

A Climate Economy in the Northern Forest:
A joint Hubbard Brook-Dartmouth College Roundtable
June 4, 2018
REPORT

EXECUTIVE SUMMARY

On June 4, 2018, the Hubbard Brook Research Foundation and Dartmouth College convened a group of 15 thought leaders from Dartmouth and surrounding communities for a roundtable dialogue about an emerging climate/sustainability economy in the Northern Forest and the potential roles of corporations, scientists, and NGOs. The stated goal of the dialogue was to initiate and gain insights from a conversation amongst a handful of thoughtful colleagues about the relationships among climate change, the forests and water resources of northeastern North America, and corporations as leaders of economically-driven environmental solutions.

The meeting grew out of increasing recognition of overlap among the interests and issues being explored by various groups both at Dartmouth and at Hubbard Brook and a desire among the organizers to build stronger linkages and communication channels among these groups. There have long been important ties between Dartmouth College and the Hubbard Brook Ecosystem Study going back to the origins of Hubbard Brook, and Dartmouth College serves as a key member of the Hubbard Brook Consortium.

The meeting revealed shared interest and excitement around the potential for building new connections among environmental scientists, economists, and corporate leaders in the Northern Forest region. Several specific themes emerged:

- Interest in the role Dartmouth could—or should—play in a sustainable forest economy in the region.
 - “We should be community partners *and* global leaders.”
 - “We’ve always been the voices in the woods. But we don’t take credit. This is Dartmouth’s biggest missed opportunity.”
- Recognition that this is a challenging time in northeastern North America with the loss of a stable low-grade timber market.
- Recognition of an opportunity in the shift in corporate thinking, globally, from shallow sustainability efforts (“greenwashing”) to a real focus on supply chain integrity.
- In forest management, recognition that certification programs (e.g., SFI: Sustainable Forestry Initiative and FSC: Forest Stewardship Council) offer an important pathway for linking forest-based research and corporate practice.
- Interest on both sides (science and the private sector) in the development of new corporate funding models for basic ecological research.
 - “I’d be interested in a research surcharge for each certified acre.”
 - Question: “What would you want to get out of funding research?” Answer: “Access. Access to translated, synthesized research.”
- Interest in examining Dartmouth as a proxy for understanding corporate action: How is research translated into implementation at Dartmouth? What is the policy ecosystem?

- Recognition of the need to build connections between ecological economists/environmental scholars and business schools.
- Recognition of opportunities to strengthen links between Hubbard Brook and Dartmouth's Second College Grant, especially related to stakeholder and practitioner engagement.

As actionable outcomes of this roundtable, the Hubbard Brook Research Foundation will follow up with individual participants about investigating new pathways for corporate funding of basic ecological research. The Hubbard Brook Research Foundation will also share knowledge and resources related to science education in the region with the Revers Center for Energy. Matt Ayres, Professor of Biological Sciences, will follow up with April Salas, Executive Director of the Revers Center for Energy, about the potential for graduate students in his department to provide needed regional data. Anant Sundaram will follow up on the potential for a student project in the Tuck School to complete a network analysis of corporations in the region that should be connected to environmental scientists at Dartmouth College and Hubbard Brook.

—Submitted by Sarah Garlick, Hubbard Brook Research Foundation, June 5, 2018

PARTICIPANTS

Matt Ayres	Professor of Biological Sciences, Dartmouth College
Joe Bachman	Executive in Residence in Natural Resource Finance, Duke Nicholas School of the Environment
Melody Burkins	Associate Director for Programs and Research in the John Sloan Dickey Center for International Understanding
Kevin Evans	Director of Woodlands, Dartmouth College
Sarah Garlick	Director of Science Policy and Outreach, Hubbard Brook Research Foundation
Rich Howarth	Professor and Chair of Environmental Studies, Dartmouth College
Anthea Lavalley	Executive Director, Hubbard Brook Research Foundation
David Lutz	Forest ecologist, Dartmouth College
Caitlin Hicks Pries	Assistant Professor of Biology, Dartmouth College
Conrad Reining	Associate Director for Advancement and Administration at Dartmouth College
April Salas	Executive Director, Revers Center for Energy
John Smitka	Trustee, Hubbard Brook Research Foundation
Peter Stein	Managing Director, The Lyme Timber Company
Anant Sundaram	Professor, Tuck School of Business
Elizabeth Wilson	Professor of Environmental Studies and Director of the Arthur L. Irving Institute for Energy and Society at Dartmouth College

NOTES FROM THE MEETING

Themes from introductions: *Share a story about a time when you participated in or were aware of an interaction between academic scientists and a corporation that resulted in either positive or negative outcomes.*

1. Need for connections across silos
2. Potential for hot-button issues and conflicts
3. Potential for major impact
4. Importance of government connections and policies
5. Value of tech transfer

Notes from Breakout Group A:

Attendees:

- Sarah Garlick
 - Anant Sundaram
 - Elizabeth Wilson
 - Caitlin Hicks Pries
 - Peter Stein
 - Rich Howarth
 - Joe Bachman
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- Moving from greenwashing to supply-chain integrity
 - Ikea supporting conservation of “woodbaskets” within driving distance of mills
 - Adoption of certification programs to avoid excessive regulation
 - Natural climate solutions = this is the link between research and corporate decision-making = private sector playing a role in climate change solutions
 - Is there a barrier between environmental economists and business schools?
 - Climate Smart Land Network: a pathway for corporate land managers to learn from scientists; taking granular info from research and translating to practice
 - Interest in supporting ecological research (FSC/SFI certification programs as bridge)
 - Shift in thinking in scientific community: openness to corporate funding – less concern about risks/stigma.
 - Cooperative funding for research changed with shift to investment model of landownership
 - Interest in research surcharge for each certified acre: access to translated, synthesized research
 - What goes in to forest certification? What is left in and what is left out? Are landscape scale issues addressed?
 - Certification: Potential bridge to research funding
 - Necessity of synthesis and translation: Access to research

Notes from Breakout Group B:

Attendees:

- Matt Ayres
- Melody Burkins
- Kevin Evans
- Anthea Lavalley
- Conrad Reining
- April Salas

- John Smitka

General discussion

- The only companies that will survive over next decades are those that are sustainable. Lot of pressure coming from institutional investors for change, which will ultimately have considerable impact on corporations. Not yet mainstream in business education, but slowly emerging.
- Need to keep resources in the ground – example of the Permian Basin, which has an enormous amount oil and gas.
- Impact investing, building efficiency, patient capital, are all emerging topics, in business education, at Tuck at least.
- Consumer driven changes: chief driver of insect is the movement – ash borer as an example – of plants around the country. If people were more motivated to buy local plants, might reduce this. Could be incentive to advertise, becoming a marketing tool. Would also drive public awareness. Emerald ash borer example.

What types of research might be needed to understand the links between climate change, forest ecosystems, and corporate actions? What research currently exists?

- Hubbard Brook research
- Where is that forest-climate nexus? What are the leverage points?
- Identify the values triggers.
- Local food analogue.
- Not telling the right stories.
- Socio-economic factors, humanism, human scale.
- Area of potential growth: what does it take to motivate people?
- Trust issues.
- Analyze from a systems perspective – take Donella Meadows approach.
- Industrial/commercial hurdles – BOCA (?) codes, for example, often prevent use of local products.
- Architects used to doing certain things – Mahogany trim example.
- Timber frame example – UMass, UMaine now doing timber-frame buildings over eight stories in height.
- On Dartmouth campus: still planting non-native species, despite existence of a policy¹ against such practices.

¹ PDF: Dartmouth AASHE STARS* Plan (May 2015)

**STARS: The Sustainability Tracking, Assessment & Rating System™ (STARS) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. More @ <https://stars.aashe.org/>*

KEY Sections:

Grounds & Landscape Management

Page 27:

*"Is the institution utilizing the campus as a living laboratory in the following areas?"
—"Grounds = Yes"*

Page 124-131

Grounds & Landscape Management Plans

- Work with students, administrators. What’s the “policy ecosystem” that allowed good things to go forward? What’s preventing action/decision-making from moving forward.
- Who do we need to convene in these multifunctional groups?
- Why are things not working as well as they could at Dartmouth? Should we do a microstudy of how decisions get made? Critical to understand how decisions are made in the aggregate, and the state of leadership.
- Sustainability decisions come from the top. Corning example. NYC, Washington, DC examples.
 - Research can influence these people
 - At Dartmouth, look to the trustees potentially
 - How get someone in the room with the decision-makers?
- Ultimate impact comes through a combination of personal decisions, plus high-level decision making/leadership.
- What does it take to bring all the appropriate decision-makers to the table?
 - Realization that there’s often no alignment among all the incentives and policymakers.
 - Yet with a good leader, can often overcome these barriers. Example: CFO at UVM became a leader/focal point for sustainability efforts, even though that person had little background in the field. Was able to drive them forward through his convening ability.
 - At Dartmouth, need leadership. We have a sustainability plan, need someone to hold people accountable.
 - Research: look at colleges/universities as a block – what could they contribute at a national/international scale?
 - Could Dartmouth be a model? We have the resources, a basic direction and commitment.
 - Study decision-making (e.g., trustees and senior decision-makers), procurement, finance systems
 - Deloitte – study of incentive structures and alignment – bonus structure turns out to be a major driver
 - Dartmouth as a living/learning lab
 - Dartmouth as a case – it is the “corporation” making decisions.
 - Concept of follow-up – critical, once decisions are made, that there is consistent monitoring and confirmation that actions are being taken

MEETING AGENDA

Monday, June 4, 2018

12:30 pm to 3:30 pm

Dartmouth College

Location: Alperin classroom, Tuck School of Business

HOSTS

Matt Ayres and Anant Sundaram, Dartmouth College

Sarah Garlick and Anthea Lavalley, Hubbard Brook Research Foundation

AGENDA

12:30 pm	Lunch and Introductions
1:30 pm	Introductory presentations: Anthea Lavalley, Hubbard Brook Research Foundation Anant Sundaram, Tuck School of Business Matt Ayres, Dept. of Biological Sciences
2:00 pm	Small-group discussions
3:00 pm	Plenary discussion
3:30 pm	Adjourn

The purpose of this dialog is to initiate and gain insights from a conversation amongst a handful of thoughtful colleagues about the relationships among climate change, the forests and water resources of northeastern North America, and corporations as leaders of economically-driven environmental solutions.

We wish to address the following specific questions:

- What types of research might be needed to understand the links between climate change, forest ecosystems, and corporate actions? What research currently exists?
- What are corporations already doing in the field of forest-based conservation and management for climate change and water quality, both globally and regionally?
- Do these actions represent a new way of thinking among corporate leaders and scientists? If so, what roles do scientists and NGOs have to play in this emerging climate/sustainability economy?
- Are there unexplored opportunities for collaboration that might yield transformational results? What are the likely exigencies with such a collaboration?