

USDA Climate Hubs Quarterly Report

Q4 FY18

PURPOSE

The Climate Hubs reduce climate related risks to agriculture, forestry, and rural communities by working with and through USDA agencies and partners. The hubs develop and deliver science-driven strategies and tools so that USDA programs, advisors, and land managers can make informed decisions to manage risk.

Assessments & Syntheses

Southwest Hub personnel gave 8 presentations at scientific / professional meetings reaching an estimated audience of 700. Meetings included the Soil and Water Conservation Society Annual Conference, the Ecological Society of America Annual Meeting, 2018 Western Regional Cooperative Soil Survey Workshop and the annual Jornada Symposium. Topics included tools and resources to improve climate knowledge and decision-making in the face of a changing climate. *(USDA Partners: NRCS, ARS)*

Caribbean Hub led the development of the Fourth National Climate Assessment (NCA4) and finalized the Fourth Order Draft. This is the first-ever Caribbean chapter on the NCA4, focused on climate science and climate change effects on Puerto Rico and the U.S. Virgin Island. *(USDA Partners: USFS, International Institute of Tropical Forestry)*.

Outreach & Education

Midwest Hub delivered information at several outreach events discussing climate change issues in agriculture to NRCS, extension economists and an Iowa State graduate distance education class. The presentations were part of several different efforts to educate on climate change-agriculture issues. Midwest Climate Hub Liaison, Adam Dowling gave a series of presentations to NRCS in Wisconsin about climate change impacts in the region. The focus was to educate NRCS staff on how climate is impacting agriculture, and to discuss these issues in support of NRCS field assistance. *(USDA Partners: NRCS)*

Northern Plains Hub Extension & Outreach Team hosted a 2-day workshop for fellow University of Nebraska-Lincoln Extension educators and USDA partners across Nebraska. Travel funds from NPCH enabled 30 Nebraska Extension educators to meet with 20 USDA agency leaders and field staff from NRCS, FSA, ARS, APHIS, and RMA. Together they strengthened their working relationship and climate literacy through: presentations from the Nebraska State Climate Office; a scenario planning tutorial to empower more effective climate-outreach; lightning talks about USDA and Extension programs/services; and a case-study exercise that revealed gaps and opportunities for more effective collaboration during future disaster events. *(USDA Partners: NRCS, FSA, ARS, APHIS, RMA)*



Breakout groups at the Northern Plains Hub 2018 Extension & Outreach Retreat in Rapid City, SD, work together to identify the outreach needs of agricultural communities to help them better prepare, respond, and recover from wildfires. Photo Credit: Dannele Peck, NPCH Director

Outreach & Education

California Hub developed a **Climate Smart Agriculture curriculum** and is in its final stages of development in collaboration with **EcoAgriculture Partners and USDA-FAS**. The curriculum targets decision-makers at the sub-national level, including local government officials, technology transfer specialists and service providers, and to a lesser extent, landscape managers and individual land managers in a variety of global contexts and agricultural sectors. The purpose is to help align local climate-smart actions with national climate goals. The curriculum includes background synthetic content on CSA, as well as interactive exercises and activities for workshop participant, and can be used as a whole unit or as individual lessons. *(USDA Partners: FAS)*

Southern Plains Hub delivered climate-smart information to numerous Southern Plains stakeholders via in-region outreach and education activities. These included the 90th annual Texas FFA convention (Fort Worth TX); the Kansas Soil Health Coalition meeting (Manhattan KS), the NRCS-Love County Conservation District soil health meeting (Marietta OK), and a soil health demonstration and tour on Cheyenne and Arapaho Tribal land. SPCH staff interacted with farmers and ranchers, extension personnel and agricultural professionals, and USDA agency representatives on matters concerning the use of soil health as a climate resiliency tool. *(USDA Partners: NRCS, ARS)*

Northeast Hub engaged a diverse audience with direct stakeholder meetings at 4 in-person events. We hosted an information booth at AgProgress Days in Pennsylvania. We co-hosted the Local Climate Action Summit during Climate Week in New York City. We presented at the Pasture Resilience Workshop in Vermont. We attended the New England Catalyst Conversations on Energy and Climate in New Hampshire. Altogether we directly engaged with over 300 key stakeholders. *(USDA Partners: ARS, NRCS, USFS)*

Northern Forests Hub Supported and lead advanced technical discussions on climate change adaptation. The NFCH provided climate education, adaptation technical extension, adaptation planning trainings to the: Department of Defense (Navy (Port Hueneme and Newport), Air Force (Vandenberg), Michigan Army National Guard (Ft Custer)), MN DNR, WI DNR and the PA DCNR. Additional work was completed on the USFS Wayne National Forest as part of an on-going effort to revise the Forest Plan. *(USDA Partners: USFS: State and Private Forestry, Region 9, Northern Research Station, National Forest System (Wayne NF))*



Caption: Pennsylvania DCNR staff considering potential risks at a September 2018 workshop hosted by the Northern Forests Hub. Photo credit: Patricia Leopold (NIACS, MTU)

Technical Support

Northwest Hub is working to foster productive and sustainable use of National Forest System Land. It is critical to adapt resource management to reduce negative effects of climate change and ensure continued functionality of ecosystems. Teams of scientists and land managers have developed climate change vulnerability assessments and adaptations in natural resource management. The Climate Risk Management Practices synthesize key climate change sensitivities and risk management practices for land managers for these resource areas: forest vegetation, non-forest vegetation, water and infrastructure, fisheries and fish habitat, wetlands and riparian areas, wildlife, and recreation. The NW Climate Hub showcased this work on the national and regional Climate Hub websites. *(USDA Partners: Forest Service Research & Development Pacific Northwest Research Station, Forest Service Office of Climate and Sustainability, Forest Service National Forest Systems)*

Southeast Hub and partner Chris Henry, University of Arkansas Associate Professor and Water Management Engineer, passed the 100,000 acre mark of planned Multiple Inlet Rice Irrigation (MIRI) through their MIRI app. Dr. Henry has been conducting free field schools to teach rice farmers how to use the MIRI app to install and manage irrigation pipes on their fields. Over 400 users have downloaded the app and 250 miles of pipeline have been planned for implementation. Once fully implemented on these fields, MIRI will save over 21 billion gallons of water annually.