New Office Supports Maine Climate Action

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by Parker Gassett and Ivan Fernandez

The ocean plays a vital role in Maine's efforts to address climate change, presenting both challenges and opportunities. Maine's communities and industries are particularly susceptible to extreme precipitation patterns, coastal storms, rising temperatures, and climate-induced changes in species and habitats. Understanding and managing these impacts is crucial for the state's marine economy and coastal resilience. Furthermore, by promoting sustainable practices, fostering climate change adaptation, and enhancing the Gulf of Maine ecosystem and our own blue economy, Maine can ensure the long-term health and viability of its shared ocean resources. This vision and effective preparedness for climate change hazards necessitates the collaboration of various sectors, including government, business, civil society, and academia. This coordination is essential to ensure that all stakeholders work towards aligned goals, share resources, and amplify the success of synergistic activities, ultimately leading to effective and efficient mitigation and adaptation efforts.
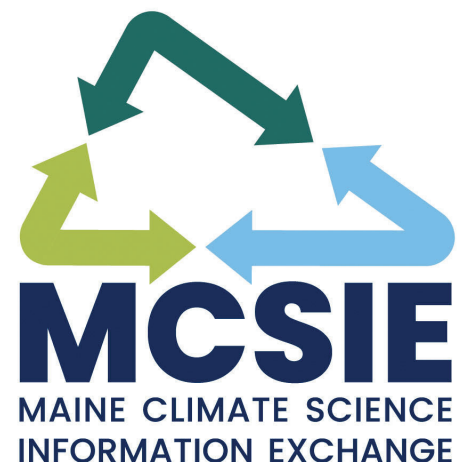
In this context, scientific research plays a vital role in informing, evaluating, and improving our strategies to respond to accelerating climate change. Research helps us anticipate and understand the environmental, economic, and social impacts of climate change, and it allows those with leadership, management, and policy roles to refine and optimize interventions. A science-informed climate change response is understandably most actionable when stakeholders and decision-makers help in shaping research to inform or solve specific problems for society. However, effective communication and collaboration between climate scientists, policymakers, managers, and stakeholders is not automatic, but often hindered by the practical constraints of time and project management as well as the real and perceived divisions of professional and social silos. It takes work to span those boundaries. Such efforts can be thought of as investments in building consensus and expanding shared knowledge for the complex challenges of climate change mitigation and adaptation so that more people and more initiatives can effectively engage in developing solutions.

Expanding and expediting access to climate change information can improve collective action outcomes. Accordingly, the Maine Climate Action Plan (*Maine Won't Wait*)[1] called for the creation of an information coordinating hub, aiming to enable effective and efficient use of climate information in Maine's climate change response. To aid that need, the University of Maine created the Maine Climate Science Information Exchange (MCSIE) office as a gateway to information about climate-relevant research, the scientists conducting that research, and the most recent data and applied science efforts relating to Maine's climate change strategies.

The office was established in 2023, after a year of developing prototypes of the functions of *information coordination* and investigating how universities in other states are or are not involved in implementing each state's climate action plan. Staffing for the MCSIE office now includes full-time appointments and co-appointments with sector-based institutions including the University of Maine Cooperative Extension, the Center for Research on Sustainable Forests, and Maine Sea Grant. The office primarily focuses on agriculture and food systems, forests and forest products, and marine resources and coastal communities. Graduate student fellowships and internship programs are now also established to extend the resources that MCSIE provides.

The MCSIE Office does not direct traditional research activities. Nor does MCSIE replicate the work of institutions that conduct applied research or synthesize scientific information for decision-making contexts. Rather, MCSIE serves to amplify these existing activities in Maine and expedite the connectivity of in-state collaborations associated with investigating climate change and pursuing

solutions. In short, the Maine Climate Science Information Exchange is designed to accelerate how climate scientists and their research activities connect to decision-making across the policy and management spectrum. MCSIE adds capacity to Maine's overall climate community of practice by focusing on information sharing and boundary-spanning that enhances the role of science in decision-making. The MCSIE office also facilitates collaboration between the scientific community, decision-makers, and stakeholders to ensure that scientific information is relevant and accessible to all parties. These efforts include organizing workshops, meetings, and conferences that bring together different perspectives and promote dialogue and mutual understanding.

One of the initiatives of the MCSIE office is to maintain an inventory of statewide applied climate research and scientific expertise. This inventory includes the applied academic work of nearly a hundred institutions in Maine that uphold climate change programming and thousands of individuals who are professionally committed to a subject matter relevant to Maine's climate action plan. The MCSIE Research Inventory includes concise project summaries, contact information, and a searchable tagging system relating to key themes and strategies of *Maine Won't Wait*. By using the research inventory online or by connecting with MCSIE staff, MCSIE provides a gateway for anyone to inquire about, for example, who is leading the work on stormwater management, researching drought tolerance, or forecasting species shifts with warming temperature. The research inventory is publicly available online through the MCSIE website[2]. Those involved in climate adaptation research or novel science-based implementation efforts in Maine are encouraged to connect with MCSIE staff to ensure their work is discoverable in the MCSIE Research Inventory.

NOTES

1   https://www.maine.gov/climateplan/

2   https://umaine.edu/mcsie/

Parker Gassett is the marine and coastal community specialist for the Maine Climate Science Information Exchange. He is also a member of Maine Sea Grants Marine Extension Team. Recent awards include the Senator Mitchell Center for Sustainability Solutions Award in 2018 for research on managing ocean acidification and the 2023 Maine Fishermen's Forum Distinguished Service Award. Parker is coeditor of the *2023 Maine Community Resilience Workbook,* a guide to climate change assessment and community resilience.

Ivan Fernandez is professor emeritus and climate research scientist at the University of Maine and director of the Maine Climate Science Information Exchange. He was UMaine's Distinguished Maine Professor in 2007, named Professor of the Year for Maine in 2008 by CASE/Carnegie in Washington, DC. Fernandez was the 2018 President's Public Service Achievement Award recipient at the University of Maine. He has served on various US Environmental Protection Agency Science Advisory Board committees and has led the Maine's Climate Future assessments in 2009, 2015, and 2020. In 2019, he was appointed to the Maine Climate Council andserves as cochair of its Scientific and Technical Subcommittee.