

Scope 3 action agenda for the agrifood sector

→ *Tackling land-based emissions and removals*



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Executive *Summary*



Executive Summary

The agriculture and food sector represents close to one-third of global emissions.¹ Transforming this system from a net source of greenhouse gas (GHG) emissions to a net sink is essential to meeting the 1.5°C pathway set by the Paris Agreement.

The majority of agrifood sector emissions are from on-farm activities and land-use change. These land-based emissions will dominate the GHG emissions footprint of most companies in the sector. For companies that do not directly own or manage land, land-based emissions fall within the scope 3 emissions boundary and require value chain interventions. As a result, in-value-chain interventions (insetting) are a key mechanism for agrifood companies to achieve their climate goals through the implementation of GHG reduction or removal initiatives in company value chains.

WBCSD is working with members and partners to identify and tackle the challenges related to addressing to scope 3 emissions reductions and removals associated with land use to accelerate value chain interventions and the flow of investment.

In our recently published [CEO Guide to the Climate-related Corporate Performance and Accountability System \(CPAS\)](#), we identified a misalignment between the financial markets and business, calling for transformation in both the real and financial economy to meet climate targets and provide businesses with significant innovation opportunities.

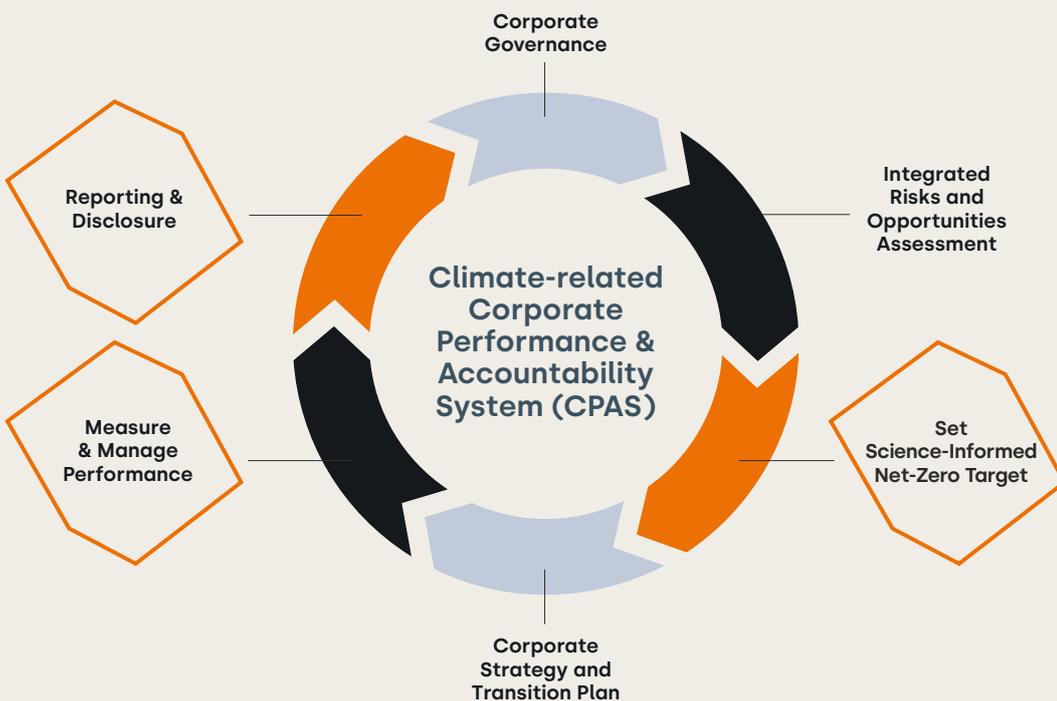
The CEO Guide to Climate-related CPAS lays out a practical pathway to align the performance and innovation power of business with the right incentives from financial markets, while simultaneously meeting the rising demand for corporate accountability. By integrating the climate-related risks and opportunities in every part of the strategic and performance management process, companies can provide financial markets and other stakeholders with well-managed, consistent and comparable data.

This publication explores this pathway by unpacking key themes related to agriculture and food value chains, exploring how to tackle “pain points” and turn into outcomes that align, incentivize and accelerate progress on these targets.

Opportunities to accelerate land-based scope 3 emissions and removals

We have identified three interconnected action areas: standards, data and accounting, and farmer incentives.

Figure 1: Climate-related Corporate Performance & Accountability System (CPAS)



1

Standards and frameworks

Key challenge: Unclear guidance for scope 3 accounting

Businesses struggle to navigate a complex landscape of frameworks and tools developed separately over time to calculate emissions, set net-zero targets, develop a transition plan and act, and disclose progress. For agriculture and food value chains, there is further complexity due to the fact that land-based emissions dominate GHG footprints.

And many companies lack clarity as to whether they can account for certain interventions within scope 3 or as beyond-value-chain mitigation. At the same time, many companies are concerned about potential double counting of emissions reductions or removals.

Outcome needed: GHG accounting standards and frameworks are robust, pragmatic and aligned with clear adoption pathways for business

2

Data and accounting

Key challenge: Lack of practical accounting approaches for reductions and removals

There is a need for practical and consistent accounting approaches and monitoring, reporting and verification (MRV) tools for reductions and removals from agriculture. There is also a need for data of sufficient quality and granularity to measure the impact of in-value-chain interventions.

Outcome needed: Sector-aligned data requirements and interoperable MRV systems to enable the adoption of standards and frameworks

3

On-farm incentives

Key challenge: Unclear mechanisms for engaging and financing farm-level practice change and data collection

Producers require financial support to effectively undertake their role in emissions reductions and removals, including the cost of data collection and monitoring as well as practice change. Because actions taken by food producers influence the collective scope 3 emissions of companies across the value chain, the sharing of costs and benefits is necessary. The lack of consensus on the mechanism for co-claiming the GHG reductions or removals that occur at the farm level along the value chain further complicates scaling.

Outcome needed: Consensus on mechanisms for prioritizing the equity of farmers in scope 3 emissions accounting and interventions



Our scope 3 action agenda for agriculture & food

We will be a convener, action platform and advocate for accelerating reductions and removals in agrifood value chains.

Our 2024 priorities will focus on:

1. **Aligning carbon accounting standards and practices** by ensuring carbon accounting standards and frameworks are robust, pragmatic and aligned with clear adoption pathways for business;
2. **Accelerating the adoption of standards and practices for scope 3 emissions reductions and removals** by aligning on the adoption of standards and frameworks, with a focus on data and MRV;
3. **Ensuring coherence between in-value-chain and beyond-value-chain mitigation and nature-positive approaches** by supporting the convening of key platforms for alignment and advocacy on landscape-based approaches

This report represents the perspectives of members and partners based on interviews and workshops during 2023. These findings inform our priorities to drive this topic in 2024, together with members and partners, through our agriculture and food scope 3 emissions action agenda.

Introduction:

The importance of scope 3 emissions and removals for the agrifood sector



01.

01. Introduction:

The importance of scope 3 emissions and removals for the agrifood sector

1.1 Transforming agriculture to a net carbon sink

The agrifood sector plays a vital role in achieving the 1.5°C warming pathway set by the Paris Agreement² to avoid catastrophic impacts of climate change. The greenhouse gas emissions (GHG) associated with agrifood systems are approximately a third of global GHG emissions.³ The majority of emissions from the agrifood sector are land-based emissions: emissions from on-farm activities and land-use change (see Figure 2) The agrifood sector is also unique in mitigating climate change as, in addition to emission reductions, agriculture and surrounding landscapes must contribute to the needed carbon removals for a 1.5°C pathway. In addition to mitigation efforts, addressing land-based emissions and removals is also critical for resilient and adaptive agrifood systems in response to the physical risks of climate change.⁴

There are three main sources of emissions from agriculture and food: land management, land-use change, and pre- and post-production activities.

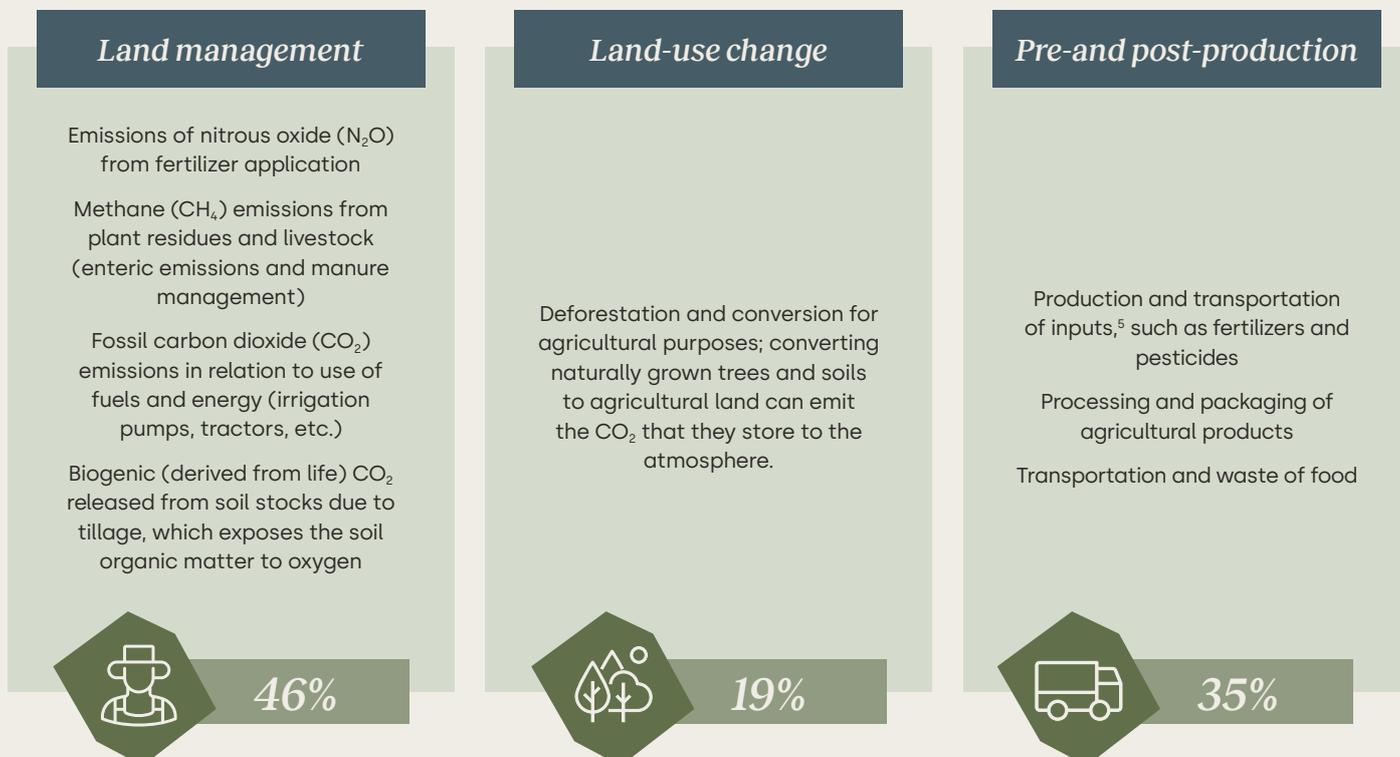
For most agrifood companies, land-based emissions will dominate their corporate footprint. As most companies in the agrifood sector do not directly own or manage land, land-based emissions fall within what corporate reporting standards refer to as the *scope 3 boundary*⁷ and require value chain interventions.

In addition to emissions reductions, the promotion of agricultural and forestry practices that increase long-term CO₂ removal through carbon sequestration is essential to meeting 1.5°C scenarios. Globally, establishing forests has the highest potential for carbon removal, followed by cropland soil carbon sequestration, and agroforestry.⁸ The restoration of peatlands and coastal wetlands is also critical.⁹

Estimates suggest that emissions reductions will represent 62% of the mitigation potential for the forest, land and agriculture sector, with biogenic removals representing the remaining 37% needed through 2030.¹⁰

Figure 2: Emissions from the agrifood sector

Source: Food and Agriculture Organization (FAO) of the United Nations⁶



1.2 The complexity of agricultural value chains

The complex nature of agricultural value chains gives rise to specific considerations when implementing scope 3 programs. To achieve market demand, agricultural supply chains comprise various aggregation, trading and processing steps. For example, cooperatives, mills or other types of post-harvest processing facilities aggregate crop products taken from farms to become tradable commodities. Traders then trade the commodities on various market scales, processors process them and food companies often ultimately procure the processed products as a derivative or ingredient for final food products. In addition to supply chain complexities, agriculture is often embedded in natural landscapes where there are opportunities for restoration or other landscape-level management practices (e.g., connecting biodiversity corridors), adding to the complexity.

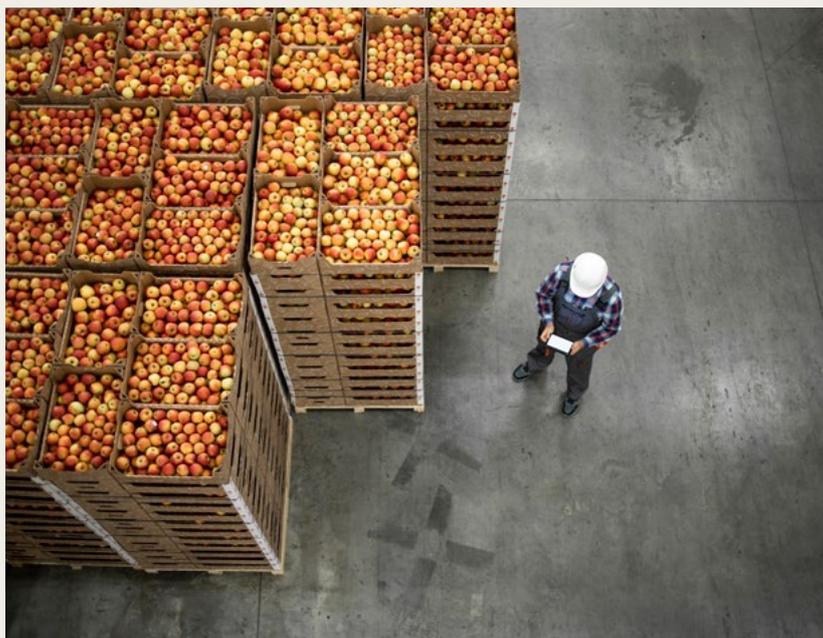


Figure 3: A simplified agrifood value chain

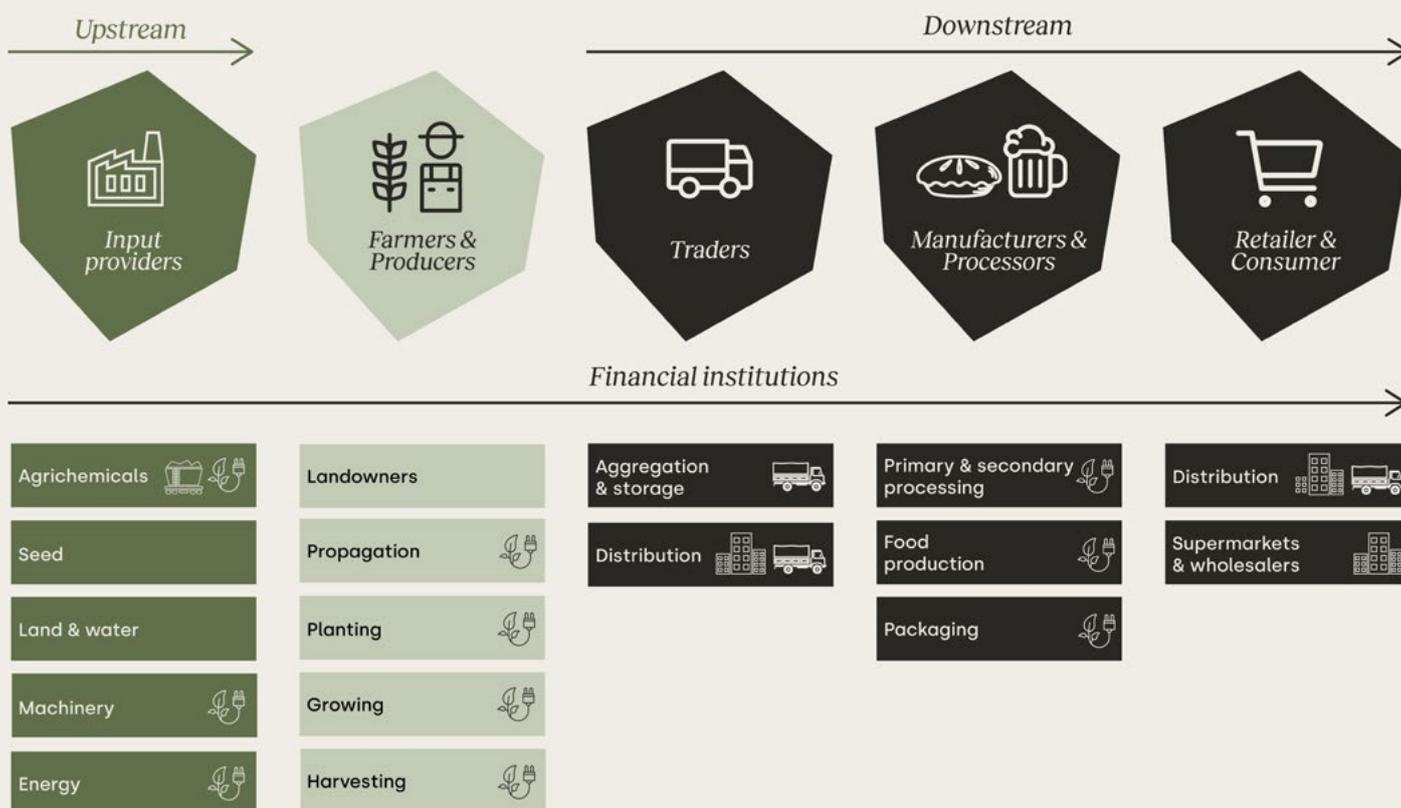
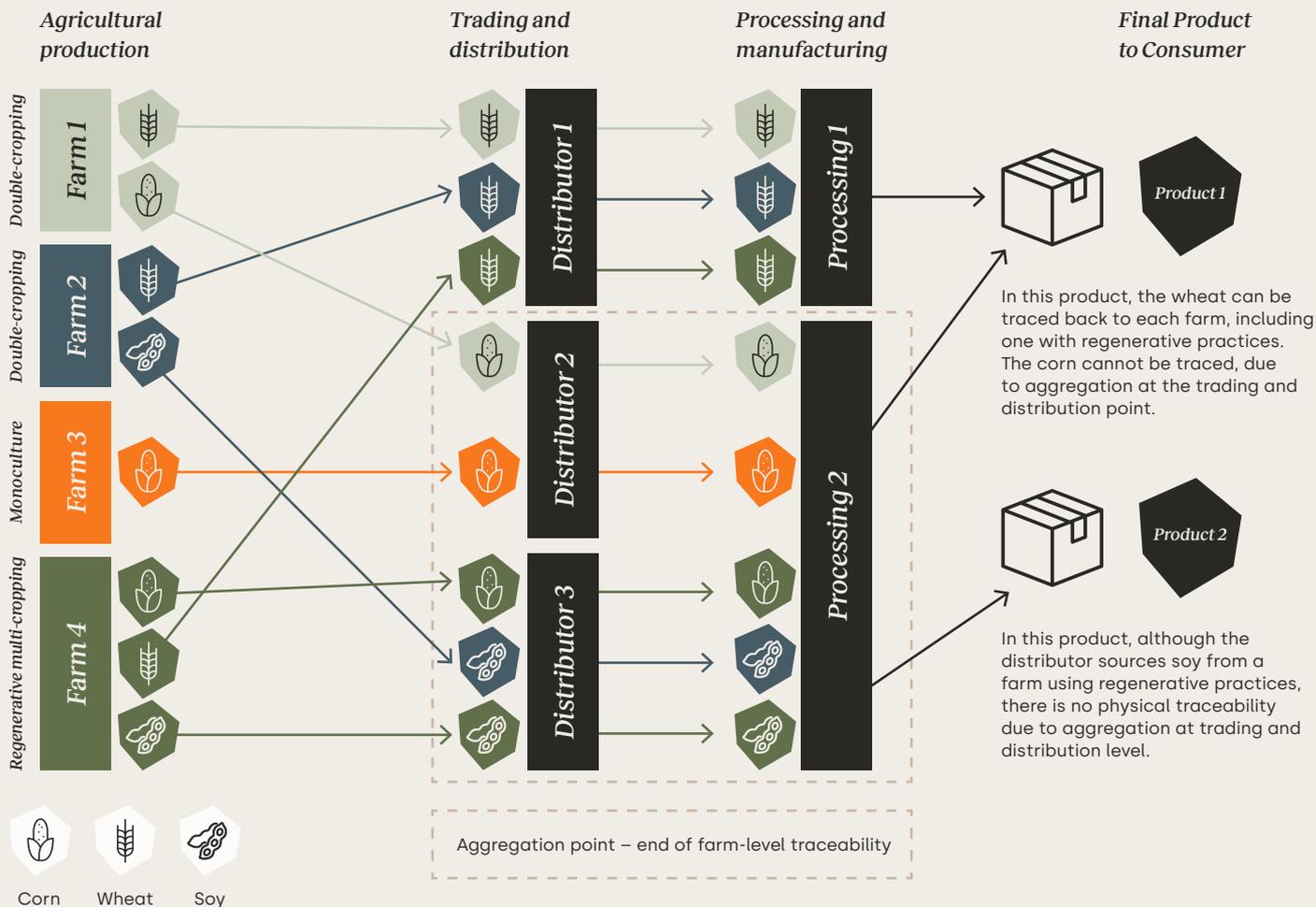


Figure 4: The complex nature of agrifood value chains – illustrative example

Due to the complex nature of agrifood value chains, physical traceability of a commodity to a specific farmer or producer is not always possible. The possibility of physical traceability will differ greatly depending on the commodity and existing supply chain infrastructure.



1.3 Perspectives on inseting and in-value-chain mitigation

“Inseting” has emerged in recent years as a key mechanism for agrifood companies to achieve their climate goals by implementing nature-based solutions in their value chains as part of decarbonization efforts. Growing interest in inseting has led to various definitions put forward (as summarized in reports from WBSCD¹¹ and the International Platform for Insetting and Abatable¹²). According to the International Platform for Insetting *“insetting projects are interventions along a company’s value chain that are designed to generate greenhouse gas emissions reductions and carbon storage, and at the same time create positive impacts for communities, landscapes and ecosystems.”*¹³ Two key topics when exploring different perspectives on inseting are **credit trading** and the **value chain boundary**.

Credit trading

In practice, the term “insetting” is often juxtaposed with the term “offsetting”, with the idea being that one member of the value chain can implement an agricultural project to generate a scope 3 emissions reduction or removal *credit* or *unit* that another member of the value chain can then purchase. This type of credit trading, even when within a value chain, does not obviously align with corporate reporting standards that rely on *inventory* accounting in relation to physical flows, as the company could enact credit trading separate from a physical flow of material. For example, a company could purchase inseting credits from a supplier that are not equivalent to the amount of goods purchased from the supplier. Or a company could purchase from a supplier where there is no established chain of custody (meaning it is not possible to associate specific agricultural land and the related climate projects with the physical goods purchased).

Boundaries of supply and value chains

The terms “supply chain” and “value chain” are similar but different concepts. A supply chain describes the travel of goods from a supplier to a customer; a value chain describes how a company can deliver value to a customer (which can include considerations beyond physical supply). Because agricultural supply chains largely rest on short-term contracts and are complex (see Figure 4), defining what is “within” a supply or value chain at any given moment in time can be challenging. The term inseting therefore describes a variety of projects for GHG removals occurring within and outside of supply chains, such as restoring adjacent lands, or second or third tier suppliers where it is not possible to confirm a physical chain of custody or controlled blend.*



The lack of alignment on the term “insetting” has led to confusion and agrifood companies are moving away from using it. **Due to a lack of a clear industry-wide definition of the term “insetting”, this report refers to climate action within corporate value chains as “in-value-chain mitigation” or “scope 3 emissions reductions and removals.”**

*Chain of custody model in which materials or products with a set of specified characteristics are mixed according to certain criteria with materials or products without that set of characteristics resulting in a known proportion of the specified characteristics in the final output - source: <https://ghgprotocol.org/sites/default/files/2022-12/Land-Sector-and-Removals-Guidance-Pilot-Testing-and-Review-Draft-Part-2.pdf>

1.4 A fast-moving ecosystem

The agriculture and food scope 3 emissions ecosystem is complex and fast-moving. Companies working to address scope 3 emissions must navigate multiple reporting standards and regulatory frameworks, understand which monitoring, reporting and verification (MRV) tools are best suited to their needs, assess which farm-level actions may yield the greatest outcomes,

and more. On the other hand, companies may ask producers to report the same data but in different formats for each off-taker, increasing the reporting burden placed on them.

Figure 5 gives an illustrative example of some of the many players a company may encounter in the agrifood scope 3 emissions ecosystem. This is a non-exhaustive list.

Figure 5: Agrifood scope 3 ecosystem – illustrative example



Objectives *and methodology*



02.

02. Objectives and methodology

The objective of this report is to develop a shared understanding of the challenges that prevent actors in the agriculture and food value chain from scaling credible in-value-chain mitigation activities to address scope 3 emissions and removals – and recommendations for WBCSD and other organizations to advance the agenda.

This report represents the perspective of members and partners based on interviews and workshops during 2023 (see Figure 6 for timeline of 2023 milestones and the appendix for the list of stakeholders who participated). The report findings inform WBCSD's priorities in driving this topic in 2024, together with members and partners.

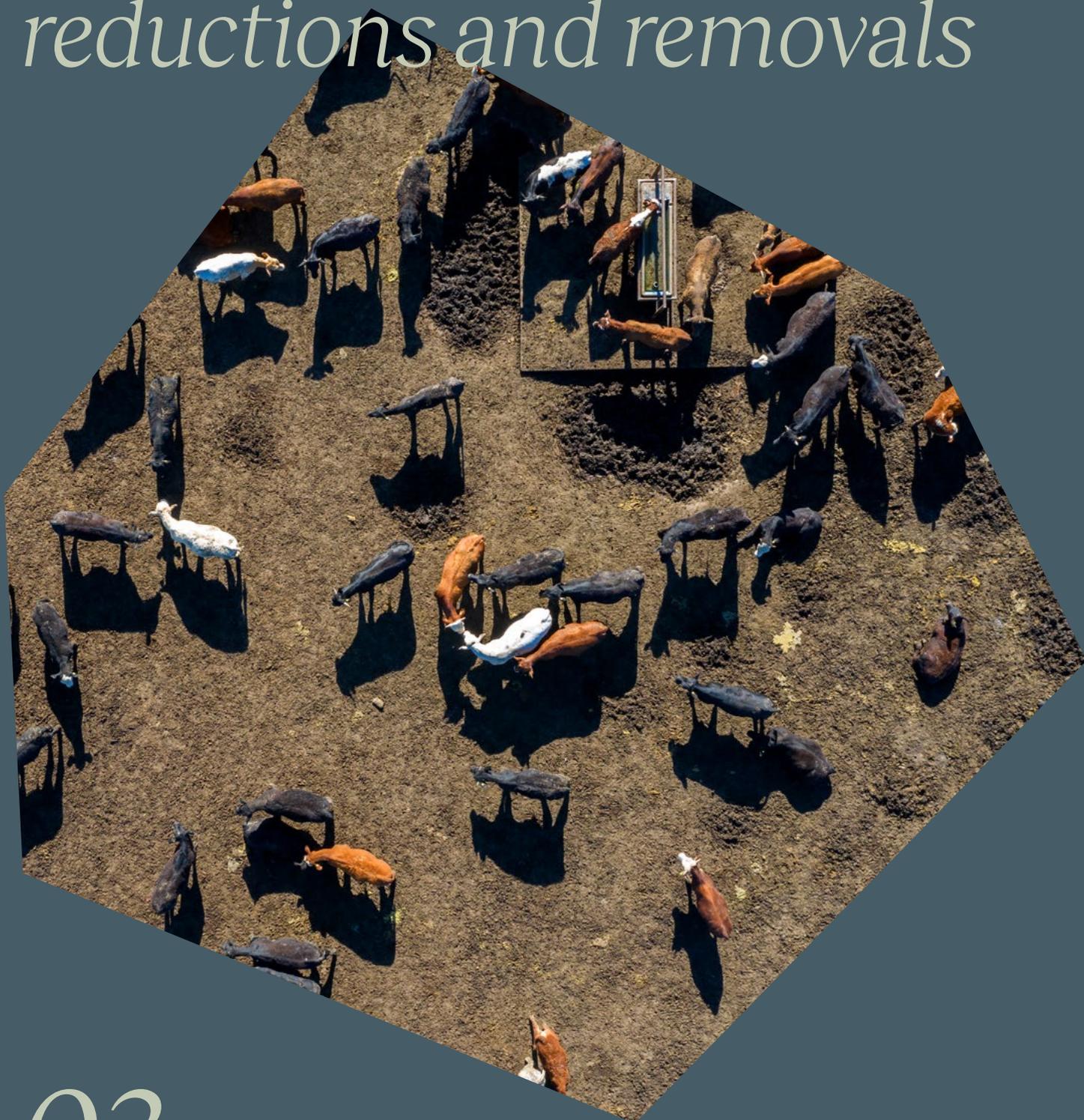
The report is also in the context of WBCSD's **PACT (Partnership for Carbon Transparency) initiative**,¹⁶ which is creating the standard for product carbon footprints and value chain carbon data interoperability. Although agrifood companies are already using the PACT standard for non-land-based emissions, WBCSD recognizes the opportunity in applying the PACT standard to land-based emissions. The scope of this research will support the future extension of the PACT methodology.

WBCSD's joint working group with the One Planet Business for Biodiversity (OP2B) coalition has also informed the insights from this report.¹⁴ This collaborative effort focuses on **regenerative agriculture metrics (RAM)**, with the aim to align on metrics to measure the outcomes of regenerative agriculture – starting with climate outcomes.¹⁵ Regenerative agriculture is a key mechanism for emissions reductions and removals at the farm level and a primary example of an in-value-chain activity that needs to be scaled.

Figure 6: Work to date



Opportunities to accelerate agrifood scope 3 emissions reductions and removals



03.

03. Opportunities to accelerate agrifood scope 3 emissions reductions and removals

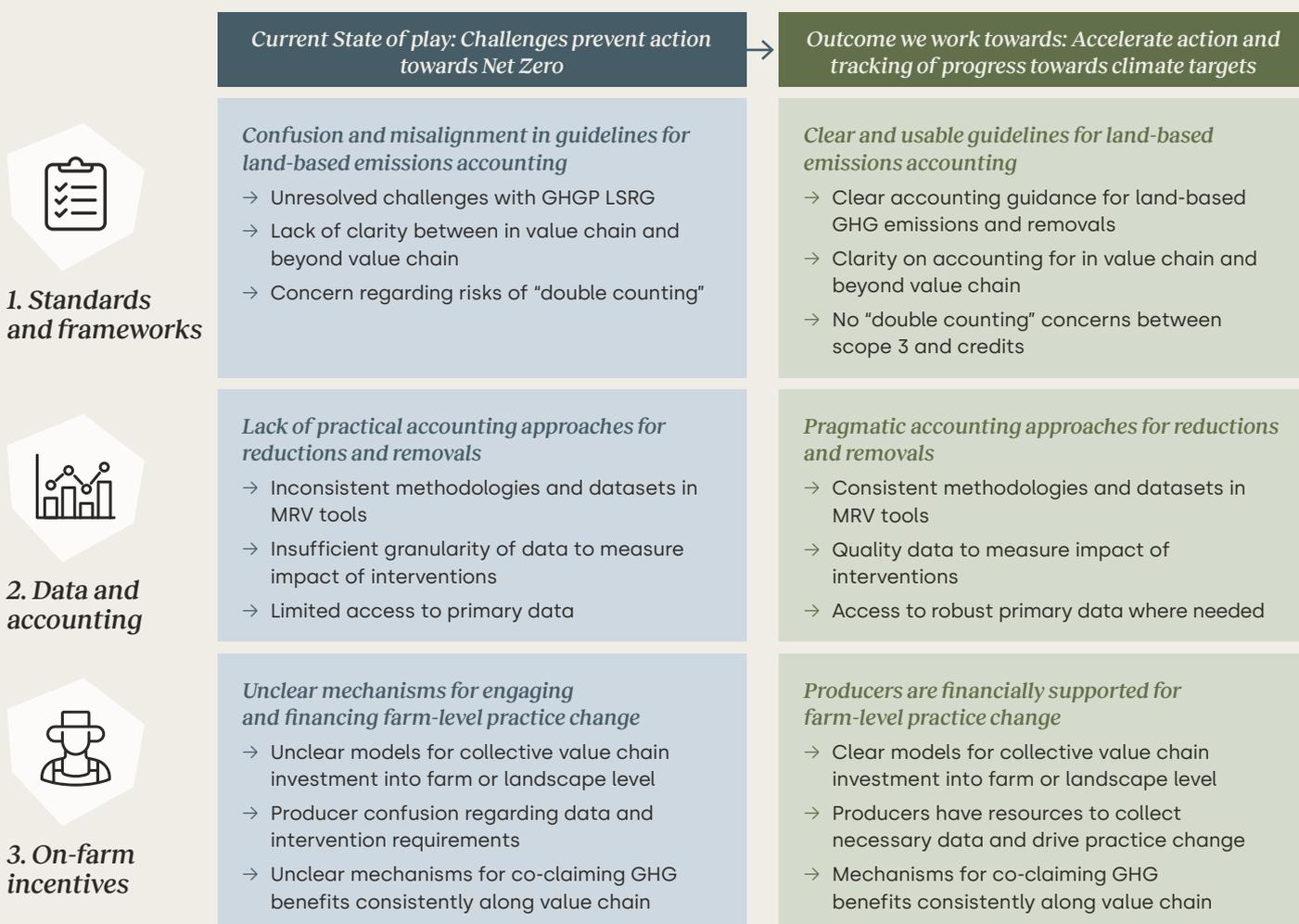
3.1 Climate-related corporate performance & accountability system

The [CEO Guide to the Climate-related Corporate Performance and Accountability System \(CPAS\)](#) lays out a practical pathway to align the performance and innovation power of business with the right incentives from financial markets, while simultaneously meeting the rising demand for corporate accountability. By integrating the climate-related risks and opportunities in every part of the strategic and performance management process, companies can provide financial markets – and other stakeholders – with well-managed, consistent and comparable data.

For agriculture and food value chains, common “pain points” create friction in the system. If not addressed, they severely limit the ability of companies to meet their net-zero emissions targets. Addressing these pain points should lead to outcomes that align, incentivize and accelerate progress on these targets.



Figure 7: Opportunities to accelerate agrifood scope 3 emissions reductions and removals



3.2 Standards and frameworks

3.2.1 GHG accounting standards

The Climate-related Corporate Performance and Accountability System for agriculture and food is evolving with the development of much-needed standards for target-setting, emissions accounting and disclosure. The vast number of voluntary initiatives, frameworks, standards and metrics make managing climate performance complex. At the same time, agrifood companies are recognizing harmonized GHG accounting as a key need in responding to stakeholder expectations for increased accountability and transparency.

"Consistency in accounting is the key unlock for corporate action."

Interviewee - Retail company

Many agrifood companies have climate strategies based on the Science Based Targets initiative (SBTi).¹⁷ SBTi sets the needed ambition to align companies with the Intergovernmental Panel on Climate Change (IPCC) 1.5°C climate scenarios. SBTi released new guidance for companies relying on forests, land and agriculture (FLAG)¹⁸ in 2022 to accommodate the IPCC findings that the agrifood sector requires less in GHG reductions than other sectors relying on fossil fuels (due to the societal dependence on agrifood systems and the types of greenhouse gases emitted – biogenic methane and nitrous oxide instead of fossil carbon).¹⁹ SBTi FLAG requires companies to build GHG inventories in accordance with the Greenhouse Gas Protocol.²⁰ To provide standardized guidance for corporate accounting of land-based emissions and removals, the World Resources Institute and WBCSD are developing the GHG Protocol Land Sector and Removals Guidance (LSRG), with the final draft expected in late 2024.²¹

The preliminary draft of the LSRG in 2022 introduced many concepts for companies to navigate when performing corporate reporting. One of the most important was the need for physical traceability (meaning the ability to demonstrate the physical link between farms and final products down the supply chain) when reporting on direct land-use change (dLUC) and removals (such as carbon sequestration).

The guidance also revisits fundamental concepts, such as allocation, which refers to the way the system distributes its GHG emissions to the products it produces. For instance, a farm is a system with multiple products sold across field-level harvests and rotations. There is a need for guidelines on how to allocate emissions and removals from farms to products, for example how to account for cover crops in a crop rotation and which crop product the farmer can allocate emissions and any potential removals in association with cover cropping to.

Feedback provided by WBCSD agriculture and food members to the GHG Protocol highlighted the need for the LSRG to better reflect the nature of agrifood supply chains that rely on dynamic farm systems (meaning farms with rotations), supply sheds²² (such as groups of farms that aggregate product) and other steps of the agrifood supply chain (for example, trading and processing). As an example, this means **it is not currently possible for companies to account for removals in their SBTi climate strategies when they do not have a segregated supply chain** with a clear physical chain of custody from the farm to the product the company purchases. Outside of the GHG reporting context, agrifood companies have accommodated supply chain complexity through certification schemes. For example, systems commonly use *book and claim certificates* and *mass balance chain of custody* for commodities such as palm oil, soy, coffee and cocoa. To make the GHG Protocol LSRG actionable, WBCSD members have highlighted the need to 1) accept chain of custody models that are not only based on segregated supply chains and 2) bring clarity on issues in relation to allocation.

"We face traceability challenges and there is confusion and expertise issues in addressing these. For example, the Value Chain Initiative has introduced the key concept of supply shed but it is not clear if this is approved by [the] GHG Protocol."

Interviewee - Trading and distribution company

Ultimately, the goal of corporate reporting standards is to provide a harmonized and credible approach to incentivize and communicate corporate climate action. That said, there is a risk that the focus on the complexity of reporting frameworks can be paralyzing, distracting and a barrier to climate progress. **Many interviewees expressed the importance of continuing on-the-ground work and finding pragmatic solutions to measure the outcomes of actions, rather than "letting perfection be the enemy of progress."**

"The discussion is too often about compliance with standards such as [the] GHG Protocol and not about the ultimate impact of outcomes."

Interviewee - MRV Company

3.2.2 In value chain or beyond value chain

The concept of beyond-value-chain mitigation (BVCM)²³ describes actions or investments outside a company's physical value chain.²⁴ The rationale for companies to expand beyond their value chains is gaining momentum²⁵ – science suggests the agrifood sector requires both within and beyond-value-chain mitigations to align with a 1.5°C pathway.²⁶ However, BVCM is not currently in the scope of corporate GHG accounting or SBTi targets. Because of the intertwined and complex reality of landscapes and agrifood supply chains, defining what is within and beyond agrifood value chains can be challenging. For example, defining agricultural practices (such as crop rotations, cover cropping, and biodiversity and wetland buffer zones) as part of a supply or value chain is not straight-forward, as one company may off-take only a single product from farms that produce many products in rotation. Additionally, buffer zones for flood and wildlife management are by definition non-productive. Furthermore, there is a need for alignment on the business case for BVCM action to complement scope 3 emissions efforts to amplify climate mitigation and adaptation outcomes. **Challenges in defining the supply or value chain can be a barrier to reporting GHG reductions and removals and making strategic decisions to both mitigate and react to climate change risks.**

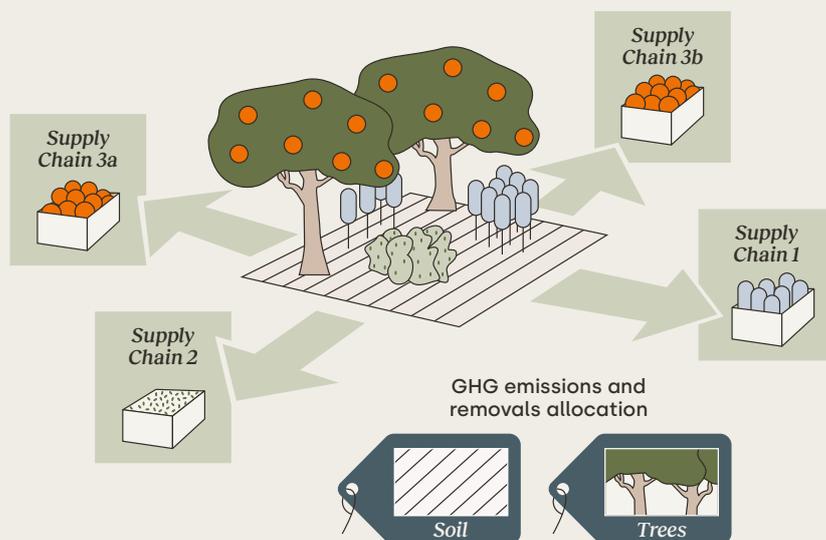
3.2.3 Double counting

Double counting describes the risk of companies reporting or claiming the same emission reduction or removal more than once (either in multiple scopes or by multiple entities). The agrifood sector has a variety of double counting risks that are necessary to understand when working on credible scope 3 emissions reporting. Allocation is one double counting risk. As an example, the reported carbon removals resulting from a regenerative agriculture project on a farm with rotations should not exceed 100% of the actual benefit when summing the benefits allocated to sold products (see Figure 8).

Another risk is related to interactions with carbon markets. The GHG Protocol considers reporting sold or purchased carbon credits as in-scope inventory to be unacceptable double counting. In cases where visibility and control over supplier sales of credits is low, downstream companies are often concerned that suppliers may have sold credits,

Figure 8: Allocation of GHG emissions and removals

This graphic illustrates the complexities of allocating emissions and removals at field-level to different products and supply chains. *Source: Adapted from a graphic produced by Emma van de Ven, Rabobank*



meaning their inventory does not align with the GHG Protocol. Double counting or claiming can also occur when investing in BVCM, such as natural restoration and regeneration projects, if the project overlaps with the scoped inventory of another company. Regulatory carbon markets or schemes that aim to provide incentives for climate action add further complexity as they can interact with corporate supply chains in a way that may pose double counting risks. Companies should consider regulatory schemes on a case-by-case basis to understand the relationship (if any) with corporate reporting and if the risk is indeed relevant.

Overall there is a range of opinions on the importance of the risks associated with double counting and claiming that require further exploration to ensure that credible reporting structures are in place that are also pragmatic and encourage climate action through various incentive structures. One way companies can immediately manage "double counting" issues in relation to suppliers selling carbon credits is to ensure supplier incentives are in place such that selling to the voluntary carbon market is less attractive.

Outcome needed: GHG accounting standards and frameworks that are robust, pragmatic and aligned with clear adoption pathways for business.

3.3 Data and accounting

“Standards are hugely important but when following standards like [the] GHG Protocol, companies will come up with vastly different numbers based on the data used.”

Interviewee - Trading and distribution company

Even when following guidelines and standards, companies come to different results for emissions and removals because they use different data and methods. There is a need for the agrifood industry to align on standards and, perhaps more importantly, to align on the data and methods (meaning tools) used to calculate GHG emissions and removals. In the end, the operationalization of the guideline or standard through a tool or database is what influences the actual calculation and value for the company to report.

3.3.1 Fragmentation of MRV tools

Various agri-footprinting databases and tools are available through public and private entities (see Figure 4). Although there are ongoing efforts by both the private sector and NGOs, the harmonization of tools and data platforms into a unique platform is unlikely. However, interoperability is critical through initiatives such as PACT's Pathfinder Framework.²⁷ In this context, **agrifood companies cannot base procurement decisions on the emissions factors provided by their suppliers unless they are performing the calculation using the same data framework and calculation tool.** Furthermore, companies are wary of reporting progress on climate targets if they are using emissions and removal values provided by suppliers who may calculate them differently (meaning the risk that they incorrectly capture progress due to a difference in methodology).

“The real challenge is not the data; this can be collected. The challenge is that there is no unique system – each company has their own platform or their own calculator. Can the community ensure that there is harmonization across platforms?”

Interviewee - Financial institution

3.3.2 Accessing decision-relevant data

A major issue in tracking progress is obtaining data that reflects on-the-ground action. For example, generic data in life-cycle inventory databases (for example, Ecoinvent or the World Food LCA Database) that companies can use to create generic emission factors are useful when tracking progress related to portfolio shift (such as transitioning to plant-based alternatives for animal products); however, generic data are often not useful in tracking progress on agricultural practices. Generic data often represent

conventional practices and thus do not often represent organic, regenerative and other types of more sustainable agricultural practices.

To overcome this challenge and account for farm-level practice change, collecting primary data is becoming increasingly important for companies. In the agrifood space, primary data often refers to data collected directly to describe a specific agricultural system (even if those data are used to populate models or extrapolate GHG emissions or removals, such as from satellite imagery). The perspective of standards and guidelines is often that primary data are of higher quality than secondary data. Corporate interviewees, however, say that primary data are expensive, time consuming and have many quality issues. Furthermore, companies often use highly accurate primary data (for instance, on the number of trees on a plot) as parameters to run models that themselves are highly uncertain (such as the amount of carbon in a tree).

“We focus on developing emission factors with primary data for key strategic crops – and specifically focusing on deforestation – with the aim to show that emission factors are lower than the generic factors and to show year-on-year improvement.”

Interviewee - Trading and distribution company

“Primary data across all commodities is not feasible or desirable: we spend a lot of time trying to get better data and in the end these data often populate models. Secondary data should be able to demonstrate advances.”

Interviewee - Trading and distribution company

“It is better to use primary data to refine secondary data so we can advance the use of secondary data instead of requiring primary data for all.”

Interviewee - Intergovernmental organization

“The good news is that remote sensing is enabling companies to get started as increased visibility into supply chains and the quality of models is improving. After a model is calibrated with primary data, we can move away from needing primary data.”

Interviewee - MRV Company

Due to these challenges in primary data collection and accuracy, companies often focus primary data collection on key sustainability and strategic issues (such as land-use change in areas of high deforestation risk). Another priority is to **use primary data to create improved secondary data sets and to calibrate models.** This can break the dependence on expensive primary data collection and give assurance that company reporting is accurate.

Ease of primary data collection varies greatly across agrifood companies and is mostly dependent on access to and engagement with farmers. Many agrifood companies that do have farmer engagement have said that access to primary data is not a key concern. Instead, the issue lays in using the data due to the restrictions named in the draft GHG Protocol LSRG accounting guidelines.

“Primary data are easy for us to get but the problems we have [is] in how to use it for accounting when there are traceability issues and no system to track double counting.”

Interviewee - Company

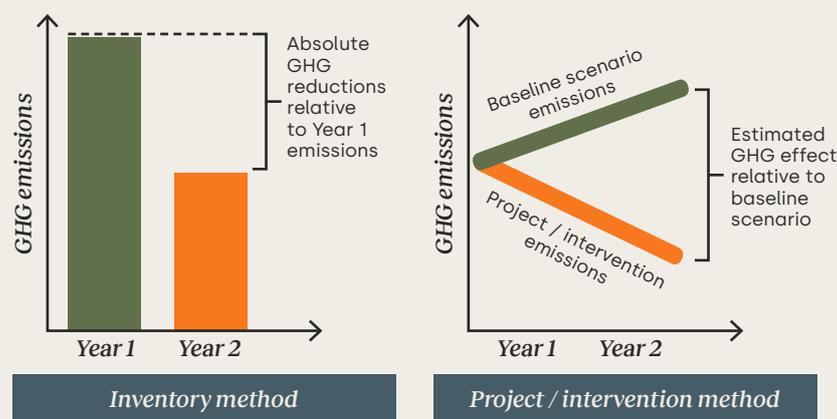
3.3.3 Inventory and project accounting

One way companies can collect primary data is by implementing projects. Project-based accounting approaches for insets or offsets have proliferated with the expansion of the carbon credit market. But project-based accounting does not align with inventory-based accounting, which is the basis of the GHG Protocol LSRG and thus SBTi FLAG. In a project-based approach, the company measures the GHG benefit according to the difference between the project and the absence of the project (meaning the business-as-usual counterfactual). In contrast, the LSRG requires annual inventory-based accounting: year-on-year calculations of GHG footprints (without explicit comparison to a counterfactual scenario).

Although many agrifood companies are transitioning the purchase (and sale) of carbon credits as offsets and insets out of their corporate strategies, an open question on how to leverage robust carbon credit project methodologies for in-value-chain mitigations remains. This question has led companies that specialize in MRV systems to transition project-based accounting to also accommodate accounting of scope 3 emissions reductions and removals. For example a project-based approach could use *the year before a project* as the baseline instead of a hypothetical future state. In this way, companies can easily adapt some project-based approaches for use in an annual scope 3 emissions inventory. At the same time, project-based approaches for avoided emissions or landscape level actions, such as avoided deforestation, may deliver wider corporate and societal outcomes but do not align with GHG Protocol reporting. **Agrifood companies recognize the need to use inventory-based approaches when reporting against the GHG Protocol and SBTi. They also acknowledge that some project-based approaches (such as avoided deforestation), if enacted with integrity, are important in managing agrifood sector risks.**

Figure 9: Comparison of inventory-based and project-/intervention-based accounting methods

Adapted from [GHG Protocol Draft Land Sector and Removals Guidance](#).²⁸



Key opportunity: Measuring soil carbon sequestration

Reporting on removals in relation to soil organic carbon (SOC) sequestration is particularly challenging. Due to natural fluctuations in soil, a statistically significant result often takes several years to establish, where 4-5 years between sampling is typical to capture SOC stock change in relation to management activities.²⁹ Given the challenges associated with soil sampling (time, cost, uncertainty) companies are seeking innovations in ways to calibrate models and potentially also use remote sensing. Most companies do not report on SOC removals even if they have regenerative agricultural programs or primary data sampling campaigns in place. This leads to the question: What is the most pragmatic and credible way to report on SOC change through the GHG Protocol? One approach could be to identify shared sourcing regions or supply sheds and work collaboratively (for example across the public and private sectors) to establish a credible method for the region that companies could use in their corporate MRV systems.

Outcome needed: Sector-aligned data requirements and interoperable MRV systems to enable the adoption of standards and frameworks that can cover reporting on both emissions and removals.

3.4 On-farm incentives

Producers need to receive finance for their role in emissions reductions and removals, including the cost of data collection and monitoring, as well as practice change. There is a risk that a lack of clarity or support regarding data and intervention requirements will be a burden on producers.

"The only way to make a business case is to align a product specification with the needs of the customer and to assign a premium to those specifications that can cover the costs."

Interviewee - Input company

Overall, the testing of actionable and effective supplier incentive programs requires more concrete piloting and large-scale programs to support scope 3 emissions reductions and removals. Incentives need to support farmers through consolidated financial, technical and educational support systems that both de-risk farmer efforts to move to practices with emissions reductions or removals and secure the longevity of these impacts on ecosystems.

"The best incentive mechanism for producers will differ depending on commodity – whether it is cash, low interest loans, premiums on products, etc. There is a need to ensure companies can then claim the incentivized practices."

Interviewee - Corporate financial institution

The carbon credit market and carbon shadow pricing (such as integrating the hypothetical cost per metric ton of GHG emissions as an internal decision making tool) has created the precedent to consider prices and costs with respect to GHG outcomes (meaning the amount paid to a project is directly related to the CO₂ emissions reductions or removals). Incentive programs must drive measurable and reportable outcomes and be sensitive to the desired changes in behaviors or infrastructure (meaning the need for high capital expenditures, operational or transition costs, or mindset or cultural shifts). Various types of incentive structures are needed to drive actions where the same action can lead to different outcomes depending on factors such as natural conditions (soil characteristics, weather events, etc.).

"Data on production is pretty easy for us to get, so the issue is more the commercial discussion and how to actually have a buyer and seller agree on a specification. What is the ambition or percentage reduction in GHG needed in order to drive a commercial hook?"

Interviewee - Input company

Farmers can access an array of public funding and subsidy programs depending on the jurisdiction. This is an incredibly complex topic to navigate for multinationals that source from farms in various regions. That said, there is a great opportunity for companies to provide clarity and incentivize farmers in key jurisdictions with known schemes (such as in Europe) to seek public funding and support for mitigation efforts that they could directly report in their corporate scope 3 emissions accounting. Furthermore, there may be an opportunity for companies to positively influence subsidy schemes to provide better outcomes for sustainable agrifood systems.

Because actions taken by food producers influence the collective scope 3 emissions of companies across the value chain, cost sharing is a necessary mechanism. Although companies and partners are piloting co-financing approaches for farm- or landscape-level activities, strategic and logistical challenges often prevent scale. The lack of consensus on the mechanism for co-claiming the GHG reductions or removals that occur at the farm level along the value chain further complicates scaling. There is a need to better understand what works for the value chains and for farmers.

"Sharing reductions with value chain partners and allocation through the value chain is critical. We need to ensure consistent calculation of reductions and associated impacts and a system to assign reductions appropriately along the value chain."

Interviewee - Agricultural production company

A key issue is the lack of understanding on how to share the benefits of actions between different value chain stakeholders. There is a mismatch between the time horizons of farm-level interventions and the time period of typical procurement contracts. As an example, regenerative agriculture projects tend to require a minimum of 3-5 years to deliver outcomes, yet agrifood procurement contracts are typically on the order of 6 months. The nature of the agrifood supply chain has led to business concerns that if a single company incentivizes farm or supplier action, other companies that may also source from those suppliers will profit from the benefits without providing their own incentives ("free riders"). These concerns come from a competitive corporate reporting perspective. **Bridging the gap between the reality of what is needed on the ground for climate action versus agrifood business terms requires a mindset shift.** The concern of "free riders" reporting GHG benefits they have not paid for, for example, should not block corporate strategies for farm investment. Firstly, the company can structure the accounting of benefits such that "free riding" does not occur (for example by using a third party that manages the reporting between a supplier and multiple customers). Secondly, due to lack of traceability in supply chains, it is possible

the other farm off-takers are not aware of the on-farm or supplier programs in the first place. Thirdly, companies can strategically consider different procurement and sourcing models, for example by identifying other companies sourcing from the same supplier and working together on a longer term basis to manage risks and opportunities.

Furthermore, it is important to consider the importance farm-level practice changes more broadly, going beyond the context of corporate climate targets to securing resilient supply chains in the face of climate-related risks.

Outcome needed: Consensus on mechanisms for prioritizing farmer equity in scope 3 emissions accounting and interventions.

3.5. Challenges across the value chain

Depending on their position in the value chain, stakeholders face specific challenges. We underscore some of these perspectives below.



Figure 10: challenges across the value chain



3.6. Case study: Farmer First Clusters – in-value-chain mitigation in action

The **Farmer First Clusters** is a collective investment from six agribusinesses that collaborate via WBCSD's Soft Commodities Forum to establish deforestation- and conversion-free soy supply chains in the Brazilian Cerrado. Downstream actors, through the Consumer Goods Forum's Forest Positive Coalition, are jointly investing with the Soft Commodities Forum's members in high-risk landscapes in the Brazilian Cerrado.

The initiative deploys incentives to soy producers who supply Soft Commodities Forum members to avoid deforestation and native vegetation conversion, implement regenerative and climate-smart agricultural practices, and restore degraded lands. As the producers enrolled in the Farmer First Clusters are direct suppliers of Soft Commodities Forum members, their farms are traceable via polygon mapping from geospatial imagery. Quantified as GHG emissions removals, these outcomes have the capacity to abate scope 3 emissions along the soy value chain and deliver a market-based in-value-chain mitigation program.

Key focus areas to scale the program:

1. A practical accounting approach and a credible MRV tool for GHG emissions reductions and removals from the program

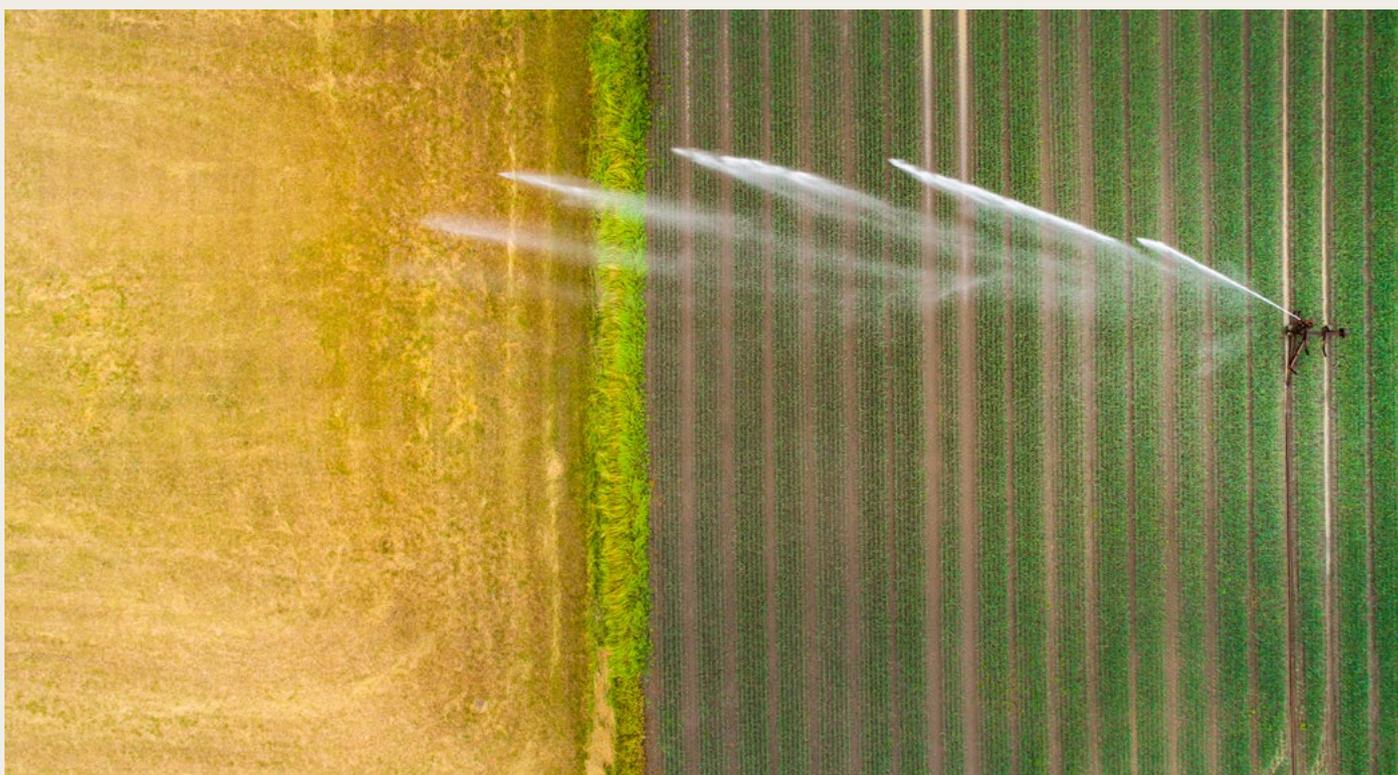
→ The Farmer First Clusters equip and mobilize implementing partners **at the farm-level** to carry out interventions and **collect data from these farms directly**, ensuring the collection of reliable primary data on measured outcomes, according to a set baseline.

→ Developed by Bayer in collaboration with Embrapa, the **ProCarbono Commodities Program** is discussing the extension of its GHG emissions methodology with the Soft Commodities Forum. The calculator covers the following emissions sources for scope 3 accounting of emissions reductions and removals in accordance with SBTi FLAG and GHG inventory needs:

- Land management: Application of agricultural inputs such as soil amendments and fertilizers and the combustion of diesel by agricultural machinery;
- Land-use change: Emissions from land-use conversion and changes in carbon stocks over the current and previous 20 years;
- Pre- and post-production: Emissions ranging from the extraction of natural resources to the manufacturing and transportation of inputs, emissions related to the transportation of the product from the farm to the trader.

2. Mechanisms for cost-sharing and co-claiming across the value chain

- Farmers engage and enroll in the Farmer First Clusters by presenting the role they can play in supporting the deployment of climate- and nature-positive solutions.
- The Soft Commodities Forum and Consumer Goods Forum's Forest Positive Coalition will **develop co-financing principles** to define a cost-sharing mechanism for the distribution of incentives concentrated in given landscapes or supply sheds. Cost-sharing principles between agri-traders and downstream companies can serve as a foundation in defining co-claims, which in turn has the capacity to **unlock funding at scale**.



Action *Agenda*



04.

04. Action Agenda

We have identified three priority actions to address the challenges and opportunities discussed.

1 Align carbon accounting standards and practices

With the rapid developments in the Climate-related Corporate Performance and Accountability System (CPAS) for agri-food, there is a need to ensure carbon accounting standards and frameworks are robust, pragmatic and aligned with clear adoption pathways for business:

- Ensure the resolving of SBTi FLAG and the GHG Protocol LSRG with a clear approach for corporate uptake;
- Enable a consistent and comparable carbon accounting methodology with a revised PACT Pathfinder Framework to include land-based emissions and removals (once the GHG Protocol LSRG is final).

2 Accelerate the adoption of standards and practices for scope 3 reductions and removals

To support the adoption of standards, it is critical for the supporting infrastructure to be in alignment, especially data and MRV tools:

- Ensure focused and strategic approaches to prioritizing primary and secondary data, considering different contexts;
- Undertake the assessment and prioritization of MRV tools;
- Understand the implementation costs and trade-offs of different data and MRV approaches.

3 Coherence between in-value-chain, BVCM and nature-positive approaches

Recognizing the role of landscape-level action to address emissions from agricultural and food value chains, there is a need for the alignment of in-value-chain, beyond value chain and nature-positive approaches:

- Create guidance on the strategic and complementary role of in-value-chain and beyond-value-chain approaches for agricultural and food value chains;
- Formulate recommendations on how to avoid double counting between value chains.

05. Next steps

To support action on these three priorities, WBCSD will be a convener, action platform and advocate for accelerating emissions reductions and removals in agrifood value chains:

- We will convene members to address the three priority actions through working groups and pre-competitive collaboration.
- We will support the regular convening of key platforms for land-based emissions initiatives, including those that focus on scope 3, BVCM and nature-positive initiatives for alignment and advocacy.
- This work will link closely with our wider work relating to policy, finance, high-impact landscapes and regenerative agriculture metrics.

We will also continue to explore the Climate-related Corporate Performance and Accountability System, convening key organizations to improve the system, orchestrate the world's leading businesses to drive systems change and advocate for the adoption of ISSB's climate disclosure standards.

Addressing these barriers requires collaboration across actors in the agrifood value chain and surrounding ecosystem. We welcome discussion and feedback on the findings of this report. To provide yours, please contact the WBCSD Agriculture & Food team newbury@wbsd.org.

Appendix

Acronyms, abbreviations and initialisms

| | |
|--------------------------|---|
| B2C | Business to Consumer |
| BVCM | beyond-value-chain mitigation |
| CO₂ | carbon dioxide |
| CPAS | corporate performance and accountability system |
| dLUC | direct land-use change |
| FMCG | Fast Moving Consumer Goods |
| GHG | greenhouse gas |
| GHG Protocol LSRG | Greenhouse Gas Protocol Land Sector and Removals Guidance |
| IPCC | Intergovernmental Panel on Climate Change |
| MRV | monitoring, reporting and verification |
| PACT | Partnership for Carbon Transparency |
| SBTi | Science Based Targets initiative |
| SBTi FLAG | SBTi Forest, Land and Agriculture Guidance |
| WBCSD | World Business Council for Sustainable Development |

Endnotes

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