THE CLIMATE SOURCE

Additionality Considerations for Food Companies

Perspectives from the Livestock and Dairy Industry

Why Does Additionality Matter?

As food companies look to meet their greenhouse gas (GHG) reduction targets, they have increasingly invested in GHG reduction projects, both through offset programs and supply chain inset programs. To ensure the integrity of these programs, standards setting bodies have established project quality criteria. Additionality, which seeks to address whether GHG reducing activities would have occurred without a project, is one of these fundamental quality criteria.

Additionality has been a particular focus of observers concerned with greenwashing. Controversies related to deficient forestry credits have received coverage from major media outlets, such as The *Guardian* and *Bloomberg*.[1][2] As a result, pricing of forestry credits has deteriorated, traders have had to write off millions in forestry credits, and buyers who backed "net-zero" claims with forestry credits have faced greenwashing lawsuits.[3][4][5]

Facing pressure to invest in value chain decarbonization efforts, food companies have started partnering with cooperatives and farmers to reduce on-farm emissions through Scope 3 inset programs. In inset programs, the core concerns and approaches to additionality differ slightly from those of offset programs, due to different project standards and carbon accounting realities. Still, food companies must ensure their inset programs adhere to additionality principles mandated by GHG Protocol, SBTI, and CDP to mitigate risks related to assurance, reputation, and return on investment.

Overall, addressing additionality concerns in inset programs requires an understanding of how companies manage inventory accounting and measure project impacts. This white paper will first introduce key differences between offset and inset programs before exploring approaches to additionality in inset programs, focusing on examples from the livestock and dairy industries. In a follow-on paper, we will explore considerations for how food companies should navigate additionality risk in inset programs given an evolving inset landscape.

Additionality in the Context of Offsets and Insets

Broadly speaking there are two approaches to quantifying and claiming GHG mitigation:

- Offsets are certified, tradable credits that represent an exclusive claim on a metric ton of CO_2e abatement or removal from an offset project. These credits, which are not tied to a company's value chain, can be retired to offset a buyer's Scope 1, 2 or 3 emissions to meet emissions targets.

- Insets are semi-exclusive claims associated with a specific supplier or sourcing region. All upstream and downstream stakeholders that participate in Scope 3 reduction projects, such as avoided methane emissions from manure management projects, can co-claim the full reduction, so long as claiming parties have different positions in the value chain (e.g., a yogurt company, a distribution company, and a retailer). Meanwhile, Scope 3 removals, such as soil carbon sequestration projects, should be applied as exclusive claims.

Offsets and insets function differently in ways that impact how food companies approach additionality.

First, since offsets are not connected to a company's operations, including offsets in corporate emissions accounting is relatively straightforward. Meanwhile, for inset projects, which target a company's Scope 3 emissions, incorporating project impact in emissions accounting can be more complicated based on how the company manages emissions data. Without strong systems to translate project-based reductions into inventory accounting, companies might not be able to recognize project impacts as additional to inventory baselines without risk of double counting.

Second, procedures for additionality testing and baseline setting are more standardized and transparent in offset than inset programs. In offset markets, registries publish public protocols on how to assess additionality for specific project types (e.g., different protocols exist for afforestation, prevented deforestation, and improved forestry management projects). Meanwhile, the Greenhouse Gas Protocol Project Protocol does not provide project-specific guidance for projects within a value chain and provides implementing companies meaningful flexibility in how they assess additionality in programs. Program procedures for inset programs, including the level of rigor for additionality testing and baseline procedures, vary from program to program and are subject to negotiation between implementing parties. Thus, food companies and project developers carry more of the project integrity burden for inset programs than is the case for offsets.

Overall, inherent differences between how offset and insets are incorporated into emissions accounting and how they are regulated lead to added complexity for food companies seeking to ensure the additionality integrity of their programs.

Approaches to Determining Additionality with Inset Programs

One key difference between offset and inset programs is the degree of project-specific guidance provided on additionality. For inset programs, companies are largely responsible for determining their own program governance and rigor. Thus, companies should familiarize themselves with the two core additionality concerns for GHG reduction projects:

- Determining whether projects generate claims of additional GHG impact; and
- How to quantify the GHG reduction impact of a project against a counterfactual baseline.

While offset protocols often describe detailed procedures for conducting additionality tests, the GHG Protocol's Project Protocol does not require additionality testing procedures for inset projects. Instead, additionality is pressure tested through baseline procedures.

Determining Whether Projects Generate Claims of Additional GHG Impact

Additionality Testing for Offset Markets
In offset markets, one core additionality question is whether an offset project would have happened without the financial investment provided by a project. This is a critical feature of the offset process since offsets represent a tradable asset equivalent to a metric ton of CO_2e abatement. To assess this question, project protocols prescribe a series of additionality tests. These tests may look different across registries and protocols, but generally follow a common structure. A high level summary of these steps are included in Figure 1.

Assessing Incentive Impact in Inset Markets
While offset markets aim to generate tradable assets, inset projects aim to reduce the GHG footprint of a food company's supply chain. Therefore, assessing additionality in inset programs depends on the type of claim the food company seeks to make.

Figure 1: Additionality Testing Process in Offset Markets Based on the Clean Development Mechanism (CDM)

Step 1: Certain registries may approve projects as additional if the project type is on the CDM's positive list of technologies. Subject to registry policies, projects on the pre-approved list qualify as additional.

Step 2: Assess alternatives to the project activity. Project developers should identify all other viable practices that are consistent with laws and regulations.

Step 3: Conduct an investment analysis or barrier analysis. If either analysis passes, move on to step 4. If both analyses fail, the project is not considered additional.

- Investment analysis compares the project activity to alternatives. The test should demonstrate that the project is not an attractive investment relative to alternative practices or do-nothing scenarios
- Barrier analysis should demonstrate that the project alleviates barriers related to capital, technologies, or skilled labor that prevent the proposed project activity from occurring.

Step 4: Conduct the Common Practice Analysis. If the analysis passes, then the project is considered additional.

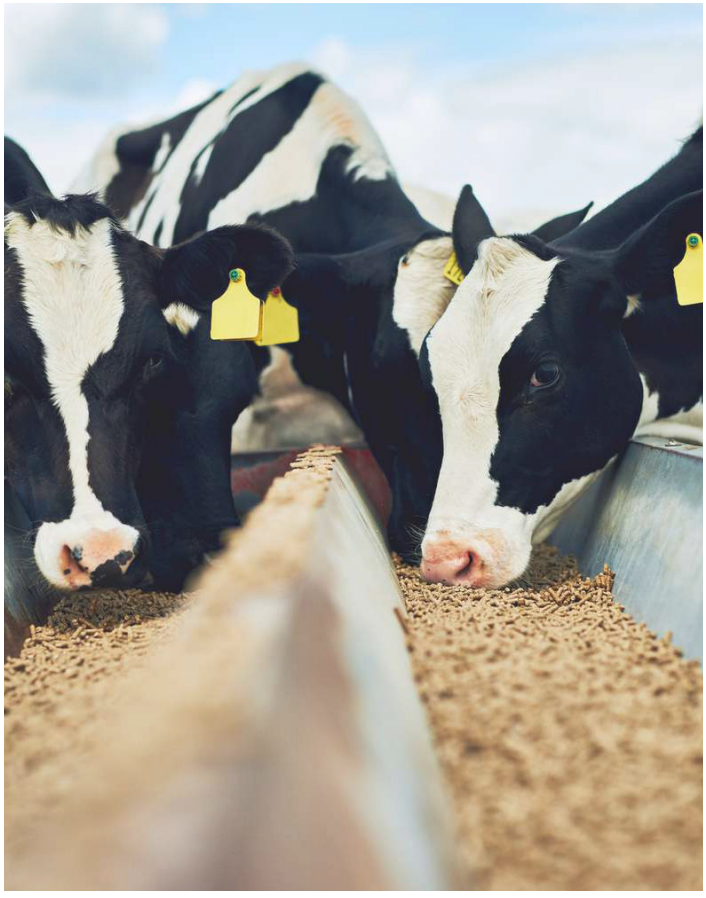
- Common Practice Analysis defines a threshold of practice penetration (e.g., 20% of suppliers in the same national boundary). Practices where adoption is above the threshold are not considered additional.

Companies can make a variety of claims about their Scope 3 emissions. For project-based reduction claims, additionality implies that a company has a causal relationship to a reduction project. Food companies may choose to follow similar procedures as offset testing approaches; however, a variety of practices from offset additionality testing frameworks make less sense in inset contexts:

- Disqualifying projects that are considered "common practice" may lead to suboptimal penetration of GHG reducing practices that may not occur without outside investment. For example, in livestock and dairy, feed additives focused on reducing methane emissions may have limited to no economic value to farmers apart from carbon program revenues. For these practices, companies should seek to fund practice penetration beyond "common practice" thresholds, which can be as low as 20% in offset markets.

- In certain situations, suppliers may have a history of using GHG reducing practices. These suppliers do not qualify for payments under traditional offset additionality testing frameworks. Offset additionality tests may under-report the suppliers' past efforts, frustrating suppliers and de-incentivizing them from participating in new programs.

- There are cases where the lack of, or discontinued, funding has caused the end of a practice use. For example, in California, between 2006 and 2018, 14 anaerobic digester projects were shut down (compared to 20 operational projects at the end of 2018), due to a mix of regulatory and economic challenges.[6] With practices that involve ongoing operational costs and dynamic economic circumstances (e.g., changing market costs, public funding sources, etc.), companies may need to ensure the continuation of GHG reducing practices without continually conducting investment additionality analyses.



Meanwhile, for emissions inventory reduction claims, drawing a casual relationship to a carbon intensity improvement is not necessary since Scope 3 emissions reductions will register in inventory emissions regardless of what actor (upstream, downstream, government, etc.) makes the reduction investment.

Determining the additionality of Scope 3 reduction projects is more of an imperative of ensuring financial efficiency as opposed to regulatory compliance. To understand whether a project has meaningfully advanced a corporation's progress towards their Scope 3 emissions inventory target, the corporation must understand the practice assumptions inherent to their inventory baseline. For example, if a dairy company's Scope 3 inventory baseline assumes that 30% of milk volumes come from farms that use feed additives, then that company should report progress toward its Scope 3 target only if they incentivize adoption of feed additives beyond the 30% threshold.

In practice, food companies likely neither know practice adoption rates across their global supply chains nor the supplier adoption assumptions inherent to their inventory baselines. These data deficiencies make it difficult to truly assess the additionality of projects. Given these realities, companies may need to make parallel investments in supply chain data along with project-based reductions programs. Ensuring supply chain actors invest in capacity building on both program and data capabilities will set food companies up for success as emissions data systems improve.

How to Quantify the GHG Reduction Impact of a Project Against a Counterfactual Baseline

The second core additionality consideration for offset markets is how projects quantify the additional impact of a project. In broad strokes, this process is achieved by comparing project emissions against the estimated emissions of a baseline scenario, which represents the most likely outcome absent the project.

In offset markets, project-specific guidance published by registries will often provide specific guidance on baseline and quantification processes. For example, the American Carbon Registry, Verified Carbon Standard, Climate Action Reserve, and California Air Resources Board all provide different baseline scenario procedures for Improved Forestry Management (IFM) projects.[7]

With inset programs, the Greenhouse Gas Protocol provides flexibility in how project developers design their baseline and quantification processes. This flexibility is practical, given the different circumstances projects may occur under and availability of historical data. For example, with a program on a single dairy farm, different geographic ranges may be appropriate for feed cropping interventions and manure interventions. Feed cropping norms are influenced by local availability while manure management norms are influenced by farm scale. Although the two factors may have some geographic overlap, a developer could reasonably define different geographic boundaries for the two interventions.

The flexibility project developers have in designing baseline processes has benefits, such as adaptability to varying circumstances; however, it also comes with several drawbacks, including lower comparability, risk of external criticism, and high program transaction costs. Therefore, there may be an opportunity for industry groups to work together and align on project-specific best practices to simplify the baseline aspect of project development.

Conclusion

Overall, additionality principles are a core part of carbon program integrity. Ensuring that inset programs follow additionality principles will minimize risks related to assurance, reputation, and return on investment.

In the current state, the realities of Scope 3 emissions accounting and regulatory guidance on inset programs complicate the application of additionality principles to inset programs; however, improved data infrastructure and standards set at the industry level will resolve these challenges. In the meantime, food companies can set themselves up for success through by:

- Investing in the data capabilities of supply chain actors, along with expanding already existing project-based reduction programs; and
- Determining internal approaches to baseline methodology and rigor; and
- Collaborating with industry groups and standard-setting bodies to establish practical best practices for inset programs.

In our next paper, “Addressing Additionality in Inset Programs”, we will build on these concepts to discuss practical steps food companies can take as they scale their Scope 3 decarbonization programs.

Notes

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