Navigating the *market instruments landscape*

→ A report on the current landscape of initiatives, guidance, and standards on the use of market instruments and implications for corporate climate action.



World Business Council *for Sustainable Development*

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EXPONENTIAL ROADMAP INITIATIVE

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Executive *Summary*



Executive Summary

As companies make further progress in their net-zero journey and extend decarbonization efforts across their value chain, many are identifying areas where direct emission reductions are constrained, while at the same time facing calls to demonstrate credible action. In this context, market instruments are increasingly seen as a mechanism to support continued progress by mobilizing finance and creating credible demand signals for low-carbon products and solutions in hard-to-abate sectors such as agriculture, heavy transport and steel, where direct reductions are not feasible at scale. Building on an established track record in Scope 2, particularly for electricity procurement, their use is now expanding into Scope 1 and Scope 3.

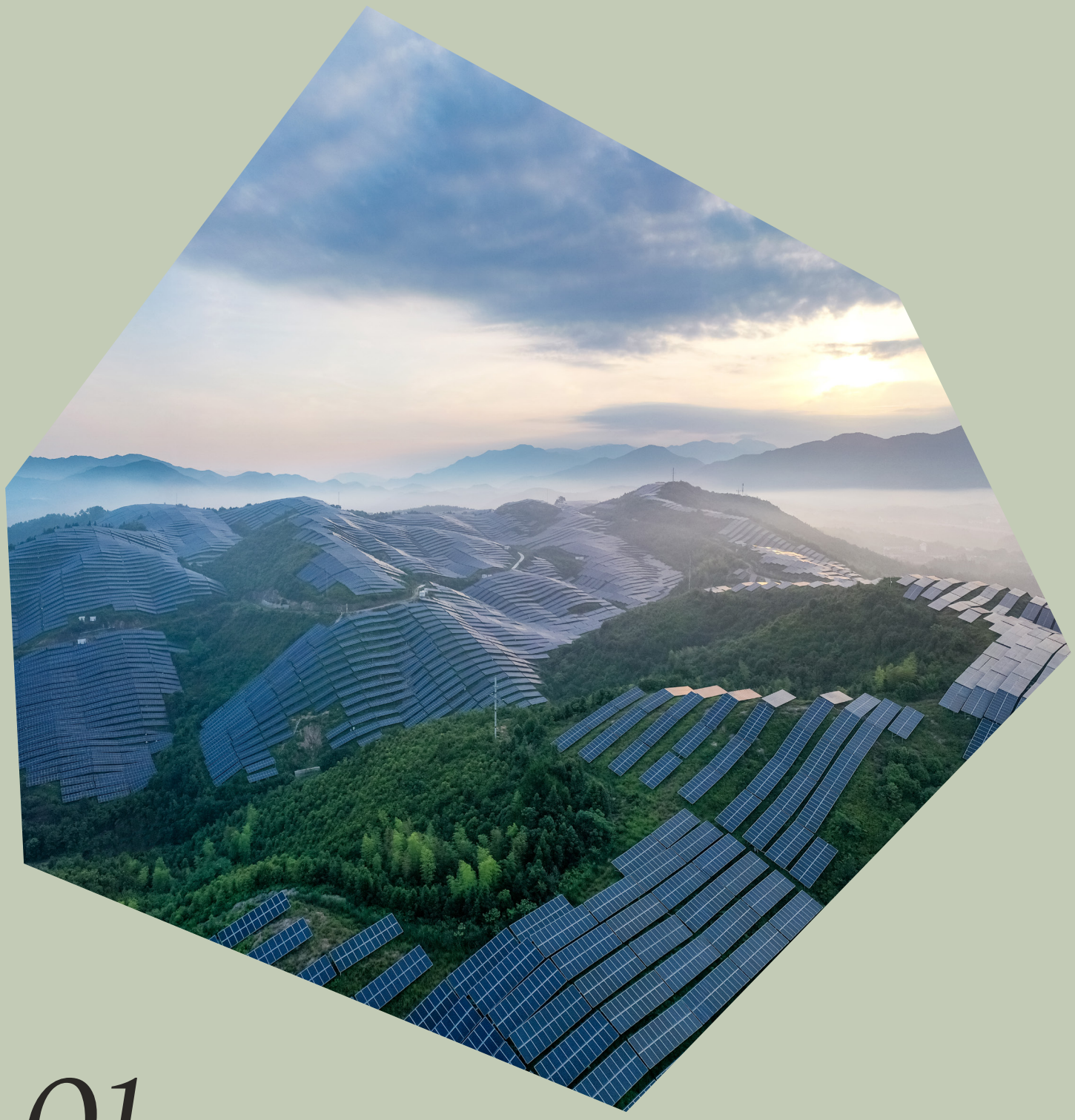
This growing demand, however, is running ahead of the alignment and consistency in guidelines and rules that companies need to act with confidence. A 2025 WBCSD survey of more than 40 member companies found that 93% planned to use or were already using market instruments beyond Scope 2, despite limited clarity on the applicable rules and recognition under leading GHG accounting and target-setting standards. The rules governing the use of market instruments beyond Scope 2 – including quality, credibility and claim boundaries – remain undefined by key voluntary standard setters, notably the Greenhouse Gas (GHG) Protocol, the International Organization for Standardization (ISO) and the Science Based Targets initiative (SBTi). In their absence, a complex landscape of chain of custody frameworks, accounting methodologies, and sector-specific guidance has emerged. Navigating this landscape to understand which instrument and framework to use, how they relate to evolving standards and how to act responsibly in an evolving space has become a practical necessity for companies. This report examines the current landscape of guidance, frameworks and standards, identifies where further alignment between industry practice and standard development is needed and proposes good practice approaches rooted in existing methodologies and practitioner convergence.

Despite current fragmentation in the landscape, this report finds meaningful convergence across initiatives, frameworks and standards, particularly around the need for robust governance and accountability systems, independent verification and assurance, the importance of chain of custody models and the prevention of erroneous double counting. At the same time, several topics remain under debate, including additionality, the treatment of pooled interventions, temporal alignment between contract duration and target cycles and the degrees of physical connectivity and traceability needed to use specific instruments and corresponding claims. Resolving these will require standard setters and initiatives in the landscape to prioritize harmonization and interoperability, building on effective sectoral solutions and developing overarching frameworks where needed.

Although the accounting and reporting landscape continues to evolve, sector-specific guidance and integrity frameworks currently available provide a degree of clarity in important areas to enable interim action. Based on this, the report proposes a phased Practical Action Pathway to help companies at any stage navigate the landscape. The Pathway begins by identifying where physically traceable emissions reductions are not achievable in the near term due to structural constraints and which market instruments can appropriately address these, then determining the eligibility criteria and integrity guardrails by selecting the chain of custody model best supported by the degree of traceability available. From there, companies can move to pilot procurement and testing, before scaling. Throughout, market instruments should be treated as complementary to mitigating emissions in the physical GHG inventory and companies are encouraged to prioritize physical decarbonization[1] of operational and value chain emissions, document why the use of market instruments is appropriate, ensure it meets governance and integrity criteria and report market instrument use based on the degree of physical connectivity, using a separate market-based statement to report actions where the connection is more limited.

The areas of convergence identified in this report support companies with a basis to act in the interim as the landscape continues to develop, resolving open questions, clarifying the interoperability between frameworks and standards and building toward greater harmonization. Companies that engage in the development of frameworks and standards, pilot and test emerging approaches and build robust decision-making processes along the way are likely to be better positioned to navigate an evolving landscape, as well as shape a more harmonized system that enables market instruments to credibly accelerate the transition to a low-carbon economy.

Introduction



01.

01. Introduction

Limiting global warming in line with the Paris Agreement requires an unprecedented and immediate mobilization of capital into low-carbon technologies, infrastructure and commodities, particularly in hard-to-abate sectors such as steel, cement, aviation, shipping and agriculture. This is not solely a matter of companies meeting their own net-zero commitments but part of a broader imperative for the global economy to scale climate solutions at the pace and volume this decade demands. While governments have a central role in setting policy direction and de-risking investment, companies and corporates are equally well positioned to accelerate this mobilization, given their control over capital, procurement decisions and value chains, whether by bringing low-carbon solutions into the market, investing directly in them or creating the demand signals that make such investments viable for others.

Within this context, companies are increasingly expected to demonstrate credible progress on their own decarbonization pathways while contributing to system-wide mobilization of finance and demand. Yet many encounter a structural barrier in creating such demand signals, given the existing corporate GHG accounting, reporting and data architecture. The architecture in use today was designed primarily to measure, disclose and reduce the operational emissions of companies, and less to reflect investments in, or procurement of, low-carbon materials, products or solutions elsewhere in the value chain. This leads to a focus on direct emissions reductions in operations (Scope 1/2) compared to value chain emission reductions (Scope 3), and a disconnect between capital requirements to develop low-carbon solutions at emissions sources on the one hand and capital allocation toward these solutions through purchasing decisions on the other, limiting companies' ability to build a clear financial case for action, even where the underlying climate rationale is strong. While interventions downstream in a value chain, such as the use of sold product and avoided emissions, can play a significant role in contributing to decarbonization, this report focuses on actions and interventions occurring upstream, whose environmental attributes are transferred to and claimed further along the value chain through market instruments, including how those claims are assessed and recognized by GHG accounting and target-setting programs.

The lack of clear accounting rules constrains corporate target-setting programs, which rely on this same architecture to determine which actions, investments and instruments can count toward a company's emissions reduction targets. Given that many companies look to bodies such as the GHG Protocol, the Science Based Targets initiative (SBTi) and ISO to set their decarbonization ambition and demonstrate progress, gaps and delays in this guidance carry implications well beyond individual reporting choices, given they affect the level of confidence and pace at which capital can reach the low-carbon technologies, materials, products and other solutions the transition depends on. Companies are therefore operating in a prolonged period of uncertainty with regard to measuring, reporting and substantiating the actions and investments needed to help close this financing gap.

This report examines the current guidance and standards landscape available to companies, discussing what is known and what remains uncertain, as well as identifying key questions and areas where further work and alignment between current industry practice and ongoing standard development processes is needed. Based on this analysis, the report proposes a phased Practical Action Pathway to help companies make use of the landscape and take interim action. In doing so, it aims to equip companies not only to navigate today's uncertainty with more confidence, but to deploy market instruments in ways that contribute to the scale and pace of climate finance mobilization the world needs.

Market instruments and their role *in advancing corporate climate action*



02.

02. Market instruments and their role *in advancing corporate climate action*

Market instruments are defined in this report as a, "contractual arrangement between two or more parties that enables the creation, transfer or claiming of greenhouse gas (GHG) related environmental attributes."[2] The use of market instruments in corporate GHG accounting to reduce the reported indirect emissions from purchased electricity (commonly known as Scope 2) is well established. To reduce reported Scope 2 emissions under the market-based method, companies can use market instruments such as Renewable Energy Certificates (RECs), guarantees of origin (GOs), power purchase agreements (PPAs) or other forms of green electricity contracts. This allows them to claim the emissions profile of the volume of renewable energy procured as part of their emissions reporting without physically consuming renewable electricity. Guided by the GHG Protocol, companies are required to conduct dual reporting of market and location-based emissions and must report the use of market instruments in their 'market-based inventory'.

A second well-established use of market instruments is their use in carbon avoidance or reduction credits, which are grounded in project-level, consequential accounting approaches and have typically been used to demonstrate action beyond a company's value chain.[3] Standards such as the GHG Protocol's Project Standard and ISO 14064-2 were developed to provide frameworks for quantifying, monitoring and reporting GHG emissions reductions or removals from specific mitigation projects. These methodological frameworks form the basis for many carbon crediting approaches and certification programs today. While carbon credits have historically been used to substantiate carbon neutrality claims, and more recently to deal with residual emissions and demonstrate action beyond a company's value chain, they are gradually moving toward higher-quality, removals-focused markets and increasingly merging with formal regulatory trading systems. The focus of this document, however, is on the landscape and use of instruments that companies intend to employ to substantiate interventions within, or of relevance to, their value chain and GHG inventory, and not beyond value chain action.

Because market instruments do not necessarily require physical traceability between the emission source and the organization claiming its use, they can enable emission reductions in contexts where an organization is unable to trace an activity back to its original emission source and therefore cannot report emission reductions in their physical GHG inventory.[4] Therefore, market instruments are increasingly seen as a practical mechanism to stimulate supply and demand for low-carbon solutions, mobilize finance and incentivize the decarbonization of products, projects and value chain activities where physical traceability is constrained. The demand to expand their use to Scope 1 and Scope 3 reflects the growing expectations that market instruments can help reporting companies both seek recognition for their actions, such as procurement decisions, and substantiate progress made with providers that supply low-carbon commodities, materials, products and other solutions.

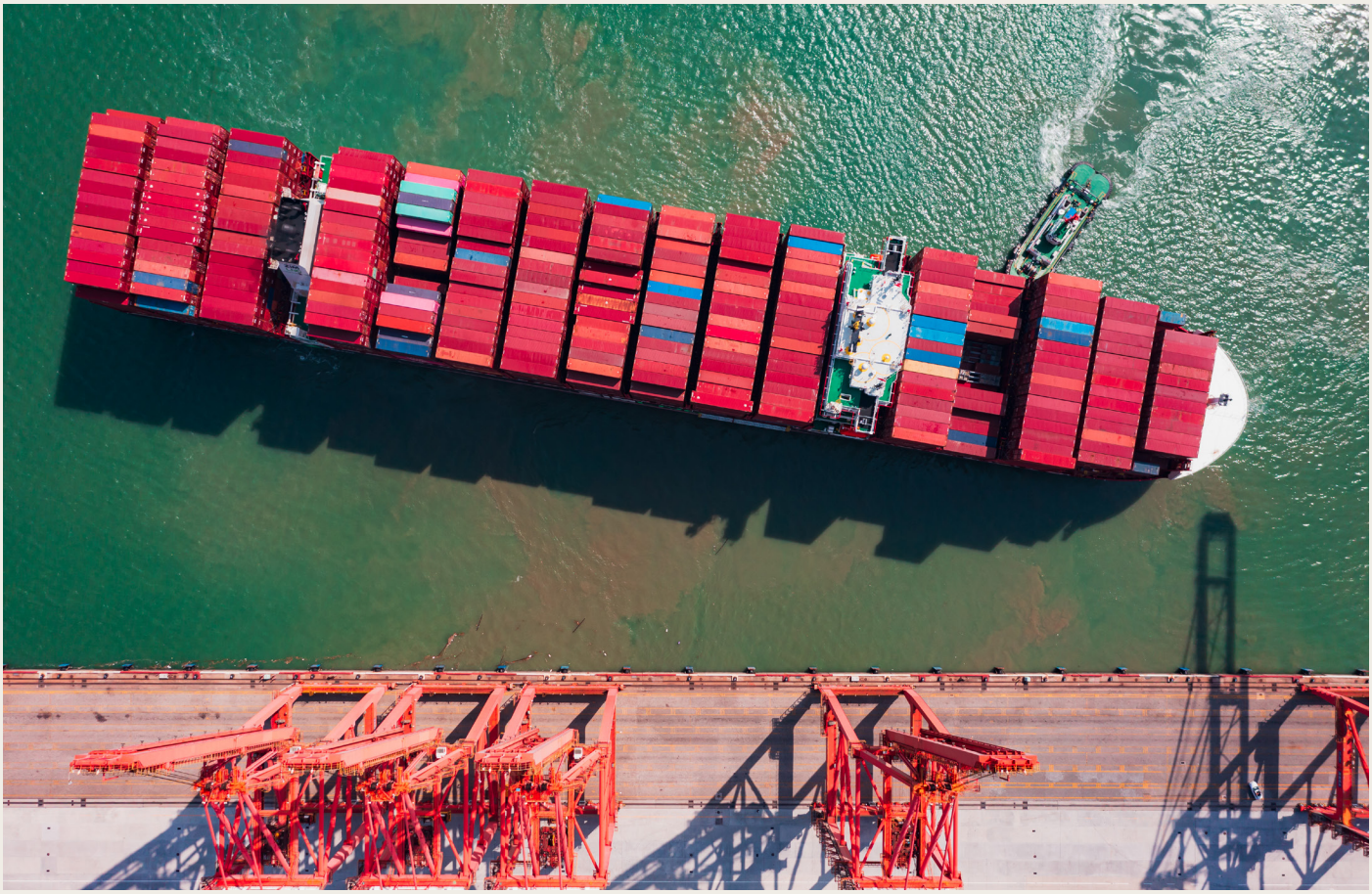
Exploring the roles of actors throughout the value chain helps illustrate how these market instruments are used in practice and how claims are transferred between upstream and downstream participants:

- **Upstream actors** produce low-carbon physical commodities and/or implement mitigation actions that reduce emissions in production processes, goods or services. The associated environmental attributes or emissions profile can be passed downstream through primary data, or transferred or claimed through market instruments.
- **Downstream actors** seek to address value chain emissions through procurement of low-carbon commodities, goods or services provided by upstream actors or customers. Market instruments may be used to claim associated environmental attributes where direct physical connectivity or full traceability to the low-carbon attributes is not achievable within a given supply chain structure, subject to applicable accounting and integrity requirements.
- **Intermediate value chain actors**, such as transportation and logistics companies, may procure low-carbon fuels, services, certificates or associated environmental attributes, which can support claims by actors further along the value chain.

The use of market instruments is not limited to contexts where traceability is constrained, as instruments such as mass balance and controlled blending approaches can support credible claims where physical connectivity is constrained by the nature of the commodity or sector, subject to the applicable integrity and traceability requirements. Moreover, while organizations are categorized as upstream, downstream and intermediate value chain actors, many can take on more than one role across a value chain and can therefore act as generators and users of environmental attributes through market instruments.

Despite their growing demand and use, the rules governing the supply and use of market instruments beyond Scope 2, such as their quality, credibility and extent of claims companies can make, remain undefined by the key voluntary standard setters, notably the GHG Protocol, ISO and SBTi. The importance and urgency of addressing this gap was evidenced in a 2025 WBCSD survey of 43 member companies, in which 93% of respondents noted that they planned to use or were already using market instruments to reduce emissions beyond Scope 2, despite having limited clarity on the accounting rules or types of actions eligible to substantiate net-zero progress.[5] Recent standard-setting developments have demonstrated a response and advanced the understanding of how market instruments can be used as part of corporate climate action: SBTi's Corporate Net-Zero Standard V2.0, released in June 2026, and ISO/DIS 14060 have both introduced eligibility and minimum integrity criteria for the use of market instruments, while the GHG Protocol and ISO 14064 series are jointly developing a standard that includes accounting and reporting rules and guidelines. Section 3 of this report explores these standard development processes in greater detail, while Section 6 explores the open questions and areas of convergence.

Although ongoing standard revision and development processes aim to address existing gaps, their pace has not matched rapidly evolving market practices and the urgent need for catalytic climate finance in key sectors. In response, a range of initiatives[6] and industry-led organizations in hard-to-abate sectors have developed interim guidance and frameworks tailored to specific use cases. As a result, companies seek clarity on how today's fragmented guidance will translate into practical, verifiable and decision-useful rules from core standard setters, and how other initiatives in the landscape can meaningfully inform and accelerate that transition. Addressing this need is essential to support credible use of market instruments, reduce uncertainty and unlock scalable investment in low-carbon solutions. The following sections examine perspectives on the expanded use of market instruments and the current landscape in more detail, and identify areas of emerging convergence and ongoing debate in the landscape.



How market instruments are currently recognized in *GHG reporting and target implementation*



03.

03. How market instruments are currently recognized in *GHG reporting and target implementation*

Having established the role of market instruments in corporate climate strategies, a critical question remains: how do the properties of these instruments determine their eligibility and recognition within GHG accounting and reporting frameworks, and target-setting programs? The answer varies based on the properties of the instrument, which include the degree of physical connection to underlying commodities, traceability to emission sources and the applicable chain of custody model, as well as the accounting and target-setting frameworks used. As a result, the same type of market instrument may be accounted for differently across companies and contexts.

To function effectively within corporate decarbonization strategies, companies using market instruments therefore need clarity on three interrelated dimensions:

1. the degree of physical connection between the instrument and the related attribute;
2. how the associated intervention or attribute can be accounted for in a corporate GHG report; and
3. whether and how the instrument may be recognized by target-setting frameworks, depending on integrity criteria and the level of physical traceability.

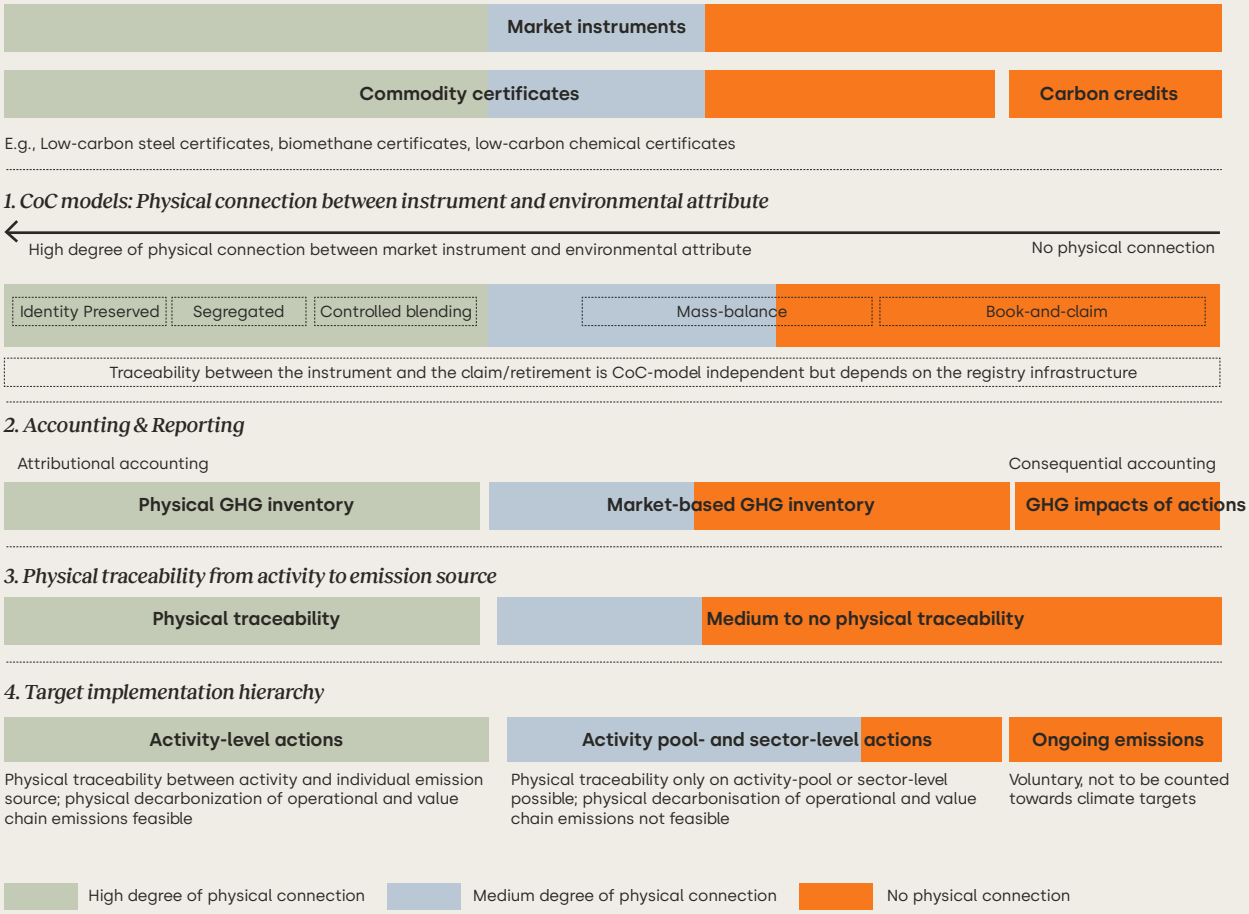
Figure 1 connects these elements and provides an interpretation of how these dimensions are integrated as part of corporate climate action, illustrating that decisions around market instruments span value chain traceability, GHG accounting and reporting, and target implementation.

To reflect this complexity, experts and standard setters have identified the need to distinguish between a company's physical GHG inventory and other reporting statements that capture the impacts and claims associated with market instruments not captured by the inventory. In its recent white paper, the GHG Protocol's Actions and Market Instruments Technical Working Group (AMI TWG) proposed a multi-statement reporting structure that would allow companies to report actions and market instruments alongside, but separately from, their physical inventory within a public GHG emissions report.[7] Multi-statement or multi-ledger frameworks have also been proposed by initiatives like the Task Force for Corporate Action Transparency (TCAT)[8] and the Advanced and Indirect Mitigation Platform (AIM Platform).[9]

The fact that market instruments may be accounted for and recognized differently across contexts indicates a broader tension in corporate climate accounting: how to recognize legitimate progress enabled by market mechanisms while preserving the integrity of emissions reduction claims. This raises important questions for companies relating to integrity. First, do market instruments support real-world, system-level decarbonization? Second, do they accurately convey the environmental attributes they represent, without the risk of erroneous double counting? Third, can companies make credible claims about their use of these instruments in GHG reports and target progress assessments? For companies, this means understanding both the accounting guardrails needed to support credible reporting and the target-setting criteria that will determine whether and how market instruments can contribute to progress toward science-based targets.



Figure 1: The market instruments landscape: from traceability to target implementation



Notes:

1. This figure reflects an interpretation of how market instruments relate to chain of custody models, traceability, accounting and target implementation. It was developed through stakeholder feedback and analysis. This figure does not represent a final view or consensus from stakeholders or WBCSD or its members.
2. Several boundaries shown here, particularly around chain of custody models, GHG accounting statements and target implementation, are the subject of active work and debate by standard setters and expert working groups and are likely to evolve. This figure should be read as a snapshot of the current landscape, not as a definitive classification.
3. The GHG Protocol counts 'mitigation-related contractual agreements' and 'other market instruments' as market instruments but does not further specify or refer to possible use cases, and they are therefore not reflected in the landscape overview presented in this report, as their practical application remains unclear at this stage.
4. The placement of mass balance CoC models in the figure relative to the physical and market-based GHG inventory is not yet settled. The GHG Protocol's Actions and Market Instruments (AMI) TWG is still developing criteria for which, if any, traceability models are sufficient for inclusion in the physical inventory, and whether reporting through a separate market-based statement is required or optional. The boundary shown in Figure 1 reflects an interpretation of current proposals based on stakeholder feedback and analysis, not an agreed position.
5. The mapping of CoC models to SBTi's activity-level, activity-pool and sector-level implementation hierarchy under the Corporate Net-Zero Standard V2.0 is illustrative. The CNZS V2.0 recognizes certain CoC models as eligible at the activity-pool level, but has not yet published detailed eligibility criteria specifying which CoC models qualify at each level of the hierarchy. Further guidance is expected on this topic.
6. The "Degree of physical connection" refers to the extent to which a market instrument is administratively linked, or traceable, to a specific underlying emission source or activity. Market instruments are ultimately issued against a real underlying action or activity and what varies is the resolution at which that link can be demonstrated and verified.

Chain of custody models – Physical connection between instrument and environmental attribute

The use of market instruments comes with varying degrees of physical connection between the environmental attribute and the associated commodity.[10] As illustrated in Figure 1, chain of custody models are used to demonstrate varying degrees of physical connection, ranging from identity preservation and segregation at the higher end of physical connection, through controlled blending and mass balance, to book and claim. Within bundled certificates, where the attribute, in the form of a certificate, is physically connected to an underlying commodity or material,[11] the degree of physical connection between the certificate and the product can vary depending on how the bundling is designed. On the other hand, through unbundled certificates, companies make claims about environmental attributes that exist within a defined system boundary but are unbundled from the physical flow of the commodity.

In unbundled approaches, the purchase of the certificate provides a contractual right to claim the associated benefit while excluding other actors with the same role on the value chain from doing so. RECs and sustainable aviation fuel (SAF) certificates are established use cases for unbundled instruments. To document and track the transfer of environmental attributes (e.g., emission intensity) across complex supply chains from the point of origin to the reporting company, chain of custody models play an important role. The type of underlying CoC model used indicates the degree of physical connection between the environmental attribute and the associated product, commodity or certificate, and fundamentally shapes how companies can account for these instruments in their GHG reports and climate targets.

Accounting and reporting

The CoC model used influences how a market instrument can be accounted for in a company's GHG report. As part of its proposal to transition toward a multi-statement reporting structure, the GHG Protocol's forthcoming AMI Standard is expected to introduce a dedicated market-based GHG inventory statement, separate from the physical inventory, where the use of market instruments such as commodity certificates can be reported. This distinction is important: in many cases, commodity certificates do not impact the reporting company's physical emissions but represent a contractual claim to an environmental attribute generated elsewhere in the value chain. The position of a market instrument within the GHG reporting structure therefore depends on the type of instrument used, the CoC model applied and the relevant accounting rules. It is also important to note that some market instruments cannot be reported in either the physical or market-based GHG inventory. Carbon credits, for example, are generally used to make contribution or impact claims about emission reductions or removals outside an organization's value chain and are reported separately from a physical GHG inventory. The GHG Protocol's AMI TWG has therefore proposed a dedicated statement to report GHG impact of actions that allows reporting of consequential actions and instruments in a GHG report, such as carbon credits, and that is separate from the physical and market-based GHG inventories.

Physical traceability from activity to emission source

A recurring discussion in the use of market instruments is the conflation of physical connectivity with physical traceability. Physical connectivity refers to the degree to which the commodity and its environmental attribute are delivered together through the supply chain to the claiming organization. Physical traceability, by contrast, refers to a company's ability to identify, track and collect information on activities (such as activity data, GHG emissions or removals factors) related to material flows in its value chain, across upstream and downstream processes.[12]

Where full physical traceability exists, activities can be directly traced to the physical emission source in own operations and the value chain, and primary data can be obtained. In other cases, traceability may extend only to an activity pool (such as a country or sourcing area), and companies may use market instruments to claim environmental attributes. Under SBTi's CNZS V2.0, energy and commodity certificates may be used when physical emission reductions cannot be substantiated through direct traceability: where traceability is limited to activity pools, certificates shall be sourced from within those pools. Where structural constraints[13] prevent action at the activity-pool level, sector-level actions are permitted, including through book and claim and mass balance models, subject to integrity criteria.

ISO/DIS 14060 takes a similar yet distinct approach for the use of environmental commodity certificates (ECCs). The draft text permits the use of ECCs where a company cannot trace, address or influence the value chain emissions associated with an underlying commodity. The ECCs must also be associated with an equivalent emissions type, volume and region. This latter requirement sets implicit regionality requirements similar to SBTi's activity-pool concept. It therefore remains an open question how the middle ground is addressed: specifically, how the use of market instruments will be treated in cases where a degree of traceability to the activity or intervention exists, but full activity-level action remains structurally constrained. While ISO/DIS 14060 establishes the structural conditions for ECC use, the draft standard defers the GHG accounting rules to the GHG Protocol's Actions and Market Instruments guidance, currently under development.

Target implementation hierarchy

The final step in the ecosystem illustrated by Figure 1 concerns how market instruments may be recognized by target-setting programs to help companies implement targets and substantiate progress. SBTi's CNZS V2.0 introduced an implementation hierarchy and minimum integrity criteria that allows companies to use energy and commodity certificates as part of target implementation and progress assessment. This hierarchy allows the use of energy and commodity certificates at the activity-pool or sector-level where activity-level physical reductions are structurally constrained.[14] Market instruments may be used where decarbonization actions at the activity level cannot be achieved through physically traceable emissions reductions, subject to the Standard's minimum integrity criteria and differentiated claims. In such cases, companies are expected to demonstrate that structural constraints prevent emission reductions at the activity-level before the use of market instruments becomes eligible. As noted above, ISO/DIS 14060 permits the use of ECCs where a company cannot trace, address or influence the value chain emissions associated with an underlying commodity, but cannot substitute actual emissions reductions in the physical inventory. In line with the mitigation hierarchy outlined by the draft standard, a company must demonstrate that direct procurement or activity-level action is not feasible before ECCs become eligible.[15]

It is worth emphasizing the different roles that the GHG Protocol and SBTi have in this space: the GHG Protocol's AMI Standard aims to develop cross-sector accounting guidance for the use of market instruments, while SBTi's CNZS V2.0 defines the recognition criteria for how eligible actions and associated instruments may contribute to science-based targets, potentially with sector-specific requirements. As outlined in the CNZS V2.0, SBTi maintains that market instruments complement the overarching obligation to drive verifiable, physically traceable emissions reductions over time, which reflects an important position in the ongoing debate on the long-term role of market instruments explored in Section 6.



Perspectives on expanding the use *of market instruments*



04.

04. Perspectives on expanding the use *of market instruments*

The arguments surrounding the expanded use of market instruments have generated significant debate among the stakeholders actively shaping the landscape, with complex and nuanced arguments, some in favor of their expanded role and others urging caution. While many companies have made progress and tackled the actions deemed low-hanging fruit to reduce Scope 1, 2 and 3 emissions, additional significant reductions remain a challenge for companies with the tools recognized by the current standards landscape. At the same time, meeting near-term and long-term Scope 3 reduction commitments remains difficult, given persistent barriers to achieving and substantiating physically traceable emissions reductions across complex and often global value chains. Several proponents of the expanded use of market instruments argue that their use in emerging applications, particularly low-carbon materials and commodities, can open practical pathways to accelerate decarbonization by mobilizing finance and aggregating demand for low-carbon solutions across value chains.

When looking to tackle decarbonization across value chains, many companies face a dual challenge. Upstream and intermediate actors face high abatement costs and limited availability of low-carbon technologies, with investment barriers often preventing actions that could create value across the system. The Smart Freight Centre has illustrated the cost challenge faced by actors within the transport and logistics industry, commenting that the high costs associated with reducing the GHG emissions of freight transportation, "...can serve as a significant barrier to the deployment of low-emission transportation services."[16] To remain competitive, companies withhold from investing in these solutions, despite the decarbonization benefits this can enable for downstream actors. At the same time, downstream actors struggle to trace Scope 3 emissions to their origin, which limits their ability to claim the benefits of their actions. The Value Change Initiative (VCI) and ISEAL have examined some of these barriers, which include fragmented and dynamic value chains, low influence of the buyer or reporting company over suppliers and the wider value chain, large geographical or administrative boundaries and limited digital maturity and data infrastructure. They note that, "without physical traceability, the physical goods and the GHG-related characteristics associated with those goods – such as a specific emissions profile – are decoupled, which inhibits reporting these GHG outcomes in an inventory and using these toward climate targets."[17]

Where physical traceability[18] between activity and physical emission sources in the value chain is limited, market instruments enable companies to detach environmental benefits from the underlying commodity and claim them through contractual mechanisms. Proponents argue that, in relevant sectors, instruments such as commodity certificates can also help distribute the cost of decarbonization interventions across value chain actors with the willingness and ability to pay, and that, deployed in this way, market instruments can deliver the relevant demand signals that can catalyze production of low-carbon solutions in hard-to-abate sectors such as agriculture, heavy-duty transport and steel production.

Despite the potential benefits, expanding the use of market instruments has also generated concerns for some stakeholders. Their use represents contractual claims to environmental attributes that do not in themselves ensure or correspond to physical emission reductions within the corresponding company's physical GHG inventory. This has generated concerns among stakeholders regarding credibility, particularly due to a potential decoupling between reported claims and real-world outcomes. Additional concerns include double issuance and/or claiming, which can inflate mitigation claims, as well as the challenges relating to additionality and the question of whether market instruments deliver incremental emission reductions beyond what would have occurred in their absence. In the context of Scope 2, for example, where commodity certificates are already widely used, research has questioned whether corporate REC purchases lead to additional renewable energy production.[20]

These competing arguments reflect the ongoing debate across the landscape and have shaped its evolution. They have fostered the emergence of industry-specific initiatives to provide interim guidance for companies in the absence of finalized standards, while also accelerating the work of cross-sector standard setters to develop consistent guidelines and criteria for accounting, target-setting and using market instruments credibly.

The current landscape: *key initiatives, guidance and standards*



05.

05. The current landscape: *key initiatives, guidance and standards*

The rapid development and growth of initiatives and frameworks focused on the use of market instruments over recent years demonstrates the widespread demand for guidance in the absence of overarching standards. As abatement challenges differ by sector, relevant accounting and claims guidance is often governed by sector-specific frameworks tailored to address technologies, commodities and mitigation pathways. While sector-specific guidance and frameworks have emerged to fill the gaps and are essential to address the unique characteristics of diverse value chains, they alone are insufficient to meet the demands of increasingly complex global value chains. Given companies typically operate and source goods and services across multiple sectors, there is a need for cross-sectoral approaches that enable comparability and aggregation of instruments stemming from different origins. These sector-agnostic rules can provide a common basis to compare mitigation interventions, evaluate trade-offs, prioritize action and make informed procurement decisions, regardless of where in the value chain an action or intervention occurs, particularly given the complexity of global value chains. This interaction between sector-specific intervention guidance and broader cross-sector rules and principles is essential to ensure market instrument use is credible and practical across complex global value chains.

Table 1 provides an illustrative and non-exhaustive map of the focus areas of key initiatives, standards and frameworks that offer guidance on accounting, integrity, reporting or claiming the use of market instruments according to their primary ecosystem function. These initiatives were selected based on a landscape analysis and stakeholder feedback, as they were deemed to be actively shaping and informing industry action or the ongoing standards development processes. The selection is not intended to provide a complete overview of all actors currently engaged on the topic of market instruments. The table presents a diverse and evolving landscape that reflects the strong demand for guidance across value chains and sectors, and the practical challenge companies face in identifying which initiatives or frameworks companies can use to address their particular questions on accounting, traceability, claims and related topics. Although these initiatives or frameworks are often categorized as focusing on distinct dimensions or spaces in the landscape, the guidance and thematic focus of some of these initiatives spans multiple areas, from production through to end use and associated claims, and from accounting methods to traceability guidance.

GLOSSARY OF KEY TERMS

A comprehensive glossary of key terms used in this publication and the broader market instruments landscape has been developed by WBCSD and will be made available as an accompanying asset for companies and stakeholders navigating this landscape.

Table 1: Selected initiatives and their function in the landscape. This list is non-exhaustive, and selection and categorization are based on an analysis of the landscape and stakeholder engagement. A detailed list, including relevant guidance documents and status for the organizations in this table, is provided in Annex 2, and descriptions of selected initiatives are provided in Annex 3

Overarching standards		
Cross-sector frameworks that set rules applicable across the full landscape		
Initiative / bodies	**Standard / document / guidance**	**Role in the landscape**
GHG Protocol	Actions and Market Instruments (AMI) White Paper V3; Land Sector and Removals Standard (LSRS)	Develops cross-sector accounting and reporting rules for market instruments and associated actions across all scopes; the foundational reference for how instruments are recognised in GHG inventories.
SBTi	Corporate Net-Zero Standard V2.0 (CNZS V2.0)	Sets the target-setting and recognition criteria governing how eligible actions and market instruments may contribute to science-based net-zero targets. Defines the implementation hierarchy discussed throughout this report.
ISO	ISO 14060 series (incl. ISO/DIS 14060); ISO 22095 series (parts 1, 2, 3)	ISO 14060 (under development, currently ISO/DIS 14060) establishes requirements for net-zero claims and the role of market instruments within them; ISO 22095 sets cross-sector requirements for chain of custody system design, governance and claims.
Instrument integrity, CoC governance and certification frameworks		
Initiatives that define quality criteria, CoC models and governance rules for how instruments are designed, certified and governed		
Initiative / bodies	**Standard / document / guidance**	**Role in the landscape**
ISEAL	Chain of Custody Models and Definitions Guidance V2.0	Provides the cross-sector definitions and governance requirements for CoC models covering identity preservation, segregation, controlled blending, mass balance and book-and-claim. These guidelines and requirements are applicable across industries and sustainability systems.
Value Change Initiative (VCI)	Value Chain (Scope 3) Interventions — GHG Accounting and Reporting Guidance; Achieving Net Zero through Value Chain Mitigation Activities	Cross-sectoral initiative that develops accounting and integrity principles for value chain interventions and market instruments used to address Scope 3 emissions.
ICVCM	Core Carbon Principles, Assessment Framework and Assessment Procedure	Cross-sectoral initiative that sets integrity standards for voluntary carbon credits, including additionality, permanence and independent verification requirements.
ISCC	ISCC EU 203 Traceability and Chain of Custody	Defines traceability and CoC requirements for bioenergy and biomass certificates; one of the most established sector-specific CoC certification schemes with cross-sector applicability.
Book and Claim Community (RMI + SFC)	Principles and Best Practice for Book and Claim Systems in Heavy Transport	Establishes governance principles and best practice for book and claim systems. Developed for heavy transport but provides transferable principles for other sectors developing B&C infrastructure.
TCAT	Mitigation Action Accounting and Reporting Guidance	Multi-stakeholder initiative developing GHG accounting and reporting guidance for corporate climate actions, including market instruments across scopes and sectors. Proposes a multi-statement reporting structure, with a focus on sector-level action.

Registries and traceability infrastructure

Initiatives that provide the technical infrastructure for issuing, tracking and retiring instruments

Initiative / bodies	Standard / document / guidance	Role in the landscape
Verra	Verra Scope 3 Standard	Verra operates one of the largest carbon credit registries globally. Its Scope 3 Standard, extends registry infrastructure to value chain emission reduction claims.
Gold Standard	Accounting and Reporting the Emissions of Certified Commodities: Introductory Guidance	Operates a carbon credit registry alongside its certification standard. Provides accounting guidance that bridges registry issuance and corporate GHG reporting. It can also be classified under the instrument integrity category as a certification framework.
RECS International	RE-DISS / RECS certificate standard	Operates the most established EAC registry for renewable electricity and provides the foundational model for certificate issuance, tracking and retirement that newer commodity certificate schemes are drawing on.
AIM Platform / GMA	AIM Platform Standards and Guidance; GMA Book-and-Claim System for Concrete	Develops registry infrastructure and integrity criteria for indirect mitigation instruments across multiple commodity types. GMA is extending book and claim registry infrastructure into hard-to-abate sectors, including concrete.

Independent assurance and verification

Bodies that audit and verify claims against integrity frameworks and standards

Initiative / bodies	Standard / document / guidance	Role in the landscape
SustainCERT	Dual Factor Credibility Framework; Emission Factor Verification service; Scope 3 Impact Units	ISO 14065-accredited validation and verification body that provides independent assurance for carbon credits, corporate GHG inventories, product carbon footprints and value chain interventions across sectors. Its Scope 3 Impact Units concept enables companies to allocate and co-claim value chain emission reductions.
Smart Freight Centre (SFC)	Voluntary Market Based Measures Framework for Logistics Emissions Accounting and Reporting	Provides sector-specific verification and reporting framework for logistics and freight emissions; also co-authors the Book and Claim Community principles (appears in the instrument integrity category in that capacity).

Note: independent assurance and verification is currently one of the least developed areas in the landscape. Most commodity certificate schemes used today rely on certification bodies approved under the rules outlined in their own scheme, rather than on independently accredited validation and verification bodies. This represents an important focus area of development.

Sector and value chain implementation guidance

Initiatives that translate overarching standards into sector-specific implementation

Initiative / bodies	Standard / document / guidance	Role in the landscape
IATA	SAF Accounting and Reporting Methodology	Sector-specific guidance for sustainable aviation fuel certificate accounting and reporting. It is one of the more developed sector frameworks given the maturity of SAF certificate markets.
Together for Sustainability (TfS)	Product Carbon Footprint Guideline for the Chemical Industry V3.0	Industry-led guidance translating GHG Protocol principles into a chemical sector-specific PCF methodology and relevant to commodity certificates in chemicals supply chains.
World Steel Association	GHG Chain of Custody Approaches in the Steel Industry — The Role of GHG Reduction Certificates	Sector-specific guidance on CoC approaches and certificate use in steel. Guidelines cross-reference overarching standards while addressing steel-specific production routes and system boundaries.
First Movers Coalition (WEF)	First Movers Coalition — Aviation, Steel, Aluminium, Cement and Concrete	Demand-side buyer alliance establishing procurement commitments and minimum quality criteria for low-carbon commodities across multiple hard-to-abate sectors. The Coalition's work bridges instrument integrity requirements and market activation.
Roundtable on Sustainable Biomaterials (RSB)	RSB Procedure for Traceability of RSB Certified Material	Sector-specific traceability and certification scheme for biofuels and biomaterials that represents an established CoC scheme in a hard-to-abate sector context.

Crosscutting initiatives

Several initiatives listed above span more than one functional category:

- → Gold Standard, for example, operates both as a certification framework and a registry.
- → The Book and Claim Community and Smart Freight Centre jointly develop governance principles and verification frameworks.
- → The AIM Platform, developed in partnership with GMA, C2ES and Gold Standard, combines integrity criteria with registry infrastructure.
- → ResponsibleSteel spans instrument integrity, registry infrastructure and sector guidance for the steel sector.

This crosscutting element reflects the complexity of a landscape that merges standard-setting, infrastructure and verification functions, highlighting the low maturity of the commodity certificate markets still under development.

Emerging principles *and areas of ongoing debate*



06.

06. Emerging principles *and areas of ongoing debate*

As the application of market instruments expands, standard setters, initiatives and frameworks have begun to define core principles to foster the environmental integrity and credibility needed.[21] Recent publications from ISO and SBTi, as well as interim white papers from the GHG Protocol, and guidance from organizations and initiatives like the AIM Platform, NewClimate Institute,[22] the Book and Claim Community,[23] TCAT, VCI and ISEAL[24] have proposed principles and approaches to inform the discussion and evolution of the landscape. Despite differences in the scope and application of these initiatives, commonalities across key themes have emerged. These include but are not limited to:

- **Market instruments complement, not replace, physical decarbonization:** Following the launch of SBTi's CNZS V2.0, a degree of alignment has emerged in the landscape that market instruments should complement, rather than substitute for, the long-term and overarching objective of achieving physical emissions reductions by a net-zero target date. This is reflected in CNZS V2.0's implementation hierarchy, which prioritizes activity-level decarbonization before recognizing activity-pool or sector-level action, and echoed in the GHG Protocol's proposed multi-statement reporting structure, which keeps market-based claims separate from the physical GHG inventory rather than treating them as a substitute for it.
- **Third-party verification of environmental attributes:** Most initiatives and frameworks converge on the need for independent certification or verification to ensure that market instruments are linked to environmental attributes that are real, measurable and documented within a defined system boundary. Verification is increasingly seen as a prerequisite for the credible use of market instruments, requiring that certification systems are robust, transparent and based on credible standards or normative documents. It is worth noting, however, that the role of certification/verification is to demonstrate the validity of environmental attributes, and not to signify alignment with a 1.5°C pathway or a systemic emission reduction.
- **A core role for chain of custody models:** Several initiatives and frameworks converge around the key role that chain of custody systems ought to serve as mechanisms enabling the credible transfer, allocation and claims of environmental attributes. However, a uniform CoC approach is not considered feasible, given the diversity of sectors, technologies and value chain structures. Therefore, sector-specific applications of CoC systems are required to meet the physical, operational and traceability realities of different value chains. This is reflected in emerging guidance that focuses on both the selection of tailored CoC systems and the governance structures that underpin these. Initiatives like the New Climate Institute explicitly call for tailored CoC approaches, while initiatives such as VCI, ISEAL and standards like the ISO 22095 series focus on the governance requirements of CoC systems, outlining responsibilities for rule-setting, conformity assessment and data governance. Cross-sector standards like the GHG Protocol's AMI Standard (currently under development), draw on the ISO 22095 series and ISEAL to develop eligibility criteria as part of multi-statement reporting, while SBTi's CNZS V2 permits certain actions based on eligible CoC models, subject to minimum integrity criteria within its implementation hierarchy.
- **Robust governance and accountability**: There is increasing convergence on the need for clear and effective governance structures to uphold the integrity of market instruments and relevant systems. This includes mechanisms to define and enforce rules, ensure stakeholder participation, verification and system management. Such governance and accountability structures are deemed necessary to maintain long-term confidence and credibility.
- **Prevention of erroneous double counting and duplicated claims:** Preventing erroneous double counting has emerged as a priority topic as part of the discussion on integrity. A related priority is ensuring that claims to the same market instrument or associated environmental attribute are well defined, mutually exclusive and are not duplicative. Although different chain of custody approaches can enable distinct claims within a value chain, the landscape has shown increasing convergence on the need for credible and robust registry systems to enable the effective issuance, transfer and retirement of certificates. Robust registry infrastructure is deemed crucial to prevent double issuance and enable the degree of tracking the market requires, as well as alignment with GHG accounting and reporting rules. Effective governance systems must clearly allocate environmental attributes and ensure unambiguous claims, supported by transparent retirement rules and controls that prevent the same environmental attribute from being claimed by multiple parties. Clarification is still needed on how different entities or reporting statements may report the same underlying action without being treated as duplicative.

- → **Transparent and accurate data management:** Accurate data reporting across the value chain is an area of alignment as well as concern, given the inherent challenges relating to upstream data aggregation by buyers/downstream actors. The certified characteristics of environmental attributes need to be correctly reflected in the system, and transparency regarding methodologies, standards and system functionalities is essential to enable credible claims and third-party verification.
- → **Use of registries and claiming mechanisms:** There is growing alignment surrounding the need for credible and robust registry systems to enable the issuance, transfer and retirement of certificates effectively. A robust registry infrastructure is deemed crucial to prevent double issuance and enable the degree of tracking needed by the market, as well as the necessary alignment with GHG accounting and reporting rules. A focus on interoperability, transparency and visibility across the registry infrastructure is important to reduce fragmentation and support credible claims as this infrastructure grows.

While important areas of convergence have emerged, several topics remain under debate across the landscape and ongoing standards development processes. As highlighted throughout this document, the diversity across value chains, their complexity, varying levels of market maturity and traceability, and the limited availability of low-carbon solutions across markets, make it challenging to establish rules and principles that are credible and applicable across all situations. As a result, several key topics and questions require further methodological progress and alignment. These include:

- → **Additionality:** Some initiatives and frameworks argue that overly stringent additionality criteria can hinder adoption, particularly in hard-to-abate sectors where solutions require investment or where establishing causality is structurally difficult. Others view additionality as a critical guardrail for claims based on mitigation outcomes not directly linked to a company's physical value chain or stemming from business-as-usual interventions. Furthermore, the role of additionality within attributional accounting and reporting remains a point of ongoing discussion. While some standards and frameworks reference additionality as a quality criterion for market instruments, others question whether additionality requirements are compatible with attributional accounting methodologies, which are not currently designed to assess what would have occurred in the absence of a given intervention but rather to provide a picture of all emissions attributable to an organization. Sector and context-specific additionality requirements are being explored by several initiatives, looking to differentiate between instruments aimed at driving new mitigation and systemic decarbonization and instruments aimed at allocating existing environmental attributes. At the same time, there's a risk that this can create a disparity in additionality requirements and lead to negative implications and inconsistencies across markets.
- → **Treatment of pooled interventions:** Standards such as the SBTi CNZS V2.0 recognize that decarbonization actions can occur within activity pools, such as supply sheds or sourcing regions, and have developed an implementation hierarchy that allows interventions and market instruments associated with those pools to be used when activity-level actions are not feasible. Standards such as ISO 22095-2 offer a framework for how pooled interventions can be governed and verified, but do not determine eligibility criteria for accounting or target implementation. Furthermore, although ISO/DIS 14060 sets requirements for ECCs to be associated with an equivalent emissions type, volume and region, it does not specify the degree of association to a 'pool' that companies must demonstrate. Although standard setters including SBTi and ISO recognize an activity-pool or equivalent approach, given it reflects the realities of complex value chains, questions remain around how companies can and should demonstrate the correct degree of association to the activity pool, how mitigation outcomes are attributed among stakeholders and the level of physical connectivity required to support credible claims. These open questions raise additional concerns around overlapping claims, comparability and the credibility and robustness of the reported mitigation outcomes.[25]
- → **Legacy treatment and evolving standard requirements:** Companies securing long-term market instrument contracts often face a challenge: contract durations of 5–10 years extend beyond current target cycles into future accounting frameworks not yet finalized. As standards evolve toward more stringent requirements, such as hourly matching for renewable electricity or changes in accepted chain of custody

models, instruments that meet quality criteria at contracting time may no longer align with updated frameworks. This raises questions about whether instruments should retain validity for GHG inventory and target progress as standards change, a practice termed 'grandfathering' or legacy treatment. The landscape has not yet converged on managing this transition: some frameworks allow legacy treatment to recognize long-term commitments made in good faith under prior standards, while others require retroactive alignment. Whether standards should accommodate grandfathering of instruments contracted under prior versions remains unresolved.

→ **Physical connectivity and physical traceability requirements:** This topic can have important implications for the accounting, reporting and substantiation of mitigation outcomes. Some stakeholders argue for strong physical connectivity requirements as these are deemed to deliver greater credibility and lower the risk of overlapping and erroneous claims. In addition, stringent physical traceability requirements could hinder the scalability of market instruments and prevent mitigation actions in complex value chains. For example, in globally traded sectors such as maritime transport, where the availability of alternative fuels may be geographically constrained, requiring direct physical traceability at the activity level may create unnecessary barriers to the scaling of low-carbon fuels.[26] This tension between the integrity benefits of high physical connectivity and the scalability implications of requiring it as a threshold criterion remains an area of active debate among standard setters and industry practitioners.

→ **Conditions for market instruments to contribute to target implementation:** While there is growing alignment that market instruments should complement rather than replace physical decarbonization, the focus of active debate has turned to the specific conditions and degree to which market instruments are able to contribute to implementation and achievement of targets, and what claims organizations are able to make. In parallel, an important area of discussion and uncertainty is the alignment and interoperability between the accounting rules and principles ultimately developed by the GHG Protocol and ISO, and the implementation criteria and requirements established by SBTi in the CNZS V2.0 and supporting guidance.

Table 2: Areas of convergence, alignment and ongoing debate in the landscape

Topics and areas with increasing alignment	*Unresolved topics or areas under active debate*
Market instruments complement, not replace, physical decarbonization	Additionality
Third-party verification of environmental attributes	Treatment of pooled interventions
A core role for chain of custody models	Legacy treatment and evolving standard requirements
Robust governance and accountability	Physical connectivity and physical traceability requirements
Prevention of erroneous double counting and duplicated claims	Conditions for market instrument contribution to target implementation
Transparent and accurate data management	
Use of registries and claiming mechanisms	

Implications for harmonization *of guidance across the landscape*



07.

07. Implications for harmonization *of guidance across the landscape*

The absence of a definitive, globally recognized standard governing the use of market instruments beyond Scope 2, combined with the decentralized development of sector and model-specific guidance to address immediate implementation needs, has resulted in a fragmented landscape with limited alignment on core principles, terminology and interoperability. This has created a transition period in which companies operate with uncertainty and stakeholders are forced to interpret interim signals with limited clarity, leading to increased ambiguity and a lack of confidence with which to advance their action.

Going forward, standard setters and initiatives developing specific guidance are encouraged to focus on improving harmonization and interoperability, prioritizing the unresolved questions highlighted in this document. These efforts could focus on the following:

- → greater convergence on core principles, terminology, minimum requirements and claims
- → guidance on how CoC models and systems can be applied, governed and linked to permissible claims across sectors
- → common foundational criteria for credible commodity certificate systems
- → clarity on the role and focus of cross-sector standards, and the recognition of sector-specific guidance and frameworks
- → guidance on the treatment of existing long-term market instrument contracts and procurement commitments, including how legacy or grandfathered arrangements will be treated in GHG inventories and target progress

Criteria for credible commodity certificate systems are currently being developed in an uncoordinated manner, resulting in inconsistent approaches, particularly with respect to traceability and CoC models. While sector-specific guidance remains essential to reflect differing decarbonization levers and value chain structures, the industry continues to call for an overarching, cross-sector framework from key standard-setting bodies. In this context, companies most often look to the GHG Protocol and ISO as the primary reference points for clarity on GHG accounting and reporting, and to SBTi for guidance on how the use of market instruments can credibly substantiate progress toward targets.

The direction of travel provided by the GHG Protocol's AMI White paper introduced a foundational set of key terms and definitions, providing a basis for the development of forthcoming operational rules. While some definitions remain subject to refinement, the update clarifies key concepts required for consistent accounting and reporting. Rather than introducing entirely new terminology, the GHG Protocol has reviewed the landscape (see Annex 3) to align with definitions already used in key frameworks and guidance, particularly for cross-sector concepts such as chain of custody approaches and carbon credits. This approach supports greater interoperability across frameworks while leaving scope for further specification as the AMI guidance advances.

Not every challenge requires new theoretical frameworks, and cross-sector standards under development can build on effective sectoral solutions that already exist. In this context, standards such as the GHG Protocol AMI standard have the important role of defining foundational accounting requirements and principles that ensure consistency, integrity and comparability across all sectors. Sector-specific methodologies can then align with this framework to support and guide practical application. This may mean that where sector-specific guidance already exists, it may need to evolve to reflect updated standards. Where guidance does not exist, the standards should consider providing clear and practical entry points that allow sectoral initiatives to develop

more nuanced guidance, while enabling companies to apply cross-sectoral rules consistently to their specific circumstances.

As standard development processes follow formal governance structures, which differ across organizations, this has implications for the ability of the landscape to align. A common challenge cited by companies stems from the ambiguity and uncertainty from differing processes, which result in the delivery of incomplete parts of a system. This has real-world repercussions for the ability of practitioners to generate the degree of confidence required for decision makers to approve strategies and investments, given risks of future changes or misaligned interpretations of interim signals.

The overarching objective should be to provide companies with clear and practical guidance that enables them to credibly demonstrate their mitigation efforts. While scientific rigor remains essential, guidance should also be grounded in practice to ensure it is applicable and decision useful. Providing clear and consistent rules will empower companies to both credibly and effectively use market instruments and accelerate the deployment of climate solutions at scale.

A CALL ON INITIATIVES AND STANDARD SETTERS:

Standard setters are strongly encouraged to improve their communication on the outcomes of ongoing alignment processes. Understanding the areas of agreement, open questions and timelines for resolution is vital information for companies that need to make investment and procurement decisions. Standard setters and initiatives are therefore called on to engage proactively with one another to coordinate harmonized solutions and ensure consistency, reduce duplication and accelerate adoption.

Navigating the interim period: *a practical action pathway for companies*



08.

08. Navigating the interim period: *a practical action pathway for companies*

While the landscape of accounting and reporting requirements and their alignment with target-setting programs remain under development, this document presents several areas of emerging convergence. This provides a direction of travel for companies to begin acting in the interim period. Regardless of a company's current stage of maturity, the following practical set of foundational principles, grounded in the areas of convergence identified in Section 4 and Section 6, can underpin a strategy involving market instruments:

- → **Hierarchy:** Direct decarbonization at the activity level takes precedence over market instruments. Market instruments are complementary tools, applicable only where direct decarbonization is not feasible, reflecting the SBTi Corporate Net-Zero Standard V2.0 implementation hierarchy (activity level, then activity pool, then sector level). Where sector-specific guidance has already emerged, this can signal that activity-level decarbonization in these sectors faces structural constraints that cannot be fully addressed through direct action alone, and that market instruments have consequently been recognized as a necessary complement to physical decarbonization efforts.
- → **Complementarity:** Market instruments support, rather than substitute for, direct emissions reductions within a company's operations and value chain. They serve as bridging mechanisms where structural barriers prevent activity-level action, not as alternatives to pursuing direct decarbonization.
- → **Integrity:** Market instruments must be grounded in robust governance, verifiable chain of custody and independent assurance. Credibility depends on a clear connection to the underlying emission source or activity pool, measurable outcomes and controls against double counting.
- → **Transparency:** Companies must clearly disclose the extent to which market instruments contribute to progress, distinguish market-based claims from physical emissions reductions and report separately on eligible actions and their outcomes in line with SBTi requirements.
- → **System-Level impact:** Where sector-specific guidance or relevant standards such as SBTi's Corporate Net-Zero Standard V2 require companies to contribute to wider benefits when using market instruments, companies should give preference to instruments that demonstrably deliver system-level impact at the market, activity-pool or sector generating new low-carbon capacity or capability in the relevant market, rather than reallocating existing capacity.[26] Where this contribution cannot be fully evidenced, companies should be transparent about the basis on which the instrument was selected.
- → **Justification:** The use of market instruments should be grounded on a documented assessment of the structural constraint involved. Internal preference, procurement convenience or cost alone do not constitute sufficient justification. In line with the GHG Protocol's Actions and Market Instruments (AMI) framework (under development), reporting should be based on the degree of physical connectivity: Market instruments whose underlying chain of custody model meets the applicable physical connectivity threshold can be included in the physical inventory; where physical connectivity is more limited, they should be disclosed through a separate market-based statement.[28] In all cases, companies should disclose how each instrument affects accounting and target progress.
- → **Adaptability:** Market instrument use and selection criteria should be reviewed against evolving accounting standards and target-setting requirements on a recurring basis, rather than fixed to a single point-in-time framework.

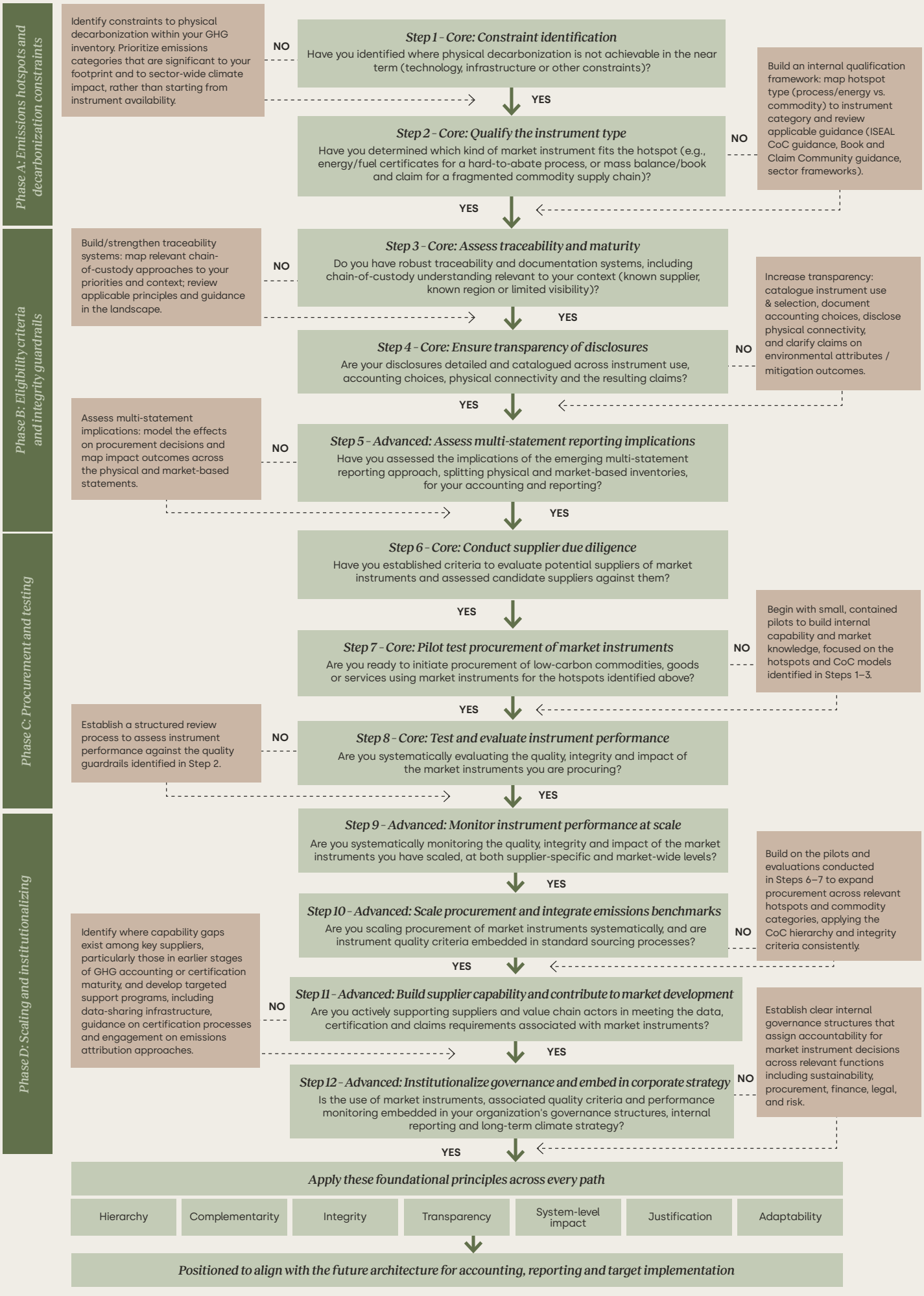
To reflect this, this section proposes a phased **Practical Action Pathway** that helps companies engage with market instruments at any stage of maturity, based on the foundational principles above, while also giving suppliers clear signals about the criteria buyers are likely to apply. The Pathway moves through four phases: identifying and qualifying the constraints that warrant the use of market instruments, determining eligibility criteria and integrity guardrails, piloting and testing procurement, and scaling and institutionalizing governance. Annex 1 provides further detail on each step, organized by the stage at which a company may find itself. The pathway is not prescriptive, but diagnostic and directional, as it does not replace the judgment needed to apply it to a company's specific sector, geography

and value chain structure. Steps marked 'Core' reflect requirements that are directly derived from SBTi Corporate Net-Zero Standard V2.0 or ISO/DIS 14060 core requirements and recommendations and are therefore relevant to companies of any size or resource level. Steps marked 'Advanced' reflect practices observed among companies at a more mature stage of implementation and are presented as a direction of travel rather than a baseline recommendation.

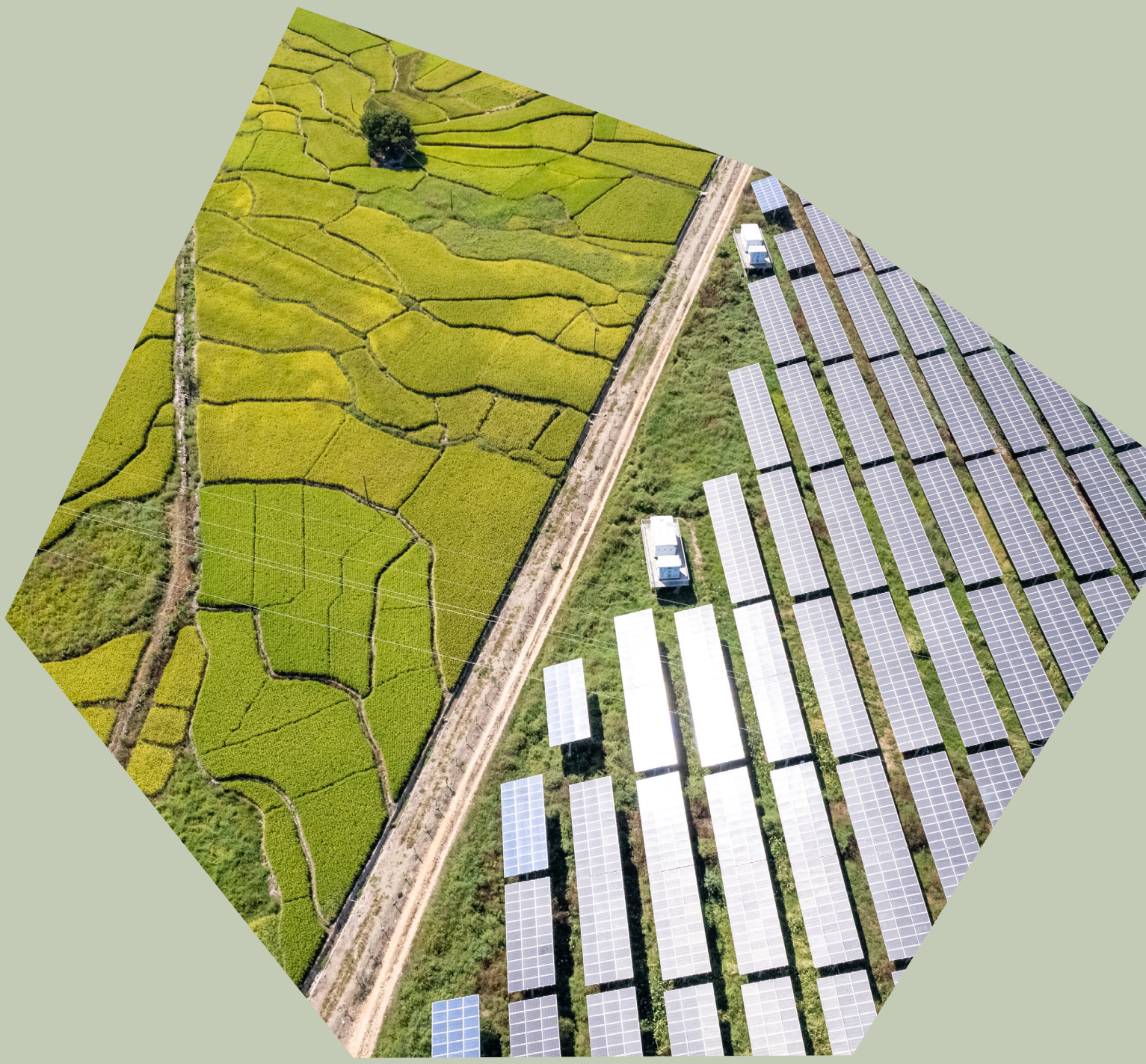
The Practical Action Pathway responds directly to a need identified by companies for practical interim steps that help companies start, continue or scale their use and reporting of market instruments with confidence, while overarching standards are finalized and the broader landscape continues to develop. The pathway addresses several interconnected needs surfaced through stakeholder engagement and consultation: a principles-based approach for how to act in the interim period, support for developing clear and consistent narratives to explain market instrument use and related choices to relevant stakeholders, and guardrails to help companies assess whether and how their use of market instruments is aligned with evolving standards. The Pathway aims to support companies to be better positioned to navigate the current uncertainty and gaps, foster preparedness that enables action and ultimately develop the readiness needed to transition successfully to the next generation of GHG accounting, target setting and implementation guidance.



Figure 2: The Practical Action Pathway[16]



Conclusion



09.

09. Conclusion

The use of market instruments in corporate climate action continues to evolve alongside emerging expectations for accounting, reporting, claims and governance. The analysis outlined in this report highlights increasing alignment around the principles and mechanisms needed to support credible and effective use of market instruments, while also identifying important questions that remain unresolved. This provides a meaningful base for companies, standard setters such as the GHG Protocol, ISO and SBTi, and the various cross-sector and sector-specific initiatives to build greater consistency while preserving the flexibility required to address different value chain realities.

For a growing number of companies and standard setters, the question has shifted from asking whether market instruments have a role to play, to asking how they can be applied in ways that are credible, scalable, comparable and supportive of real-world decarbonization. As discussed in this report, across the landscape there is growing alignment that market instruments, when used credibly, can help address genuine barriers in value chains while directing investment and demand toward low-carbon solutions. To maintain credibility, their use must remain grounded in strong evidence, transparent reporting and a clear connection to physical emissions reductions over time.

For companies, this presents an opportunity to act. Although important questions remain, the direction of travel is becoming clearer. The pathway outlined in this report provides a practical foundation for action across different emissions hotspots, business units and geographies. By prioritizing direct emissions reductions, applying market instruments where they are most appropriate, strengthening governance and traceability, and remaining adaptable as standards evolve, organizations can build the capabilities needed for the next generation of climate accounting and target-setting frameworks.

Annex



10.

Annex 1:
The Practical Action Pathway, a step-by-step approach

Phase A: Emissions hotspots and decarbonization constraints

Step 1 - Core: Identify emission hotspots where physical decarbonization is not achievable

Guiding question: Where in the organization's value chain are emission hotspots for which physical decarbonization levers (electrification, renewable energy sourcing, low-carbon feedstock substitution, modal shift) are technically or economically constrained in the near term?

- → Assess materiality first: Companies should prioritize emissions categories and value chain nodes that are significant to their footprint, contribute to their overarching climate strategy and drive sector-wide climate impact, rather than starting from instrument availability.
- → Confirm that the constraint is genuine: Where physical decarbonization is not genuinely constrained by technology, infrastructure or value chain structure, market instruments should not be used as a substitute. This determination precedes, and is a precondition for, the characterization of the constraint below.
- → Identify the nature of the constraint: This could be a technology gap (e.g., no scalable electric alternative to a fossil-based technology), an infrastructure gap (e.g., absence of renewable fuel supply in a particular geography), or a structural value chain constraint (e.g., limited leverage over upstream commodity production, or fragmented multi-supplier sourcing). Economic feasibility is another constraint that arises in the discussion around physical decarbonization (e.g., high CAPEX for electric alternatives). This type of constraint may inform the assessment of whether activity-level action is feasible; however, cost considerations alone do not constitute sufficient justification for moving to market instruments.[29]
- → Document the assessment: Companies are encouraged to specify the anticipated time horizon over which the constraint is expected to persist and to commit to a periodic review of this assessment, consistent with the review cycle described in step 3, so that progress toward activity-level or activity-pool action can be tracked over successive target cycles.

Step 2 - Core: Determine what type of market instrument is relevant

Guiding question: Given the nature of the constraint identified in Step 1, is a market instrument an appropriate bridging solution, and of what kind?

Companies are encouraged to first screen the market instruments available for the relevant commodity, sector and geography, before prioritizing among them. Different constraints call for different types of instruments. Additionally, companies should assess and confirm that quality guardrails can realistically be met for the instrument type under consideration. Such guardrails can include sectoral/geographic market boundary matching, temporal correlation, as well as robust ledger and cancellation-tracking systems. Companies are further encouraged to document how the selected instrument is expected to contribute to activity-pool or sector-level decarbonization, complementing rather than substituting for activity-level action within the company's own operations and value chain (see Section 6 for the full criteria).

Phase B: Eligibility criteria and integrity guardrails

Step 3 - Core: Assess the level of traceability and select the corresponding chain of custody model

Guiding question: How much does the organization know about the specific origin of the product or commodity linked to the constraint? Does the organization know the individual supplier (or production site), or only the broader region or supply shed it is sourced from?

The level of traceability a company has directly determines which CoC model can credibly be applied, following the hierarchy set out in Section 6 and reflected in current company practice. It is one element of the broader set of integrity criteria set out in Section 6, which also include registry credibility, unique identifiers, transparent retirement rules and controls against double counting and over-claiming. Companies should apply the traceability-based selection process below in conjunction with these broader criteria, rather than in isolation.

1. If the specific supplier or production site is known, apply an identity-preserved or segregated chain of custody model, targeting market instruments directly at that supplier relationship. For example, sourcing certified biomethane through a dedicated supply arrangement with a known supplier facility.
2. If only the sourcing region or supply shed is known, apply a controlled blending or mass balance model, provided it operates within a defined and audited system boundary.
3. If traceability is limited even at the regional level, companies can apply a book and claim model, provided it represents the only operationally feasible mechanism and sector-specific guidance explicitly permits its use. This could include, for example, the Book and Claim Community's Principles and Best Practice for heavy transport, or IATA's SAF Accounting and Reporting Methodology for aviation.
   - Application remains subject to explicit time-bound and regional safeguards, and it is recommended that it is accompanied by a documented assessment of why higher traceability models are not available. Companies are encouraged to review this positioning periodically and move toward more traceable chain of custody models as infrastructure, data availability and sector-specific guidance evolve.

We suggest that companies review this assessment periodically and as barriers are overcome, they should aim to progressively move up the CoC hierarchy toward greater physical traceability, consistent with the direction of travel described in Section 6.

Step 4 – Core: Ensure transparency of disclosure

Guiding question: How can the organization's disclosures be detailed and catalogued across instrument use, accounting choices, physical connectivity and resulting claims?

- → If not yet in place, companies should catalogue instrument use and selection, document accounting choices, disclose the degree of physical connectivity and clarify claims made on environmental attributes or mitigation outcomes. Companies are encouraged to report market-based claims separately and transparently from the underlying physical inventory.
- → If already in place, companies should consider benchmarking disclosure practice against emerging sector norms (e.g., TfS PCF Guidelines for chemicals) and against practice such as dual reporting of physical versus market-based performance.

Step 5 – Advanced: Assess readiness for multi-statement reporting

Guiding question: What are the implications of the emerging multi-statement reporting approach on the organization's accounting and reporting?

- → If not yet assessed, companies should model the effects on procurement decisions and map impact outcomes across statements before they become mandatory reporting requirements.
  - The case studies developed and published alongside this publication as part of the WBCSD Market-Based Solutions Hub toolkit provide practical examples that explore the implications of decisions and their outcomes using the evolving multi-statement reporting structure.
- → If already assessed, companies are encouraged to continue to monitor the development and evolution of the GHG Protocol AMI standard and related guidance, as well as engage in peer exchanges:
  - Companies at a more advanced stage of maturity, such as those already practicing dual reporting across multiple business units or commodity categories can actively contribute to this process by engaging in technical working groups convened by the GHG Protocol, ISO, SBTi or sector-specific initiatives.
  - Where possible, companies are encouraged to share implementation experience and lessons learned with peers and standard setters, as well as develop internal scenario models that anticipate how different architectural outcomes could affect procurement strategies and target progress.

For companies that have or intend to set targets under the SBTi Corporate Net-Zero Standard, a readiness assessment should extend to the transition to CNZS V2.0. Companies with near-term targets expiring around 2030 face a particular planning imperative that extends beyond the current target cycle, as CNZS V2.0 introduces substantive changes that may require them to revisit the role and selection criteria of market instruments currently embedded in their decarbonization strategies. In parallel, these companies should use the interim period to assess how their existing market instrument portfolios align with the integrity criteria and implementation hierarchy set out in CNZS V2.0, so the transition to the next target cycle can be executed without interruption.

Phase C: Procurement and testing

Step 6 – Core: Conduct supplier due diligence

Guiding question: Has the organization established criteria to evaluate potential suppliers of market instruments and assessed candidate suppliers against them?

Companies are encouraged to develop a framework of quality and integrity criteria, drawing on the guardrails identified in Step 2 and to conduct due diligence of potential suppliers against this framework, before initiating internal procurement discussions.

Step 7 – Core: Pilot test procurement of market instruments

Guiding question: Is the organization ready to initiate procurement of low-carbon commodities, goods or services using market instruments for the constraints identified above?

Not yet ready: Companies can begin with small, contained pilots to build internal capability and market knowledge, focused on the hotspots and CoC models identified in Steps 1–3. The relevant reference points will depend on the commodity category and sector in question, and consulting sector-specific guidance applicable to the organization's hotspot is recommended instead of cross-sector proxies. Examples include TfS PCF Guidelines for chemicals, IATA's SAF Accounting and Reporting Methodology for aviation, or the relevant dairy, steel or agricultural framework, where applicable. Where no sector-specific guidance exists, this gap should be documented and, where possible, brought to the attention of relevant industry bodies.

Ready to proceed: Companies should select a targeted set of key suppliers linked to the hotspot identified in Steps 1–2 from whom market instruments can be sourced and initiate procurement discussions. It is recommended that the focus remain on a manageable scope at this stage, building familiarity with the instrument type, verifying that quality guardrails can be met in practice, and establishing the data and documentation flows required for credible claims rather than on broad-based procurement across the supply base.

Step 8 - Core: Test and evaluate instrument performance

Guiding question: Is the organization systematically evaluating the quality, integrity and impact of the market instruments it is procuring?

If not yet in place: Companies are encouraged to establish a structured review process to assess instrument performance against the quality guardrails identified in Step 2, including CoC model robustness, additionality, temporal and geographic boundary matching, and registry integrity. It is recommended that findings are documented and used to inform future procurement decisions. To ensure the chosen approach satisfies standard setter requirements, organizations are encouraged to conduct third-party validation of their use of market instruments.

If in place: Companies should expand the scope of evaluation to include comparison across instrument types and sectors. Where instruments are found to underperform against integrity criteria, companies should adjust procurement accordingly and document the rationale.

Phase D: Scaling and institutionalizing

Step 9 - Advanced: Monitor instrument performance at scale

Guiding question: Is the organization systematically monitoring the quality, integrity, and impact of the market instruments it has scaled, at both the supplier-specific and market-wide level?
Companies should monitor performance against the due diligence framework established in Step 6 on an ongoing basis, considering both supplier-specific performance and market-wide developments (e.g., shifts in sector-specific guidance, registry practices or instrument availability), and document findings to inform future procurement decisions.

Step 10 - Advanced: Scale procurement and integrate emissions benchmarks

Guiding question: What are the organization's efforts to scale procurement of market instruments systematically, and are instrument quality criteria embedded in standard sourcing processes?
If not yet systematically scaled: Companies should build on the pilots and evaluations conducted in Steps 6 - 8 to expand procurement across relevant hotspots and commodity categories, applying the CoC hierarchy and integrity criteria consistently. It is recommended to prioritize instruments that are aligned with the SBTi implementation hierarchy and the integrity criteria set out in the CNZS V2.0.

If already scaling: Companies should deepen the integration of instrument quality into procurement processes by embedding emissions performance benchmarks into supplier qualification, tender evaluation, and contract criteria. Where applicable, companies should align these benchmarks with SBTi V2.0 sector-specific benchmarks for emissions-intensive activities, so that procurement decisions are directly linked to the decarbonization trajectories required under science-based targets.

Step 11 - Advanced: Build supplier capability and contribute to market development

Guiding question: Is the organization supporting suppliers in meeting the data, certification and claims requirements associated with market instruments?
Companies should identify capability gaps among key suppliers, particularly those at earlier stages of GHG accounting or certification maturity, and provide targeted support, such as data-sharing infrastructure, offtake agreements and engagement in buyer alliances, or guidance on certification processes. More advanced companies can extend this engagement to broader value chain actors and contribute to multi-stakeholder pilots where sector-specific guidance does not yet exist.

Step 12 - Advanced: Institutionalize governance and embed into corporate strategy

Guiding question: Are the use of market instruments, associated quality criteria and performance monitoring embedded in the organization's governance structures, internal reporting and long-term climate strategy?
Companies are encouraged to assign cross-functional accountability for instrument selection, quality assessment and claims approval (sustainability, procurement, finance, legal, risk) to document permissible instrument types and minimum integrity criteria

in an internal policy, and to review this policy at each target cycle under the applicable target-setting program. Where companies are subject to CNZS V2.0 transition plan disclosure requirements, this governance framework should be reflected in the transition plan.

Contributing to the evolving landscape

Where possible, companies are encouraged to document the testing and use of market instruments and engage with standard setters to communicate the value of recognizing them. Demonstrating this value through documented use cases can support the case for their formal recognition as the accounting and reporting landscape continues to develop. Where no sector-specific guidance yet exists for a given CoC model or instrument type, companies are encouraged to make this gap explicit and mobilize their industry peers and relevant value chain actors to develop specific guidance. Companies in Phase D are well positioned to contribute to the broader governance debate by engaging in public consultations, sharing implementation experience with standard setters, and advocating for the harmonization and interoperability that the landscape continues to require.

Annex 2:
Selected landscape of key initiatives, guidance documents, frameworks and standards

Organization	*Guidance/Standard*	*Sector Classification (NACE)*	*Category*	*Details*	*Status/Date*
AIM Platform (Association Testing)	Advanced and Indirect Mitigation Platform Association Test	Cross-sectoral	Market-wide / market activation initiatives	Introduces association testing of interventions that are not physically connected to emission source.	Draft published, December 2024
AIM Platform/ Center for Green Market Activation (GMA)	AIM Platform Standards and Guidance	Cross-sectoral	Market-wide / market activation initiatives	Through a unified framework, it offers requirements and guidance that support companies in making transparent, comparable, and defensible claims about their contribution to decarbonization through value chain interventions.	Final guidance published, April 2026
	GMA Book and Claim System for Concrete	Manufacture of articles of concrete and cement	CoC or Instrument-specific guidelines/-initiatives	Outlines core principles, market design considerations, and operational guidance for book and claim transactions, environmental attribute certificate issuance, and digital registry tracking for cement and concrete.	Final framework published, January 2026
American Iron and Steel Institute	Steel Production Greenhouse Gas Emissions Calculation Methodology Guidelines	Manufacture of basic iron and steel and of ferro-alloys	Sectoral / Cross-sectoral initiatives	Calculation of PCFs of steel in the USA.	Final guidance published, November 2022
Book and Claim Community (RMI + SFC)	Principles and Best Practice for Book and Claim Systems in Heavy Transport	Transportation and storage	CoC or Instrument-specific guidelines / initiatives	Description of principles and best practices for book and claim systems in heavy transport.	Final guidance published, June 2024
CEAP (Clean Energy Accounting Project)	Scope 3 GHG Accounting for Upstream Clean Electricity Use	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Accounting rules for renewable electricity within upstream Scope 3 emissions.	Final guidance published, August 2023
Clean Energy Ministerial	Driving consistency in the greenhouse gas accounting system - A pathway to harmonized standards for steel, cement and concrete	Manufacture of articles of concrete, cement and plaster	Sectoral / Cross-sectoral initiatives	GHG accounting guidance for steel, concrete and cement.	Final guidance published, 2023
EPA	Renewable Electricity Procurement on Behalf of Others: A Corporate Reporting Guide	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Different approaches for using RECs connected to value chain partners. Example: Buying RECs on behalf of customers.	Final guidance published, May 2022

Organization	*Guidance/Standard*	*Sector Classification (NACE)*	*Category*	*Details*	*Status/Date*
First Movers Coalition/ World Economic Forum	First Movers Coalition - Aluminium	Aluminium production	CoC or Instrument-specific guidelines / initiatives	Definition of allowed CoC models for primary aluminium.	Final guidance published, January 2025
First Movers Coalition/ World Economic Forum	First Movers Coalition - Aviation	Air transport	CoC or Instrument-specific guidelines / initiatives	Definition of SAF criteria for the aviation sector.	Final guidance published, January 2025
First Movers Coalition/ World Economic Forum	First Movers Coalition - Cement and Concrete	Manufacture of articles of concrete, cement and plaster	CoC or Instrument-specific guidelines / initiatives	Definition of allowed CoC models for cement and concrete	Final guidance published, January 2025
First Movers Coalition/ World Economic Forum	First Movers Coalition	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Definitions for CoC and links to sector-specific guidance	Final guidance published, January 2025
GHG Protocol	Actions and Market Instruments (AMI) White Paper V3	Cross-sectoral	Sectoral / Cross-sectoral initiatives	Develops cross-sector accounting and reporting rules for market instruments and associated actions across all scopes.	Phase 1 White Paper published, March 2026. Request for Information closed May 2026.
	Land Sector and Removals Standard (LSRS)	Cross-sectoral	Sectoral / Cross-sectoral initiatives	Standard for accounting land-sector emissions and CO_2 removals; requires physical traceability via accepted CoC methods to use granular spatial boundaries.	V1.0 published, January 2026
Global Cement and Concrete Association (GCCA)	Book-and-Claim System for Cement & Concrete	Manufacture of clinker, cement, and concrete	CoC or instrument-specific guidelines / initiatives	A sector-specific book and claim system for low-carbon cement and concrete with an emphasis on high-credibility certificates.	In progress, NA
Gold Standard	Accounting & Reporting the Emissions of Certified Commodities: Introductory Guidance	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Starting point for the ISEAL community and broader sustainability systems to engage and align with credible, science-based greenhouse gas (GHG) emissions accounting and reporting for certified commodities. The associated guidance is a synthesis of existing good practices and features new tools to create a blueprint for emissions accounting and reporting good practice, allowing for sustainability systems to achieve several potential objectives.	Final guidance published, June 2022

Organization	*Guidance/Standard*	*Sector Classification (NACE)*	*Category*	*Details*	*Status/Date*
IATA	IATA Sustainable Aviation Fuel (SAF) Accounting & Reporting Methodology	Air transport	CoC or Instrument-specific guidelines / initiatives	GHG accounting of aviation and SAF related emissions and accounting guidance for reductions related to SAF use, including the generation of SAF environmental attributes.	In progress, NA
ICVCM (Integrity Council for the Voluntary Carbon Market)	CORE CARBON PRINCIPLES, ASSESSMENT FRAMEWORK AND ASSESSMENT PROCEDURE	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Core Carbon Principles (CCP) for identifying high-quality carbon credits. Basis of the integrity council for the voluntary carbon market which elaborates criteria to evaluate whether carbon credits and carbon-crediting programs reach its threshold for quality and integrity.	Final guidance published, 2023
IDF (International Dairy Federation)	Pathways to Dairy Net Zero	Manufacture of dairy products	Sectoral / Cross-sectoral initiatives	NA	In progress, NA
International Platform for Insetting	A Practical Guide to Insetting	Agriculture, forestry and fishing	Sectoral/ cross-sectoral initiatives	Design and creation of insetting projects. No specific guidance on any of the required steps (e.g., no guidance on accounting, instead reference to GHGP LSRG). Goes beyond climate and also tackles other sustainability benefits, such as biodiversity or social aspects.	Final guidance published, March 2022
ISCC	ISCC EU 203 Traceability and Chain of Custody	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Requirements for traceability and chain of custody.	Final guidance published, July 2021
ISEAL	Chain of custody models and definitions - V2.0	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Provides definitions and explanations of CoC models.	Final guidance published, July 2025

Annex 2

Organization	*Guidance/Standard*	*Sector Classification (NACE)*	*Category*	*Details*	*Status/Date*
ISO	ISO 14064-2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	Principles and requirements for determining baselines, and monitoring, quantifying and reporting of project emissions. Focus on GHG projects or project-based activities specifically designed to reduce GHG emissions and/ or enhance GHG removals. Basis for verification and validation of GHG projects.	Final guidance published, May 2020
	ISO 14068	Cross-sectoral	Sectoral / Cross-sectoral initiatives	ISO standard on the verification of the claim 'carbon neutrality'.	Final standard under publication, August 2026
	ISO 22095: Chain of Custody (CoC) – General terminology and models ISO 22095-2: CoC –Requirements and guidelines for mass balance ISO 22095-3: CoC – Requirements and guidelines for book and claim	Cross-sectoral	CoC or Instrument-specific guidelines / initiatives	The ISO 22095 series defines common terminology and general framework for CoC systems. Part 2 sets out requirements for mass balance, where certified and non-certified material are mixed within a defined system boundary and reconciled by volume. Part 3 sets the rules for book and claim systems, which let companies separate the environmental attribute from the physical product.	Final guidance published, January 2026
	ISO 14060 Draft International Standard: Net Zero Alignment Organizations	Cross-sectoral	Sectoral / Cross-sectoral initiatives	Principles and requirements for organizations to set targets, develop transition plans, take action and demonstrate verifiable progress toward net zero.	Draft standard published, July 2026
PCAF/CRREM	Accounting and Reporting of GHG Emissions from Real Estate Operations	Financial and insurance activities	Sectoral / Cross-sectoral initiatives	GHG Accounting for (financed) emissions from real estate / buildings.	Final guidance published, March 2023
RECS International	RECS certificate standard	Electricity, gas, steam and air conditioning supply	CoC or Instrument-specific guidelines / initiatives	Operates the most established EAC registry for renewable electricity and provides the foundational model for certificate issuance, tracking and retirement that newer commodity certificate schemes are drawing on.	Certificate scheme launched, 2002

Organization	*Guidance/Standard*	*Sector Classification (NACE)*	*Category*	*Details*	*Status/Date*
RMI & Center for Green Market Activation (GMA)	Book-and-claim system for concrete	Manufacture of concrete products for construction purposes	CoC or Instrument-specific guidelines / initiatives	GMA and RMI are currently leading a Working Group to design a credible book and claim system for low-carbon cement and concrete. The Working Group will provide key feedback and perspectives on imperative system design questions, leading to a single standard to uplift green technologies in this sector. Once designed, GMA and RMI will leverage this standard to facilitate bankable contracts between end users and low-carbon cement and concrete suppliers.	In progress, NA
Roundtable on Sustainable Biomaterials	RSB Procedure for Traceability of RSB Certified Material	Manufacture of liquid biofuels	CoC or Instrument-specific guidelines / initiatives	Information about the chain of custody systems, as well as their requirements for traceability for RSC certified materials.	Final guidance published, May 2020
SBTi	Science-based Target Setting for the Aviation Sector	Air transport	CoC or Instrument-specific guidelines / initiatives	Sector-specific target-setting guidance for emissions related to aviation, anchored on the Corporate Net Zero Standard.	Final guidance published, August 2021
	Corporate Net-Zero Standard V2.0 (CNZS V2.0)	Cross-sectoral	Sectoral / Cross-sectoral initiatives	Sets the target-setting and recognition criteria governing how eligible actions and market instruments may contribute to science-based net-zero targets. Defines the implementation hierarchy used throughout this report.	Final standard published, June 2026
Smart Freight Centre	Voluntary Market Based Measures Framework for Logistics Emissions Accounting and Reporting	Transportation and storage	Sectoral / Cross-sectoral initiatives	Use and accounting of mass balance and book and claim of low emission transport. Contains clear examples and graphics.	Final guidance published, October 2023
SustainCert (Software)	Dual Factor Credibility Framework	Agriculture, forestry and fishing	Sectoral / Cross-sectoral initiatives	Verification of value chain interventions. Focus lies on the verification of direct mitigation, however, system can also be used for indirect mitigation as it aims at ensuring/assuring that there were real emission reductions happening.	Final guidance published, NA
TCAT	Mitigation Action Accounting and Reporting Guidance	Cross-sectoral	Sectoral / Cross-sectoral initiatives	Multi-stakeholder initiative developing GHG accounting and reporting guidance for corporate climate actions, including market instruments across scopes and sectors. Proposes a multi-statement reporting structure, with a focus on sector-level action.	V1.1 published, June 2026

Organization	*Guidance/Standard*	*Sector Classification (NACE)*	*Category*	*Details*	*Status/Date*
Together for Sustainability (TfS)	The Product Carbon Footprint Guideline for the Chemical Industry V3.0	Manufacture of chemicals and chemical products	Sectoral / Cross-sectoral initiatives	Calculation of PCFs in the chemicals sector.	Final guidance published, December 2024
Value Change Initiative	Achieving net zero through value chain mitigation activities	Agriculture, forestry and fishing	Sectoral / Cross-sectoral initiatives	This addendum to the VCI Guidance explores the accounting, monitoring, and assurance on Intervention mitigation outcomes at the level of the Supply Shed.	Final guidance published, NA
Value Change Initiative	Value Chain (Scope 3) Interventions – Greenhouse Gas Accounting & Reporting Guidance	Cross-sectoral	Sectoral/ cross-sectoral initiatives	Accounting principles for value chain interventions. Focuses on direct mitigation, i.e., where physical connection to a value chain is given.	Final guidance published, NA
Value Change Initiative & ISEAL	Physical traceability in Greenhouse Gas accounting	Agriculture, forestry and fishing	Sectoral/ cross-sectoral initiatives	Joint paper clarifying current GHG Protocol requirements for physical traceability and chain of custody, using ISEAL's concepts and definitions	Final publication, September 2025
VERRA	Verra Scope 3 Standard	Cross-sectoral	Market-wide / market activation initiatives	Independent validation of interventions and verification of GHG outcomes that can further be used for carbon registry.	Draft published, March 2025
World Business Council for Sustainable Development	Guidance on Avoided Emissions v2.0: Drive Innovations and Scale Solutions Toward Net Zero	Cross-sectoral	Sectoral/ cross-sectoral initiatives	Provides methodological harmonization and concrete guidance on how companies can assess and disclose avoided emissions	Final guidance, July 2025
	Unlocking Sustainable Feedstocks at Scale: A practical guidance for industry action and policy alignment	Manufacture of chemicals and chemical products	Sectoral/ cross-sectoral initiatives	Provides guidance on sourcing and sustainability assessment, helping chemicals and materials companies determine what qualifies as a sustainable low-carbon input to make credible sourcing decisions	Final Publication, September 2026
World Steel Association	GHG chain of custody approaches in the steel industry - The role of GHG reduction certificates	Manufacture of basic iron and steel and of ferro-alloys	Sectoral / Cross-sectoral initiatives	Chain of custody models and certification system ("banking") for green steel and green steel certificates.	Final guidance published, NA

Annex 3:
Detailed summary of selected initiatives, guidance, frameworks and standards

International Organization for Standardization (ISO)

The ISO is an independent non-governmental global network that develops and publishes voluntary technical and business standards. It is comprised of representatives from national standards organizations of member countries. ISO manages a wide range of standards that regulate the operations of different industries and processes, including topics of sustainability and market instruments.

The relevant standards focus on building frameworks that define how GHG claims must be quantified, tracked and verified to ensure alignment and to avoid double-counting of environmental attributes. Standards ISO 14064-2 and ISO 14068-1 provide rules for validating mitigation project impacts and establish criteria for claiming carbon neutrality.

ISO also provides definitions, guidelines and requirements for chain of custody models under the ISO 22095 series. ISO 22095-2 provides requirements and guidelines for applying mass balance in material and product flows, while ISO 22095-3 provides requirements and guidelines for implementing book and claim systems.

ISO/DIS 14060, currently under development, establishes requirements for net-zero claims and the role of market instruments within them. The current draft international standard permits the use of environmental commodity certificates (ECCs) where a company is unable to trace, address or influence the value chain emissions associated with an underlying commodity, but cannot substitute actual emissions reductions in the physical inventory. In line with the mitigation hierarchy outlined in the DIS, a company must demonstrate that direct procurement or activity-level action is not feasible before ECCs become eligible.

Relevant standards: ISO/DIS 14060, ISO 14064-2 (2020), ISO 14068-1 (2023), ISO 22095-2 (2026) , ISO 22095-3 (2026)

Sectoral classification: Cross-sector

Greenhouse Gas (GHG) Protocol

The GHG Protocol is currently undergoing a thorough revision of its Corporate Suite of Standards, as well as developing a new Actions and Market Instruments Standard. In July 2026, the GHG Protocol announced that guidance on Scope 1, Scope 2 and Scope 3, as well as the upcoming Actions and Market Instruments (AMI) standard, will be consolidated into a single Corporate Standard, jointly developed with ISO and expected to also incorporate ISO 14064-1. The work is divided into phases, with Phase 1 ending in Q4 2025 and Phase 2 running through 2026. The GHG Protocol's Technical Working Group (TWG) will also review feedback from ISO's Working Group experts across Q3-Q4 2026. The revised content will feed into a single consolidated draft standard for public consultation in Q2 2027, with final publication expected in Q4 2028.

The GHG Protocol Scope 2 TWG has proposed updates to accounting methods and drafted a 'Marginal Emission Impact' metric to incorporate broader grid effects of clean energy procurement and electricity load.

The updates were approved by the GHG Protocol Independent Standards Board (ISB) for consultation:

- → Location-based method (LBM) – largely supported with some refinements: definition of 'accessible' and EF hierarchy
- → Market-based method (MBM) – largely supported with some refinements: additional clarification of profiled loads for hourly matching, exemptions, deliverability, standard supply service
- → Marginal emission impact metric – largely unsupported unless issues are resolved.

The use of contractual instruments is permitted only within the MBM, with the following updates being relevant:

- → Definition: The MBM reflects energy consumption matched with generation, using contractual instruments or residual mix, enabling clean energy market development
- → Contractual instruments quality criteria
- → Hourly matching (required above threshold; estimations are allowed)
- → Deliverability (same market boundary or demonstrates deliverability using price- or contract-based methods).

The GHG Protocol AMI workstream is clarifying the structure, purpose and limitations of a corporate GHG report and addressing the role of actions and market instruments to enable claims in the GHG report showing impacts of mitigation actions that are not reflected in the physical inventory. The results of the workstream will be synthesized into relevant GHG standards. The AMI working group is defining terms and concepts, appropriate roles of 'quantified impacts' and various market instruments, providing structure to and guidance on GHG accounting and reporting, and the typology of market instruments and actions based on the source of the claim/certificate, type of mitigation measure, accounting approach and chain of custody model. GHGP AMI workstream makes a distinction between the market instruments in the inventory and market instruments in the GHG reporting, depending on location and rules of reporting.

In March 2026, the GHG Protocol published a white paper with the outcomes of the AMI workstream for

Phase 1. The key proposals, which were made within the first phase, can be summarized as follows:

- Multi-statement reporting structure – public GHG report would be separated into four separate statements:
  - Physical GHG inventory: Contains the organization's emissions without market-based adjustments
  - Market-based GHG inventory: Contains an account of GHG emissions adjusted with market instruments
  - GHG impact statement: Contains an account of impacts of actions taken within and outside of the value chain
  - Non-GHG indicators: Contains an account of metrics not expressed in terms of CO2e.
- Terms and definitions: the white paper outlines key terms and definitions for
  - Actions and market instruments
  - Attributional and consequential accounting
  - GHG report elements
  - GHG impact-related terms
  - GHG credit- and certificate-related terms
  - Traceability-related terms
- Accounting and reporting principles: the paper outlines how the existing principles from different GHGP standards and guidance apply to actions and market instruments.

Relevant standards: Scope 2 Guidance (v1, 2015; Draft, 2025), Actions and Market Instruments – Phase 1 Progress Update White Paper (RFI, 2026)

Sectoral classification: Cross-sector

Science-Based Targets initiative (SBTi)

The SBTi Corporate Net-Zero Standard Version 2.0 (CNZS V2.0) integrates market instruments to drive decarbonization across corporate value chains and broader economic systems. To establish clear guardrails for target delivery, the standard introduces a structured implementation hierarchy across three operational levels:

- Activity level: Companies must prioritize reducing emissions at source within their operations and value chains before relying on indirect mechanisms.
- Activity-pool level: Where direct action is constrained, companies may take action within shared systems (such as electricity grids, gas networks, or supply sheds). This may be supported by market instruments conveying low-carbon attributes.
- Sector level: Where structural constraints prevent activity or activity pool-level action, companies may take sector-level actions in a relevant geographic or system context.

For Scope 2 emissions, companies can set targets based on either low-carbon electricity (LCE) alignment or absolute emissions reductions. Contractual market instruments may be used for setting Scope 2 targets if they satisfy specific criteria, such as geographic deliverability, generator age, and hourly matching.

Market instruments used within Scope 3 and broader target implementation must satisfy SBTi minimum integrity criteria:

- Temporal Alignment: Market instruments must correspond to activities occurring within 12 months of the company's underlying activity, unless longer timeframes are justified by production cycles or market vintage rules.
- Volume Matching: The volume of market instruments matched to a given activity cannot exceed the physical volume reflected in the company's GHG inventory.
- Separate Reporting and Claims: Market instruments not reflected in the physical GHG inventory must be reported separately.

Changes in the physical GHG inventory form the basis for emissions reduction claims, whereas activity pool or sector-level actions that are not reflected in the physical GHG inventory support system contribution claims.

Additionally, the standard establishes the voluntary Ongoing Emissions Responsibility (OER) program to recognize companies that deliver climate contributions (such as high-integrity carbon credits) to cover a portion of their ongoing footprint. OER operates separately from value-chain target accounting, with the intent to mandate ongoing responsibility from 2035 onwards.

Relevant standards: Corporate Net-Zero Standard Version 2.0 (2026)

Sectoral classification: Cross-sector

Verra

Verra is the global standard-setting organization founded in 2007. It manages a set of standards and certifications to promote climate action, sustainable development and environmental projects. Their work is divided into programs, with each one managing a specific standard. The core of Verra's work is the Verified Carbon Standard (VCS) and Registry attached to all standards.

The Scope 3 Standard is part of the Scope 3 Program (launched in 2022) and is built on top of the VCS to enable organizations to account for and report value chain interventions. The deliverables include a Scope 3 Standard, GHG quantification methodologies, an auditing and certification

system and a registry. The first version (V1.0) focuses on 'intervention proponents' and tools for GHG quantification methodologies, issue of 'intervention units' representing benefits and tools to ensure robust traceability. The second version (V2.0) will address reporting companies and value chain association between the reporting company and intervention.

Scope 3 Standard has been under development and piloting phase since 2024. The latest version, V0.1, was published in March 2025 and includes the S3C Standard with overarching rules and requirements, definitions for key terms, guidance for adapting VCS methodology and integration guidance with technical rules for emissions reporting. A similar package is expected for Version 1.0, formerly known as V0.9, which is expected to be published in 2026.

Relevant Standards: Scope 3 Standard (Draft, 2025)

Sectoral classification: Cross-sector

Integrity Council for the Voluntary Carbon Market (ICVCM)

The ICVCM is an independent non-profit governance body which establishes and manages quality thresholds for the voluntary carbon market. It has defined 'Core Carbon Principles', an overarching framework that sets integrity and governance principles across various carbon-crediting programs and methodologies.

The ICVCM principles can be extended beyond carbon credits onto other market instruments and act as the integrity framework for them. By clarifying the quality of MIs and ensuring they are backed by robust registries, ICVCM enables companies to confidently use market instruments to offset residual emissions or fund value chain mitigation, ensuring that corporate environmental disclosures are grounded in scientifically sound and verified climate impacts.

Relevant standards: Core Carbon Principles, Assessment Framework and Assessment Procedure (v3, 2024)

Sectoral classification: Cross-sector

International Social and Environmental Accreditation and Labeling Alliance (ISEAL)

The ISEAL Alliance is a membership organization that empowers sustainability systems to drive global change. It defines and sets benchmarks for good practice for businesses, governments and sustainability systems fostering multi-stakeholder engagement and supply chain partnerships. ISEAL does this by providing credibility tools (ISEAL Code of Good Practice for Sustainability Systems), funding innovation (ISEAL Innovations Fund) and fostering collaboration around sustainability challenges (Living Income Community of Practice and Global Living Wage Coalition).

In the context of market instruments, ISEAL provides definitions and rules for CoC models. ISEAL's framework clarifies how sustainability characteristics are linked to physical products, standardizing models such as Identity Preserved, Segregation, Mass Balance and Book and Claim. By defining the exact operational criteria and administrative boundaries for each model, ISEAL provides standard setters with tools to ensure that when an environmental attribute certificate or a certified commodity is sold, the underlying claim is backed by a verifiable chain of custody.

Relevant standards: Chain of custody models and definitions (v2.0, 2025)

Sectoral classification: Cross-sector

The Value Change Initiative (VCI)

The VCI is a peer-to-peer learning forum that develops solutions to implement and achieve value chain emission reductions and removals. The initiative has more than 500 members and was founded by Gold Standard and SustainCERT to reinforce the ability of corporations to achieve their science-based targets. SBTi, WWF, CDP and WRI are among the leading global partners of VCI.

VCI is focused on providing practical accounting and reporting guidance for value chain interventions. Its work is divided into thematic workstreams focused on specific areas: value chain intervention guidance (both sector-agnostic and sector-specific), a market-based instruments program (just launched), verification and implementation guidance (focusing on certification schemes and assurance for value chain interventions) and sector-specific working groups (food and agriculture, apparel and footwear sectors).

When it comes to market-based instruments, VCI launched a two-year workstream in 2025 to design operational rules, including allocation methods, measurement rules and specific guidance on registries and retirements. VCI has also published several documents focusing on accounting and reporting for value chain interventions, including Accounting & Reporting Emissions from Certified Commodities, Value Chain Intervention Guidance, as well as several sector-specific addendums, which clarify rules for accounting and reporting of Scope 3 interventions in the apparel and footwear, and food and agriculture sectors. There is some guidance focused on the topics of traceability and tracking systems for interventions on a general level.

Relevant Standards: Value Chain (Scope 3) Interventions – Greenhouse Gas Accounting & Reporting Guidance (2021 with Gold Standard), Market-Based Instruments for Voluntary Corporate Reporting: Definition and Taxonomy (2026), Physical traceability in Greenhouse Gas accounting (with ISEAL, 2025)

Sector classification: Agriculture, forestry and fishing

International Air Transport Association (IATA)

The IATA is the global trade association for the aviation industry and is represented by the majority of global airlines. IATA plays a vital role in leading and serving the airline industry, spearheading initiatives to improve safety, efficiency and environmental sustainability.

As the aviation sector faces intense pressure to decarbonize and achieve net-zero carbon emissions by 2050, IATA has turned its focus toward accelerating the adoption of Sustainable Aviation Fuel (SAF), which represents the most significant lever for reducing the industry's climate impact. To support this transition, the IATA's market instruments work focuses heavily on establishing standardized, globally aligned accounting and reporting methodologies for SAF.

Through its Sustainable Aviation Fuel Accounting & Reporting Methodology, IATA defines the structural rules for book and claim systems within the aviation sector. This framework allows airlines to purchase SAF attributes and claim the resulting absolute emissions reductions under their Scope 1 inventories, regardless of where the fuel is physically uplifted. Concurrently, it creates a structured path for corporate travelers to buy SAF certificates to substantiate their Scope 3 business travel reductions. By creating rigorous rules around registry tracking, lifecycle emissions values and ownership allocation, IATA prevents double counting and provides the commercial aviation sector with a trusted market instrument to mobilize private investment into clean fuel infrastructure.

Relevant standards: IATA Sustainable Aviation Fuel (SAF) Accounting & Reporting Methodology (2025)

Sectoral classification: Air transport

Smart Freight Centre (SFC) and Book and Claim Community

SFC is a global non-profit organization dedicated to reducing GHG emissions associated with the freight transportation and logistics sector. SFC works closely with an extensive network of cargo owners, logistics service providers, carriers and multi-stakeholder initiatives to drive transparency and establish industry-wide standards for measuring and reporting logistics-related carbon footprints.

Recognizing that shippers often have limited direct control over the physical assets or fuel types used by their third-party carriers, SFC developed the Voluntary Market Based Measures Framework for Logistics Emissions Accounting and Reporting framework, which formalizes the application of book and claim mechanisms across the transport sector, covering road, rail, air and marine freight.

The Book and Claim Community is a collaborative, multi-stakeholder initiative co-led by SFC and the Roundtable on Sustainable Biomaterials (RSB), which serves as its joint Secretariat. This community serves as a dedicated ecosystem to unify and scale high-integrity book and claim frameworks specifically designed to accelerate the decarbonization of the global transportation and heavy industry sectors.

The Book and Claim Community created the Principles and Best Practice for Book and Claim Systems in Heavy Transport initiative, which establishes clear criteria for preventing double counting, ensuring additionality and verifying the physical chain of custody at the point of fuel production or injection.

Relevant standards: Voluntary Market Based Measures Framework for Logistics Emissions Accounting and Reporting (2023), Principles and Best Practice for Book and Claim Systems in Heavy Transport (2024)

Sectoral classification: Transportation and storage

Task Force for Corporate Action Transparency (TCAT)

The TCAT is a group of GHG accounting experts, practitioners and nonprofit organizations working to build comprehensive GHG accounting guidance to enable companies to take high-integrity climate action.

TCAT has produced two guidance documents:

- → Mitigation action accounting and reporting guidance (MAARG, 2025) – measuring and reporting on impacts of climate actions (including inventory categorization)
- → Target accounting and reporting guidance (TARG, 2025) – reporting progress toward and attainment of climate targets.

The MAARG includes provisions for accounting for and reporting on the impacts of mitigation actions, including the use of contractual instruments.

Under its guidance, mitigation actions and their

outcomes need to pass four tests – the mitigation action test, sector association test, inventory alignment test and physical delivery test – to determine whether and where outcomes can be reported.

The framework proposes five statements for outcomes reporting – (1) physical inventory statement, (2) contractual inventory statement, (3) inventory impact mitigation statement, (4) sector impact mitigation statement and (5) global impact mitigation statement. Contractual instruments and EACs can be reported within any of the statements granted if they pass the respective tests and satisfy statement-specific criteria.

Contractual instruments and EACs can be classified as either an Emission Profile or Emission Reduction/Removal unit, based on the information they are conveying. The guidance sets out requirements for information disclosure about EACs, regardless of their classification.

Relevant standards: Mitigation action accounting and reporting guidance (2025)

Sectoral classification: Cross-sector

Advanced and Indirect Mitigation (AIM) Platform

The AIM Platform was jointly launched by Center for Climate and Energy Solutions (C2ES), the Center for Green Market Activation (GMA) and Gold Standard. The platform aims to guide companies on how to invest in their value chain and claim resulting mitigation of Scope 3 emissions. To achieve this, the platform has developed a suite of tools and guidance to make proper claims about value chain interventions:

- → Guiding Principles guide and regulate the standard and guidance development
- → Association Test determines the connection between intervention and value chain
- → Intervention Quality, Accounting and Reporting Criteria sets requirements on value chain interventions, traceability, accounting and reporting.

The tools can be used to address two key challenges: Scope 3 decarbonization and investments into wider system transformation.

Relevant standards: The AIM Platform Standard & Guidance (v1.0, 2026)

Sectoral classification: Cross-sector

Gold Standard

Gold Standard was established in 2003 by WWF and other international NGOs to ensure that carbon reduction projects feature the highest levels of environmental integrity and directly contribute to sustainable development. As part of its work, Gold Standard verifies the impacts of climate and development interventions on a global scale.

Developed in collaboration with the ISEAL Alliance, Gold Standard's Accounting & Reporting the Emissions of Certified Commodities creates a rigorous framework for tracking emissions directly associated with certified agricultural and raw commodities.

Relevant standards: Accounting & Reporting the Emissions of Certified Commodities: Introductory Guidance (2022)

Sectoral classification: Cross-sector

SustainCert

SustainCert is a climate impact verification organization specializing in advanced digital solutions for carbon markets and corporate value chains. Founded to scale the deployment of credible climate action, SustainCert combines rigorous auditing expertise with innovative software platforms to automate and streamline the measurement, reporting and verification (MRV) of emissions reductions and removals. The organization acts as an independent verifier, ensuring that corporate climate claims and market-based interventions are fully aligned with leading global reporting standards.

SustainCert developed a Dual Factor Credibility Framework that solves the complex challenge of co-claiming and double counting within shared supply chains. The framework has two layers. First, it verifies the physical mitigation outcomes of an intervention, such as a regenerative agriculture project, using project-specific data and baselines. Second, it unitizes these verified emission reductions into standardized 'Impact Units'. These digital market instruments can then be transferred and allocated among multiple value chain partners within a common geographic supply shed. By introducing rules for tracking these units across different 'Impact Layers' (from raw material production to final retail), SustainCert enables companies to co-finance decarbonization projects and proportionally claim the carbon benefits within their respective Scope 3 inventories.

Relevant standards: Dual Factor Credibility Framework (2024)

Sectoral classification: Agriculture, forestry and fishing

Centre for Green Market Activation (GMA)

The GMA is a US-based nonprofit organization launched in 2024 to advance the book and claim

systems and establish buyer alliances to support the decarbonization of hard-to-abate sectors. GMA runs programs targeting the aviation, maritime shipping, cement and concrete, heavy-duty trucking and chemical industries.

The GMA Center has established several buyer alliance groups – SABA (aviation), ZEMBA (maritime), SCoBA (concrete and cement), GMA Trucking (freight transportation) and GMA Chemicals (chemical substances) – in partnership with several organizations (RMI, EDF, Aspen Institute and Smart Freight Centre). Through these programs, GMA consolidates work on buyer alliances and procurement of relevant EACs for each of the sectors creating standardized book and claim systems and creating common rules for reporting and accounting for commodity EACs.

Each program has specific outcomes:

- → SABA: Published a sustainability framework for SAF, launched the SAFc registry (in partnership with RMI and EDF) and regularly conducts RFPs for SAF procurement
- → SCoBA: Published a draft book and claim framework for low-carbon cement and concrete products; launched an RFI to clinker, cement and concrete producers to inform the RFP for low-carbon cement and concrete purchase
- → GMA Trucking: Launched an RFI for zero-emission trucking service attributes in December 2024
- → GMA Chemicals: Formed a core group and held discussions on frameworks underway
- → ZEMBA: Formed a core group and fulfilled its first RFQ.

Relevant standards: Book and claim system for concrete (Draft v2, 2025), Sustainability Framework for Sustainable Aviation Fuel (SAF) (v3, 2025)

Sectoral classification: Cross-sector

I-TRACK Foundation

The I-TRACK foundation is a non-profit organization that provides a framework of standards for developing attribute tracking systems. The main focus is on the energy sector, where I-TRACK is one of the founders of the I-REC system. However, the standards cover commodities beyond energy.

Currently, I-TRACK owns the following standards and codes:

- → International Attribute Tracking Standard
- → Product Codes
  - Biogas and Biomethane
  - Hydrogen
  - Carbon dioxide removal
  - Electricity (I-REC)

The Standard acts as the main framework governing all of I-TRACK's processes and work. The product codes are the 'implementation documents' describing how the standard is applied to specific commodities/products. The foundation emphasizes that the Standard is designed, "to facilitate the standardized creation of markets, not the standardized use of markets." As such, the norms and rules described by individual product codes vary across the commodities.

In addition to the product code for electricity (I-REC), the foundation co-owns with Evident the I-REC registry system for I-REC certificate attribute tracking.

Relevant standards: The International Attribute Tracking Standard (v1.1, 2025)

Sectoral classification: Cross-sector/Electric power generation, transmission and distribution

Roundtable on Sustainable Biomaterials (RSB)

The RSB is a non-profit organization founded in 2013. It creates and manages sustainability standards, certification systems and guidance for biomaterials, including biomass, fuels, products and recycled feedstocks. RSB is divided into five chapters covering organizations from producers to governments, policy actors and NGOs. Members interact with each other through platforms focusing on several areas: fuels (aviation and marine), book and claim systems, impact claims, Power-to-X (PtX) and sustainable chemicals and materials.

RSB's work is based on the 12 Principles & Criteria, which are complemented by a set of standards, procedure and guidance documents contributing to the RSB sustainability framework. The most significant program is the Book and Claim Program, established for the purpose of improving traceability for sustainable aviation fuel (SAF) certificates.

The program manages the RSB Book and Claim System, which includes the Manual (launched), Registry (launched) and Recognition Procedure (under development). RSB has conducted several pilot projects in the aviation industry and is currently working to expand the B&C System's scope to the shipping sector.

Another large part of RSB's work is the Certification, which is designed for accreditation of commodities against the RSB sustainability framework. RSB's certification schemes cover fuel production (RSB Global Fuels, RSB EU RED, UK RTFO and CORSIA), products (RSB Global Advanced Products), biomass (RSB Japan FIT, Non-GMO Cultivation, and Low ILUC Risk Module) and Book and Claim Traders.

Relevant standards: RSB Procedure for Book and Claim Chain of Custody (The RSB Book and Claim Manual, v4.2, 2025)

Sectoral classification: Manufacture of liquid biofuels

Endnotes

1 In this report, 'physical decarbonization' refers to actions that lead to reductions in the physical GHG inventory of an organization (e.g., switching to renewable energy, energy efficiency measures or substituting materials with low-carbon alternatives.

2 Greenhouse Gas Protocol. (2025) Actions and Market Instruments Phase 1 Progress Update White Paper. https://ghgprotocol.org/sites/default/files/2025-12/AMI-Phase1-WhitePaperDraft-ISB%20Review-v2.1.pdf

3 Carbon credits can be generated from interventions that contribute to climate change mitigation through avoidance or reduction of GHG emissions, destruction of super-pollutants or removals of GHGs from the atmosphere

4 The term 'physical GHG inventory' was introduced by the GHG Protocol Actions and Market Instruments TWG and replaces the currently used term 'location-based GHG inventory'. This terminology has also been adopted by other programs such as the SBTi in the CNZS V2.0.

5 WBCSD. (2025). Member survey July/August 2025.

6 Throughout this report, 'initiative' refers to the standard-setting bodies, coalitions, platforms, working groups, and organizations that develop, coordinate, or govern guidance, standards, or infrastructure relevant to market instruments. This is distinct from the specific guidance documents, standards, or frameworks they produce, which are referred to separately in this report.

7 GHG Protocol (2026). Actions and Market Instruments: Phase 1 Progress Update White Paper. https://ghgprotocol.org/sites/default/files/2026-03/AMI-Phase1-WhitePaper-RFI.pdf.

8 Task Force for Corporate Action Transparency (2026). Mitigation Action Accounting and Reporting Guidance V1.1. https://static1.squarespace.com/static/68a20cd6b956195465ffa4c9/t/6a28b6a74927e61b34d49f73/1781053095834/2026+MAARG+v1.1+FINAL.pdf.

9 Advanced and Indirect Mitigation (AIM) Platform. AIM Platform Standard and Guidance, Version 1 (2026).

10 It is important to note that a physical connection between a market instrument and the underlying action, intervention or low-carbon solution always exists at some point in the value chain. What varies is the degree to which that connection is transferred through the value chain.

11 While Product Carbon Footprints (PCFs) are not market instruments themselves, they exemplify an extreme form of bundled certificates, providing specific footprint information that directly corresponds to the purchased product.

12 GHG Protocol (2026). Land Sector and Removals Standard.

13 Structural constraints are defined by SBTi in the CNZS V2.0 as, "A condition external to a company that materially limits the availability of options to take action at the activity or activity pool level within the target timeframe, including infrastructure, technological maturity, regulatory, market structure or supply limitations. Structural constraints do not include internal preferences, procurement choices or cost considerations alone."

14 'Activity level' actions refer to direct decarbonization within a company's own operations and value-chain activities that results in a reduction of the physical GHG inventory. 'Activity-pool level' actions refer to actions taken within shared systems that underlie multiple value-chain activities, such as electricity grids, supply sheds or logistics networks. 'Sector-level' actions refer to actions implemented at the broader sector context, where activity- or activity-pool-level options are constrained, provided a relevant geographic or system link to the company's activities can be demonstrated.

15 Science Based Targets initiative. (2026). SBTi Corporate Net-Zero Standard Version 2.0. https://standards.sciencebasedtargets.org/.

16 Smart Freight Centre. (2023). Voluntary Market Based Measures Framework for Logistics Emissions Accounting and Reporting. https://smart-freight-centre-media.s3.amazonaws.com/documents/SFC_MBM_FRAMEWORK_2023_Oct.pdf

17 VCI & ISEAL. (2025). Physical traceability in Greenhouse Gas accounting.

18 The GHG Protocol defines physical traceability as, "the ability of a company to identify, track, and collect information on activities (e.g., activity data or GHG emission or removals factors) related to material flows of goods and services in its value chain, across its upstream and downstream processes and products." This definition was adopted by SBTi in CNZS V2.0.

19 Bjørn, A., Lloyd, S.M., Brander, M. et al. (2022). Renewable energy certificates threaten the integrity of corporate science-based targets. https://www.nature.com/articles/s41558-022-01379-5

20 New Climate Institute. (2026). Market instruments explained (1/5): promises and risks for corporate climate action. https://newclimate.org/news/market-instruments-explained-blog-series-part-1

21 See Annex 2 for an overview of existing standards and guidance.

22 New Climate Institute (2024). THE ROLE OF ENVIRONMENTAL ATTRIBUTE CERTIFICATES FOR CORPORATE CLIMATE STRATEGIES. https://newclimate.org/sites/default/files/2024-10/

NewClimate_RoleOfEACs_Oct24_1.pdf

23 Book and Claim Community. (2024). Principles and Best Practice for Book and Claim Systems in Heavy Transport. https://bookandclaimcommunity.org/wp-content/uploads/2024/06/June-2024-BCC-Principles-and-Best-Practices.pdf

24 Value Change Initiative and ISEAL. (2025). Physical traceability in Greenhouse Gas accounting. https://valuechangeinitiative.com/resource/physical-traceability-in-greenhouse-gas-accounting/

25 A concrete example illustrates the practical complexity. A large consumer goods company sources steel from a supplier facility where the company accounts for less than 10% of total production capacity. To drive decarbonization, the company agrees to finance an increase in recycled scrap input to the facility's production line, but the supplier also serves other customers who do not share the same climate commitments. The resulting steel mix reflects the increased recycling, but attributing the precise emissions reduction to the purchasing company's intervention requires assumptions about allocation, traceability and the degree of 'association' to the activity pool.

26 The International Maritime Organization's (IMO) 2024 Guidelines on Life Cycle GHG Intensity of Marine Fuels set out a methodology for calculating well-to-tank, tank-to-wake and well-to-wake emissions for marine fuels. Building on these guidelines, the IMO is also developing a GHG Fuel Intensity (GFI) standard, which may produce relevant guidance for chain of custody and claims eligibility for maritime fuels. The GFI remains under development and no document has been published as of this report's publication.

27 It remains an open question, however, what minimum threshold of additionality is appropriate, including whether regulatory-surplus testing should constitute a baseline requirement, as this continues to be actively debated among standard setters and technical working groups. Companies can therefore monitor the direction of travel in this area and apply the most conservative interpretation consistent with applicable sector-specific guidance, subject to further clarification from the GHG Protocol AMI standard and related processes.

28 This reflects the direction of the GHG Protocol's Actions and Market Instruments (AMI) Technical Working Group, which is developing a multi-statement reporting structure intended to complement, but not replace, the physical inventory.

29 A marginal cost premium for a low-carbon alternative (e.g., a modest green premium) does not, by itself, establish that physical decarbonization is economically constrained. Cost should therefore be documented as one factor within the broader constraint assessment set out above, alongside technology, infrastructure and structural value chain factors, rather than as a standalone justification. In CNZS V2.0, SBTi states that, "[s]tructural constraints do not include [...] cost considerations alone" (see CNZS-C23).

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The World Business Council for Sustainable Development (WBCSD) is a global community of over 225 of the world's leading businesses driving systems transformation for a better world in which 9+ billion people can live well, within planetary boundaries, by mid-century. Together, we transform the systems we work in to limit the impact of the climate crisis, restore nature and tackle inequality.

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