

# Natural Climate Solutions

## A Federal Policy Platform of the National Wildlife Federation

Natural climate solutions are critical to the success of any climate change policy. These solutions can enhance the health of our soils and ecosystems, conserving forests, watersheds, grasslands, farmlands, and more—all while reducing emissions and boosting the resilience of communities across America.

America's farmers, ranchers, and private forest owners are both highly threatened by climate change and well equipped to play a role in successful climate mitigation and adaptation. The agriculture sector can help mitigate climate change

through management practices that sequester carbon in soil and vegetation, through reducing greenhouse gas (GHG) emissions (including nitrous oxide and methane emissions), and through avoiding conversion of grasslands, wetlands, and forests. Climate-smart agricultural practices such as cover cropping, reduced tillage, rotational grazing, and diversified cropping systems have the potential to sequester carbon while also providing benefits for soil, water, and wildlife—and helping farmers adapt to climate change. Fully implementing these practices could remove as much as 100-200 million metric tons of carbon dioxide annually by 2050.<sup>1</sup>



## Policy Recommendations (continued)

### Dedicate significant resources to research, data collection, and dissemination of knowledge.

- Increase funding for research into crop varieties with increased carbon sequestration potential, such as perennial varieties of crops and enhanced root crops.
- Create and maintain data sharing networks to allow farmers, agencies, researchers, and industry to share and utilize data on practices, soil health, yield, carbon sequestration, and climate impacts.

- Increase funding for the Sustainable Agriculture Research and Education (SARE) program and the National Institute of Food and Agriculture (NIFA) and direct a portion of the funding to climate-smart agriculture and resilience.

- Direct USDA to increase research on manure storage, biogas, and digestive emissions from livestock.

- Provide mandatory funding for Climate Hubs for each state and the Long Term Agricultural Research (LTAR) network. Direct LTAR to address long-term climate mitigation strategies.

- Significantly increase funding for technical assistance within the Natural Resources Conservation Service

(NRCS) and other USDA agencies, with a focus on guidance on practices benefiting long-term climate adaptation and mitigation.

- Increase capacity and climate literacy for outreach from USDA, land grant universities, and Cooperative Extension services. Establish a state-level climate outreach coordinator position within each state NRCS office.

- Increase USDA social science capacity to better guide outreach efforts to address social and cultural barriers to long-term adoption of climate-smart agricultural practices, and share this learning with other outreach agents.

### Citations

1. Mulligan, J., et al. 2020. *CarbonShot: Federal Policy Options for Carbon Removal in the United States*. Working Paper. Washington, DC: World Resources Institute.
2. Spawn, S.A., Lark, T.J., and Gibbs, H.K. 2019. Carbon emissions from cropland expansion in the United States. *Environmental Research Letters*. 14 045009. [doi.org/10.1088/1748-9326/ab0399](https://doi.org/10.1088/1748-9326/ab0399).



**The National Wildlife Federation supports natural climate solutions as part of a broader set of policies and programs that reduce anthropogenic greenhouse gas emissions and enhance climate adaptation for natural and human systems. The National Wildlife Federation has produced the Natural Climate Solutions Federal Policy Platform to layout recommendations to swiftly scale up natural climate solutions, for both climate mitigation and climate resilience. Recommendations are structured around several analytical categories based on land or habitat type. The solutions offer benefits for the climate, local environments, communities, wildlife, and job creation.**

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## Key Principles

• **Avoid conversion of natural ecosystems such as grasslands, which sequester carbon and have high biodiversity value.** Plowing natural areas like native prairie and converting the land to intensive crop production reverses decades, centuries, or even millennia of carbon accumulation and storage in the soil. This massive release of carbon into the atmosphere—which has rivaled that from tropical deforestation hotspots in the last two decades—is particularly problematic, as we have a very limited amount of time available to avoid the most destructive impacts of climate change.<sup>2</sup>

- **Make the most out of limited funding.** Even envisioning a significant increase in funding for conservation practices, federal money would still be limited. To make the most of available dollars, funding should be targeted to:
  - The most effective practices and processes that offer the biggest bang for the buck;
  - Practices with multiple natural resource benefits, to maximize co-benefits to water, wildlife, air quality, farm resilience, soil health, and biodiversity;
  - Practices with high carbon benefits but low return to farmers and ranchers. Practices such as buffer strips provide significant carbon benefits and wildlife and water co-benefits, but don't help improve yield or reduce inputs for farmers—so we can't expect farmers to adopt these practices on their own; and
  - Practices that promote both sequestration and resilience.

• **Provide transition assistance, but not indefinite funding, for adoption of practices that can provide net benefits to farmers and ranchers in the short-to-medium term.** Some GHG-beneficial practices, such as cover cropping, rotational grazing and no-till planting can yield net benefits to producers within a few years. In such cases, paying indefinitely for such practices sends the wrong message—that the practice is only worth adopting if it results in a payment—and cessation of the payments may result in high rates of practice reversal. However, when culturally appropriate outreach and technical assistance are targeted at assisting producers in meeting their production needs and realizing the benefits the practices provide, the motivation is built to maintain the practice long term. Short-term transitional payments, and/or risk management protection to increase producer willingness to try something new, may help accelerate adoption.

• **Reward high performers and early adopters, but pay for adoption of new practices and increased levels of conservation.** Only providing benefits to new adopters of GHG-beneficial practices fails to reward early adopters and the GHG benefits they have provided, and can even lead to practice reversal. Yet paying for practices that would have been implemented anyway does not result in net benefits. A middle ground is to allow early adopters of GHG-beneficial practices bonuses or enhanced payments and/or priority access to programs that reward adoption of additional practices.

(continued inside)

## Key Principles *(continued)*

- **Prioritize socially disadvantaged, veteran, and beginning farmers and ranchers.** These are the producers least likely to have access to the capital and information required to implement many practices. They may also represent some of the farmers most ready and willing to adopt these practices.

- **Focus on more permanent conservation strategies to ensure long-term benefits.** Examples include long-term or permanent easements and putting mechanisms in place to ensure against reversibility.

- **Ensure the predicted GHG benefits of practices are based on best available science, but allow for some degree of uncertainty in instances where measurement is prohibitively expensive or resource intensive.** The difficulty in measuring the exact GHG benefits for some practices, such as cover cropping, can mean that some practices become prohibitively expensive or impractical to monitor if a high degree of accuracy is required. An alternative is to use the best available science to conservatively predict the GHG benefits of a practice in a given region. Periodic sampling of results can be used to fine-tune predicted GHG benefits.

- **Provide significantly more technical assistance, outreach, education, and conservation planning.** Outreach efforts should expand on current technical assistance to address social and cultural components of climate-smart agriculture to ensure lasting adoption of sustainable practices.

- **Invest heavily in research and development, particularly around new and innovative crops and practices.** Research efforts should include both traditional institutions (U.S. Department of Agriculture [USDA] agencies, land grant universities) and innovative arrangements (citizen science, data sharing platforms) to maximize applicability across field, farm, and landscape contexts.



## Policy Recommendations

**Establish a new federal conservation policy for grasslands, a North American Grassland Conservation Act,** modeled after the North American Wetland Conservation Act, that will maintain or increase carbon storage capacity, bolster community resilience from flooding and hurricanes, support ranchers, and have the additional benefit of improving habitat for birds, pollinators, and wildlife.

**Improve climate benefits of existing conservation programs.** In addition to increased funding to existing Farm Bill programs, there are numerous ways in which these programs can better utilize limited dollars to achieve climate gains. These include cataloging climate benefits or drawbacks of all existing conservation practice standards; adjusting programmatic rankings of projects to reward those that better benefit the climate and denying projects likely to harm it; adding climate as a priority initiative within the Environmental Quality Incentives Program (EQIP); creating bundles of climate-smart agriculture

practices within the Conservation Stewardship Program (CSP) and adding these practices into nutrient management bundles; better emphasizing and utilizing easements (including permanent easement options) and targeting them to areas at greatest risk of conversion; expanding the Conservation Reserve Program (CRP) and creating long-term and permanent contract options to avoid losing the land's carbon storage in the future; and making climate a subcategory of project initiatives within the Regional Conservation Partnership Program (RCPP).

**Reform initiatives across various USDA agencies to spark climate action and encourage climate mitigation.**

- Call on the Secretary of Agriculture to study the risk implications of climate change for USDA programs (including the consequences to crop insurance of inhibiting or failing to encourage producers to adapt by implementing less risky practices) and establish a plan for USDA to address those risks.

- Create a department-wide crop diversification initiative, with an emphasis on establishing diverse cropping systems through research, credit, conservation, and rural development programs.

- Create a climate-smart agriculture certification program, modeled after the National Organic Program.

- Direct USDA to study how each Farm Bill program—including but not limited to conservation programs—can do more to address climate change. This can include ways to sequester more carbon and avoid GHG emissions.

**Reform the federal crop insurance program to actively promote climate-smart agriculture practices, remove barriers to their adoption, and incorporate the resulting reduction in risk.** Right now there are many ways in which existing crop insurance structure and rules stand in the way of farmers who want to implement new practices. There are missed opportunities for rewarding farmers who do the right thing, and for using the immense taxpayer subsidies of the crop insurance program to force better climate

performance. The program has not recognized that better conservation and climate stewardship reduce taxpayer risk by conferring to the farm increased performance and resilience.

**Prevent conversion of native grasslands to croplands through a nationwide Sodsaver provision,** which protects native prairies by reducing federal premium subsidies for crop insurance on land where native sod has been plowed for row crop planting.

**Reduce on-farm emissions and support on-farm renewable energy.**

- Expand the Rural Energy for America Program through significant new funding, with a strong investment in anaerobic digesters.

- Incentivize or mandate methane reduction from manure lagoons.

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