

# Engaging End Users:

## *Working iteratively to produce usable science*

December 10, 2015

Thank you for joining us. The webinar will begin shortly. Please remember to do the following:

1. Join the conference call:
  - Dial: 1-877-594-8353
  - Enter the Participant Code: 56286004
2. Mute your line (mute button or \*6)

### Notes:

- The content of this presentation was developed from three sources:
  1. The experiences of our research teams as they have integrated end users into their research projects;
  2. Our Water Center staff's experiences and observations working with research projects involving end users; and
  3. The research of Science Collaborative Team members, Julia Wondolleck and Maria Lemos, who study collaborative research processes.

# Questions

- What lessons have you learned / observations have you made that may benefit others as they consider their approach to collaborative science?
- What resources have you found useful when designing collaborative research?
- What additional resources or support would have been helpful?

## NOTES

- We hope that this packaged presentation prompts reflection on the collaborative research processes of which you have been a part. We encourage you to reflect on your own experiences in light of the questions on this slide as you consider the remainder of this presentation.

# What is an end user?

*A person or group in a position to apply the information or tools being produced, evaluated, or transferred through a Science Collaborative project in a way that is of direct consequence to the ecological, social, or economic integrity of a reserve(s) and/or surrounding watershed(s).*

## NOTES

- ‘End users’ can include, but are not limited to, reserve staff and public, private, or non-governmental decision/policy makers, including landowners, natural resource managers, land use planners, and educators.
- It is important to distinguish between ‘end users’ and ‘stakeholders.’ For NERRS projects, collaborative science projects focus on end users; whereas integrated assessments engage both end users and stakeholders.
- The best rule of thumb: All end users are stakeholders, but not all stakeholders are end users.
- End users include the people who have an interest and are in a position to apply the science being produced, whereas stakeholders include parties on all sides of an issue.
- For IAs, end users should help define the focal issue, clarify the decision making context, identify additional key stakeholders, and highlight current information needs.

# What is an end user?

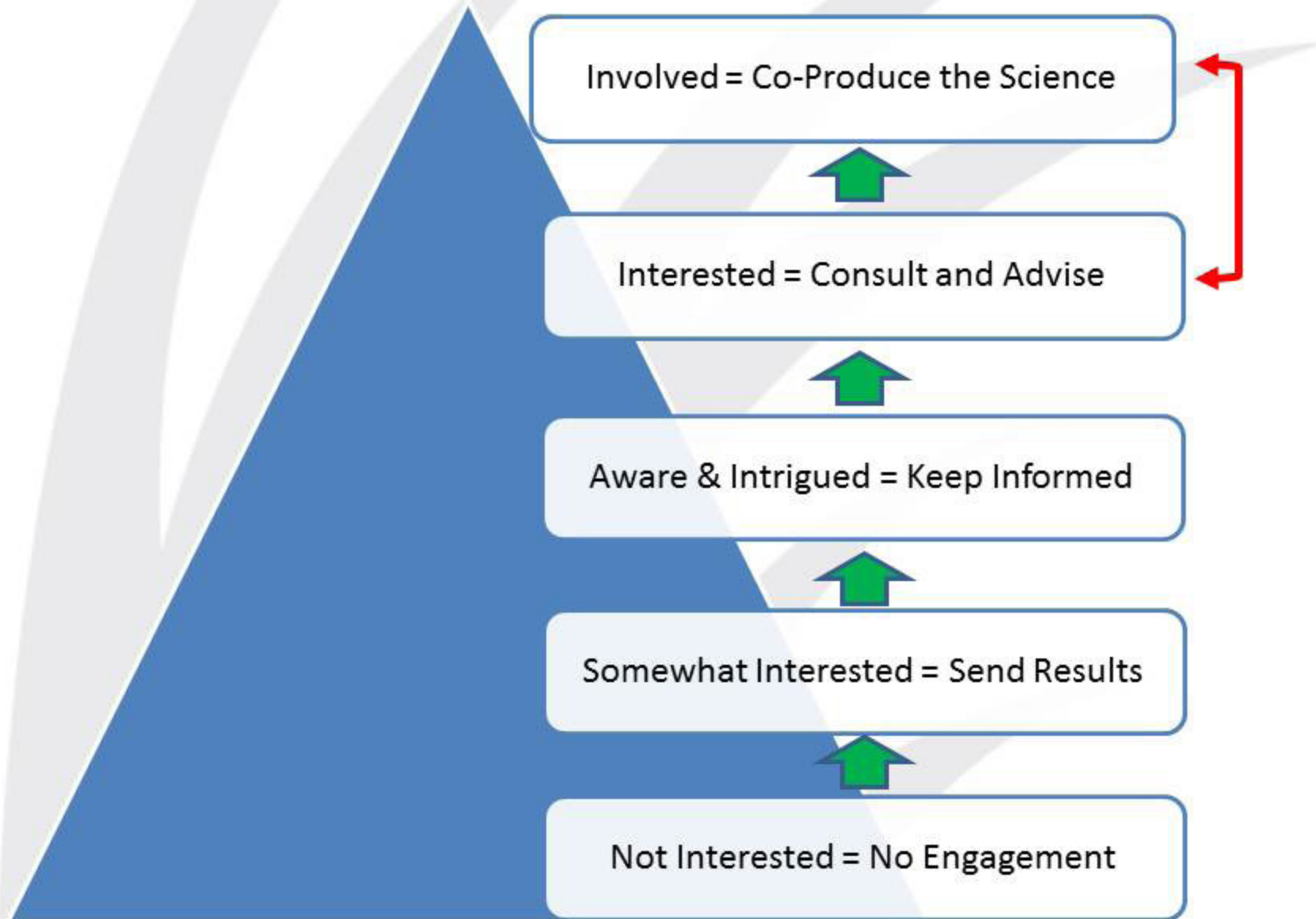
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## QUESTIONS

*What are some of the types of end users on NERRS proposals in the past?*

- There are a broad spectrum of end users engaged through current NERRS projects. These include reserve staff, e.g., managers, research coordinators, stewards, educators, and others; nongovernmental organizations; and state environmental agencies and local municipalities.
- One common approach, seen across several projects, is to pull together a committee of end users at the proposal development stage to engage as the project is being scoped and then regularly once the project is underway.

# What we've observed



## NOTES

- This graphic characterizes the levels of end-user engagement we have observed.
- Each box describes the level of interest of the end user and their general level of involvement in the project.
- In collaborative science, we aim for end user interest and engagement in the top two boxes: “interested” in the research project, which manifests in a consulting or advising role, or “involved” in the research project, which manifests as a co-producer of the science.
- “Interested” end users may wish to be “involved” end users, but capacity, resources, or ability inhibits them from doing so. In this case, consulting them and explicitly integrating their responses is important to make the science usable.
- Collaboration between scientists and end users is the process for creating usable science. The process must receive and respond to end user input, and have the flexibility to do so.
- We have observed that over the course of a project, end users may shift categories. It is important to be aware of this and always strive to be receptive, responsive, and flexible to end user needs.

# Collaborative Science: Planning and Implementing

- Building relationships and convening users
- Planning for deliberate and meaningful end user engagement
- Developing accessible and usable outputs

## NOTES

- The next three slides cover each of the points on this slide in greater detail.
- Building relationships is critical so that users and producers of the science are on the same page and acknowledge one another's needs and limitations. Building relationships can require significant effort.
- Deliberate and meaningful end user engagement is maintained by building measures to facilitate engagement into the project's design.
- Developing accessible and useable outputs requires that they be in the right form and have the right content relative to the end user's decision-making context.

# Successful end user engagement:

## *During proposal development*

- Use existing relationships to engage new users / leverage others' relationships
- Convene multiple potential users at the same time
- Face-to-face meetings @ outset, sets the tone
- Be open and willing to work adaptively
- Plan for new topics and new partnerships to require more time/energy

## NOTES

- This information comes from the experiences of project leads for science collaborative projects in the proposal development process and how they managed it.
- From the very beginning, make clear to end users that you are “open and willing to work adaptively.” Working adaptively means that you are open to receive and incorporate end user input throughout the process. Establishing from the very beginning that your process is receptive to end user needs, and hence their on-going input, may help the research team adapt and change course as necessary to respond to user input. The flexibility to adapt is key for collaborative science to succeed.

## COMMENTS

### *Snowball Approach to Identifying End Users*

- You can start by identifying one group actively involved in decision-making around the research issue you intend to explore. This could include reserve personnel. You can then ask that group for other organizations within their network who could be appropriate end users. This snowball approach, starting with one organization and picking up more through connections, can be very effective for identifying a suite of end users to partner on the project.

# Successful end user engagement: *Project elements*

- Responds to a clearly articulated end user need
- Demonstrates need for the work
- End user plays a meaningful role, e.g., team, advisory
- End users influence the project scope and design
- Regular & meaningful opportunities for user feedback
- Collaborative efforts adequately supported
  - Budget
  - Timeline
  - Experienced collaborative lead

## NOTES

- These are common qualities we have observed in successful collaborative science projects, including those supported under the latest RFP.
- What do “regular and meaningful opportunities for user feedback” look like?
  1. Collecting feedback early and often.
  2. Not just “reporting out” or “checking in,” but engaged and iterative interaction that is strategic and designed to gather and incorporate meaningful feedback and input. End users need to see their input reflected in project programs.
  3. Iteration from both sides: the science needs to meet the users’ needs and the users need to understand the capabilities and limitations of science.
  4. Designating a collaborative lead to guide the team.



# Successful end user engagement:

## *Outputs and outcomes*

- End user(s) directly involved in output development
- End user(s) directly involved in output delivery
- Anticipated outcomes are feasible and responsive to end user needs

### NOTES

- These are common qualities we have observed in successful collaborative science projects.
- While output development and delivery might not occur until near the end of the project, these need to be considered up front and throughout to ensure they are accessible and useable.

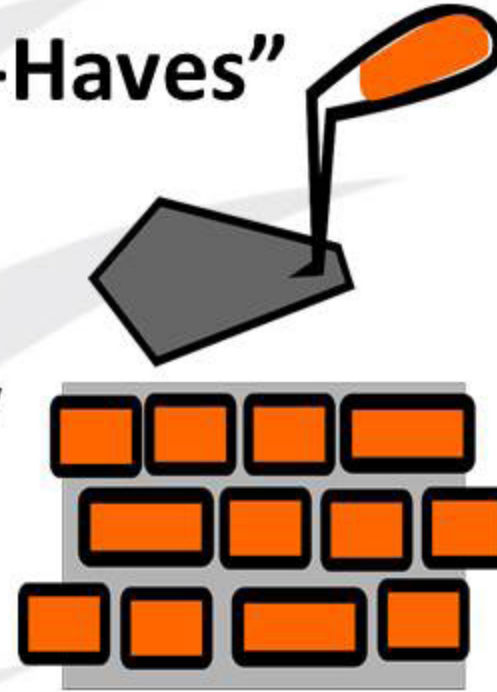
# Collaborative Science “Must-Haves”

## Bricks – building blocks for success

1. Explicit purpose and scope
2. Organizational structure – who, what and how
3. People/participants
4. Explicit roles/responsibilities

## Mortar –intangibles that hold the collaborative process together

1. Compelling and worthwhile
2. Sense of ownership is instilled
3. Credible process – information, data, etc.
4. Well-managed and respected
5. Visible progress



## NOTES

- This diagram conveys the foundational pieces (“bricks”) and intangible pieces (“mortar”) that are essential for collaborative science.
- Key questions for “Organizational Structure” are:
  1. Who is responsible for what?
  2. What are their tasks?
  3. What is our policy/decision-making process?
- When gathering “People/Participants,” it is important to ask if the right people are at the table, especially those people who can use the results of the science.
- Making “Visible Progress” is an observation made by one of our project leads, who noted that it is important to demonstrate the project is moving forward to keep people motivated.

# Collaborative Science “Must-Haves”

## What sustains – *maintenance and care*

1. Regular meetings
2. Coordinator/point person – responsible for the process
3. Evidence of continuity – managing transitions
4. Evidence of commitment – to the process and purpose of the process

## NOTES

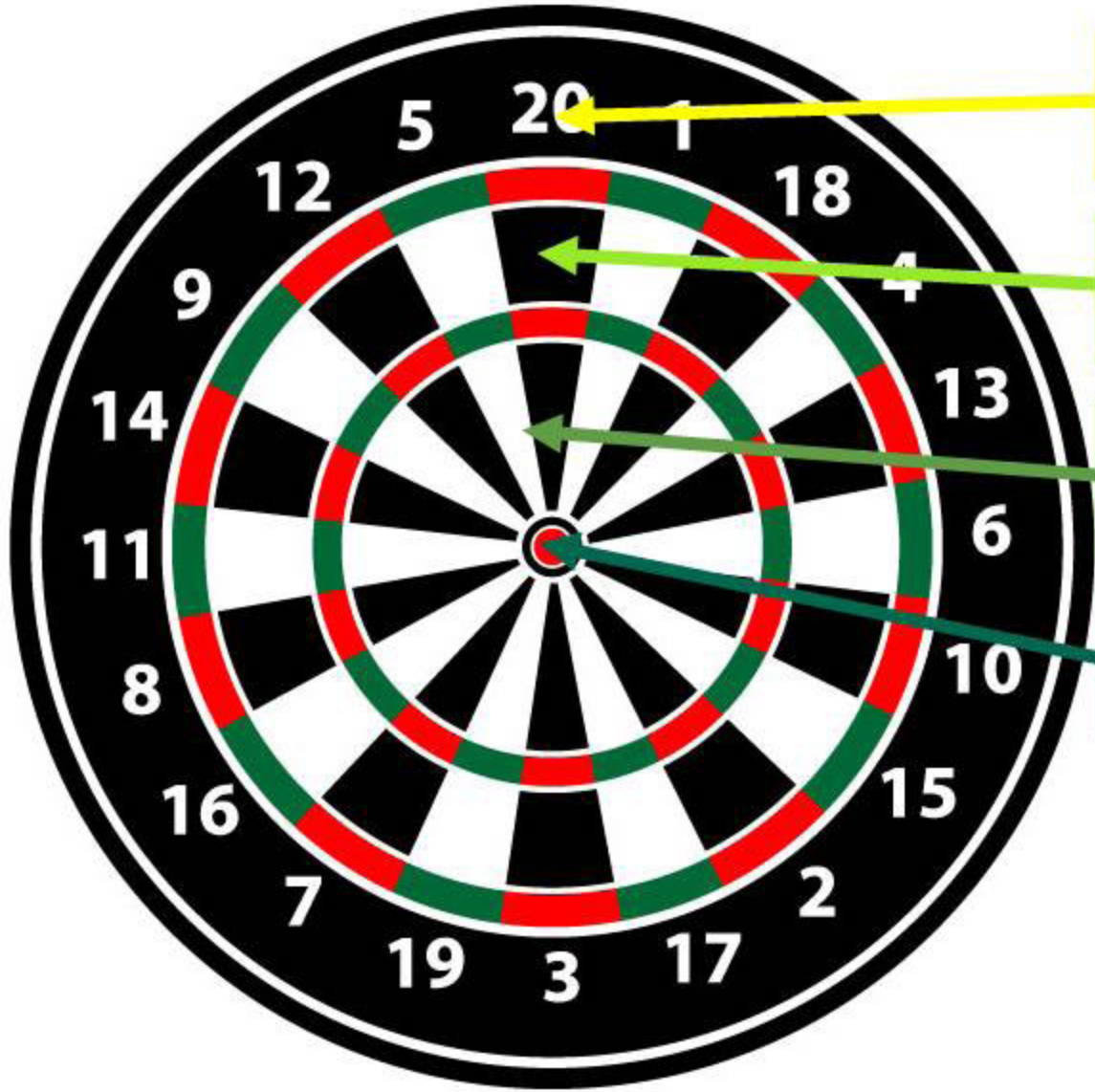
- “Regular Meetings” should also be “meaningful meetings” and occur with the frequency, location, agendas, and time and duration necessary for your team and project.
- The “Coordinator/point person” should be the person to whom the other participants feel responsible for delivering project work, including attending meetings.

# Characterize your users

1. Consider first: who are your end users?
2. How engaged do you need them to be?
3. When do the outputs need to be available to users?

## NOTES

- These questions will help you consider how to manage end user engagement from pre-proposal through project implementation.
- The best projects we have observed demonstrated that they knew who their end users were and what needs they had. Thus, it is important at the very beginning to start identifying end users and engaging them about their needs.
- For a more complete list of questions to characterize your end users, visit our '2016 Proposal Development Resources' on the NERRS Science Collaborative website and download our 'Characterizing End Users' worksheets at: <http://graham.umich.edu/water/nerrs/funding/research-ia>
- It is helpful to revisit these questions periodically as the project evolves.



**Somewhat Interested**

**Aware and Intrigued**

**Interested: Consult and Advise**

**Involved: Co-develop to co-produce**

### NOTES

- In thinking about how to best engage your end users, it may be helpful to think strategically about what level of engagement your different end users require as the project progresses.
- This graphic is a way to conceptualize how your “circle” of engaged users may grow - and have varying levels of engagement - as the project develops.
- We have heard from project teams about the high investment of time in engaging end users. We encourage you to use the ‘Characterizing End Users’ form to determine who you will work with during proposal development, recognizing that your group of end users will expand if you are funded. The form is available here: <http://graham.umich.edu/water/nerrs/funding/research-ia>

# Collaborative Science Resources

- Online resources
- NERRS Science Collaborative support:
  - \$1k for convening partners during proposal development
  - \$10k to support relationship building and collaborative processes for scoping Science Collaborative research projects/integrated assessments
- Characterizing end users worksheet
- Your peers
- NERRS Science Collaborative Team

## NOTES

- Some “Online Resources” include the Collaboration Toolkit available on the National Estuaries Research Reserve Association (NERRA) website.

## QUESTIONS

*Where do you find the characterizing end users worksheet?*

- This resource can be found under the ‘2016 Proposal Development Resources’ on the NERRS Science Collaborative website: <http://graham.umich.edu/water/nerrs/funding/research-ia>
- Please note that there are separate worksheets for Collaborative Research and Integrative Assessment (IA) projects.

### *More Training Resources*

- The Coastal Services Center provides training on collaborative natural resource management and can be hosted for a course. This includes courses such as ‘Planning and Facilitating Collaborative Meetings’ (<https://coast.noaa.gov/digitalcoast/training/planningand-facilitating>).

# Keep in mind

- There is no one-size-fits all approach
- The best projects are responsive to the needs and limitations of both the science and the end user
- Goal is to develop *usable* products
- Take into account the ripple effect; no need to engage everyone at every stage
- Outcomes can be longer-term

## NOTES

- Each team will need to develop the approach that best suits its needs.
- As the project gains momentum, your circle of engaged users may expand, much like a stone thrown in a pond gains rings over time. You may start with a small group of involved users, but other end users will naturally be brought into the process as the project continues to move forward and take shape.

# Questions

- What lessons have you learned / observations have you made that may benefit others as they consider their approach to collaborative science?
- What resources have you found useful when designing collaborative research?
- What additional resources or support would have been helpful?

**NERRS Science Collaborative Team**

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## NOTES

- Take a moment to reflect on your own experiences using the questions posed at the beginning of the presentation in light of your own experiences with collaboration or collaborative science.