RECLAMATION
Managing Water in the West

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Bottom Line

This scoping research project interviewed over 60 people to identify communication needs and determine potential solutions to meet them. This project coordinated with Reclamation's Office of Policy to develop a Climate Change Communication Toolbox to address some of these communication needs.

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Making It Easier to Talk About Climate Change

Determining the need for clear explanations of concepts in analyzing climate information

Problem

Every discipline has its own jargon, and climate change and climate variability are no exception—indeed, it is a sensitive and complex topic. Planners, stakeholders, subject matter experts in other disciplines, and others need to understand the terminology—from what is the difference between climate and weather to what is meant by transient analysis to period change analyses. Understanding the basic terms, assumptions, science, and analytical processes involved in climate change and variability is key to using these analyses for effective planning and decisionmaking.

Without clearly understanding climate projections and modeling analyses, planners, stakeholders, and decisionmakers cannot effectively plan, participate in, or take informed and balanced actions to manage water and related resources in the Western United States. Providing samples of effective ways to communicate climate change and variability "basics" could provide a foundation for Reclamation's reports. Climate change analyses constantly evolve; thus, we need to develop communication strategies for future research, analyses, and planning.

But is there a need for a "toolbox," with examples from published and peer reviewed reports, that writers and analysts could adapt to their projects? If so, what concepts would benefit from "a plug and adapt" approach to text and graphics conveying these ideas? What are the issues in communicating climate change information and analyses?

Solution

This Reclamation Science and Technology Program scoping research project interviewed various audiences, including:

- Climate change experts (the West-Wide Climate Risk Assessment Team [WWCRA], 2016 SECURE Report Team)
- Environmental compliance, planning, writing, and technical experts in Reclamation's regional and area offices
    - Technical Service Center (TSC) group managers and selected TSC experts (e.g., biologists, engineers, hydrologists)
    - Selected stakeholders who participated in Basin Studies
    - Interviews were conducted via email, in person, over the telephone, and in group conference calls.

Questions varied but focused on:

- How the interviewee used climate change information
- Challenges and successes in communicating climate change information
- Ways to improve communication

Application and Results

Results showed that Reclamation analysts and planners need to more clearly communicate complex topics involving climate change to both:

- A technical audience of climate scientists and other analysts, so they can use that information in resource-specific planning analyses and engineering design
- A lay audience of stakeholders, decisionmakers, and other participants, so they can fully understand the implications of the science

A descriptive, flexible, shared library of explanations, terms, acronyms, graphics, spreadsheets, etc., would be useful, as long as it was not prescriptive. Analysts and authors should be able to adapt and modify any of the communication tools developed. Several groups have already developed tools and definitions, but finding this information is difficult.

In coordination with WWCRA and the TSC Manuals and Standards Program, researchers took these results and developed a Climate Change Communication Toolbox (Toolbox) that now addresses five main areas:

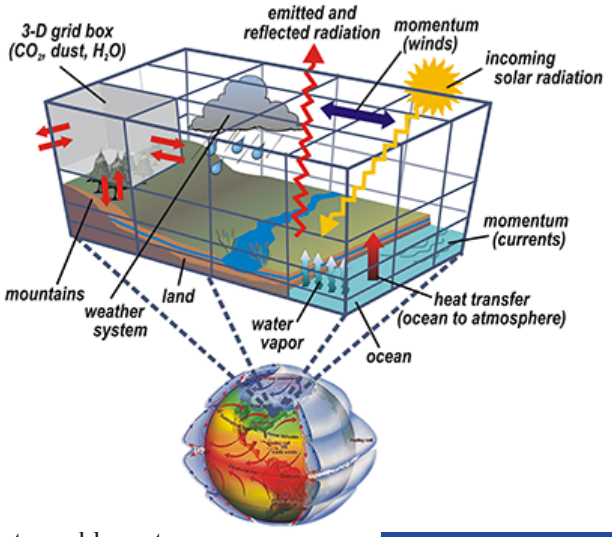
- Reclamation-specific language
- Suggestions for communicating climate change information effectively
- Climate change concepts
- Climate change analysis
- Planning and decisionmaking approaches

Respondents also discussed needs beyond communication tools, such as finding and selecting resources and tools for analyzing climate change and variability and incorporating analyses into planning.

Future Plans

A working draft of the Toolbox is available on the Office of Policy's SharePoint site (please contact the principal investigator for access). However, it will require continued effort to identify and provide examples of consistent and clear language and graphics for common climate analysis concepts to:

- Help climate change analysts in Reclamation and its partners, as well as other analysts, know about and use existing resources more effectively
- Identify areas where further communication about climate change analyses methods and results could help Reclamation plan and adapt more effectively
- Save time for researchers, planners, and analysts by eliminating the need to reinvent explanations of basic concepts and definitions



Other Reclamation writers, planners, and analysts are int developing the Toolbox as a living, dynamic document that would meet the communication needs that interviewees delineated. This can be done in various programs throughout Reclamation—on a formal and informal basis.

"When working with stakeholders, we have found that clearly communicating the analysis and research is critical to avoid conflicts and come to agreements. Clear and thoughtful understanding of these complex issues allows stakeholders to go back to their principals and convey this information accurately. This helps decisionmakers in their processes, as they are typically not climate change experts."

Jim Prairie
Hydrologic Engineer
Reclamation's Upper Colorado Region

Collaborators

- **West Wide Climate Risk Assessment Team in Reclamation's Office of Policy**
- **Reclamation's Technical Service Center Manuals and Standards Program**

More Information

www.usbr.gov/research/projects/detail.cfm?id=3533

For printable version see: www.usbr.gov/research/docs/updates/2016-09-climatechange-talk.pdf