COORDINATING REGIONAL SUPPORT FOR NATURAL RESOURCE MANAGEMENT IN A CHANGING ENVIRONMENT

Climate and weather variability affect a broad array of risks (such as drought, floods, changing growing seasons and many others) that must be addressed by decision makers, including families, farmers, ranchers, foresters, state and tribal natural resource professionals, city managers, businesses, and others. Risks are not limited to a single region or scale, so to meet the information needs of decision makers, federal agencies must closely coordinate within the federal family as well as with state, local and tribal entities. For example, impacts on water resources affect many different decision makers across the country, requiring action and engagement across many governing jurisdictions and scientific disciplines. Coordination is a vital part of ensuring that federally supported science and risk management efforts address needs, preparation, and responses in integrated ways to best meet the needs of the public.

Federal agencies are increasingly supporting science and operational programs that provide context-specific data, information and tools for decision makers to improve practices and make risk management and adaptation decisions that are climate-and weather-sensitive. These programs rely on partnerships involving scientists, practitioners, and decision makers to identify and refine science needs and with local officials and experts to ensure effective implementation. Federal agencies are eager to ensure that the communities and networks that we serve have sustained and reliable access within their region to the expertise and information needed to engage in this important work. Four key partnership-driven regional science and information programs are working to ensure this continued support:

Regional Climate Hubs (USDA) package and deliver information capitalizing on USDA Service Centers, Forest Service Threat Centers and partnerships, such as Cooperative Extension and the Climate Change Response Frameworks. This information enables farmers, ranchers, and forest landowners to adapt to the impacts of climate change and weather variability and to promote agriculture/forestry production sustainability and health. (www.usda.gov/climatehubs)

Landscape Conservation Cooperatives (DOI/FWS/multiple partners) are management-science partnerships composed of states, tribes, federal agencies, non-governmental organizations, universities, and others. LCCs provide a structure to define shared objectives, develop spatially-explicit strategies, and provide scientific and technical decision support to foster landscapes capable of sustaining natural and cultural resources for current and future generations. (http://lccnetwork.org)

Regional Climate Partnerships (NOAA/multiple partners) provide integrated science, climate data and information products, and partnership building efforts to local, state, tribal, and federal entities seeking to manage climate- and weather-related risks. Regional Integrated Sciences and Assessments (RISA) teams work with a diverse range of sectors (e.g. public health) as a research engine for partnership-driven science, while Regional Climate Service Directors help link people to expertise and data, such as the operational products and services of the Regional Climate Centers. (toolkit.climate.gov/help/partners)

Climate Science Centers (DOI/USGS) provide natural and cultural resource managers (federal, state, tribal, local, public/private) with the scientific tools and information they need to develop and execute climate adaptation strategies for natural and cultural resources. (www.doi.gov/csc/index.cfm)

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HOW WE COORDINATE

Western Water Assessment RISA works with the North Central CSC on a joint project with The Nature Conservancy in Colorado. Here, participants work to restore sagebrush habitat using information drawn from future climate scenarios.

Photo credit: Betsy Neeley, TNC

Naturally, some technical expertise within these programs overlaps, but each is targeted directly to stakeholders associated with the respective agencies. Designing agency programs to support mission-relevant partnerships helps ensure that each group obtains information in the form and at the level of detail and complexity appropriate to their decisions and activities. By linking Federal efforts in a region, users can benefit from integrated scientific information, drawing on the expertise of scientists and users from multiple backgrounds.

CSCs, RISAs, LCCs, and Hubs have and will continue to interact in both formal and informal ways at the national, regional, and project level. Regular exchange builds trust, understanding, and appreciation for the capabilities of science and the pressure of real world challenges. Thus, informal dialogue and engagement are critical to our ongoing coordination.

National and regional program leaders— working with emerging regional network partners and decision makers—identify and address common needs across sectors and best practices for information sharing. Such efforts include establishing greater consistency across communication products, and periodic program coordination meetings.

This growing interagency coordination will allow communities, land managers, and state and local governments to know where they should go for comprehensive climate information and expertise to allow them to recognize opportunities, and to prepare for and respond to risks.

Scientific collaboration is ensured through:

- Co-location of and institutional arrangements between centers
- Collaborative, jointly funded projects and joint requests for proposals
- Cross-membership on technical panels and committees
- Extensive integration and sharing of data, results and project information

Coordinated engagement is ensured through:

- Shared membership on stakeholder committees
- Encouraging joint priority setting across regional programs
- Clear and consistent communications about where to go for expertise and data
- Continued interaction with national efforts such as the National Fish, Wildlife, and Plants Climate Adaptation Strategy Joint Implementation Working Group and Climate Change and Water Working Group, and existing regional partnerships and organizations

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REGIONAL COLLABORATION CASE STUDIES

Tribal participants with SCIPP and SC-CSC workshop organizers at the Fort Cobb, OK Climate Training Workshop on August 28, 2014.

Supporting decision making in the South Central Region

The South Central Climate Science Center (SC CSC), the Southern Climate Impacts Planning Program (SCIPP, a NOAA RISA team), and the USDA's Southern Plains Regional Climate Hub (SPRCH) share more than similar geography, directors for all three organizations work together regularly to coordinate activities, leverage resources, and help give direction to each other's organizations. The Southern Plains states are dominated by privately owned land, so it is essential for USDA, DOI, NOAA, and other federal agencies to work together to effectively communicate with agricultural producers and landowners. Additionally, many small rural communities are particularly vulnerable to climate- and weather-related pressures and rely on USDA and a variety of state agencies for technical and financial assistance in responding to drought and other extreme events. To respond to this need, leaders of these federal entities work closely together to ensure that they are coordinated in their engagement, research, and planning. The SC CSC, SCIPP, and the SCRCH co-produce outreach events and training for tribes. The relationships among these groups in the South Central region have allowed for greater collaboration and successful outcomes in the South Central region.

Great Basin Climate Forum, DRI, April 8th, 2015

Convening users and providing information in the Great Basin

Since 2012, the Desert Research Institute, the California-Nevada Applications Program (a NOAA RISA team), the Western Regional Climate Center, and the Great Basin LCC have hosted a series of one-day workshops called The Great Basin Climate Forum, which have included participation from the Southwest Regional Climate Hub. These Forums are designed to improve outreach and engagement with a wide range of public, private, tribes, and other partners and stakeholders to better understand their issues and concerns, and to provide more focused climate products within the five states of the Great Basin. Each Forum covers recent and current climate conditions in the Great Basin, and resource management decisions and issues in upcoming months that are affected by climate. Every Forum revolves around a theme such as Fire, Drought, or Water. Forums are intended for public and private resource managers and professionals, tribal members, and other interested organizations. From these interactive sessions emerged a desire for a one-stop website for the most commonly sought weather and climate information as well as drought planning resources. This website is now online as The Great Basin Weather & Climate Dashboard. (gbdash.dri.edu)

REGIONAL COLLABORATION CASE STUDIES

Participants in the Blue Mountains Adaptation Partnership workshop, hosted by the CIRC RISA team and the US Forest Service.

Photo Credit: Karen Dante, USFS.

Building Organizational Capacity to Adapt to Climate Change on Public Lands

The Pacific Northwest Research Station of the US Forest Service is working with the Climate Impacts Research Consortium (CIRC, a NOAA RISA team) to build capacity in the USFS to assess vulnerabilities to climate-related impacts on public lands. This project was funded in part through a RISA competition designed to elicit proposals for collaborative work. As part of the project, the Blue Mountains Adaptation Partnership (BMAP) in northeast Oregon and southeast Washington began in 2013, and the Northern Rockies Adaptation Partnership (NRAP), covering portions of northern Idaho, western Montana, and northwestern Wyoming, began in 2014. These partnerships both convened a network of regional resource experts from the USFS to develop vulnerability assessments for different resources or sectors (e.g. fisheries, hydrology, wildlife, recreation, and others), and are working together to refine vulnerability maps and work towards developing adaptation strategies and tactics for each major vulnerability. Through ongoing partnerships, agency partners are working to develop capacity to use climate information for planning and decision making in the regions where they work. The CIRC Director is the University Director of the Northwest Climate Science Center, thus assuring linkage with CSC efforts.