

**BOWDOIN COLLEGE
ENVIRONMENTAL STUDIES PROGRAM**

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To Whom It May Concern,

Since 2009, faculty and students from Bowdoin College, Bates College, and the University of Southern Maine, along with fisherman and McArthur Fellow Ted Ames of the Penobscot East Resource Center have conducted a collaborative research project titled, "*The ecological and economic recovery of the Kennebec and Androscoggin rivers and their common estuary and coastal fisheries.*" This project investigates the ecological and economic links between Maine's rivers and its coastal fisheries, and is funded through the Sustainability Solutions Initiative at the University of Maine. The primary goal is to understand the ecological and the social constraints on ecological recovery in the Kennebec and Androscoggin rivers and their common estuary and nearshore marine environment, and to estimate how communities would benefit economically from further ecological recovery.

Broadly, our research project fits under the umbrella of socioecological resilience. Resilience is defined as the capacity of human communities and the ecosystems on which they depend to withstand external disturbance and persist without losing functionality. Recovery of our natural resource base is paramount to long-term community resilience. In the case of Maine's coastal fisheries and human communities, resilience first and foremost means promoting sustainable harvest of several marine species. Many qualities are important for building resilient communities. In general, the diversity and redundancy of system components and activities confers resilience as do strong leadership, effective governance, social cohesion, and strong communication and trust.

There are two dimensions of this research that are innovative and differentiate it from more traditional research projects. First, our research team is interdisciplinary, comprised of both natural and social scientists, and is multi-institutional. Our research team includes aquatic biologists, economists, geologists, and ecosystem ecologists from four different institutions. The composition of our research team enables us to examine the role of resilience from both a natural and social science lens and to understand the linkages between natural and social systems, barriers to, and opportunities for developing the resilience of these systems.

In addition to applied research about understanding the potential for recovery of coastal groundfish populations, a major goal of our project brings knowledge-to-action through interactions with key stakeholders and the public in conducting our research and disseminating the results. In addition to publishing academic papers in ecology, fisheries science, and economic journals, we seek collaborations with stakeholders to help conduct our research and disseminate the research results widely among policy makers and the public. Over the past four years, we have collaborated with multiple organizations in hosting symposia, conducting field research with stakeholders, and developing models for disseminating information to the public.

To date, we have had numerous discussions with commercial fishermen, alewife harvesters, and sports fishing guides as well as state fish biologists, local water districts, land trusts, and environmental NGOs

Our efforts to engage stakeholders appear to be paying off. In the fall of 2011, the Bowdoin-Bates-USM team held a symposium at Bowdoin College titled, "Many Rivers, One Estuary," which was attended by nearly 100 individuals representing a diversity of stakeholder interests. This event prompted watershed groups on the Kennebec and Androscoggin to approach us about engaging with their organizations in similar discussions about economic and environmental issues, and to develop a river institute that could bridge differences among stakeholders as well as connecting the range of stakeholder organizations currently engaged in restoration initiatives throughout the watersheds.

This project has been rewarding; especially for the undergraduate students who have gained invaluable research experience in a newly evolving, interdisciplinary field of socioecological systems (SES) research. Over the past three years, 29 students from the three academic institutions have participated in summer research and many more have been exposed to our research goals, study design, and results in classrooms.

These collaborations constitute a new way of doing environmental science. The hope is to avoid the sometimes tense relationships that can develop between scientists/managers and those making their living from our waterways and coastal fisheries and to develop a model that enables researchers to work in effective partnerships with stakeholders to answer questions, and to identify and implement solutions.

Sincerely,

A handwritten signature in cursive script that reads "John Lichter". The signature is written in dark ink and is positioned above the printed name.

John Lichter

Director, Environmental Studies Program

Samuel S. Butcher Associate Professor in the Natural Sciences, Biology and Environmental Studies