TECHNICAL BRIEF
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Go Big or Go Home?

Tools and Processes for Scaling Up Collaborative Forest Restoration

Science and Collaborative Processes

Multi-stakeholder collaboration about public lands management has become common in the western United States. Scientific information can contribute foundational information about resources, trends, or possible outcomes of actions to collaborative planning efforts. However, scientific and collaborative processes typically differ in purpose, timelines, and activities. The scientific process includes framing researchable problems and questions, determining suitable methods, gathering and analyzing data, interpreting and reviewing results, and writing up and submitting the findings for peer review. Collaborative processes emphasize collective dialogue about interests. The following are suggestions of ways to incorporate science into collaboration, based on reviewed research on the role of science in natural resource decision-making and experiences with collaborative groups on national forests. These may apply to both biophysical and social science applications.

Identify pressing questions and knowledge gaps

A structured process to identify, screen, and direct collaborative knowledge needs may help prioritize the most important questions and gaps, and allow more targeted engagement. Possible activities might include:

- Brainstorming a large list of all questions that stakeholders and agency managers have, capturing the range of interests.
- Clarifying and consolidating questions to address those that are unclear or redundant.
- Running a consolidated list of questions through a criteria screen to determine alignment with collaborative mission or anticipated future projects.

Assess need for review versus original research

Not all questions that a collaborative process generates require new research to be answered. In many cases, a literature review/synthesis of existing knowledge is what is needed. This is called "joint fact-finding" in a collaborative setting, and it is used to uncover all available knowledge on a topic and reveal applicability of existing studies to your needs, including agency/manager knowledge. This might take place through a sub-committee. Another option is a primer, or a "101" presentation on a key topic. Scientist(s) with relevant expertise in this area can provide an overview presentation of foundational terms and concepts. For these approaches, create shared expectations, ensure standards for inclusion, and focus on building group understanding. Original research may be necessary if there is a lack of clear or specific information that would be needed to justify a new/novel management approach, or an insurmountable discussion or series of decisions that cannot be comfortably made without local data.

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Evaluate the research opportunities that scientists offer

Often, scientists ask for collaborative support/participation after they have already designed their study. When approached by a scientist under these circumstances, you may wish to consider if the proposed research is:

- ✓ In alignment with your group's mission and strategic plans.
- ✓ Relevant to your current or future projects.
- ✓ Of broad interest to the group's members.
- ✓ Likely to advance or harm your current state of agreement and trust.
- ✓ Feasible for you to participate in given your time and capacities.

You may consider asking for some alterations to the study plan if those will improve the fit of the project for the collaborative group.

Co-design an original research project with scientist(s)

In some instances, stakeholders engage science support for a new research project that produces knowledge specific to their landscapes or needs. In doing so, you may want to consider the following:

- **Look into the future:** Conducting original research will be a lengthy process. The group should plan time to identify the right researcher(s), help develop study questions, find funding, conduct research, and set aside time for shared learning of research results.
- **Seek funding:** Finding funding for original research will require foresight, identification of possible grantors and programs, and relationships with scientists. Alternately, you may seek scientists who study your topic and inquire about their availability, but they may not have flexible funds and time.
- **Understand scale:** Being clear on what kinds of questions are possible to address using different sized areas can help stakeholders better identify the appropriate scope of research needed. Typically, some questions are better addressed by examining individual stands or groups of stands while other questions are better addressed considering entire landscapes.
- **Design a transparent, interactive process:** Develop a clear timeline and multiple points of interaction between scientists and stakeholders from study conceptualization through results sharing and use. This can allow a group to better understand the scientific process, and build shared language for discussing results and management implications.
- **Create end goals and uses for the research:** Studies should be designed with a clear idea of how new knowledge and study findings will be used by stakeholders and managers. Study results are often more directly useful to managers and stakeholders if they are presented in formats different from those used for scientific journals and meetings. Some useful formats include technical briefs or reports, fact sheets, webinars, and presentations at stakeholder/collaborative meetings.
- **Recognize that science is only part of the equation**: Values, the feasibility of different actions, and risks and uncertainty will still play an important role in the collaborative decision making process along with results from a scientific study.
- **Be aware that uncertainty will remain:** A single research study will not fully answer all questions or address all possible scenarios. Uncertainty about something will remain.

Choose scientific partners and roles

Stakeholders should assess if potential scientific partners possess the capacity for collaborative research. Some particularly useful characteristics include flexibility, good social skills, and interest in working on new types of problems, as well as the ability to face scrutiny and criticism, consider conflicting scientific theories and methodologies, and navigate process shifts. Having the scientist(s) spend time getting to know stakeholders and their perspectives is also important. In addition, a collaborative should clearly define their desired role for scientist(s). A more neutral role may be asking scientist(s) to design a study, explain methods, and interpret results and possible outcomes of management actions; rather than to propose management decisions.

Use knowledge brokers

Brokers can be useful in mediating between sources and users of knowledge. Often they are trained as scientists, but are not full time academic researchers. Having such people involved in collaboration can help by translating problems into research questions, synthesize existing information, and identify promising research partners and initialing contact with them. They could also provide quality control and evaluation of proposed research as a third party if appropriate. University extension agents, nonprofit organizations, and graduate students may be suitable and available for this role.

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About Go Big or Go Home?: The goals of this research project were to analyze how public land managers and stakeholders in Oregon's east Cascades can plan and manage at landscape scales using scientific research and participatory simulation modeling (Envision). **To learn more, visit:** gbgh.forestry.oregonstate.edu

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