

Cement and Concrete Book and Claim Framework

March 2026

A partnership between



Today's Objective

Highlight context and key features of the recently published cement and concrete book and claim framework

Agenda

1. Introduction and process
2. Background on book and claim
3. Framework overview
4. Q&A



This meeting will be recorded and shared publicly



Please drop your questions in the Q&A box

Meet the framework Organizers, GMA and RMI



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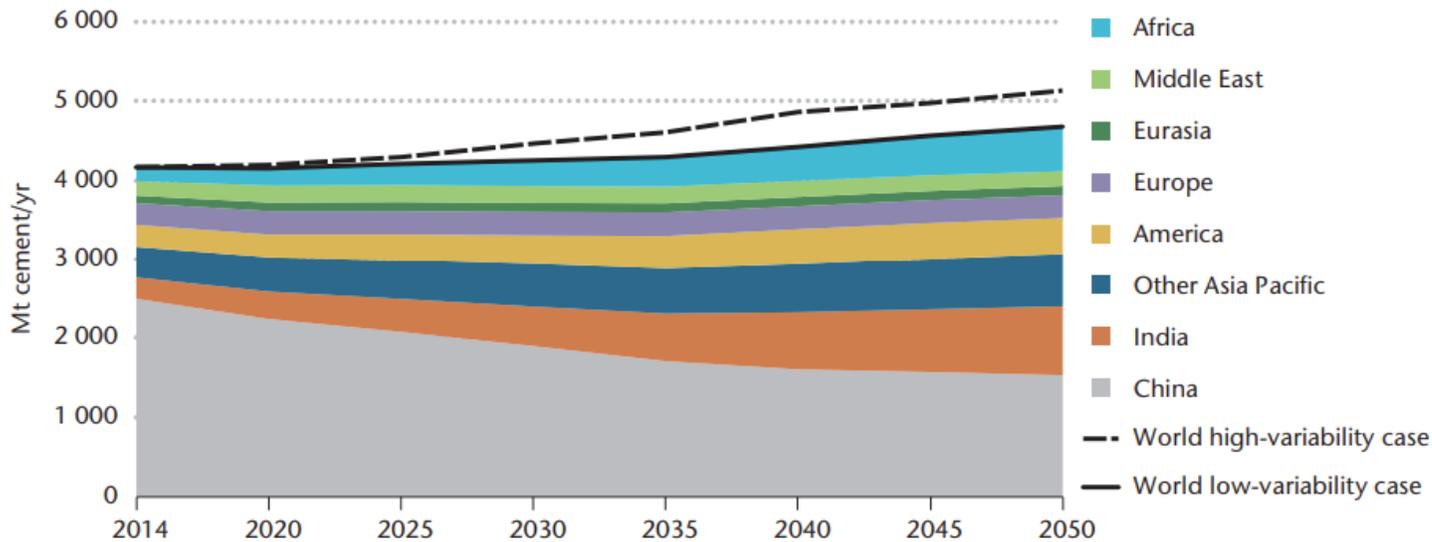
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Cement and concrete are among the largest sources of global emissions and production is expected to grow

Cement production by year is expected to continue growing through 2050¹



Source: IEA

8%

of global GHG emissions are generated during cement and concrete production²

>5 billion t

in global demand for cement expected by 2050¹

+22%

growth in total global demand for cement between 2014 and 2050¹

Low-carbon cement and concrete products face significant barriers to adoption today



Supply

Is waiting for strong demand assurance before investing in capital-intensive projects



Long, complex value chains separate downstream buyers from upstream producers

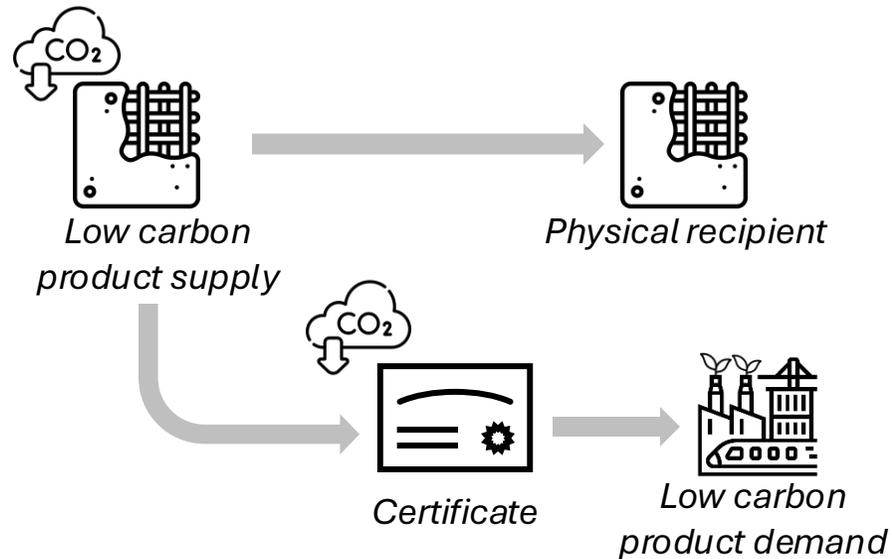
Demand

Cannot find available low carbon products where they are building

Book and claim can accelerate deployment by bridging supply and demand

Book and claim

Decouples the environmental attribute from the physical product via an Environmental Attribute Certificate (EAC)



Increases flexibility



Provides demand assurance



Enables multi-year contracts



Connects supply and demand

Supply

Can make investments in large-scale, low-carbon production with assurance of firm revenues

Accelerated action through
standardized EACs

Demand

Can directly support low-emissions projects and achieve Scope 3 goals in a streamlined way

GMA and RMI initiated this program to bring credibility, consistency, and scalability to those interested in book and claim for the cement and concrete industry

Program Objective

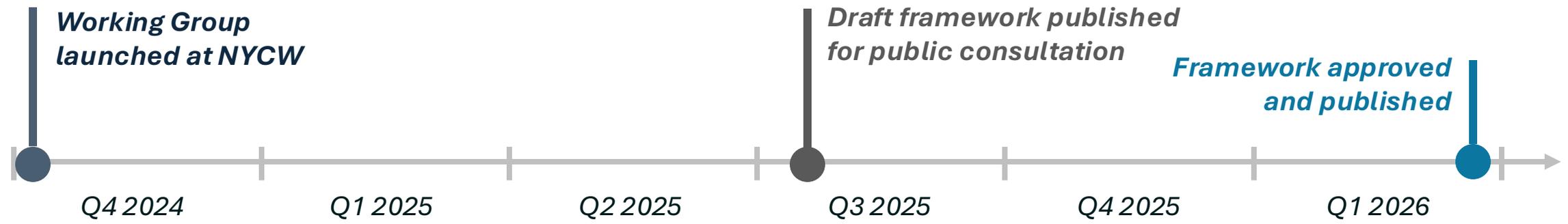
Establish clear, sector-specific guidance for applying book and claim in the cement and concrete value chain to enable credible pilot transactions and inform the development of a buyers alliance and registry to support a scalable market.

Guiding Principles: the framework is designed to be...

- i** **Credible:** Credible from an environmental standpoint, driving high-integrity atmospheric benefits
- ii** **Usable:** Straightforward and usable to facilitate scalable market transactions for low-carbon cement and/or concrete attributes
- iii** **Compatible:** Compatible with existing regulatory and non-regulatory frameworks and best practices
- iv** **Comprehensive:** Comprehensive across a range of decarbonization solutions to ensure the book and claim system can support multiple viable pathways to low-carbon cement and concrete
- v** **Unifying:** Designed to serve diverse geographic regions and markets, minimizing fragmentation and promoting geographic equity in access to decarbonization opportunities
- vi** **Adaptable:** Designed for longevity and adaptability for future low-carbon technologies

This framework is the product of a more than year-long effort that brought together stakeholders from across the value chain

Timeline of framework development



Working group representation



Certificate purchasers



Concrete producers



Construction companies



Industry associations



Governments



Multinational cement producers



Innovative startup producers



Developers



NGOs

We are in a rapidly-evolving landscape for mechanisms such as book and claim, with several published and forthcoming documents seeking to bring standardization

Existing standard and guidance landscape for corporate accounting, reporting, and book and claim



GREENHOUSE
GAS PROTOCOL

GHGP's Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Currently under revision process; likely to include incorporation of book and claim



SCIENCE
BASED
TARGETS

Corporate Net-Zero Standard defines criteria for near-term and long-term science-based targets

Currently under revision process; likely to include incorporation of book and claim



Forthcoming guidance to account and report value chain interventions including book and claim certificates



International standards body that recently published ISO 22095-3: Requirement for book and claim

This framework is meant to provide additional specificity and guardrails to the cross-sector standards that tailor requirements to the cement and concrete sector

Landscape and roles of standards

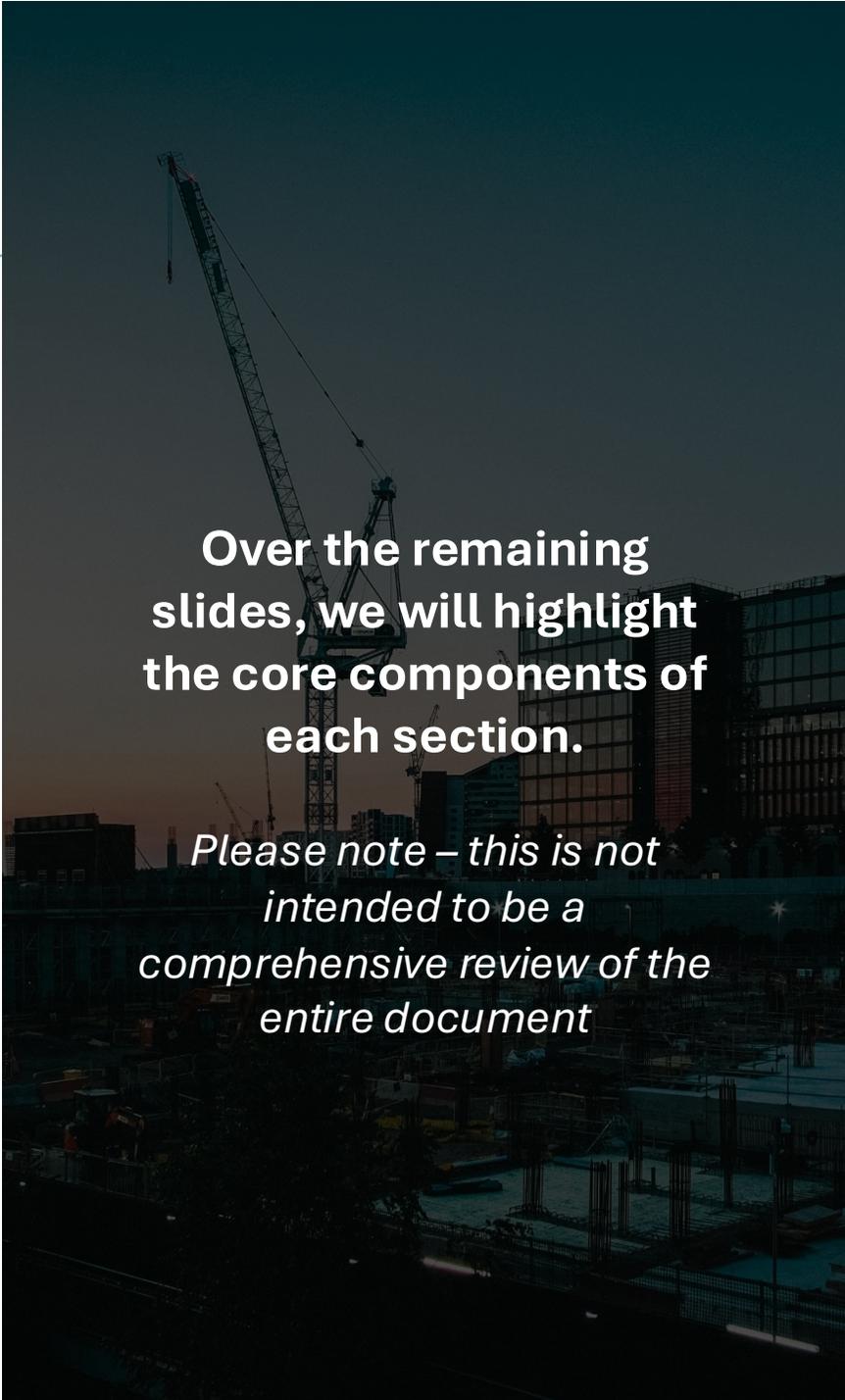


An aerial, high-angle photograph of a construction site. The ground is a mix of concrete and dirt. In the center, three workers wearing yellow safety vests and hard hats are gathered around a set of papers, likely reviewing plans. Another worker in a blue vest is visible in the upper right corner. The scene is brightly lit, suggesting a clear day.

Framework overview

Framework table of contents

- 1 Introduction
- 2 Book and claim functional units
- 3 Eligibility criteria
- 4 Emissions intensity measurement methodology
- 5 EAC issuance and data tracking
- 6 EAC accounting
- 7 Accounting baseline
- 8 Physical recipients of products with sold EACs



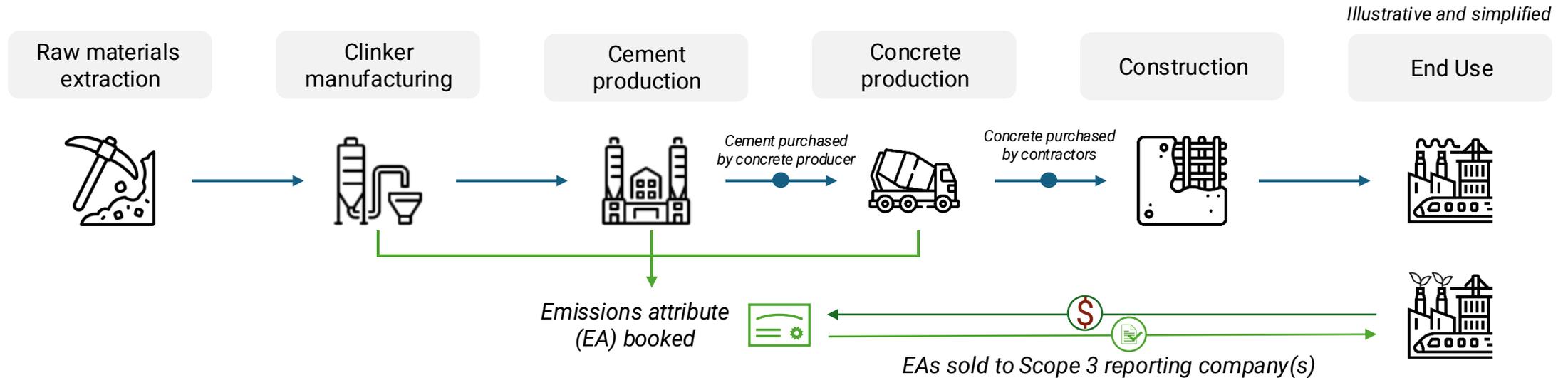
Over the remaining slides, we will highlight the core components of each section.

Please note – this is not intended to be a comprehensive review of the entire document

1. Introduction

Book and claim is the chain of custody model that separates the attribute from physical product

Illustrative book and claim value chain for cement/concrete industry



*The book and claim chain of custody model is not new – the design of this framework leveraged the groups expertise in existing systems such as **renewable energy certificates (REC)**, **sustainable aviation fuel certificates (SAFc)**, **sustainable maritime fuel certificates (SMFc)**, and **other environmental attribute certificates (EAC)***

2. Book and claim functional units

The framework outlines the issuance of EACs at three steps of the value chain, with distinct guardrails

Enabling pathways for all three stages to issue certificates promotes a wide array of deep decarbonization pathways and accounting structures

Clinker



The intermediate product and primary ingredient to make a binder for traditional hydraulic cement, typically produced by heating limestone to ~1450°C

Example interventions: CCS, fuel switching, kiln electrification

Cement



Hydraulic cement that sets and hardens by chemical reaction with water (hydration) and can do so under water

Example interventions: alternative binders, novel SCMs, CCS, fuel switching

Concrete



A composite material that consists of a mixture of cement, aggregates, and water, or other cementitious materials to be used as the final construction product

Example interventions: alternative binders, novel SCMs, CCS, fuel switching, mineralization

➤ The Organizers are currently **exploring** potential updates to enable **direct issuance for SCM products**, considering replacement rate to create equivalency guardrails; potential update to come in **Q3 2026, if credible approach identified**

3. Eligibility criteria

The framework includes additional guardrails to direct certificates towards innovative solutions on the market

	3.1 Intensity Threshold	3.2 Regulation Disclosure	3.3 Catalytic Impact
Criteria	<p>Before 2030: Minimum GCCA “C” rating</p> <p>2030 onward: Minimum GCCA “B” rating</p>	<p>EAC-generating products must disclose all regulations that apply to the issuer or upstream producers</p>	<p>Buyers should prioritize EACs from technologies and products that need revenue from the environmental attribute to be financially viable</p> <p>Products where the primary intervention is non-beneficiated and non-activated GGBFS or fly ash should not generate EACs</p>
Rationale	<ul style="list-style-type: none"> - Acknowledges varying levels of maturity across markets - Creates runway for novel products to reach deeper decarbonization through scale 	<ul style="list-style-type: none"> - Enables buyers to assess against additional criteria such as regulatory additionality - Consistent criteria with other analogous systems such as RSBs book and claim manual 	<ul style="list-style-type: none"> - Traditional industrial SCMs are commonplace and often lower cost - Book and claim should be targeted towards deeper decarbonization products

4. Emissions intensity measurement methodology

To align with existing PCR practices, the framework bases product intensity on the most applicable PCR



Product-specific Type III, third-party verified EPD serves as the product emissions intensity and primary proof of sustainability documentation

For clinker EACs, the products must produce an EPD with an assumed cement-clinker ratio of 1

Additional considerations for carbon capture

PCR guidance

In regions where PCRs lack carbon capture guidance, producers may use alternative PCR methodologies (e.g., Smart EPD Annex A) to account for CCUS emissions reductions.

Carbon storage

Products using CCS must account for all transport, storage, and leakage emissions and demonstrate at least 100-year permanent sequestration, verified through a third-party storage certificate disclosing key storage and emissions data.

Carbon utilization

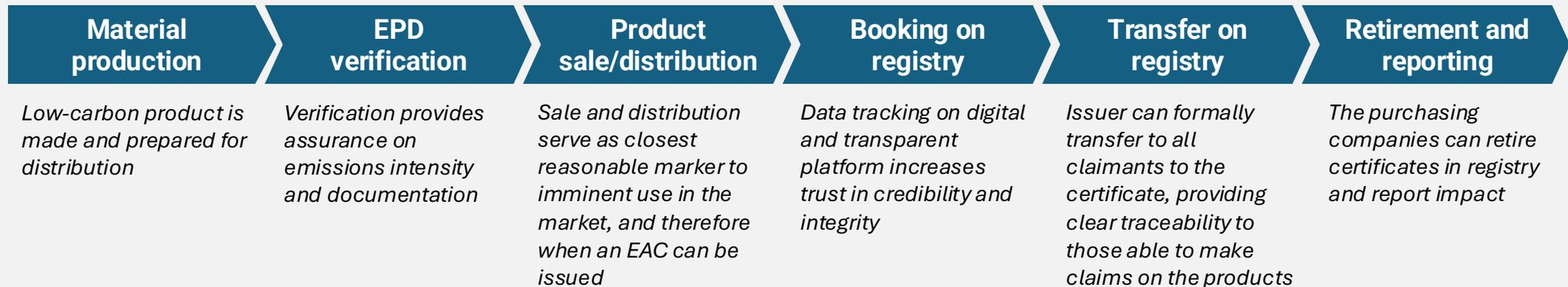
Utilization must ensure durable, long-term storage.

Enhanced oil recovery does not ensure storage and, therefore, may not be used as viable pathway to claim reduction from carbon capture

5. EAC issuance and data tracking

EACs can only be issued when physical products have been created and distributed to customers

EAC issuance steps



*Note: **Commercial agreements or forward transactions** may occur before the EAC is formally issued, but certificates cannot be issued until physical materials produced and distributed*

6. EAC accounting

This framework is designed with broader standards and guidance in mind, as further updates are underway

Accounting approaches

Direct Substitution

*EAC intensity **replaces inventory intensity for an equivalent product to EAC**, reported in a separate contractual ledger*

*EAC generating products **must match** certain geographical and technical characteristics of **inventory products** to directly substitute, as outlined further in framework*

Enhanced Substitution

(or substitution with adjustments)

*EAC intensity is subtracted from **most applicable reference baseline** and impact is used to adjust inventory activity in contractual ledger*

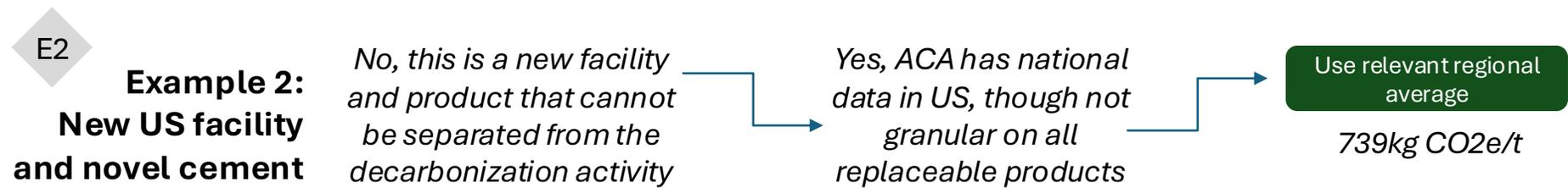
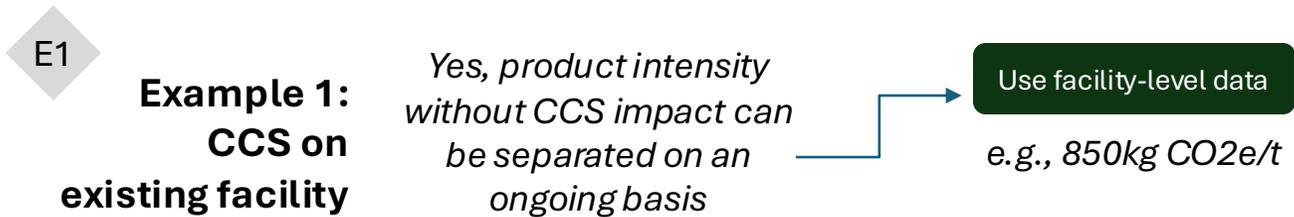
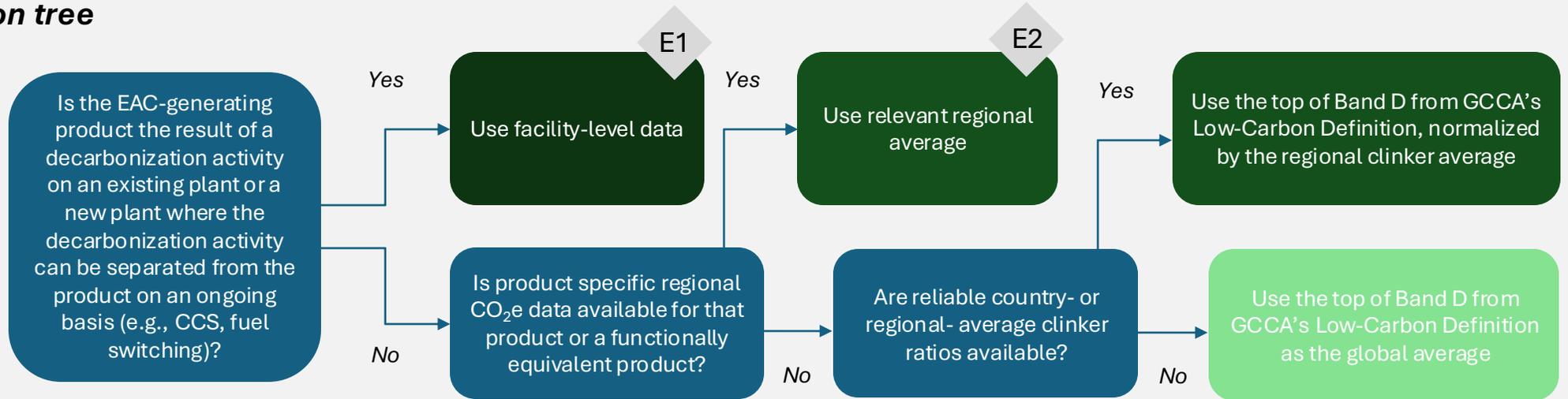
*EAC generating product **must match** geographical and technical characteristics of **baseline product** to use enhanced substitution approach, as outlined further in framework*

This document is not intended to serve as comprehensive accounting or reporting guidance. Rather, it outlines potential pathways and guardrails for different accounting approaches that purchasers may use to protect against misrepresentation of impact. This section may be updated as further guidance from GHGP, SBTi, and AIM is published.

7. Accounting baseline

For enhanced substitution, consistent baseline selection is pivotal to increasing comparability and accuracy

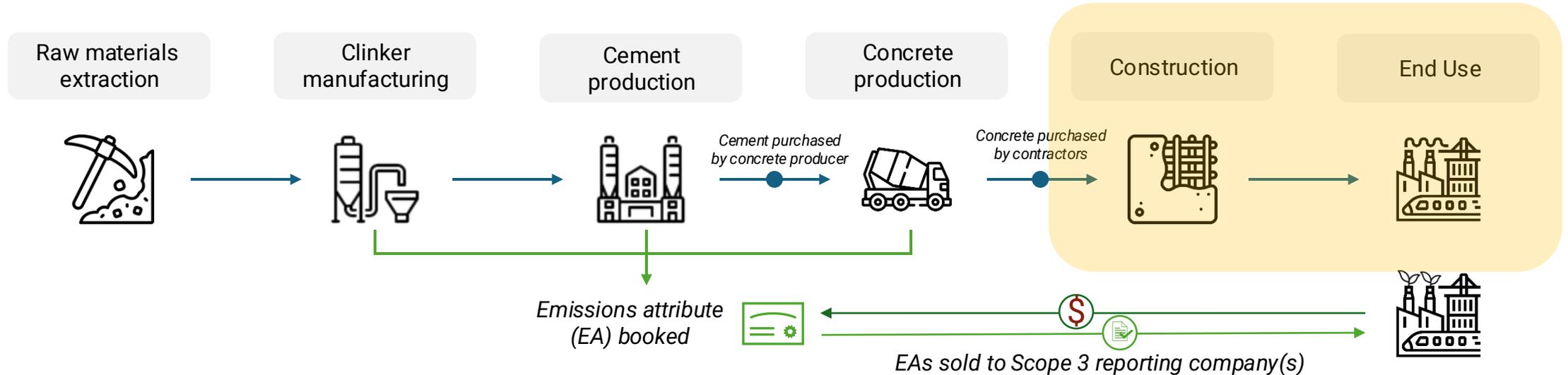
Baseline selection tree



8. Physical recipients of products with sold EACs

Avoiding double counting of impact will increase credibility and trust in the system, enabling scaling

“Physical recipients” within EAC value chain



Physical recipients may not claim the emissions impact of an EAC towards corporate GHG accounting and reporting. This is to avoid erroneous double counting of the emissions impact.

Instead, producers must either

- *Provide an EPD that excludes the low carbon nature of the product (e.g., in EU where EPD may not include CCS)*
- *Or provide the baseline factor for accounting on the EPD notes section and contractually make aware that baseline should be used for corporate inventory reporting*

Next steps

The Organizers will continue to support market development by operationalizing the framework and aggregating demand to accelerate book and claim transactions

Market Infrastructure

- **Efforts are underway to operationalize the framework within a registry** to issue, transfer, and retire EACs with integrity
- The Organizers continue to explore opportunities to accelerate decarbonization in the sector, including **evaluating the benefits and risks of EAC issuance from Supplementary Cementitious Materials (SCMs)**

Market Activation

- **The Sustainable Concrete Buyers Alliance (SCoBA) will issue its first RFP for cement/concrete EACs in the coming weeks** to bring demand to market at scale
- Buyers are also **engaging in bilateral negotiations for the purchase of EACs**

Demand is now the critical unlock to decarbonize the cement and concrete sector!
We encourage companies looking to decarbonize their physical footprint to contact us.

Q&A



Thank you!

Please reach out to info@buildscoba.org for any questions or feedback

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