



Testimony of Callie Eideberg

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House Committee on Agriculture

Voluntary Carbon Markets in Agriculture and Forestry

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Thank you, Chairman Scott, Ranking Member Thompson and all the Members of this Committee for the opportunity to provide testimony about the role of agriculture in voluntary carbon markets. I am honored to share Environmental Defense Fund's perspective.

EDF is a leading international nonprofit organization that creates transformational solutions to the most serious environmental problems by linking science, economics, law and innovative private-sector partnerships. With more than 2.5 million members and a global staff of 750 scientists, economists, policy experts and other professionals, we're one of the world's largest environmental organizations.

At EDF, we are also proud to collaborate with farmers, farmer organizations, land-grant universities and businesses throughout the supply chain to ensure a climate-resilient and profitable future for U.S. agriculture. EDF's farmer advisory board is instrumental in shaping our agricultural policy and research priorities, and EDF helped found the Food and Agriculture Climate Alliance, along with leading agricultural and commodity groups, to build support for agricultural climate solutions and innovative approaches like voluntary carbon markets.

As the Director of Government Relations, I advocate for policies that reduce the climate impact of farming and agricultural production, while simultaneously maintaining or improving farmer profitability. This is a tough path to carve, but it can, and must, be done.

Farmers, foresters and landowners are squarely at the intersection of climate adaptation and mitigation. Domestic farming operations contribute approximately 10% to overall U.S. greenhouse gas emissions and are also at high risk from climate-induced stressors such as heat, drought and pests.

Voluntary carbon markets, although currently in their infancy, have the potential to reward producers for practices that can reduce greenhouse gas emissions and may

sequester carbon in soil, plants and trees, while also improving the resilience of farms and rural communities.

However, the U.S. voluntary carbon market currently involves multiple carbon registries and protocols for different types of emissions reduction and carbon removal practices, with variable measurement and accounting approaches. For some newer credits, such as soil carbon credits, we need standards for consistent, transparent measurement and accounting. Otherwise, farmers, other credit developers and purchasers risk investing in poorly quantified and potentially reversible climate benefits.

As our understanding of long-term sequestration potential evolves, the U.S. Department of Agriculture and Congress should support efforts to secure emissions reductions through increased efficiency in on-farm operations, fertilizer management and methane management. Developing these elements of the carbon market now will provide more time to develop high-quality credits through soil carbon sequestration.

EDF recommends a number of policy principles to help build a high-quality carbon market that compensates farmers for putting America's working lands to work for climate action broadly, equitably and with strong integrity.

This testimony will focus on four areas of policy that Congress should consider when developing voluntary carbon markets for working lands: quality framework and assessment of protocols; research and incentives; benefits for early adopters; and technical assistance.

1. Quality framework and assessment of protocols

The voluntary market for greenhouse gas emissions reductions or net carbon sequestered in the agriculture and forestry sector is growing rapidly with a wide range of differing crediting standards. Congress can help provide clarity by establishing a framework for quality assurance. This framework would not prescribe the use of specific protocols but would instead set quality objectives to ensure that the voluntary credits assessed across different climate registries are comparable and equivalent.

EDF recently published a report comparing existing protocols used to generate credits for soil carbon sequestration and found that the protocols differ in the treatment of additionality, uncertainty, permanence and reversal, leading to inconsistency of credit quantification. This variation causes uncertainty for farmers generating credits and for buyers purchasing credits, and makes it difficult to determine if credits are truly delivering net climate benefits.

The inconsistency undermines confidence in and the credibility of voluntary agricultural carbon markets. A protocol assessment by USDA or a neutral third party would reduce risks across markets and could assist with moving from isolated projects to a scale that can address reversal, additionality and permanence and make a real contribution to the climate effort.

One possibility would be for USDA to establish an advisory group to define criteria for greenhouse gas quantification; monitoring, reporting and verification, or MRV; and social impact guardrails. The advisory group deliberations would be transparent and published on the USDA website and membership would be drawn from USDA, civil society and carbon market experts. EDF, along with partners World Wildlife Fund and Oeko-Institut, authored a report that identified six "quality objectives" for carbon credits and established specific criteria that can be used to evaluate credits against each of these quality objectives. This could be a starting point for the advisory process.

Once criteria are agreed upon, USDA would publish the criteria and use them to assess, score and certify registries' methodologies and categorize credits in accordance with their level of scientific certainty. USDA would publish the evaluation of protocols, driving all protocols to adhere to the quality criteria set by USDA.

2. Research and incentives

Congress should direct USDA to prioritize scientific and economic research about voluntary markets and the agricultural practices that are most likely to provide a return on investment and reduce emissions. This practice-based research should increase the use of climate-smart practices on farms, while also improving the rigor and transparency of climate models and measurements to support the efforts of voluntary carbon markets.

Connecting the extensive agricultural research community to USDA's vast agricultural datasets is a critical strategy to quickly and efficiently answer key research questions about the multiple benefits of climate-smart agricultural practices. USDA should engage trusted research partners to advance USDA research priorities by developing and testing tools for farmers and university researchers to access and standardize anonymized USDA datasets.

The scale and scope of the agricultural research investments needed to prepare farmers for climate impacts and adaptation can be accomplished through partnerships with land-grant universities, commodity groups and other trusted partners. Researchers and corporations should be encouraged to share their data within this anonymized data framework. USDA should also establish and maintain shared public research data repositories to allow all users to benefit equally from data that improves ecosystem quantification methodologies, such as process models.

Creating channels to clearly communicate how producer data is being used, allowing producers to opt in or out of research projects, and communicating the results of research that producers opted in to can build farmer and ranchers' trust that their data is being used responsibly and effectively to generate knowledge that will ultimately benefit their operations.

USDA should expand knowledge of regional climate impacts and climate-smart agricultural practices and invest in researching new practices to engage the full diversity of U.S. farmers, ranchers and production systems in conservation and climate solutions.

There is a strong body of existing knowledge about the long-term financial and environmental benefits of common conservation practices, such as cover cropping and no till, in major row cropping systems that can be used to expand adoption of those practices today. However, research should also develop new strategies and practices, particularly for other crops, animal operations and smaller operations with different economic constraints. This includes developing additional tools to measure and manage the major sources of emissions from livestock and nitrogen application, and to harness bioenergy from crops, food processing, livestock waste management and on-farm energy use.

3. Benefits for early adopters

Congress should carefully consider how best to incorporate the successful practices of early adopters. Federal policy should recognize and reward early adopters' efforts, ensure additionality, and protect against the risk of practice reversal as producers aim to set their baseline.

As part of EDF's work with the Food and Agriculture Climate Alliance, we recommended that early adopters be eligible for a one-time bonus payment contingent upon participation in a new or existing conservation program. This one-time payment would motivate producers who have already adopted conservation practices to maintain or increase enrollment in voluntary conservation programs to ensure continued sequestration efforts and promote additionality. This would also assist producers in the transition from participating in practice-based programs to outcomes-based programs.

4. Technical assistance

USDA and Congress should prioritize and skillfully implement technical assistance to enable equitable access to voluntary markets for all potential participants and to help farmers and ranchers plan their climate mitigation and adaptation efforts. Technical assistance from trusted partners and on-the-ground support is critical to help farmers

and ranchers overcome knowledge and administrative barriers that impede the adoption of climate-smart practices.

Recommendations for technical assistance include data collection and dissemination, increased investments in conservation programs and ensuring equitable access for all participants.

- **Collecting and publishing market data.** In coordination with the Environmental Protection Agency and State Department, USDA should report yearly on the status of voluntary carbon markets, including where voluntary reductions credits are being used in compliance markets, such as California's Air Resource Board Emissions Trading Program. Reporting should be similar to USDA's published commodity reports.
- **Collecting and analyzing data on landscape levels.** Data collection and analysis at landscape scales would reduce the risks associated with additionality, permanence and leakage, while also decreasing measurement, reporting and verification costs. For example, USDA Agricultural Statistical Districts could be used to aggregate climate contributions from farms with similar soil and climate types, allowing for USDA or another entity to conduct landscape-scale monitoring of both areas with carbon sequestration projects and areas without projects. This monitoring, analogous to the jurisdictional approaches proposed for high-quality REDD+ tropical forest carbon credits or for national emissions inventories, would facilitate full carbon accounting, reducing issues associated with additionality, permanence and leakage and reducing the potential for double-counting. USDA could similarly categorize, research and update potential credits from crops, livestock and forestry as more is learned.
- **Ensuring equitable access to markets.** USDA should engage with socially disadvantaged farmers, including organizations representing Black farmers and small-scale farmers, directly to hear what their producers need to be successful and to have equitable access to USDA conservation programs and voluntary carbon markets. This should occur very early in USDA's engagement with private, voluntary carbon markets. Based on this engagement, USDA may choose to treat socially disadvantaged farmers differently than other categories of farmers to promote equitable outcomes. Large farming operations, for example, have different economies of scale, face lower prices for inputs, have better access to finance and can more easily engage in climate-smart activities relative to many smaller farm operations. USDA policy that accounts for these differences and applies appropriate administrative processes and incentives based on farm size should help smaller farms and historically underrepresented producers participate in voluntary markets.
- **Ensuring environmental injustices are addressed.** As the agricultural sector works to reduce greenhouse gas emissions from livestock production, it must

also engage with environmental justice communities and remedy localized harms such as dust, odor and spray from manure lagoons reaching nearby resident's homes, community buildings and schools. USDA must prioritize the most vulnerable communities and coordinate efforts to ensure local impacts from farming, such as harmful air and water quality and the associated public health risks, are remediated. USDA should work with the private sector to research, develop and bring new technologies to scale that can address these externalities alongside emission reductions.

- **Increase conservation program investments.** Congress should set aside significant funding from mandatory farm bill conservation programs and fund a technical assistance initiative focused on increasing climate resilience and reducing net greenhouse emissions. Funds could be used to recruit and train additional technical assistance providers and staff who would provide the on-the-ground support needed to implement soil health and climate stewardship practices.

Agriculture and forestry are essential to climate solutions, including cutting greenhouse gas emissions, storing carbon and building resilience to climate-fueled impacts like droughts and floods. Voluntary carbon markets have the potential to increase investment in these climate solutions and deliver durable benefits for the climate, farmers, ranchers and foresters.

To fully tap into that potential, Congress and USDA must promote equitable access to the financial incentives, technical assistance and research advancements that will help accelerate, and reward, agriculture and forestry's climate contributions.