

New York Sea Grant Strategic Plan 2010 - 2013

VISION STATEMENT

With the release and adoption of the Final Recommendations of the Interagency Ocean Policy Task Force in the summer of 2010, the United States has entered a new era of ocean policy. These Final Recommendations establish both the ocean policies of the United States and provide a framework for implementing them.

As summarized in the Final Recommendations

(*see pdf*, <http://www.seagrantsunysb.edu/Images/Uploads/PDFs/OceanPolicyReport0710.pdf>)

and adopted by Presidential Executive Order on July 19, 2010:

It is the Policy of the United States to:

- Protect, maintain, and restore the health and biological diversity of ocean, coastal, and Great Lakes ecosystems and resources;
- Improve the resiliency of ocean, coastal, and Great Lakes ecosystems, communities, and economies;
- Bolster the conservation and sustainable uses of land in ways that will improve the health of ocean, coastal, and Great Lakes ecosystems;
- Use the best available science and knowledge to inform decisions affecting the ocean, our coasts, and the Great Lakes, and enhance humanity's capacity to understand, respond, and adapt to a changing global environment;
- Support sustainable, safe, secure, and productive access to, and uses of the ocean, our coasts, and the Great Lakes;
- Respect and preserve our Nation's maritime heritage, including our social, cultural, recreational, and historical values;
- Exercise rights and jurisdiction and perform duties in accordance with applicable international law, including respect for and preservation of navigational rights and freedoms, which are essential for the global economy and international peace and security;
- Increase scientific understanding of ocean, coastal, and Great Lakes ecosystems as part of the global interconnected systems of air, land, ice, and water, including their relationships to humans and their activities;
- Improve our understanding and awareness of changing environmental conditions, trends, and their causes, and of human activities taking place in ocean, coastal, and Great Lakes waters; and
- Foster a public understanding of the value of the ocean, our coasts, and the Great Lakes to build a foundation for improved stewardship.

Most important to New York Sea Grant (NYSG) is the implementation strategy, as outlined below in the Final Recommendations.

National Priority Objectives

1. **Ecosystem-Based Management:** Adopt ecosystem-based management as a foundational principle for the comprehensive management of the ocean, our coasts, and the Great Lakes.
2. **Coastal and Marine Spatial Planning:** Implement comprehensive, integrated, ecosystem-based coastal and marine spatial planning and management in the United States.
3. **Inform Decisions and Improve Understanding:** Increase knowledge to continually inform and improve management and policy decisions and the capacity to respond to change and challenges. Better educate the public through formal and informal programs about the ocean, our coasts, and the Great Lakes.
4. **Coordinate and Support:** Better coordinate and support Federal, State, tribal, local, and regional management of the ocean, our coasts, and the Great Lakes. Improve coordination and integration across the Federal Government, and as appropriate, engage with the international community.
5. **Resiliency and Adaptation to Climate Change and Ocean Acidification:** Strengthen resiliency of coastal communities and marine and Great Lakes environments and their abilities to adapt to climate change impacts and ocean acidification.
6. **Regional Ecosystem Protection and Restoration:** Establish and implement an integrated ecosystem protection and restoration strategy that is science-based and aligns conservation and restoration goals at the Federal, State, tribal, local, and regional levels.
7. **Water Quality and Sustainable Practices on Land:** Enhance water quality in the ocean, along our coasts, and in the Great Lakes by promoting and implementing sustainable practices on land.
8. **Changing Conditions in the Arctic:** Address environmental stewardship needs in the Arctic Ocean and adjacent coastal areas in the face of climate-induced and other environmental changes.
9. **Ocean, Coastal, and Great Lakes Observations, Mapping, and Infrastructure:** Strengthen and integrate Federal and non-Federal ocean observing systems, sensors, data collection platforms, data management, and mapping capabilities into a national system, and integrate that system into international observation efforts.

These Priority Objectives provide an excellent framework for the NYSG Strategic Plan. NYSG is already active in almost all of these areas, with Number 7, Changing Conditions in the Arctic, probably the only objective that is not applicable. Many of our past and present research and extension efforts have addressed topics important to Ecosystem-Based Management, Coastal Resiliency, Ecosystem Protection and Restoration, Water Quality, and Coastal Observations. Our educational efforts help to Inform Decisions and Improve Understanding and our many partnerships with a wide variety of agencies and groups assist in efforts to Coordinate and Support. These objectives also highlight new areas for NYSG efforts, especially Coastal and Marine Spatial Planning and Adaptation to Climate Change. As the National Oceanic and Atmospheric Administration (NOAA) moves forward to establish the NOAA

Climate Service, NYSG's new efforts in climate extension and outreach will assume greater importance.

However, just as the role of NYSG becomes more closely aligned with national policy and is increasingly important, both Federal and State funding for these efforts are in greater jeopardy. This is a direct result of the financial crisis and the increasing deficit and debt burden at all levels. Furthermore, it is a problem in many states and is not just limited to New York. It is likely that both the New York State budget and the Federal science budget, including our major funding source, NOAA, as well as other Federal agencies, will be increasingly constrained the coming years.

Thus NYSG has the opportunity and challenge is to better address the National Priority Objectives at the same time that funding for these activities is flat or declining. It is clear that creative new ways of financing will be essential to increase or even maintain support for NYSG efforts to address these objectives. In the past, our most successful source of additional funding has been Federal pass-through funds for special programs or initiatives. These initiatives have been especially research productive and produced important synthesis volumes which attracted wide attention and have helped to define the state of the art going forward.

NYSG has received limited new Federal funding through the Great Lakes Restoration Initiative (GLRI) and will continue to pursue this over the next few years. Additional Federal funding may be available through new areas of major focus, such as Coastal and Marine Spatial Planning. Other sources of potential NYSG funding, including private and foundation support, should be sought in the future.

Introduction and Process

This is the new strategic plan for New York Sea Grant (NYSG) for the years 2010- 2013 as requested by the National Sea Grant Office. This plan has been developed during 2009 with input from the Board of Governors, Program Advisory Council, academic researchers in New York, and NYSG staff and stakeholder groups. (The Vision Statement was added in 2010). Members of the Board of Governors and Program Advisory Council were also invited to comment on the plan following its development and those that did were overwhelmingly supportive. Some had suggestions for minor changes which have been largely incorporated. This plan draws upon the Strategic Plan of the National Sea Grant College Program (2009-2013) and other documents, but is focused on the needs of New York and its citizens.

The plan is structured around three Program Goals and four Focus Areas. The Program Goals are unique to NYSG and provide a clear focus and ready shorthand (economics, environment, and education) for discussing the program and its goals with policy makers and stakeholders, particularly when conducting our work and seeking funding. The Focus Areas conform to the Focus Areas of the strategic plan of the National Sea Grant College Program (2009-2013), which simplifies interactions with the National Sea Grant College Program and other state Sea Grant programs as well as reporting to the National Sea Grant Office. This is also important in helping the National Sea Grant College Program to become more of a focused national program which addresses the needs of the National Oceanic and Atmospheric

Administration (NOAA) and the Nation (Report of the National Sea Grant Advisory Board on Sea Grant Research, August 2009)

Background

Among the 32 programs of the National Sea Grant College Program, New York is the only state program bordering two Great Lakes and the open ocean. More than 85 percent of New York's 19 million people live within a short distance of the State's 3400 miles of Great Lakes, estuarine and marine coastline. Prominent New York State coastal water bodies include the Hudson, St. Lawrence, and Niagara Rivers; Lakes Ontario and Erie; Long Island's estuarine bays; Long Island Sound; New York Harbor; as well as the New York Bight and the coastal Atlantic Ocean. With so much of the State's economy and population relying upon and impacting the State's marine and Great Lakes resources, there is a compelling need for informed management of the interactions between people and the ecosystems associated with these areas. As a university-based program committed to developing and extending peer-reviewed science and to having it used by decision makers, NYSG is well-positioned to assist all levels of government and private entities by "Bringing Science to the Shore." As a university-based Federal-State partnership, NYSG is jointly overseen by the State University of New York (SUNY) and Cornell University through a Board of Governors representing both Universities.

MISSION STATEMENT

In a time of accelerating economic, environmental, and scientific developments, New York Sea Grant (NYSG) will serve as an important partner in helping New York's diverse coastal communities to respond to rapid economic and environmental changes. (The term coastal used throughout this document includes all the Great Lakes, estuarine, and marine coastlines mentioned above.) New York Sea Grant will support the development of objective, peer-reviewed scientific information about New York's coastal resources that is needed for current and future decision-making. It will also communicate the important results of these and other scientific studies in forms useful to its stakeholders and partners in New York's coastal communities. These partners and stakeholders include coastal residents; coastal businesses and their workers; policy-making officials and staffs of municipal, State, and Federal governments and agencies; and teachers and students. Through the development and dissemination of this scientific research-based information, tools, and expertise, New York Sea Grant, working with these stakeholders and partners, will use an integrated approach to advance its three Program Goals below.

PROGRAM GOALS:

New York Sea Grant has three integrated Program Goals which provide the direction to drive the program forward. All three Program Goals are separately highlighted but are closely connected and do not stand alone. The most effective strategies are those which lead to progress on more than one Program Goal simultaneously.

Coastal economic vitality NYSG will support coastal communities in protecting and promoting their economic vitality consistent with their use of coastal resources in a sustainable manner. This encompasses many aspects of coastal economic activities including tourism, fisheries, and other waterfront businesses, as well as minimizing environmental hazards to business activity.

Coastal environmental sustainability NYSG will assist coastal communities in ensuring the long-term health and sustainability of coastal environments. This includes limiting the long-term impacts of many different human interactions with the coastal environment, including recreational, commercial, and watershed impacts.

Coastal citizens' awareness and understanding NYSG will engage many sectors of coastal communities through education and training programs to improve coastal awareness and literacy, as well as the understanding of sustainable coastal environments and economies. Teachers and students as well as many other coastal partners will be engaged by these efforts.

FOCUS AREAS:

Within these over-arching major Program Goals, New York Sea Grant has four Focus Areas which correspond to the focus areas of the National Sea Grant College Program Strategic Plan 2009-2013. Aspects of each of these Focus Areas address all three major Program Goals, though some more than others.

Healthy New York coastal ecosystems

Focus area goals:

Reduced or mitigated impacts of aquatic invasive species

Strategies:

1. Support research and research syntheses on the biology, introduction, effects, prediction, management, and control of important invasive species in order to reduce or mitigate their impacts.
2. Educate and motivate stakeholders to adopt practices that will limit the introduction and spread of invasive species through a variety of outreach efforts.

Improved coastal water quality

Strategies:

1. Support research and research syntheses on water quality problems such as nutrients and contaminants (including new and emerging contaminants), as well as the impacts of these problems including harmful algal blooms, hypoxia, and fish consumption advisories. Help to develop methods to improve water quality and thus minimize these adverse impacts.
2. Demonstrate the impact of everyday individual actions on New York State's coastal water quality to help motivate the public to implement stewardship activities. Provide the information needed to show the scale of impact that various mitigation measures could have.
3. Educate representatives of municipal and private drinking water treatment facilities, public health officials, local government agencies, and lake associations about water quality issues including nutrients and cyanobacterial blooms. Assist with mitigation strategies to limit impacts on drinking water supplies and in coastal waters.
4. Extend science and research to adults, educators, and youth to increase knowledge of coastal habitat issues and to increase coastal and ocean literacy.

Restored and well-managed habitat

Strategies:

1. Support research and research syntheses in habitat management and restoration to develop new techniques, assess sustainability, and determine the effectiveness of current approaches.
2. Support research on and the application of ecosystem-based management methods to best respond to current and future uses and needs.
3. Extend science and research to educators and youth to increase knowledge of coastal water quality issues and to increase coastal and ocean literacy.

Sustainable New York coastal development

Focus area goals:

Robust coastal business development

Strategies:

1. Support research on improved understanding and implementation of sustainable and cost effective environmental best management practices (BMPs), especially as they relate to the design and operation of marinas and other waterfront businesses. Work with waterfront businesses, agencies, and communities to better identify, evaluate, and implement such practices.
2. Assist marine industry and local and state decision makers to better identify and assess impediments to meeting dredging needs for recreational boating, and use NYSG information and assistance to start developing sustainable regional dredging and dredged material management plans and programs.
3. Provide information to coastal tourism industries and businesses to help them maintain and build their economic viability in an environmentally sustainable manner.

Effective community land use planning which integrates watershed issues

Strategies:

1. Educate municipalities, organizations, and citizens to help reduce nonpoint source and stormwater pollution and limit their effects on coastal habitats and water quality.

Effective coastal spatial planning and utilization of coastal waters for commerce and conservation

Strategies:

1. Support research to develop tools for State and local communities to use in planning for diverse but compatible uses of submerged lands.

Safe and sustainable New York seafood supply

Focus area goals:

Sustainable coastal fisheries stocks for New York commercial and recreational fishers

Strategies:

1. Identify and address causes and remedies for the declines of finfish and shellfish of economic importance in New York estuaries and coastal waters through research and outreach. Increase awareness in fisheries-dependent coastal communities about additional threats to fisheries health and economic stability, and facilitate appropriate steps to help reduce them.
2. Inform recreational fishing communities about new and alternative tools being applied in other regions to successfully manage coastal fisheries.
3. Educate children about the recreational value of fishing, sustainable fishing practices, and the coastal ecosystems.

Safe, high quality, seafood products from profitable New York seafood businesses

Strategies:

1. Assist businesses, decision makers and other interested parties to use information on current issues, policies, regulations, or other conditions that could affect the productivity and profitability of their individual seafood business or the seafood industry in New York. Support additional research in these areas as needed.
2. Educate individuals from seafood businesses to obtain the knowledge and skills that they need to build and manage an effective Hazard Analysis Critical Control Point (HACCP) based food safety plan and comply with the requirements of the Food and Drug Administration's (FDA) Seafood (HACCP) regulation. In addition, aid the training of state or federal food safety inspectors in HACCP principles and the FDA Seafood HACCP regulations.
3. Support research to facilitate the potential expansion of sustainable aquaculture in New York State to increase seafood products for New York and U.S. consumers.

Hazard resilience in New York coastal communities

Focus area goals:

Improved response to coastal hazards

Strategies:

1. Support research to better predict and respond to coastal hazards and their potential impacts in the New York coastal zone. These hazards include hurricanes and nor'easters, and their associated storm surges, flooding, and erosion.
2. Enhance New York Sea Grant's capabilities to enable timely responses to rapidly-developing coastal high water, flooding, and/or erosion events and to assist coastal landowners, decision-makers, marine contractors, and marine facility owners to deal with developing hazardous situations.
3. Educate coastal landowners, decision makers, marine contractors, realtors, and marine facility operators about shoreline erosion, erosion control, and in the Great Lakes region, lake level fluctuations as well.

Adaptive responses to climate change and sea level rise impacts

Strategies:

1. Assist coastal communities and decision makers to better understand and be more aware of existing and potential future coastal flooding hazards related to climate change so that they can better plan for the future.
2. Assist Federal, State and local agencies and governments to have better information on regional coastal natural processes and resources and access to new tools that can be used to help identify and evaluate appropriate long term strategies for addressing coastal hazards and climate related impacts.