



# **Forest Science Dialogues**

## **Final Evaluation Report**

**Submitted To:**  
**Hubbard Brook Research Foundation**

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# Forest Science Dialogues Evaluation Final Report

## I. Introduction and Evaluation Goals

RMC Research designed evaluation activities to provide formative and summative feedback to the Hubbard Brook Research Foundation (HBRF) on their NSF Pathways project, Forest Science Dialogues (FSD). FSD consists of a plan to engage with scientists at the Hubbard Brook Ecosystem Study and with the surrounding community using the Hubbard Brook Roundtable dialogue process in order to facilitate mutual learning. The purpose of this engagement was to increase public knowledge, understanding, and awareness of ecosystem science in the Northern Forest in order to enrich local dialogue surrounding topics with social, economic, and policy implications, such as climate change, land use, bioenergy, and water resources. The project also aimed to increase the scientists' knowledge, understanding, and awareness of the relevance and context of their work in regards to the human communities in the Northern Forest, and to build their interest and skills in engaging and communicating with public audiences.

Although the FSD project was originally intended to take place in three phases—needs assessment, planning, and product development—the project evolved over time to better serve the interests of the community and scientists. RMC's evaluation activities evolved with it but remained focused on learning about the successes and challenges of the project in order to provide useful and timely feedback to HBRF and to inform a model of public engagement. Finally, despite changes to the project and subsequently the evaluation, the four goals of the evaluation remained unchanged.

- 1: The public will learn about the topics the scientists at the Hubbard Brook Experimental Forest are studying and increase their capacity to engage in discussions about ecosystem related topics and how they impact their communities.
- 2: The scientists at Hubbard Brook will increase their knowledge, interests, and engagement over the issues/concerns, experiences, values, and perspectives held in the surrounding communities, and will build their capacity for engaging with publics about their work.
- 3: HBRF will grow in its role as an intermediary between the scientists and the surrounding communities, and will build its capacity to engage with those communities via informal dialogue and/or education.
- 4: HBRF will develop the capacity to broaden and sustain its community engagement work beyond the duration of the grant, including, but not limited to, the creation of a Citizen Advisory Council.

## II. Evaluation Activities

Evaluation data were collected in multiple ways throughout the duration of the project:

- Surveys of FSD scientists at the start and end (see Appendix A) of the FSD project to get information about the scientists' self-reported confidence and skills in dialoguing with the public and the ways in which they see how information learned during the project could inform their research.

- Focus group discussion with FSD scientists before the first Roundtable discussion to learn about their experience with public audiences and what they hoped to gain from their involvement with FSD. See Appendix B.
- Observations of the Roundtable discussions that were designed to gather data on quality of engagement, listening, and interaction that occurs at each Roundtable. Four Roundtable discussions were conducted during the project period: *Forest Connections: Forging a New Model of Public Engagement with Science*, a needs assessment Roundtable (October 2014), *Changing Climate, Changing Forests* (May 2015), *Winter Climate Change in Vermont* (March 2016), and *Setting a Biodiversity Research Agenda in Vermont* (June 2016). RMC was able to observe all but the *Winter Climate Change in Vermont* Roundtable. See Appendix C.
- Roundtable discussion post-surveys of participating scientists and community members to learn about the successes and challenges of the dialogue process, usefulness of the dialogue, and benefits of the discussions for participants (community members and scientists), particularly about issues salient to them. Surveys were collected at all four Roundtables. See Appendix D.
- Surveys of HBRF staff conducted at the end of the FSD project (see Appendix E) to discover their perspectives about the lessons learned from the project about public engagement with scientists, their perceptions of changes in how Hubbard Brook scientists engage with non-scientists and in how the Hubbard Brook scientists approach their research, and reflections on the capacity of Hubbard Brook Research Foundation to grow and sustain the dialogue process.
- Feedback from FSD participating scientists and HBRF staff (see Appendix F) who attended a professional development event at the Boston Museum of Science on deliberative dialogues sessions between scientists and public audiences.
- Observations of several events including a public engagement training conducted at the Carey Institute, a mid-project retreat held in June 2015 with HBRF staff, and project update sessions held by the FSD project director with FSD scientists (December 2015; Spring 2016). Additionally, ongoing conversations were held with the FSD director about the unfolding of the project and reflections about the implications of the survey findings and observations for informing subsequent Roundtable sessions and building a sustainable dialogue process.

### III. Findings/Significant Results

Significant findings are reported below, broken down by evaluation goals. The findings summaries are drawn from the observations, focus group, and surveys previously described.<sup>1</sup>

Evaluation Goal 1: The public will learn about the topics the scientists at the Hubbard Brook Experimental Forest are studying and increase their capacity to engage in discussions about ecosystem related topics and how they impact their communities.

- The Roundtables were successful at engaging community members and stakeholders.
  - Community participants felt comfortable engaging with the scientists (means ranged from 4.44 – 4.71). They believed they had the chance to fully participate (4.33 – 4.75) and their points were acknowledged (4.56 – 4.69), creating a path for two-way dialogue.

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<sup>1</sup> The reported means are taken from questions on the four post-Roundtable surveys, and are based on five-point scales where 5 is “very” and 1 is “not at all.” The means are reported as ranges across the surveys rather than combined for a single number because each survey varied slightly in wording in order for the questions to be tailored to the specific Roundtable. Reporting in ranges, therefore, was deemed more statistically sound. Illustrative quotes were drawn from a combination of all the available survey responses.

- Participants reported an increase in knowledge (3.50 – 3.89) about both what the scientists at Hubbard Brook do (at the needs assessment Roundtable) and about the specific topics addressed at the other three Roundtables (e.g., winter climate change and biodiversity). Understanding more about Hubbard Brook science is the first step toward potentially turning to Hubbard Brook as a resource.
- Community members wanted to learn from scientists. Despite the original idea of an even, back-and-forth exchange, participants reported being interested in learning more about ecosystem science, particularly among certain stakeholder groups.

*I would have liked more science information, handouts of slides, other information would have been helpful. (community member)*

- Overall, community and stakeholder groups were highly satisfied with their participation in the Roundtables (means ranged from 3.89 – 4.47).

Evaluation Goal 2: The scientists at Hubbard Brook will increase their knowledge, interests, and engagement over the issues/concerns, experiences, values, and perspectives held in the surrounding communities, and will build their capacity for engaging with publics about their work.

- The Roundtables were successful at engaging scientists with communities and stakeholders, building their knowledge of the issues important to those groups, and with increasing their capacity to present.
  - The scientists felt prepared for the Roundtables (means ranged from 4.14 - 4.75), thought they had the chance to fully participate (4.75 – 5.00), and felt comfortable engaging in the discussions (4.75 – 5.00). They also believed their points were acknowledged during the discussions (4.71 – 5.00).
  - Across the various Roundtable topics, the scientists believed they increased their knowledge and awareness of the issues and opinions in the various community and stakeholder groups (4.00 -4.75).

*It was useful to hear which areas everyone seemed to agree should be priorities for research. This will help direct my course work. (scientist)*

*I am more aware of whether and how my research is relevant to a broader audience. I am more interested in applied aspects of research. (scientist)*

- The scientists reported being interested in finding new ways to share information with the public, perhaps in smaller and more homogenous groups that will allow for better targeted exchanges.

*The Roundtables have definitely helped me think about topics that are of interest in the region. (scientist)*

*The process opened my eyes to the needs and constraints of public audiences. (scientist)*

The scientists also valued the opportunity to work together and with HBRF staff for preparation in planning their Roundtable presentations.

*When I talk with the scientists about public outreach and engagement, we inevitably talk about possibilities that all include some sort of two-way communication. I think before this project the*

*perspective was more on one-way dissemination of their science.  
(HBRF staff)*

*One scientist in particular has responded by thinking of concrete examples for how he could address the scientific concerns of the forestry community. (HBRF staff)*

- Hubbard Brook scientists all had different goals for their participation at the beginning of the project, but they all feel their participation was valuable.
  - Although the scientists started in different places, they shared two primary goals for participating in FSD: 1) to learn more about the perspectives of various stakeholder audiences and 2) to learn to better communicate/translate research findings with the public.

*It is always good to hear from people on the ground. I have learned that I need to expand my network to include more practicing foresters. (scientist)*

- All the scientists wanted research to inform policy/decision-makers, to recognize the knowledge out there, and to use the local community as a resource.

*There are synergies to be taken advantage of between stakeholders and scientists - connections made. (scientist)*

- They also expressed interest in building networks because they are more enduring; networks of trusting relationships across boundaries.

- The Hubbard Brook scientists began the project as advanced communicators, but they still reported benefitting from participation and training.
  - Scientists' reports of the Roundtables specifically affecting their comfort levels with regard to discussing science-related topics varied from 2.86 - 3.75.

*I think more about how I could express the questions and results of my research for a wide range of stakeholder groups. (scientist)*

*I may be more sensitive to the bewildering nature of research for most non-science audiences. (scientist)*

- Overall, the scientists were highly satisfied with their participation in the Roundtables (means ranged from 4.43 – 5.00).

*The FSD project gave excellent experience interacting with a diverse group of stakeholders. I had read and learned about these types of interactions, but nothing is better than some real experience. (scientist)*

Evaluation Goal 3: HBRF will grow in its role as an intermediary between the scientists and the surrounding communities, and will build its capacity to engage with those communities via informal dialogue and/or education.

- The Roundtables have been a useful way for HBRF to bridge scientists with community and stakeholder groups.
  - Community participants believed that Hubbard Brook science could be a valuable resource to their industry or vocation and would like to learn about more ways they can

use it. Opportunities for engagement exist at the intersection between what scientists study and what the public wants to know.

- Broader Impacts projects have been identified as a strong way for scientists to overcome institutional barriers to participation in engagement.<sup>2</sup>

*I have budgeted for funding for Roundtables in my NSF grants. I consider them to be an excellent “broader impact” activity on these grants. (scientist)*

- The Roundtables increased the scientists’ familiarity with individual community members, which has led to additional, less formal communication.

*Ideally, over time, scientists will use Roundtable dialogues to help them sharpen the research questions they seek to answer, or the hypotheses they seek to prove or disprove, in ways that could be understandable to stakeholders. (HBRF staff)*

- There are still challenges for HBRF with regard to engaging communities based on the science being done at HBRF.

- There is concern from the scientists that in terms of doing science, there is a mismatch between what they do (basic research) and what people need (applied research).

*The public wants to know how to manage trails, roads and other infrastructure. It seems like a civil engineer would be more helpful to them than biologists or biochemists. (scientist)*

- There are some concerns that the Roundtable format is not quite meeting the needs of the participants. Possible causes might be the diversity of the people invited, the broadness of the discussion topics and extent of the goals, and misunderstanding as to what the community wants (i.e., more science and more practical materials or ideas they can implement).

*To the degree that topic matter can be narrowed, it might lead to more in depth discussions. (community member)*

- HBRF learned a lot about the Roundtable and continues to refine the process.

- Roundtables shouldn’t be a one-size-fits-all process. Different groups, objectives, and topics may require different formats and methods.
- A lot of effort goes into the pre-Roundtable work via the interviews, but the information gathered does not always get integrated into the Roundtables. This can frustrate participants while also creating a heavy workload for staff. Prep work should reflect the Roundtable goals, and the interviews could do more to inform the Roundtables.

*Agenda was too ambitious, felt that we revisited a lot of information in pre-meeting in interview information. (community member)*

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<sup>2</sup> Proposals submitted to the National Science Foundation are required to address the broader impacts of the proposed research as a means to link their research with societal impacts. Broader impacts can include additional activities focused on education/outreach, can be intrinsic to the proposed project, or can be interwoven with the research.

- One purpose of the interviews might be to let the scientists know what the public is interested in, and that could inform the scientists' presentations. That is, connecting what people want to know with what is known. Roundtable discussion in this case could focus on how to translate knowledge for various audiences, and how HBRF might be able to facilitate that work.

Evaluation Goal 4: HBRF will develop the capacity to broaden and sustain its community engagement work beyond the duration of the grant, including, but not limited to, the creation of a Citizen Advisory Council.

- HBRF staff have been doing a lot of outreach (i.e., articles and presentations) and building connections with other organizations such as the Forest Policy Exchange, NH EPSCoR<sup>3</sup> program, Boston Museum of Science, and the Northeastern States Research Cooperative.
- A social media plan with Hubbard Brook graduate students has been proposed as a way to expand network of scientists involved with HBRF work.
- The Roundtables have also brought HBRF and community members together to work in new ways, such as Shannon Rogers, ecological economist at Plymouth State University, joining the Advisory Board.

*For example, as a result of the FSD project, HBRF and the COS (Committee of Scientists) are working together to build a single unified website. This is a hugely important outcome. HBRF and the COS have had separate websites for decades—since the beginning of HBRF—and this had been seen as a problem with intractable barriers. (HBRF staff)*

## IV. Key Outcomes /Achievements and Impacts

### List of Achievements

The FSD project generated several “spin off” activities that fostered open exchanges between Hubbard Brook scientists and natural resource professional networks and community members. Many of these activities were a “first” for HBRF and/or Hubbard Brook scientists and hold promise for future exchanges between the scientist community and a variety of stakeholder groups.

1. As a follow-up to the first needs assessment Roundtable discussion, *Forest Connections: Forging a New Model of Public Engagement with Science*, HBRF commissioned a white paper, *Informing Community-Relevant Research in the Northern Forest*, to summarize existing social science research on values and concerns of inhabitants in the Northern Forest region. One of the outcomes of the Roundtable discussion was a decision to embed social science research into the dialogue process. Dr. Shannon Rogers, an environmental policy specialist at Plymouth State University, along with her graduate students reviewed and synthesized research findings about “what people care about” in the Northern Forest region.

2. Two professional training opportunities were organized for natural resource professionals as a result of the second Roundtable in May 2015, *Changing Climate, Changing Forests*. Led by representatives from UNH Cooperative Extension and U.S. Forest Service’s Northern institute of Applied Climate Science who attended the Roundtable discussion, the workshops, *Climate Change & New England Forests* and

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<sup>3</sup> New Hampshire Experimental Program to Stimulate Competitive Research



*Forest Adaptation Planning & Practices*, were hosted by the Hubbard Brook Experimental Forest and drew over 80 professionals from New Hampshire and Vermont.

3. To honor its 60<sup>th</sup> anniversary of research, Hubbard Brook Experimental Forest held a public celebration with an Open House to Hubbard Brook researchers and surrounding communities. The event included environmental science activities for all ages such as forest tours, Talk-to-a-scientist, Children's games, arts and music, along with speakers who addressed Hubbard Brook research history, discoveries, and the environment.

4. HBRF received two small grants from Foundations in Vermont to hold Roundtable discussions initiating dialogue about the changes to Vermont's forests due to climate change, and to begin building connections between scientists and stakeholders to address critical challenges. The *Winter Climate Change in Vermont* Roundtable (March 2016) brought together ecosystems scientists and stakeholders from a variety of backgrounds to develop a stakeholder-drive framework for synthesizing the research findings. The second Roundtable (June 2016), *Setting a Biodiversity Research Agenda in Vermont*, convened ecosystem scientists with natural resource agency and network stakeholders to discuss the connections between science and policy in relation to biodiversity conservation. The overall goal was to develop a stakeholder-driven research agenda for future biodiversity research.

4. Hubbard Brook Research Foundation, in collaboration with the University of New Hampshire, TinMountain Conservation Center, Upper Saco Valley Land Trust, and Mount Washington Observatory, organized a Science Pub Night series in one of the communities close to the Hubbard Brook Experimental Station. The event provided an opportunity for discussion with ecologists and climate scientists who work at the local research sites. Topics included: Northeastern Forests and Climate Change, Forest Health and Invasive Pests, and Wildlife in a Changing World. The series was well received and garnered attention from the local newspaper.

4. HBRF contributed to nearly a dozen research proposals with the Roundtable process included as part of the project's broader impact plan to reach out to audiences/individuals and expand dissemination of the proposed research activities. Several proposals have been successful, e.g., a project about winter climate will involve up to four Roundtables across the Northern Forest Region, and an effort tied to the Hubbard Brook Ice Storm Experiment will include discussions with stakeholder groups to synthesize research findings.

## **Key Findings**

**1. Scientists benefited from participation in Forest Science Dialogues.** All six scientists who agreed to participate in the FSD project came to the project with a fair amount of experience communicating with public audiences about their research. Although the scientists had different experiences, they wanted to participate in FSD to learn more about the perspectives of different stakeholder audiences and to better communicate research findings with the public. Four of the scientists stayed committed throughout the duration of the project and took part in most of the FSD activities.

All four scientists indicated that the FSD project raised their awareness and gave them a better understanding of "how the public sees things or does not see things" and strengthened their communication skills to make their research clearer and more useful to practitioners. As an example, one scientist noted, "I no longer use the metric system when talking with the public." The scientists commented that they have become more intentional in thinking about the relevance of their research "to the real world;" two mentioned that they have become interested in applied research and are thinking more about working on research that has clear applications.

Although the four scientists had quite a lot of experience presenting research findings to non-scientists, they acknowledged that since participating in FSD they are more thoughtful in seeking dialogue with audiences, they spend more time listening to the perceptions and values of others, and they feel more confident overall in engaging with non-scientists. The scientists also expanded their thinking about how to conduct broader impacts projects associated with their research.

**2. The Roundtable process is one tool to reach audiences.** From the unfolding of the FSD project, HBRF learned that audiences, especially natural resource professionals, have a strong interest in ecosystem science and the research at Hubbard Brook; they want to learn, to hear from Hubbard Brook scientists, and to know the latest research. There are several ways HBRF can engage more broadly about ecosystem science research. For example, stakeholders who participated in the Roundtable discussion indicated they are looking for concise syntheses of Hubbard Brook research findings or fact sheets connected to practices that can be given to their constituents, e.g., landowners. Other ideas include regular communication via electronic newsletters with updates on Hubbard Brook research findings, a speakers' bureau to connect Hubbard Brook scientists to existing networks, support for networks of professionals with similar interests, and a website with existing Hubbard Brook resources that is easy to navigate. There also is interest in having Hubbard Brook scientists participate in practitioner networks and conferences, as well as engage in community Science Pub-like discussions. HBRF has since embarked on a social media plan to expand the network of scientists involved in public engagement as well as a plan to update the website. Consideration is underway to combine the Hubbard Brook Experimental Station and HBRF websites into one site.

**3. Roundtable discussions can be used for multiple purposes.** Through the FSD project, HBRF gained deeper insight about the Roundtable model, especially regarding content delivery and facilitation techniques, and made adjustments to meet expectations of participants. For example, HBRF learned that it is important to state clearly at the beginning of the process what the expectations are of the dialogue process and to identify anticipated follow-up products and/or activities.

Based on the experiences of FSD, HBRF also recognized three distinct purposes of the Hubbard Brook Roundtable model to promote public engagement with scientists in the context of ecosystems research.

1. Roundtable sessions can be framed as a “*needs assessment*” to identify the common engagement space between scientists and stakeholders. Within this context, Roundtables would be used to tap into local ecological knowledge, interests, and values (i.e., “what the public cares about”); share ongoing research areas of scientists; and establish new relationships between scientists and stakeholders. The unfolding of the common concerns and needs between scientists and stakeholders would lay the foundation for public engagement opportunities.

2. The Hubbard Brook Roundtable model can be used to *shape the direction of scientific research* to address important environmental concerns that are of interest to professionals, scientists, and decision-makers. In this setting, the dialogue process would support the exchange of knowledge between Hubbard Brook scientists and relevant stakeholders to frame research questions that build on the data and research from multiple disciplines and incorporate public interests and needs.

3. Roundtable discussions can be useful in *shaping the interpretation of findings* from Hubbard Brook research projects. Similar to above, the engagement process would support integration of ecosystem knowledge between scientists and various groups of stakeholders. In this context, scientists would present their research findings to various audiences, and work together in

translating the knowledge to understand the implications for different stakeholder groups and to strengthen science policy integration and decision-making.

## Recommendations

Based on the themes that emerged from the FSD project, RMC suggests the following recommendations that speak to the capacity of HBRF to promote public engagement with science within the culture and practices of Hubbard Brook. Two of the challenges focus on aspects of the Roundtable model.

1. *To gain the most value from the Roundtable pre-interviews, use the findings to shape the dialogue.* The Hubbard Brook Roundtable model, with its pre-interview sessions, is an intensive process to organize. There are pros and cons to this feature of the model. The interviews serve as a good mechanism for getting participants ready for the dialogue process. They also can highlight gaps between what stakeholders want to know about and what the science can tell them, which is useful for the scientists to learn. However, interviews take a lot of time for participants as well as for HBRF in terms of preparing the questions, conducting the interviews and preparing the synthesis. Roundtable participants want the interview findings to get summarized at the beginning of the Roundtable and used as a springboard for the ensuing discussion.

2. *In order for the overall Roundtable dialogue process to have the most value, the process should strive to create/produce products or identify actions that will result from the dialogue.* Each of the Roundtables identified at least one follow-up product or action for HBRF to take the lead. At this time, the status of these products is uncertain. One reason for the delay could be the capacity at the Foundation to complete the products. Another reason could be staff changes at the Foundation. HBRF underwent a leadership change in 2016 with a new Executive Director assuming responsibility in the summer. The previous Executive Director had been actively involved in developing and shaping the Hubbard Brook Roundtable Model.

3. *HBRF will need to decide how far to extend itself.* Findings show that the public, especially natural resource professionals, want to learn from the Hubbard Brook scientists. They want the information about specific topics such as winter climate change, water quality, invasive pests, etc. Additional services that HBRF might be able to provide could include fact sheets, scientist speakers' bureau, science cafes, or series of white papers on specific content areas.

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## **Appendix A. Initial and Final Scientist Survey**

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## Hubbard Brook Scientists

### Scientist Focus Group Pre-Survey

1. Briefly describe the extent to which you work with peers in carrying out your research.
  - a. What aspects of collaboration with peers are most valuable?
  - b. What aspects of collaboration with peers are least valuable?
2. How much do you enjoy engaging with the public about science?\*
3. How confident are you in your ability to effectively engage with the public about science?\*

\*Likert scale rating from Very Much to Not At All

### Final FSD Survey

Thank you for your participation in the Forest Science Dialogues (FSD) project. By answering the following questions about your participation, you'll be helping the Hubbard Brook Research Foundation staff and the evaluation learn more about the FSD Roundtable process and how the Research Foundation can benefit Hubbard Brook scientists in the future.

To ensure confidentiality, all responses will be reported in aggregate; no individuals will be identified. The survey should take approximately ten minutes to complete.

1. Since participating in the FSD project, what changes have you noticed in how you approach your research?
2. Since participating in the FSD project, what changes have you noticed in how you present your research to non-scientists?
3. As a result of your participation, have you spent more time engaging with non-scientists?
4. Since participating in the FSD project, what changes have you noticed in how you engage with non-scientists?
  - a. Can you link these changes, if they exist, to your participation?
5. What is your definition of public engagement in science?
  - a. How has your participation in FSD changed it?
6. How do the FSD Roundtables fit into your research process?

- a. What, if anything, have you gotten from the Roundtable process that's been useful to you or your research?
7. Briefly describe how the Roundtable process could be more useful to your research?
8. Please share anything else you'd like to tell us about your participation in the FSD project.

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## **Appendix B. Focus Group Questions**

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### Focus Group Questions

1. What does public engagement with science look like to you?  
→ prompt: What do you picture public engagement to look like? What do you think of when you hear the words?
2. When was the last time you were part of the “audience” being engaged, and what kept you engaged (or didn’t)?
3. In what ways, if any, has your work been influenced by engaging with non-scientist audiences?  
→ Prompt: have you asked different research question?
4. What do you hope to get out of participating in the Forest Science Dialogue initiative?  
→ Prompt: Inform your research, build communication skills
5. How would you know if you were successful?
6. What would you like from Hubbard Brook Research Foundation to support your role in the initiative?



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## **Appendix C. Roundtable Observation Protocol**

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**Forest Science Dialogue Project**  
**Hubbard Brook Roundtable Observation Protocol**

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The protocol addresses the following communication behaviors that take place during the dialogue sessions and discussions:

- Equivalent speaking time – do scientists and community members have close to equal talk time?
- Types of questions asked and by whom – what are the types of questions asked of scientists by community members and the types of questions asked of community members by scientists, e.g., factual questions versus questions that elicit opinions and statements of belief?
- The amount of time sharing information versus asking questions
- Contributions to the discussion come from a range of the participants not just a small group
- Contributors reflect the language of previous speakers/questioners

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## Appendix D. Roundtable Survey Results

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## Forest Connections: Forging a New Model of Public Engagement with Science Roundtable

### SURVEY SUMMARY

OCTOBER, 2014

#### Community Responses

Fourteen community members completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise notes, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1).

Question	Mean	Std. Deviation	Range
How helpful were the pre-meeting materials Hubbard Brook Research Foundation provided for setting the stage for the Roundtable discussion?	4.07	0.62	3-5
How useful was the Roundtable format for generating topics of interest and relevance to the community for further discussion?	4.36	0.63	3-5
How comfortable did you feel sharing your thoughts and opinions?	4.71	0.47	4-5
Did you feel like you had a chance to fully participate in the Roundtable discussion?	4.57	0.65	3-5
Did you feel like your points were acknowledged during the discussion?	4.57	0.51	4-5

Question	Yes	No	Unsure
Have you ever participated in a Hubbard Brook Roundtable before?	3 (23%)	8 (62%)	2 (15%)

Question	Mean	Std. Deviation	Range
How interested are you in participating in another Roundtable?	4.07	0.83	1-5
How familiar were you with the Hubbard Brook Experimental Forest before being asked to participate in the Roundtable?	3.36	1.33	1-5
Did the Roundtable increase your awareness or knowledge of Hubbard Brook research?	3.64	1.01	2-5
Did participating in the Roundtable help you make connections between issues that are important to you and the forest ecosystems research being done by Hubbard Brook scientists?	3.64	0.84	2-5

Question	A Lot	Some	A Little	None		
How much prior experience do you have talking to scientists about your community's issues?	2 (17%)	8 (57%)	1 (8%)	1 (8%)		
Question	Less Than 1 Year	1-3 Years	3-5 Years	5-10 Years	10-15 Years	Over 15 Years
How long have you lived in NH/VT/ME?	0	0	0	0	0	13 (100%)

Question	Mean	Std. Deviation	Range
Overall, how satisfied are you with your participation in the Roundtable?	4.21	0.80	3-5

**Consider the network(s)/organization(s) you represented today, what geographic area(s) does it serve?**

Entire state

Northern Forest/New England

The State of NH

Ski resorts in NH, one in VT, one in MA

Statewide, Plymouth area, social scientist research community on many scales from local to global.

Coos county

Local - MWV; Regional - Northern New England

NH statewide

Statewide and NE Region

Northeast & Mid-Atlantic

Northern NH

NH, Northern New England, United States

Entire Northern Forest region

Eastern White Mountains Region

**Do you have any suggestions for how to improve future Roundtable discussions?**

I wasn't too sure I got the point of the discussion immediately following lunch where we talked about the top priority topics. I felt we had already done a good job covering the topics before lunch. Rest of afternoon discussion very good.

Not at this point

Closer link to how I can link the resources of Hubbard Brook to my industry. Unclear of how a link may take place.

It would have been great to have more smaller group discussion but overall very effective.

Another break, more free time for open discussion, better lodging option -- all would help fuel better engagement.

Maybe a little more clarity on outcomes

Use some of the concerns illuminated in this discussion & assumptions, impacts on real people.

Give seniors thought about how to engage non-paid, non-professionals as part of the process.

Not right now. This was done skillfully & professionally on an important set of questions.

Difficult to rank ideas but don't know how else to do it. Hard to lose some of the topics.

More information on past & current HB research projects would be helpful.

**Are there any additional comments you would like to share?**

Interesting & engaged group of people. Learned a lot from them. Thank you for the relaxed evening introductions and fellowship.

Sarah did a great job putting out info & taking significant feedback well! Need to better outline assumptions underlying work as discussed; knowing some of these ahead of time would have been helpful.

Enjoyed the fact that the group all had a common interest. Hope the time was helpful.

Great to have professional facilitation

Congratulations -- very interesting experience!

Please share complete contact information for all participants with all participants.

Good moderation, would have liked some more clarity at the beginning, and clearer definition of audience & geography.

Group very engaged & wanted to help discussion. Good grasp of issues & summaries.

## Scientist Responses

Four Hubbard Brook scientists completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise notes, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1).

Question	Mean	Std. Deviation	Range
How helpful were the pre-meeting materials Hubbard Brook Research Foundation provided for setting the stage for the Roundtable discussion?	4.00	0.82	3-5
How useful was the Roundtable format for generating topics of interest and relevance to the community for further discussion?	4.25	0.50	4-5
How comfortable did you feel sharing your thoughts and opinions?	5.00	0.00	na
Did you feel like you had a chance to fully participate in the Roundtable discussion?	5.00	0.00	na
Did you feel like your points were acknowledged during the discussion?	5.00	0.00	na

Question	Yes	No	Unsure
Have you ever participated in a Hubbard Brook Roundtable before?	4 (100%)	0	0

Question	Mean	Std. Deviation	Range
How interested are you in participating in another Roundtable?	5.00	0.00	na
Did the Roundtable increase your knowledge or awareness of community issues or concerns?	4.00	0.82	3-5
Did participating in the Roundtable affect your comfort level in talking about science-related issues with non-scientists?	3.50	0.58	3-5
Did participating in the Roundtable help you make connections between ecosystem science research and issues relevant to community members?	4.00	0.00	na

Question	HBES Research	Your Research	Other Research
If yes to above, do the connections relate to:	3 (75%)	3 (75%)	3 (75%)

**Comment:** The public wants to know how to manage trails, roads and other infrastructure. It seems like a civil engineer would be more helpful to them than biologists or biochemists.

Question	Mean	Std. Deviation	Range
Overall, how satisfied are you with your participation in the Roundtable?	5.00	00.00	na

**Do you have any suggestions for how to improve future Roundtable discussions?**

Perhaps one more breakout group; could shorten time to include two 45 minute, rapid fire breakouts.

It seems like we always interact with people who are all more or less in agreement on issues. It might be helpful to engage people with opposing views. Maybe that would require a different forum.

Have organizers assign people to breakout groups. Everyone in my group (except) me knew each other prior to our breakout group. We still had a very productive discussion, but I think it would have been even stronger with random assortment of groups. Include email addresses with participant list that is printed out.

**Are there any additional comments you would like to share?**

Great meeting! I'm looking forward to the roundtables.



## Changing Climate, Changing Forests Roundtable

### SURVEY SUMMARY

MAY, 2015

#### Community Responses

Sixteen community members completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise notes, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1). When appropriate, responses to open-ended questions were grouped by theme.

Question	Mean	Std. Deviation	Range
How helpful were the pre-meeting materials Hubbard Brook Research Foundation provided for setting the stage for the Roundtable discussion?	4.33	0.90	2-5
Did the pre-meeting interview process increase your interest in participating in the Roundtable?	4.47	0.74	3-5
How useful was the Roundtable format for guiding discussion on climate change and the forest?	3.44	0.72	2-5
How comfortable did you feel sharing your thoughts and opinions?	4.63	1.03	1-5
Did you feel like you had a chance to fully participate in the Roundtable discussion?	4.63	0.89	2-5
Did you feel like your points were acknowledged during the discussion?	4.69	0.60	3-5
Did the Roundtable increase your knowledge or awareness of current ecosystem science?	3.73	1.03	1-5
Do you feel like you had the opportunity to share the issues that are important to you with forest ecosystem researchers?	3.93	0.80	3-5
Did you feel there was a good balance between dialogue and being provided with science content?	3.47	0.74	2-5

#### If No, please explain.

I feel like I am very advanced on the science topics and so would have wanted more dialogue.

I would have liked more science information, handouts of slides, other information would have been helpful.

Would have liked more science presentations. Pamela showed a lot but would have loved more from other scientists.

The science content was terrific and necessary.

Question	Mean	Std. Deviation	Range
How well do you think the Dialogue Station format worked?	3.67	0.62	3-5

**What did you learn today that you could apply or incorporate into your life/work/etc.?**

***Science Information***

A fact sheet on long term weather changes

Got some information on science

I gained a good perspective on the perception of larger landowners in regards to climate change.

Interesting details from Tim Fahey and great connections, greater awareness of Hubbard Brook's work

Interpretation of science projects, how the aggregate works together - at least a beginning look

Niblets of information from scientists intriguing

Soil freezing info, snow pacer changes

Tidbits from scientists on their research

***Hubbard Brook Information***

HBRC is an incredible and valuable resource.

Re-learn HBF as a knowledge source for forestry

***Other***

Specific Hubbard Brook research scientist presentations were excellent!

Not much really

**Share a few topics you would like to learn more about or follow up on.**

Carbon registration - effect of management techniques including none effect of loss of aspen and birch on ecosystem

How research is being used to help landowners manage forest land

How to simplify/put in long-term context basic climate change information - would be great to have easy comprehensive source for this.

Language to use when talking about climate change. Simple, practical synthesis of recommendations for private landowners

Love the idea of "top 10" questions from managers.

More information on the work being done here to pass on to others

Research on forest flux and stresses

Cannot think of any at present.

Question	A Lot	Some	A Little	None
How much prior experience do you have talking to scientists about climate change and forestry?	8 (53%)	5 (33%)	2 (13%)	0 (0%)
How interested are you in extending the Roundtable discussion into further joint activities with the Hubbard Brook scientists?	8 (53%)	7 (47%)	0 (0%)	0 (0%)

Question	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
How long have you lived in NH/VT/ME/MA?	1 (7%)	0 (0%)	2 (14%)	1 (7%)	10 (71%)

Question	Mean	Std. Deviation	Range
Overall, how satisfied are you with your participation in the Roundtable?	4.47	0.52	4-5

### Do you have any suggestions for how to improve future Roundtables?

#### ***Agenda and Time***

Agenda was too ambitious, felt that we revisited a lot of information in pre-meeting in interview information.

It is always challenging to convene a session in a day but the reality is that more than one day in challenging for most people.

Like idea of overnigher

Make the seminar one and a half days. Provide printouts of synopsis on the spot - could be done with portable printer.

#### **Topics and Objectives**

More substance on the work of the scientists

Narrow down topic - state it clearly and repeat it during event - have more clear objective.

Narrower range of issues

I thought it was a great and very worth while meeting. Just a little improvement on process/clarifying outcomes needed!

#### ***Other***

Get outside, let people interact as much as possible, making it an overnight is great.

I am unsure exactly what the desired outcome was and if the round table activity reaches it. I would have preferred more disclosure in the prework, the interview, and at the start of the meeting about how this round table fits into the grant and what/how the round table will assist in the grant. I also feel there is some disclosure needed about the relationship of HBRF and HBEF so that when we say "Hubbard

Brook" should do x or y we know who we are talking about. So in the end I think it was a good session but it could have accomplished much more. I think it is important for HBRF to identify its niche and follow its strengths or possibly choose a new strategic direction.

Provide follow-up on actions HB or others took as a result

Well done...thanks!

**Are there any additional comments you would like to share?**

Ranking votes on priorities seemed forced. Should ask: 1) What is the message and how should it be delivered. 2) Reading list on climate change would have been helpful. 3) Would have been nice to have copies of changing climate, changing forests and forest adaptation resources prior to the roundtable. 4) Mailing addresses for participants.

Discussing issues more valuable than ranking them

Great work on this - thank you.

A very good day!

Thank you

Thanks for the opportunity to participate

Tom was a masterful emcee and facilitator.

## Scientist Responses

Four Hubbard Brook scientists completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise notes, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1).

Question	Mean	Std. Deviation	Range
How helpful were the pre-meeting materials Hubbard Brook Research Foundation provided for setting the stage for the Roundtable discussion?	4.25	0.96	3-5
How useful was the Roundtable format for guiding discussion on climate change and the forest?	3.75	0.50	3-4
How comfortable did you feel sharing your thoughts and opinions?	5.00	0.00	na
Did you feel like you had a chance to fully participate in the Roundtable discussion?	5.00	0.00	na
Did you feel like your points were acknowledged during the discussion?	5.00	0.00	na
How prepared did you feel to engage in the discussion?	4.75	0.50	4-5

### What would have helped you feel more prepared?

I felt prepared. The interviews are a great way to get things going. It makes me think about it before I arrive.

Know more about expected/desired outcomes

Perhaps to have a plan of three potential outputs prior to the meeting to make the work within the actual roundtable more productive

Question	Mean	Std. Deviation	Range
Did the Roundtable increase your knowledge or awareness of the opinions, issues, or concerns of landowners and land managers?	4.00	0.82	3-5

### What did you learn today that you could apply or incorporate into your life/work/etc.?

Better understanding of forestry, thoughts on tree planting

It is always good to hear from people on the ground. I have learned that I need to expand my network to include more practicing foresters

Thinking about interactions between land owner and manager needs with effects of their actions

We need to communicate our science better.

**Share a few topics you would like to learn more about or follow up on.**

Communication network of participants.

I'd be interested in following up on how to provide information to foresters that covers information on managing forests for climate change

What do landowners think about? What are their priorities? Goals? I think for another roundtable it would be helpful to have a ten min. talk by a director of an array of landowners or managers.

What information should I try to synthesize?

Question	Mean	Std. Deviation	Range
<b>Did participating in the Roundtable affect your comfort level in talking about science-related issues with non-scientists?</b>	3.75	0.96	3-5
<b>How well do you think the Dialogue Station format worked?</b>	4.25	0.96	3-5
<b>Overall, how satisfied are you with your participation in the Roundtable?</b>	4.50	0.58	4-5

**Do you have any suggestions for how to improve future Roundtable discussions and/or the Forest Science Dialogues project?**

Continuity into the future will be a challenge. I agree that too much emphasis on ranking was counterproductive.

Have landowner/manager/director give a presentation that summarizes typical goals priorities, challenges of day to day land management. Have more concrete plans for next steps rather than relying on roundtable to develop plan.

I think it might be useful to try smaller groups. More might be accomplished with 8-10 people there.

Participants seemed to want more science. Have a handout/pamphlet on HBEF science.

**Are there any additional comments you would like to share?**

I thought it was helpful. I am getting to know people after a few of the exchanges.

This was very well facilitated, easy to participate. I appreciate Tom's facilitator style. I worry about the roundtable participants becoming frustrated with lack of progress outside (in between) the roundtable events.

**WINTER CLIMATE CHANGE IN VERMONT ROUNDTABLE  
SURVEY SUMMARY  
MARCH, 2016**

**COMMUNITY RESPONSES**

Nine community members completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise noted, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1). When appropriate, responses to open-ended questions were grouped by theme.

<b>Question</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Range</b>
<b>How helpful was the pre-meeting interview process for setting the stage for the Roundtable discussion?</b>	4.78	0.67	3-5
<b>How useful was the Roundtable format for guiding discussion on winter climate change?</b>	3.78	0.67	3-5
<b>How comfortable did you feel sharing your thoughts and opinions?</b>	4.44	0.73	3-5
<b>Did you feel like you had a chance to fully participate in the Roundtable discussion?</b>	4.33	0.87	3-5
<b>Did you feel like your points were acknowledged during the discussion?</b>	4.56	0.53	4-5
<b>Did the Roundtable increase your knowledge or awareness of current ecosystem science?</b>	3.89	0.99	2-5
<b>Do you feel like you had the opportunity to share the issues that are important to you with forest ecosystem researchers?</b>	4.56	0.53	4-5
<b>Did you feel there was a good balance between dialogue and being provided with science content?</b>	4.11	0.61	3-5

**If No, please explain.**

More science is always welcome.

It felt like we just scratched the surface, but overall the day's agenda was well-balanced.

**What did you learn today that you could apply or incorporate into your life/work/etc.?**

***Knowledge and Resources***

Correct trends. Resources to follow up with.

Ecology of soils during winter freeze/thaw.

More information to pass on to people I interact with - non-believers mostly.

Nothing that I can apply into my life or with, except as I talk to friends and colleagues, a better knowledge of climate change effects.

There are available resources in the science community.

New sources climate source for local region and extended network of relationship with fellow practitioners and scientists.

***Motivation for Sharing***

If people in this room can agree that climate change is a real issue, then we should find a mechanism to relay to others.

General inspiration to learn more about these issues - and to share knowledge with my constituents.

I hope to share more about climate change with our constituents - making the science/citizen connection in relevant ways

**Share a few topics you would like to learn more about or follow up on.**

Soil freezing. Root death, water availability

Pyrolysis/biochar - how valid is this practice for carbon sequestration! Winter climate change and native insects, including pollinators. Different ways to communicate about climate change with the public.

Soil interaction with forest health; ways to deal with change of climate in my business.

Effects of climate change of forest regeneration.

More information on winter climate variability and interrelationship soils, vegetation, water, etc.

Snowpack and all its ecological impacts



Question	A Lot	Some	A Little	None
How much prior experience do you have talking to scientists about winter climate change or other environmental topics?	4 (44%)	3 (33%)	1 (11%)	1 (11%)

Question	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
How long have you lived in NH/VT/ME/MA?	0 (0%)	0 (0%)	2 (22%)	1 (11%)	6 (67%)

Question	Mean	Std. Deviation	Range
Overall, how satisfied are you with your participation in the Roundtable?	3.89	0.78	3-5

**Do you have any suggestions for how to improve future Roundtables?**

I think it would be helpful to have a facilitator who asked fewer questions along the way but spent more time setting the framing the discussion up front.

Bring in the ski area people as they are critical to the discussion.

Excellent work on this. To the degree that topic matter can be narrowed, it might lead to more in depth discussions.

More in depth talk of how to deal

Keep it moving - don't let today sit on a shelf.

Concrete goals; how to apply information to my area/sector/organization

## Scientist Responses

Eight Hubbard Brook scientists completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise noted, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1).

Question	Mean	Std. Deviation	Range
<b>How useful was the Roundtable format for guiding discussion about winter climate change?</b>	4.38	0.52	4-5
<b>How comfortable did you feel sharing your thoughts and opinions?</b>	4.75	0.46	4-5
<b>Did you feel like you had a chance to fully participate in the Roundtable discussion?</b>	4.75	0.46	4-5
<b>Did you feel like your points were acknowledged during the discussion?</b>	5.00	0.00	na
<b>How prepared did you feel to engage in the discussion?</b>	4.50	0.55	4-5

### What would have helped you feel more prepared?

More concrete definition of the goal of the roundtable objectives.

The consolidated document of interview responses was helpful, but maybe a more specific list of stakeholder questions would help.

There's never enough time to prepare as much as I'd like.

Question	Mean	Std. Deviation	Range
<b>Did the Roundtable increase your knowledge or awareness of the opinions, issues, or concerns of community members?</b>	4.75	0.46	4-5

### What did you learn today that you could apply or incorporate into your life/work/etc.?

New connections to both scientists and stakeholders; how to illustrate temp data in a way that people can more easily digest; how winter climate change is influencing how snow mobile trails need greater cleaning

There are synergies to be taken advantage of between stakeholders and scientists - connections made

Some strategies for communicating with non - scientists

Some new approaches to thinking about integrating stakeholder needs and data into interpretation of climate change data.

The breadth of interest and need in both the science and stakeholder communities; so this helps me to think about communication and research questions.

I learned that foresters have already started to manage forests with climate change in mind. This makes me want to consider the topic of assisted migration of species.

The importance of including positive information/positive action steps when conveying climate change information.

**Share a few topics you would like to learn more about or follow up on.**

Freeze/thaw and soil organisms and release of N and C

Climate change tools - models, guides, web tools, etc. and if/how stakeholders use (or are aware of them)

Snow mobile trail use/census data

Networking; communication between scientists and stakeholders/managers

The whole idea of energy alternatives and impacts on the landscape

Winter climate change and forestry, citizen and organizational data sources that can be incorporated into science.

Question	Mean	Std. Deviation	Range
<b>Did participating in the Roundtable affect your comfort level in talking about science-related issues with non-scientists?</b>	3.38	1.06	2-5
<b>Overall, how satisfied are you with your participation in the Roundtable?</b>	4.50	0.55	4-5

**Do you have any suggestions for how to improve future Roundtable discussions and/or the Forest Science Dialogues project?**

Provide a science overview ahead of time (video or webinar) so face to face time could be in dialogue

Plan for continued engagement in future conversations; more time for in depth discussions.

I liked the suggestion for more time to rotate through some of the small group discussions.

Maybe meet in the afternoon on the 1st day, then have a group dinner where there are greater opportunities to talk with one another and get to know one another, then meet the next morning for the breakout discussions.

We need to figure out the next step. Where do we go from here?

Mixing up scientists/non-scientists for better interaction

**Are there any additional comments you would like to share?**

Thanks for this opportunity

Thanks so much...this is a great idea and we need more of them.

Nope. Thanks!

Very glad to have participated!

It was great to meet all of the scientists and stakeholders!

I liked the breakout discussions and would like to see more time devoted to small group interactions.

## Creating a Biodiversity Research Agenda in Vermont Roundtable

### Survey Summary

June, 2016

#### Stakeholder Responses

Twelve stakeholders from Vermont completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise noted, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1). When appropriate, responses to open-ended questions were grouped by theme.

Question	Mean	Std. Deviation	Range
How helpful was the pre-meeting interview process for setting the stage for the Roundtable discussion?	4.42	0.52	4-5
How useful was the Roundtable format for developing a biodiversity conservation research agenda for VT?	3.64	0.51	3-4
How comfortable did you feel sharing your thoughts and opinions?	4.58	0.52	4-5
Did you feel like you had a chance to fully participate in the Roundtable discussion?	4.75	0.45	4-5
Did you feel like your points were acknowledged during the discussion?	4.67	0.49	4-5
Did the Roundtable increase your knowledge or awareness of current issues related to biodiversity conservation?	3.50	1.17	2-5
Do you feel like you had the opportunity to share the issues that are important to you with biodiversity researchers or other scientists?	4.18	0.87	3-5

If No, please explain.

**What did you learn today that you could apply or incorporate into your life/work/etc.?**

How to communicate biodiversity and quality of life issue in VT are very important

I am waiting for the follow-up summary in a week to evaluate how we might address some of the research priorities

I can't see anything clearly yet - many issues/approaches likely to creep in here and there

New and emerging trends with invasive species and challenges we face

priorities for research, themes for research, better understanding of connections between research issues

Some interesting insights into carbon sequestration, Interesting to learn about high level of forest pests in VT. (Don't know how I'll apply that)

That there is a convergence of thinking on the urgent trends

The number of people sharing the same concerns and the possibility of cooperatively pursuing solutions

There is a lot of agreement on the threats, variables, and even the research priorities. The challenge is how to best disseminate information to the public and motivate them to take the necessary actions to protect a functional landscape.

**Share a few topics you would like to learn more about or follow up on.**

All of it

curious about ways of increasing and improving communication opportunities, a pretty tough nut to crack. Everything is in a circle. Where on the circle do you focus your intervention for optimal benefit?

Ecosystem (both forestial and aquatic) processes and function considered most important for healthy ecosystems. And how to articulate that message to VT political people & state legislature

Ecosystem services valuations for forests - many dimensions to this

Fragmentation/habitat loss - particularly measuring amount and effect. Outreach to landowners and the public that instigates change

How to better communicate with landowners, the public, and scientists

How to further prioritize research needs and get traction from funders and link to policy

How to reach the funding community with the products of this meeting

Invasive species impacts to natural systems; land use change over past 25 years

Who is monitoring and studying (academic) How land use effects change in Biodiversity and climate change

Question	A Lot	Some	A Little	None
<b>How much prior experience do you have talking with ecosystem scientists about biodiversity or other environmental topics?</b>	7 (58%)	2 (17%)	2 (17%)	1 (8%)

Question	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
<b>How long have you lived in NH/VT/ME/MA?</b>	0 (0%)	1 (8%)	0 (0%)	2 (17%)	9 (75%)

Question	Mean	Std. Deviation	Range
<b>Overall, how satisfied are you with your participation in the Roundtable?</b>	4.08	0.67	3-5

**Do you have any suggestions for how to improve future Roundtables?**

Although we struggled to get folks focused on the tasks at hand for the day - it worked out well in the end. Continue to make sure a broad cross-section of VT agencies, NGO, private sector industry folks at next table

Done very well

Efficacy vs practicality is a real challenge - I have no idea how you could change that!

Follow up participation will be critical to flush out specific research work

Include a representative from agriculture and someone from VT F&W Heritage program (non game biologists)

Less talk about process - get to the "meat" sooner.

Less windup and more pitch. A bit too much introduction today. Also, I think we got unnecessarily hung up for way too long on the name and definition of biodiversity. Ultimately I think that was actually helpful but I do think it could have happened much quicker.

longer time in the breakout groups

Slightly smaller groups with 1-2 more private sector/non researchers

**Additional Comments?**

I think I already did

Late arrivers should not be allowed to derail actual progress by discounting and ignoring what was missed.

Need to work in conjunction with as many other groups as possible to be sure we have a clear and powerful message

Nice location, Bill's mid-day walk was great both as a mental break and a way to spark discussions

Please share the results from today's discussion and how they can be used in our work

tough topic - wide range of people and opinions so job well done

very interesting discussion with a great stimulating mix of people

We got bogged down in the morning session with the threats discussion. Would have been great to have greater (=more) representation from the policy arena (including someone from a regional planning commission and local planning/zoning/select board) to keep us focused on the need for actionable science. Consider another round table to more fully explore the needs of policymakers/practitioners on a variety of levels. Mike Snyder is an anomaly in that he already sings in our choir.

worthwhile process

## Scientist Responses

Seven scientists completed the post-Roundtable survey. Not every person responded to every question. Unless otherwise noted, respondents rated their answers on a 5-point Likert scale from Very (5) to Not At All (1).

Question	Mean	Std. Deviation	Range
<b>How useful was the Roundtable format for guiding discussion about winter climate change?</b>	3.86	1.07	2-5
<b>How comfortable did you feel sharing your thoughts and opinions?</b>	5.00	0.00	NA
<b>Did you feel like you had a chance to fully participate in the Roundtable discussion?</b>	5.00	0.00	NA
<b>Did you feel like your points were acknowledged during the discussion?</b>	4.71	0.49	4-5
<b>How prepared did you feel to engage in the discussion?</b>	4.14	0.38	4-5

### What would have helped you feel more prepared?

A bit more background reading in some foundational stuff \_\_\_\_\_. VT conservation blue prints? An example of the kind of thing we aim for. An example of science being framed, pursued, packaged in the way we aim to, to support policy.

homework - eg, a previous report by VT on the topic

Maybe a little more pre-workshop structure and information on the key outcomes the workshop was hoping to achieve. That would have helped direct the discussion. Also you could have started (just give us the list) with the threats, which as already well-established, then moved directly to the research priorities. Don't be afraid to impose a little more structure.

More life experience

Perhaps some past efforts such as reports from VT Biodiversity Project that is about 15 years old, etc.

pre-work and pre-work writeup

Question	Mean	Std. Deviation	Range
<b>Did the Roundtable increase your knowledge or awareness of the opinions, issues, or concerns of various stakeholders?</b>	4.00	1.16	2-5

### What did you learn today that you could apply or incorporate into your life/work/etc.?



It was useful to hear which areas everyone seemed to agree should be priorities for research. This will help direct my course work.

Met new colleagues

Previous assessments and reports I didn't know about. Factor, forest owner, take into account in making decisions (on the walk)

That biodiv. monitoring is not being done at the spatial and temporal scales at which management decisions remade and management practices are used

There are a lot of great research topics to ponder and follow-up on. I was actually surprised at how diverse and long it took the room to actual come together on biodiversity agenda. Wide range of ideas and opinions to be considered.

Ways to communicate biodiversity research needs and findings to managers and public

**Share a few topics you would like to learn more about or follow up on.**

As there was only one day and only time to be with one group, I would love to follow up more with other groups such as communications in same manner.

Consider building ideas from this round table on top of VT Biodiversity Project and North Atlantic Landscape Con. Coop

How people of various walks empathize or don't with "biodiversity"

Synthesis paper or statement would be happy to help out

The pattern of forest age throughout New England , the existence of long-term data sets for any tax on New England

Would like to examine how forest cover affects town-level socio-economic outcomes

Question	Mean	Std. Deviation	Range
<b>Did participating in the Roundtable affect your comfort level in talking about science-related issues with stakeholder groups?</b>	2.86	1.22	1-4
<b>Overall, how satisfied are you with your participation in the Roundtable?</b>	4.43	0.79	3-5

**Do you have any suggestions for how to improve future Roundtable discussions?**

A little more starting structure, otherwise I enjoyed the event and look forward to seeing the outcome.

Break out sessions were good. Full program was good. Participants were fascinating

I felt a lot of folks said "I'm retiring soon," How would the continuation/collaborations be different with early-to-mid career folks?

I think they need to be more narrowly focused for participants to feel that progress was made

Perhaps link two of them together, 3 months apart, so could draft a synthesis of day one to when and make another bit and program in day two

Since it is just one day, perhaps, if possible, get to breakout groups more quickly.

Would be useful to show some successful round tables in the past to show how process works from start to finish

**Are there any additional comments you would like to share?**

Good luck and please keep me in the loop if possible!!

Keep up good work

Stimulating day. It almost seems it should have day two later to keep going.

Thank you!

Thanks for organizing the round table. It was interesting learning about the perspectives of others. A follow up meeting might focus on specific topics where it is thought that progress can be made e.g. developing a "bugs in the classroom" program that trains 4th grade teachers to collect long term data on insect diversity.

Well done!

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## Appendix E. Final Staff Surveys

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## Final FSD Survey

### HBRF Staff

Thank you for taking the time to respond to the following questions about your participation in the Forest Science Dialogues (FSD) project. Your answers will help inform the evaluation and future work on the Roundtable process.

To ensure confidentiality, all responses will be reported in aggregate; no individuals will be identified. The survey should take approximately ten minutes to complete.

1. What sorts of changes, if any, have you noticed in how the Hubbard Brook (HB) scientists engage with non-scientists?
2. What sorts of changes, if any, have you noticed in how the HB scientists approach their research?
3. How do you think the Roundtable process fits in with the research process?
4. What kinds of changes, if any, have you noticed in the relationship between Hubbard Brook Research Foundation (HBRF) and the scientists as a result of the FSD project?
5. How has HBRF's role as an intermediary organization changed since participating in the FSD?
6. As a result of the FSD project, do you have a better sense of how HBRF can support engagement between scientists and non-scientists? Please explain.
7. What lessons have you learned about public engagement with science as it applies to HBRF and the roundtable process?
8. What do you think HBRF can do in the future to make the Roundtable process more successful and sustainable?

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## Appendix F. Boston Museum Survey

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**Boston Museum of Science**

**Follow Up Survey for Scientists and HBRF Staff**

1. What were your initial observations? Did anything in particular strike you?
2. What did you learn that you could apply to the FSD project? Was there anything you could apply to your regular work?
3. Is there anything you'd like to learn more about or follow up on? Why?
4. Would you recommend the other scientists in the project participate in a similar type of event? Why or why not? If so, what would you suggest they focus on?