AI-Climate Broadens Outreach to Underserved Audiences

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ABSTRACT

Artificial Intelligence (AI)-Climate Institute, consisting of **six institutions** (**Delaware State**, **Colorado State**, **Cornell**, **Minnesota**, **North Carolina State**, and **Purdue** Universities) is bolstering collaborative research across the country to scale up solutions to the tremendous challenges associated with climate change. AI enabled technologies will help farmers and foresters improve yields and use resources more sustainably to reduce the agricultural sector's greenhouse gas emissions. Climate change requires concerted societal action, in which machine learning can play an impactful role. The issue is pressing, with major implications for societal well-being, particularly for the world's most disadvantaged populations. Stakeholders want accurate information on impacts, risks, and projections of climate change. Addressing climate change requires rapid, sustained, equitable, and scientifically informed efforts that optimize carbon sequestration in mitigation and adaptation, in conjunction with relevant stakeholders. **Delaware State University,** 1890 Institution, will play the pivotal role of reaching out to underrepresented groups with Climate smart practices. Using approaches that respect their independence and cultural practices, University of Minnesota will engage the Native American community. Through their well-developed Education and Extension programs in Climate Science, Cornell and Purdue are a great resource. **AI Climate** constituents will work together for five years and beyond, to deliver major societal impacts.

AI-Climate Team

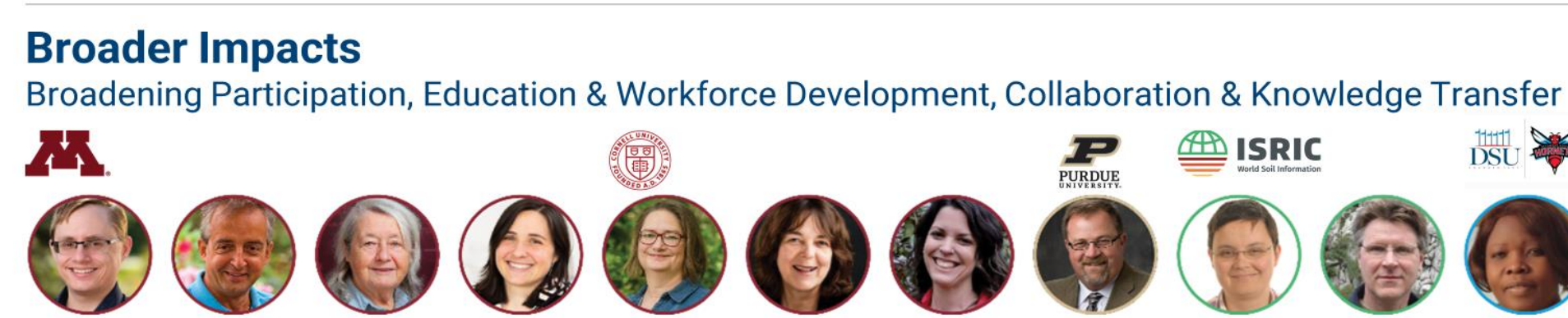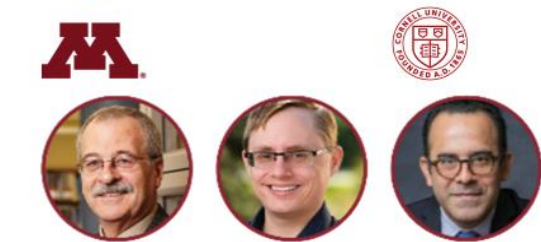### MULTI-DISCIPLINARY, MULTI-INSTITUTION TEAM

Artificial Intelligence (AI) — UNIVERSITY OF MINNESOTA

Climate Smart Agriculture and/or Forestry (CSAF)
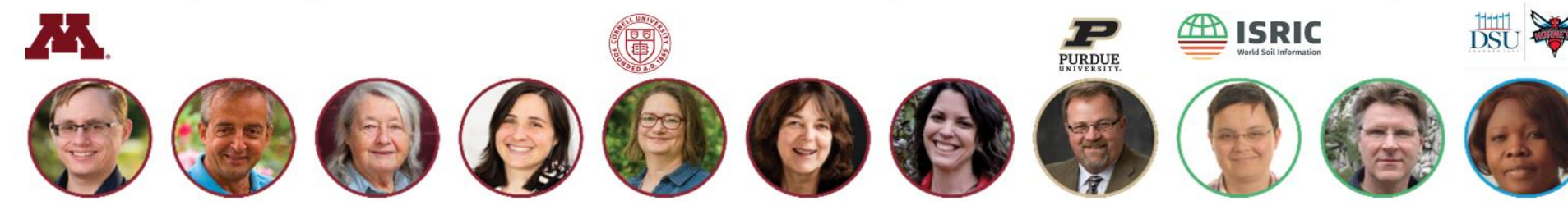
Cyber Infrastructure

Applied Economics

Broader Impacts
Broadening Participation, Education & Workforce Development, Collaboration & Knowledge Transfer

Researchers are exploring compelling AI-powered knowledge and solutions—including, using AI to enhance the measurement of greenhouse gasses, and creating specialized field-to-market decision support tools.
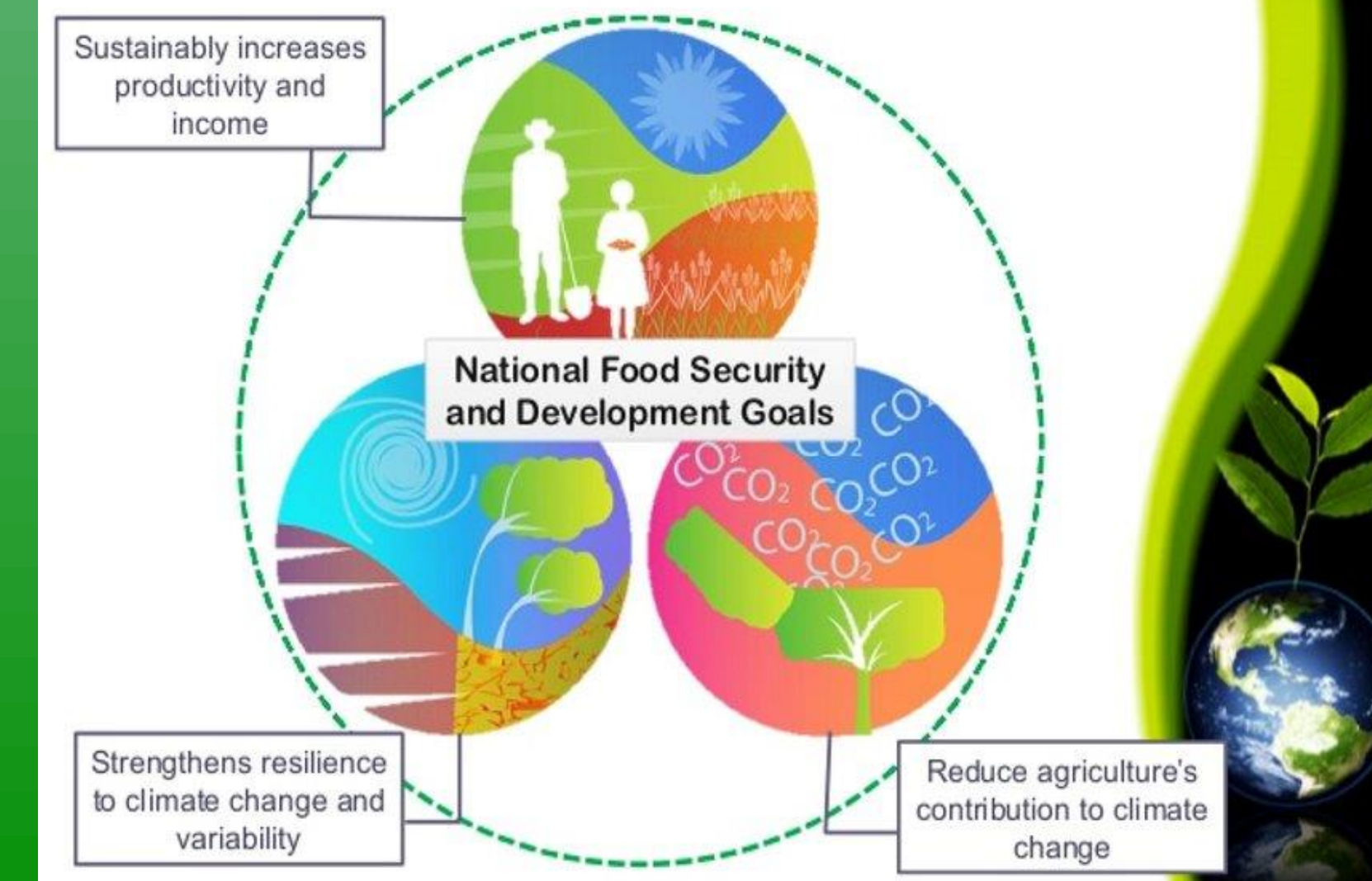
Applications/Climate Smart Practices

AI-CLIMATE, is combining knowledge from agriculture and forestry sciences with unique new methods in artificial intelligence (AI), working to curb the effects of climate change while also lifting rural economies.
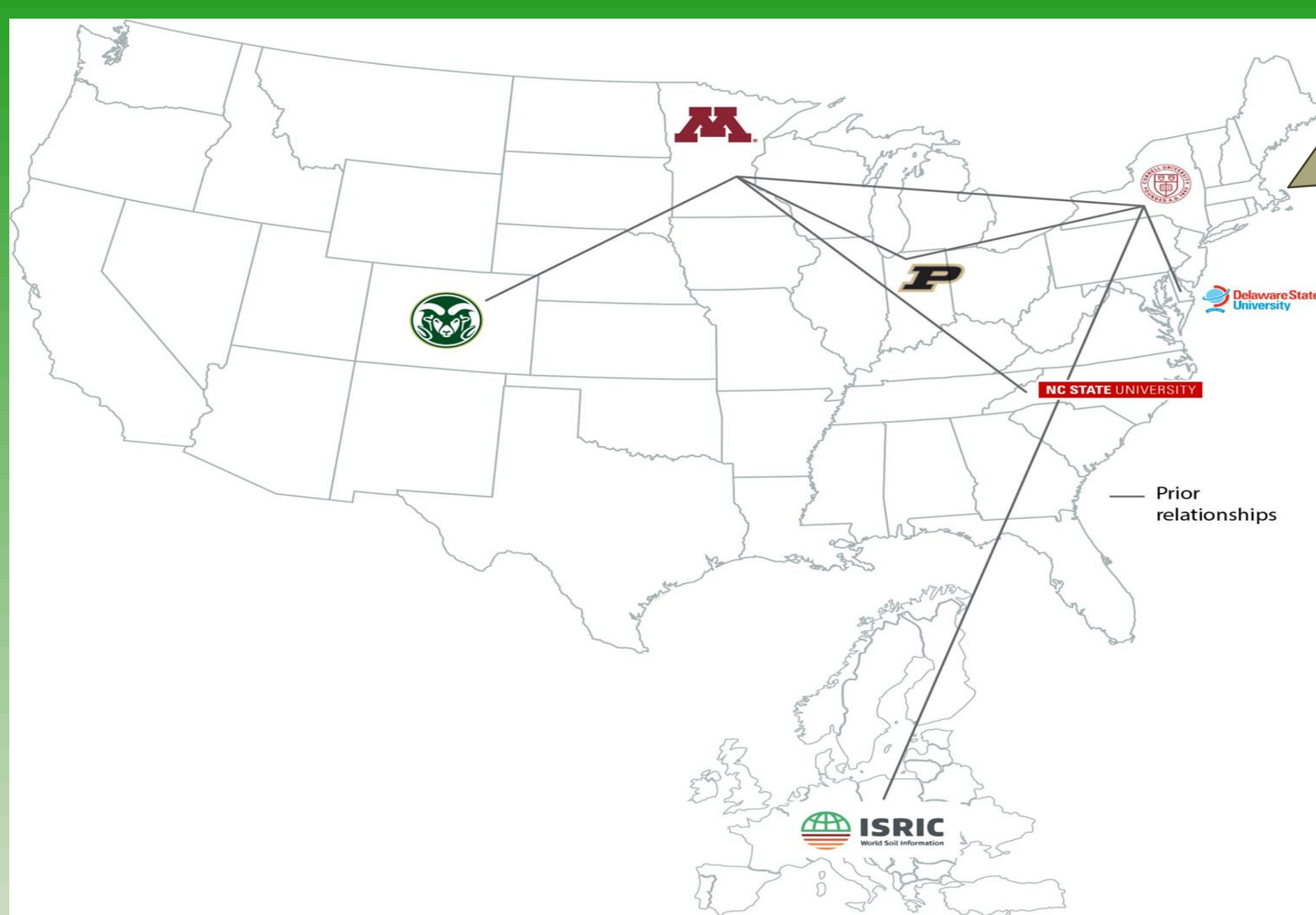
CSF Climate Smart Farming — A program of Cornell University

Training and outreach to farmers provides more accurate decision tools for greenhouse gas (GHG) audits and adaptation plans

CSF Climate Change In Your County | CSF Winter Cover Crop Planting Scheduler | CSF Growing Degree Day Calculator

What is CSA? — CLIMATE SMART Agriculture
- Sustainably increases productivity and income
- National Food Security and Development Goals
- Strengthens resilience to climate change and variability
- Reduce agriculture's contribution to climate change

Farmers can change practices and strategies to increase resiliency and reduce GHG emissions

AI SMART FARM

ARTIFICIAL INTELLIGENCE IS CHANGING AGRICULTURE

Delaware State University-Smyrna Outreach Research Center- To demonstrate climate smart practices

Outreach to Small farms clientele is key

Solicit feedback for our technologies and tools

Member Institutions
Prior relationships

Acknowledgments

AI-CLIMATE is a joint effort involving the University of Minnesota Twin Cities (lead), Colorado State University, Cornell University, Delaware State University, North Carolina State University, and Purdue University.