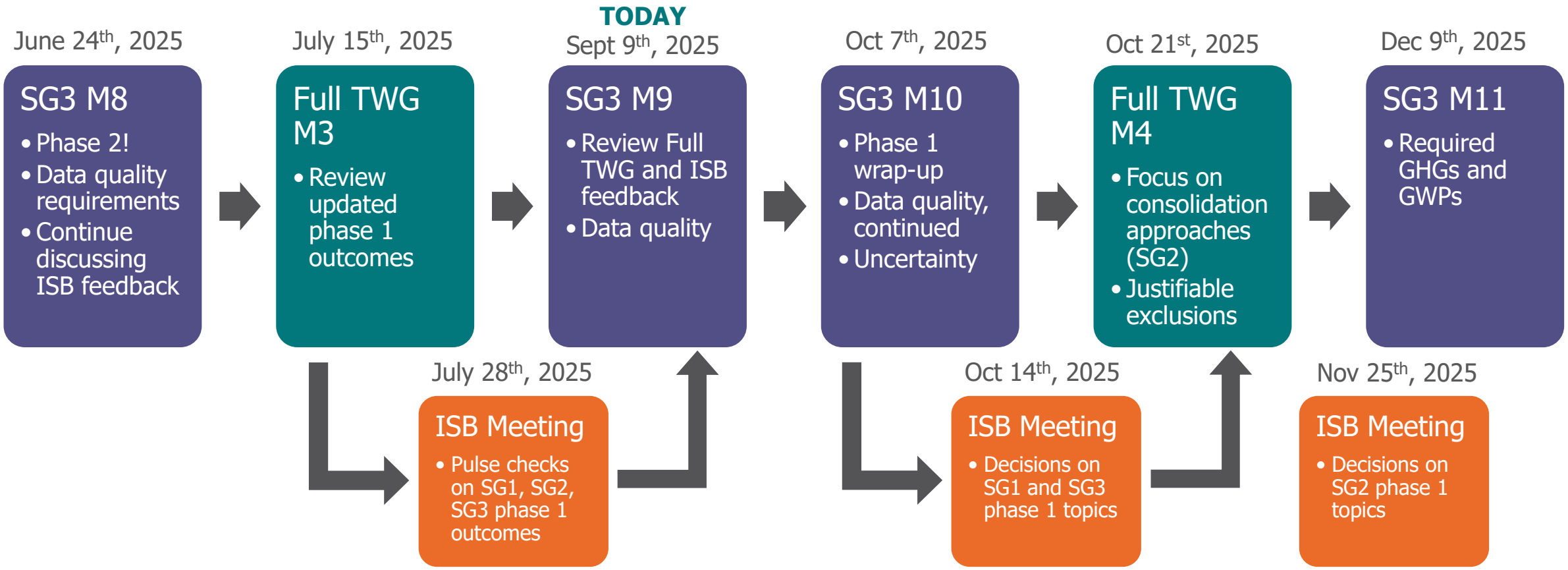
Agenda

Introduction and housekeeping	10 minutes
Phase 2 proposed plan	10 minutes
Full TWG and ISB feedback	20 minutes
Data quality	70 minutes
Wrap-up and next steps	**10 minutes**



GREENHOUSE GAS PROTOCOL

Upcoming Schedule



Legend: Subgroup 3 | Full TWG | ISB

Note: There will be an **optional open discussion meeting on September 18th** on consolidation approaches

Next steps

Upcoming meetings:

(Optional) **Subgroup 2 open discussion meeting** on consolidation approaches	Wednesday September 17th	8:00 ET / 14:00 CET / 20:00 CHN
Subgroup 3 Meeting 10	Tuesday October 7th	9:00 ET / 15:00 CET / 21:00 CHN

Items to be shared by GHG Protocol Secretariat:

- Final slides, minutes, and recording from this meeting
- Feedback survey on meeting 9 topics

TWG member action items:

- **Review** meeting materials
- Fill out post-meeting **feedback survey** by **EOD Friday September 26th**

GREENHOUSE GAS PROTOCOL

Thank you!

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

Iain Hunt, iain.hunt@wri.org

Hande Baybar, baybar@wbcsd.org

Appendix

GREENHOUSE GAS PROTOCOL

Uncertainty, as defined in GHG Protocol

Uncertainty =

1. **Quantitative definition**: Measurement that characterizes the dispersion of values that could reasonably be attributed to a parameter.
2. **Qualitative definition**: A general and imprecise term that refers to the lack of certainty in data and methodology choices, such as the application of non-representative factors or methods, incomplete data on sources and sinks, lack of transparency etc.

-Scope 3 Standard, page 141

See also:

- **Scope 3 Standard, Appendix B: Uncertainty in Scope 3 Emissions**
- **GHG Protocol guidance on uncertainty assessment in GHG inventories and calculating statistical parameter uncertainty**
- **GHG Protocol, Quantitative Inventory Uncertainty**

Program requirements for **direct emissions:** *Examples from EU ETS*

Classification of stationary installations

Classification of installation determines data quality requirements

The operator shall **classify each installation** in one of the following categories:

Category	**Emissions** in the prior trading period
Category A	**≤ 50,000** tonnes CO_2e
Category B	**> 50,000 and ≤ 500,000** tonnes CO_2e
Category C	**> 500,000** tonnes CO_2e

The operator shall **classify each source stream** in one of the following categories:

Category	**Emissions** in the prior trading period
Minor source streams	Source streams jointly account for <5,000 tonnes fossil CO_2 per year or <10%, up to a total maximum of 100,000 tonnes of fossil CO_2 per year, whichever is greater
De minimis source streams	Source streams jointly account for <1,000 tonnes fossil CO_2 per year or <2%, up to a total maximum of 20,000 tonnes of fossil CO_2 per year, whichever is greater
Major source streams	Source streams do not fall within the minor or de minimis source streams

Source: EU ETS Monitoring and Reporting – Quick guide for stationary installations

Program requirements for direct emissions: *Examples from EU ETS*

Calculation methodologies for stationary installations

Article 21: Choice of the monitoring methodology

"For the monitoring of the emissions of an installation, the operator shall choose to apply either a **calculation-based methodology or a measurement-based methodology**, subject to specific provisions of this Regulation."

Category	Definition
Calculation-based methodology	Determining emissions from source streams on the basis of **activity data** obtained by means of measurement systems and additional parameters from **laboratory analyses or default values** Two types: • **Standard methodology** (use of activity data and emissions factor) • **Mass-balance methodology** (multiply activity data with the carbon content by its fossil fraction)
Measurement-based methodology	Determining emissions from emission sources by means of **continuous measurement of the concentration of the relevant greenhouse gas** in the flue gas and of the flue-gas flow, including the monitoring of CO2 transfers between installations where the CO2 concentration and the flow of the transferred gas are measured

"Where sector-specific requirements laid down in Annex IV require the use of a specific monitoring methodology, the operator shall use that methodology or a measurement-based methodology. "

Note: EU ETS Does not appear to state preference for calculation versus measurement based methodology. Specific methodologies required in Article IV are generally the mass-balance method for certain types of process emissions.

Source: EU ETS Monitoring and Reporting – Quick guide for stationary installations

A1 Disaggregation of scope 3 inventory data shall be done in 3 tiers, based on data specificity

Current Standard (2011)

11.1 Required information - Companies **shall** publicly report the following information: […]

- For each scope 3 category, a description of the **type and source of data**, including activity data, emission factors and GWP values, used to calculate emissions, and a description of the data quality of reported emissions data.
- … **methodologies, allocation methods, and assumptions** used to calculate scope 3 emissions.
- **percentage of emissions calculated using data obtained from suppliers or other value chain partners**.

Proposed Revised Standard (2025)

- Organizations **shall** report scope 3 inventory emissions disaggregated by the specificity of the data, **in four line items** (tiers) for each scope 3 category:
  - **Specific data:** Emissions calculated using specific activity data and specific emission factors.
  - **Non-specific data (name TBD):** Other (not specific data and not EEIO data)
  - **EEIO / Spend-based data:** Any emissions calculated using EEIO emission factors or other monetary proxy emission factors.
  - **Unknown / Unclassified ***

Notes/rationale

- Promotes transparency and allows inventory users to interpret emissions results
- There are **feasibility concerns**
  - Data management (of both upstream/downstream data) can be onerous, particularly for SMEs; costs can divert from decarbonization
  - Not directly aligned with other standards (e.g. ISO 14083)

Level of support from Scope 3 TWG

- **80% support** (31% strongly)
- 20% oppose (11% strongly)
- *14% level of Abstention* **
- Survey opinion
  - **20%** of members expressed concern re: **feasibility**
  - Combined, **30%** of voting Scope 3 TWG members expressed **feasibly concerns** and/or **opposition**

** Supporting v. opposing percentage values *exclude* abstentions in the denominator

* This fourth classification is being proposed based on discussion with Group A on July 17th; it has not been voted upon by the entire scope 3 TWG. Please refer to the full draft specifications for disaggregation here: Draft Requirements (Rules) for reporting tier definition.pdf

A3 Introducing uncertainty assessment requirement, subject to methodological development

Current Standard (2011)

11.2 Optional information – A public GHG emissions report **should** include, when applicable, the following additional information: […]

- Quantitative assessment of data quality.
- Information on inventory uncertainty (e.g. information on the causes and magnitude of uncertainties in emissions estimates) and an outline of policies in place to improve inventory quality.

11.3 Reporting guidance – […] **Optional reporting: Information on uncertainty** - Companies **should** describe the level of uncertainty of reported data, qualitatively or quantitatively, to ensure transparency and avoid misinterpretation of data. In cases where data uncertainty is high, companies should also describe efforts to address uncertainty.

Proposed Revised Standard (2025)

Subject to the GHG Protocol providing a standardized method to assess the uncertainty of scope 3 emissions data, then:

- Companies **shall** conduct and report uncertainty assessment* of the data, at a minimum for 80% of scope 3 emissions:
  - Large companies** **shall** conduct and report ***quantitative*** assessment;
  - Other organizations **shall** conduct and report a ***qualitative*** assessment.

Notes/rationale

- Introduces a better proxy for data quality
- Feasibility concerns and additional burden for companies
- Costs diverted from decarbonization
- This would be contingent on the corporate suite of GHG Protocol standards providing a standardized methodology
- The Secretariat does not currently have the budget or capacity to develop such a methodology in the current revision SoW

Level of support from Scope 3 TWG

- **75% support** (33% strongly)
- 25% oppose (36% strongly)
- *14% level of abstention***

*Quantitative or qualitative. * Addressed in 'implementation of standards updates' topic, slides 113 onwards

** Supporting v. opposing percentage values *exclude* abstentions in the denominator

A5 Minimum requirements for data quality (question 12)

Current Standard (2011)

7.3 Guidance for selecting data

- "Companies **should** collect data of sufficient quality to ensure that the inventory appropriately reflects the GHG emissions of the company, supports the company's goals, and serves the decision-making needs of users, both internal and external to the company…
- In general, companies **should** collect high quality, primary data for high priority activities (see section 7.1)…
- Companies **should** select data that are the most representative in terms of technology, time, and geography; most complete; and most reliable.

Proposed Revised Standard (2025)

- The following applies to emission factors:
  - "Companies **should** use data of high completeness (not more than 5% exclusions applied)…
  - … **supplemented by** uncertainty assessment, and provided with information on its completeness level, data quality assessment, validation process and evidence, and verification level...
  - … Emission factors **should** include import and export into regional models." *

Notes/rationale

- **Note**: The Scope 3 TWG supports applying a 95% inclusion requirement (5% exclusion threshold) to required scope 3 emissions (as per Table 5.4 for required vs. optional activities)

Level of support from Scope 3 TWG

- **93% support** (37% strongly)
- 7% oppose (0% strongly)
- *10% level of abstention*

* This applies exclusively to emission factors. Emission factors that are calculated by including import (and export) of materials from (to) other markets/countries are expected to be more representative of the regional reality and therefore more accurate.

A6 Data specificity improvement

Current Standard (2011)

- **7.6 Improving data quality over time** - Companies should first apply data quality indicators and assess data quality when selecting data sources (see section 7.3), then review the quality of data used in the inventory after data has been collected, using the same data quality assessment approach.
- Over time, companies should seek to improve the data quality of the inventory by replacing lower quality data with higher quality data as it becomes available.

Proposed Revised Standard (2025)

- Companies **should** set a goal for the minimum percentage of their inventory using the "Specific" tier and pursue reaching this percentage as a minimum. *
- Companies **should** use data quality metrics like:
  - Share of scope 3 emissions reported in the "Specific" tier
  - Share of value chain partners providing specific data **

** This is an additional metric, beyond the metrics presented as an alternative to requiring A.1 Disaggregation.

Notes/rationale

- Introduces feasible and clear minimum requirements
- **Cross-cutting alignment** with the Corporate Standard TWG on GWP values (acceptable IPCC AR)

Level of support from Scope 3 TWG

- **80-93% support** (37-39% strongly) ***
- 7-20% oppose (0-13% strongly)
- *10-20% level of abstention*

* Tiers as per A.1 Disaggregation: Specific, Non-specific, EEIO/Spend-based, and Unknown. *** The above proposed "should" revisions were surveyed via two separate questions and reflected in the above percentage (%) ranges for the first and second revision, respectively.

A7 Data quality improvement recommendation

Current Standard (2011)

- **7.6 Improving data quality over time** - Companies should first apply data quality indicators and assess data quality when selecting data sources (see section 7.3), then review the quality of data used in the inventory after data has been collected, using the same data quality assessment approach.
- Over time, companies should seek to improve the data quality of the inventory by replacing lower quality data with higher quality data as it becomes available.
- Companies are required to provide a description of the data quality of reported scope 3 emissions data to ensure transparency and avoid misinterpretation of data

Proposed Revised Standard (2025)

- #16 - Companies **should** improve data quality over time and set data quality improvement targets based on established metrics and considering the company context.
- #17 - Companies **may** use year-on-year improvement targets, or mid-term horizon targets.

Notes/rationale

- Introduces feasible and flexible recommendations supporting the ambition
- Cross-cutting alignment with other workstreams

Level of support from Scope 3 TWG

- **90-92% support** (23-45% strongly)*
- 8-10% oppose (0% strongly)
- *0-6% level of abstention*

* The above proposed revisions were surveyed via two separate questions and reflected in the above percentage (%) ranges for the first and second revision, respectively.

Draft general requirements for disaggregated reporting

[G1] Organizations shall report scope 3 inventory emissions disaggregated by the specificity of the data, **in three line items** (tiers) for each scope 3 category: Specific data, Non-specific data, EEIO / Spend-based data.

[G2] When reported and when passed along the value chain, emissions data shall be **communicated in disaggregated manner**. Emissions shall be disaggregated by scope 3 category and data specificity tier.

[G3] Emissions data classified as specific, non-specific or EEIO /Spend-based should be **passed along the value chain** and reported by the recipients of the data maintaining the tier, if qualified by representativity.

[G4] Emissions data within the same tier and the same scope 3 category can be summed up.

[G5] Emissions data and emissions calculated using activity data or emission factors provided without classification in data specificity tiers, shall be reported into a temporary tier of **Unknown** used during the transition period. Companies shall not use **Unknown** tier of reporting after the transition period, and for more than X% of the scope 3 inventory during the transition period.

Note: *Transition period duration and maximum percentage allowed for reporting on the tier are for further development*

[**G6**] All emissions data, activity data, and emission factors used in scope 3 inventory calculations shall **meet the minimum requirements** (see Chapter 7.X)

Draft calculation requirements for disaggregated reporting

[C1] Specific Rule:

Emissions calculated using specific activity data and specific emission factors shall be classified by a reporting company as **Specific (Tier 1).**

[C2] EEIO/Spend-based Rule:

Any emissions calculated utilizing an environmentally extended input-output (EEIO) emission factor input (whether country-level or regional), or other proxy *emission factors* expressed as emissions per monetary unit (e.g., kgCO2e / $), shall be classified by a reporting company as **EEIO/Spend-based (Tier 3).**

> ***Note:*** *Any results (or calculation method) utilizing an activity data input (e.g., unit count product, unit weight fuel, unit weight material, etc.) calculated, estimated, or modelled from or based on spend data (e.g., expenses or COGS) must be classified by a reporting company as Non specific (Tier 2).*

[C3] Non-specific Rule:

Emissions not classified as EEIO/Spend-based or Specific shall be reported as **Non-specific** (process-based) data **(Tier 2)**

Scope 3 TWG recommendations on data quality

Scope 3 inventory shall be reported in a disaggregated manner

Disaggregation principle	Verification add-on	Uncertainty assessment add-on
Most supported: Option 4: disaggregation based on **data specificity**	**Most supported:** Mark "+" for the verified data in reporting	**Most supported:** Required quantitative uncertainty assessment for large companies, required qualitative uncertainty assessment for the rest
Runner-up Option 2: disaggregation by existing calculation methods		**Runner-up** Qualitative uncertainty assessment is required for large, other assessment is optional for all Optional uncertainty assessment across the board, with a mark of recognition for opting-in

Source: Subgroup 3 Full TWG Meeting #3 on Group A revisions

Survey summary: Series A

- [Revision A1] **Disaggregation of Scope 3 inventory in tiers**
  - **80% support** (31% strongly)
  - 20% oppose (11% strongly)
  - 14% level of Abstention *
- [Revision A2] **Verification add-on, marking data with +**
  - **96% support** (64% strongly)
  - 4% oppose (0% strongly)
  - 4% level of Abstention *
- [Revision A3] **Uncertainty assessment add-on**
  - **75% support** (33% strongly)
  - 25% oppose (36% strongly)
  - 14% level of Abstention *
- [Revision A5] **Minimum requirements for data quality**
  - **93% support** (37% strongly)
  - 7% oppose (0% strongly)
  - 10% level of Abstention *
- [Revision A6] **Data specificity improvement**
  - **80-93% support** (37-39% strongly)
  - 7-20% oppose (0-13% strongly)
  - 10-20% level of Abstention *

Legend: *For discussion today* | *For discussion at a future meeting* | *Unboxed: Not relevant to Corporate Standard*

* Supporting v. opposing percentage values *exclude* abstentions in the denominator.

Survey summary: Series A

- [Revision A7] **Data quality improvement**
  - **90-92% support** (23-45% strongly)
  - 8-10% oppose (0% strongly)
  - 0-6% level of Abstention *
- [Revision A8] **Corporate level data allocations**
  - **91% support** (33% strongly)
  - 9% oppose (0% strongly)
  - 16% level of Abstention *
- [Revision A9] **Physical and economic allocation**
  - **98% support** (40% strongly)
  - 2% oppose (0% strongly)
  - 10% level of Abstention *
- [Revision A10] **System expansion with substitution**
  - **83% support** (50% strongly)
  - 17% oppose (17% strongly)
  - 29% level of Abstention *

Legend: *For discussion today* | *For discussion at a future meeting* | *Unboxed: Not relevant to Corporate Standard*

* Supporting v. opposing percentage values *exclude* abstentions in the denominator.

Preliminary outcomes:
Data quality in GHG Protocol: Scope 2, Scope 3, Land Sector and Removals

TWG	Data quality disclosure	Minimum data quality requirements	Uncertainty
Scope 2	• **Methodology disclosure**, including the types of contractual arrangements/instruments for MBM*	• LBM*: Requirement to use the **most precise location-based emission factor** accessible for which activity data is also available. • MBM*: **Hourly matching requirement** for electricity consumption above a certain threshold (to be defined) • MBM: **Market boundary matching requirement** to ensure contractual instruments are sourced within the reporting entity's market boundary	• **No uncertainty recommendation or requirement** at this stage
Scope 3	• Scope 3 inventory shall be reported in a **disaggregated** manner • Current proposal: Data disaggregation based on **four levels of data specificity** (i.e., specific, non-specific, EEIO/spend-based data, and unknown/unspecified)	• **Minimum data quality requirement with qualitative indicators** (i.e., data used shall be compliant with GHG Protocol methodology and shall be accompanied with required documentation, such as data source, GWP, and allocation methods) • **Recommendation** to use high quality data and improve quality over time	• Current proposal**: Require quantitative uncertainty assessment** for large companies, and require qualitative uncertainty assessment for the rest • Only required if GHGP can develop uncertainty guidance
Land Sector and Removals	• **Methodology disclosure** for each accounting subcategory, by scope and scope 3 category • **Data type, source, and quality disclosure**; share of primary data used to calculate scope 3 emissions, by scope 3 category	• General: recommendation for **improved data collection** and **higher accuracy methods** that reduce uncertainty, with prioritization for GHG sources and sinks that are most significant and/or where opportunity for emission reduction/removals enhancement are greatest • Removals: to report removals, calculations must use **empirical data specific to the sinks and pools** where carbon is stored in company's operations or value chain	• General: see general recommendation at left • Removals: to report removals, must provide **quantitative uncertainty estimates**

*LBM = location-based method; MBM = market-based method