ACCELERATING COLLECTIVE LEARNING AND ACTION FOR ENHANCED CLIMATE RESILIENCE

WEBINAR SUMMARY REPORT | SEPTEMBER 9, 2019

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About the NERRS

The National Estuarine Research Reserve System (NERRS) is a network of 29 coastal reserves located in 22 states and Puerto Rico. Each site includes programs focused on land stewardship, research and scientific monitoring, training programs for the public and local officials, and education.

About the NERRS Science Collaborative

The NERRS Science Collaborative is a NOAA-funded program that provides grants and other support for user-driven collaborative research, assessment, and transfer activities that address critical coastal management needs identified by the reserves.

ABOUT THIS DOCUMENT

The National Estuarine Research Reserve System (NERRS) Science Collaborative hosted a webinar on September 9, 2019 that featured a discussion among four panelists that have been taking different approaches for helping communities anticipate and prepare for climate impacts. The webinar explored lessons learned in order to accelerate learning and the transfer of ideas across the coastal management community. Some of the projects referenced by panelists were supported by grants through the NERRS Science Collaborative. The one-hour webinar included a moderated panel discussion and an opportunity to respond to audience generated questions.

This document is a comprehensive post-webinar report that includes a summary of the panel discussion, a record of the Q&A session, comments submitted by attendees about the most important next steps for accelerating learning and action for climate resilience, the results of audience polls administered during the webinar, and a list of participants who opted to list their contact information to foster connections among coastal resilience practitioners and researchers.

A complementary management brief is also available in the Science Collaborative Resource Library.

National Estuarine Research Reserve System Science Collaborative

ABOUT THE SPEAKERS

Lisa Auermuller, Assistant Manager and Coastal Training Program Coordinator, Jacques Cousteau NERR, NJ

In her role at the Reserve, Lisa's duties include assessing the needs of coastal decision makers and providing relevant and timely training opportunities. Lisa has been working with a variety of partners to develop tools and protocols to help communities understand their risks, plan for those risks, and put adaptation measures into place. Learn more about Lisa and her Science Collaborative projects on risk communication and planning tools.

Syverine Bentz, Coastal Training Program Coordinator, Kachemak Bay NERR, AK

Syverine is interested in human and environmental drivers of landscape change, coastal and watershed processes, and ecosystem services. She currently works in the Coastal Training Program providing workshops, trainings and technical assistance. Syverine has led or co-led several innovative projects that help targeted groups better understand and plan for climate change impacts. Learn more about Syverine and Science Collaborative projects in Kachemak Bay on scenario planning, fisheries, groundwater resources and blue carbon.

Philip Orton, Research Assistant Professor, Stevens Institute of Technology, NJ

Philip is a physical oceanographer that uses computational ocean modeling to study storm surges and sea level rise, urban flood adaptation, and water quality in estuaries and coastal environments. In partnership with the Hudson River NERR and others, Philip is studying the potential physical and ecological effects of building storm surge barriers to protect coastal infrastructure and human populations around New York City. Learn more about Philip and his Science Collaborative project.

Stuart Siegel, Resilience Specialist, San Francisco Bay NERR, CA

Stuart's work focuses on the intersections of climate change, natural resources resiliency, ecosystem restoration, and land use planning, with a special interest in how to guide adaptive management meaningfully and cost effectively. Recently he has been leading a collaborative assessment of adaptation options for an important shoreline road that is threatened by chronic tidal flooding. Learn more about Stuart and his Science Collaborative project.

Moderator: **Susi Moser,** NERRS Science Collaborative

Susi's work focuses on adaptation to climate change, vulnerability, resilience, climate change communication, social change, decision support and the interaction between scientists, policy-makers and the public. She is a geographer by training, and has contributed to the Intergovernmental Panel on Climate Change in multiple capacities. Over the past five years, Susi has partnered with different reserves to develop indicators of successful climate adaptation. Learn more about Susi and her Science Collaborative work.

DISCUSSION SUMMARY

BACKGROUND AND INTRODUCTION

The session began with a two brief polling questions aimed at providing a snapshot of audience demographics and gauging familiarity with the NERRS. Following a quick analysis of polling results, the Science Collaborative introduced moderator Susi Moser, who asked each panelist to provide a short introduction about the location in which they work and how their work is helping to advance climate adaptation. You can learn more about each panelist's Science Collaborative projects by following the links in their bios above.

DISCUSSION SUMMARY

Prompt: **What have you learned about initiating climate adaptation efforts, engaging new partners, and ensuring that communication goes well?**

Syverine Bentz provided insight on the **potential timing mismatch between political will and financial resources** for adaptation planning and action, especially in environments with limited regulatory, human, or financial resource capacity. She advised preparing for that mismatch when embarking on longer-term projects and plans, especially with turnover in elected and appointed officials and staff at partner agencies. Syverine elaborated on this lesson by explaining how she and her team in Kachemak Bay incorporated adaptation strategies into routine planning processes that communities are already required to do - rather than trying to develop new climate adaptation plans for the region - and remarked that political will for climate adaptation has increased in recent years.

Lisa Auermuller built on Syverine's comments about turnover at the local level, noting that **successful adaptation work requires long-term projects** and therefore partners and stakeholders may change over time. She then shared lessons learned from her experiences working through visioning processes with stakeholders in the mid-Atlantic. In particular, Lisa noted that engaging in visioning conversations about key community assets at the outset of a project is an effective means of unearthing **points of consensus** among a diverse audience.

Stuart Siegel also spoke about the importance of direct communication and the use of clear definitions early in projects, as in his recent project addressing a chronically flooded shoreline road. He described how his team used broad general descriptions during their initial visioning process, which caused stakeholders to interpret terms differently and required that the team backtrack later to explicitly address the differences and **develop a common understanding of terms**. The team's arrival at concrete and specific ideas for desired outcomes for the road represented a significant breakthrough for the project.

Prompt: **What kinds of surprises or unexpected events occurred during your climate resilience projects, and how did you deal with them?**

Philip Orton spoke about the challenges of building trust against a backdrop of criticism from external environmental groups. He described how his team's work looking at how surge barriers that could be used to protect the NY/NJ harbor required them to demonstrate that their study would be objective and grounded in science in order to build an effective partnership with the US Army Corps of Engineers. Philip explained that, despite his initial skepticism of the approach used by the Army Corps, the lead engineers shared many of his concerns about the potential future environmental impacts of surge barriers.

Lisa provided an example of another common pitfall that project teams sometimes experience - namely, not following through on stakeholder input and feedback. She pointed out that, even if teams had sincerely meant to gain input, they sometimes fail to **build in sufficient time or resources to analyze, incorporate, or follow up on the feedback** they receive, which can quickly erode trust and ruin the collaborative process.

Prompt: **How do you maintain momentum through what can become bureaucratic, tedious, or technical issues over time?**

Syverine spoke to the benefit of working with partners and **developing deeper relationships over extended periods of time**, citing an example of how her team's project transferring a fisheries business assessment from Mississippi-Alabama Sea Grant to Alaska deepened the relationship between the Alaska Reserve and Sea Grant programs. She also remarked on an unexpected outcome involving interactions with commercial fishermen, a previously under-engaged group for the Reserve. The extended interactions with focus groups led to a better understanding of their information needs, and provided an opportunity for fishermen to become ambassadors for science and habitat.

Philip addressed the challenges associated with consistently delivering all expected outputs under short-term contracts. He noted that participation in a variety of related programs and initiatives has enabled his team to **establish a strong track record of reliability** with key partners, which has helped him secure funding and maintain momentum for future projects.

Lisa stressed the importance of being sincere when requesting and utilizing stakeholder feedback. She commented on the importance of facilitators for **ensuring that community stakeholders feel fully integrated** into the process so that they see their priorities reflected in adaptation plans and thus can take ownership of them. She also noted that, while losing people during the engagement process is a relative certainty, it can also be an opportunity to gain great new people.

Stuart emphasized the need for continuity, noting that a 10-20 year time frame is not uncommon for climate adaptation projects. He observed that local champions, such as non-profits, local governments, or other appropriate entities, give essential sponsorship and continuity. He reiterated that the **reserves can serve as local champions by retaining knowledge and insights** gained through years of work and research and continuing to offer technical assistance.

Closing Prompt: **What do you see as the most important step for us, collectively, to accelerate learning and action to get to resilience and adaptation a little faster than we have?**

Lisa advocated for additional opportunities for practitioners to share process details, lessons, and pitfalls.

Philip commented on the critical need to continue improving communication processes and collaboration opportunities among academics, government entities and stakeholders, especially in cases where government offices will be making important infrastructure decisions.

Syverine noted the importance of sharing facilitation tools and experiences for building awareness and capacity. In particular, she praised the broad value of process tools and training that have come out of Science Collaborative projects such as Lisa Auermuller's Risk Communication training sessions.

Stuart echoed Lisa and Syverine's comments, and added that educating and preparing funders is essential for building a foundation for effective community planning.

SUMMARY STATISTICS

This webinar engaged 120 people, representing nine different regions of the country and a wide range of experience with collaborative science projects. Participants indicated their affiliation to the reserve system as follows: 15% work for the reserve system, 38% partner with reserves; 40% have heard of the NERRS and 7% have not heard about the NERRS. The most common groups represented in the webinar included the Stevens Institute of Technology, the U.S. Environmental Protection Agency, and the National Oceanic and Atmospheric Administration.

QUESTION AND ANSWER SESSION

QUESTION AND ANSWERS

This section summarizes questions submitted by participants during the webinar and responses provided by the panelists. Due to time constraints, not all questions were answered during the webinar. For questions not answered during the webinar, panelists helped to provide written responses, which are included here. For privacy purposes, the names of the individuals who submitted questions are not provided in this document. If you would like to follow up on any of the questions below, please contact us at nerrs-info@umich.edu.

Q: When it comes to building trust, gathering feedback, and following up, some stakeholders expect immediate solutions; but we know this is not possible, especially when it comes to adaptation. How would you address this when we, as practitioners, cannot provide immediate solutions even though the hazards are happening now?

- **Stuart:** It's definitely true that people want to see some action today. In our project, we started with short-term adaptation workshops, and then moved on to long-term goals, which created the opportunity to think about some of the near-term things we can get done. In this case the county, which owns the road, has started taking some of those short-term steps, such as fixing culverts, increasing warnings about road flooding, and using social media and other more modern means of alert systems. Finding and working on this list of near-term steps allows us to hold the ground briefly while we work on longer-term projects. So remember that there are often some short-term steps that can be done while you're working to tackle longer-term problems.

Q: Other than building trust and meeting them where they are, are there other strategies for getting stakeholders, especially communities, to buy into a program, project, or planning process, and sustain that momentum?

- **Susi:** It seems to me that when you connect to people around a vision of a desirable future that you may be working toward, very often people have a much broader vision than what you brought them in for. So maybe in addition to whatever your original coastal management issue was, they also want to fix food systems or something else. I think one way to keep momentum and bring people in is to actually focus attention on a few other things along the way, which could also be a good strategy to keep people engaged while you're waiting for a permit to come in or some other lengthy process to move forward.
- **Syverine:** I think it's partially meeting people where they are, but also understanding what their knowledge systems are or their decision making framework. So I think that being present in the community, which is one of the biggest strengths of the NERRS, allows us to have these long term relationships in our regions. Understanding people and going to where they are has enabled a lot of our success in the region, and allows us to communicate climate impacts more effectively.

- **Stuart:** As you get caught up in these environmental planning processes you might have a loss of time between milestones, and that can create these problematic periods of silence. A lot of communities have a lot of things going on already and have events on a regular basis, so reaching out, attending events hosted by others, following through, and keeping in contact creates the opportunity to maintain a connection and build trust during longer processes.

Q: **How have panelists ensured that the appropriate stakeholders are being engaged, not just the usual subjects with whom it will be easier to engage? In particular, First Nations and tribal representatives, and communities of color are often underrepresented in these conversations.**

- **Syverine:** It can be a challenge to make sure you're engaging the appropriate people and maintaining social equity with adaptation actions and planning. I have relied a lot on our partners for recommendations on which people should be in the room during an upcoming workshop. For example, we worked hard to engage commercial fishermen - they were going to be impacted by these climate trends and they didn't have a seat at the table. I think that it's really good to rely on your partners, and social and professional networks, and always be asking these questions of your partners.
- **Lisa:** We have two active projects where we've done some pretty unique things to engage typically underrepresented groups. One thing we've been doing in our regional resilience project is going to people instead of asking them to come to us. Rather than sending out a survey or hosting a public open house, knowing everyone's time is limited, we actually went to community events and interacted with a variety of different people and asked them what matters to them in their community. We wanted to understand what people valued as assets in their communities, and this goes beyond fire stations and hospitals. We've been asking members living in the community what they value so we can figure out how to protect it.

  The second part, going back to that trusted source, is that while we may not be the trusted source within underrepresented communities, there are social-based organizations that are. These social-based organizations act as the inner part of a wheel that can reach out to the different spokes of the wheel to draw their members into climate conversations.
- **Stuart:** One of the things that we found was critical, is that you need to understand the different communities you have and what it takes to get them to engage. There's a bit of legwork to understand what that looks like.

  Another thing that can be challenging is paying for food and drinks without a non-profit or business partner that can pay for those types of things to provide extra incentive for communities to engage.

  One thing that's been helpful is that in California there's a state law that mandates engagement with regional tribes, and we've had great success in keeping the different tribal representatives at the two reserve sites engaged in what we're doing.

Q: **How do we make progress when the science seems to be slower than community needs?**

- **Philip:** There's a lot of demand in our area for answers after Hurricane Sandy. We've been going into communities in person to learn what people want and provide what we have available. One of the problems we have right now is that we don't know if and where

surge barriers might be built, which affects what homeowners and neighborhoods ability to plan how to protect themselves from flooding. People don't know if they're going to be protected by the government or not and, even if we build barriers, the barriers can't be closed often enough to protect property against rising seas. So people are missing crucial information about how the government will respond, but we can show them the different scenarios of the future and offer some guidance.

- **Stuart:** There's this field called adaptive management which is centered around the idea of moving forward with inadequate information, and being very methodical and careful about it. A lot of people talk about adaptive management but not a lot of people do it. The idea is that every action taken can be thought of as an experiment. Experiments only exist if you assess them, communicate the findings, and put them to use; otherwise they're just things that happened that may or may not have some associated data somewhere. So there's a lot you can learn from doing pilot projects, getting those experiments built into your actions, and extracting knowledge and feeding it back into the system is a critical part of that.

Q: How do we avoid stakeholder fatigue?

Susi: You can't. It's real and it happens. But you can minimize the risk and the speed with which it might arrive by being responsive and flexible to the needs of people. People get fatigued when things take a long time and there is no benefit to them during the process or waiting period. They also get fatigued by repetition (like all of us), but coordination across partner groups can help create opportunities for scientists to share their results back with the people they involved in their research. Coordinate organizations once a year - every year - to share what everyone is up to. This is how in California, we went from every coastal organization wanting to do a stakeholder needs assessment on their own to having ONE survey with 15 or so organizational partners which addressed questions everyone cared about.

You can also make fatigue an explicit topic and form agreements with people around how to handle those times. Maybe you all agree that people don't always have to be at every meeting; or you agree on ways to keep everyone in the loop without showing up for everything. Maybe you agree on a buddy system to catch people up who couldn't be at the last meeting; or maybe you simply ask people how to make collaborations more worth their while, share responsibilities for different pieces more effectively, and get feedback over time. Food, fun and friendship all seem to help!

Syverine: In a rural and low regulatory environment I often am engaging the same few decision makers on multiple issues. I've moved to using a variety of engagement strategies to respect their time and interest level from site-based learning (field trips) that get them out of their office, professional sharing and networking opportunities, information briefs and skills based trainings. This is in an effort to maintain interest, increase relevance and provide context for their decision making frameworks.

Q: Can you please post the link for the management brief that was mentioned?

A: You can access the Management Brief - distributed ahead of the September 9 webinar - from the Resource Library on the NERRS Science Collaborative website.

Q: Was this webinar recorded for later viewing?

A: The video recording for this webinar is available on the Science Collaborative's YouTube channel.

ATTENDEE THOUGHTS ON CRITICAL NEXT STEPS

Prompt: **What do you see as critical next steps to accelerate collective learning and action for climate adaptation?**

Supporting Effective Communication with Stakeholders

Several survey respondents commented on the need for improving communication with communities and stakeholders, in terms of both the flow of information and the tone. Specific comments included:

- Sharing of information, bridging the gap with different groups, and fostering communication and collaboration with different groups (ie: including community groups in grant proposals);
- Building excitement for new initiatives while being clear about how long a process might take; and
- Creating working groups for people working with similar stakeholder communities, within similar geographies, or tackling specific climate impacts.

Fostering Communities of Practice

Some attendees indicated support for the creation and growth of communities of practice around climate adaptation and resilience. Specific ideas included:

- Sharing strategies for different approaches, such as community visioning, long-term adaptation planning, and techniques to sustain relationships and trust; and
- Fostering connections across disciplines engaged in climate adaptation topics.
- Creating venues for showcasing successful collaborations; and
- Additional webinars, showing who is working in the field, and what kinds of projects are happening.
- Sharing ideas across regions about how to best tackle climate adaptation;

Some existing groups include:

- National Adaptation Forum
- EcoAdapt
- Climate Adaptation Knowledge Exchange
- American Society of Adaptation Professionals

Finding Unique Ways to Engage Stakeholders

Some attendees echoed panelist comments and elaborated on the need for creative thinking to engage stakeholders when obtaining community support. Specific ideas included:

- Engaging stakeholders by meeting them where they are. That is a unique approach to engage individuals who may have difficulty attending a specific meeting or workshop; and
- Improving communication and collaboration among government agencies, researchers and stakeholders to expand the science and viewpoints considered for infrastructure decisions. Allow others to understand how decisions are made within key government bodies, such as the US Army Corps of Engineers.

ATTENDEE ROSTER

To foster connections among coastal resilience practitioners and researchers, attendees were encouraged to provide their contact information and a summary of how their work intersects with climate adaptation and resilience. 120 people attended the webinar, and the following opted to provide their information.

Carl Alderson

Marine Resources Specialist/Landscape Architect, National Oceanic and Atmospheric Administration

carl.alderson@noaa.gov

About my work: I provide restoration planning and technical design guidance to projects that improve passage of migratory fish and enhance shellfish and wetland habitats, often with the additional benefit of contaminant remediation.

Betsy Blair

Director, Blair Environmental Consulting; Research Affiliate, National Estuarine Research Reserve Association

Betsy@BlairEnvironmental.com

About my work: My work is dedicated to fostering adaptation of natural coastal communities to climate change.

Helen Cheng

Coastal Resilience Specialist, Science and Resilience Institute, New York Sea Grant

helen.cheng@cornell.edu

About my work: I work on coastal resilience issues in New York City, specifically in Jamaica Bay. One example of my work is a citizen-community science program encouraging residents to report flooding and flooding impacts in their communities.

Marissa Figueroa

Coastal Training Program Specialist, Rookery Bay National Estuarine Research Reserve

marissa.b.figueroa@floridaDEP.gov

About my work: The CTP provides science-based information, training, and tools to individuals who make professional decisions that affect coastal resources.

Lauren Fosbenner

Project Assistant, Nurture Nature Center

lfosbenner@nurturenaturecenter.org

About my work: Nurture Nature Center is dedicated to building community resiliency to environmental risk by leveraging the power of informal science education, art-centered approaches to learning, and community dialogue and networking.

Roger Fuller

Restoration and Stewardship Coordinator, Padilla Bay National Estuarine Research Reserve

rfuller@padillabay.gov

About my work: I coordinate coastal natural resource stewardship and restoration, focusing on stewarding resources through a time of rapid environmental change and engaging communities in that process.

Kathy Guindon

Director, Suncoast Youth Conservation Center, Florida Fish and Wildlife Conservation Commission

kathy.guindon@myfwc.com

About my work: We are a hands-on marine science center committed to creating the next generation that cares about Florida's natural resources in an effort to instill in them a life-long commitment to stewardship of the outdoors.

Mike Tholstrup

Sustainable Communities Planner, State of Delaware Division of Climate, Coastal, & Energy

michael.tholstrup@delaware.gov

About my work: I coordinate land use review for the department, including comprehensive plans, manage the Delaware Sustainable Communities Planning Grant Program, and am on the steering committee for the Delaware Resilient and Sustainable COmmunities League.