

April 29, 2021

**FROM:** Debbie Reed  
Executive Director  
Ecosystem Services Market Consortium LLC (ESMC)  
Washington, DC  
dreed@ecosystems-servicesmarket.org  
Tel. (202)701-4298

**TO:** Seth Meyer  
Chief Economist  
U.S. Department of Agriculture (USDA)  
1400 Independence Avenue, SW  
Washington, DC 20250

**SUBJECT:** Notice of Request for Public Comment on the Executive Order on Tackling the Climate Crisis at Home and Abroad (Docket No. USDA-2021-0003)

Thank you for the opportunity to comment on the U.S. Department of Agriculture's (USDA) request for input on the Executive Order on Tackling the Climate Crisis at Home and Abroad (Docket Number: USDA-2021-0003). The Ecosystem Service Market Consortium's (ESMC) mission is to advance ecosystem services markets that incentivize farmers and ranchers to improve soil health systems that benefit society. ESMC is a member-based not-for-profit organization launching a national scale ecosystem services market for agriculture to recognize and reward farmers and ranchers for their environmental services to society. ESMC's public-private partnership includes members and stakeholders include a wide range of agricultural businesses, farmer-led associations, farmer check-offs, farmer cooperatives, conservation organizations, foundations, land-grant universities and research institutes, and USDA. The Ecosystem Services Market Research Consortium (ESMRC) serves as the research arm of ESMC, in which we are engaged in research, demonstration, development and deployment of tools, technologies and methodologies to improve the accuracy and rigor of greenhouse gas (GHG), carbon, water quality, water quantity and biodiversity outcomes quantification for market-based purposes.

ESMC's market will financially reward farmers and ranchers who voluntarily adjust crop and livestock production systems in ways that increase soil carbon sequestration and retention, reduce GHG emissions, improve water quality, conserve water, and provide many additional ecosystem service outcomes, such as enhanced biodiversity and habitat conservation. ESMC's program allows producers to choose only those changes they desire to undertake, and as few or as many as they select, with the understanding they will be paid based on quantified outcomes. ESMC has completed a comprehensive market assessment and design phase, and we are in a full testing phase of our program. Together with our members across the agricultural supply chain and value chain,

we are pilot testing the entire program, investing in critical RDD&D to create a national scale ecosystem services market program and infrastructure for the agricultural sector, and refining the program prior to full national-scale market launch in 2022.

USDA funded research, analysis and conservation programs provide assistance to our members and farmers in the U.S. agricultural sector, and there is great potential to leverage private sector investments in voluntary markets by integrating public sector and USDA conservation programs as a form of up-front financing for producers seeking to engage in these markets. ESMC's innovative and technologically advanced national scale program to generate ecosystem markets and credits generated by farmers can increase agricultural production while making significant progress towards the recently announced nationally determined contributions (NDC) to reduce overall GHG emissions by 50-52% of 2005 levels by 2030 in accordance with the Paris Agreement.

At the same time, USDA conservation programs must be accessible to all of agriculture, including farms and ranches of all sizes, socially and economically disadvantaged producers, and farmers and ranchers who are Black, Indigenous, and People of Color (BIPOC). Currently, many USDA programs are not adequately accessible or appropriately designed to meet the needs of BIPOC producers. Conservation programs can provide needed financing in these communities for the adoption of production systems that generate credits and represent a steppingstone for producers towards participation in ecosystem services markets. Lack of access to USDA programs for BIPOC and other underserved agricultural communities can therefore limit their ability to participate in these markets. ESMC urges USDA to resolve equity and accessibility issues with BIPOC farmers and ranchers who have been largely excluded from USDA programs in the past. Resolving issues of access and participation begins with incorporating equity considerations into the development of all programs, from design to implementation and reporting, which we believe will further enable Black, Brown, Indigenous, and other underserved farmers and ranchers to participate in private, voluntary ecosystem services markets.

ESMC is grateful for this opportunity to provide input on how to best use USDA programs, funding and financing capacities and other authorities as USDA prepares programming to expand climate-smart agriculture and forestry practices and systems. It should be noted that the following comments reflect the official thoughts and positions of ESMC only and do not represent the positions of ESMC's entire membership. Many of ESMC's member organizations plan to submit separate comments to the same solicitation which will reflect those organizations' official statements to USDA's request for public comment.

## **1. Climate-Smart Agriculture and Forestry Questions**

**A. How should USDA utilize programs, funding and financing capacities, and other authorities, to encourage the voluntary adoption of climate-smart agricultural and forestry practices on working farms, ranches, and forest lands?**

**1. How can USDA leverage existing policies and programs to encourage voluntary adoption of agricultural practices that sequester carbon, reduce greenhouse gas emissions, and ensure resiliency to climate change?**

The U.S. Department of Agriculture’s (USDA) voluntary, incentive-based Farm Bill conservation programs administered by the Natural Resources Conservation Service (NRCS) provide conservation technical and financial assistance that supports individual farmer and rancher adoption of conservation practices. The Agricultural Conservation Easement Program (ACEP), Conservation Stewardship Program (CSP), Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP) and the Regional Conservation Partnership Program (RCPP) each provide tools to farmers, including financial cost sharing and technical assistance to expand adoption of conservation practices that sequester carbon, reduce GHG and improve water quality and water use efficiency. These programs require farmers to share in the cost of the practice with USDA financial assistance covering a portion of the practice cost. It is important to recognize that while individual conservation practices implemented alone have limited impact, when “stacked” together (and implemented correctly) they can provide cumulative environmental benefits that can increase farm production and generate ecosystem services that can be monetized on voluntary ecosystem markets. NRCS could leverage its existing focus on resource concerns to establish trust and begin working with farmers at the whole farm level to produce ecosystem services. This would require adapting NRCS technician training to focus on the stacking and adaptation of conservation practices for enhanced environmental benefit.

ESMC recommends the following actions to these NRCS programs to support the voluntary adoption of agricultural practices that generate beneficial ecosystem services:

#### **Agricultural Conservation Easement Program (ACEP)**

- ESMS encourages NRCS to ensure that producers participating in ACEP Wetland Reserve Easements or Agricultural Land Easements be allowed to obtain environmental credits under these and other programs. Current program implementation allows landowners to have the opportunity to participate in private, voluntary ecosystem services credit markets and it is important that producers and NRCS staff have a clear understanding of permitted uses on the land and that participation in ecosystem services markets is acceptable under the program when consistent with the terms of the easement. This will enable ecosystem services market efforts and USDA conservation programs to work cooperatively to advance quantified environmental outcomes of conservation practices and to ensure the provision of financial incentives to producers who voluntarily engage in those efforts.

#### **Conservation Stewardship Program (CSP)**

- CSP soil health enhancement bundles should be expanded to include support for quantification of environmental benefits of conservation practices adopted. The data collected to quantify outcomes will enable markets to expand and reach more farmer and rancher participants and to quantify the environmental impact of on-farm conservation activities according to market accounting and monitoring standards.
- NRCS should clarify the soil health attributes that are being measured through NRCS soil health testing. With many definitions and approaches to soil health across the agricultural landscape, NRCS tests, including standardized sampling approaches and criteria, should be clear and transparent and regionally appropriate for all production regions and production systems. Soil health testing data should also be shared with stakeholders to

calibrate and validate process models used to quantify changes in ecosystem services outcomes for market purposes; and if producers allow, shared directly with market programs that can utilize that data as inputs to generate credits for private voluntary market payments to the producers.

- NRCS should provide several options for soil health enhancements in CSP. The 2018 Farm Bill requires CSP to be managed for soil health benefits. To achieve this directive from Congress, NRCS should clearly articulate the standards for soil health measurements, attributes and applicability of soil health testing for all US production systems.
- The provisions in the 2018 Farm Bill allowing for one-time payments for conservation planning should also include comprehensive plan development for participation in ecosystem services markets. Ecosystem services management plans will allow farmers to seek additional revenue streams for their conservation practice adoption. This approach would be consistent with section 1470.37 Environmental Credits for Conservation Improvements of the Conservation Stewardship Program (CSP) Interim Rule.<sup>1</sup>
- CSP enhancements should incorporate new technology(ies) and advancements in agricultural production such as:
  - Advanced nutrient management enhancements that focus on the implementation of nutrient management plans including soil testing, stalk testing, and equipment calibration;
  - Manure analysis and the use of manure as a soil amendment to improve soil health; and
  - New approaches to livestock feed management and feed amendments that can reduce enteric emissions and subsequently reduce GHG emissions from livestock production systems.
- NRCS should actively ensure producers are allowed to adopt the use of new technologies and innovations in agricultural production, resulting in a greater variety of available enhancement options.

### **Conservation Reserve Program (CRP)**

- ESMC encourages USDA to revise the provisions of section 1410.63 of the 2019 Conservation Reserve Program interim rule<sup>2</sup>, Permissive Uses, to clearly articulate “the sale of carbon, water quality, or environmental credits is permitted by CCC,” instead of the current provision that says, “may be permitted.” Ensuring that producers and USDA staff have a clear understanding of permitted uses and related payments will enable private ecosystem market efforts and USDA conservation programs to work cooperatively to

---

<sup>1</sup> Conservation Stewardship Program (CSP) Interim Rule, 7 CFR Part 1470, [Docket No. NRCS–2019–0020], RIN 0578–AA67; <https://www.govinfo.gov/content/pkg/FR-2019-11-12/pdf/2019-24367.pdf>

<sup>2</sup> Conservation Reserve Program (CRP) Interim Rule, 7 CFR Part 1410, [Docket ID CCC–2019–0006], RIN 0560–AI41; <https://www.govinfo.gov/content/pkg/FR-2019-12-06/pdf/2019-26268.pdf>

advance quantified environmental outcomes of conservation practices and to ensure the provision of financial incentives to producers who voluntarily engage in those efforts.

### **Environmental Quality Incentives Program (EQIP)**

- EQIP practices and new incentive payments should include provisions to support the cost of third-party data collection used to quantify environmental outcomes of adopted conservation practices in private ecosystem services markets. The data collected helps quantify the impact of federal funds, allows markets to better respond to both consumer demand for transparency of impacts of agricultural systems and corporate demand for sustainable outcomes, will increase the rigor of quantification of environmental benefits, and will reduce data entry/re-entry burdens on farmers and ranchers.
- EQIP practices and new incentive payments should compensate farmers for the soil testing and data collection costs of participating in private ecosystem markets which can provide farmers and conservationists with important baseline data.
- NRCS should clarify the soil health attributes that are being measured through NRCS soil health testing. With many definitions and approaches to soil health across the agricultural landscape, NRCS tests, including standardized sampling approaches and criteria should be clear and transparent and regionally appropriate for all production regions and production systems.
  - Furthermore, soil carbon and bulk density should be added to the list of soil health attributes that NRCS collects to enable greater understanding of conservation system impacts on soil carbon sequestration and enable greater enrollment in ecosystem service markets.
- Similar to our recommendation for CSP, NRCS should provide more options for soil health practices in EQIP in accordance with statutory requirements under the 2018 Farm Bill. Again, NRCS should clearly articulate the standards for soil health measurements, attributes and applicability of soil health testing for all US production systems.
- The provisions in the 2018 Farm Bill creating incentive payments in EQIP should align with systems changes supported in private ecosystem services markets. Conservation practices encouraged through ecosystem services markets will most likely align with USDA conservation practice standards, and participation in both EQIP and an ecosystem services credit market will allow farmers to seek additional revenue streams for their conservation practice adoption. Combined, the up-front federal financing and the post-outcome market payments can make significant differences in scale of adoption. This approach would be consistent with section 1470.37, Environmental Credits for Conservation Improvements, of the 2019 Environmental Quality Incentives Program (EQIP) interim rule.<sup>3</sup>

---

<sup>3</sup> Environmental Quality Incentives Program (EQIP) Interim Rule, 7 CFR Part 1466, [Docket ID NRCS–2019–0009], RIN 0578–AA68; <https://www.govinfo.gov/content/pkg/FR-2019-12-17/pdf/2019-26872.pdf>

- Similar to our recommendation for CSP, EQIP practices and conservation practice standards should incorporate new technology(ies) and advancements in agricultural production such as:
  - Advanced nutrient management planning and products. The implementation of nutrient management plans including soil testing, stalk testing, and equipment calibration can inform beneficial activities and outcomes; and new products can improve outcomes;
  - Manure analysis and the application of manure and/or manure-derived products to improve soil health; and
  - New approaches to livestock feed management and feed amendments that can reduce enteric emissions and subsequently reduce GHG emissions from livestock production.

### **Regional Conservation Partnership Program (RCPP)**

- ESMC appreciates provisions previously included in section 1464.46 of the interim final rule for the Regional Conservation Partnership Program (RCPP) regarding environmental credits for conservation improvement.<sup>4</sup> This section stated that “NRCS recognizes that environmental benefits will be achieved by implementing eligible activities funded through RCPP, and a participant may obtain environmental credits as a result of implementing additional eligible activities through an environmental service market if one of the purposes of the market is the facilitation of additional conservation benefits that are consistent with the purposes of a program contract or supplemental agreement.” The provision went on to state, “NRCS asserts no direct or indirect interest on these credits.” ESMC is supportive of this provision and hopes NRCS will continue to support farmer and rancher environmental credit generation for sale on private voluntary markets in the future.

Continued and improved tracking and reporting by USDA of conservation practices and management systems supported by the aforementioned Farm Bill programs and utilized by farmers and ranchers in different geographies would benefit ESMC and all outcomes-based private markets and monitoring approaches by allowing the determination and tracking of baselines and changes in practice adoption and rates of adoption that can impact change at scale. ESMC’s program quantifies stacked ecosystem services impacts in a streamlined, technologically advanced, verified and certified program and monetizes the impacts as ecosystem services credits or attributes of value to demand-side buyers in private markets. Farmers and ranchers will be paid for quantified outcomes, and the attributes or credits are sold in a national ecosystem services market to entities seeking to reduce their environmental footprint. In this way, the partnership of USDA’s existing policies and programs with private sector markets such as ESMC’s will encourage the voluntary adoption of climate-smart agricultural and forestry programs on working lands.

While cost-share can be an important tool to de-risk experimentation, and ecosystem service market payments can incentivize adoption, there is a great deal of expertise and knowledge

---

<sup>4</sup> Regional Conservation Partnership Program (RCPP) Interim Rule, 7 CFR Part 1464, [Docket ID NRCS–2019–0012], RIN 0578–AA70; <https://www.govinfo.gov/content/pkg/FR-2020-02-13/pdf/2020-01812.pdf>

required to piece multiple conservation practices together into a regenerative system that ultimately produces ecosystem services. Widespread adoption of such systems will require far more technical assistance than is currently available. Additionally, widespread adoption is going to require widespread understanding among the farming community, as well as NRCS field staff, about the importance of healthy soil to farm business and about the full suite of NRCS-approved soil health principles and how to implement them. Without this understanding, there is no amount of cost-share or external economic incentive that will trigger widespread, sustained, and economically viable adoption of environmentally beneficial agricultural systems.

## **2. What new strategies should USDA explore to encourage voluntary adoption of climate-smart agriculture and forestry practices?**

As USDA continues to discuss agriculture's role in climate change mitigation, administration efforts should allow for the continued development and success of private sector voluntary ecosystem services markets and not place the federal government into a role that in any way competes with or undermines private markets. The government's role should be to provide science-based data, research, technical assistance, and other information to ensure private markets have access to the best scientific and agricultural sector data available.

ESMC suggests USDA avoid any policy intervention that would lead to confusion by possibly duplicating private sector market activities and roles that do not require and will not benefit from redundant efforts, including by creating new market standards by which ecosystem services credits are verified or certified. Global accounting and quantification standards already exist in private markets and are maintained by market registries and organizations led by civil society non-governmental organizations (NGOs) with long-standing expertise and global recognition.

In order to work with market programs such as ESMC and others, producers are required to enter into contractual agreements that outline the roles and expectations of producers and market programs in the generation, and eventual sale, of carbon and other ecosystem service credits. Each market program offers its own terms and conditions for participation, creating confusion for producers when navigating the contractual environment of various market programs. USDA could help markets streamline the contracts process by creating more standardized forms and processes that allow farmers to more easily understand contract terms between various market programs. Additional USDA lending programs could also help improve contract terms for producers by providing additional financial backing.

As previously noted, many USDA conservation programs have not been equally accessible to BIPOC farmers and ranchers due to improper design and historic discrimination, limiting these producers' ability to participate in ecosystem service markets. We urge USDA to correct for inequities in conservation programs in ways that specifically target and encourage BIPOC and socially disadvantaged producer participation in them. Increased access to technical assistance, farm loans, and other capital which can lead to beneficial environmental outcomes could be further monetized by underserved farmers through participation in private ecosystem services markets.

## **B. How can partners and stakeholders, including State, local and Tribal governments and the private sector, work with USDA in advancing climate-smart agricultural and forestry practices?**

ESMC receives funding from the Foundation for Food & Agriculture Research (FFAR), USDA-NRCS, philanthropic organizations and other funders, as well as from corporate, NGO, land-grant university and other members who are co-investing in our national scale program. ESCM was awarded a \$10.3 million FFAR grant in 2019 to invest in RDD&D to develop an innovative, technologically advanced national environmental credit market designed exclusively for the agricultural sector. ESCM and its members are matching the grant over three years to fund research and development projects in this public-private partnership for a total investment of \$20.6 million. Through the grant, the ESMRC, the research arm of the ESCM, is developing tools and technologies to assure the validity of these credits in a cost-effective way.

ESMRC's FFAR-funded research has already led to the development, demonstration and deployment of technologies to better quantify, monitor and verify the environmental impacts of agricultural producers' conservation efforts to recognize and pay them through private ecosystem services markets. This public-private sector work to better quantify and track environmental impacts of agricultural practices is ongoing. There continues to be a need for more scientific data on GHG and economic impacts of various agricultural production systems in varied geographies to better advise farmers and ranchers on how to achieve desired outcomes cost-effectively; and to inform program development opportunities. USDA could provide aggregated data on conservation practice adoption and management systems to better inform private markets and project developers to support dedicated efforts to better scale impact.

### **C. How can USDA help support emerging markets for carbon and greenhouse gases where agriculture and forestry can supply carbon benefits?**

USDA recognition of external private, voluntary ecosystem market opportunities operating in concert with or complementary to Farm Bill conservation programs as a means of supporting and scaling agricultural conservation goals and generating beneficial environmental outcomes should continue. Such recognition allows programs like ESCM's to utilize federal support programs as a catalyst for beneficial outcomes for farmers, ranchers and society. ESCM foresees opportunities to work together or build upon successful NRCS programs and partner projects that lay the groundwork to further conservation activities by interested producers.

Adherence to existing market standards for the verification and certification of credits is fundamental to the success of emerging markets like ESCM's. These international standards underpin global carbon markets and ensure fungibility of credits across markets, which in turn ensure integrity of the markets and the credits. If credits generated in the United States by American farmers are to be internationally recognized and accepted, including as a means of ensuring compliance with sustainable and GHG-specific outcomes desired by multinational corporate buyers of these credits, it is imperative that credits generated follow internationally recognized standards. The International Carbon Reduction & Offset Alliance (ICROA)<sup>5</sup> is the internationally recognized best practice for managing, using and sourcing carbon offsets. The International Organization for Standardization (ISO)<sup>6</sup> and the American National Standards Institute (ANSI)<sup>7</sup> provide reference for these market standards and can ensure compliance through

---

<sup>5</sup> <https://www.icroa.org/>

<sup>6</sup> <https://www.iso.org/home.html>

<sup>7</sup> <https://www.ansi.org/>

their programs. The Greenhouse Gas Protocol, in turn, also utilizes these standards and represents globally accepted accounting and reporting standards for GHG emissions, emissions reductions, and increased sequestration.

To comport with its NDC under the Paris Agreement, Canada is developing its own federal compliance offset system with protocols, the Canadian Federal Offset System<sup>8</sup>, following internationally accepted standards, guidance and approaches used by other compliance systems. To develop this national program, Canada is looking to examples within its own borders, such as Alberta's Emission Offset System<sup>9</sup> and British Columbia's Carbon Registry<sup>10</sup>, as well as approaches used in California<sup>11</sup>, Columbia<sup>12</sup>, South Africa<sup>13</sup>, and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).<sup>14</sup> Canada is also following globally recognized standards for how protocols are developed, including through expert consultation and public comment periods. Canada is developing its system following ISO compliance market processes and developing protocols based on the frameworks and principles of 14064-2, VB requirement ISO 14065, and Verification Standard 14064-3.<sup>15</sup> The draft regulations and protocol development process is currently open for consultation (through early May 2021), and the government will be developing compliance protocols that are either heavily adapted from existing systems (e.g., American Carbon Registry (ACR), Climate Action Reserve (CAR), VCS/Verra, and Gold Standard) or developing new methodologies where they may find a need (e.g., where existing protocols do not meet needs). The Canadian government is also creating several Technical Protocol Teams based on initial priority project types (including Enhanced Soil Organic Carbon, for instance). The U.S. Government should follow Canada's leadership in supporting these rigorous international standards to further develop and scale voluntary private markets. A federal interagency effort led by the White House could help scale opportunities in these markets not only from the agricultural sector, but across other U.S. sectors as well.

USDA could also provide support for producers who are currently not able to participate in voluntary markets but who are still providing beneficial environmental outcomes, such as soil carbon sequestration and improved water quality. Such stakeholders include:

- Ranchers who ranch on public lands and who therefore cannot participate in voluntary markets since they do not own the underlying assets;
- Farmers and ranchers who cannot reach agreements with their landowners regarding the contractual assignment of asset ownership, which would enable them to participate in voluntary markets;

---

<sup>8</sup> Federal Greenhouse Gas Offset System, <https://www.canada.ca/en/environment-climate-change/news/2021/03/federal-greenhouse-gas-offset-system.html>

<sup>9</sup> Alberta Emission Offset System, <https://www.alberta.ca/alberta-emission-offset-system.aspx>

<sup>10</sup> Accessing the BC Carbon Registry, <https://www2.gov.bc.ca/gov/content/environment/climate-change/industry/offset-projects/bc-carbon-registry>

<sup>11</sup> <https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program>

<sup>12</sup> [https://www.ieta.org/resources/Resources/Case\\_Studies\\_Worlds\\_Carbon\\_Markets/2018/Colombia-Case-Study-2018.pdf](https://www.ieta.org/resources/Resources/Case_Studies_Worlds_Carbon_Markets/2018/Colombia-Case-Study-2018.pdf)

<sup>13</sup> [https://www.edf.org/sites/default/files/south\\_africa\\_case\\_study.pdf](https://www.edf.org/sites/default/files/south_africa_case_study.pdf)

<sup>14</sup> <https://www.icao.int/environmental-protection/CORSIA/Pages/default.aspx>

<sup>15</sup> <https://www.iso.org/iso-14001-environmental-management.html>

- Farmers and ranchers who do not qualify for existing markets due to additionality rules – so-called early adopters whose actions are deemed as “business as usual,” and thus do not qualify as “additional;”
- Farmers and ranchers who have soil carbon stores above that of their neighbors, which show that they have been good stewards and have either protected existing soil carbon stores, improved them, or both;
- Farmers and ranchers who adopt USDA conservation program activities above a certain threshold or minimal requirement but remain ineligible for private voluntary markets; and/or
- Owners of “stranded assets” intended for sale on markets – or assets generated that are not purchased within a certain period.

By addressing these current gaps in market access, USDA can ensure that the benefits of voluntary ecosystem service markets can reach across the entire value chain.

#### **D. What data, tools, and research are needed for USDA to effectively carry out climate-smart agriculture and forestry strategies?**

There are roles that USDA can undertake to standardize criteria, technical guidance and data collection to support private voluntary ecosystem markets. USDA leadership can harmonize and standardize data collection and data sharing criteria utilized by public and private modeling communities to improve rigor and outcomes for all GHG and water quality models. Process-based GHG quantification and water quality models should be used as the basis and the key to advanced, cost-effective quantification of impacts and outcomes at scale. These models can be improved if the modeling community unifies behind standardized criteria for data to populate and run such models, including criteria for sampling and data collection, formatting, processing, sharing, and centralized and accessible storage. ESMC urges USDA to not select specific tools or models to utilize in estimating or measuring GHG emissions and emissions reductions and increased sequestration from agriculture, but instead provide leadership across all sectors in developing standardized criteria that are applicable to the accurate and appropriate use of multiple models or tools for market-based purposes as well as other non-market purposes, such as USDA assessment of conservation program outcomes. Different tools and different models serve different purposes and enjoy different utilities, and rather than picking winners or losers, USDA should focus on strategies to benefit all tools and models.

USDA leadership should encourage and perhaps support the development of an opensource, national research data set repository(ies) to enable calibration and validation of all process-based GHG models. To this end, the technical guidelines should set transparent, standardized, and harmonized criteria and methodologies for data collection, formatting, storage, and access to ensure that modelers have access to consistent, harmonized, high-quality data to improve the performance of all relevant process-based models. These criteria and methodologies should include, among other things, criteria and guidelines for soil sampling frequency, depth increments, and analysis requirements; for soil chamber placement, deployment timing, and measurement frequencies; and for data collection, formatting, entry, and quality control, including automation wherever and whenever possible to remove human error.

Additionally, criteria for soil sampling and data collection is not uniform or uniformly agreed to, even within USDA or among federal soil scientists. Leadership in an open, transparent, inclusive effort to develop standardized, harmonized criteria and protocols should include, among other things, criteria and guidelines for soil sampling frequency, depth increments, and analysis requirements; and for data collection, formatting, entry, and quality control, including automation wherever and whenever possible to remove human error. Also, soil carbon sampling data that is publicly funded is not available to private sector modelers to calibrate and validate their tools, even when being utilized to benefit U.S. farmers and ranchers. This data should be immediately available to all modeling communities operating in the private voluntary market space in order to benefit U.S. agricultural producers operating in these markets.

From a scientific perspective, harnessing data is the key to unlocking the climate-smart agriculture strategies of the future. Farmers, researchers, authorities and stakeholders are united in their need for the most up-to-date data, without which they cannot coordinate and innovate. The USDA should prioritize research database accessibility and ensure that information collected across publicly funded research can be easily accessed by stakeholders. Stakeholders should also be consulted for suggestions on how to streamline and improve USDA's research database(s). ESMC considers data accessibility and streamlining to be part of a larger strategy to grow the use of climate resilient practices on American farms.

The Conservation Application Ranking Tool (CART) developed by NRCS appears to have great potential to support producers and streamline workload in ranking producer applications across USDA conservation programs. Technology use in agriculture production provides more information and data analysis directly to producers. But the data interpretation, providing producers usable information in a manner that is concise and actionable has the most value to farmers and ranchers. If CART can provide analysis to farmers and ranchers that allows them to understand the potential impact of different conservation practices and the value of making systems changes, the information has greater value to farmers. ESMC and private ecosystem markets can help provide that added value by providing market access opportunities for eligible producers.

Just as databases can be improved and streamlined to facilitate ease of sharing for researchers, USDA grant contracts can be similarly improved using feedback from stakeholders. Research in the agriculture-climate nexus is among the most advanced agriculture research being conducted today. USDA can embrace the audacious nature of these projects by allowing grant contracts to be renegotiated mid-project when in fact there is a credible rationale to do so. Undue rigidity in this regard should be avoided.

### **E. How can USDA encourage the voluntary adoption of climate-smart agricultural and forestry practices in an efficient way, where the benefits accrue to producers?**

As USDA considers action on climate issues, an underlying principle of any policy should be to not adversely impact or create redundancies to existing public-private efforts or private sector activities and markets advancing agricultural sector participation in, and payment for, carbon sequestration and other environmental services. Significant efforts are underway by ESMC/ESMRC and the private sector to further develop private markets focusing on providing soil carbon sequestration, reduced net GHG, and water quality and water quantity credit sales to

recognize and reward farmers and ranchers for their services. Private markets operating at scale can do so in a manner that produces scaled, quantified, verified outcomes in a cost effective, efficient manner while providing additional revenue streams to American farmers and ranchers. Any policy that USDA develops must allow for and recognize existing private markets and not adversely impact, interfere or duplicate private sector efforts. Private sector markets can operate more nimbly and at a lower cost than Federal Government programs and USDA could maximize returns on investment to American agricultural producers by providing complementary services discussed above that increase the creation and quality of ecosystem service credits for sale on private voluntary markets.

The private sector has learned much over decades of developing carbon and ecosystem services markets. Additional contributions and collaborative efforts to further enhance these markets and ensure their continued integrity and credibility are currently underway. Such efforts include those led by international multi-stakeholder organizations such as the Institute for International Finance’s Taskforce on Scaling Voluntary Carbon Markets<sup>16</sup>, the Voluntary Carbon Market Integrity (VCMI) Initiative hosted by the Meridian Institute<sup>17</sup>, and ICROA. In addition, the Environmental Defense Fund’s (EDF) collaboration with ENGIE Impact provides relevant recommendations on Mobilizing Voluntary Carbon Markets to Drive Climate Action.<sup>18</sup>

These large global multi-stakeholder efforts offer transparency and expertise, and will continue to ensure credibility and fungibility of credits and actions in global markets. Operating within the guidelines and standards of these international organizations will in turn ensure US agricultural credits generated will not run afoul of or be subject to cross-border carbon taxes or other schemes being discussed that would adversely impact agricultural export markets. The adoption of and adherence to agreed upon international standards that are peer-reviewed and scientifically rigorous have contributed to the increase in demand for (and value of) credits traded on these markets by assuring buyers that credits accurately represent true climate change or environmental mitigation outcomes they claim. As agricultural carbon credits are increasingly scrutinized, these independent, third-party, peer-reviewed standards will provide legitimacy to markets and shield farmers (suppliers) and corporations (buyers) from claims of ‘green washing’ which seem to be increasingly pervasive as a multitude of new ‘markets’ proliferate, not all of which utilize standards. USDA can bolster the integrity of these markets, and the farmers who participate in them, by embracing international standards and refraining from developing new standards or methodologies that could confuse market participants or undermine market standards. The best way to accrue the benefits of private voluntary markets to producers is to encourage markets to create accountable, fungible, and high-value credits that buyers demand.

All parties could benefit from a more collaborative approach to climate-smart practices. Many organizations and private companies are already incentivizing sustainable practices among their suppliers and producers, and many more have made public sustainability pledges. Where industry is currently leading, they should be encouraged to continue to lead. The adoption of climate

---

<sup>16</sup> <https://www.iif.com/tsvcm>

<sup>17</sup> <https://merid.org/why-im-optimistic-this-earth-day/>

<sup>18</sup> [https://www.edf.org/sites/default/files/documents/Mobilizing\\_Voluntary\\_Carbon\\_Markets\\_to\\_Drive\\_Climate\\_Action\\_Recommendations.pdf](https://www.edf.org/sites/default/files/documents/Mobilizing_Voluntary_Carbon_Markets_to_Drive_Climate_Action_Recommendations.pdf)

resilient practices can be accelerated by these private-sector-led initiatives. Now is not the time to reinvent the wheel.

Thank you again for the opportunity to provide input to USDA's climate strategy in response to President Biden's Executive Order on Tackling the Climate Crisis at Home and Abroad. ESMC believes the agricultural sector can have an outsized ability to reduce and remove GHG while providing other ecosystem services that mitigate the negative impacts of climate change and benefit society. ESMC looks forward to working closely with USDA to implement voluntary climate-smart agriculture policies that benefit producers while improving our environment.

Sincerely,

Debbie Reed  
Executive Director  
Ecosystem Services Market Consortium LLC (ESMC)  
Washington, DC  
[dreed@ecosystems-servicesmarket.org](mailto:dreed@ecosystems-servicesmarket.org)  
Tel. (202)701-4298