Since 2014, the USDA Southwest Climate Hub (SWCH) has helped farmers, ranchers, foresters and communities plan for and respond to climate change and extreme events in our region. The SWCH is one of eleven Climate Hubs.

USDA Southwest Climate Hub Core Team

Southwest Hub Director

Emile Elias Emile.Elias@usda.gov

Science Coordinator

Caitriana Steele caiti@nmsu.edu

Coordinator

Skye Aney angus.aney@usda.gov

HI & USAPI Coordinator

Ashley McGuigan aamcguig@hawaii.edu

Tribal Coordinator

Helena Deswood Helena.Deswood@usda.gov

USDA-ARS Jornada Experimental Range 2995 Knox St.

> Las Cruces, NM 88003 (575) 646-4842

USDA Southwest Climate Hub Partners

ARS

Brandon Bestelmeyer

Marisa Wall

USFS

Stephanie Yelenik Christian Giardina Susan Cordell

NRCS

Sara Thompson Amy Koch



WATER SCARCITY SOLUTIONS

The SWCH has developed the Water
Adaptation Techniques Atlas (WATA) to
document practices and foster discussion on
sustainable water use in the Southwest. In
support of the Bureau of Reclamation's Rio
Grande New Mexico Basin Study, the SWCH
team facilitated an adaptation planning and
practices course with water users. Our team
is leading analyses of adaptation options
and the impacts of changes on cropping and

rangeland. https://webapps.jornada.nmsu.edu/wata

Northern Forests Hub Northwest Region Northern Plains Region Northern Plains Hub Northeast Region Northeast Region Southwest Region Southwest Region Southwest Region Southeast Region Southeast Region Caribbean Hub Southwest Region Southwest Region Caribbean Hub Southwest Region Caribbean Hub



WATA

SUSTAINABLE SOUTHWEST BEEF PROJECT

SWCH leads the extension team for the SSBP, a project promoting ranch and rangeland resilience in the Southwestern US. The diverse team is evaluating:

1) heritage Raramuri Criollo cattle for sustainable grazing in arid rangelands, 2) precision ranching technologies, and 3) supply chain options as strategies to help keep ranching and rangelands ecologically and economically healthy as climate, markets, and policies change.

https://southwestbeef.org/

FOREST RESOURCES

SWCH develops and provides essential region-specific decision-support tools and resources to help forest land managers effectively and efficiently achieve their management objectives while addressing ecological impacts and disturbances. SWCH provides adaptation planning and practices workshops for forest managers. SWCH has developed the Forest Resource Index for Decisions in Adaptation or FRIDA. FRIDA is an online compendium of decision-support tools and resources which allows land managers to easily query based on their goals and region to choose the most appropriate action for their specific objectives. https://webapps.jornada.nmsu.edu/frida/



FRIDA

CLIMATE EQUITY AND INDIGENOUS COLLABORATION

SWCH is partnering on a Native Climate project. This project strengthens the Role of Climate Hubs in Indian Country and supports three native climate fellows (Agriculture, Data and Teaching) and a cadre of native student interns an inperson drought response workshop.

https://native-climate.com/



Native Climate

The SWCH works in three functional areas:

- 1. Research and Science Synthesis: Conduct climate vulnerability and equity assessments synthesizing the knowledge in our region and sharing the historic and emerging climate change and climate impact science with partners and stakeholders. Members of our team author national and international climate assessments, including The 6th IPCC Assessment Report, and the 5th National Climate Assessment.
- 2. **Decision-Support:** Our team builds and shares data-driven decision-support tools and leads groups through decision processes to build climate adaptation and mitigation into planning.

3. Convening:

Adaptation Workbook Process:

The Adaptation Workbook assists natural resource professionals and landowners as they consider future climate and potential impacts in their project area. The Workbook is a step-by-step process that allows users to consider climate change information relative to their project goals. Users develop skills in project-level evaluation with future climate impacts on mind, allowing them to design customized management actions to better meet management objectives.

1. DEFINE Vulnerability location, assessments, scientific objectives, and literature, and other time frames. resources 2. ASSESS climate 5. MONITOR and change impacts evaluate effectiveness vulnerabilities Menu of 4. IDENTIFY and 3. EVALUATE Adaptation implement management Strategies & adaptation objectives. Approaches actions.

https://adaptationworkbook.org/

After-Fire:

A toolkit where Southwest land managers, landowners, or communities can find guidance for assessing and preventing damage due to post-fire flooding and related events.

https://www.climatehubs.usda.gov/hubs/southwest/tools/after-fire-toolkit-southwest

AgRisk Viewer:

Managing Agricultural Risk in a Changing Climate. The AgRisk Viewer is an accessible web platform for visualizing crop insurance loss data from the USDA Risk Management Agency (RMA). These data provide an important window that can reveal the nature, severity and frequency of weather and climate events impacting commodity crops across the U.S.

Tools for the Beef Industry:

The Sustainable Southwest Beef team curated more than 550 resources into a library of decision support tools for beef cattle production and management.

https://webapps.jornada.nmsu.edu/livestock/

Convening Scientists and Partners: We specialize in building networks and convening partners to advance climate solutions. A prime example is the Southwest Drought Learning Network (DLN), formed in response to the 2018 exceptional drought by the SWCH, the National Drought Mitigation Center and the National Integrated Drought Information System.

https://www.climatehubs.usda.gov/hubs/southwest/tools/agrisk-viewer

https://dln.swclimatehub.info/

Indigenous Collaboration Sharing **Projections** Management to People Practices Resource Managers: Tribes, NRCS, FSA, RMA, Extension, Monitoring Drought in BLM, USFS, States, & Impact Reporting Agriculture Parks, Municipalities, Others 2022 DLN Teams are denoted dln.swclimatehub.info

We partnered with the Natural Resources Conservation Service to host Climate Conversations designed to expand agency personnel climate literacy.