



C-AGG Executive Summary: Additionality in Agricultural Offset Protocols

This Executive Summary is based on the C-AGG white paper of the same name. Both documents seek to achieve agreement on approaches for determining additionality as it applies to the agricultural sector. Whereas this Executive Summary distills the most salient concepts of the white paper for discussion and agreement, the white paper presents a more in-depth analysis of additionality and how it should be addressed and accounted for in offset projects and/or programs.

Climate change mitigation opportunities and outcomes, and incentives to promote or enhance adoption of these opportunities by the agricultural sector, are a central focus of C-AGG. The issue of additionality is a central component of greenhouse gas (GHG) offset protocols, and is an important concept to ensure the integrity of GHG emissions reductions programs. Additionality refers to the concept that GHG emissions reductions for credits must result from additional action or action that likely would not have happened in the absence of the incentive provided by the carbon market.

C-AGG identified additionality as one of five core principles in its' April, 2010 report¹, stating: *"Only net reductions of atmospheric GHG concentrations beyond business as usual should be rewarded."*

Agriculture is Different

Additionality as it applies to the agricultural sector has a somewhat unique context. Agricultural systems are managed biological ecosystems, characterized by variability from farmer to farmer, farm to farm, season to season, and often, intra-annually. Farmers manage production on a daily basis, adjusting practices and inputs to address changes in weather, precipitation, pests, input costs, and other variables. Determining what is business as usual, and what is 'additional', can thus be tricky.

The biological complexity of agricultural ecosystems confers benefits, as well. Agricultural GHG mitigation activities are characterized by many ancillary co-benefits that contribute other ecosystem services and societal goods. Some of these benefits can be monetized and accrue additional financial incentives to stimulate change among producers, but most cannot. Experience with project development in the agricultural sector has shown that ancillary co-benefits typically outweigh the value of carbon credits, and are often necessary to make the business case for change. Additionality tests must not constrain the incentives for these ancillary benefits, but should encourage them.

Key C-AGG Statements and Strategies for Determining Additionality for Agriculture

Based on the unique circumstances of agriculture, C-AGG recommends four key strategies to determining additionality for the agricultural sector:

¹ Coalition on Agricultural Greenhouse Gases, *Carbon and Agriculture: Getting Measurable Results*, Version 1, April, 2010.

1. Standardized methods and approaches should be utilized;
2. Experts in agricultural science and practice must be involved;
3. Barriers to practice change are a hallmark criterion; *and*
4. Project developers and aggregators are recognized agents of change.

Strategy One: Standardized Methods and Approaches Should be Utilized to Determine Additionality

Summary: Project-by-project determinations of additionality are resource-intensive and difficult to ‘prove’, given the variability common to agricultural operations. Standardized approaches or criteria, to include ‘positive lists’ of activities, performance benchmarks, or pre-approved additionality tests are viable options to aid in additionality determinations. These simplified or standardized approaches should be embedded in protocols, or established as programmatic rules for agricultural protocol development.

Standardized approaches to additionality can aid in removing barriers to farmer engagement, reduce transaction costs, enhance outside investments, and help achieve scale while retaining program integrity. Agreement on additionality strategies and criteria that are sensitive to the realities of agriculture can further create harmonization across registries or programs to avoid market fragmentation, confusion, and uncertainty among project developers, agents of change, and agricultural producers. Still, care must be taken to avoid standardized additionality tests that hamper participation by creating uncertainty or that unduly exclude projects or practices that are additional.

Innovation is another of C-AGG’s five core principles. C-AGG has determined that “accelerating innovation is crucial to delivering substantial net reductions in atmospheric GHG concentrations².” It is critical that standardized methods and approaches recognize and embrace innovation as a key means of accomplishing net emissions reductions at a scale that matters, and avoid hampering innovation.

Definitions:

Positive lists: lists of activities deemed at the program level to be additional by virtue of meeting criteria established to ensure the activities are beyond business as usual.

Performance benchmarks: the use of criteria or thresholds to assess what is common practice based on rates of adoption or penetration within a given boundary.

Approved tests: identification of tests that must be met to show additionality. Approved tests can include:

regulatory additionality (i.e., action must not be mandated by law or regulation);

threshold dates (i.e., dates beyond which an activity will not be deemed additional);

barrier tests, which show significant financial, technological, informational, or cultural barriers to adoption;

innovation tests, showing the novelty of an action compared to common practice;
and/or

ancillary co-benefits test, showing that an action will provide co-benefits that may not otherwise be captured or monetized, and that the combination of the project activity and co-benefits is necessary to incentivize the action.

Examples or case studies: Some pilot agricultural projects have required inclusion of tens or even hundreds of farmers in order to reach a marketable scale for potential agricultural offset credits.

² *ibid*

Achieving true scale within the agricultural sector – and meaningful mitigation of GHG – will require that we engage thousands and tens of thousands of farmers. The application of complex project-by-project additionality tests to each agricultural operation – particularly operations that may exhibit highly variable management systems – can make the transaction costs associated with this test higher than potential project outlays. Individualized assessments or uncertainty associated with additionality tests can also deter project investments or producer participation, particularly if additionality is only decided after project planning and implementation. Project investors and farmers want to know in advance of making investments and altering their fundamental operations whether the adopted practices will be considered additional. Certainty is also fundamentally important to making the business case for practice change.

The practice of establishing penetration rates for certain best management practices as baseline additionality tests can be beneficial as a standardized approach, but will deter participation or practices changes if the established penetration rate is too low. Some registries and programs have proposed a 5% penetration rate as a cut-off for additionality, but this rate in effect means that, for practices with significant barriers to adoption, only innovators will be deemed as additional, which will prevent beneficial change from being promoted or incentivized within the agricultural sector. Alternatively, a new practice or technology that lacks significant barriers to adoption may reach penetration rates beyond 5% without offset incentives, so other additional tests would need to be applied in combination.

Positive lists can create certainty, but may also have the unintended consequence of leading to the development of protocols that only reward certain practices. In contrast, a standardized approach that supports a particular level of practice adoption, or a target emissions reduction (such as a performance benchmark), offers certainty to farmers and project developers while allowing for and even encouraging innovative new practices.

Strategy Two: Experts in Agricultural Science and Practice Must be Involved in Determining Additionality Approaches and Tests

Summary: Standardized approaches to additionality are best decided with the considered expertise of agricultural practitioners and scientists who have direct familiarity with agricultural management. Such expertise can aid in assessing what are and are not common agricultural practices and management actions at the farm scale (or greater), can identify true barriers to change, and can determine whether ancillary benefits meet critical thresholds that confer additionality to a project and/or program.

Example or case study: Nitrous oxide (N₂O) is a GHG of significant concern in agriculture. N₂O emissions can be reduced through improved nitrogen management (addressing the rate, timing, product, and placement of nitrogen fertilizers, for instance, matched to the cropping or management system). Variables that can impact N₂O emissions from agriculture are highly complex and often interrelated. Technical and practical expertise is required to understand these interactions fully, and to assess additionality at the farm, project, or program scale in a manner that does not constrain or oversimplify N₂O management issues, but rather assesses and encourages beneficial nutrient management strategies that lead to net GHG emissions reductions.

Strategy Three: Barriers to Practice Change and Needed Support for Practice Change are Hallmark Criteria for Determining Additionality

Summary: It is difficult within agriculture to effect beneficial changes in a 'one-size-fits all' approach, which complicates the identification of simple and effective standardized approaches to additionality. Financial (including equipment), cultural, and educational barriers to practice change typically simultaneously exist. One must assess the need for financial, capital, infrastructure and technical or educational support to effect practice change while still meeting a producer's needs and while mitigating GHG emissions at a meaningful level that can lead to scale. Additionality should be deemed to be met when a project developer documents how they overcame these barriers to produce a protocol that engages agricultural producers and allows their participation in carbon markets.

Example or case study: Farmers have significant investment in current management systems, equipment, and methods of operating. Farmers are not like factory operators who can install a scrubber to change their smokestack emissions. Changes in management systems or capital investments on the farm are often akin to installing a whole new assembly line. In addition to financial barriers, cultural and educational barriers can prevent implementation of a new practice even after infrastructure or equipment changes are made. Therefore it makes most sense to apply additionality criteria to aggregators who can bridge the cultural and education gap between adoption and non-adoption of new practices and management systems at the farm scale.

Strategy Four: Project Developers and Aggregators are Recognized Agents of Change

Summary: Almost universally, additionality requires that rewarded actions be motivated by the offset program. For agriculture, individual farmers require agents of change to link carbon market offset opportunities and requirements with necessary practice changes. Project developers and aggregators are the necessary change agents that engage in education, outreach, and the pooling of resources to engage farmers, develop projects, and achieve participation at a scale that will have impact and increase certainty to ensure program integrity. Without these agents of change, penetration of GHG mitigation activities in the agricultural sector is highly unlikely in timeframes or scales that matter.

Example or Case Study: The following case study is from the Delta Institute/National Wildlife Federation (NWF) GHG Conservation Innovation Grant (CIG) Pilot project of nitrogen management for reduced N₂O emissions. The project developers have found that with current high grain prices and low carbon market prices, there is not a business case to be made for a farmer's involvement in carbon markets. However, farmers may respond to a business case for improved nutrient management that can reduce fertilizer input costs and increase yields. Carbon credits can be used as a bonus payment or incentive for agricultural producers, but hardly act as a primary incentive, given the economics. The presence of the carbon market, however, did incentivize the Delta Institute and NWF to act. This example suggests that the aggregators (Delta Institute and NWF in this case) are the entities which should be tested for additionality.