



Secretary Tom Vilsack
U.S. Department of Agriculture
100 F Street NE
Washington, DC 20549

November 1, 2021

**RE: Comments in response to Notice of Request for Public Comment
on the Climate-Smart Agriculture and Forestry Partnership Program,
86 Fed. Reg. 54149 (Sept. 30, 2021), Docket No. USDA–2021–21368**

Dear Secretary Vilsack:

Carbon180 submits the following comments in response to Commodity Credit Corporation’s Notice of Request for Public Comment on the Climate-Smart Agriculture and Forestry Partnership Program. Carbon180 is a DC-based climate NGO on a mission to build a carbon-removing future for all. We develop and advocate for equitable, science-driven federal policies to advance solutions that pull carbon out of our atmosphere, including agriculture and forestry.

In our previous comments on the Executive Order on Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 14403 (Mar. 16, 2021), Docket No. USDA–2021–0003, we recommended USDA use the borrowing authority under the Commodity Credit Corporation (CCC) to develop a pilot program to incentivize widespread adoption of practices that store carbon in agricultural soils and forests and expand markets for climate-smart commodities. We appreciate this opportunity to elaborate on how CCC can best support these activities. We recommend USDA take a multi-pronged approach that includes a new Climate-Smart Agriculture and Forestry Partnership Program (hereinafter “the Partnership Program”) to provide a combination of financial incentives for the adoption of climate-smart agricultural practices outside of carbon offset markets, while pairing said investments with technical assistance and robust monitoring, reporting, and verification. In addition to the Partnership Program, we recommend that USDA enhance existing conservation programs to jointly support producers and expand markets for climate-smart commodities. Our recommendations reflect priorities to both design the pilot Partnership Program *and* maximize the impact of current program structures.

Below, we provide comments on questions 2, 3, 4, 8b, and 8c. Forestry and agriculture are not only promising carbon removal solutions but drivers of economic growth, ecosystem restoration, and overall community resilience. We encourage USDA to consider multiple avenues to support these climate solutions and the communities they serve, prioritizing equity and environmental justice across climate-smart programs.

Sincerely,

A handwritten signature in black ink that reads "Giana Amador".

Giana Amador

Co-Founder and Policy Director • [Carbon180](#) • giana@carbon180.org



2. *In order to expand markets, what should the scope of the Climate-Smart Agriculture and Forestry Partnership Program be, including in terms of geography, scale, project focus, and project activities supported?*

Agriculture: To encourage adoption of climate-smart agriculture and forestry (CSAF) practices and promote markets for climate-smart commodities, the Partnership Program should provide direct payments to agricultural producers who agree to implement suites of climate-smart practices for a minimum of 10 years across a diversity of geographies, operation types, and scales. Ongoing data collection — specifically the development of soil sampling tools and methodologies to measure and verify soil carbon storage — should accompany these efforts. Producers should also receive financial assistance for robust monitoring, reporting, and verification (MRV) of soil carbon outcomes during climate-smart commodity production. This two-pronged approach can encourage the near-term adoption of CSAF practices, while paving the way for future pay-for-performance incentives for climate-smart agricultural commodities. This approach also aligns with USDA’s commitment to prepare the Department to quantify, track, and report the benefits of climate-smart agriculture and forestry activities in its 90-day progress report.¹

The program should focus on underexplored geographies, operation types (eg., specialty crops and ranching), and practices to fill gaps in existing knowledge. Priority should be given to historically underserved producers (BIPOC and beginning farmers and ranchers) and small- and mid-sized operations to ensure they can benefit from these incentives. To enhance accessibility and effectiveness, we strongly encourage USDA to launch the Partnership Program in pilot stage and solicit on-the-ground perspectives from agriculture and forestry stakeholders before launching at full scale. Additionally, USDA should leverage existing programs and structures including its 10 Climate Hubs and the Natural Resources Conservation Service (NRCS) to develop a list of regionally-appropriate CSAF practices, conduct outreach to producers to enroll in the pilot program, and support producers with soil sampling, monitoring, and data collection.

Forestry: As with agricultural producers, the Partnership Program should enroll forest landowners in long-term contracts to implement climate-smart forestry practices across diverse geographies, tree species, and scales. Given that the opportunity to protect and restore carbon stocks on private lands is largely underexplored, the Partnership Program should ensure that all forest landowners — particularly small- and mid-sized owners, private non-corporate owners, and socially disadvantaged owners — can participate. The Partnership Program should invest in projects that assess the most effective management techniques for enhancing carbon sequestration across forest ecosystems. Examples include thinning practices and optional rotational intervals.

¹ United States Department of Agriculture. (2021). *Climate-Smart Agriculture and Forestry Strategy: 90-Day Progress Report*. USDA. <https://www.usda.gov/sites/default/files/documents/climate-smart-ag-forestry-strategy-90-day-progress-report.pdf>



3. *In order to expand markets, what types of CSAF project activities should be eligible for funding through the Climate-Smart Agriculture and Forestry Partnership Program? Projects should promote the production of climate-smart commodities and support adoption of CSAF practices.*

In order to expand markets, the Partnership Program should fund a diverse set of work that addresses the production and marketing barriers that farmers, ranchers, and forest landowners currently face. Current markets to incentivize climate-smart commodities (eg., voluntary offset markets) have neglected to effectively prioritize landowner benefits and climate integrity. An assessment of all soil carbon offset protocols shows that existing protocols fail to secure additional, durable, and appropriately safeguarded carbon outcomes.² The most rigorous of these existing protocols are difficult to implement and priced too low to incentivize transitions to practices with the highest carbon sequestration potential. Another study highlights the systematic over-crediting of forest offsets, an issue that has generated forest carbon credits that do not result in real climate benefits.³ Moreover, focusing on offsets could bias the program toward regions and operations that can more easily document soil and forest carbon sequestration and disadvantage dryland, livestock, and small-scale operations, as well as early adopters. Finally, voluntary offset schemes create an environmental justice challenge: offsets allow historic polluters to continue exacerbating acute, local impacts on environmental quality and human health in frontline communities.

Accordingly, the Partnership Program should avoid financial mechanisms that include generating, trading, or supporting carbon offsets. Instead, USDA should prioritize projects and incentives that pay producers and forest landowners for adopting CSAF practices (not quantified carbon outcomes) while paving the way for future, outcomes-based incentives. We recommend the following activities:

- **Pilot direct payments to producers and landowners to incentivize adoption of regionally appropriate, well-proven, and nascent carbon sequestration practices.**
 - USDA should work with NRCS and Climate Hubs to develop a list of regionally-appropriate CSAF practices that are eligible for Partnership Program funding. Eligible practices should include those already approved as NRCS conservation practices and more nascent solutions not currently eligible under existing conservation programs (e.g., biochar and compost application). These practices should at a minimum include: cover cropping, conservation tillage, double cropping, crop rotation, managed grazing, perennialization, biochar application, compost application, tree and shrub establishment, agroforestry practices, and prescribed burning. The Partnership Program should prioritize funding for more novel practices or applications of well-known practices in newer contexts or regions. USDA should ensure that payments for practice implementation take into consideration unintended consequences, such as increasing irrigation in drought-prone areas.

² Zelikova, J., F. Chay, J. Freeman, and D. Cullenward. (2021). *A buyer's guide to soil carbon offsets*. CarbonPlan. <https://carbonplan.org/research/soil-protocols-explainer>

³ Badgley, G., J. Freeman, J. Hamman, B. Haya, A. T. Trugman, W. R. Anderegg, and D. Cullenward. (2021). *Systematic over-crediting in California's forest carbon offsets program*. bioRxiv doi: <https://doi.org/10.1101/2021.04.28.441870>



- Under the Partnership Program, USDA can distribute funding to partnerships between NRCS, Climate Hubs, and local, on-the-ground organizations who can then conduct joint outreach to enroll producers in 10-year agreements. These agreements will help producers implement suites of regionally-approved CSAF practices with the goal of producing climate-smart commodities. Producers selected for this pilot program must reflect the diversity of US agricultural operations in size, geography, and operation type.
- **Provide low-cost loans for community and shared-use cooperatives for novel climate-smart agriculture equipment.**
 - While existing conservation programs provide incentives for practice implementation, evolving practice often requires farmers and ranchers to acquire additional equipment. Eligible equipment could include roller crimpers, no till drills, on-farm composting facilities and infrastructure, compost spreaders, and innovative weeding equipment. USDA should ensure that loans cover appropriately sized equipment for farms of all sizes, including small and mid-sized farms, to support them in building and retaining soil carbon. Additionally, arrangements should be made directly with Tribal governments and agricultural organizations and cooperatives to meet their specific needs.
- **Provide low-cost loans to establish and expand private tree nurseries to meet growing demand for seeds and seedlings.**
 - A national shortage of tree seeds and seedlings is a primary barrier to scaling reforestation in the US. In order to meet national reforestation goals, US nurseries will need to more than double their current rate of seedling production.⁴ Significant investment in private nurseries is needed to meet and expand production capacity, and low-cost loans could facilitate early growth. Through the Partnership Program, USDA should prioritize loans for small businesses and regions with high reforestation potential. USDA should distribute nursery loans across US regions and invest in the cultivation of ecosystem-appropriate species.
- **Explore the direct procurement of climate-smart commodities by the federal government to provide first markets for innovative producers.**
 - Many climate-smart commodities such as perennial agriculture products require significant increases to operational and capital costs, as well as time to build soil carbon expertise. Despite increased strains on producers' time and bottom lines, these commodities currently do not have mature, specialized markets that would pay a premium for their climate benefits. This lack of market development prevents more

⁴ Fargione, J., D. L. Haase, O. T. Burney, O. A. Kildisheva, G. Edge, S. C. Cook-Patton, T. Chapman, A. Rempel, M. D. Hurteau, K. T. Davis, S. Dobrowski, S. Enebak, R. De La Torre, A. A. R. Bhuta, F. Cubbage, B. Kittler, D. Zhang, and R. W. Guldin. (2021). *Challenges to the Reforestation Pipeline in the United States*. *Frontiers in Forests and Global Change*, 4:629198. doi: <https://doi.org/10.3389/ffgc.2021.629198>



risk-averse farmers — those experiencing climate impacts or thin margins — from transitioning their operations.

- The US government is one of the largest purchasers in the world.⁵ In particular, USDA has historically purchased agriculture commodities for price regulation, international aid, and food assistance.⁶ The Partnership Program could use similar tactics to provide an important “demand pull” for climate-smart commodities, including food and fiber products and soil amendments such as biochar and compost.
 - As a first step, USDA should develop a public report on the potential scale of carbon sequestration on working lands. This report should include estimates for MRV costs at spatial and temporal resolution that enables precise quantification. This feasibility assessment should account for science and technical assistance challenges. USDA should use this information to set achievable targets for government offtake of climate smart commodities and determine an appropriate premium for said commodities.
 - USDA can support processing, marketing, and consumption of climate-smart agricultural commodities through the new Partnership Program as well as existing programs such as the Local Agricultural Marketing Program (LAMP) and Regional Food System Partnerships Program (RFSP). These programs could fund R&D projects to grow local and domestic markets for climate-smart commodities like small grains, pulses, alternative oilseeds, perennials, and agroforestry products cultivated in diversified, resource-conserving crop rotations. These projects should include research on the soil carbon benefits of these commodities. In addition, the Partnership Program could provide a purchase incentive to feed mills and other supply chain actors for using these climate-friendly commodities in their processing and manufacturing.
 - USDA should draft and request public comment on a model procurement contract that has clear MRV, durability, labor, community benefit, and environmental protections standards. USDA should also work with the Office of Management and Budget (OMB) and General Services Administration (GSA) to assess procurement mechanisms that would optimize for least cost (e.g., reverse auctions).
- **Pair implementation of climate-smart practices through the Partnership Program and other conservation programs with robust MRV technologies and protocols to ensure that any future pay-for-performance schemes are grounded in reliable and accurate methods.**
 - USDA should invest in protocols, methodologies, and tools that can support accurate and accessible quantification of carbon benefits across different soil and forest types, climates, and historical land use factors. USDA should fund robust on-the-ground soil sampling to measure and verify soil and forest carbon accrual through grants to producers and landowners in both the Partnership Program and other conservation programs. This

⁵ United States Environmental Protection Agency. *Selling Greener Products and Services to the Federal Government*. EPA <https://www.epa.gov/sustainable-marketplace-greener-products-and-services/selling-greener-products-and-services-federal>

⁶ United States Department of Agriculture, Farm Service Agency. *Guide for Selling Agricultural Commodities to the Government*. USDA. <https://www.ams.usda.gov/sites/default/files/media/SellingToGovernmentUsersGuide.pdf>



funding should be made available for the entire duration of their contracts. In the grant selection process, USDA should aim to provide awards across a representative sample of US agriculture and forest lands including operation type, type of practice, etc., paying particular attention to current gaps in knowledge and historically underserved producers and landowners. This data can then feed into core modeling tools, including the DAYCENT model and COMET Farm/COMET Planner, as well as tools at the Forest Inventory Analysis Program to improve long-term predictions of soil and forest carbon storage. This data should also be shared with USDA Climate Hubs and can support better operations planning.

- Separately, USDA should invest in R&D to develop next-generation pathways for MRV, including physical soil sampling and the linking of on-the-ground measurements with point-and-shoot tools, near- and mid-range spectroscopy, remote sensing, simulation-based tools, and process-based models that incorporate multiple data sources.
 - USDA should also increase funds for the NRCS National Resources Inventory (NRI) to create and facilitate an on-farm soil monitoring network to support wide-scale adoption of soil carbon sequestering practices and bring together existing data, tools, and technologies. NRI should be expanded to include new sites and include GHG fluxes.
 - USDA should also prioritize projects that improve MRV for forest carbon storage across CSAF programs, especially for non-timber species and belowground systems. This can ultimately de-risk implementation of these practices while enhancing MRV protocol for future pay-for-performance incentives.
 - The Partnership Program should also explore harvested wood products (HWP) and the real-world durability of mass timber. Investing in R&D of burgeoning and innovative wood technologies can play a role in incentivizing landowners to invest in and maintain private forests and also create diversified economic opportunities in rural areas. The Partnership Program should work to better understand how to improve these technologies (e.g., mitigate moisture, reduce risk against pests), coupled with cradle-to-grave LCAs for mass timber products that assess carbon accounting, air quality, and other environmental impacts of glues, adhesives, and production processes.
- **Amend the Environmental Benefits Index (EBI) to become the Environmental and Climate Benefits Index (ECBI), prioritizing climate mitigation and resilience measures under the Partnership Program and existing conservation programs.**
 - The ECBI should define and rank conservation and soil health practices based on their potential to sequester carbon and deliver other environmental and social benefits. This index must formally include Indigenous agricultural knowledge (IAK)-based practices and be rooted firmly in emerging soil carbon science, updated every 3 years to reflect emerging research.
 - Using the ECBI, prioritize CSAF projects with the greatest carbon sequestration and resilience potential. Provide higher payments for adoption of multiple conservation practices rather than a single practice.



- **Ensure that financial assistance is accompanied by adequate and appropriate technical assistance and demonstration projects to support producers in assessing their options, implementing new practices, and incorporating new equipment technologies.**
 - USDA should increase funding streams for CSAF-supportive technical assistance at NRCS, as current capacity cannot meet producer demand. USDA should hire new staff with specific and deep expertise in soil carbon management suitable to the climate and soil types in the regions they serve. Currently, expertise on soil carbon varies significantly across NRCS regional offices — increased funding could go to build capacity and regionally specific knowledge on soil carbon sequestration across US landscapes. USDA should collect continuous feedback from stakeholders on accessibility and effectiveness of this technical assistance and incorporate this data into future program support.
 - In addition, USDA should fund soil carbon demonstration projects that aim to fill knowledge gaps around soil carbon sequestration, regionally-appropriate climate-smart practices, and underexplored practices (especially around grazing and soil amendments) across the full geographic and operational diversity of US agriculture. These demonstration projects can help producers to build familiarity with CSAF practices and de-risk their implementation both operationally and economically. At these demonstration projects, USDA should collect economic data on the costs and benefits of CSAF practice implementation.

- **Standardize data curation and archival standards across relevant USDA agencies and programs to accurately track CSAF incentives, practice adoption, carbon outcomes, and barriers to implementation.**
 - USDA chief data officer should oversee a team focused on data accessibility, integrity, availability of appropriate standards, stewardship, interoperability, curation, and full transparency. Research and incentive programs should be required to collect, make available, and manage all data according to current standards required by granting agencies. Existing USDA data should be made available for these and other internal and interagency research efforts, ultimately to be made public for producers and other stakeholders to utilize.
 - USDA Climate Hubs should use existing data across the 10 regions to produce a review of progress and key barriers to implementing CSAF practices, specifically with respect to the unique and disproportionate barriers faced by BIPOC producers. This review should inform and bolster the efforts of technical assistance providers at NRCS and the Cooperative Extension Service.

4. In order to expand markets, what entities should be eligible to apply for funding through the Climate-Smart Agriculture and Forestry Partnership Program? Given that the administrative costs of the Climate-Smart Agriculture and Forestry Partnership Program could be high if USDA were to



contract with individual producers or landowners, it makes more sense to work with groups of producers and landowners. For example, eligible entities may include an agricultural producer association or other group of producers; State, Tribe, or unit of local government; a farmer cooperative; a carbon offset project developer; an organization or entity with an established history of working cooperatively with producers on agricultural land, as determined by USDA (for example, a non-governmental organization); a conservation district; and an institution of higher education, including cooperative extension.

- **Prioritize eligibility of and outreach to institutions that are already embedded in producer communities, especially those that center the interests of socially disadvantaged producers.**
 - The land grant university (LGU) system plays a crucial role in delivering education, the latest scientific research, and technical assistance to agricultural communities. 1890 Institutions (Historically Black LGUs) and 1994 Institutions (Tribal LGUs) deliver these services specifically to underrepresented and historically underserved agricultural communities. However, 1890 and 1994 Institutions receive only 18% and 0% of federal funds for agricultural research and extension, respectively — this is insufficient to support conservation and climate resilience goals in these communities.⁷ The Partnership Program should center projects conducted in and by minority-serving LGUs and Hispanic-Serving Agricultural Colleges and Universities (HACUs) to support equitable distribution of its benefits.
 - Urban agriculture operations can be powerful vehicles for improving urban communities by increasing local access to food, bolstering local economies, and improving local environmental and public health. Management of urban soils has also been shown to increase urban carbon stocks.⁸ The Partnership Program should support urban agriculture operations that carry out soil carbon sequestration practices. USDA should prioritize accessibility of resources and materials and conduct targeted outreach to historically underserved urban communities to ensure these farmers and stakeholders can benefit from the program.
 - Indigenous producers and Tribal entities often face disproportionate obstacles to accessing USDA programs, despite programs being available to similar-level entities such as local and state governments.⁹ CSAF should explicitly include and prioritize projects by Indigenous producers, governments, and other Indigenous entities to ensure that funding and climate resilience benefits flow equitably to these communities.

⁷ Croft, G. K. (2021). *1890 Land-Grant Universities: Background and Selected Issues*. Congressional Research Service. https://www.eversysreport.com/files/2021-06-15_IF11847_959b04717bf44053a20e29bce17406f25b5287cd.pdf

⁸ Brown, S. and E. Miltner. (2012). *Carbon Sequestration Potential in Urban Soils*. Carbon Sequestration in Urban Ecosystems, (pp. 173-196). https://www.researchgate.net/publication/289776921_Carbon_Sequestration_Potential_in_Urban_Soils

⁹ Simms Hipp, J. and Colby D. Duren. (2017). *Regaining our Future: An Assessment of Risks and Opportunities for Native Communities in the 2018 Farm Bill*. Seeds of Native Health. https://seedsofnativehealth.org/wp-content/uploads/2017/06/Farm-Bill-Report_WEB.pdf



8. *How can USDA ensure that partnership projects are equitable and strive to include a wide range of landowners and producers?*

- **Ensure accessibility and funding of projects that provide financial assistance, technical assistance, and other forms of support to BIPOC and socially disadvantaged producers.**
 - USDA should establish a set-aside of at least 30% within the Partnership Program for socially disadvantaged producers to ensure that they can benefit from incentives and increase environmental health in their communities. Simultaneously, USDA should broaden this impact by increasing set-asides to 30% each for socially disadvantaged and beginning farmers within existing conservation programs such as the Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP).
 - USDA should provide increased assistance for completing Partnership Program applications and ensure that all resources, forms, and person-to-person assistance are available in all regionally appropriate languages. This may include hiring additional multilingual staff at NRCS and other relevant agency offices, translating educational resources and application forms, and partnering with local community organizations to conduct outreach.
 - USDA should dedicate 30% of annual Regional Conservation Partnership Program (RCPP) funding to partnerships with organizations addressing the specific conservation needs of socially disadvantaged farmers and ranchers and include a Tribal agricultural conservation priority within RCPP. With the authority granted to it under the law, USDA can substantially reduce the size of the contribution provided by eligible partners within these special priority projects. USDA should also reduce the match requirement for Conservation Innovation Grants.

- **Ensure that all CSAF activities are accompanied by robust labor protections and workforce development initiatives to support long-term, safe, and equitable opportunities in climate-smart careers.**
 - USDA should require all CSAF projects to have robust worker protections in order to be eligible for funding through the new Partnership Program. Specifically, USDA should require worker access to overtime pay, unionization, heat protection, and chemical exposure protection. These protections are particularly urgent for guestworkers under the H-2A and H-2B visa programs.
 - USDA should leverage existing programs such as Sustainable Agriculture Research and Education (SARE), Farming Opportunities Training and Outreach (FOTO), and AFRI Education and Workforce Development to build awareness, knowledge, and skills related to soil health and soil carbon storage. Support of these programs in conjunction with the Partnership Program will increase technical knowledge across socially disadvantaged,



beginning, and young producers and enable them to implement these practices in their systems.¹⁰

8a. How can the Climate-Smart Agriculture and Forestry Partnership Program be designed to ensure that benefits flow to historically underserved communities?

- **Prioritize funding for projects and practices that directly benefit historically underserved rural and urban communities.**
 - Practices that promote soil and forest carbon storage may also provide benefits that align with priorities of rural and urban communities, including improved soil health, air quality, and water quality.¹¹ The Partnership Program should prioritize funding projects that employ soil and forest carbon sequestration practices that reduce pesticide, herbicide, and fertilizer inputs that have adverse health and environmental impacts in surrounding communities.
 - The Partnership Program should also prioritize projects located near vulnerable communities with high levels of air and groundwater pollution that could benefit from these practices. In doing so, CSAF could better ensure benefits flow to frontline and historically underserved rural and urban communities.
 - The Partnership Program should invest in rural and urban knowledge-building and public engagement regarding forest and agricultural soil carbon storage to ensure that management transitions are just and community-driven.

¹⁰ Kosar, U. and V. Suarez. (2021). *Removing Forward: Centering Equity and Justice in a Carbon-Removing Future*. Carbon180.

<https://static1.squarespace.com/static/5b9362d89d5abb8c51d474f8/t/6115485ae47e7f00829083e1/1628784739915/Carbon180+RmovingForward.pdf>

¹¹ Carbon180. (2021). *Fact Sheet: Soil Carbon Storage*.

<https://static1.squarespace.com/static/5b9362d89d5abb8c51d474f8/t/5e55a0e096f3913deb5e31ca/1582670065496/Carbon180+FactSheet+SoilCarbon+R3.pdf>

