

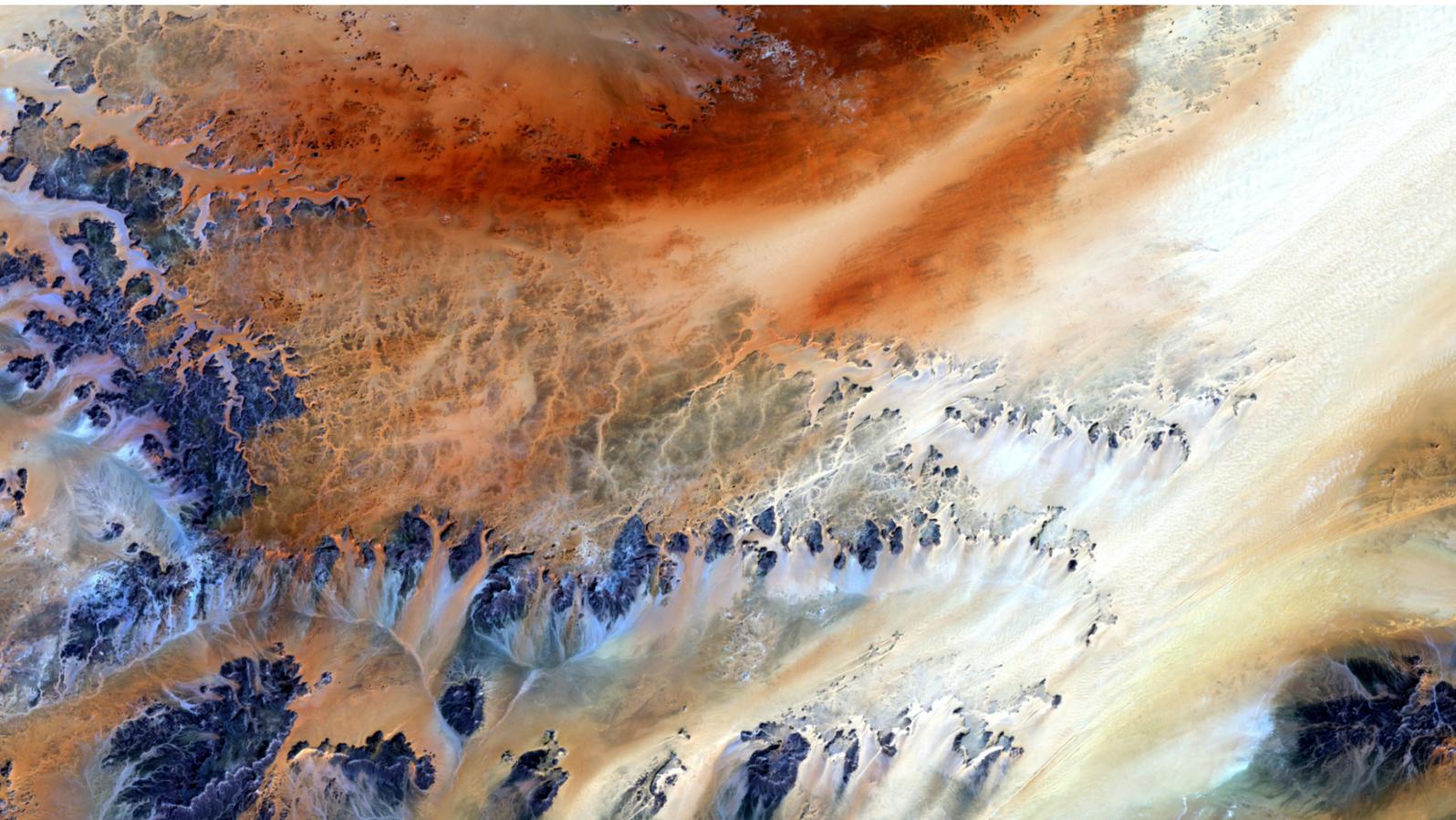
# DESIGNING A BALANCED DECARBONIZATION STRATEGY:

Combining Claimable Value Chain Interventions and Landscape  
Investment for Maximum Impact

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White Paper, January 2024

<https://sustain-cert.com/>



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# SUMMARY

Companies with Scope 3 agricultural greenhouse gas (GHG) emissions are exploring pathways to reduce these emissions and enhance removals in service of their Science-Based Targets (SBTs). Informed by the *SustainCERT Verification Requirements for Value Chain Interventions, v0.9 (SC VC 0.9)*, the draft *Greenhouse Gas Protocol Land Sector and Removals Guidance (LSRG)* and the *Forest, Land and Agriculture Science Based Target -Setting Guidance, v1.0 (SBTi FLAG)*, SustainCERT created a checklist of Intervention requirements (the Checklist) that was applied to assess the degree to which General Mills' Interventions and investments would enable validated and verified GHG mitigation outcomes, and the associated opportunity for co-claiming. Here, alongside SustainCERT, General Mills applied this Checklist to evaluate five Interventions designed to advance regenerative agriculture, reduce emissions, enhance removals, and support broader ecosystem services for people and nature in key ingredient Supply Sheds (a concept developed by the Value Change Initiative to help organizations mitigate emissions in their supply chains when there exists a lack of information and traceability from suppliers).

The outcome of evaluating the five Interventions against the Checklist indicated that only one Intervention satisfied the criteria for credibly co-claiming validated and verified reductions and removals. The other Interventions have potential for co-claimability, but General Mills indicated that necessary changes to align with the requirements in the Checklist presented various trade-offs for impact, feasibility, and/or scalability. Such trade-offs included higher Intervention investment, a greater reliance on granular, farmer-provided data, and the added complexity for implementation partners. Noting these trade-offs, and the various strategies for decarbonizing agricultural supply chains, there is certainly a role these four Interventions play on the Net Zero path and the enhancement of additional ecosystem services. Therefore, this paper also discusses other pathways in which value from these Interventions could be recognized, such as contribution claims aligned with the forthcoming *Beyond Value Chain Mitigation (BVCM)* guidance by SBTi, as well as the challenges that arise when Interventions do not align with existing frameworks.

# BACKGROUND

Companies worldwide have acknowledged the urgent threat posed by climate change and are proactively taking mitigation measures that go beyond current regulatory requirements. These measures often take the form of setting ambitious climate mitigation targets in line with the latest climate science. As of the time of writing, 5,378 companies have committed to reducing their emissions across their value chains in alignment with a 1.5°C pathway through their participation in the SBTi<sup>1</sup>. As outlined in the *Corporate Net Zero Standard*, guidance suggests that corporate climate action toward the 1.5°C pathway should include four key elements:

- Near-term science-based targets (SBTs),
- Long-term SBTs,
- Beyond Value Chain Mitigation (BVCM), and
- Neutralization of any residual emissions at the Net Zero target date.

Focusing on food and agricultural companies, in which land-related emissions are the greatest in Scope 3, a variety of decarbonization strategies can be deployed to align with the targets defined by SBTi. One of those mitigation strategies is the development of Interventions that result in a “reasonable level of assurance” and allow for credible co-claiming by adhering to a set of auditable criteria. These criteria are envisioned to be compatible with best GHG accounting practices (e.g., Greenhouse Gas Protocol, SBTi Net Zero, ISO 14064-1, ISO\_DTR\_14069, ISO 14068). The strategy of designing Interventions for BVCM is working in parallel, noting that guidance advises that companies should employ BVCM to supplement, and never to substitute, climate mitigation within their own value chains<sup>2</sup>. The purpose of this white paper is to explore the opportunities and challenges for recognizing Intervention contributions within existing frameworks and the implications for corporate decarbonization strategies.

## GENERAL MILLS’ OBJECTIVE

General Mills, Inc. (General Mills), an American multinational manufacturer and marketer of branded consumer foods headquartered in Golden Valley, Minnesota, serves the world by making food the world loves. In addition to General Mills’s Science-Based Target for Scope 3 GHG emissions, the company has a commitment to advance regenerative agriculture on 1 million acres of farmland by 2030. General Mills’s regenerative agriculture approach includes

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<sup>1</sup> “Companies Taking Action.” Science Based Targets, 2023., <https://sciencebasedtargets.org/companies-taking-action>.

<sup>2</sup> The Corporate Net-Zero Standard, 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>.

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supporting interventions as well as landscape-level initiatives designed to enable widespread adoption of regenerative management principles. General Mills's objective is to understand how best to represent this diverse strategy within existing frameworks for GHG accounting and corporate accountability.

Illustrated by Figure 1, Scope 3 indirect emissions account for the majority of General Mills's GHG inventory. As a leader in corporate climate change mitigation, General Mills has agreed to pilot test the GHG Protocol's draft *Land Sector and Removals Guidance (LSRG)* in anticipation of its final publishing in 2024. Furthermore, it is important to note that General Mills is not yet claiming climate impacts from Interventions and instead continues to explore the opportunities and challenges of validating and verifying outcomes for the purpose of co-claiming. In lieu of claiming impacts from Interventions, General Mills's near-term approach to reporting its GHG inventory involves monitoring emissions and removals at the Supply Shed scale using remote sensing and modelling in combination with traditional Life Cycle Assessment (LCA) approaches as reported here. General Mills and SustainCERT co-published a whitepaper in 2022 that discusses General Mills's monitoring approaches, *Hitting the Right Target: A Proposal for Monitoring Accurate Supply Shed Impacts*.

## GENERAL MILLS GHG EMISSIONS BY SCOPE (metric tons CO<sub>2e</sub>)\*

	SBTi Target boundary		GHG Protocol	
	Fiscal 2022	Fiscal 2021	Fiscal 2022	Fiscal 2021
Scope 1	317,900	349,200	317,900	349,200
Scope 2 (market-based)	74,100	178,300	74,100	178,300
Scope 3	15,727,500	15,465,900	19,234,400	19,254,800
<b>Total</b>	<b>16,119,500</b>	<b>15,993,400</b>	<b>19,626,400</b>	<b>19,782,300</b>

\* See below for GHG calculation methodology and definitions. Scope 1 and 2 totals differ from the Key manufacturing metrics to the left as the data in this table include those locations as well as other wholly owned or controlled facilities globally (such as offices and Häagen-Dazs shops) as well as fleet vehicles.

Figure 1: General Mills's 2022 GHG emissions by scope 1,2,3<sup>3</sup>

General Mills's Scope 3 GHG inventory includes material emissions associated with purchased agricultural commodities. The draft LSRG proposes new processes and requirements for calculating land-based emissions, as well as a pathway for the inclusion of carbon removals

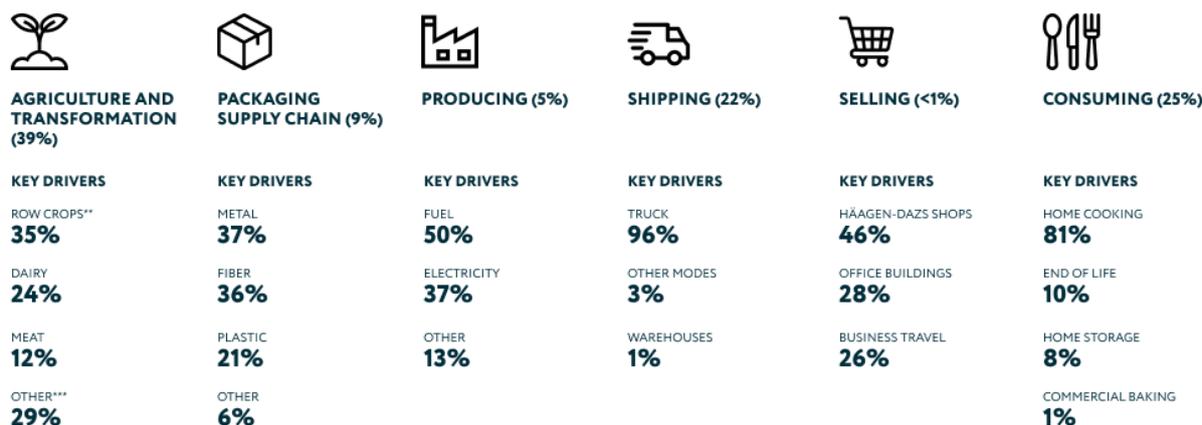
<sup>3</sup> General Mills. "Global Responsibility Report." 2023.

[https://globalresponsibility.generalmills.com/images/General\\_Mills-Global\\_Responsibility\\_2023.pdf](https://globalresponsibility.generalmills.com/images/General_Mills-Global_Responsibility_2023.pdf).

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within a reporting company’s value chain. General Mills has financed Interventions within its supply chain and is exploring the potential alignment of these supply chain projects with the draft LSRG. However, this phase is exploratory and General Mills has not yet sought to attribute the climate benefits of these Interventions to their corporate inventory. Figure 2 represents General Mills’s GHG emissions across the value chain. Noting that General Mills only controls a small portion of the value chain – a common attribute of complex agricultural supply chains – so collaboration across multiple value chain stakeholders is needed.

### GREENHOUSE GAS EMISSIONS ACROSS THE VALUE CHAIN\*



\* Percentages next to each phase represent the portion of General Mills’ fiscal 2022 value chain GHG emissions footprint.

\*\* Wheat, dry corn, oats, sugar beets

\*\*\* Cocoa, soybean oil and sugarcane represent nearly half of other

Figure 2: Source of General Mills’s emissions across the value chain and key drivers of each source<sup>4</sup>

## SUSTAINCERT’S OBJECTIVE

SustainCERT is a climate impact verifier on a mission to bring credibility to climate action. Founded by the Gold Standard Foundation in 2018 as an independent organization, SustainCERT combines deep climate expertise with technology to bring cutting-edge and scalable verification solutions to the market. Their work is designed to increase the speed and accuracy at which climate impact from carbon market and value chain decarbonization projects can be verified.

To ensure alignment with best practices for Scope 3 inventory and Intervention reporting, Sustain-CERT proposes technical assistance and advisory services as a supporting partner to General Mills within the framework of General Mills pilot testing the draft LSRG.

<sup>4</sup> General Mills. "Global Responsibility Report." 2023.

[https://globalresponsibility.generalmills.com/images/General\\_Mills-Global\\_Responsibility\\_2023.pdf](https://globalresponsibility.generalmills.com/images/General_Mills-Global_Responsibility_2023.pdf).

# ASSESSMENT OF GENERAL MILLS-SPONSORED SUPPLY CHAIN PROJECTS

## APPROACH

A cross-functional SustainCERT team conducted a review of selected General Mills-sponsored projects aiming at generating GHG mitigation outcomes in General Mills's value chain. The scope of work covered an assessment of conformance with the criteria outlined in three protocols: the draft *GHG Protocol Land Sector and Removal Guidance (LSRG)*, *SustainCERT's Verification Requirements for Value Chain Interventions, v0.9 (SC VC v0.9)*, and *the Forest, Land and Agriculture Science Based Target -Setting Guidance, v1.0 (SBTi FLAG)*. The SustainCERT team does not seek to validate or verify any components of the supply chain projects and their alignment with the above noted protocols. Conformance of GHG reductions or removals from General Mills-sponsored projects will ultimately need to be assessed outside of this pilot testing framework.

The assessment of the supply chain projects was conducted qualitatively in a matrix format. After two rounds of feedback and input from the General Mills team, attributes of the projects were assessed based on alignment with criteria (green), potential alignment with criteria if noted modifications were made (yellow), gap or misalignment with criteria (red), and not applicable (criteria does not pertain to the project).

## OVERVIEW OF SUPPLY CHAIN PROJECTS

Five General Mills-sponsored projects were evaluated for alignment with the SC VC v0.9, the draft LSRG, and SBTi FLAG. Broad alignment between project and protocol is indicated in Table 1 and applies the same color coding as described above to indicate potential alignment with the criteria outlined in the three protocols. Table 1 is intentionally simplistic with the aim to provoke conversation around the business and climate case for designing projects for claimability as value chain abatement. Table 1 is supported by more details in Appendix A.

### 1. Precision Agronomy:

- a. Location - Saskatchewan, Canada
- b. Supply Shed - Oat
- c. Intervention - Nutrient Management
- d. GHG Outcomes - Reductions
- e. Quantification Approach - Fertilizer zone maps, yield maps, drone & satellite imagery

**2. Soil Health Demonstrations:**

- a. Location - Minnesota, US
- b. Supply Shed - Sugarbeet & Wheat
- c. Intervention - Soil Health: Crop rotation, nutrient management, cover cropping, reduced tillage
- d. GHG Outcomes - Reductions & Removals
- e. Quantification Approach - IPCC Emissions Factors

**3. Regenerative Agriculture Pilots:**

- a. Location - Manitoba and Saskatchewan, Canada; North Dakota, US
- b. Supply Shed - Oat
- c. Intervention - Soil health: Crop rotation, nutrient management, cover cropping, reduced/no-tillage, livestock integration, adaptive grazing, biological inputs
- d. GHG Outcomes - Removals, soil health, biodiversity
- e. Quantification Approach - Primary data, soil carbon samples

**4. Competitive grants to local organizations:**

- a. Location - Northern Great Plains, Southern Great Plains, Great Lakes states, US
- b. Supply Shed - Oat, wheat, dairy
- c. Intervention - Enhanced technical assistance capacity, soil health practice implementation, edge-of-field practices, invasive species removal, habitat restoration, adaptive livestock grazing, nutrient management
- d. GHG Outcomes - Reductions and Removals, water and biodiversity outcomes
- e. Quantification Approach - Tracking of practice implementation

**5. Ecosystem Services Market Consortium (ESMC) Intervention:**

- a. Location - Kansas, US
- b. Supply Shed - Wheat
- c. Intervention - Reduced and no tillage, cover crops, nutrient management
- d. GHG Outcomes - Reductions and Removals
- e. Quantification Approach - DNDC modelling

Table 1: Simplified overview of project alignment with stated protocols - see Appendix A for more information. Green-aligned, Yellow-requires modifications, Red-misaligned\*

Guidance	Precision agronomy	Soil health demonstrations	Regenerative agriculture pilots	Competitive local grants	ESMC
Draft GHG Protocol LSRG	*Reduction outcomes only				
SC VC Req.v09					
SBTi FLAG					

\*Note: General Mills invests in various projects to reach its regenerative agriculture ambition. The assessment performed by SustainCERT on the projects noted above is limited to a comparison to the draft LSRG, SC VC V0.9, and SBTi FLAG. Other comparisons, and impacts associated with those, such as beyond value chain mitigation impacts, were out of scope for this paper.

## OPPORTUNITIES AND CHALLENGES IN RECOGNIZING CONTRIBUTIONS

### *Designing Interventions for Co-Claiming*

Credible and transparent GHG accounting is the foundation for a just transition to Net Zero<sup>5</sup>. To achieve this, General Mills follows guidance from the *GHG Protocol Corporate Value Chain (Scope 3) Standard* for their GHG accounting. Furthermore, they are both piloting and identifying supply chain projects that align with the *SC VC v0.9* and *SBTi FLAG*. The *SC VC v0.9* defines a set of auditable requirements that intend to ensure the credibility and transparency of the GHG mitigation outcomes associated with an Intervention. If the Intervention is validated and verified under a Level 2 Pathway, which enables the establishment of a “reasonable level of assurance”, the outcome is a transferable claim that can be both claimed by General Mills (as part of a Scope 3 reduction and/or removal) and transferred to other actors in the same supply chain that source from the defined Supply Shed. The co-claiming of mitigation outcomes is conducted through SustainCERT’s Value Chain Decarbonization Solution. *The SC VC v0.9* intends to maintain ongoing alignment with *GHG Protocol Corporate Value Chain (Scope 3) Standard* and forthcoming *LSRG* to ensure best practice GHG accounting and applicability of claims to a SBTi Net Zero context.

Our collective understanding for what constitutes a credible GHG emission reduction and removal continues to evolve to reflect scientific consensus and best practice in GHG emissions accounting. As this collective understanding evolves, companies must navigate the trade-offs between best practice accounting requirements and the costs associated with meeting said accounting requirements, such as the collection of primary data for the direct emissions associated with the Intervention. General Mills argues that not only is primary data sometimes

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<sup>5</sup> Science Based Targets initiative. (2021). Net-zero standard criteria. Retrieved from <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard-Criteria.pdf>

challenging to access, but in most agricultural value chains the burden of primary data collection for Interventions falls on farmers and other implementing partners. General Mills further indicates that the multitude of farmer barriers (technical, economic, logistical, administrative, and social) can hinder farmer participation, quality of data and overall Intervention development<sup>6</sup>. Overcoming these barriers often requires a dedicated effort to build user-friendly data collection systems, hire trained implementing partners to assist farmers with data entry, and provide economic incentives for data entry, in addition to providing the resources for behavior shift necessary to generate positive ecosystem outcomes.

However, requirements such as primary data, which are set out in the *SC VC v0.9* are essential to augment the credibility of GHG mitigation outcomes and to acquire a reasonable level of assurance which is necessary for enabling co-investment that could take place with co-claiming. This co-investment would enable a lower cost for Intervention implementation, ensure that the payment for enrolled farmers is greater, and more broadly enable collective action across the value-chain. However, meeting a reasonable level of assurance requires that the Intervention collects and applies primary data where feasible, quantifies outcomes through the application of a top-down methodology, and ensures the ongoing monitoring of carbon removals<sup>7</sup>. Therefore, it is important for companies such as General Mills to evaluate the potential financial opportunities, costs, and barriers that are associated with designing an Intervention for co-claiming.

Of the five projects evaluated, only the ESMC Intervention indicated potential alignment with the draft *LSRG*, *SC VC v0.9*, and *SBTi FLAG*. Areas in which gaps were identified among the other four projects were primarily orientated around data and monitoring. More specifically, the gaps include baseline and project scenario data availability and data quality (primary data), monitoring plan, data management systems, and the establishment of the boundary via material sources, and sinks and reservoirs. High quality data may not be available or accessible due to various reasons, such as lack of infrastructure, capacity of implementation partners to support data collection, and the other inherent challenges associated with farm data collection and reporting. General Mills overcomes these barriers in the ESMC Intervention through economic incentives for farmers tied to data reporting, supporting implementation partners with specific responsibilities for data collection, and leveraging ESMC's existing soil sampling protocols and

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<sup>6</sup> "Ag Carbon Markets and U.S. Farmers: A Farm Journal Trust in Food Discussion Paper." 2022. Trust in Food, Farm Journal, 2022, <https://www.trustinfood.com/wp-content/uploads/2022/05/Farm-Journal-Carbon-Whitepaper-2022.pdf>.

<sup>7</sup> Noting, that the monitoring duration of removals is under discussion and pending finalization of the draft *LSRG*.

Monitoring, Reporting, and Verification platform. General Mills noted that there is potential to add these resources to some of the other Interventions to enable co-claiming, but it brings trade-offs associated with greater cost, and added time and complexity.

### *Recognizing Contributions in Beyond Value Chain Mitigation*

The world will not limit global warming to 1.5°C without investing in nature-based climate solutions. And while there are four projects that did not currently align with the Checklist requirements, there is certainly a role these efforts play on the path to Net Zero and the enhancement of other ecosystem services. *SBTi Net Zero Standard* outlines the “mitigation hierarchy” under which companies must address value chain emissions and then take action to mitigate emissions outside of the value chain, or Beyond Value Chain Mitigation (BVCM)<sup>8</sup>. BVCM refers to the idea that companies take a more holistic approach to reducing their environmental impact beyond addressing emissions within their own value chains. In the context of this analysis, there is an opportunity for General Mills to continue developing and investing in the competitive local grants, precision agriculture, regenerative agriculture, and soil health demonstration Interventions even though these did not meet the co-claimability requirements in the Checklist. These efforts create value for the business and the planet by creating enabling conditions for climate impact, while generating a variety of ecosystem services beyond carbon. In fact, SBTi emphasizes that there is a particular need to focus on BVCM initiatives that generate additional benefits for both people and nature.<sup>9</sup>

The SBTi has launched a new initiative to release a guidance paper titled "Beyond Value Chain Mitigation" in 2023. The paper will offer guidance and suggestions to companies on the minimum standards required for credibility, as well as the best practices for transparency. Additionally, the SBTi will be examining the role of climate claims, along with other methods, to encourage the expansion of private sector climate finance. While the best practices of BVCM and potential contribution claims are still being defined in the forthcoming BVCM SBTi guidance document, benefits beyond contribution claims could include enhanced brand reputation, improved stakeholder relationships, reduced business risks, supply chain resilience and increased innovation opportunities.

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<sup>8</sup> "SBTi Net-Zero Standard." Science Based Targets Initiative, 2021, <https://sciencebasedtargets.org/resources/net-zero-standard>.

<sup>9</sup> Science Based Targets Initiative. (n.d.). Beyond value chain mitigation: FAQ. <https://sciencebasedtargets.org/resources/files/Beyond-Value-Chain-Mitigation-FAQ.pdf>

### *Limitations of Existing Frameworks*

While designing Interventions for credible co-claiming or as a BVCM contribution claim is an evolving space that intends to recognize investments and incentivize value chain decarbonization, there are instances in which Interventions are not perfectly aligned with existing frameworks. General Mills indicated that co-claiming the validated and verified outcomes of the competitive local grants may not be desirable as the Intervention is primarily designed to build staffing capacity to deliver farmer technical assistance and implement locally led initiatives. In this example, impact cannot be directly attributed to General Mills's investment; thus, representing an instance in which value of this effort is not adequately captured within existing frameworks for intervention or project-based accounting, and may be better captured as a contribution claim under BVCM. However, General Mills notes that current attempts to characterize such investment in indirect climate mitigation as BVCM implies that such investments only support mitigation outside of value chains, which according to the mitigation hierarchy should come secondary to mitigation within the value chain. General Mills argues that this characterization can limit investments that make value chain mitigation possible.

An alternative option for validated and verified claiming under the SC VC v0.9 is through a Level 1 pathway which results in a "limited level of assurance" for the claims resulting from an Intervention. A limited level of assurance has a differing set of auditable rules and requirements, such as the option for applying secondary data or average default emission factors for quantifying Intervention outcomes. The scope of this white paper did not evaluate the five projects against the rules and requirements of a limited level of assurance. However, it is relevant to note here that this pathway would result in a narrative claim that could be communicated through sustainability reports, but not transferred to another actor in a co-claiming effort. This pathway is mentioned here as another claiming option that General Mills could pursue for the four projects that did not meet the criteria in the Checklist. However, one of the primary limitations of this pathway is the inability to galvanize collective action to address shared Scope 3 emissions through co-claiming.

## CONCLUSION

In conclusion, decarbonizing the value chain in hard-to-abate industries will require a multi-faceted approach that includes designing Interventions for co-claimability, narrative claims as well as more broad-reaching efforts like Beyond Value Chain Mitigation (BVCM). Each effort plays a strategic and impactful role in driving collective action in shared value chains to bridge the gap to a Net Zero emissions economy. Furthermore, as our collective understanding and development of GHG inventory accounting and claims guidance evolves, there is an identified need to ensure that value can be captured for a range of Interventions that result in both direct and indirect mitigation outcomes and other ecosystem service benefits. Whether it is designing Interventions for co-claimability, BVCM, or a claimable value that is yet to be defined, General Mills's vision of collaborative stakeholder engagement across the landscape level is pivotal in accelerating the transition towards a sustainable, low-carbon future.

# APPENDIX

## APPENDIX A.

[Supply chain project assessment checklist](#)

