

# **New York Sea Grant Strategic Plan**

## **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. 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 Subject 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 Subject 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 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.

## Subject Areas:

Within these over-arching major Program Goals, New York Sea Grant has four Subject Areas (see matrix below) 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, as shown in the matrix below.

### A. *Healthy New York coastal ecosystems*

Subject area goals:

#### i. 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.

#### ii. 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.

#### iii. 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.

B. *Sustainable New York coastal development*

Subject area goals:

i. 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.

ii. 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.

iii. 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.

C. *Safe and sustainable New York seafood supply*

Subject area goals:

i. 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.

ii. 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.

D. *Hazard resilience in New York coastal communities*

Subject area goals:

i. 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.

ii. 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.

**A Few Examples of how Specific Strategies Fit within the Program Goal—Subject Area Matrix**

<b>Program Goals →</b>	<b>1. Economic Vitality</b>	<b>2. Environmental Sustainability</b>	<b>3. Informed Citizenry</b>
<b>Subject Areas ↓</b>			
A. Healthy NY Coastal Ecosystems	A.i.2. Invasive species outreach to stakeholders to limit impacts.	A.i.1. Invasive species research A.ii.1. Water quality research	A.ii.2. Water quality outreach to the public
B. Sustainable NY Coastal Development	B.i.1. Addresses best management practices for NY waterfront businesses.	B.iii.1. Support research to develop tools for marine spatial planning	B.ii.1. Educate municipalities about non-point source pollution issues.
C. Safe and Sustainable NY Seafood Supply	C.ii.2. HACCP training for businesses.	C.i.1. Address fisheries declines	C.i.3. Educate children about fish and fishing.
D. Hazard Resilience in NY Coastal Communities	D.i.2. Enable rapid hazard response	D.ii.1. Assist location communities in planning for climate change impacts	D.i.3. Educate stakeholders about erosion and control

**Internal Programmatic Goals**

NYSG seeks to expand its impact on New York coastal problems through the support of academic researchers in New York as well its own education and outreach (extension) activities. To increase its role in this area which is crowded with Non-Governmental Organizations (NGOs) and State Agencies conducting similar activities, NYSG must stress its unique characteristics, consider sharpening its focus, and increase its resources. NYSG is a university-based program which receives both State and Federal funding. NYSG is more readily able to bring the best university-generated scientific information to bear on important coastal issues than advocacy-based NGOs or mission-oriented State Agencies. In addition, NYSG may have more personnel flexibility than State agencies to more quickly address new problems or opportunities.

In the future, NYSG must consider sharpening its focus to increase its impact. This may include an increased focus on a narrower suite of research and outreach issues than described in this Strategic Plan. This could result from a more specific call for proposals from NYSG or as part of a National Sea Grant College effort to focus on specific issues, such as climate change impacts, as described in the recent National Sea Grant Advisory Board Report (2009). In addition, NYSG will also consider supporting more syntheses of important research topics, establishing a stronger integration of research and extension

activities, and implementing a more rapid and frequent dissemination of results and impacts. Requiring better extension connections in our research proposals and more effectively utilizing previously funded research for extension purposes are also important potential improvements. We will also be re-envisioning our communications program to make sure that it provides the maximum benefit for NYSG and our stakeholders.

Finally, NYSG needs to become more creative about seeking additional sources of funding. Its core Federal funding has been constant for several years and State funding has been limited and unpredictable and is likely to be constrained in the next few years. Some of NYSG's greatest impacts in the past have come through special research initiatives which generated significant outside funding. National Sea Grant College Program funding for such special initiatives is no longer available because of the effort to maintain constant state allocations. Therefore, NYSG has and will continue to seek additional funding from other Federal and State Agencies as well as possible additional sources in an effort to increase its funding. The Great Lakes Restoration Initiative of the US Environmental Protection Agency is just one example of a potentially large outside funding source that NYSG is currently pursuing. Finally, NYSG will increasingly emphasize regional partnerships with other Sea Grant Programs, NOAA, and other groups, especially in the Northeast and Great Lakes, to increase the significance of our efforts.

### **Description of the Implementation Planning Process**

The NYSG Implementation Plan was developed relatively quickly following a much longer process for the development of the NYSG Strategic Plan described earlier. Outcomes and performance measures were selected based on current research, communication, and extension activities that we need to continue, as well as some new subject areas that we need to expand (e.g., climate change) or begin (e.g., marine spatial planning) during the next four years. During this process we relied on the guidance from the National Sea Grant Office as well as the National Sea Grant Implementation Plan. Since the National Implementation Plan does not contain Measureable Objectives (Template II) but emphasizes Outcomes and Performance Measures, we have done the same. During the planning process the management team has had considerable discussion with the NYSG staff in order to make sure that the stated outcomes are important and that the performance measures can be achieved. We believe that this is an ambitious implementation plan that strongly addresses both our Program and Subject Area Goals.