

Summary of ‘The Role of Science in the Collaborative Forest Landscape Restoration Program’

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INTRODUCTION

The Collaborative Forest Landscape Restoration Program (CFLRP) is an ambitious policy experiment designed to test “collaborative, science-based restoration” on USDA Forest Service lands. The CFLRP calls for use of the “best available science”, although scientific information is one of many decision-making considerations in landscape-scale restoration. Furthermore, identifying and applying the best available scientific information can be challenging. Scientific information needs to be viewed as relevant and actionable by decision-makers, and the ways in which it is developed and communicated can impact its application in decision-making. There is little empirical evidence about how scientific information is obtained, communicated, perceived, and used by CFLRP collaboratives, so I sought to investigate the role of science in five CFLRP collaborative groups in the Western U.S.

METHODS

I conducted interviews, participant observation, and a survey with participants in the Four Forest Restoration Initiative (4FRI) in Arizona, the Zuni Mountain CFLRP and Southwest Jemez Mountains CFLRP in New Mexico, and the Uncompahgre Plateau Collaborative Restoration Project and Colorado Front Range CFLRP in Colorado. The objectives of the study were to (1) identify what sources of scientific information are used in CFLRP collaboratives, (2) understand how scientific information is communicated, (3) determine how CFLRP participants view the role of science, and (4) identify obstacles to the use of science. There were 20 interview respondents and 39 survey respondents.

FINDINGS

The CFLRP groups studied demonstrate that there is a commitment to incorporating scientific information in decision-making that goes beyond the program mandate to simply use the best available science. However, the role of science is still unclear, there are numerous obstacles to using scientific information, and there is tension over what scientific information sources and modes of delivery are most relevant and actionable for decision-making purposes.

Science Sources

- Forest ecology and ecological restoration science were the most commonly used disciplines in the CFLRP groups surveyed. Silvicultural science, economic science, social science, climate science, and local knowledge were also commonly used disciplines across projects.
- University-based groups, such as the Ecological Restoration Institute, Colorado Forest Restoration Institute, and New Mexico Forest and Watershed Restoration Institute, were the most common providers of scientific information.
- The Forest Service and other federal agencies were also major scientific information providers.
- Scientists with relevant expertise were consulted when new information was needed. Conducting new research was uncommon, likely because it is not funded by the CFLRP.

Science Communication

- The most common modes of scientific information delivery were oral formats including informal, face-to-face meetings, such as field trips, or formal meetings with the collaborative (Figure 1).

- Respondents most preferred peer-reviewed articles for receiving scientific information, followed by informal meetings and reports.

Science Perceptions

- Respondents were asked to indicate level of agreement with statements about the role of science derived from interview analysis. Across projects, respondents most agreed that science is one of many perspectives brought to bear on planning and decision-making.
- Respondents generally agreed that incorporating science in decision-making was a clear objective in their CFLRP collaborative.
- Respondents generally agreed that scientific information is accepted by their CFLRP collaborative.
- Respondents generally disagreed that socio-economic or political concerns were more critical than scientific information for their CFLRP collaborative.

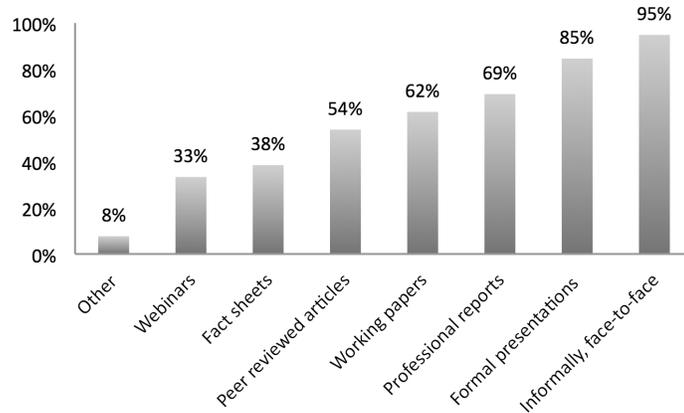


Figure 1. Results from the survey question, "How is scientific information most commonly provided in your CFLRP project?"

Science Obstacles

- Again, respondents were asked to indicate level of agreement with statements about obstacles to the use of science. Respondents most agreed that conflicting viewpoints that inhibit the use of science.
- Respondents generally agreed that integrating scientific information with NEPA and other planning documents and management guidelines is challenging.
- Respondents felt that scientific information was disconnected from implementation realities.

CONCLUSIONS AND MANAGEMENT IMPLICATIONS

This study suggests that although the CFLRP collaboratives studied are committed to incorporating science, scientific information is generally accepted, and the incorporation of scientific information is an important objective, the role of science is still unclear. There are many obstacles to using science and tensions between science and other forms of information. Scientific information is largely delivered orally, though respondents expressed a preference for peer-reviewed articles, which suggests that the credibility associated with peer-review may be perceived to alleviate some of the science use obstacles.

To alleviate obstacles to the use of science and clarify the role of science, CFLRP collaboratives can:

- Continue to emphasize oral, in-person modes of scientific information delivery, especially field trips and in-person meetings, to communicate scientific concepts.
- Emphasize purposeful, ongoing interactions among scientists, CFLRP collaborative members, implementers, and decision-makers to facilitate the development of relationships.
- Encourage scientists to be active participants in CFLRP collaborative group meetings and processes.

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See the following publication for more information:

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