

Actions and Market Instruments Technical Working Group

Meeting # 2.04

GHG Protocol Secretariat team:

Ralf Pfitzner, Alejandra Bosch, Yumzhana Daneeva, Kevin Kurkul, David Rich

April 22, 2026

Agenda

- Welcome & Housekeeping (5 min)
- Quality criteria
 - Interim summary and next steps (20 min)
- Traceability
 - ISEAL traceability and CoC, Josh Taylor (25 min)
 - ISO 22095, Mark Staples (20 min)
 - Discussion (40 min)
- Next steps (5 min)



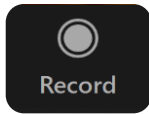
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Agenda

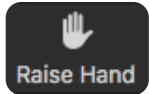
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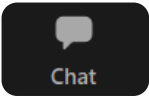
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This meeting is recorded.



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.

Guidelines and Procedures

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 the 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

AMI TWG Shared Values

- Always **be respectful**
- Take space, make space
- There are **no bad ideas or questions**
- **Be pragmatic** – balance perfect with actionable
- **Be open** to differing points of view and **curious** about all sides of a discussion
- **Keep integrity** at the heart of decision-making and consider real word impacts
- **Keep focus** on the long-term goal of developing an effective standard

Plan for our TWG meetings in 2026 – some modifications needed

Meeting	Date	Topic
2.01	Jan 28, 2026	Workplan, white paper, public consultation
2.02	Feb 25, 2026	Quality and eligibility criteria
2.03	Mar 25, 2026	Statement 2 and 3 structure
2.04	Apr 22, 2026	Traceability, quality and eligibility criteria
2.05	May 20, 2026	Additionality, Baselines*
2.06	Jun 17, 2026	Public consult feedback, Statement 4*
2.07	End of June /early July 2026	Potential in-person meeting
2.08	Sep 09, 2026	Revisiting key topics from in-person meeting
2.09	Oct 07, 2026	Plan for Standard drafting
2.10	Nov 04, 2026	TBD, key topics as necessary
2.11	Dec 02, 2026	TBD, key topics as necessary

*Potential additional topics as time allows: case studies, avoided emissions from product use

Today's Objectives

1. Quality criteria
 - Summarize outcomes so far and provide interim status

2. Traceability
 - Level-setting. Align understanding on traceability and CoC models.
 - Define the issues that we need to solve on traceability for each of the statements.

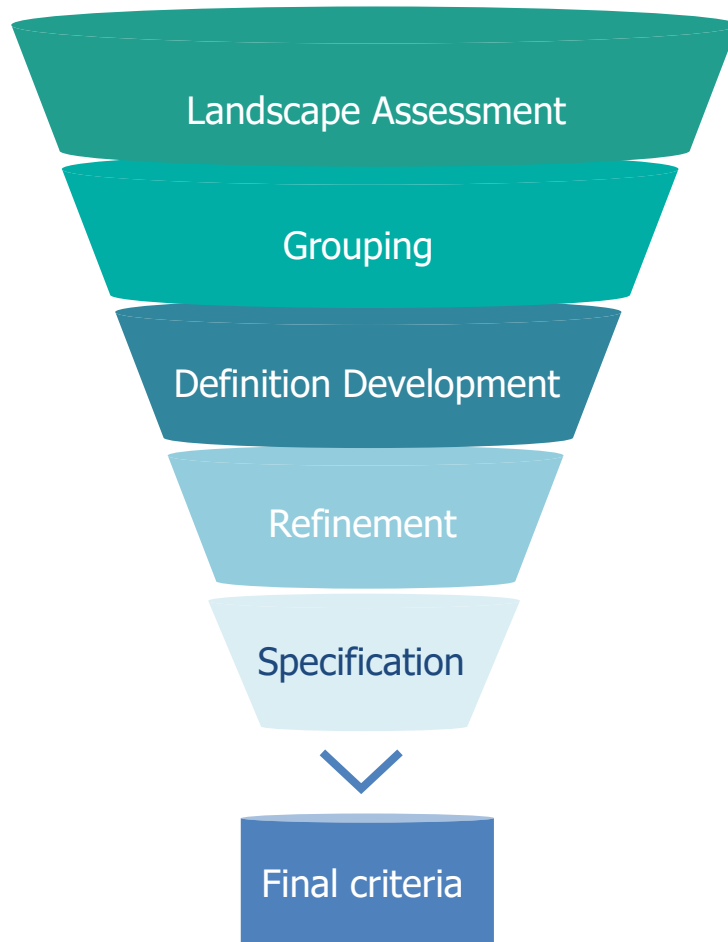
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Revisiting the AMI Quality Criteria Development Process



- Began with a review of relevant GHG Protocol and third-party sources for quality criteria that are used for GHG reporting
 - Per topic, one or more criteria were proposed for discussion. Each proposed criteria was assigned a single definition.
- The list of criteria and definitions was refined based on input from the TWG
 - Discussed at the full TWG meeting 2.02
 - Since meeting 2.02, the quality and eligibility criteria subgroup has met three times to further development

Topic	Proposed Next Step
Quantified	Moved to drafting
Additionality	Tabled for further Secretariat analysis Miro Board inputs to be considered
Right to Claim	Unique issuance Moved to drafting, pending co-claiming discussion
	Unique claiming / unique right to report Moved to drafting, pending co-claiming discussion
	Appropriate co-claiming of market instruments Subgroup discussion – April 17th
No Double Counting	Subgroup discussion – April 17th
Measurement, Reporting, and Verification (MRV)	Monitoring Removed from quality criteria per result of previous subgroup discussion
	Intervention record and system of record Moved to drafting
	Independent verification Subgroup discussion – April 17th
	Transparency and disclosure Removed from quality criteria per result of previous subgroup discussion

Topic	Proposed Next Step
Permanence	Moved to drafting
Leakage	Removed from quality criteria per result of previous subgroup discussion
Governance	Removed from quality criteria per result of previous subgroup discussion
Sustainable Development Benefits and Safeguards	Removed from quality criteria per result of previous subgroup discussion
Temporality (previously vintage and ex-post)	Moved to drafting
Contribution to Net Zero	Removed from quality criteria per result of previous subgroup discussion
Credible Baselines	Removed from quality criteria per result of previous subgroup discussion

The next step proposed for each quality criteria is based on the level of survey agreement and direction of TWG discussion:

- *Moved to drafting*
- *Subgroup discussion*
- *Secretariat analysis*
- *Moved from quality criteria to another section of the standard or guidance*

Next steps for quality criteria

- With the robust amount of feedback in hand, the majority of the quality criteria options will move ahead into initial requirements drafting by the Secretariat
 - Secretariat intends to draft requirements by mid of June
 - The full TWG will then have an opportunity to provide further feedback to the draft language
- Further subgroup meetings will be convened as necessary if additional questions for exploration are identified (also depending on April 17 subgroup meeting)
- The topics of baselines and additionality are expected to be revisited in the May full TWG meeting



Landscape assessment

Provided by Deloitte Team – preread only



Landscape assessment overview

This assessment was prepared to educate and inform the AMI TWG on the concept of physical traceability.

- The landscape assessment draws on an established body of work (primarily from ISO and ISEAL) related to using chain of custody (CoC) models for traceability in broad contexts, as well as nascent work on using physical traceability for GHG accounting.

The following slides will support the TWG as it considers the following questions:

- What traceability models establish sufficient physical traceability for inclusion in the physical inventory (statement 1)?
- What level of traceability (if any) is required for inclusion in statement 2 and 3?

The TWG can draw upon existing work on physical traceability in GHG accounting:

- The LSRS interim traceability requirement sets requirements for including traceable products in the physical inventory and may be adopted by AMI.
- VCI describes challenges to using chain of custody models for GHG accounting and proposes alternative (non-CoC) frameworks for establishing physical traceability.

Sources

- ISO 22095:2020, ISO 22095-2, and ISO 22095-3
- ISEAL, Chain of custody models and definitions
- VCI and ISEAL, Physical traceability in greenhouse gas accounting
- GHG Protocol Land Sector and Removals Standard (LSRS)
- AIM Platform Intervention Quality, Accounting, and Reporting Standard and Guidance



Chain of custody (CoC) model definitions

ISO 22095:2020 defines 5 chain of custody models:

- **Identity preserved model:** "The identity preserved model is a chain of custody model, in which the inputs originate from a single source. In the identity preserved model, the material or product is kept physically separated and its characteristics are maintained throughout the supply chain. Materials or products are clearly identifiable throughout the supply chain as originating from the single source" (pg. 11).
- **Segregated model:** "The segregated model is a chain of custody model in which, from initial input to final output, the specified characteristics are maintained. Inputs from different sources may be mixed, based on identical characteristics. However, the identity of any particular source might be lost" (pg. 12).
- **Controlled blending model:** "The controlled blending model is a chain of custody model in which materials or products with a set of specified characteristics are mixed according to certain criteria with materials or products without that set of characteristics. This results in a known proportion of the specified characteristics within all parts of the final output" (pg. 14).
- **Mass balance model:** "The mass balance model is a chain of custody model in which materials or products with specified characteristics are mixed with materials or products without some or all of these characteristics, resulting in a claim on a part of the output, proportional to the input" (pg. 15).
- **Book and claim model:** "The book and claim model is an alternative chain of custody model in which the administrative record flow is not connected to the physical flow of materials or products throughout the supply chain. After production the information on specified characteristics within the supply chain is decoupled from any material or product. Credits are issued when materials or products enter the market. The credits may be traded and sold independently of the physical delivery of materials or products" (pg. 17).



Introduction to CoC and traceability

- **ISO 22095 and ISEAL set foundation for Chain of Custody (CoC) definitions and design.**
 - ISO 22095 contains requirements for implementing CoC systems and individual CoCs. System requirements focus on scope of the system (boundaries and applicability), specific CoC model requirements, necessary documented information, responsible personnel, and assurance.
 - ISEAL provides guidance describing how CoC systems are implemented today.
 - ISO and ISEAL discuss CoC models: identity preservation (IP), segregation, controlled blending (CB), mass balance (MB), and book and claim (B&C). ISEAL adds an additional model called controlled mass balance.
 - GHG Protocol LSRS provides traceability requirements for land sector GHG calculations, including the use of a CoC system.
- **How do the frameworks consider traceability by CoC model?**
 - **ISO 22095:** Separates models based on those that meet item-based expectations and market-based expectations of users:
 - Item-based: the material or product received bears all the characteristics identified by associated information
 - Market-based: taken as a whole, the market for the material or product received delivers the characteristics identified by associated information
 - **ISEAL:** Distinguishes models that have an administrative relationship, physical relationship, physical connectivity, and no physical relationship
 - **LSRS:** Determines that IP, segregation, and controlled blending always establish physical traceability. Mass balance can establish physical traceability, under certain conditions.

Physical traceability by CoC model

Relevant frameworks differ in whether mass balance establishes physical traceability.

Standard / Framework	Identity Preservation	Segregation	Controlled blending	Mass balance			Book and claim
ISO 22095				Rolling average % method	Credit method		
ISEAL Chain of Custody				Rolling average % method	Credit method	Controlled mass balance	
GHGP Land Sector and Removals Standard ¹				(Methods not specified)			

Considered to satisfy physical relationship/traceability	
May be considered to satisfy physical traceability/connectivity (ISEAL) with specific boundaries	
Not considered to satisfy physical traceability	

¹ **LSRS - Mass balance can establish physical traceability if:** attributes are proportionally allocated (i.e., no free allocation), the volume of inputs/outputs with the GHG characteristic is specified, a reconciliation period is defined, and mixing occurs at a site(s) within the same country/sourcing region.



Mass balance key design aspects/requirements

- **System transfer boundaries / geographic boundaries:**
 - ISEAL CoC: "The CoC system boundaries for mass balance can be batch, site, multi-site or group-level" (pg. 26).
 - ISO 22095-2: "The mass balance model system boundary can include: a process within a site; site; multiple sites under the control, or under a common management system, of one organization; transportation between organizations active in the chain of custody" (pg. 12).
- **Temporal restrictions / balancing period:**
 - ISEAL CoC: "Volumes of inputs and outputs with specified characteristics must be reconciled within a defined volume reconciliation period. In complex supply chains, materials may go through a mass balance CoC multiple times. The longer the supply chain, the weaker the physical connectivity between specified characteristics and materials" (pg. 26).
 - ISO 22095: "The inputs and outputs shall be balanced. The organization shall ensure a zero or positive balance within the balancing period. The organization shall provide evidence that volumes of material or products with specified characteristics supplied to customers are balanced with the volumes bought by the organization with the same specified characteristics" (pg. 17).
 - AIM QAR: A system of record utilizing a mass balance model shall define a "volume reconciliation period of up to 2 years" (pg. 34).
- **Other:**
 - **Product groups:** "Groups of input and output products that are treated as equivalent for the purpose of tracking, controlling and reconciling volumes within the CoC system boundaries" (ISEAL CoC, pg. 2).
 - **Conversion factor:** "The conversion factor is used to determine the required quantity of input with specified characteristics to match the output or part of the output with specified characteristics taking into account any losses" (ISO 22095-2, pg. 14).
 - **Allocation:** "The process of partitioning GHG emissions, removals, or other metrics from a single facility, process, or other system among its various outputs" (GHGP LSRS, pg. 112).
 - **Attribution:** "The process of assigning specified characteristics to outputs within a CoC system boundary" (ISEAL CoC, pg. 2)



Insights on traceability for GHG accounting

- **Data management challenges (from VCI, focus on food and agriculture):**
 - **"The value chain's ability to sustain credible sustainability claims is only as strong as its weakest link.** If actors such as traders or processors choose not to participate in traceability systems, the connection between verified data and end products is lost" (VCI Food and Ag Case Study, pg. 4).
 - **"The reporting company is often far removed** from the source and from the players further up the supply chain. In many cases, [...] the company intending to report GHG outcomes is not the entity controlling key transformation or aggregation points. This means it has **limited leverage to enforce CoC roles**, ensure implementation, or demand conformity assessment." (VCI Physical Traceability in GHG Accounting, pg. 48).
 - "For value chains that operate with little or even without digital traceability systems, record-keeping, data transfer, and assurance of the **CoC system will be burdensome as this will require managing paper trails.** [...] This is particularly problematic for smallholder-based supply chains that are not digitalized." (VCI Physical Traceability in GHG Accounting, pg. 48).
- **Proposed alternatives to CoC for traceability and GHG accounting**
 - **Proof of Sourcing (PoS):** "Is a backward traceability system that enables companies to establish a credible link after impacted goods have passed through the value chain. PoS allows companies to retrospectively validate their connection to the Supply Shed" (VCI Physical Traceability in GHG Accounting, pg. 51).
 - **Probabilistic approach:** "Allows the claimant to estimate the probability that at least a given amount of what is sourced comes from the impacted farms. [...] Instead of requiring certainty on sourcing, it estimates the probability that at least the required claim volume from a defined Intervention area where Value Chain Interventions are being implemented is present in the company's sourced volume from the broader sourcing region" (VCI Physical Traceability in GHG Accounting, pg. 53).
 - **Stratified EF:** "Enables reporting based on a subset of farms within a sourcing region that share common characteristics – often, this will be participation in an Intervention. Based on current guidance, the use of a Stratified EF requires traceability to the specific set of land management units (LMUs) that define the stratum" (VCI Physical Traceability in GHG Accounting, pg. 53).
 - **Impact traceability:** "The ability of a company to identify, track, and collect information on the GHG emission or removal impacts of projects or interventions in the value chain of goods and services purchased or sold by the company, including upstream and downstream processes and products" (LSRS, pg. 116).

ISO 14067 in WD2 includes content about how chain-of-custody models would be used in calculating the carbon footprint of products

- The table on the right is copied from the working draft of ISO 14067:2025, Annex H, and is currently under consultation with Joint Working Group on 14067/Product Standard
- It was included in the AMI White Paper, Annex D
- The text and table are in WD2 stage and subject to change through collaboration within the JWG on 14067/Product Standard, as well as alignment efforts by ISO and GHG Protocol.
- It is also identically included in ISO 14064-1 WD2 Annex N, with adjustments for organizational context

ISO/AWI 14067 WD2 Table (as in AMI White Paper, pg. 51).

Table H.1 Requirements and eligible Chain-of-Custody models by GHG Quantification Approach

GHG Quantification Approach		Physical	Contractual	Mitigation
GHG quantification approach requirements related to CoC models	Allocation hierarchy	Attributional	Attributional	Consequential
	Data requirements	Primary and secondary data <i>without</i> residual inputs	Primary and secondary data <i>with</i> residual inputs	Primary and secondary data <i>with</i> residual inputs
	Conformity assessment	Verification	Verification	Validation
	Physical traceability and connectivity in CoC model	Required	Optional	Optional
	Organizational GHG accounting type where CFP is used	Inventory (default)	Inventory	Intervention
	CoC models used in carbon footprint of products (CFP)	Identity preserved	Allowed	Allowed
Segregated		Allowed	Allowed	Allowed
Controlled blending		Allowed	Allowed	Allowed
Mass balance (rolling average)		Allowed if physically traceable	Allowed	Allowed
Mass balance (credit-based)		Not allowed	Allowed with guardrails (technical feasibility) and residuals	Allowed with guardrails
Book-and-claim		Not allowed	Allowed with guardrails (technical feasibility) and residuals	Allowed with guardrails
	Electricity (special case of CoC model)	Location-based	Market-based with residuals	Marginal emission factors



Questions for discussion

What traceability models establish sufficient physical traceability for inclusion in the physical inventory (statement 1)?

- **Is the LSRS interim traceability requirement relevant to non-agricultural supply chains?**
- **Should statement 1:** a) adopt LSRS interim requirements, b) adopt stricter CoC requirements, c) adopt more flexible CoC requirements, d) adopt non-CoC methods of traceability, e) combination/other?
- **Key consideration:** AMI requirement needs to be cross-sectoral
- **Key consideration:** VCI highlights significant data management challenges for using CoC models in the food and ag sector and proposes a few alternative traceability models.

What level of traceability (if any) is required for inclusion in statement 2 and 3?

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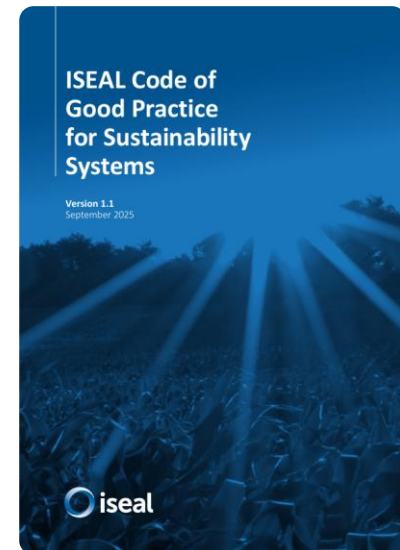
Introduction to traceability and the ISEAL CoC models and definitions guidance

GHG AMI TWG meeting #2.04 – 22/4/26



Introduction to ISEAL

- › **Thought leaders on credible practice for sustainability systems**
 - › ISEAL Credibility Principles
 - › ISEAL Code of Good Practice for Sustainability Systems
 - › Technical solutions (traceability, chain of custody, data, performance measurement, assurance and integrity)
- › **Membership organisation bringing together sustainability systems across regions and sectors**
- › **Convenor of business platforms, associations, policymakers, regulators and NGOs to drive uptake of credible practices**



ISEAL Members

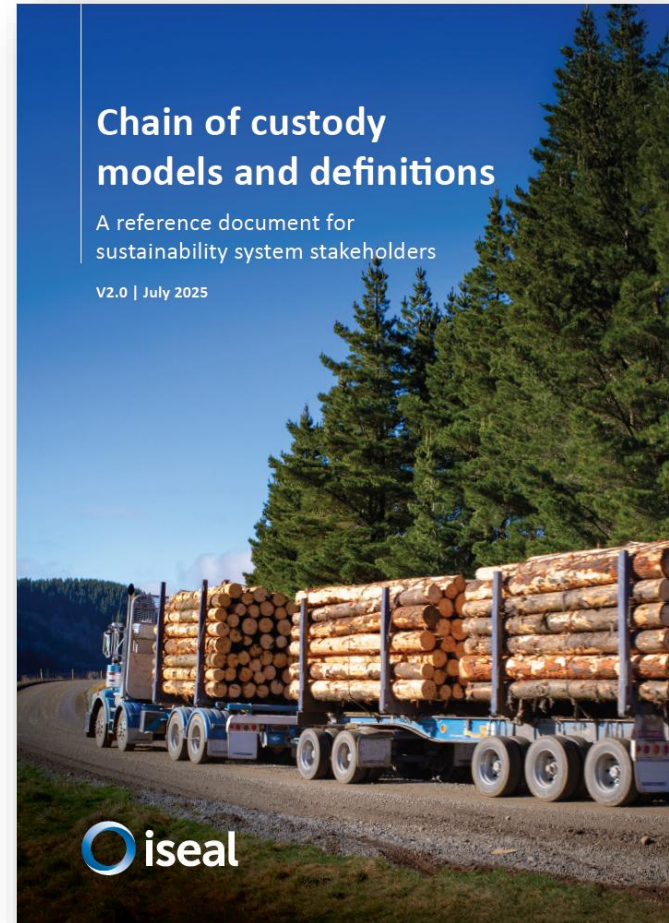


ISEAL Chain of Custody models and definitions v2

First published in 2016, updated in 2025

- › Provides a reference for discussions about CoC and sustainability systems using a shared language
- › Presents definitions and descriptions of different CoC models used in sustainability systems for MBIs today
- › Identifies conditions under which each CoC model is appropriate for different supply chains
- › Complements ISO 22095:2020 guidance on Chain of Custody

Part of a broader suite of updates linked to the introduction of the revised [ISEAL Code of Good Practice](#).



Our CoC guidance revision process



Traceability

Generic definition

the ability to track and verify the history and location of a material's movement through defined stages of production, processing and distribution (adapted from ISO 22095:2020).

Traceability is **relational** and **context-specific**. It could be thought of as a network of relations between actors, artifacts and purposes – this is always:

- › For something (purpose / function / policy / theory of change)
- › Of something (what is being traced / the object of traceability)
- › By someone (the actor enabling traceability)
- › For someone (the beneficiary – whether consumer, end company, regulator)
- › Through something (the 'traceability mechanism')

The 'interoperability challenge' is that numerous approaches to traceability are being applied to the same supply chains

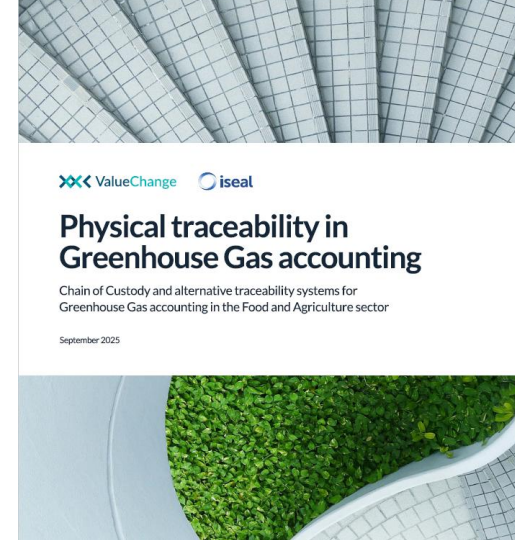
Chain of Custody

Definition

a means by which inputs, outputs, and associated attributes are transferred, monitored and controlled as they move forward through each step in the supply chain. (adapted from ISO 22095)

- › Enables the **transfer and validation** of attributes associated with activities and entities included in a sustainability system.
- › Controls the movement, handling and processing of materials **within and between** approved or certified business entities.
- › Forms the basis for any claims that can be made about an approved or certified product.

Differences between CoC and traceability



Explored further
in our 2025
guidance with VCI

Chain of custody

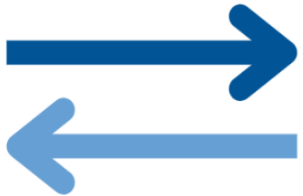
Material forward

Requires collaboration from the supply chain

Track material volumes and specified characteristics

Requires volume reconciliation

Requires verification



Material forward or product backward

Possible without active engagement

Can track diverse data points

May not require volume reconciliation

May not require verification

Traceability

CoC system elements

In the context of sustainability systems, CoC systems usually include the following elements:



**Normative requirements
(a CoC Standard),**



**A monitoring and verification
mechanism**



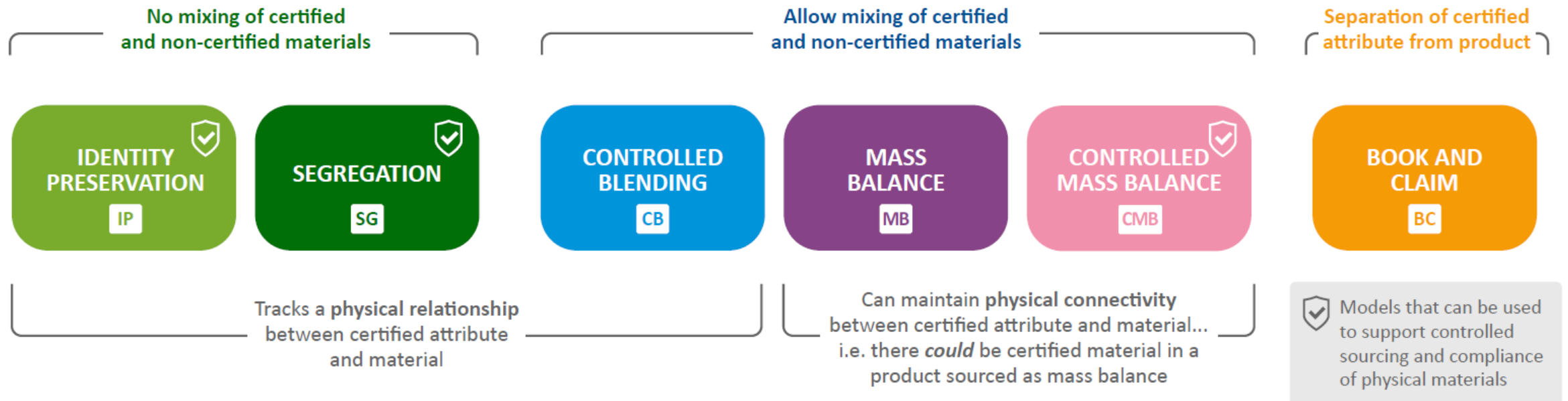
**A means of identifying and
controlling sites and entities
participating in the CoC**



**A centralised volume tracking and
reconciliation system**

Making sense of the CoC model landscape

CoC models: The approach taken to control inputs and outputs, and transfer specified characteristics, within the CoC system (adapted from ISO 22095:2020)



Understanding the mass balance CoC model

Mass Balance

A CoC model in which certified input materials are mixed according to defined criteria with non-certified materials, and where there is no guarantee of physical presence of specified characteristics in a material (ISEAL, 2025)

There are a variety of ways to design and implement a mass balance CoC model, with significant implications for levels of physical connectivity between specified characteristics and the material. Core to this is the mass balance implementation method, and the CoC system boundary, which defines:

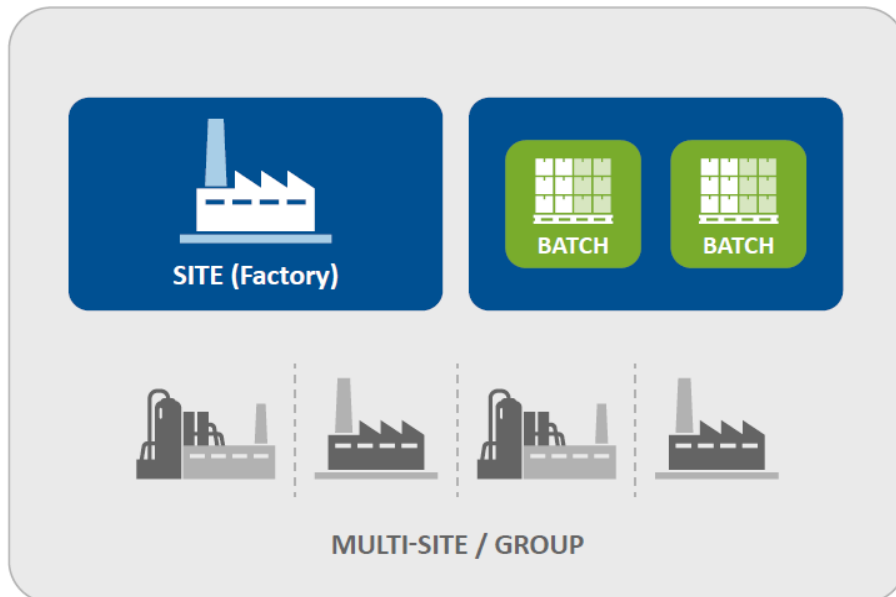
- › The scale of the transfer boundaries
- › The volume reconciliation period, and further temporal restrictions
- › The granularity of product groups tracked within the CoC system

CoC system transfer boundaries

Transfer boundary

The spatial boundaries in which the transfer of specified characteristics between inputs and outputs is controlled and tracked.

- › ISEAL guidance describes batch, site, multi-site and group.
- › ISO 22095-2 defines process, site, multiple sites under control / management of one organisation, transportation process
- › Referred to by ISO as Geographic area



Temporal restrictions

Volume reconciliation period

Timeframe when inputs and outputs with specified characteristics are balanced within the temporal boundaries of the CoC system (ISEAL, 2025)

Referred to in ISO 22095-2 as 'Balancing period'

Some mass balance CoC systems require continuous accounting i.e. you cannot sell volumes with specified characteristics if they are not in your inventory.

JANUARY

Purchase	0 MT
Sales	40 MT
Mass balance account	- 40 MT

FEBRUARY

Purchase	30 MT
Sales	10 MT
Mass balance account	- 20 MT

MARCH

Purchase	20 MT
Sales	0 MT
Mass balance account	0 MT

Product groups

Definition

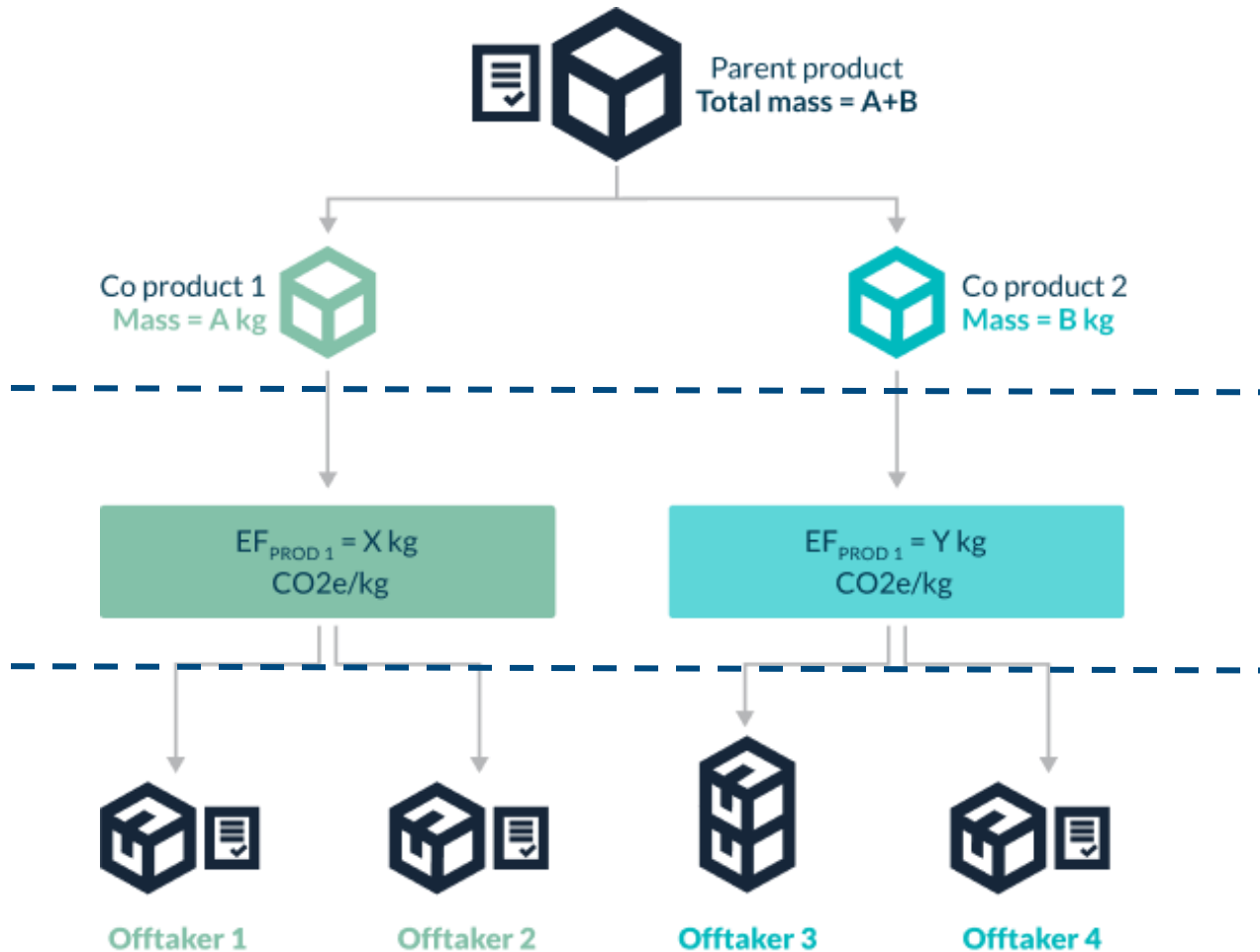
Groups of input and output products that are treated as equivalent for the purpose of tracking, controlling and reconciling volumes and attributes.

When a manufacturing process generates multiple co-products, each co-product is usually treated as a separate product group. Specified characteristics can usually only be transferred from one product group to another when there is a direct input-output relationship between them.

Product groups can be determined:

- › By the sustainability system (either in normative documentation, or embedded in data standards)
- › Using externally defined nomenclature, such as HS codes
- › By the supply chain entity, based on the inputs they source, and outputs they produce

Linking ISEAL CoC guidance to GHG accounting concepts



1. Distribution

How much co-product is created from each parent product?

2. Allocation

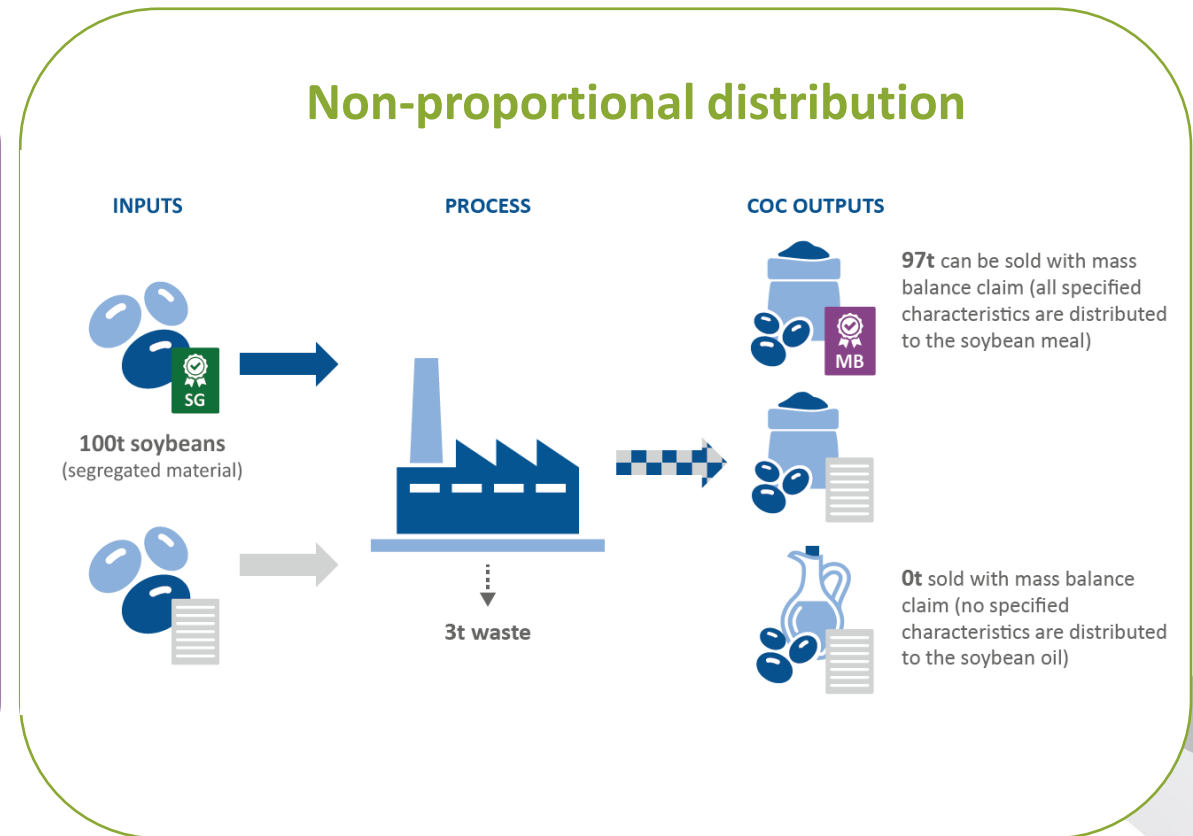
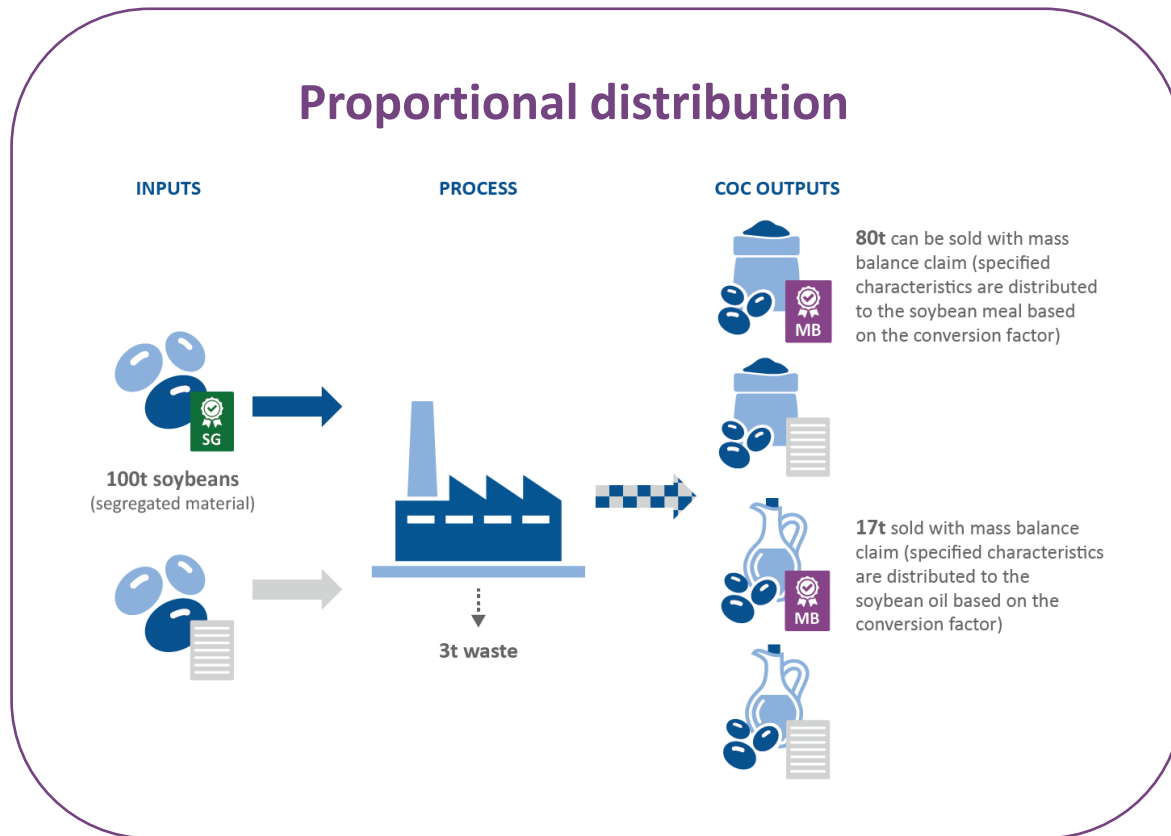
How are GHG emissions credibly partitioned among each co-product using justified allocation keys?

3. Attribution

How are EFs assigned to batches of each co-product (proportionally or not), while respecting sourcing volume limits?

Distributing attributes between product groups under credit-based mass balance approaches

ISEAL recommends distributing specified characteristics proportionally between co-products, to avoid mass balance systems out-performing physical CoC models, and to maintain physical connectivity.



How ISEAL's CoC guidance can support the AMI TWG

It is important to consider the theory of change (ToC) for the market-based statement, to guide our understanding of what type of mass balance is 'fit for purpose'.

- › If the MB statement is intended as a transitional tool, and in the long-term companies are expected to move towards reporting mitigation interventions and activities in their physical inventory, then increasing expectations of physical connectivity over time will be critical.
- › If the MB statement is about unlocking the finance needed for the transition, then greater focus should be on ensuring the net-impact of market instruments, with more flexibility on CoC system boundaries.

Regardless of ToC, CoC systems need to be credible, with transparency in design, implementation (emphasis on volume reconciliation) and levels of assurance. **ISEAL guidance provides a framework for sustainability systems to design and implement fit-for-purpose and credible CoC systems.**

Clarifying questions

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Introduction to ISO 22095-2 and -3

GHGP AMI TWG meeting #2.04
April 22, 2026





ISO work on Chain of Custody (CoC)

ISO Technical Committee (TC) 308 is responsible for:

“standardization in the field of chain of custody (CoC) for products and associated processes with specified characteristics, with the aim of ensuring that associated claims are reliable”.

In 2020, TC 308 published ISO 22095 – Chain of custody – General terminology and models

In 2022, Working Group 2 (WG2) was convened to develop new standards, building on ISO 22095:

- **ISO 22095-2 – Chain of custody – Mass balance – Requirements and guidelines (MB)**
- **ISO 22095-3 – Chain of custody – Book and claim – Requirements and guidelines (B&C)**



ISO work on Chain of Custody (CoC)

ISO technical standards are developed through a multi-lateral, consensus-based process.

WG2 consists of technical experts from a broad spectrum of backgrounds

- 21+ countries & 5 continents
- National standard bodies (NSBs), academics, NGOs, and industry (conventional & renewable energy; chemicals; steel & non-ferrous metals; renewable power; food & beverage; consumer goods; finance; system operators; etc)

22095 standards are sector-agnostic, and applicable to any set of 'specified characteristics'

Key contributions of ISO 22095-2 and 22095-3

1. Critical conceptual definitions
2. Differentiation between controlled blending, MB and B&C
3. Minimum requirements & principles
4. Actors' roles in B&C CoCs
5. Designation system for MB CoCs

1. Critical conceptual definitions

MB

credit method – method where the appropriate quantity of credits are created when an input with a specified characteristic enters the system boundary. Therefore, specified characteristics exist in the system boundary only as credits up to the point they are attributed to an output

MB

technically feasible – ability to follow an existing and operable route to obtain the output or part of the output from the input(s) with specified characteristics

Both

similar in nature – material, products, or concepts that share e.g. common characteristics, functionalities, qualities, composition or attributes, making them alike in fundamental aspects

B&C

Transferrable Instrument with Entitlement to Claim (TIEC) – Administrative record that is issued, tracked, and retired within a book and claim system, the ownership of which confers the unique right to claim consumption or use of specified characteristics upon retirement.

B&C

residual mix – attributes or products of materials, within the boundary of a book and claim system, for which no TIECs are retired nor specified characteristics allocated within any other reliable tracking system

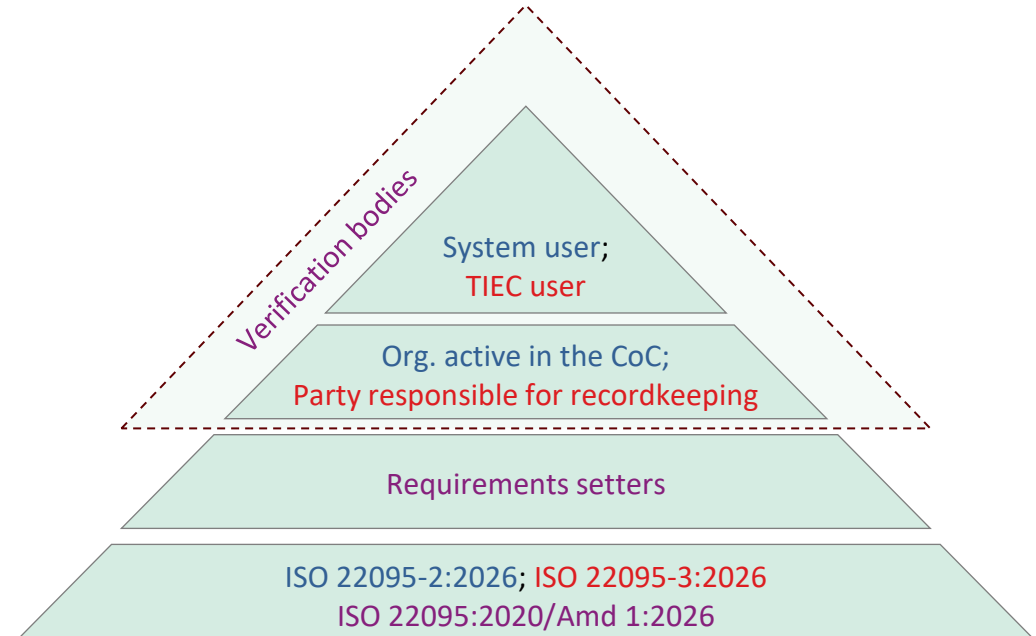
2. Differentiation btw. controlled blending, MB and B&C (Table 1)

Comparison point	Controlled blending	Mass balance	Book and claim
Is there a TIEC or credit system in place?	No	Rolling average percentage: No Credit method: Yes	Yes
What are the applicable geographical system boundaries?	Product or production process	Process, site, multiple-sites, or transportation process	Physical region, delineated network, or market
Are item-based expectations satisfied?	Yes, for the percentage with specified characteristics	No	No
Are the inputs with specified characteristics physically present in the output or part of the output with specified characteristics at all times?	Yes	No	No
Can TIECs or credits be transferred between organizations separately from physical material or product?	No	No	Yes
Is physical separation of material or product required to ensure the specified characteristics are physically present in the output?	Yes, for the part with the specified characteristics	No	No
Is it required that the specified characteristics be present in the output in a known proportion?	Yes	No	No

3. Minimum requirements & principles

Minimum requirements & principles

- System boundary definition & vintage/balancing limits
- Unique TIEC/credit issuance & use
- No erroneous double counting
- Data & recordkeeping requirements
- Robust & transparent claims



Further specification left to application-appropriate **‘requirements setter’**, for example:

- Timeframe limitations; evaluation frequency; unit of measurement; etc.
- Conditions to be met for multiple TIECs to enable unique claims (i.e. ‘co-claiming’)

4. Actors' roles in B&C CoCs

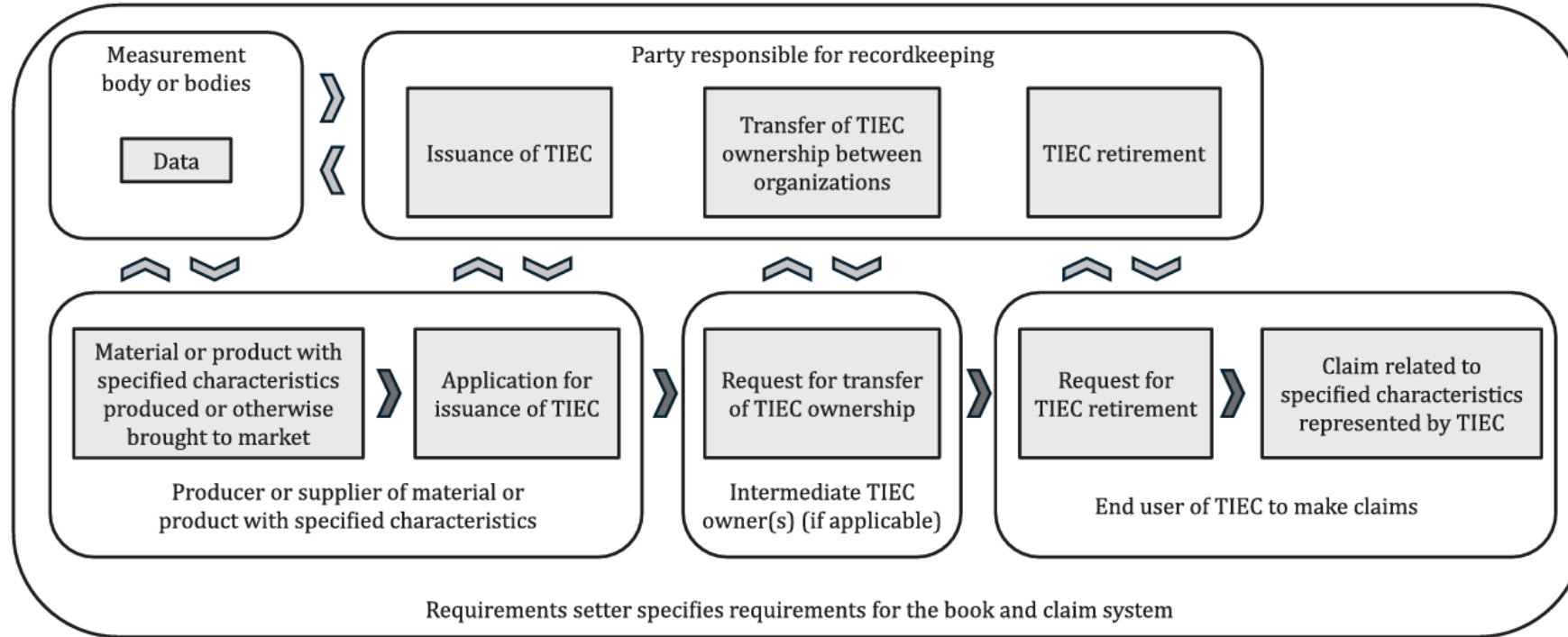


Figure 1 — Life cycle of a transferrable instrument with entitlement to claim (TIEC) and the roles of value chain actors within a generalized book and claim system

5. Designation system for MB CoCs

22095-2 Annex C defines a designation system to disclose key implementation details related to MB CoC systems, to enable clear and consistent communication.

Table C.1 — Data block designation system

Designation						
Description block	Identity block					
	International Standard number	Individual-item block				
Chain of custody		Data block 1	Data block 2	Data block 3	Data block 4	Data block 5

Data block 1: Chain of custody model

Data block 2: System boundary

Position 1: Geographic area ([5.3.1](#), [5.3.2](#))

Position 2: Possibility of physical presence ([5.2](#))

Position 3: Physical link ([5.2](#))

Position 4: Balancing (credit) or claim (rolling average percentage method) period ([5.3.1](#), [5.3.3](#))

Data block 3: Implementation method ([6.1](#), [6.2](#))

Data block 4: Specific rules of credit method ([6.2](#))

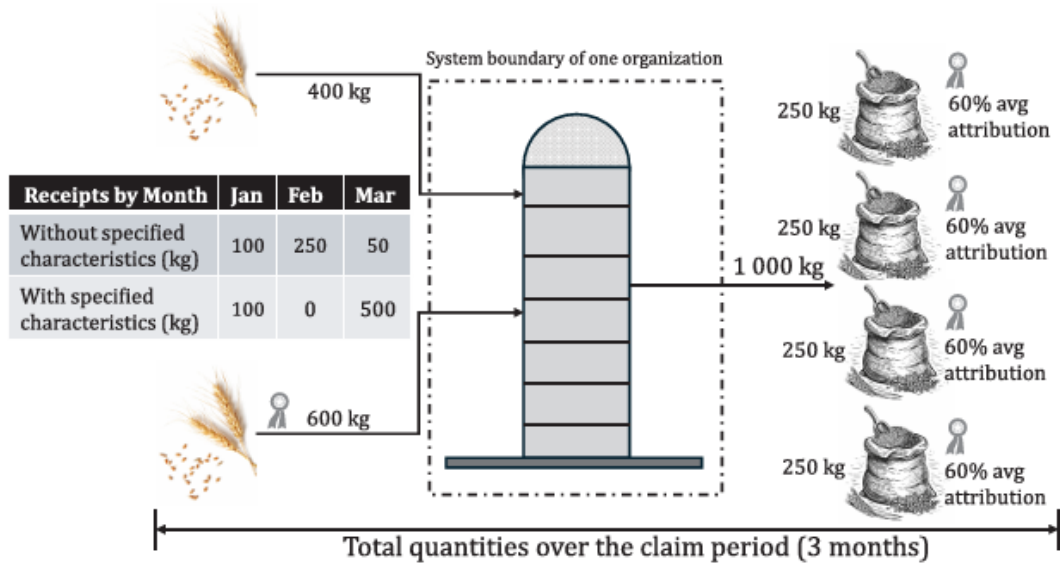
Position 1: Attribution rules of specified characteristics ([6.2.3.1](#))

Position 2: Site-to-site credit transfer ([6.2.3.2](#))

Data block 5: Additional information

5. Designation system for MB CoCs – Implementation methods

Rolling average percentage method



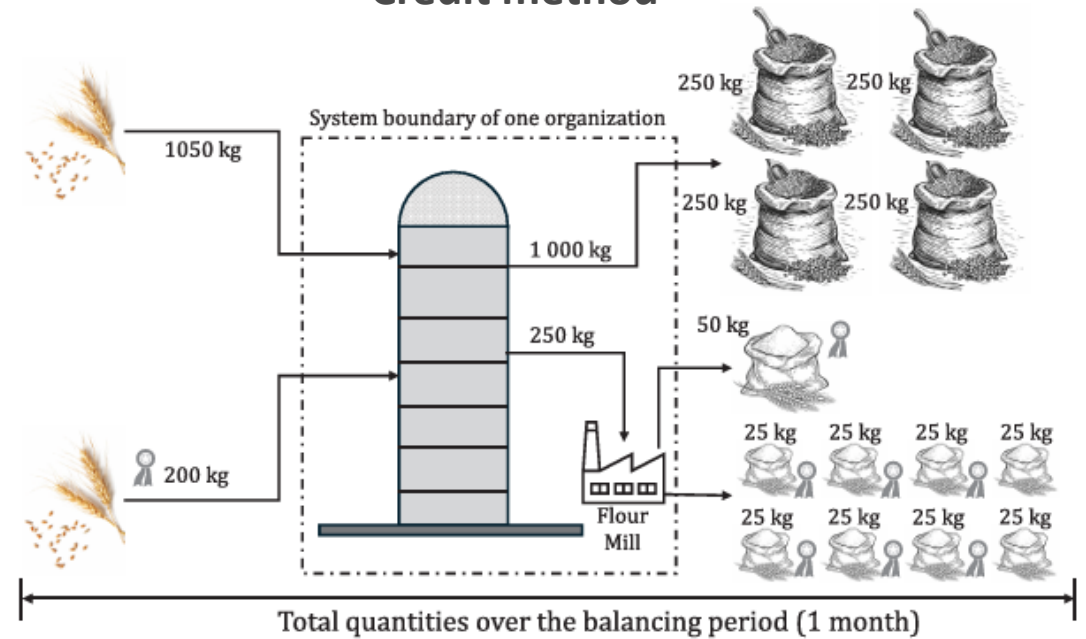
NOTE 1 Allowed claim: made with 60 % fair wage wheat grain on average, using mass balance.

NOTE 2 Input volume with specified characteristics varied over the claim period.

NOTE 3 The quantity of input with specified characteristics in the output cannot be guaranteed,

EXAMPLE Shipments in February may have no physical content of specified characteristics.

Credit method



NOTE 1 Allowed claim: 100 % of wheat grain sourced from fair wage farms, using mass balance.

NOTE 2 The quantity of input with specified characteristics in the output cannot be guaranteed.

How do the new ISO 22095 CoC standards support GHG emissions accounting and reporting?

The standards enable organizations to make accurate, unique, and auditable GHG claims by using robust and credible MB and B&C systems, recognized by society, policy-makers, and industry.

- **Trusted process:** ISO develops normative technical standards following a respected, international and multi-lateral process, with a transparent revision procedure.
- **Robust foundations:** Documents common definitions and concepts and formalizes accepted practices and minimum requirements of credible and functional CoC applications.
- **Cross-sectoral recognition:** Defines sector-agnostic minimum criteria for robust CoC implementation, complementary to sectoral guidance (e.g. ISCC PLUS, SFC MBM). Critical for recognition of market-based mechanisms (MBMs) under cross-sectoral GHG reporting & target setting frameworks.

Clarifying questions

Agenda

- Welcome & Housekeeping (5 min)
- Quality criteria
 - Summary of outcomes (20 min)
- Traceability
 - ISEAL traceability and CoC, Josh Taylor (25 min)
 - ISO 22095, Mark Staples (20 min)
 - Discussion (40 min)
- Next steps (5 min)



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GAS PROTOCOL

Purpose of AMI Standard/Guidance

Relevant content from White Paper:

Cross-sector standard that enables companies to account for and report on decarbonization actions and market instruments to

- Incentivize impactful investments, while strengthening the integrity and credibility of corporate climate action
- Provide a comprehensive and transparent multi-statement accounting and reporting structure
- Enable target-setting programs to make policy decisions on corporate mitigation targets

Relevant Miro comments:

- *The purpose of each statement will determine CoC model or traceability level needed*
- *Define Theory of Change*

New Miro board

Q1. Please add your thoughts and comments on the Theory of Change for each statement

Physical GHG inventory

Relevant content from White Paper:

Provides comprehensive accounting and disclosure of an organization's annual GHG emissions (and removals, if applicable) resulting from its operations and activities in its value chain across scope 1, scope 2, and scope 3, based on attributional accounting approaches.

- In the physical inventory, emissions (and removals, if applicable) from a common activity pool are allocated to end users based on physical relationships and physical flows of goods and services.
- It allows chain of custody models that establish physical traceability to the reporting company.
- It also accounts for average emissions from a shared pool if the reporting company's physical traceability does not exceed that shared pool.

Relevant Miro comments:

- *The need for strict, physical traceability declines as we move away from the physical inventory, e.g. book & claim not suitable for the physical inventory but can be reported in the impact statements.*
- *Establish physical connectivity (not physical traceability), where there is likelihood that the good you are purchasing might have been impacted*
- *Mass balanced commodities can be part of the physical inventory when there is a clear physical connection and this is followed through the whole supply chain. Proportionality isn't needed for this.*
- *The dividing line between statement 1 and statement 2 should be around the level of physical connectivity between the production of the attribute, and the reporting company.*

New Miro board

Q2. Should the Physical GHG inventory require demonstration of a physical relationship, or should strong physical connectivity be allowed?

Statement 2: Market-based GHG inventory

Relevant content from White Paper:

The market-based GHG inventory of emissions (and removals, if applicable) is complementary to the physical inventory.

- It allocates emissions associated with the reporting entity's activities from a common activity pool, based on qualified contractual arrangements for the purchase of goods and services (across scopes).
- It allows chain of custody models that establish contractual traceability from suppliers to the reporting company.
- By maintaining a clear separation from the physical GHG inventory, the market-based GHG inventory ensures that claims about procurement and market choices are transparent.
- It also maintains the integrity of the company's physical GHG inventory.

Relevant Miro comments:

- *The framework should distinguish between credible physical connection and robust market-based attribution, without assuming all high-integrity systems will look the same across regions. Physical inventory should remain linked to approaches with a credible physical connection, while statement 2 or 3 could provide space for robust non-physical instruments, with clear safeguards on boundaries, reconciliation, transparency and double counting.*

New Miro board

Q3. Should Statement 2 require demonstration of a level of physical connection, or is market-based attribution with safeguards enough?

Statement 3: GHG impact statement

Relevant content from White Paper:

The GHG impact statement provides a dedicated, structured statement for reporting on the impacts of actions taken by the reporting entity inside and outside its value chain (e.g., emissions avoided, reduced, or removed). It applies to actions such as projects, interventions, investments, production/sale of products, and purchase/consumption of products.

- Uses consequential accounting methods that aim to quantify the global change in GHGs in the atmosphere resulting from a given action.
- Allows reporters to report the impact of activities that are quantified using consequential methods and therefore not reflected in the physical GHG inventory.
- Ensure that claims about mitigation impacts, avoided emissions, credits, and other impacts based on consequential accounting are transparent and separately reported from statements using attributional accounting methods.

Relevant Miro comments:

- *Complicated for consequentially generated attributes related to a company's value chain to move through a CoC system?*
- *Can excess attributes sourced through B&C be reported in statement 3?*

New Miro board

Q4. Is traceability or Chain of Custody models relevant to Statement 3?

Challenges with CoC models

Relevant TWG comments:

- *CoC is mainly used for downstream traceability, not upstream (i.e. starting from the reporting company up to the intervention)*
- *Important to understand the differences between traceability and CoC, and that establishing connectivity between a company and a material does not require formal forward-looking CoC mechanisms. Backward-looking traceability systems would be sufficient, including methods like Proof of Sourcing.*
- *Where do CoC models start and end in a value chain? It is highly unlikely (in any sector) that a company uses one CoC model to establish traceability in practice.*
- *Current requirements for Mass Balance as per LSRS already quite high and stringent. They require a high quality of data coordination and governance, which does not happen easily and would leave many value chain players (SMEs, smallholders) out of the transition.*
- *We're not trying to define specific CoC, we're trying to define quality criteria to describe traceability of a claimed intervention - or how traceable is it. The idea is to say how confident are we that something is inside, on or outside the boundary. We aren't trying to provide clarity around a fixed boundary.*

Relevant Miro comments:

- *Define quality criteria to help review traceability data systems, e.g. records, data, internal checks*
- *Discuss quality and consistency in CoC implementation, and the difference between implementing CoC through a sustainability system and actions or systems implemented independently by a supply chain company with much less oversight.*
- *If we're going to talk about additional quality criteria for statement 2, we need to have nuance around instrument type, not just level of traceability. Producers do not know if their volumes are going to be in statement 1 or statement 2.*

New Miro board

Q5. What are other mechanisms to establish physical connectivity, besides CoC models? What type of quality criteria / safeguards should be integrated in those mechanisms?

Applicability across sectors

Relevant TWG comments:

- *While we should be applicable and usable by all sectors, I also don't think we need to let the most challenging sectors set the bar for traceability. Some sectors will have to rely more heavily on reporting in the impact statements.*
- *We need to determine where to draw the line between the physical inventory and statement 2 and which mass balance models fit in each statement. Customized criteria should be considered for different sectors.*
- *The use of CoC for commodities seems much more feasible than for processed and finished products! Is that a useful distinction that can be made?*
- *Important to differentiate between the impacted product, the sourced product and the LCI product that is used for reporting. We should assume that these products will not be the same and evaluate whether there is a sufficient data fit between the three products.*
- *Evaluate the data fit similar to a LCA pedigree matrix that provides empirical uncertainty ranges across different correlations and can therefore estimate the overall fit between two or more data points.*

New Miro board

Q6. How do we address applicability across sectors?
Should requirements be:

- Principle-based?
- More prescriptive and apply equally to all sectors?
- Based on transparently reporting data quality and physical connectivity levels?

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Objective of Traceability subgroup

Define level of traceability, safeguards and/or quality criteria required for:

- The physical GHG inventory
- Statement 2
- Statement 3

By responding to the Traceability-related questions, considering the full TWG contributions to Miro board:

- Q2.** Should the Physical GHG inventory require demonstration of a physical relationship, or should strong physical connectivity be allowed?
- Q3.** Should Statement 2 require demonstration of a level of physical connection, or is market-based attribution with safeguards enough?
- Q4.** Is traceability or Chain of Custody models relevant to Statement 3?
- Q5.** What are other mechanisms to establish physical connectivity, besides CoC models? What type of quality criteria / safeguards should be integrated in those mechanisms?
- Q6.** How do we address applicability across sectors?

Plus, additional more detailed questions that expand on this issues.

Next Steps

Traceability TWG subgroup

- Let us know if you want to be part of the Traceability subgroup (at alejandra.bosch@wri.org)
 - The Secretariat reserves the right to select members of the subgroup
 - Note that we will limit the subgroup to 10 members
 - The subgroup will develop proposals for the full TWG to weigh in on.
- Secretariat will share a poll with subgroup members to define three meeting dates
 - April 27th week
 - May 4th week
 - May 11th week

Next Meeting Date

- **TWG meeting**
 - May 20th

Optional informative session

- **TCAT sectoral approach**
 - April 27th (TBD)

In person Meeting – two options on par; rooms only available June 29-July 1

Very likely: June 29 – July 1 in Amsterdam

- Internal budget confirmed – sponsors for dinner welcome,
- Unfortunately, no travel assistance possible for select TWG members
- Location: Energy Transition Campus (WBCSD offices), Amsterdam, Netherlands
- We still need to do one review of participants confirmed.
- Final confirmation end of this week

Thank you!

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