How do I coproduce science?

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

While there is no single approach to coproduction, there are steps that you can take to help support successful coproduction throughout a project. The following steps represent ideas and actions that we have found to be helpful in our projects, based on our collective experience.

Success in coproduction must be grounded in a commitment to building strong working relationships and good basic project management. You can learn more about project management through many trainings and professional communities. The actions below complement and build on standard project management processes and steps. Early and sustained communication among all project team members is critical for successful coproduction.

Suggested coproduction steps for project leads

Initiating coproduction:

1. **Consider what level of coproduction is most appropriate** for your project based on the nature of the project, its intended end products and users, available time and resources, and any other pertinent factors.
2. Build a **project team** that includes the expertise and experience needed to complete the project, starting by drawing on your existing networks and those of colleagues and funding partners. For complex projects, consider identifying **core project team members** versus auxiliary members, or breaking the team into smaller working groups, while also ensuring that there are mechanisms for cohesive communication.
3. Plan a **kick-off meeting(s)** for the project that includes a conversation about what coproduction means and typical challenges encountered in coproduced projects.
4. Collectively **clarify the agency management need** addressed by the project, who will use the resulting science product(s), and specifically how and in what processes and decisions the products will be used. Revisit this conversation as needed throughout the project, particularly if there are changes in agency policies or decision processes that may affect product use.
5. Decide on and record roles, responsibilities, and other project details using the **Project Logistics Tracker**. Update this document periodically. Consider **project timelines** for delivering products and account for peer review and approval processes and expected publication timeframes.
6. **Revisit the project Statement of Work** and **planned deliverables** with the project team; discuss and document any changes resulting from these initial conversations**.**
7. Discuss details about **data ownership and data sharing**. Plan for long-term data storage and access.

Communicating with the project team (including running project meetings):

8. Commit to a **recurring day and time** for project team meetings. Put meetings on everyone's calendars for the year (or length of the project), with the flexibility to cancel if a meeting is not needed.
9. Consider **rotating responsibility for leading and facilitating meetings** to help support participatory decision-making. Determine whether it might be helpful to bring in an outside facilitator.
10. At an early project team meeting or in a follow-up to it, ask each member of the project team **how much time** they plan to devote to the project, **what project phases and decisions** they would like to be involved in, and **how they would like to be looped into project communication** (e.g., via emails, project meetings, or shared meeting notes).
11. Develop and share an **agenda** before each project team meeting. Start each meeting with a **reminder of the project scope and objectives** (for at least several months), **a recap of key decisions from the last meeting(s), the plan for the current meeting,** and an **opportunity for every project member to share** updates relevant to the project (e.g., progress on related initiatives, agency staffing or policy changes). **Give equal space** to management and research perspectives.
12. **Take meeting notes** and share them in an agreed-upon format and location, with action items and responsible parties highlighted. Consider emailing progress updates between meetings if meetings are infrequent.

13. **Clarify points-of-contact** for concerns, detailed questions, and updates about project progress/work.
14. As the project progresses, the project lead should periodically **check in with each project team member** about how they feel about the project and their involvement in it. This could occur at a project team meeting but may be better in one-on-one conversations. Possible questions to ask:
    o How do you feel about the direction the project is headed and the work we are doing?
    o Are you satisfied with your involvement, and that of the project team, in the project?
    o Do you feel you are being listened to and have the say you want to have in project decision-making?
    o What is working well? What could be improved? What are we not doing that we should be doing?
15. Once the project is underway, **have an open and realistic conversation about who would like to be involved in, and an author on, project products**. Make sure the whole team is comfortable with the author group making decisions about project publications, and that authors have adequate time to contribute to the effort. Revisit these conversations and decisions as needed.
    o Consider consulting existing resources on the roles of authors and contributors (e.g., here).

Sharing project progress and products outside the team:
16. Create a **Project Briefing Sheet** and **project webpage** to facilitate communication with others outside of the project team. **Encourage project team members to share** these with others who may have an interest in the project.
17. Periodically **ask the project team if there are other agency programs or people** with whom the project lead or project team members should be coordinating or sharing information and products.
18. Decide when and how often to brief higher-ups about the project. Make every effort to **have both project leads attend** briefings. Share the project briefing sheet and link to the project website with the audience before meetings.
19. **Think about who is the best messenger to take project updates and results to different audiences**. A goal of coproduction is that everyone on the project team will be fully capable of, and comfortable with, sharing project results and products with the audiences they know best.

Evaluating success:
20. At the outset of the project, **consider if you will evaluate the coproduction aspect** of the project, in addition to requesting feedback on coproduction as the project progresses (see #14). Depending on your approach, you may want to set aside time at regular meetings for the project team to plan for the evaluation in advance. You might conduct the evaluation formally (e.g., working with social scientists to develop a survey or interviews) or informally (a conversation), with questions such as:
    o During the project, did you feel like your ideas and contributions were valued?
    o What were some strengths and weaknesses of the coproduction process used for this project?
    o From a coproduction perspective, what would you like to see done differently in a future effort?
21. At the outset of the project, **consider if you will evaluate the extent to which the products were actionable and acted upon**. Develop a list of potential end users and questions to ask them. The team will likely need to plan for this evaluation to occur further into the future, since the timeline for use may be months or years. You might conduct the evaluation formally (e.g., working with social scientists to develop a survey) or informally (a conversation), with questions such as:
    o Did this product provide useful information for you?
    o Did the product meet your original management need? Did the scale of the product fit your needs?
    o Did you use the product to inform a management action or decision? If so, how?
    o What, if anything, could help make this product more useful for you?