



Resilience Dialogues: Strategies for Conflict Management in Collaborative Science

Overview

Project Location

United States

Project Duration

October 2017 to June 2020

Project Lead

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Project Type

Science Transfer – Promoting the use of science

Products

- Resilience Dialogues [curriculum](#)
- Best practices for conflict management [case studies](#)
- Resilience Dialogues [webpage](#)
- Training for reserve staff and partners

Project Partners

- Laudholm Trust
- NOAA Office for Coastal Management
- 13 National Estuarine Research Reserves, including: Grand Bay, Great Bay, Guana Tolomato Matanzas, Hudson River, Lake Superior, Mission-Aransas, Narragansett Bay, North Carolina, Old Woman Creek, Rookery Bay, San Francisco Bay, Waquoit Bay, Wells

Project Webpage

nerrsciencecollaborative.org/project/Feurt18

Resilience dialogues are conversations that occur among people with diverse perspectives who have agreed to work together to increase community and ecological resilience. For over a decade, the National Estuarine Research Reserve System has been leading a new approach to collaborative science that brings together scientists, environmental managers, and community stakeholders to address pressing coastal issues.

Conflict is a natural part of collaborative science, as people with differing perspectives and values interact in new ways over complex and uncertain issues. While leading collaborative science projects, reserves and their partners have accumulated a wealth of knowledge about how to confront and manage conflict. The *Resilience Dialogues* project drew on this experience to identify four best practices for collaborative science. The project created a curriculum, case studies, and peer-to-peer training to share these successful collaboration techniques and build conflict mediation skills. Multiple in-person and virtual workshops for reserve staff established these best practices and contributed to the effectiveness of collaborative science projects within the reserve system, while the project's resources brought this expertise to a wider audience of state agencies and coastal management partners.

Project Approach

Resilience Dialogues captured knowledge and lessons learned about conflict management in collaborative science from National Estuarine Research Reserve System staff in boundary-spanning roles. The project team first conducted a needs assessment that included focused interviews with reserve Coastal Training Program coordinators with varied levels of experience in collaborative science. Using this information, the team identified examples of the kinds of conflict that typically arise in collaborative science, the causes and consequences of conflict, and the times or phases of a project when conflict is most likely. The needs assessment found conflict centered around three main sources: conflict within teams, conflict

with stakeholders, and project management conflict. Examples from reserve-led collaborative science projects revealed common areas of conflict related to coastal management topics, such as differing perspectives on how to prioritize habitat restoration projects, uneven public acceptance of climate science, and negative public responses to shoreline stabilization techniques. Reserve experiences with conflict in collaborative science provided strategies to address the substance, process and relationship elements at the root of conflict. The Resilience Dialogues resources synthesized these strategies and made them available for a broader audience.

The project team drew on needs assessment findings to identify four best practices for managing conflict in collaborative science. These best practices depend upon and enhance the shared motivation of stakeholders involved in collaborative science to take actions that build ecological and community resilience. They are based on rigorous social science methods and offer a road map for the effective engagement of end users in solutions-based science.

The *Resilience Dialogues* project identified four best practices for a boundary-spanning scientific method for stakeholder engagement, collaboration, and conflict management in collaborative science. These practices evolved among a number of National Estuarine Research Reserve System Science Collaborative projects over the past decade, and are extracted here in four case studies and a training curriculum. At their core, these practices depend upon and enhance the shared motivation of the stakeholders involved in collaborative science to take actions that build ecological and community resilience.

Best Practices for a Boundary-Spanning Scientific Method for Collaborative Science	
Adapt the collaborative learning approach to provide structure for stakeholder engagement for collaborative science	Case studies: Wells Reserve Maine: Protecting Our Children's Water; Chesapeake Bay Maryland Reserve: Deal Island Peninsula Project
Assess the social-ecological system where the project is embedded	Case study: Great Bay Reserve New Hampshire: Buffers on the Bay
Develop a common language around interdisciplinary teams that includes local and indigenous knowledge	Case study: Hudson River Reserve New York: Sustainable Shorelines
Reveal and use knowledge of mental and cultural models to develop shared meaning, spark innovation, manage conflict, and track progress	Case Studies: Wells Reserve Maine: Protecting Our Children's Water; Chesapeake Bay Maryland Reserve: Deal Island Peninsula Project

Case studies from real projects were developed to illustrate each of the four best practices. The project team designed a one- to two-day Resilience Dialogues curriculum to teach best practices and build advanced facilitation and project management skills for collaborative science. In the curriculum, participants identify and practice skills to build stakeholder teams for problem solving, policy analysis, adaptive management, and the integration of science into decision-making. In 2018 and 2019, the team led Resilience Dialogues training at three reserves and a virtual Crucial Conversations webinar series. Training and technical support remain available upon request and can be arranged in collaboration with a reserve. To inquire about training, contact Christine Feurt at CFeurt@wellsnerr.org.

Benefits

- Increased awareness across the reserve system of types of conflict arising during collaborative science projects and conflict management strategies to address them. This includes a recognition within the reserve community that when it comes to collaborative science, relationships, trust, and process are equally important to research substance.
- Reserve Coastal Training Program coordinators and coastal management partners improved their skills as neutral facilitators of collaborative science.
- The project captured input from project participants about the strengths and remaining challenges of the collaborative science model in the reserve system.

What's Next

The project team is exploring ways in which *Resilience Dialogues* best practices for conflict management can be used to enhance the evolving National Estuarine Research Reserve System Science Collaborative model for collaborative science. The team will continue to offer Resilience Dialogues virtual training, webinars, and technical assistance.

About the Science Collaborative

The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is managed by the University of Michigan's Water Center through a cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA). Funding for the research reserves and this program comes from NOAA. Learn more at nerrsciencecollaborative.org or coast.noaa.gov/nerrs.