Embedding Public Engagement with Science at Long Term Ecological Research Sites (PES@LTERs)

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Abbreviated abstract: We share insights from a project to embed public engagement with science (PES) into the cultures and practices of two Long Term Ecological Research (LTER) sites: the Hubbard Brook Experimental Forest in New Hampshire and the Harvard Forest in Massachusetts. The "PES@LTERs" project is producing a suite of practical tools and approaches for facilitating reciprocal listening, sharing, and learning among scientists and stakeholders/community members. The project is also producing research- and evaluation-driven insights about how to advance strategic and ongoing public engagement programs within scientific organizations.

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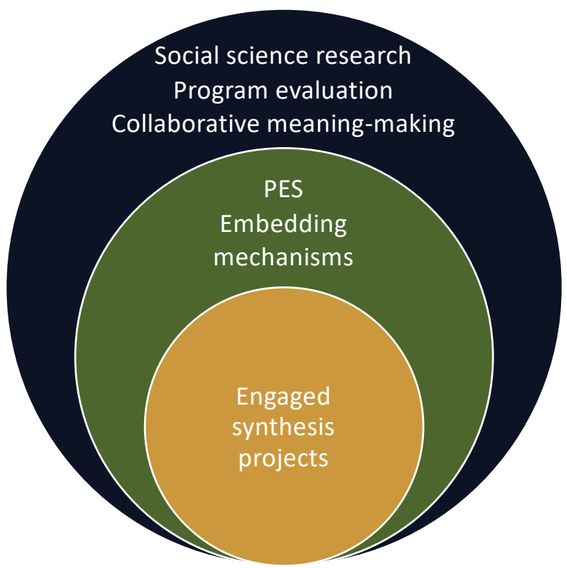
What we did:



The PES@LTERs project followed a nested design involving PES implementation, research, and evaluation.

Engaged synthesis projects employed scientist–stakeholder dialogues to co-produce knowledge and tools to address relevant, socio-scientific issues. At Hubbard Brook we led a project about community and ecological resilience; at Harvard Forest we developed an online, interactive tool about the science of land-use change in New England.

Embedding mechanisms developed the capacity and infrastructure for ongoing PES at these sites, for example via stakeholder advisory boards, professional development workshops for scientists, and communications platforms.

Research activities tracked scientists' perceptions of PES, particularly the goals and objectives they prioritize, and their attitudes about participating in PES activities.

Evaluation activities assessed stakeholder participation in and views about PES activities.

Why "embedded PES"? Why LTERs?

We envision a cultural shift in science, from public engagement as an add-on activity that scientists sometimes do, to a normative and strategic practice that is integrated within research programs and institutions.

Long Term Ecological Research sites are ideal units of study for PES. LTERs have:

- Long-term commitment:
  Their long tenure are well-suited to developing meaningful, enduring relationships between scientists and community members.
- Compelling size and scope:
  The research programs are large enough to support access to PES professionals and team-based approaches to PES practice.
- Place-based but not place-limited:
  Scientists and publics share common connections to places, but unlike National Parks, LTER sites represent broad ecoregions, not one spot on the map.
- A well-established and institutionally diverse national network:
  Sites represent a range of different types of institutions are linked together in a robust, national network

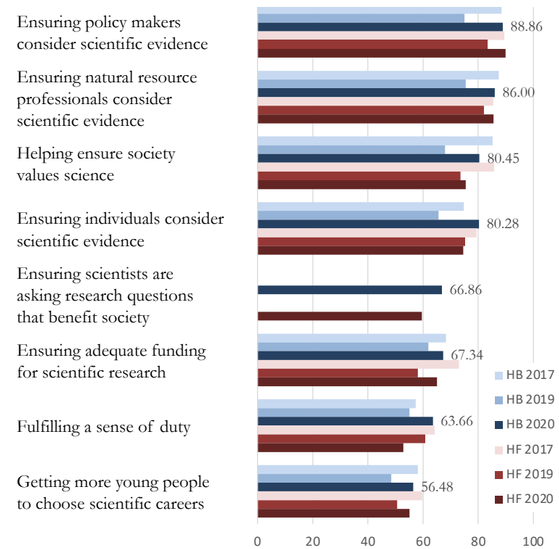
Map of LTER sites in North America (2020)

How can we learn from this work?

Key insights:

- Scientists often talk about science education and literacy, but when pressed, their priority goals for engagement are for decision-makers to consider scientific evidence.
- While scientists value PES, they often want to work closely with PES experts rather than take a lead on developing or implementing engagement activities. Key roles for PES professionals at these sites include "strategists" and "tacticians."
- A barrier to PES advancement is lack of a shared PES strategy. This contributes to inefficient use of resources and missed opportunities for impact.
- Practical PES tools include the ECO Framework (see sister poster!), roundtable dialogue methods, and community-led implementation groups.

Scientists' engagement goals at Hubbard Brook and Harvard Forest, 2017–2020



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