RHODE ISLAND SEA GRANT COLLEGE PROGRAM
STRATEGIC PLAN 2011–2014

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1.0 STRATEGIC CONTEXT

1.1 RHODE ISLAND—THE OCEAN STATE

With an area of only 50 by 40 miles, Rhode Island is America's smallest and second most densely populated state. The state's defining feature is Narragansett Bay, one of the world's best-studied temperate estuaries. The Ocean State has 400 miles of diverse coastline and 30 islands, with Block Island, 12 miles off the mainland, adding about 1,500 square miles of water to the political jurisdiction of the state. All Rhode Islanders live within a 30-minute drive from the Atlantic Ocean, the coastal lagoons, or Narragansett Bay. Two thirds of Rhode Island's residents live in the state's 21 coastal municipalities. The Bay, the south shore lagoons (salt ponds), and Block Island and Rhode Island Sounds not only define the state geographically, they have shaped Rhode Island's history, and are essential to its political and social well-being.

Ever since Rhode Island was founded, the state has had a history of independence and diversity. In modern times this has translated to a state with no formal county government and a very localized township style of political and social organization. Any Sea Grant approaches to coastal change must account for some of the unique social-cultural structures and organizations that exist.

1.2 THE BAY AND COASTS

Narragansett Bay is a well-mixed, heavily indented estuary, 147 square miles in size, running north about 40 miles from the Atlantic Ocean to the capital city of Providence. The Bay's north-south ecosystem diversity and high-to-low population density, with much of its watershed in Massachusetts, makes it a living laboratory for the study of the interactions between ecological-social and political-governance systems. About 1.8 million people occupy Narragansett Bay's densely developed watershed—roughly half in Rhode Island and half in Massachusetts—averaging about 1,100 people per square mile. The northern half of the Bay in Rhode Island is dominated by densely developed urban centers, while its southern half is mainly rural coastlines and islands. There is legacy pollution in the Upper Bay and recent, massive investments in nutrient control strategies. Approximately 25 percent of the Narragansett Bay coastline is hardened with piers, marinas, bulkheads, and sea walls.

1.3 RHODE ISLAND SEA GRANT

Based at the University of Rhode Island (URI), the Rhode Island Sea Grant College Program is a partnership of the university, the National Sea Grant College Program, the National Oceanic and Atmospheric Administration (NOAA), and the state of Rhode Island. Rhode Island Sea Grant helps government and society understand and manage marine and coastal resources through research, extension, education, and legal programs.

Sea Grant founders Athelstan Spilhaus, John Knauss, and Sen. Claiborne Pell at the first Sea Grant Conference in Newport, R.I., in 1965.

Rhode Island Sea Grant has the distinction of being one of the first four Sea Grant programs in the U.S. URI, in fact, sponsored the first national conference where the Sea Grant concept was developed in 1965. This unique historical context informs this strategic plan, which describes the program's "glocal" approach to its work: Rhode Island Sea Grant works locally with an eye to how its work can be applied regionally, nationally, and even internationally. This is exemplified by research on Narragansett Bay and coastal lagoons that are representative of other similar ecosystems across the country. It is also exemplified by special area management planning—done with the state's coastal program, the R.I. Coastal Resources Management Council—that has been a model for other states' coastal programs, and has been applied internationally through the URI Coastal Resources Center. The glocal approach is also reflected in the program's participation in national initiatives, such as leadership on the National Sea Grant Healthy Coastal Ecosystems Focus Team, the Fisheries Extension Enhancement coordination committee, and the National Sea Grant Smart Growth Committee.

Rhode Island Sea Grant recognizes that the future economic prosperity of Rhode Island and the Northeast is inextricably entwined with enhancing the ecological integrity and stewardship of the region's marine and coastal

environments. In this strategic plan, Rhode Island Sea Grant is committing to addressing the urgent needs of the state's coastal communities, its endangered habitats and changing cultures, and its coastal and ocean waters by addressing strategic priorities in three core thematic areas: 1) sustainable coastal development, 2) safe and sustainable seafood supply, and 3) healthy coastal ecosystems, and by investing in the integrated, cross-cutting Rhode Island Sea Grant Legal Program.

2.0 STRATEGIC PLANNING AND EVALUATION PROCESS

In its 2005-2010 Strategic Plan, Rhode Island Sea Grant developed a Planning and Organizational Development Framework (Costa-Pierce et al., 2005) that has been adapted and refined in this 2011-2014 Strategic Plan. The framework includes three integrated planning approaches in which strategic, implementation, and organizational development planning are conducted concurrently (Table 1). It contains plans for three thematic priorities; the legal program; and the functional areas covered by the communications, program development, and education programs. In this new plan we pay more attention than ever before to planning for program development and anticipatory planning for responsiveness in our programs.

By being broad thematically but specific functionally this new strategic plan encompasses goals that encourage short-term competitive research as well as long-term institution building, but that also are responsive to the emerging needs and priorities of our state and region's coastal environmental stakeholders.

Program Administration undertook a year-long collaborative process that addressed the need for both external and internal alignment and included key Rhode Island Sea Grant stakeholders in a series of forums, focus groups, and advisory meetings. A web site of documents that informed this plan is available at seagrantadm.gso.uri.edu/bcp/stratplanresources.htm.

The Rhode Island Sea Grant Leadership Team worked throughout 2009-2011 to elicit stakeholder and advisor input from the Rhode Island Sea Grant Senior Advisory Council, members of other Sea Grant advisory groups, business and non-profit groups, diverse government stakeholders, and the public (Table 2).

Responsiveness to changing local conditions and evolving priorities of stakeholders is a core strength of the Sea Grant model and requires that this strategic plan be a living document. To this end, this plan and related evaluations are designed to accommodate changes in response to emerging issues and trends.

3.0 ORGANIZATIONAL FOUNDATION FOR RHODE ISLAND SEA GRANT 2011—2014

3.1 VISION

The people of Rhode Island make sound decisions to ensure vibrant marine ecosystems, thriving marine economies, and sustainable coastal communities by using the best available scientific and management strategies for the benefit of this and future generations.

3.2 MISSION

Support innovative research, education, and outreach programs that enable coastal constituents from Rhode Island and beyond to address marine environmental and economic challenges and opportunities.

3.3 VALUES

I. Research

We value the direct application of high quality research to solve coastal and marine issues important to stakeholders.

II. Education

We value the development and training of the next generation of environmental professionals and leaders, and aim to engage students across all disciplines in higher education to promote understanding and appreciation of the marine and coastal environments.

III. Innovation

We value innovative practices and collaborations that create new tools and methodologies to enhance the quality of research, coastal and marine management, education, communications, and outreach in order to address the most pressing environmental issues of today and tomorrow.

IV. Partnerships & Community

We value the development of sustainable communities through stakeholder engagement and building lasting partnerships with institutions aligned with our values to serve diverse communities across Rhode Island.

V. Leadership

We value skills and abilities that develop effective teams and assume accountability to partners, funders, grantees, and stakeholders.

3.4 GUIDING PRINCIPLES

Support multidisciplinary and multi-institutional efforts that align with Sea Grant's values to build lasting partnerships and enhance learning both locally and regionally.

Strengthen leadership and learning in all of Sea Grant's thematic, functional, and administrative areas for current and potential partners, and to develop an active, diverse, program-wide Senior Advisory Council.

Engage with community stakeholders and act as a transparent, neutral facilitator to address local and regional needs.

Provide opportunities that encourage diversity both scientifically and socially to more accurately reflect and better respond to stakeholder needs locally and regionally.

4.0 STRATEGIC PLANNING FOR RHODE ISLAND SEA GRANT PROGRAMS 2011—2014

4.1 RHODE ISLAND SEA GRANT INVESTMENT STRATEGY

Rhode Island Sea Grant has been the "first investor" in a number of pioneering initiatives at URI and Roger Williams University (RWU) School of Law that have had significant local impacts and have become important national, and even international, models. The most notable of these are a 40-year old relationship with URI's Coastal Resources Center (CRC), and more recently, the Rhode Island Sea Grant Legal Program based at the RWU Marine Affairs Institute (2005) and the URI Sustainable Seafood Initiative at URI (2008). CRC/RISG has been recognized by the National Academy of Sciences as a model university center of cooperative organizational development (National Research Council, 2008). Centers started as an innovative idea for partnerships and collaboration that built upon previous initiatives (for example, CRC was built upon URI's International Center for Marine Resource Development, and the Legal Program was built upon the existing joint degree program between URI and RWU).

4.2 THEMATIC PROGRAMS

In this strategic planning period Rhode Island Sea Grant will focus its strategic and implementation efforts in three thematic programs—Sustainable Coastal Development, Healthy Coastal Ecosystems, and Safe and Sustainable

Seafood Supply—that are closely allied with the National Sea Grant Program Focus Teams, and one integrated, cross-cutting program, the Rhode Island Sea Grant Legal Program.

4.2.1 SUSTAINABLE COASTAL DEVELOPMENT PROGRAM

The Sustainable Coastal Development Program harnesses the extensive and proven project management expertise of CRC/RISG. For 40 years, the program has built the capacity of coastal and ocean community decision makers locally, regionally, and nationally to apply sound science to coastal and ocean ecosystem management planning. CRC has pioneered coastal management practice the world over. The program works with communities regionally and nationally to develop use plans for coastal and ocean-based resources through the application of spatial planning tools and techniques. CRC/RISG is also working with communities on the development and application of climate change and sea level rise adaptation tools, and on strategies to encourage collaborative enhancement of vibrant urban waterfronts.

4.2.1.1 STRATEGIC SITUATION

Coastal migration, high population densities on coasts, overuse of coastal resources, and land-use changes have extensively modified coastal ecosystems. A greater awareness of the overuse of Rhode Island's coastal resources is fueling increased interest in innovative coastal resources management and new zoning efforts. Impacts of ongoing modifications of coastal ecosystems are being exacerbated by climate change. Growing understanding of the threats posed by degraded coastal environments is stimulating governments, communities, and private sector groups to develop adaptation plans for the anticipated increases in economic disruptions and property damage associated with severe weather events. The desire to reduce fossil fuel dependence is focusing accelerated attention on the development of offshore renewable energy resources. Local coastal management activities are occurring within a larger global context as communities around the world grapple with coastal population growth and increased competition for coastal and ocean resources.

Participants review maps at an Ocean SAMP stakeholder meeting.

4.2.1.2 TARGET AUDIENCES

The public sector—government and elected officials, as well as planners and practitioners, community organizations, and citizens—and the private sector, academia, and nongovernmental organizations.

4.2.1.3 PRIORITIES

Priority 1. Create diverse and vibrant waterfronts for Rhode Island: Rhode Island Sea Grant will build the capacity of coastal communities to apply the best available economic, environmental, and social science and best practices to waterfront planning and contribute to the overall vitality and wellbeing of these unique places.

Priority 2. Apply Coastal and Marine Spatial Planning (CMSP) as a tool for managing coastal and offshore waters in Rhode Island and beyond: Rhode Island Sea Grant will test innovative planning tools to build greater effectiveness and efficiency into ecosystem-based management practice. Specifically,

Participants confer during a CMSP training exercise.

the program will provide technical expertise to continue implementing the Ocean Special Area Management Plan (SAMP), test CMSP-related tools and techniques for improved ocean management, and appropriately share these tools with other coastal states and places through networks such as the Northeast Regional Ocean Council (NROC). Another component will be to continue to implement ecosystem based management in other Rhode Island coastal communities—possibly the Mount Hope Bay and Sakonnet River region—through the development of SAMPs.

Priority 3. Build the capacity of coastal constituents to understand and communicate the consequences of global climate change and apply best practices to reduce, and adapt to, local impacts. Rhode Island Sea Grant will translate and provide climate change science to local coastal communities and the state to promote adaptation for climate change-induced sea level rise and storm impacts.

Strategic goals, outcomes, and impacts for 2011-2014 are in Table 3.

4.2.2 SAFE AND SUSTAINABLE SEAFOOD SUPPLY

4.2.2.1 STRATEGIC SITUATION

Domestic seafood supplies are not increasing fast enough to meet growing consumer demand and as a result there is a tidal wave of seafood imports from rapidly-expanding global aquaculture. Since 2000, U.S. aquaculture has grown most markedly in shellfish production along the East Coast, while finfish aquaculture has grown slowly or declined, with the exception of salmon aquaculture in Maine. Finfish aquaculture has not developed to any degree in New England due to price and volume competition from imports, the high cost of aquaculture production, the lack of cost-effective feeds, the complexity of regulatory frameworks, and conflicts with existing coastal users and environmental groups. Shellfish aquaculture developments have not been as constrained by these issues, and are therefore growing rapidly in coastal areas of R.I. and the Northeast. This growth has been matched by increased capacity for aquaculture-based science and associated outreach to the shellfish aquaculture stakeholder community.

Sustainable seafood branding and marketing programs are growing rapidly and have the promise of driving the adoption of more sustainable aquaculture and fishing practices, but the economics and acceptance by the public remain in question. Although there is a growing interest in sustainable seafood locally, there remains a lack of knowledge by the public on the origins of seafood products and the sustainability of seafoods, with many competing advocacy messages adding to the confusion. Also, there is consumer resistance to higher prices for "sustainably farmed/harvested" seafoods. Price increases could shift consumption to other, lower-cost protein choices. There also are many concerns about seafood contamination and safety during handling, storage, and transport as fishermen and farmers attempt to promote and develop local markets for local seafoods in order to develop more robust local economies. Rhode Island Sea Grant has been investing in the URI Sustainable Seafood Initiative, which is a knowledge portal that provides independent information on sustainable seafoods and the various approaches being used to promote demand and the efficacy of those approaches, and has invested for years in seafood safety outreach and education.

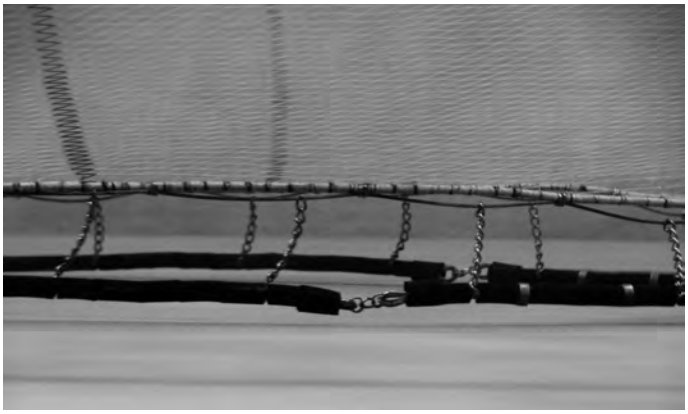
Shellfish aquaculture is a growing industry in Rhode Island.

Capture fisheries, and the communities who depend on them, are threatened by coastal population growth and urbanization, a complex regulatory matrix, environmental degradation, disease outbreaks, and climate change. In the Northeast groundfish fisheries there has been painful restructuring and downsizing. Yet while there may be fewer fishermen overall, those remaining have the hope of operating in a more profitable business environment. Furthermore, recent science indicators point to a rebound in many wild stocks, which may lead to greater stability and sustainability of many commercial capture fisheries.

Certainly, the future of New England's capture fisheries will be overseen by complex federal and regional management structures, which will require a continuing influx of robust scientific information upon which to formulate ecosystem-

based management practices. Fortunately, amidst the rapidly shifting landscape for seafood production and the needs and opportunities that are arising, several millions of dollars of new, applied, collaborative fisheries research is underway, shepherded by the Commercial Fisheries Research Foundation, opening new opportunities for Sea Grant partnering and collaboration.

All the above circumstances are creating a new demand for more diversified extension services that go beyond basic fisheries science and into the realm of fisheries management and business acumen. There is a clear need for capacity-building in this area to help take advantage of improving stocks, navigate increasingly complex management structures, meet changing consumer needs and desires for seafood, and improve the local and regional economic outlooks for the production and delivery of safe, sustainable seafood products.



This new trawl net design targets squid while allowing groundfish to escape. URI and Rhode Island Sea Grant Fisheries Extension staff worked with the net designers in testing the gear and analyzing results.

The National Sea Grant Program has developed a priority area in its strategic plan under the title of Safe and Sustainable Seafood Supply. In response, Rhode Island Sea Grant will expand efforts in fisheries and aquaculture management, marketing and seafood economics, and consumer programs to improve the seafood economy.

4.2.2.2 TARGET AUDIENCES

Commercial fishermen and aquafarmers and their professional organizations; fisheries and aquaculture scientists and managers; seafood buyers and processors; seafood culinary professionals; fisheries and aquaculture NGOs; and seafood consumers.

4.2.2.3 PRIORITIES

Priority 1. Expansion of the URI Sustainable Seafood Initiative: (a) Build a new partnership between Johnson & Wales University (JWU), URI, and Rhode Island Sea Grant (RISG) by developing a plan for enhanced engagement; plus explore the potential for investments in proposed JWU education and outreach programs for sustainable seafoods in Providence. (b) Engage with the local seafood and direct marketing initiatives in R.I.

Priority 2. Support of More Sustainable Capture Fisheries: (a) Engage with the Commercial Fisheries Research Foundation in the development and assessment of collaborative fisheries research programs, reporting, and review, plus explore mechanisms to develop outreach, extension, and communications components in their funded research. (b) Build upon and strengthen Rhode Island Sea Grant's longstanding excellence in gear technology by focusing on extension efforts with the fishing industry to implement new findings in gear technologies, particularly in the area of innovative bycatch reduction. (c) Engage with fishing sectors to facilitate a needs assessment for their organizational development, economics, and marketing and value-added options for increased product flows from recovered capture fisheries.

Priority 3. Aquaculture: (a) Discuss the needs and the resources required to support the development of innovative multidisciplinary programs in URI's new academic units in sustainable foods and aquaculture ecosystems in the College of the Environment and Life Sciences (CELS). (b) Initiate a regional dialog with Northeast Sea Grant Consortium partner institutions to identify the potential for the regional growth of shellfish and finfish aquaculture, with a focus on roles that Rhode Island Sea Grant might play in the regional movement towards an ecosystems approach to aquaculture that is economically viable but also socially and environmentally responsible (Costa-Pierce, 2010).

Priority 4. Seafood Safety: Continue Rhode Island Sea Grant's longstanding excellence in seafood safety by continuation of support to HACCP training and similar seafood safety programs in the Northeast.

Strategic goals, outcomes, and impacts for this program for 2011-2014 are in Table 4.

4.2.3 HEALTHY COASTAL ECOSYSTEMS

4.2.3.1 STRATEGIC SITUATION

Threats such as coastal sprawl, non-point source pollution, habitat degradation and destruction, invasive species, climate change, harmful algal blooms, and shoreline development and armoring threaten the quality of Rhode Island's coastal habitats, drinking waters, and marine resources. Scientific research is needed to improve understanding of the problems and to help shed light on possible solutions. Despite the need, funds for basic marine research are not keeping pace. Rhode Island Sea Grant's flat funding for the past decade has slowly eroded the monies available to the research portfolio. This has placed a premium on leveraged funds, but this can only go so far in light of shrinking core funds from which to leverage.

Steven Reynolds

Phragmites is an invasive plant becoming more common in Rhode Island coastal ecosystems.

4.2.3.2 TARGET AUDIENCES

Research scientists grounded in the broad array of coastal and marine disciplines, including resource economics and marine policy, will continue to be the core recipients of research funds. Efforts will be made, however, to broaden the reach of investments into the area of social science research so that Rhode Island Sea Grant better aligns with new strategic initiatives at the national level.

4.2.3.3 PRIORITIES

Priority 1. Bi-annual research RFP: The biennial research Request for Proposal program will narrow the focus of thematic areas but increase the disciplinary breadth to encourage well-integrated research proposals so that funds invested in research at any given time will better address specific problems or issues and will better suit the needs of stakeholders.

Priority 2. Social science research needs assessment: Assessment of the needs of stakeholders for research within the realm of the social sciences will be undertaken so that a coherent and applicable approach can be developed for implementation of a social science research program in future RfPs.

Priority 3. Improve coordination with the Northeast Sea Grant Consortium: Define a direction and process for the long-term application of research funds for regional efforts through the Northeast Sea Grant Consortium.

Strategic goals, outcomes, and impacts for this program for 2011-2014 are in Table 5.

4.3 CROSS-CUTTING LEGAL PROGRAM

The Rhode Island Sea Grant Legal Program is one of only four Sea Grant legal programs in the country, and is the only one in New England. It was established in 2003 and is housed at the Marine Affairs Institute at the Roger Williams University School of Law. The institute is a clearinghouse for marine law and policy whose mission is to educate and prepare exceptional marine law professionals and host expert marine law and policy practitioners. Students from around the country come to take advantage of rigorous and diverse maritime and marine law courses, and full extracurricular opportunities to develop excellent research, writing, and advocacy skills. The Legal Program is a unique partnership between a public state university and a private university law school that builds on the dual-degree program that offers students the opportunity to simultaneously earn a J.D. from Roger Williams University School of Law and an M.A. in Marine Affairs from the University of Rhode Island. The centerpiece of the Legal Program is the Sea Grant Law Fellow program, providing constituents with quality legal research at a fraction of the cost of fully licensed lawyers, and students with valuable experience and networking opportunities.

In 2009, a new advisory board was formed to advise the institute and Legal Program on programming, curriculum, development, Law Fellow projects, and student activities. Rhode Island Sea Grant and URI have permanent seats on this Board.

4.3.1 STRATEGIC SITUATION

Increasingly complex management decisions regarding existing uses (for example, groundfish and scallop fishing) and new uses (such as siting offshore wind) and the related impetus for regionalization and increased use of CMSP approaches, including the President's 2010 Executive Order, are simultaneously pushing the limits of current ocean governance while running into the constraints of existing law. Increasing demands on the use of ocean space and impacts of climate change on marine resources and human communities are creating new regulatory, legal and policy questions. The Rhode Island Sea Grant Legal Program is poised to play a greater role as a state, regional, and national marine law clearinghouse.

4.3.1.2 TARGET AUDIENCES

Government and elected officials, planners and practitioners, community organizations, the private sector, academia, nongovernmental organizations, students (prospective and current), alumni, faculty.

4.3.1.3 PRIORITIES

Priority 1. Train the next generation of marine law professionals: The Legal Program will continue to attract, educate, and graduate tomorrow's leaders in marine law and policy. Investments will expand the Sea Grant Law Fellow Program and the annual Law Fellow Colloquium.

Priority 2. Build capacity as a prominent clearinghouse for information on marine policy and law: The Legal Program will expand its prominence as a state, regional, and national clearinghouse by using its unique expertise and position within a law school to convene formal and informal events to gather decision-makers and constituents, and support their decisions in the increasingly complex marine resource management landscape.

Priority 3. Provide expertise on the role of law in CMSP and resource management processes: The Legal Program will capitalize on its unique expertise in regional CMSP processes and increase engagement in state and regional activities in New England, specifically via NROC and management processes such as wind energy siting and fishery management.

Priority 4. Expand role of the program to work with other Northeast Sea Grant Programs and other regional marine law institutions: The Legal Program will work closely with regional partners to provide needed regional law and policy expertise.

Law Fellows offer organizations high quality legal research at a fraction of the cost of hiring a lawyer.

Strategic goals, outcomes, and impacts for this program for 2011-2014 are in Table 6.

5.0 EDUCATION

5.1 STRATEGIC SITUATION

The need for leaders knowledgeable in the sciences has never been more pressing. Society is faced with rapidly changing environmental conditions resulting from a rapidly changing climate, and future leaders must be able to understand, and explain to others, the threats and opportunities. Rhode Island Sea Grant has a long history of fostering the next generation of marine and coastal scientists by supporting them and their research through graduate level academic careers. While many of these students have moved on to illustrious careers in academia, resource management, and policy arenas, the future shows a clear need for scientists who possess a higher degree

of comfort in practical application of their research findings to greater benefit humankind, and for expressing what they are doing and why, in ways that are meaningful to the public.

This URI Coastal Fellow gained hands-on experience at an aquaculture facility.

5.2 TARGET AUDIENCES

For the period of this strategic plan, Rhode Island Sea Grant will focus its education effort in academia at the graduate and undergraduate levels. Funded research graduate students will continue to be supported as they historically have, though there will be a concerted effort to expand opportunities to graduate students outside of the traditional coastal marine and marine policy sciences. At the undergraduate level, the highly successful URI Coastal Fellows program will continue to be supported at a level commensurate with the need of our funded research investigators. The Law Fellow and Sustainable Seafood Fellow Programs will also continue to be supported.

5.3 PRIORITIES

Priority 1. Engage funded research graduate students in outreach efforts. Foster student understanding of the need to move research into the public and policy arenas, and provide students with the tools and opportunities to do so multiple times during their Sea Grant-funded academic careers.

Priority 2. Develop a formal Rhode Island Sea Grant Marine Affairs Graduate Fellowship in Coastal Policy and Management in partnership with the URI Department of Marine Affairs.

Priority 3. Expand offerings of the Sea Grant Law Fellow Program beyond the Rhode Island borders, particularly with regard to engaging Sea Grant Law Fellows with other Sea Grant programs in the Northeast.

Priority 4. Explore partnering with the Metcalf Institute and the new URI Harrington School of Communication and Media to engage graduate students in the anticipated master's program in environmental communications in outreach and communications at Rhode Island Sea Grant.

6.0 COMMUNICATIONS

Rhode Island Sea Grant Communications goals are to encourage an awareness and appreciation of coastal and marine resources and places and to foster better-informed decision makers, practitioners, and the public on issues of marine science relevant to Rhode Island. The program does this by translating Sea Grant research results in a way that is accurate, understandable, and meaningful; by assisting extension staff with information products in support of outreach efforts; by organizing events that educate or raise public awareness; and by developing information products that help current or potential Sea Grant constituents understand and access Sea Grant information and resources.

Survey says local seafood has market potential

Many may not typically associate "local foods" with seafood, but through the University of Rhode Island Sustainable Seafood Initiative (SSI), efforts are underway to help people understand this new concept.

A significant component of the SSI is the Sustainable Seafood Fellowship program, open to URI graduate students. Fellows conduct research on sustainable seafood markets for projects designed to inform the seafood industry, environmental community, and policy makers, while training graduate students in research methods. This past year, Samuel Grimley and the two other 2010 fellows researched the market potential for local seafood in Rhode Island. Grimley's premise was that fishermen's economic sustainability was as important as environmental sustainability, and that small vessels at a disadvantage under new fisheries management rules needed new methods to market their catch and increase revenues.

Cathy Roheim, URI professor of environmental and natural resource economics and director of the URI SSI, supervised the fellows in surveying 400 shoppers at 11 different farmer's markets statewide. The survey sought to understand what might drive consumers' purchases of R.I. seafood, with farmer's markets one possible venue for sales.

The results of Grimley's survey indicated that consumers valued freshness, origin, environmental factors, and the support of local businesses when purchasing seafood. Consumers also indicated they would be willing to pay slightly more for seafood certified as having been caught by R.I. small-scale fishing vessels – in other words, locally produced seafood.

While, R.I. regulations currently prohibit fishermen from selling fresh finfish directly to consumers, Grimley's work indicates potential if circumstances change. Grimley believes that overall his results represent a potential early framework for marketing locally caught seafood in Rhode Island.

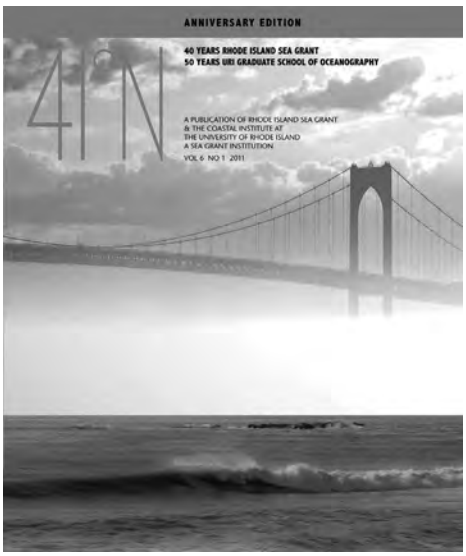
For more information, visit the SSI website at seagrant.gso.uri.edu/sustainable_seafood ■

Notes from RHODE ISLAND SEA GRANT June 2011

6.1 STRATEGIC SITUATION

The need for unbiased, accurate marine and coastal science-based information and science literacy is ever more apparent in controversies over issues such as offshore wind energy development, fisheries regulations, and climate change. Rhode Island Sea Grant is uniquely positioned as a neutral broker of the research and information needed to aid decision-making, and in turn has the ability to bring stakeholder concerns to inform research and policy processes.

The Communications Program has added a new Research Communications Specialist to more deeply investigate current research trends and findings, and bolster Communications' efforts to translate these for target audiences.



Due to funding constraints most communications efforts are undertaken in-house, from writing and editing to graphic design and layout, web maintenance, social media development, publicity, event planning and hosting, and more. Some extension communications activities are conducted by the extension programs themselves, in some cases with outside contractors.

Electronic communication and new media are becoming more prevalent for nonprofit communications than traditional print media (Miller 2010), and Rhode Island Sea Grant has followed suit to address new audiences and use resources wisely.

6.2 TARGET AUDIENCES

In this strategic planning period, Rhode Island Sea Grant has undertaken internal evaluations regarding target audiences, and is refocusing efforts to communicate with engaged stakeholders as the primary target audience. Engaged stakeholders are those subsets of the public who are most likely to derive the greatest benefit from Sea Grant information – federal, state, and local decision-makers, researchers, university faculty and staff, college undergraduate and graduate students pursuing careers in marine science and policy-related fields, resources managers, nonprofit organizations active in marine and coastal resources issues, commercial fishermen, marine business operators, marine recreational communities, and others. Rhode Island Sea Grant's specialized content is most applicable to the personal and professional interests of these audiences. Secondary audiences include educators, casual recreational users of coastal areas, high school students, and others whose interest in coastal and marine science may be limited to a single topic.

6.3 PRIORITIES

Priority 1: Evaluation of efforts: During this strategic planning period, Communications is undertaking a major evaluation process for its products and events to assess their effectiveness through research, reader surveys, listening sessions, and other appropriate mechanisms. In addition to an external evaluation we will be conducting internal meetings and workshops to explore new ideas, concepts, and opportunities. This evaluation process will guide changes to products and distribution strategies moving forward.

Priority 2: Targeted events: We are prioritizing events that Rhode Island Sea Grant is uniquely capable of offering—those that explain how research findings are relevant and applicable to management issues, what the current state of knowledge is on climate change and how it is affecting Rhode Island, explain the processes to help determine the sustainability of seafoods, or what the legal implications are of government policy decisions, for instance. Products such as these are being given higher priority than those of general interest that may have a less direct connection to coastal and marine issues.

Priority 3: Providing information in a variety of formats: In seeking to better serve, as well as to expand, its target audiences, Communications works to provide products at levels and in formats suitable for different readers. The intent is to make Sea Grant information accessible in a way that allows people to interact as much or as little as suits their needs and time constraints, while always offering them the opportunity to access more if they choose. Our suite of offerings includes our micro-newsletter, "Notes from Rhode Island Sea Grant," which will continue to be a primary mechanism for getting out timely news. Our magazine *41°N* provides in-depth reporting and analysis, and its website, in turn, offers highlights from our Facebook and Twitter pages, giving readers another easy way to connect with us. These efforts, in addition to our website, e-newsletter, and press release distribution, will be continued, while we look for opportunities to expand and improve.

Priority 4: Working with Sea Grant Extension & others to serve stakeholders: We will continue our work with extension agents and other Sea Grant staff and funded researchers on products that help fulfill Sea Grant's role in serving coastal constituents, with a focus on bringing significant findings and impacts to our stakeholders in a timely and effective fashion.

7.0 PROGRAM DEVELOPMENT

7.1 STRATEGIC SITUATION

The social sciences have made numerous contributions in the past few years in assisting in resolving complex ecological-social interactions. The pioneering works of Nobel Laureate Elinor Ostrom (Ostrom et al., 1994; Ostrom, 2009) document that groups who have a propensity to cooperate are making progress towards achieving sustainable management of natural resources that are part of the public trust (Poteete et al., 2010). These works point the way for innovative directions for the development of social science programs for Sea Grant research and extension programs to collaborate on research and management projects with professionals in the field (Poteete et al., 2010). Examples include Sea Grant programs in CMSP, in fisheries (Gutierrez et al., 2011), and an ecosystems-based approach to aquaculture (Soto et al., 2008).

The NOAA National Strategic Plan (NOAA, 2010) has a new emphasis on social science research. In response, the National Sea Grant College Program has developed a new national strategic initiative in the social sciences that included the hiring of a social scientist in the National Office, and a new $2 million allocation for nationally competitive relevant social science in the state Sea Grant programs. The Northeast Sea Grant Consortium, with financial support from Rhode Island Sea Grant and all other members, issued a call for social science research in 2010 that will ensure regional social science projects will be on-going throughout this strategic plan.

7.2 INVESTMENT INPUTS

During this strategic planning period, Rhode Island Sea Grant will develop new social science initiatives under the guidance of the newly hired program manager. Sea Grant will also contribute actively to the organizational development and funding of the Northeast Sea Grant Consortium, as well as be attentive to new funding requests for responsive activities in climate change education.

7.2.1 THE NORTHEAST SEA GRANT CONSORTIUM: A REGIONAL PRIORITY

Rhode Island Sea Grant has prioritized regionalism as the cornerstone of a new generation of coastal stewardship, and invested significant staff time and program development resources in the following regional ocean institution-building development initiatives: (a) the formation and organizational development of the Northeast Sea Grant Consortium, (b) the Northeast Regional Ocean Council (NROC), (c) the Sea Grant Gulf of Maine Regional Planning Initiative, and (d) the Sea Grant New York Bight Regional Planning Initiative.

Rhode Island Sea Grant took the lead in drafting an MOU for the Northeast Sea Grant Consortium between all seven state Sea Grant programs from Maine to New York, which was finalized and codifed at the host universities in 2010. The vision is for the state programs to work together to coordinate regional research, education, outreach, and diversity programming to address problems, opportunities, and workforce development in the Northeast.

In this strategic planning period, Rhode Island Sea Grant will: (a) assist in the development of an MOU between the Consortium and the NROC, (b) fund a portion of the regional RfP for social sciences, (c) host a Consortium meeting in 2011, and (d) support the development of regional proposals to leverage regional expertise in CMSP, working waterfronts, climate, fisheries, aquaculture ecosystems, law, policy and the marine social sciences.

Rhode Island Sea Grant/CRC has worked with North Kingstown to assess vulnerability to sea level rise.

7.2.2 CLIMATE CHANGE

Rhode Island, like many places worldwide, is taking steps to meet the impacts of changing climate and weather patterns. These impacts, whether the result of abrupt storms or gradual sea level rise, stand to alter shoreline areas significantly. For four decades, Rhode Island Sea Grant extension has engaged local communities in coastal hazards planning with policies and programs that advance resilience locally, regionally and nationally.

Building on those efforts, Rhode Island Sea Grant is beginning to address the long-term consequences of climate change. A key effort is the Sea Grant-funded collaborative research and outreach project to encourage individuals to change their behavior to respond to increased flooding and sea level rise.

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TABLES

Table 1. RISG's Planning and Organizational Development Framework: Types, Approaches and Expectations of Results

Planning Types	Planning Approaches	Results
Strategic	Thematic	Concentrate programming on three priority themes
	Functional and Integrated	Planning developed for all functional areas (research, education, outreach, legal, program administration), plus the integration of these. Also, functional planning is assessments of RISG's strategic niche (and critical mass) in the midst of a crowded field in a small state and region. What are RISG's sustainable competitive advantages? What we are best at compared to our competitors? Communicating what we are not going to do, and why, is just as important as what we are planning to do.
Organizational Development	Team-Building Facilitation Mediation Conflict Resolution	RISG continuously improves organizational effectiveness and teamwork according to the philosophy and approaches laid out by The Table Group / Patrick Lencioni for building "smart and healthy organizations."

Table 2. Summary of planning process, reviews, and evaluations

Processes	Versions	Participants
Internal Review	1.0	Director, Consultant
	2.0	Rhode Island Sea Grant Leadership Team
External Review	1.0	Senior Advisory Council (SAC)
	2.0	Strategic Partners and Project Partners
	3.0	The Public
Making this plan "living"	Annually	Programmatic Retreats, Research Symposium Updates, Extension Symposium Updates
Evaluation	1.0	SAC – Subcommittee on Evaluation
	2.0	National Sea Grant Site Review

Table 3. Sustainable Coastal Development Strategic Goals, Outcomes, and Impacts

Strategic Goals	Outcomes and Impacts of RISG Investments
Build the capacity of coastal communities to apply the best available economic, environmental, climate change, and social science to waterfront planning and contribute to the overall vitality and well-being of these unique places	Outcome: We engage coastal communities in Rhode Island and beyond in transferring and applying the lessons learned from the urban waterfront planning experience in Newport. Impact: Coastal communities integrate land and coastal planning in key municipal and/or state documents guiding urban waterfront development and management.
Test innovative planning tools to build greater effectiveness and efficiency into ecosystem-based management practice, and transfer these innovations regionally and nationally.	Outcome: We provide technical expertise to the implementation of the Ocean SAMP, test ecosystem based management tools and techniques, and transfer these tools to other coastal regions and states through networks such as the Northeast Regional Ocean Council (NROC). Impact: New local SAMPs, such as a potential Mount Hope Bay SAMP, feature the latest in ecosystem based management and CMSP policies and practices, and other states apply similar content to their guiding coastal and ocean management plans.
Build the skills of coastal decision makers with hazard mitigation and adaptation tools and techniques so they in turn can educate larger constituencies in policy and practice.	Outcome: We provide assistance to local coastal communities so they can better access potential future funding opportunities that promote adaptation for climate change-induced sea level rise and storm impacts. We will also build the capacity of our training audiences to exhibit science-informed understanding about which lands they should focus on for adaptation and mitigation measures. Impacts: Coastal communities apply for and receive grant funds to invest in the development of climate change adaptation policies for key municipal and/or state planning documents. Municipalities and the state select priority lands upon which these policies will focus.

Table 4. Rhode Island Sea Grant Seafood Program Strategic Goals and Outcomes for 2011-2014

Strategic Goals	Outcomes and Impacts of RISG Investments
Improve understanding of, and acceptance and consumption of, sustainable seafood products.	Outcome: A new partnership between Johnson & Wales JWU, URI and RISG will engage academic, local and direct marketing initiatives to educate the next generation of seafood restaurateurs' and supply chain personnel. Impact: The next generation of seafood leaders will have multidisciplinary training which allows them to enhance the values of R.I.'s seafood economy.
Improve connections between gear technology research and fisheries management efforts, particularly in Sectors Allocation.	Outcome: In partnership with the Commercial Fisheries Research Foundation, assess newly formulated research results to inform new gear research directions, and develop key research points/gear improvements pertinent to fisheries management initiatives. Impact: Bycatch reduction and fisheries regulation change enhance the economic viability of the commercial fishing industry and lead to sustainable stocks.
Foster the adoption and implementation of ecosystem-based approaches to aquaculture.	Outcome: The Northeast Sea Grant Consortium and partner institutions develop a regional initiative to support and promote research and outreach needs for sustainable shellfish and finfish aquaculture. Impact: Multi-trophic aquaculture operations throughout the New England region bring eco-friendly product to market and promote ecosystem health.
Increase the capacity of the seafood industry to ensure safe seafood product gets to consumers.	Outcome: HACCP training is provided to seafood handlers using methodologies that account for traditional as well as new contamination threats to seafood safety. Impact: Seafood product reaching consumers is of the highest quality and public health threats from seafood consumption are reduced.

Table 5. Healthy Coastal Ecosystems Strategic Goals, Outcomes and Impacts

Strategic Goals	Outcomes and Impacts of RISG Investments
Focus the research portfolio such that funded projects provide the scientific research information most needed by coastal resource managers to foster, support and enhance ecosystem-based management efforts.	Outcome: We provide research findings to the resource management community, and help them interpret them for application in better managing Rhode Island coastal resources. Impact: Resource managers develop more informed policy that promotes sustainable use and conservation of coastal resources.
Determine the needs for social science information in Rhode Island's economic and environmental resource management communities.	Outcome: Research funds are targeted at specific topics in the social sciences that will provide findings of value to stakeholders. Impact: New information is provided to stakeholders that can help them better address critical issues in a more integrated fashion, and that will help during implementation.
Define a regional approach to funding research that will provide information around broad-scale issues not efficiently or effectively addressed at a state-by-state scale.	Outcome: A regional program is in place that meets the scientific research needs of stakeholders of the New England region at large. Impacts: Critical resource management issues that overlap state jurisdictional boundaries are being more successfully addressed.

Table 6. Legal Program Strategic Goals, Outcomes, and Impacts

Strategic Goals	Outcomes and Impacts of RISG Investments
Law and policy considerations are readily included in state, regional and national marine management deliberations.	Outcome: RISG stakeholders and Law Fellows engage through Law Fellow projects that meet SG goals across goal areas. Impact: RISG stakeholders receive needed, affordable, quality legal information through Law Fellow projects; Law Fellows graduate with enhanced experience and become national marine management leaders. Decision-making is enhanced and RISG Law Fellows are acknowledged and respected as a "go-to" for legal support by a variety of constituents.
RISG Legal Program is the state and regional clearinghouse for marine law and policy, and recognized as a national expert.	Outcome: RISG Legal Program is the recognized node for other NE regional Sea Grant programs and marine law institutions. Impact: RISG Legal Program is the lead entity in the NE Regional Ocean Law Collaborative, which enables NE constituents to respond more effectively to regional management issues, by creatively leveraging intellectual and financial resources.
Law Fellow Program is prominent and financially self-sufficient.	Outcome: the RISG Law Fellow Program is widely recognized and known as a source of quality, neutral, affordable legal research. The Program attracts projects from diverse outside constituents, is financially sustainable, and attracts high quality students to RWU School of Law. Impact: Law Fellow projects provide research information for a diverse range of topics and constituents. Law Fellows are sustainable funded through outside organizations and other combinations of funding. The Annual Law Fellow Colloquium highlights Program to large number of outside organizations and enhances the Program's prestige to student participants.

THE OCEAN SAMP: A UNIQUE TOOL FOR ENSURING THAT SCIENCE INFORMS POLICY DECISIONS

In October 2010, the Rhode Island Coastal Resources Management Council (CRMC) formally approved the state's Ocean SAMP, the first offshore marine spatial planning document in the United States. "This effort has placed Rhode Island at the forefront of comprehensive coastal and marine spatial planning," said Joshua Brown, program manager for the National Oceanic and Atmospheric Administration (NOAA) National Sea Grant College Program (Providence Business News, Nov. 15, 2010), adding that the Ocean SAMP experience is helping create "a flexible, consistent and reliable methodology for conducting environmental impact evaluations for offshore renewable energy projects around the nation."

The Ocean SAMP maps the state's ocean waters and surrounding federal waters in order to identify priority future uses for this area and guide balanced management of its human and natural resources in keeping with Rhode Island's environmental, social, and economic needs and concerns. The Ocean SAMP, which engaged more than 250 advisors, researchers, outreach experts and technical team members, is now a model for proactive, research-based marine planning efforts nationwide. Its uniqueness stems not only from its pioneering act of managing offshore waters for new uses such as renewable energy development, but from these key features:

INDEPENDENT SCIENCE

Partnering with URI's expert scientists to produce an objective, fact-based evaluation enhanced the credibility of the Ocean SAMP process. Since URI is a state entity, data generated for the Ocean SAMP can be used by a prospective developer in a federally conforming environmental impact study.

INTERAGENCY PARTNERSHIP

As the first Rhode Island SAMP to consider current and future uses of federal waters, the Ocean SAMP relied from the start on cooperation with federal agencies and the Narragansett Indian Tribe. Through the federal consistency provision of the Coastal Zone Management Act, the Ocean SAMP achieves a near-partnership with the federal government in planning for federal waters.

EXTENSIVE PUBLIC INVOLVEMENT

As the first attempt to catalog all uses of the Ocean SAMP area and to manage the area for all Rhode Islanders, the Ocean SAMP process raised the status of the public from policy advisor to a co-author in crafting the content of the Ocean SAMP document. Over a 20 month period, public dialogue about the Ocean SAMP took place at more than 17 meetings. Going forward, constituent forums, such as the six-member Fishermen's Advisory Board, will continue the process by advising the state on Ocean SAMP issues.

ACTION, NOT REACTION

The Ocean SAMP aims to proactively identify the best sites for anticipated offshore developments in advance of proposal submission, rather than reactively assess proposals on a case-by-case basis as they are submitted. As a result, decisions are made in the broadest possible ecological, economic, and social contexts.

Researchers from many disciplines worked to characterize the Ocean SAMP area to develop an ecosystem-based management plan.

MORE INFORMATION

More information about Rhode Island Sea Grant is available by contacting:

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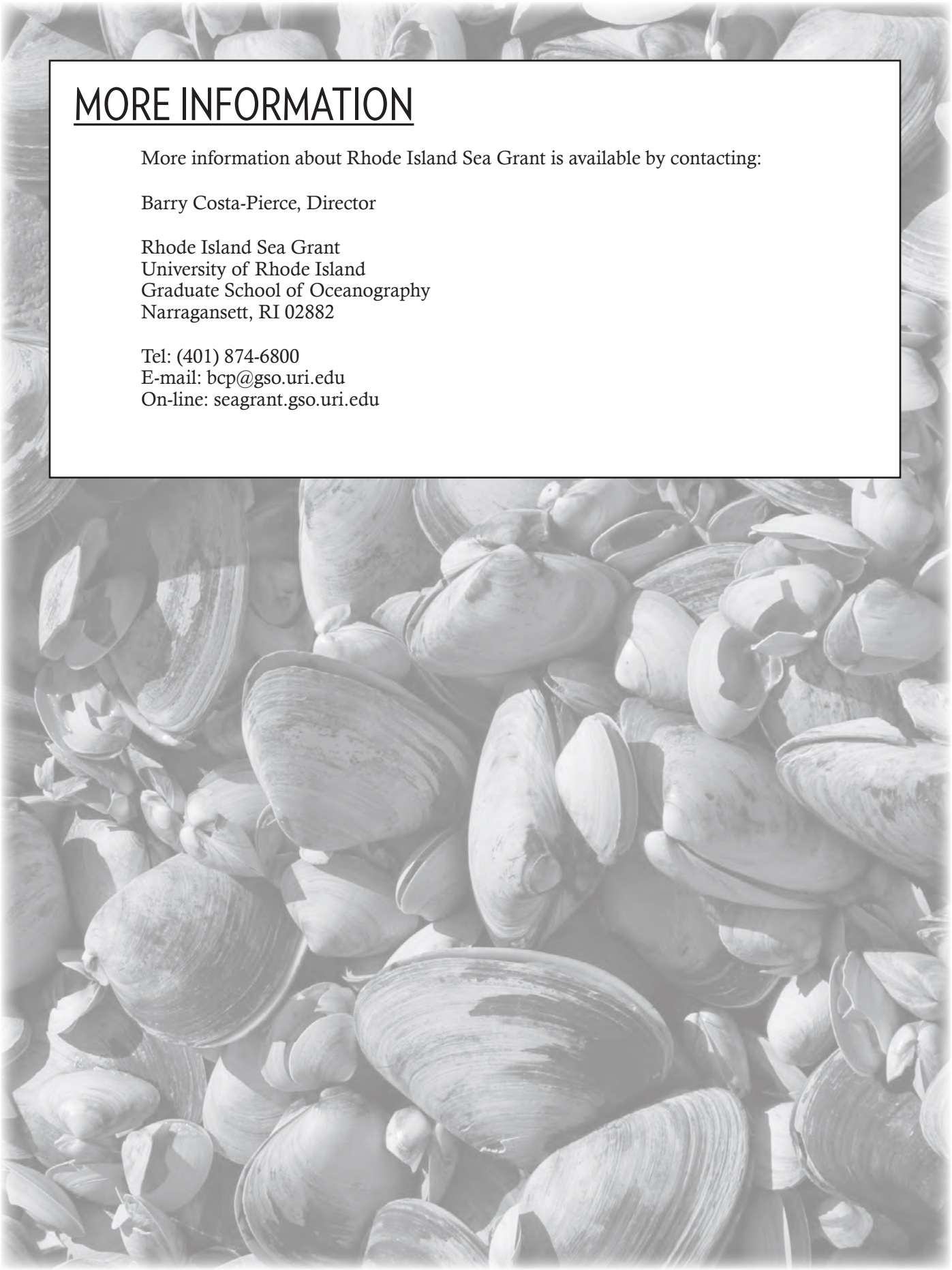

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