SUMMARY OF ENABLING POLICIES RECOMMENDED BY
THE NORTH AMERICA CLIMATE SMART AGRICULTURE ALLIANCE (NACSAA)[1]

The U.S. Fourth National Climate Assessment Report, Volume II, documents that **climate change presents numerous challenges to sustaining and enhancing crop productivity, livestock health, ecosystem integrity, and the economic vitality of rural communities**. Among the report's key messages: food and forage production are declining in regions experiencing increased frequency and duration of drought; the degradation of irreplaceable soil and water resources will expand as extreme precipitation events increase across our agricultural landscapes; challenges to human, crop and livestock health are growing due to the increased frequency and intensity of high temperature extremes and related spread of pests and crop and animal diseases; and key modes of communication, transportation, water, and sanitary infrastructure are vulnerable to disruption from climate stressors.

These events and conditions represent unprecedented risks to food and energy security, human health, the environment and progress towards greenhouse gas mitigation in the U.S., North America and worldwide. Farmers, agribusinesses and rural communities across North America are already experiencing the impacts of extreme variability in weather and a changing climate and know that the threats to their livelihoods are increasing. **The formation of the North America Climate Smart Agriculture Alliance (NACSAA) is North America's agriculture and rural communities' response to the complex threats and risks of climate change. This diverse group of agricultural thought leaders and organizations from across the continent have joined together to create a platform for inspiring, educating, and equipping agricultural partners to innovate effective local adaptations to climate challenges.**

This **farmer-led Alliance** focuses its efforts on helping both producers and the value chain utilize **climate smart agriculture (CSA)** strategies to enhance the adaptive capacity of North America's food system. Strategies range from minor adjustments in existing production to major changes in agricultural systems and best management practices, and are organized around **three CSA pillars**:

Pillar One: *Sustainable intensification of production and ecosystem integrity*

Pillar Two: *Adaptations that build resiliency*

Pillar Three: *Systems that allow farmers to retain and sequester carbon or reduce greenhouse gas emissions and simultaneously improve profitability*

These CSA pillars lead to economic, sustainability and resilience outcomes necessary for farmers to survive, thrive and achieve multiple benefits of healthy productive agricultural systems and ecosystem integrity. NACSAA developed a set of guiding principles[2] which has served well to carry North American farmer voices to an international stage and proves equally applicable to the development of domestic enabling policies. These guiding principles are the foundation of the ten priority CSA enabling policies and programs below that NACSAA recommends to the US House Select Committee on the Climate Crisis.

[1] *NACSAA. Solutions from the Land (SfL) Lutherville, MD USA. www.sfldialogue.net/what_is_sfl.html*

[2] *NACSAA Koronivia Guiding Principles submitted to United Nations Framework Convention on Climate Change (UNFCCC) Koronivia Joint Work on Agriculture (KJWA) Bonn 2019.*

Ten Priority Climate Smart Agriculture Enabling Policies and Programs Recommendations

1. ***Manage the Water Cycle:*** Acknowledge and prioritize through funding, infrastructure and practices the extreme variations in the hydrologic cycle marked by drought, evapotranspiration, increased and more intense precipitation events, erosive runoff, sediment transfers to rivers and oceans, and increasing degradation of soil and water resources. Changes in the water cycle are iteratively driven by changes in weather and climate, land uses and human land and water management leading to shifts in the timing, intensity and volume of rain and snow pack that in turn influence land surface erosion from flowing water, saturated and ponded soils, water storage capacity and flooding.

2. ***Financial Assistance and Incentives:*** Promote and assist voluntary, locally led, incentive-based conservation efforts which may vary by conservation district to avoid "one-size-fits-all" policies; especially support proven practices such as 4R nutrient stewardship, no-till and cover crops and on-farm technologies such as methane digesters.

3. ***Technical Assistance:*** Rebuild the capacity (both resources and staffing) of NRCS, state conservation agencies and local conservation districts to provide much needed technical assistance in writing and implementing CSA plans.

4. ***Investments in Infrastructure:*** Catalog and facilitate priority repairs and upgrades to vital production and vulnerable inland waterways infrastructure, including levees, locks, dams, and other water systems as well as roads, bridges, waterways, rails, utilities and others. Enable the use of on-farm new technology through universal in-field wireless broadband connectivity.

5. ***Research:*** Support and encourage system-level, integrated science research on climate risks; adaptation innovations; the economic value and effectiveness of CSA production practices; decision-making at farm and landscape level management, and methods to align market incentives with desired environmental practices and outcomes.

6. ***Risk Management:*** Adaptation to changing weather and climate entails a suite of management strategies based on short and longer term production and conservation goals and perceptions of uncertainty and risk associated with changing conditions. Adjust federal crop insurance programs to incentivize and expedite adoption of CSA practices to mitigate uncertainty and risks.

7. ***Decision-making and Capacity Building:*** Integrate the results of research, farmer experiences and their articulated needs, and technology investments to develop accessible, pragmatic, and affordable decision-making approaches that utilize the range of low, mid, and high-tech tools and strategies, and effectively connect land managers at farm and landscape scales with data, knowledge and resources.

8. ***Carbon Pricing Mechanisms:*** Support a carbon pricing mechanism that also provides payments to farmers for carbon fixation in their soil, with valuation contingent on science-based evidence for time length of capture (i.e. higher values for fixation 12 or more inches below the soil surface).

9. ***Payments for Ecosystem Services***: Support the development of quantified ecosystem benefits and a voluntary, market-based, private-sector funding mechanism/incentive for ecosystem services.

10. ***Clean Energy:*** Pursue the reduction of carbon through market adjustments and production diversification opportunities to expand bio-based fuels for transportation and electricity production.