Principles for Transparency in Agricultural Climate Markets

Background

Natural climate solutions are integral to meeting societal needs to reduce atmospheric carbon dioxide and other greenhouse gases, meeting Paris commitments, and ensuring our climate is sustainable for future generations. These solutions include conservation, restoration, and/or improved management actions that increase carbon storage and/or avoid greenhouse gas emissions across global agricultural lands, forests, wetlands, grasslands, coastal areas, and open ocean systems. These represent a set of potential near-term opportunities to reduce net emissions while longer term solutions for producing and using energy, and technologically removing CO_2, are developed and implemented at scale. To unlock these near-term solutions that working croplands and rangelands can provide, growers and land managers need technical assistance, capital investment, and financial tools and incentives to change practices and manage the risk associated with new methods. Carbon markets are one among a suite of mechanisms used to address this need.

The Agricultural Climate Markets Collaborative (see members attached) is a voluntary group facilitated by Keystone Policy Center. Keystone convened Collaborative members to identify collective, precompetitive actions that could create more transparency and build trust in the marketplace; provide more coordinated and consistent feedback to protocol bodies, USDA, and others; and ultimately contribute to a clearer marketplace that can scale towards meaningful impact. The first step that the Collaborative has taken is to create a set of voluntary precompetitive principles for transparency for carbon sequestration, greenhouse gas emissions reductions, and ecosystem service credit[1] program developers, and corporations with supply chain sustainability programs. The Collaborative will continue to address issues and challenges specific to applying market-based[2] approaches to climate change mitigation in the agricultural context – with the intention to engage with stakeholders such as growers, carbon registries, supply chain companies, and the USDA.

Agricultural soils are a large land-based sink for atmospheric carbon with additional potential to contribute to the sequestration of atmospheric carbon, though questions still remain as to the magnitude and rate of this mitigation opportunity.[3] This potential has spurred a desire to connect growers with carbon markets to realize the environmental and economic value of agricultural practices

[1] *Ecosystem service credits are quantified environmental outcomes of projects or broader interventions, which are credited for environmental claims to be transferred between entities.*

[2] *Market-based approaches operate on the principle that changes in resource use and/or environmental impacts occur as a result of changes in demand for a good or service and changes in price of that good or service. With climate markets, the value of environmental services is priced to have a positive effect on environmental impacts.*

[3] IPCC, 2019. *Climate change and land: An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems* (28). https://www.ipcc.ch/site/assets/uploads/2019/08/4.-SPM_Approved_Microsite_FINAL.pdf

that increase the carbon in soils. However, uncertainty around the measurement, verification, and permanence of soil carbon sequestration has placed the burden on program developers to ensure the integrity of accounting for soil carbon removals, either as a carbon credit or supply chain emission reduction. Integrity withstanding, solutions that are intended to lead to increased soil carbon may also come with many co-benefits including improvements to downstream water quality, habitat and biodiversity, reduced agricultural water usage and soil erosion, and enhanced on-farm productivity and finances. Therefore, incentivizing agricultural practices focused on reduced emissions and soil health is critical. These practices may also make agricultural lands more resilient to extreme weather events.[4]

To realize this multi-layered value for growers, local and downstream communities, the supply chain, and the environment, private and voluntary programs have emerged that incentivize greenhouse gas mitigation activities through multiple market-based approaches including carbon crediting systems and value chain interventions. The entities managing these approaches are referred to as "program developers" below. The competition in this space has resulted in a diverse set of offerings, and the newness of the industry means that approaches are largely unstandardized. The following principles for transparency represent an initial attempt to clarify where program developers stand on key program elements, which lays the foundation for identifying areas of further alignment.

Principles for Transparency

Market-based climate solutions for agriculture will not reach scale unless both growers and buyers are provided with the ability to make informed decisions regarding their participation in these approaches. Below are areas of critical importance for program developers when engaging with growers and buyers. Overall project design, including the types of credits generated, accounting protocols and management of associated risks, should be transparent to inform both the grower's and buyer's choice of program developer. Common terminology for use by program developers will assist in ensuring clarity and increase understanding of the differences amongst offerings. Transparent outreach and education will enable program developers to articulate the risks and rewards of market participation.

To set a bar for transparency, the Agricultural Climate Markets Collaborative has developed the following principles to promote industry credibility in the broader agricultural carbon and ecosystem services marketplace. Given that the marketplace is rapidly evolving, these ideas will be iterative, and these principles represent the first set of best practices that the Collaborative has identified.

Each program developer should be clear with growers and buyers about how they are defining credits for ecosystem services. This information should be easily accessible and conveyed prior to contracting, including clear and understandable descriptions of each of the following and how they will be addressed.

A. Eligibility: Program developers should clearly communicate the types of farmland and agricultural entities currently eligible for their programs, including geographies, production systems, climate-smart practice adoption, land use, and land ownership status.

[4] FAO, 2021. *Climate resilient practices: Typology and guiding material for climate risk screening* (2-9). https://www.fao.org/3/cb3991en/cb3991en.pdf

B. Contract obligations: Program developers should make a summary of contract terms publicly available (i.e., easily accessible on program developer website) and provide the terms to growers. The summary should spell out the duration of a contract, the transferability of a contract between subsequent landowners, the consequences of partial or non-fulfillment of the contract, including practice reversals, and conditions that may lead to the cancellation of the contract.

C. Asset types: Program developers should be clear about the assets being procured and transferred in the transaction including but not limited to:[5]

1. Greenhouse gas scope:
    - Atmospheric soil carbon removals through the deployment of practices that sequester carbon in soils and woody biomass via restoration and management of vegetation, which may be coupled with GHG reductions and accounted for via net emissions reductions.
    - Greenhouse gas emission reductions from practices that reduce/avoid conversion/degradation of the natural system, and changes such as improved nutrient, manure, and feed management, switching to alternative energy sources, and improved energy conservation, which may be coupled with removals and accounted for via net emission reductions.
2. Ecosystem co-benefits from climate-smart practices, including reduced nutrient, sediment, pesticide, and water runoff or leaching from farm fields, which improves water quality, protection of wildlife habitat and biodiversity, reduction in water use, and many other ecosystem services
3. Market-based approach:
    - Carbon credits generated outside of a country, state, company, or other defined entity's supply chain to compensate for the entity's emissions
    - Environmental outcomes generated within an entity's supply chain that reduce its emissions or environmental impacts.

D. Standards: Program developers should be clear about the accounting, reporting, and verification standards being used to generate the credit and its relationship to the value of the credit, when relevant. The standards body should have clearly defined methodologies and other program governance policies that are clearly understood and that detail how the standard addresses:

1. stakeholder consultation
2. additionality and leakage
3. robust quantification of emission reductions and removals
4. accounting and double counting
5. permanence and risk management strategies related to non-permanence such as buffer pools
6. third-party verification
7. assessment of social impacts
8. contribution to restoring and improving adaptation and resilience
9. support for the poorest and most vulnerable and affected by climate change.

Program developers should also make clear if they are generating and selling credits outside of independent registries or other carbon-credit certifying bodies.

[5] In cases where the asset category and buyers may not be finalized at the time of contract, this information should be furnished when it is available.

E. **Data requirements:** Program developers should clearly state the required grower data inputs, including their compatibility with hardware and software systems (e.g. brands of variable rate fertilizer application and yield monitoring equipment and software). Quantification, verification, and certification processes for credits should be grounded in science and transparent to the growers. Potential impacts to on-farm operations from data provisioning should be clear, including the need for and frequency and requirements of onsite visits and which individuals they will need to interact with.

F. **Models:** Program developers may use different models to estimate outcomes and determine credits based on practice changes. Therefore, it is important to share with the grower what models are being used, the kind of data input required (e.g. soil sampling or test results, climate-smart practice data, farm operation input data such as fertilizer application rates, etc.), and the assumptions those models are using to inform the generation of credits. If program developers are using proprietary models, they should still make basic assumptions and lists of underlying datasets (e.g. soils and weather databases) available for review.

G. **Ownership of credits:** The ownership of the realized value, or credit, from ecosystem benefits should be clear. The intended buyers for the credit should also be made clear as soon as they are known, as well as the potential transferability or fungibility of the credit.[6]

H. **Grower financial obligations and payments:** When applicable, program developers should make clear the financial obligations of the grower and program developer. This includes information on the overall price of the credit, and how that price may differ from the actual payment made to the grower. The accounting should be clear on how the price of credit and payment to the grower were calculated, including administrative costs and possible additional third-party costs (e.g., soil sampling and testing, grower or credit aggregator services), and how the payments will be governed. Where applicable, the use of uncertainty calculations and their relationship to payments should also be clear. Ideally, this information should be communicated in payment/acre to allow growers to make informed choices across different program developers.

I. **Data ownership and privacy provisions:** Program developers should be clear about their data ownership and privacy provisions and are encouraged to use the Ag Data Transparent[7] principles to inform transparency of data ownership and privacy provisions.

J. **Contractual noncompliance and acts of God:** Program developers should be clear about instances where contract noncompliance occurs, or the contractual contingencies addressing risks that are a result of events outside the grower's control, such as extreme weather events.

K. **Program developer disclosure**: Program developers should disclose any customer, membership, or other relationship requirements that growers must meet to participate in the market program. Additionally, program developers should disclose if the grower is required to purchase or utilize any specific product/service from the program developer or other specified entities. The program developer should also disclose if the grower is required to sell commodities or other goods or services to a program developer or program developer partner.

[6] In cases where the asset category and buyers may not be finalized at the time of contract, this information should be furnished when it is available.

[7] The Ag Data Transparent principles are published online: https://www.agdatatransparent.com/principles

Endorsements

The following organizations endorse the principles as best practice for the program developers of agricultural climate markets.

- American Farmland Trust
- Bayer
- Corteva
- Ecosystem Services Market Consortium
- Indigo Ag
- Nori
- Nutrien
- Regrow Ag
- Soil and Water Outcomes Fund
- The Nature Conservancy
- Truterra

The following organizations contributed to the development of these principles.

- EDF
- Farmers Business Network
- Field to Market
- Strategic Conservation Solutions