Maine Sea Grant Strategic & Implementation Plan 2009-2013

A focus on the needs of Maine's coastal communities

Introduction

Maine's extensive coastline is home to over half a million year-round residents and millions of summer visitors and seasonal residents. Maine's economy remains highly dependent on the local natural resources and related industries that sustain cities, towns, and villages. Competing interests abound, and this crucible of conflict is precisely where Maine Sea Grant applies resources, helping communities understand and manage their natural ecosystems while maintaining multi-use working waterfronts. Through appropriate engagement of community members and application of science, technology, and information, Sea Grant assists communities in their pursuit of economic viability, ecological integrity, and cultural heritage. Maine Sea Grant has become a trusted convener and source of science-based information and educational materials, and an organization that seeks innovative and sustainable ways for the people of Maine to address their challenges.

Maine Sea Grant: Supporting marine science for Maine people for over 30 years

The Maine Sea Grant College Program is a state-federal partnership based at the University of Maine and sponsored by the National Oceanic and Atmospheric Administration (NOAA) and the State of Maine. Part of a network of Sea Grant programs throughout the coastal and Great Lakes states, Maine Sea Grant supports marine and coastal scientific research, education, and outreach. In partnership with University of Maine Cooperative Extension, members of the Marine Extension Team focus on issues of concern to Maine's coastal communities, extending current knowledge and expertise to stakeholders while helping to ensure that Sea Grant supports research that is relevant to those who depend on Maine's coastal natural resources.

Guiding Principles

At Maine Sea Grant, we strive to:

- Encourage discovery and application of knowledge
- Recognize and work toward sustainability
- Inspire stewardship and lifelong learning
- Respect the diverse fabric of community
- Find balance and facilitate harmony
- Take initiative and be kinetic
- Be creative and innovative
- Attain excellence

Strategic Planning Process

The process for revising Maine Sea Grant's strategic and implementation plans involved a review of past and current Sea Grant-funded activities and performance, and engagement of many sectors that utilize and benefit from Sea Grant products and services in Maine. This community engagement was largely accomplished through direct contacts by staff and through the 24-member Policy Advisory Committee (http://www.seagrant.umaine.edu/contact/pac).

In 2008, the National Sea Grant Office initiated a new Program Planning, Implementation, and Evaluation process, which required that state Sea Grant programs align with national goals and strategies. Maine Sea Grant staff spent a significant amount of time working on the plan, including a two-day retreat in Eastport in May 2009. This strategic plan is in alignment with the National Sea Grant College Program *Strategic Plan 2009-2013: Meeting the Challenge* and was approved by the National Sea Grant Office in November 2009. Most of the issues that have been identified nationally through NOAA and the National Sea Grant Office resonate well in Maine, and therefore a majority of Maine Sea Grant's future activities fall into four national focus areas: Healthy Coastal Ecosystems, Sustainable Coastal Development, Safe and Sustainable Seafood Supply, and Hazard Resiliency in Coastal Communities. In addition to the objectives on the following pages, Maine Sea Grant also tracks and reports on the following crosscutting objectives:

Crosscutting Objectives

Sea Grant activities result in changes in legislation, policy, or management.

Sea Grant activities result in patents, companies, or jobs funded or created.

Informing Strategic Research

The majority of Maine Sea Grant funding sponsors research at the University of Maine and other research and education institutions in Maine and the Northeast. Whenever possible, the granting process strives to link the scientific capacity of Maine to the strategic goals of the program. Funding is directed to support the best possible science that helps to inform decision-making needs in each of the four focus areas, as described in this strategic plan, and/or addresses state, regional, and national priorities that are revised in each biennial request for proposals (the next funding cycles initiate in 2011 and 2013).

Measuring Success

Maine Sea Grant will track program success and be evaluated by the performance measures contained in this plan. The annual reporting structure and process are in line with these strategic goals and are adjusted regularly to remain consistent with University of Maine and NOAA reporting requirements. Our goals and objectives for the next four years attempt to focus efforts on achieving measurable success. Therefore, the objectives and measures are concentrated *at the community level*, and evaluation consists of tracking use and application of Sea Grant products and services *by communities*. The definition of community is broad, and encompasses municipalities as well as constituent audiences such as fishermen, tourism providers, schools, beach neighborhoods, and natural resource managers. The community scale represents the most significant investments of resources by Maine Sea Grant, and provides an accurate portrayal of how the program is providing benefit to society. However, this plan does not attempt to include all program activities. Rather, it identifies a set of objectives and associated metrics that are measurable and meet state and national standards, but are also flexible and ambitious.

Tenets: How we work

- Maine Sea Grant provides formal and informal learning opportunities to engage stakeholders in marine and coastal issues.

- Maine Sea Grant provides support to help facilitate effective participation of stakeholders in natural resource management, and to integrate science and multiple perspectives into the dialogues that lead to new management strategies.

- Maine Sea Grant provides high-quality scientific information that is used to understand, develop, and implement policies for sustainable uses of coastal natural resources.

Beyond the planning horizon

Maine Sea Grant must remain nimble and retain the capacity to respond to new and emerging issues. Within the next four-year planning horizon, ocean wind and tidal energy, marine spatial planning, and climate change are likely to create demand for Sea Grant products and services. Likewise, recent changes in commercial fisheries management may require staff to adapt projects and programs to meet the needs of local communities affected by new policies. Therefore, management will be flexible and adaptive while program staff and key advisors pay attention to new challenges and needs. The desire to be strategic yet responsive is not unique to this organization, and the proposed strategic and implementation plan structure is a living document. It is a guide and a commitment to achieving the societal benefits commensurate with investment, but Maine Sea Grant is poised to adapt as new priorities arise.

Healthy Coastal Ecosystems

GOAL: Maine residents and visitors understand and value the interdependence of healthy communities and healthy ecosystems and take action to ensure their long-term sustainability.

Objective HCE-1. Constituent organizations implement principles of ecosystem-based management.

Activities: Maine Healthy Beaches, climate change programming, Taunton Bay, Cobscook Bay, Port Clyde, fisheries research, sustainable tourism planning, collaborative problem solving.

Outputs: Sustainable Tourism Resource Guide, Maine Beaches Conference, "Seascapes," Climate Change report, Maine Healthy Beaches data, computer models, regional fishery management plans, community-based mapping projects.

Outcome: Constituent organizations (coastal residents, resource managers, communities, businesses, and industry) have increased access to Sea Grant products and services (data, models, standards, indicators, research outcomes, facilitation, and training) that support ecosystem-based planning and management approaches.

Measures: Number of entities who use Sea Grant products and services (data, models, standards, indicators, and training) in implementing ecosystem-based planning and management approaches.

Assessment Process: Collect list of constituent organizations through our daily work that are implementing some level of ecosystem-based planning or management and ask them about which Sea Grant products and services have benefited their work.

Target: Five organizations.

Objective HCE-2. Coastal communities work to improve ecosystem health.

Activities: Maine Healthy Beaches, oyster and eelgrass restoration, fisheries stock enhancement.

Outputs: Publications, stewardship programs, field monitoring/surveys.

Outcome: Communities working to restore degraded ecosystem function and productivity use and benefit from Maine Sea Grant publications, stewardship programs, monitoring, and other activities.

Measures: Number of coastal community-based projects resulting in restored or improved ecosystem function and productivity that have been informed by Sea Grant products and services.

Assessment Process: Collect list of coastal communities who are implementing some level of ecosystem restoration and ask them which Sea Grant products and services have benefited their work.

Target: Five community-based projects.

Objective HCE-3. Teachers and classrooms engage in inquiry-based science learning activities that are aligned with state and national science education standards and that contribute to the health of coastal ecosystems in Maine.

Activities: K-12 watershed education programming (Penobscot River Watershed Education Program, VitalVenture Program, High School Research Program on the American Eel, Coastal Connections); aquatic nuisance species (ANS) outreach and education.

Outputs: Standards-aligned, inquiry-based lessons and activities and professional development workshops associated with three K-12 watershed education programs, ANS awareness and prevention publications.

Outcomes: (short) Maine Sea Grant's watershed education programs are developed in collaboration with K-12 science teachers in Maine, and inquiry-based science activities have been field-tested through small-scale pilot projects. ANS awareness and prevention materials are developed in collaboration with members of the Maine Marine Invasive Species Working Group.
(medium) K-12 teachers and students outside the original pilot project teams are engaged in inquiry-based science learning activities developed and supported by Maine Sea Grant.
(long) K-12 science teachers in Maine have incorporated elements of Maine Sea Grant's inquiry-based science learning activities into their science curricula.

Measure: K-12 teachers and students in Maine are engaged in standards-aligned, inquiry-based science learning activities developed and supported by Maine Sea Grant that contribute to the health of coastal ecosystems in Maine.

Assessment Process: Maintain database of teachers involved in Maine Sea Grant watershed education programming and those who use our ANS outreach and education materials in their classrooms. Use robust pre- and post-program evaluation surveys of participating teachers' (and/or students') use of, attitudes toward, and (when possible) demonstrated learning in the content areas covered by Maine Sea Grant's watershed education programs. Track educators' downloads of Maine Sea Grant lessons and activities from Web pages where they are made available.

Target: 100 teachers/classrooms.

National Performance measures:

- Number of stakeholders who use ecosystem-based approaches in the management of land, water, and living resources in coastal areas as a result of Sea Grant activities. (Target = five)

- Number of coastal communities who have restored degraded ecosystems as a result of Sea Grant activities. (Target = five)

Sustainable Coastal Development

GOAL: Coastal community economies support multi-use waterfronts and a sustainable energy future.

Objective SCD-1. Communities balance the coastal access needs of various stakeholders and employ strategies to reduce conflicts while preserving or enhancing access for water-dependent industries.

Activities: National Working Waterways and Waterfronts Symposium 2010, working waterfronts and coastal access-related research and outreach, legal tools and strategies, research and policy analysis, waterfront access mapping, collaborative problem-solving, enhancing public engagement in municipal process, facilitated dialogue.

Outputs: www.accessingthemainecoast.com, model distribution to national partners and ongoing enhancement of digital information, reports, national conference, public-private agreements for coastal access, facilitated dialogue, regional workshops, introduction of relevant national policy.

Outcome: Maine Sea Grant's working waterfront and coastal access-related research and outreach provides communities with the tools and information they need to balance coastal access demands.

Measures: Number of communities using access information provided by Sea Grant to address community-based access issues and balancing demand to reduce conflicts between users.

Assessment Process: Collect list of communities and stakeholder groups in Maine and throughout the country, who are applying new and existing tools to resolve coastal access and working waterfront challenges, and ask them which Sea Grant products and services have benefited their work.

Target: Six communities or stakeholder groups.

Objective SCD-2. New communities engage in community–based visioning, in order to assess assets and opportunities for future planning.

Activities: Community capacity building, enhancing public engagement in community processes, visioning, marine area characterizations, Smart Growth.

Outputs: Training sessions, visioning sessions, characterization reports, publications, model transfer.

Outcome: Coastal communities engage in visioning, resource inventories, analysis of development policies, education and capacity building for community leaders and citizens.

Measures: Number of communities engaged in visioning, resource inventories, analysis of development policies, education of community leaders and citizens.

Assessment Process: Collect list of coastal communities who are implementing some level of community-based assessment and visioning and ask them which Sea Grant products and services have benefited their work.

Target: Four new communities.

Objective SCD-3. Sustainable tourism products and opportunities benefit coastal Maine residents, communities, businesses, and visitors.

Activities: Marine heritage and nature-based tourism asset inventory, evaluation, and product development for Downeast region, sustainability and marketing workshops for tourism stakeholders, enhanced network of tourism stakeholders through Vacationland Resources Committee outreach, facilitated dialogue.

Outputs: Downeast Fisheries Trail, sustainable tourism newsletter for regional stakeholders, interpretive signage, brochures and websites for visitors, workshops.

Outcome: Sea Grant collaborates with communities, industry, and stakeholders to develop nature-based tourism information and foster visitor opportunities that lead to sustainable tourism practices.

Measures: Number of collaborative projects leading to sustainable tourism practices.

Assessment Process: Collect list of collaborative projects through our daily work that are focused on sustainable tourisms and ask them which Sea Grant products and services have benefited their work.

Target: Five projects.

Objective SCD-4. Communities evaluate and implement alternative energy strategies.

Activities: Alternative energy outreach and funding related studies.

Outputs: Feasibility studies, baseline data, monitoring results, research outcomes, facilitated dialogue.

Outcome: Maine Sea Grant outreach and energy-related studies assist communities as they evaluate environmental and economic impacts of alternative energy sources (wave, thermal, current, wind, solar).

Measures: Number of coastal communities evaluating or implementing alternative energy technologies.

Assessment Process: Collect list of communities implementing some level of alternative energy development and ask them which Sea Grant products and services have benefited their work.

Target: Three communities.

National Performance measures:

- Number of coastal communities engaged in activities (e.g. visioning, resource inventories, analysis of development policies) or making informed development decisions that address the sustainability of economic and environmental resources as a result of Sea Grant's capacity building, tools, data, technologies, and/or education of community leaders. (Target = Four)

- Number of coastal communities who have adopted/implemented sustainable development practices and policies (e.g., land-use planning, working waterfronts, energy efficiency, climate change planning, smart growth measures, green infrastructure) as a result of Sea Grant activities. (Target = 14)

- Economic benefits derived from sustainable coastal policies and practices as a result of Sea Grant activities.

Goal Area #3 - Safe and Sustainable Seafood Supply

GOAL: Wild harvest and culture fisheries and the communities that depend on them are economically viable and environmentally sustainable.

Objective SSS-1. New communities engage in diadromous species research.

Activities: Funded research, outreach and education, smelt survey, Spring Running, NOAA partnerships.

Outputs: Kiosks, publications, research results, public events.

Outcome: Maine Sea Grant engages communities and fishermen in research, outreach, and education about the role of diadromous fishes in marine ecosystems.

Measures: Number of coastal communities or watersheds engaged in Sea Grant-funded diadromous species research or outreach.

Assessment Process: Collect list of coastal communities engaged in diadromous fisheries research, outreach, and habitat management and ask them which Sea Grant products and services have benefited their work.

Target: Five communities (or watershed groups).

Objective SSS-2. Seafood producers use practices that improve quality, profitability, and sustainability.

Activities: Technical assistance, information transfer, funded research, outreach.

Outputs: Fact sheets, publications, workshops, community-based management efforts.

Outcomes: (short) Seafood producers and aquaculturists are knowledgeable and employ improved fishing and aquaculture techniques; (long) Seafood availability, sustainability, and profitability increases.

Measures: Number of strategies and practices to improve efficiency implemented in the region. Number of producers who used Sea Grant products and services to achieve sustainability and economic success.

Assessment Process: Collect list of partner/consituent fisheries and aquaculture operations and ask them which Sea Grant products and services have benefited their work.

Target: Three strategies or practices.

National Performance Measures:

• Economic (market and non-market) and societal benefits (jobs created and retained) derived from the discovery and/or application of new fishery production and management models or techniques that lead to increased sustainability and productivity from the fishery.

• Number of fishermen, resource managers and seafood businesses (harvesters, aquaculturists, processors and recreational fishermen) who adopt and implement responsible harvesting and processing techniques and practices (Target = three).

Goal #4 - Hazard Resiliency in Coastal Communities

GOAL: Maine communities and decisionmakers have a working understanding of the threats, risks, and opportunities that may result from coastal hazards, including climate change, and use effective adaptation strategies to enhance and maintain resiliency.

Objective HZ-1. Property owners and municipal officials implement sustainable coastal development practices in coastal communities.

Activities: Beach profiling, coastal community resilience, vulnerability assessments, climate change programming, funded adaptation research.

Outputs: Beach profiling data, educational materials, new information technology, hazard resiliency guide and training, shared results with other states and national network, media outlets, Maine Climate News, demonstration projects.

Outcomes: (short) Coastal communities have an awareness of and access to data, innovative adaptive tools, and techniques to minimize hazard risks; (medium) Coastal communities have the ability to utilize data, innovative adaptive tools, and techniques to minimize hazard risks; (long) Coastal communities will have identified and begun to implement strategies to achieve sustainability and resiliency.

Measures: Number of coastal communities who have received and applied Sea Grant data, innovative adaptive tools, and techniques to minimize hazard risks. Number of coastal communities who have succeeded in enhancing sustainability and resiliency due to Sea Grant hazard-related products and services. Number of requests for support from other communities, programs, states. Number of requests for partnering on synergistic projects.

Assessment Process: Survey coastal communities [e.g., through Sustainability Solutions Initiative project] who request and are provided with Sea Grant hazard-related products and services and follow-up with those communities over time to track their implementation efforts and success.

Target: Eight communities

Objective HZ-2. Teachers in Maine engage students in learning about climate change and coastal hazard resiliency.

Activities: Production and distribution of educational materials related to climate change and coastal resiliency to K-12 teachers and students.

Outputs: Building a Resilient Coast DVD, VitalVenture Grade 5-8 climate-focused curriculum unit, and Maine Climate News Web site.

Outcomes: (short) K-12 teachers in Maine have obtained copies of the Building a Resilient Coast DVD and are aware of the educational resources on the VitalVenture and Maine Climate News Web sites; (medium) K-12 teachers in Maine use the Building a Resilient Coast DVD, VitalVenture and the Maine Climate News Web sites to engage students in learning about climate change and coastal hazard resiliency in Maine; (long) K-12 teachers in Maine use coastal hazard resiliency and climate change education products produced by Maine Sea Grant to support their efforts to fulfill curriculum requirements and meet state and national science education standards.

Measure: Number of K-12 teachers in Maine using educational products produced by Maine Sea Grant to engage students in learning about climate change and coastal hazard resiliency in Maine.

Assessment process: Maintain database of teachers who receive copies of the Building a Resilient Coast DVD, and conduct pre- and post- classroom instruction surveys of this group to track teachers' use of this product. Track hits on and downloads from the Maine Climate News Web site, and create a web-based survey instrument to understand whether and how teachers are using this resource in their classrooms or for professional development.

Target: 50 teachers / classrooms.

National Performance Measures:

- Number of coastal communities and citizens provided with information/trained in local hazard resiliency, and hazard mitigation tools, techniques, and best practices. (Target = eight)

- Number of coastal communities and citizens who adopt/implement hazard resiliency practices to prepare for and respond to/minimize coastal hazardous events. (Target = eight)