

# THE ROLE OF FEDERAL POLICY AT THE NEXUS OF CLIMATE, FOOD, AND WATER

Chris Adamo and Bruce Knight

# Foreword



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Climate change demands ambitious and durable federal policy solutions that are commensurate with the urgency and scale of the problem. These solutions must be inclusive of the diverse interests that make up our food and agriculture system, which can be both a contributor and a solution to climate change.

This paper adopts a systems approach and outlines ideas for how we can create a sustainable, climate-smart agriculture system that works for producers, the environment, and society. It explores policy ideas related to:

- Promoting the research and science needed to take climate action,
- Better aligning financial incentives in our risk management and farm finance systems to promote conservation,
- Improving existing conservation programs for maximum benefit,
- Exploring ways the federal government can support private ecosystem service market development, and
- Addressing how we can support and grow our technical assistance system to take action on the ground.

The purpose of this paper is to provide policy makers with a menu of policy options that consider the intersection of climate, food, and water. What follows is not a detailed or prescriptive Farm Bill proposal or complete administrative policy agenda, but instead a conceptual guide for agricultural policy discussions.

There is no silver bullet to address climate change. Complementary policies are needed that reduce emissions, assist farmers in reducing agricultural risk and improving productivity and profitability, and create additional benefits for habitat, water quality, and soil health. Advancing policies in a bipartisan way, with input and cooperation from both the Executive and Legislative branches of the Federal government, will ensure durable climate solutions.

This paper was written by Bruce Knight and Chris Adamo, with input from CFAD members and Meridian Institute. While the AGree Climate, Food, and Agriculture Dialogue (CFAD) commissioned this paper to inform and stimulate dialogue about policy reform, it does not represent official CFAD positions.

We hope you find this paper to be a useful resource.

## About the Authors



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Chris Adamo is Vice President at Danone North America for federal and industry affairs, assisting the world's largest B Corp with strengthening the role of business in driving social and environmental good for all. Prior to joining Danone, Chris spent over a decade at the highest levels of the federal government working on issues related to agriculture, environment, and nutrition.

He served as chief of staff for President Obama's White House Council on Environmental Quality from 2015 until the end of the Administration in 2017, where he helped lead the President's agenda on climate change and conservation. From 2011-2015, he led the U.S. Senate Committee on Agriculture, Nutrition, and Forestry as its staff director for the negotiations and drafting of the 2014 Farm Bill, which included new opportunities for landscape-scale conservation and unprecedented investments in healthy foods. Chris began his Senate career in 2005 and was a legislative counsel in U.S. Senator Debbie Stabenow's office starting in 2007, where he worked on legislation such as the 2007 energy bill, the 2008 farm bill, the 2009-2010 energy and climate bill efforts, as well as various other conservation initiatives.



### BRUCE KNIGHT

Bruce Knight is a nationally-recognized expert on conservation, agriculture, and the environment. As Principal and Founder of Strategic Conservation Solutions, LLC, a consultancy focused on conservation and sustainability issues related to agriculture, Bruce delivers common sense strategies, advice, and direction to move clients forward in this space. He provides a unique perspective on the future of conservation policies, drawing on his experience as a former association executive, lobbyist, regulator, Capitol Hill staffer, and a third-generation South Dakota rancher and farmer.

Previously, Bruce served in the George W. Bush Administration as Under Secretary for Marketing and Regulatory Programs at the U.S. Department of Agriculture from 2006-2009. From 2002 to 2006, he served as Chief of the Natural Resources Conservation Service, the lead USDA agency for conservation on private working agricultural lands. Under his leadership, Bruce provided the strategic vision for the development, implementation, and management of the largest expansion of working lands conservation programs in the agency's history.

## List of Acronyms

AFRI	Agriculture and Food Research Initiative
AgCROS	Agricultural Research Collaborative Outcomes System
ARC	Agriculture Risk Coverage
ARS	Agriculture Research Service
CFAD	The Climate, Food, and Agriculture Dialogue
CIG	Conservation Innovation Grant
COMET	Carbon Management Evaluation Tool
CRP	Conservation Reserve Program
CSP	Conservation Stewardship Program
DNDC	DeNitrification-DeComposition
EQIP	Environmental Quality Incentives Program
ERS	Economic Research Service
FSA	Farm Service Agency
GHG	Greenhouse gas emissions
GRACENet	Greenhouse Gas Reduction through Agricultural Carbon Enhancement network
NIFA	National Institute of Food and Agriculture
NRCS	Natural Resources Conservation Service
NTT	Nutrient Tracking Tool
NUOnet	Nutrient Use and Outcome Network
PLC	Price Loss Coverage
RMA	Risk Management Agency
SARE	Sustainable Agriculture Research and Education
TA	Technical Assistance
UNFCCC	United Nations Framework Convention on Climate Change
USDA	United States Department of Agriculture

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## Policy Principles for Climate-Friendly Agriculture

The Climate, Food, and Agriculture Dialogue (CFAD) has outlined seven consensus [guiding principles](#) for federal policy on climate change and food systems. In addition, we recommend the following three principles to ensure improved climate outcomes and efficacy for producers, taxpayers, and the environment:

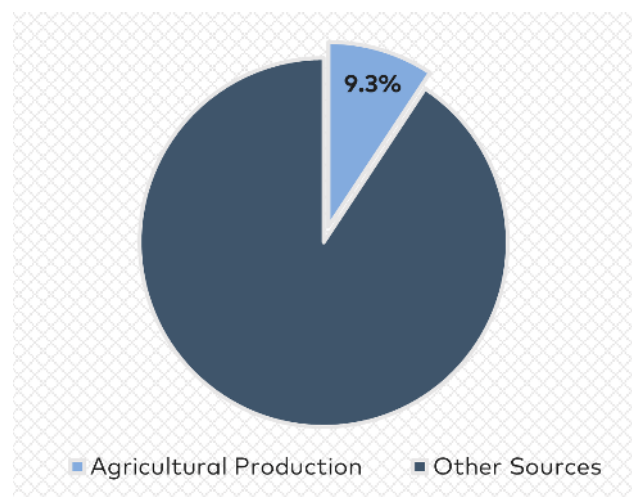
1. Improve the return on investment of USDA outlays by more closely tying incentives to outcomes for carbon sequestration and mitigation, water quality and use, and biodiversity.
2. Improve the integration, transparency, and accessibility of publicly-funded science, research, data, incentives, and conservation delivery mechanisms in order to achieve greater scale and impact.
3. Ensure that climate-friendly agriculture policies also aim to improve the economic and social resiliency of all farmers and ranchers. These efforts must work with the

diverse interests that make up U.S. food and agriculture, regardless of farm or ranch scale, location, type, ownership structure, or supply chain position.

## The Scope of the Problem and Opportunity

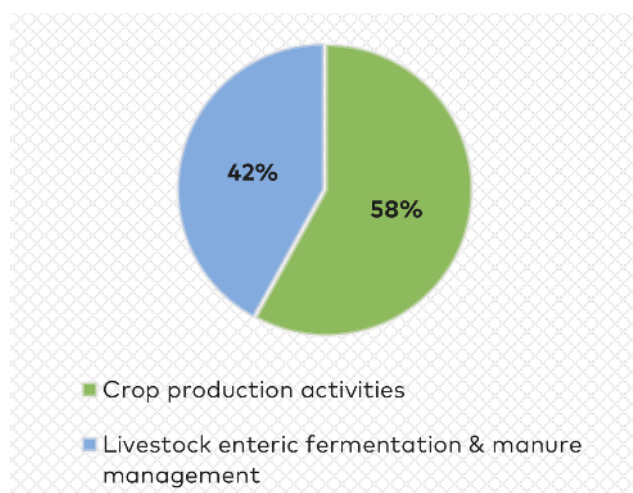
Agricultural production accounts for 618.5 MMT CO<sub>2</sub>e, or 9.3 percent of U.S. greenhouse gas (GHG) emissions. 58 percent of total agricultural emissions come from crop production activities, including synthetic and organic fertilizer applications, deposition of livestock manure, cover cropping, irrigation, drainage, tillage practices, liming, fallowing land, rice production, and the burning of agricultural residues. The balance, or 42 percent of agricultural emissions, comes from livestock enteric fermentation and manure management.<sup>1</sup>

Additionally, agriculture is the largest identified source of water impairments for rivers and streams and the second largest identified source for lakes, reservoirs, and ponds.<sup>2</sup> With respect to water use, irrigation accounts for

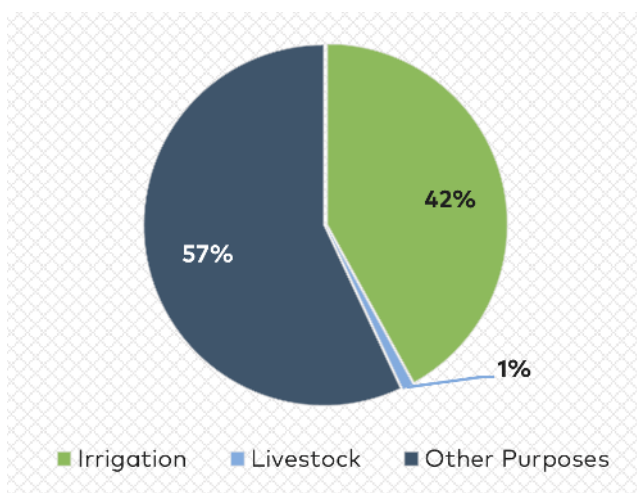


U.S. greenhouse gas (GHG) emissions in 2018. Agricultural production accounts for 9.3% of total emissions. ■

118,000 million gallons of daily freshwater withdrawals (roughly 42 percent of total withdrawals) while livestock withdrawals account for an additional 2,000 million gallons per day (1 percent of total withdrawals).<sup>3</sup> When considering the water bound up in crops and livestock and transferred away from its



*Total agricultural emissions (U.S., 2018) broken down by activity. Crop production activities include synthetic and organic fertilizer applications, deposition of livestock manure, cover cropping, irrigation, drainage, tillage practices, liming, fallowing land, rice production, and burning of agricultural residues. ■*



*Daily freshwater withdrawals (U.S., 2015). Agriculture accounts for approximately 80% of consumptive water use. ■*

source, agriculture accounts for approximately 80 percent of consumptive water use.<sup>4</sup>

Finally, food production and land use decisions have a profound impact on biodiversity. Half of the species listed under the Endangered Species Act have at least 80 percent of their habitat on private lands,<sup>5</sup> the majority of which is farm and ranchland.<sup>6</sup> Agriculture's impact on the environment is considerable, but its potential to create solutions for our nation's soil, air, water, and wildlife resources is equally great.

## Farming Requires a Systems Approach

Sustainable, climate-smart agriculture requires a systems approach in order to bring lasting management changes. Sustainable agriculture policies need to address the economic, social, and environmental sustainability of agricultural production. They need to work for producers of all sizes, scales, and types.

### New Opportunities in the Private Sector

The private sector mediates the divide between consumers and producers. Consumer preference has begun to accelerate producers' drive to grow crops and livestock more sustainably and differentiate themselves through sustainable products. Approaches taken by retailer and consumer packaged goods companies including sourcing requirements and certification programs. At the same time, input suppliers, equipment manufacturers, farm manager software companies, and others are helping producers meet this need through the development of new products and services. In short, private sector efforts to improve agricultural sustainability such as the Science Based Targets Initiative and Field to Market are diverse and robust, but public policy is needed to further leverage and coordinate these innovations, standardize measurement and



markets, and make them accessible to more producers.

## Menu of Policy Options

Recognizing the importance of a systems approach for advancing sustainable, climate-smart agriculture, agriculture policy needs to address the economic, social, and environmental sustainability of agricultural production. The menu of potential management changes is reflective of this complexity. The following suite of concepts and example actions can individually, or ideally together, help increase the scale of conservation across private working lands.

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## Research and Science

USDA's research assets are unparalleled. This capacity, however, requires strategic alignment to coordinate resources in a manner that helps to fill the gaps in both basic and applied science, allowing for both known conservation solutions and new innovations to be rapidly scaled over the next five to ten years. Climate change, for example, will require a coordinated strategy among the research entities (ARS,<sup>a</sup> ERS,<sup>b</sup> NIFA,<sup>c</sup> and Extension) and the farmer-facing mission areas of FSA,<sup>d</sup> RMA,<sup>e</sup> and NRCS.<sup>f</sup> Each of USDA's research agencies should be robustly funded and staffed to enable them to advance both basic and applied science around climate mitigation in the agricultural sector.

USDA's research should be precompetitive and scalable, benefiting all farmers and stakeholders within the value chain. Better strategic alignment and coordination with the private sector will maximize the use of current resources and legal authorities. Concurrently, this will allow policymakers to build upon these basic research programs to advance the state of soil, crop, and livestock science and improve the foundation of new systems-based approaches to agricultural sustainability that create solutions for climate, water, and biodiversity. There are a number of opportunities within the current USDA research enterprise where the department can lean in and capitalize on existing investment, as outlined below.

■ The Agriculture Research Service (ARS) serves as the foundation for USDA Climate Hubs which disseminate and translate scientific knowledge. The Greenhouse Gas Reduction through Agricultural Carbon Enhancement network (GRACEnet), Nutrient Use and Outcome Network (NUOnet), and the Agricultural Research Collaborative Outcomes System (AgCROS)—a “network of networks”—provide opportunities to measure and model climatic impacts. It is through these networks that we can **consider net climate benefits that may arise from a combination of management practices** such as cropping strategies, nutrient management, and livestock systems.

■ The Agriculture and Food Research Initiative (AFRI), part of the National Institute of Food and Agriculture (NIFA), awards hundreds of millions of dollars annually in competitive grants to scientists, researchers, and Extension to examine the risks, needed adaptations, and potential innovations to address climate change via enhanced agriculture management.<sup>7</sup> Furthermore, NIFA's Sustainable Agriculture Research and Education (SARE) program, while smaller, also provides competitive grants to

<sup>a</sup> Agriculture Research Service

<sup>b</sup> Economic Research Service

<sup>c</sup> National Institute of Food and Agriculture

<sup>d</sup> Farm Service Agency

<sup>e</sup> Risk Management Agency

<sup>f</sup> Natural Resources Conservation Service

strategically work across every state and growing region. It is notable that SARE has also provided some of the few quantitative reviews of the economics of climate- and water-friendly practices such as cover crops.<sup>8</sup>

■ The Economic Research Service's (ERS) mission is to "anticipate trends and emerging issues in agriculture, food, the environment, and rural America and conduct high-quality, objective economic research to inform and enhance public and private decision making." **ERS can play a stronger role in increasing data collection to make aggregated datasets available** that public and private sector stakeholders can leverage for transformational work. Portions of the Agricultural Data Act, for example, were included in the 2018 Farm Bill directing USDA to take stock of its existing datasets and survey correlating conservation practices with "farm and ranch profitability (such as crop yields, soil health, and other risk-reducing factors)."<sup>9</sup>

To the extent that is practical, **USDA should implement the remaining portions of the Act**, including the integration and linkage of USDA and external datasets, the establishment of a conservation and farm productivity data warehouse available to researchers, and the creation of data collection, formatting, and storage protocols. This would ensure the interoperability of USDA and external datasets and increase the understanding and potential impact of climate-smart agriculture.<sup>10</sup>

*USDA's research capacities require strategic alignment to coordinate resources in a manner that helps to fill the gaps in both basic and applied science.*

■ Research and development programs—such as the new Agriculture Advanced Research and Development Authority pilot or the Conservation Innovation Grant program—can

also expedite innovative approaches and technologies such as those that can monitor on-the-ground conditions (like remote and in-situ sensing technologies) and products that would contribute to the sustainable intensification of production (such as emerging classes of products like biologicals for crop protection and nutrition).

To speed the transition to outcomes-based program delivery, **USDA can continue to build and assist non-federal efforts with tools to calibrate, verify, and validate the process-based modeling** that underwrites outcome calculations and helps translate research into conservation work on the ground. These efforts establish a process to consult and work with non-federal stakeholders to ensure acceptance and practical applications. For example, USDA can continue to bolster its modeling work to drive wider adoption and acceptance of its Carbon Management Evaluation Tool (COMET) and Nutrient Tracking Tool (NTT). The Growing Climate Solutions Act,<sup>11</sup> introduced in the 116th Congress, would direct USDA to consider the standards, methodologies, and growing body of tools used by non-federal leaders to create environmental integrity and more uniformity across multi-stakeholder efforts. Such an approach by USDA would help **unify work using accepted methodologies and tools**, leading to more efficient measuring of impact from any farming system, including smaller and diverse farm operations.

## Risk Management and Farm Finance

Farm finance, safety net, and risk management products and policies are integral to producers' economic resilience but remain largely disconnected from environmental considerations. A significant percentage of cropland makes use of loans, commodity programs, and/or insurance policies. The integration of positive environmental considerations into loans, insurance products,



and commodity payment program terms has the potential to drive conservation adoption more than individual conservation program contracts. Given the wide use of these policies, integrating positive incentives to create conservation impact can touch the vast majority of acres across the country.

Insurance and countercyclical commodity programs typically each have five times as many enrolled acres as do major conservation programs. Currently, the only conservation provisions that apply to these acres are Swampbuster, Sodbuster, and Sod saver disincentives; noncompliance results in a loss of program benefits. **Incorporating conservation incentives**, such as lower premiums, higher premium subsidies, higher reference prices, and higher marketing loan rates, in return for implementing conservation practices could result in increased adoption rates—perhaps more efficiently than what could be achieved through standard Title II programs. In addition to blending elements of otherwise compartmentalized Farm Bill programs, such hybridized approaches may also strengthen political support for traditional subsidy and risk management programs by better aligning agricultural production and environmental impact.<sup>12</sup>

## TITLE XI CROP INSURANCE

With respect to risk management, there is an abundance of public and private data on conservation practice implementation, but it has yet to be comprehensively correlated with the yield or risk data that underpins insurance products, rates, and guarantees. The 2018 Farm Bill provided USDA's Risk Management Agency (RMA) the ability to better correlate crop insurance risk and conservation practices. Under this authority, RMA can prioritize development of crop insurance policies that lower premiums for producers who implement farm management changes that reduce risk and increase environmental benefit. This could incentivize practices that build soil health,

including cropping systems, crop diversity, or cover crops and/or advanced fertilizer management strategies that reduce yield risks while minimizing nutrient applications. An even more "blue-sky" approach would be to **develop insurance products that address the risk of provisioning ecosystem services**, for instance, by creating insurance products that reduce risks and encourage management changes to sequester soil organic carbon and/or limit N<sub>2</sub>O emissions via improved nutrient management.

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## TITLE I COMMODITY PROGRAMS

Traditional commodity subsidy programs such as the Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) programs offer additional opportunities given their widespread enrollment across cropland acreage. Congress could provide greater incentives for positive environmental impact by **adjusting current price and revenue payment triggers to reward or incentivize adoption of conservation practices**. With a higher reference price, for example, producers that have implemented conservation practices in their fields would have additional market price protection over producers that do not. Their payments would also be larger, since the differential between reference prices and actual prices would be greater. Adjustments to reference prices could reflect the actual costs, proxies for cost of production, or value of conservation practices on a per-bushel basis. Similar adjustments could be applied to the revenue program (ARC) mechanisms.

Like counter-cyclical commodity programs, conservation incentives can be incorporated into Marketing Assistance Loans. Farmers

adopting conservation practices could receive a higher marketing loan level to reflect implementation costs and the value of associated ecosystem services. Whereas PLC reference prices would cover implementation costs after the fact, marketing loans can provide farmers with upfront cash to help defray implementation costs. Marketing loans are repaid at low interest rates, making these loans a fairly easy way to integrate conservation practices into farm financial management decisions. It is not likely that changes would be needed to both ARC/PLC revenue assistance programs and marketing loans; rather, policymakers may want to consider the most cost-effective and attractive option to incentivize the most eligible farms.

## IMPROVING EXISTING CONSERVATION PROGRAMS

USDA conservation programs have great potential to increase positive environmental impact. The results of Farm Bill conservation program delivery should, however, be grounded more in outcomes rather than practices or directional correctness. To maximize the impacts of federal investment—whether for working or retired land—**conservation delivery needs optimization to deliver the greatest environmental outcomes at the lowest possible cost.** Congress, stakeholders, and the broader public seek assurances beyond the mere accounting of acres. Through the Agricultural Improvement Act of 2018 and its Conference Report, Congress directed NRCS to better deliver and report on conservation outcomes. While these are important precedents, we are not likely to “cost share” our way out of the climate problem.

To provide more accountability for conservation investments, USDA should lead the paradigmatic shift away from “random acts of conservation kindness” toward delivering quantifiable outcomes where they are needed most. This shift can provide different mechanisms to “pay for performance,”<sup>13</sup>

wherein producers are paid for measurable impact (or the ecosystem services they provide) rather than for the implementation of practices as a mere proxy for climate, water, and biodiversity benefits. Considering that paying for outcomes may take different forms, the following may help USDA focus more on outcomes, understanding that this will require a long-term evolution:

**1. New Programmatic Processes** ▪ The 2018 Farm Bill made a significant change in direction for the payment of outcomes in the Regional Conservation Partnership Program’s Alternative Funding Arrangement. Under the new rules, applicants are allowed flexibility to implement a project using unique payment rates for outcomes. The Conservation Innovation Grant (CIG) program also offers a new On-Farm Trial component to allow non-federal entities to implement payments to farms with innovative methods. Both models can provide a roadmap to build out and scale more innovative, measurable work. They also can achieve greater coordination with private sector and state efforts by leveraging non-federal resources. **USDA, however, can do more to link up with corporate efforts** such as those engaged with the Science Based Target Initiative and Field to Market to leverage efforts to reduce climate impacts in agricultural supply chains.

**2. Prioritization of Most Impactful Practices** ▪ Current conservation programs can prioritize implementation of a narrower range of individual practices with scientifically-supported impact values (e.g., climate, water, and biodiversity) among certain farming systems in specific regions. For example, there are arguably fewer than a dozen practice codes that help build soil health systems out of the over 150 approved practice standards for EQIP. Practices designed for immediate climate impact, edge-of-field management, and improved economic efficiency should be prioritized. A shorter list of “climate practices”

will help various, diverse producers choose the most impactful practices to help them build their own distinct agricultural management systems. This does not mean a centralized, top-down approach, but rather **states and regions can choose the practices that are most practical** for the farm systems that operate in specific areas and which have the greatest potential benefits for climate, water, and biodiversity. The 2018 Farm Bill contains important precedent for EQIP, CSP, and CRP which allows for the prioritization of practices, geographies, and increased incentives for the most impactful water quality practices.<sup>14</sup> NRCS should conduct a similar process with climate change in mind, and include practices that save and reduce energy use. Congress could also build upon the 2018 Farm Bill modifications designed for water to optimize EQIP/CSP for positive climate impact.<sup>15</sup>

**3. Multi-Practice, Multi-Year Incentive Contracts** • Farm management systems may often consider multiple practice changes to optimize environmental performance. In many cases, this will not produce quantifiable results for at least 2-3 years after adoption. EQIP contracts focusing on climate impact and/or soil health, for example, should **prioritize producers who desire to enter into multiple practices for multiple years**, therefore increasing the odds of measurable impact and lasting behavioral change. Additionally, **contract design should be simpler** to increase odds of a farmer's desire to engage. By incorporating multiple practices into a single, simpler multi-year contract, it lessens the need for additional transactions by the farmer or the government in the future. USDA may wish to consider creating bundles of climate practices and enhancements that, when combined, will decrease emissions, increase mitigation, and provide long-term farm resiliency for participating farmers and ranchers. Finally,

policymakers can consider using multi-year contracts with declining payments over time, whereby a producer receives a smaller cost share payment each year as transaction costs decline.

## Ecosystem Service Market Development

Title II conservation programs are routinely oversubscribed. Additional and complementary resources from the private sector are needed to reach the conservation adoption rates key to achieving long-term climate mitigation goals. The growing interest of some leaders within the private sector to meet voluntary sustainability commitments, mitigate environmental risks within supply chains, and more efficiently meet regulatory requirements should be enough of an opportunity for policy makers to help lift up ecosystem service markets where demand exists. Ecosystem services can help create a new set of agricultural commodities, the sale of which could provide agricultural producers with an additional source of revenue in return for voluntarily creating conservation outcomes most suitable for their land and operations.

## QUANTIFICATION METHODOLOGIES

In addition to supporting buyer demand, USDA can help progress quantification methodologies and tools for estimating outcomes as a foundational element of the market. USDA and the private sector already have significant research assets and tools (e.g., COMET,<sup>a</sup> NTT,<sup>b</sup> DNDC,<sup>c</sup> etc.), but technology is quickly advancing. USDA, by working more closely with the private sector, can help **improve quantification methodologies while establishing best practices for their use**. This foundational element will establish a uniform currency for climate, water, and biodiversity that improves confidence in the integrity of ecosystem

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<sup>a</sup> Carbon Management Evaluation Tool

<sup>b</sup> Nutrient Tracking Tool

<sup>c</sup> DeNitrification-DeComposition

services. Buyers require confidence in the quality of environmental assets created. Low-quality assets will curtail the development of any market. To avoid this issue, the Growing Climate Solutions Act, for example, would provide USDA with direction from Congress indicating that it has a distinct role to play to help facilitate markets with stronger quantitative tools. However, USDA will likely have to do more to ensure **uniform and transparent methodologies and tools that help establish consistent and practical standards** for producing high-quality environmental outcomes.

## USDA CARBON BANK

USDA can advance markets through financial guarantees<sup>16</sup> or the establishment of a Carbon Bank.<sup>17</sup> Under this scenario, USDA would co-finance verified carbon emission removals and reductions from U.S. farmers, ranchers, and foresters via aggregators and private developers that may facilitate the transactions.<sup>18</sup> While the Carbon Bank could likely be designed many different ways using current USDA authorities (e.g., backstopped by the Commodity Credit Corporation<sup>19</sup>), one operational model could be that USDA purchases or provides financial support for verified carbon credits from project developers in partnership with producers. USDA may use this system to contribute to the UNFCCC discussion around future National Determined Contributions.<sup>20</sup> Such a Bank could meet multiple objectives and needs, such as:

- Create **co-financing** opportunities and/or a **price floor** to help emerging markets mature.
- Provide land managers with **additional sources of income** to help mitigate the costs of new management.
- Encourage and leverage **private investment** within public-private partnerships.
- Drive **early action and innovation** in the private lands sector to help create a global

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pathway to maintaining no more than a 1.5 degree Celsius rise in temperature, which can help reduce the impact of potent short-term GHG emissions such as methane from livestock.

- Create **incentives** for an array of GHG removals and reductions such as soil sequestration, N<sub>2</sub>O fertilizer reductions, and reductions in methane from the development of biogas from livestock waste.

- Design **engagement and market opportunities** for farm, forest, and ranch managers of all types and sizes, including specific opportunities for renters of land, smaller operations, and those run by "socially disadvantaged farmers and ranchers"<sup>21</sup> which may otherwise be left out or find challenges with accessing emerging market opportunities.

## TECHNICAL ASSISTANCE

Technical assistance (TA) can come in many different forms. Farms, along with trusted partners in coordination with USDA, can work together to create a new level of conservation scale. While important, NRCS alone cannot provide the human capacity for TA that is needed. NRCS currently employs fewer than 9,400 staff, roughly 1,000 short of the agency need of 10,445 employees,<sup>22</sup> and nearly 3,000 fewer than NRCS employed 12 years ago. At the same time, program applications and financial

assistance outlays have increased dramatically. NRCS staff are increasingly occupied with the administrative aspects of conservation delivery and government bureaucracy, leaving less time dedicated to conservation planning, landowner outreach, and practice installation. In addition, staff training is needed to ensure that NRCS staff have the skills required for climate planning and implementation work on US working lands.

Given the scale of work needed across hundreds of millions of acres and millions of farms, **we need an inclusive, “all-hands on deck” approach to providing more technical assistance.** TA can also strategically improve the engagement of both large and smaller farm operations and socially disadvantaged farmers and ranchers to create a more inclusive strategy for creating solutions to climate change, water, and biodiversity. Additional budgets are needed, but the view on who can provide technical assistance should be broadened beyond just NRCS staff and soil water conservation districts. **USDA needs to leverage new and emerging partners to work with producers,** be they from agri-business, farm organizations, food companies, NGOs, or ecosystem service credit developers. These partners will help ensure knowledge and expertise provided match for the diverse management options a farm or ranch may consider. Below is a suite of policy approaches to improve TA capacity, broaden the scope of who can provide TA to access federal assistance, and expand what TA can accomplish:

**1. Climate Planning** ▪ Current programs such as EQIP and CSP could offer assistance for farms to develop conservation plans specifically tailored to optimize climate benefits and increase production resilience to climate change impacts while considering the economic realities of the farm in question.

**2. Non-Federal Third Parties** ▪ Congress should legislatively expand the types of non-federal entities eligible to provide TA to farmers and

landowners. Bills like The Growing Climate Solutions Act of 2020 expand non-federal TA capacity by establishing a third-party verifier certification program and expanding producer access to qualified technical assistance providers and credit protocol verifiers.

**3. Expanded Use of Cooperative Agreements** ▪ USDA should increase the use of cooperative agreements to provide non-federal partners more flexibility and avoid the complexity and underutilization of the current Technical Service Provider certification process. While already in use, USDA should update the national strategy to expand its use to include additional stakeholders such as agribusinesses, food companies, NGOs, Tribal Nations, and carbon credit project developers. USDA can also improve the standardization and transparency in the process through which potential non-federal partners may submit proposals for creating cooperative agreements.

**4. Blue Ribbon Panel on TA** ▪ USDA should establish a Blue Ribbon Panel to develop additional recommendations on the improvement of current TA practices and efforts to increase TA capacity through stakeholder networks.



## Endnotes

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13. The 2018 Farm Bill included "pay for performance" as a contracting model within its Alternative Funding Arrangement subsection. See Subtitle I of Title



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16. See The Rural Forest Markets Act, S.4451 which provides loan guarantees to create environmental market opportunities for small forest owners.
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18. Climate 21. "Department of Agriculture – Climate 21 Project." [https://climate21.org/documents/C21\\_USDA.pdf](https://climate21.org/documents/C21_USDA.pdf)
19. See 15 U.S.C. § 714c.
20. UNFCCC. "Nationally Determined Contributions (NDCs)." <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs>
21. See <https://www.usda.gov/partnerships/socially-disadvantaged-farmers-and-ranchers>, as this is the legal term used by Congress and USDA to encompass BIPOC populations of farmers.
22. Testimony of Kevin Norton Acting Chief, Natural Resources Conservation Service United States Department of Agriculture before the House Agricultural Subcommittee on Conservation and Forestry; October 1, 2020.

## ABOUT THE CLIMATE, FOOD AND AG DIALOGUE (CFAD)

The Climate, Food, and Agriculture Dialogue (CFAD) is a diverse and pragmatic group of climate, food, and agriculture leaders working to promote federal action on climate change that is inclusive of food and agriculture. CFAD includes producers, supply chain leaders, and civil society organizations. Learn more about CFAD [here](#), and read CFAD's [Guiding Principles](#) for federal climate policy solutions.

CFAD is a policy initiative of *AGree: Transforming Food and Ag Policy*. It complements AGree's [Economic and Environmental Risk Coalition](#), a effort that advocates for federal policy improvements to drive broader adoption of conservation practices on working lands. AGree is housed within [Meridian Institute](#), a mission-driven nonprofit consultancy that builds understanding, guides collaboration, and drives action to address our world's complex challenges.

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