



USDA Climate Hubs
U.S. DEPARTMENT OF AGRICULTURE

USDA Climate Hubs Quarterly Report

Fall 2019

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

The Midwest Climate Hub (MCH) obtained a GLISA Small Grants Competition Grant for their project "Climate Change Impacts on Agriculture in the Midwest." MCH will be synthesizing NOAA/NCEI state climate summaries with specific ag sector information. The issues specific to agriculture are varied by crop and location. The goal is to help develop more localized information for state level users/stakeholders to help share usable information for each state.

The **Northeast Climate Hub** developed a factsheet and webpage to synthesize new research on summer cover cropping in Rhode Island. University of Rhode Island (URI), has assessed the viability of using summer cover crops to build soil health. A variety of summer cover crops were tested over three years to determine how they responded in Rhode Island's climate. The URI research found that Japanese millet (*Echinochloa esculenta*) and teff (*Eragrostis tef*) make good summer cover crops in Rhode Island's climate.

The Northwest Climate Hub, in partnership with the Pacific Northwest Research Station, convened a workshop "Carbon Dynamics for Land and Watershed Managers." The workshop brought together 40 scientists and managers from the Pacific states (AK, WA, OR, CA, and HI) and British Columbia to share and explore potential for standardizing carbon accounting methodologies. The workshop participants also developed a research agenda with the West Coast states (who are leading carbon market development) to support shared stewardship of green carbon.



Southwest Climate Hub UN Civil Society Meeting

Outreach & Education

The Caribbean Climate Hub held a workshop on Chainsaw Safety and Use in Pre and Post Hurricane Situations to provide knowledge and basic skills required to manage fallen trees and maximize their wood value after a hurricane. The three-day workshop covered chainsaw safety, maintenance, and techniques for bucking logs. Two days of guided hands-on practice were followed by an evaluation of acquired skills. This is the 2nd in a series of workshops aimed to build capacity toward the growth of a sustainable wood industry capable of reducing the risks and capitalizing on resources related to hurricane-downed trees.



Participants in the Caribbean Climate Hub Workshop Chainsaw Safety and Use in Pre and Post Hurricane Situations pose after two days of hands-on practice with chainsaws in the Agricultural Experiment Station in Corozal, Puerto Rico, September 5, 2019. Photo credit: US Forest Service Contractor Eva Holupchinski.

Outreach & Education

The Northern Forests Climate Hub (NFCH)

Hosted 10 trainings for ~370 people to help land managers evaluate the impacts of climate change on forests; to consider the impacts of climate change in their land management; and to develop custom adaptation responses using the Adaptation Workbook. Events were in-person (field tours, workshops, conferences, consultations). The NFCH worked with groups from a variety of ownerships, sectors and geographies and most notably at events at the Canadian Petawawa Research Forest and at the National Advanced Silviculture Program. Other events were hosted in the Midwest and Mid-Atlantic, Northeast and New England for participants managing state, federal, NGO, private lands and in tribal communities.

The Northern Plains Climate Hub (NPCH) funded an effort by Montana State University Extension to develop the 4-H Weather and Climate Youth Learning Lab Leader’s Guide: A Hands-On Learning Experience for Elementary School Students, in partnership with Extension at Colorado State University, University of Wyoming, and South Dakota State University. The 9-lesson guide was recently accepted into the National 4-H curriculum! NPCH highlighted this creative curriculum during the 2019 AgroClimate Outreach Exchange, and adapted one of its “walk-up event” options for the 2019 Laramie County Ag Expo—where 1000 fourth-graders engaged in an interactive exploration of the effects of extreme weather on agriculture.



During the 2019 Laramie County Ag Expo, the Northern Plains Climate Hub guided 1000 fourth-graders from Cheyenne, Wyoming, through an interactive exploration of extreme weather, its effects on agriculture, and their creative ideas for helping crops and cattle survive. Photo credit: Dannele Peck.

Southeast Climate Hub Published information on the Hub’s web page to help producers prepare for and recover from Hurricane Dorian. These resources were publicized through national and regional Hub networks as the storm was approaching the SE US. Resources included links to animal and farm prep, recovery and assistance, and draft sections from the Hurricane Preparedness and Recovery Technical Manual we are preparing. Draft manual sections detail guidance for 18 major commodities found throughout the SE US. While manual sections were still in draft form there was enough commodity-specific and general guidance available to help producers increase resilience to hurricane impacts.

The Southern Plains Climate Hub (SPCH)

hosted a soil health workshop in El Reno, OK. Several experts spoke, including SPCH’s Fellow. 50 people attended the workshop and improved their understanding of land management for healthier and more resilient soils.

The Southwest Climate Hub, the NRCS, and SP hosted a webinar "Introducing a One-Stop Resource for Wind Erosion, Air Quality, and Dust Mitigation" with over 100 attendees. Participants learned about a new resource for air quality, dust mitigation, wind erosion and available resources to support on-the-ground conservation. They were introduced to the Dust Mitigation Handbook and website, which represent a “OneUSDA” vision for conservation management under varying and changing environmental conditions, and is intended for resource managers in USDA and other land management agencies who are struggling with dust challenges and working with producers to craft solutions.

Technical Support

With support from USDA-ARS ONP and in partnership with UC Merced and UC ANR climate adaptation scientist Dr. Tapan Pathak and **California Climate Hub (CCH)** director Steven Ostoja began developing a decision support compendium of climate decision enabling resources for California agriculture production modeled after the well know AgroClimate, it is called Cal-AgroClimate.