



Getting climate information to producers

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Farmers and ranchers interested in climate projections today need only look as far as the Internet, which presents a tremendous amount of climate data, graphs, and other resources. But how should they incorporate the data they find into the decisions they make at their own location on a daily, seasonal, or yearly basis? Or, more fundamentally, how do they decide which information is valuable and relevant to assessing alternative crops, timing, tillage, and marketing? In February 2014, the U.S. Department of Agriculture (USDA) established seven regional climate hubs to address this exact need—to help the owners and managers of working lands better access information on the effects of climate change to inform their investment decisions (Figure 1).

IMPACT

Northwest Regional Climate Hub activities will assist in the production of useful tools and applications so producers and educators can incorporate knowledge about climate risk and variability into their daily work. By bringing research and extension scientists and specialists together to develop these tools and information, the hub will increase the likelihood that research information will be used in making decisions affecting farms and landscapes. If producers can make better decisions to deal with an increasingly variable climate, they will be more successful at providing high-quality produce and other agricultural products to the American public at a reasonable cost.

The Northwest Regional Climate Hub (NRCH) covers ID, AK, WA, and OR. It works with partners to develop and deliver useful scientific information about climate risks by improving communication between researchers and extension organizations. To accomplish this, it works closely with extension services to help stakeholders access information specific to their location that addresses the financial and environmental costs and benefits of their decisions. Some of these decisions are informed by short-term seasonal data, while others can

incorporate 5-, 10-, or 20-year time frames. As a result, producers on working landscapes will become more successful by incorporating information on climate change into decision making while minimizing their contribution to greenhouse gases.

The mission of the regional hubs is to communicate research information, such as from the National Institute of Food and Agriculture's Coordinated Agricultural Projects (CAPs), Pine Integrated Network: Education, Mitigation, and Adaptation Project (PINEMAP), Sustainable Corn., and REACCH—which represent substantial investments in research to understand relationships between agriculture and climate change. NRCH works



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with REACCH scientists to match available information with producer needs.

NRCH also provides a website (<http://climatehubs.oce.usda.gov/>) that can be used by outreach and education specialists to access information on adapting to and mitigating climate change. The hub has invested in the development of a tool, AgBiz Logic™, that helps farmers understand the economic and environmental consequences of alternative decisions. This tool will incorporate information on projected climate changes, effects of water and temperature on yield of major crop types, and costs and benefits of “no-till” approaches. The hub has worked with partners in ID, WA, and OR to plan and hold a meeting of climate researchers and extension specialists in the three states to develop a community of interest around common priorities in climate change adaptation and mitigation.

We often hear that extension and education specialists would like to be brought into the design of research projects, rather than handed a completed product that may not be in a format useful for them. NRCH has brought together groups of agricultural researchers and extension specialists to support the development of tools that are truly useful to producers. Producers say they are already supplied with too much data—they would like a simple application that synthesizes these data and describes risks or alternative scenarios for future climate.

In the Pacific Northwest, the major concerns related to climate change are reduced snowpack and resulting winter flooding and summer low flows; a longer dry season; heat stress, especially for livestock; lack of cooling days for fruit crops; erosion from late winter or early spring flooding; and increases in plant and animal diseases. It is also possible that some crops, such as cereals, will

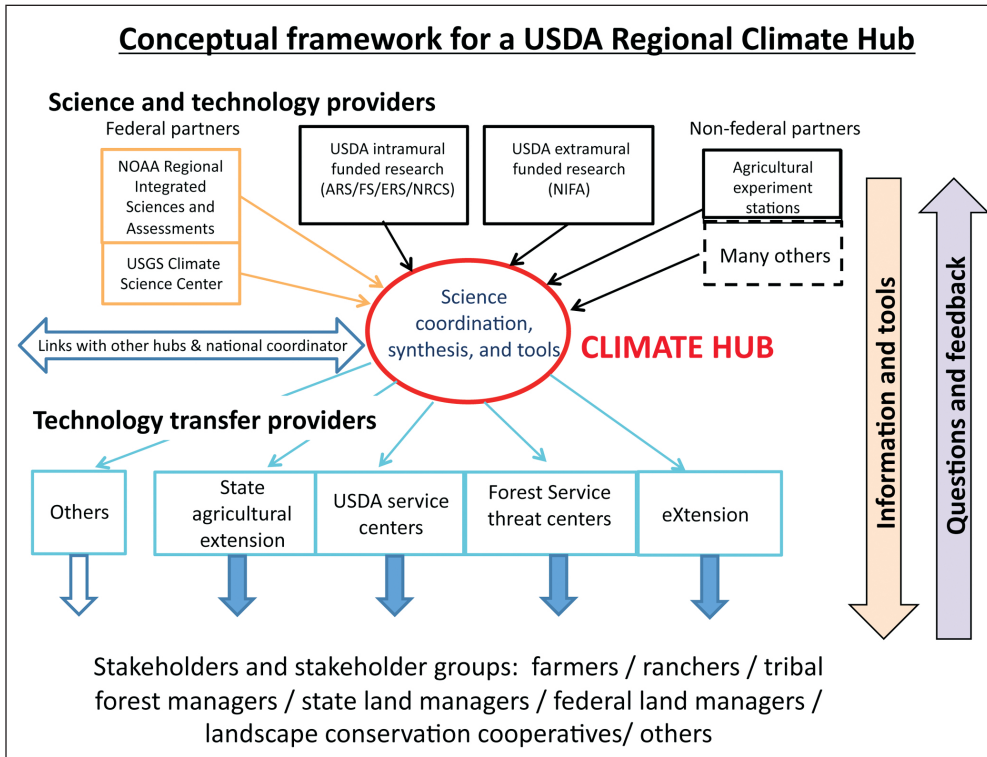


Figure 1. The U.S. Department of Agriculture’s Regional Climate Hubs help landowners and land managers gain access to information on climate change in their region so they can make informed decisions for their farms and landscapes.

increase in productivity. Commodity prices may rise as other areas of the country experience extreme drought or storms. All of these factors can influence investment decisions, and some of them can be predicted with reasonable certainty, given current and future rates of generation of greenhouse gases. Sustainable

agricultural practices, such as building soil organic structure, fertilizing and irrigating at conservative levels, and diversifying crops and livestock, will be relatively successful as climate variability increases over the next several decades and beyond.



Flooding on Paradise Creek upstream of Moscow, ID, during the spring of 2012. Photo by Erin Brooks.