

Tool 2: What Level of Coproduction Makes Sense for My Project?

An informational tool provided as part of a toolkit for researchers and resource managers with an interest in coproducing actionable science to support public land management.

Research requested by federal land management agencies to inform their policies and actions can range from projects conducted largely independently to highly integrated, collaborative projects. As projects become more collaborative, they enter the realm of coproduction (see "[Tool 1: Coproduction in the Public Lands Context](#)").

Coproduction in the public lands context is not a one-size-fits-all approach to conducting projects. Rather, it is a shared commitment by researchers and resource managers to collaborate and produce actionable science that meets the needs of resource managers. Some projects may only need limited interaction between resource managers and researchers to produce the results or tools that resource managers need. Other projects may be more exploratory, more complex, or less well defined, and may require a greater level of input and engagement throughout the project.

This tool is for researchers and resource managers who have determined that coproduction is the right approach for their project but are looking for direction regarding the best level of coproduction.

Projects that have a higher level of coproduction have a variety of benefits:

- Resource managers are more likely to gain a better understanding of the data, methods, and findings from the project, increasing their ability to apply its conclusions and understand important limitations.
- Researchers are more likely to genuinely learn about the land management agency's decision-making process, increasing their ability to produce truly actionable science for current and future projects.
- Researchers and resource managers are more likely to build strong and lasting relationships with each other and with other stakeholders at both individual and program levels.
- Products and outputs such as publications, datasets, and decision-support tools are more likely to directly relate to specific management needs and be easily used in agency decision-making processes.
- There are more opportunities for meaningful and relevant professional development for researchers and resource managers, including, but not limited to, coauthorship on publications and other products.

To realize these benefits, there is also a need for greater engagement, time, and resources (see "[Tool 1: Coproduction in the Public Lands Context](#)").

In the table that follows, Project and Partnership Characteristics Across Different Levels of Coproduction, we describe typical types of projects, key characteristics of partnerships, communication, and roles and responsibilities that researchers and resource managers can expect with each level, while acknowledging that every project will have its own unique context and needs. The goal of this tool is to encourage and guide conversations between researchers and resource managers, especially at the outset of projects, about the level of coproduction that makes the most sense for their project and about what that will mean in terms of expectations, workloads, and how they will work together.

We modeled the levels of coproduction concept and framework after Meadow et al. 2015.¹ We have tailored and expanded information here to reflect the specific context of science requested by a federal land management agency to inform resource management on and around federal public lands.


Suggested Citation

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Tool 2 Reference

1. Meadow, A.M., Ferguson, D.B., Guido, Z., Horangic, A., Owen, G., and Wall, T. Moving toward the deliberate coproduction of climate science knowledge. *Weather, Climate, and Society*. 2015; 7(2):179–191. doi:<https://doi.org/10.1175/wcas-d-14-00050.1>.

Project and Partnership Characteristics Across Different Levels of Coproduction

Coproduction Level 	Low	Medium	High
Typical types of projects	<p>Typical projects have defined needs and use established methods and approaches. Projects typically require input and guidance from the management partner to define objectives and may require occasional reassessment to ensure that the research is addressing management needs. Projects are typically relatively straightforward to conduct and project stages (e.g., data collection and analysis) may proceed independently.</p>	<p>Typical projects may address complex questions that require ongoing input from the management agency to best meet the agency's needs and be easily used within their decision-making processes.</p>	<p>Typical projects address highly context-specific, complex, sensitive, or exploratory questions. These questions require substantial input from the management agency to define and answer (e.g., development of new approaches or methods, projects intended to inform decisions made by multiple resource management programs or offices).</p>
Defining characteristics of partnerships	<p>Researchers and resource managers (or the programs they work for) engage in a targeted partnership. They may make joint decisions on some aspects of the project, likely concentrated at project initiation and application. They do not fully share project decision making.</p>	<p>Researchers and resource managers commit to joint decision making and joint responsibility for multiple (but not all) aspects of the project. There is a commitment to periodic engagement as the project progresses.</p>	<p>Decisions are made jointly. Researchers and resource managers share responsibility and power equally on all aspects of the project. There is continuous, significant engagement throughout the life of the project and shared responsibility for project outputs, outcomes, and overall success.</p>
Partner input and communication	<p>Resource managers provide input on project objectives, proposals, and/or statements of work. Communication is likely infrequent and focused on clarifying objectives, coordinating logistics, reviewing draft products, and sharing results with agency staff at project completion.</p>	<p><i>In addition</i>, researchers and resource managers meet periodically for joint review and/or refinement of objectives, methods, results, and products. They work together to share project products with target audiences.</p>	<p><i>In addition</i>, researchers and resource managers meet frequently to communicate and collaborate to complete the project. The project's successful completion relies on the knowledge and expertise of both parties. Both parties work together to share results widely with agency staff at project close through multiple mechanisms.</p>

Project and Partnership Characteristics Across Different Levels of Coproduction

Coproduction Level →	Low	Medium	High
Resource manager roles and responsibilities	<p>Resource managers provide key input in defining the scope, direction, management needs, and desired outcomes as part of project initiation, and distribute products to the resource management community. Resource managers provide guidance or approval only on major project decisions.</p>	<p><i>In addition</i>, resource managers participate in periodic project team meetings and provide context, expertise, and interpretation as the project progresses. Additional workload may focus on informing leadership about project progress and results and sharing information about changes in agency policy, staffing, and other factors that might affect the project.</p>	<p><i>In addition</i>, resource managers commit time on a regular basis (often during joint work sessions) to develop methods and interpret results; address emerging issues or challenges within the agency that may affect the project; plan for communication, distribution, and use of the resulting science products; and engage leadership to facilitate policy-relevance and broad application of findings across the agency.</p>
Researcher roles and responsibilities	<p>Researchers draft initial proposal, incorporate input from the management agency, facilitate completion of agreement or contract paperwork, and produce and share the specified deliverables. In addition to conducting research activities, researchers are expected to periodically communicate progress and findings with the management agency.</p>	<p><i>In addition</i>, researchers actively seek and incorporate partner input into the project and deliverables. Researchers support continued communication with the resource management agency. Communication can include preparing and coordinating project team updates or meetings and following up on action items related to research progress.</p>	<p><i>In addition</i>, researchers share joint responsibility for successful, timely completion of the project, including the development and application of defensible methods and production of actionable science products. Researchers share responsibility for effectively communicating findings to target audiences within and outside of the management agency and commit to providing science support for related agency management decisions.</p>