



Virginia Sea Grant Strategic Plan

Update 2013-2014

Introduction

In 2012, we conducted a midcourse check-in on the Virginia Sea Grant (VASG) 2010-2014 strategic plan. VASG kicked this off with several stakeholder input sessions, including: dedicated discussion and voting sessions at the 2012 Annual Project Participants' Symposium; Research and Education Advisory Committee (REAC) surveys of priorities; External Advisory Committee (EAC) invitations to comment; and an online open comment period on the existing priorities. The results are reflected in this version of the strategic plan goals and objectives text.

We received comments suggesting that, in general, the strategic plan is still valid and supported by stakeholders. We have incorporated modest adjustments to put more emphasis on the emerging priorities of climate change and watershed-wide issues. We have also incorporated suggestions to modestly edit some priorities for clarity and consistency of scale. Some focal area titles have been adjusted to align with NOAA's national Sea Grant strategic plan.

We suggest a more thorough refinement should await the full development of a new strategic plan, when we can get greater stakeholder and advisory group input.

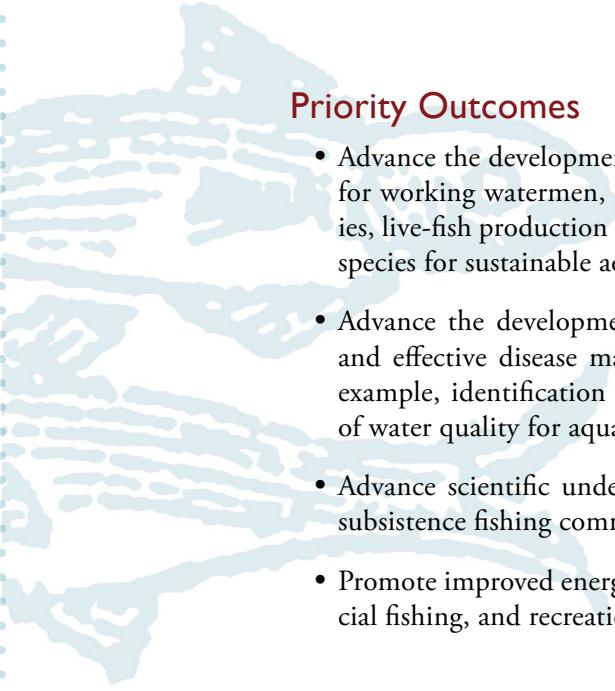
Goals and Outcomes by Focus Area

Sustainable Fisheries and Aquaculture

Goal 1: Advance scientific understanding of socially, economically, and ecologically sustainable fisheries and aquaculture and support sustainable fisheries and aquaculture businesses in coastal Virginia.

Highest Priority Outcomes

- Advance the development of bycatch-reduction devices and strategies, conservation engineering, and sustainable fishing practices in commercial and recreational fishing, and the use of collaborative research to promote sustainable fishing practices.
- Help individuals enter and remain competitive in a sustainable aquaculture industry, including the development and use of collaborative research to promote sustainable aquaculture practices, and advanced economic impact analysis.



Priority Outcomes

- Advance the development and use of innovative, adaptable, and viable business models for working watermen, including, for example, sustainable community-support fisheries, live-fish production and marketing, utilization of bycatch species, and potential new species for sustainable aquaculture.
- Advance the development and use of science for optimization of culture conditions and effective disease management in shellfish and finfish aquaculture, including, for example, identification and use of environmentally responsible controls, implications of water quality for aquaculture farms and hatcheries, and disease diagnostic capacity.
- Advance scientific understanding of and expand extension services for minority and subsistence fishing communities.
- Promote improved energy efficiency and utilization in all areas of aquaculture, commercial fishing, and recreational fishing.

Goal 2: Provide stakeholders with the best available science, facilitate stakeholder engagement in decision making, and advance science-to-management and technology adoption.

Highest Priority Outcomes

- Provide resource managers with the best available science and decision-support tools to promote effective regulatory actions, resource allocations between user groups, and resource sustainability.

Priority Outcomes

- Facilitate education, collaboration, and networking among all sectors of the fishing industry, and dialogue across the general public, industry, NGOs, and government sectors.
- Increase awareness among fishing and aquaculture businesses as well as local and state officials about jurisdictions of regulatory authorities for all aspects of fisheries and aquaculture.

Goal 3: Increase understanding and application of best practices in seafood safety, product and market development, and seafood-processing efficiencies.

Highest Priority Outcomes

- Encourage participation of seafood scientists and industry in VASG research.
- Promote efficiencies, byproduct utilization, and improved waste treatment systems in the seafood-processing industry.
- Advance emerging markets for seafood products in local farmer markets, community-supported fisheries, or other buy-local or high-value product strategies.



Priority Outcomes

- Develop an innovative, integrated model for new value-added products along with business and marketing support to identify and facilitate access to commercial markets.
- Promote seafood-processing efficiencies through the use of sustainable energy practices in seafood processing.

Goal 4: Provide technical support and guidance to industry to increase food safety and product quality.

Highest Priority Outcomes

- Promote the implementation of up-to-date post-harvest safety technologies and methods and best management practices.
- Improve industry understanding of food-safety hazards and increase compliance with regulatory requirements by providing training and technical assistance in developing HACCP plans.

Priority Outcomes

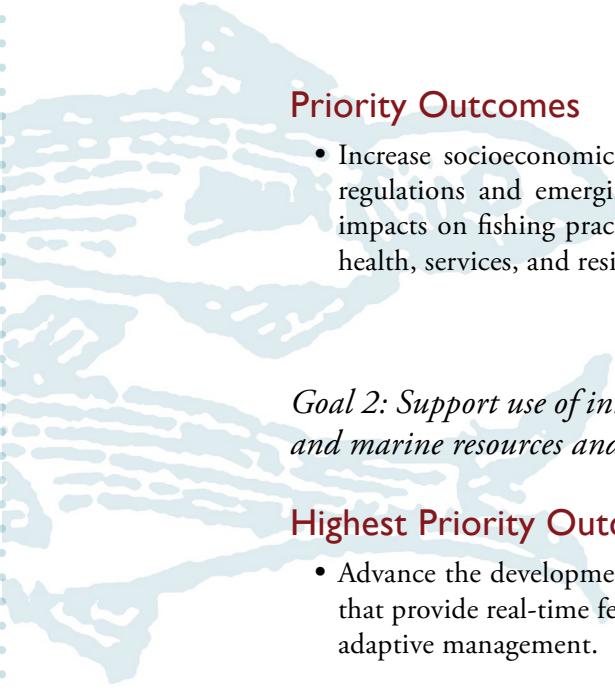
- Evaluate the microbial shelf-life and microbial safety of new value-added products and traditional products.

Healthy Coastal and Ocean Ecosystems

Goal 1: Develop and provide sound scientific information to support ecosystem-based approaches to managing the coastal and marine environment and enhancing ecosystem health, services, and resilience.

Highest Priority Outcomes

- Increase understanding of the interactions between fisheries and aquaculture activities and ecosystem health, services, and resilience, including, for example, oyster restoration and nutrient budgets.
- Increase understanding of the relationship between human use patterns and ecosystem health, services, and resilience, including coupled human-environment systems, the cumulative and interactive effects of natural and anthropogenic impacts, land-estuarine-sea interactions, and inshore-offshore dynamics.
- Advance scientific understanding and stakeholder awareness of the response of ecosystem health, services, and resilience to the impacts of climate change.



Priority Outcomes

- Increase socioeconomic, policy, and management understanding of current fisheries regulations and emerging ecosystem-based fisheries management systems, including impacts on fishing practices, stocks, human communities, governance, and ecosystem health, services, and resilience.

Goal 2: Support use of integrated, ecosystem-based approaches to managing coastal and marine resources and enhancing ecosystem resilience.

Highest Priority Outcomes

- Advance the development and use of decision-support tools and monitoring protocols that provide real-time feedback at a high spatial and temporal resolution for integrated, adaptive management.
- Advance the development and use of indices of ecosystem health and resilience, community resilience, and management effectiveness.

Priority Outcomes

- Synthesize the scientific knowledge that resource managers need in order to pursue ecosystem-based approaches to management.
- Assist partners in undertaking integrated, ecosystem-based approaches.
- Advance the use of indices, maps, and other observational systems, monitoring data, and decision-support tools for public deliberation on the societal trade-offs inherent in ecosystem-based approaches to management.

Resilient Communities and Economies

Goal 1: Advance healthy and sustainable coastal economies with working waterfronts, recreation, tourism, coastal access, and vibrant green coastal and marine technology jobs.

Highest Priority Outcomes

- Inform decision making by advancing scientific understanding of the human dimensions of coastal and ocean land- and water-use, including, for example, infrastructure, public financing, public access, and other socioeconomic, policy and management, and legal studies.
- Increase scientific understanding of the link between sustainability and working waterfronts, recreation, tourism, coastal access, and green coastal and marine jobs.



Priority Outcomes

- Support market analysis and development of green coastal and marine technology jobs and industries.

Goal 2: Promote sustainable and efficient use and protection of land, energy, and water resources by coastal communities.

Highest Priority Outcomes

- Develop decision-support tools to assist community planners, city and local officials, planning commissions, and voting citizens and to complement existing regional capacity.

Priority Outcomes

- Advance effective science-to-management at the local level through, for example, increasing awareness in the university-based scientific community about how local governments function and are structured, promoting dialogue among local and university stakeholders, etc.
- Increase understanding of science and policy relating to marine energy development and other green coastal and marine technology industries.

Goal 3: Encourage coastal citizenry, leaders, and industry to recognize the complex societal trade-offs inherent in sustainability and work together for sustainability and balance.

Highest Priority Outcomes

- Advance the development and use of decision-support tools and procedures that foster management and resolution of complex multi-use conflicts.

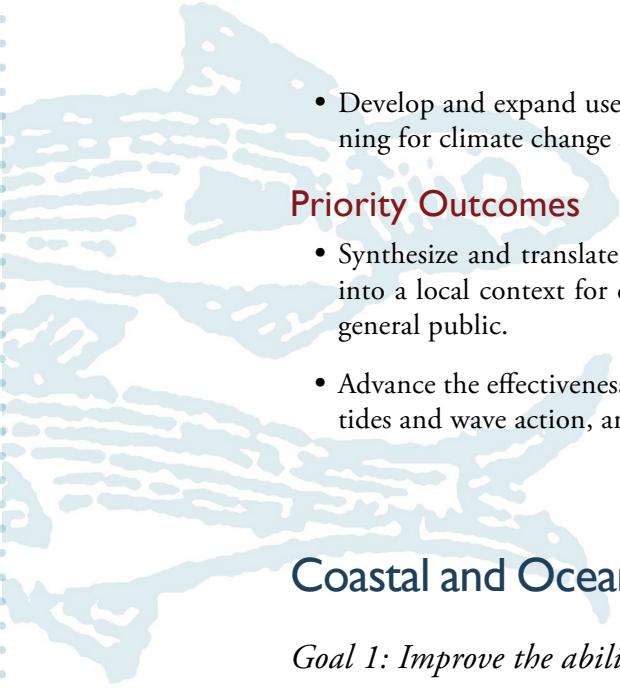
Priority Outcomes

- Design and deliver professional development programming to citizen-members of planning bodies and commissions, in collaboration with existing programs.

Goal 4: Build coastal community capacity to prepare, adapt, and respond to climate change impacts and other natural and human hazards.

Highest Priority Outcomes

- Advance scientific understanding of the socioeconomic, infrastructure, policy and management, and other human dimensions impacts from climate change.
- Advance scientific understanding of the effectiveness of climate adaption measures.



- Develop and expand use of best management practices, and advanced design and planning for climate change adaptation in targeted coastal industries and communities.

Priority Outcomes

- Synthesize and translate research data on storm events, tides, waves, and sea-level rise into a local context for city and local officials, planners, marine-trade groups, and the general public.
- Advance the effectiveness of prediction and impacts visualization tools for storm events, tides and wave action, and sea-level rise at the local level.

Coastal and Ocean Literacy and Workforce Development

Goal 1: Improve the ability of educators to teach about coastal and ocean science.

Highest Priority Outcomes

- Translate science-based information about the coast and ocean to make it accessible and useable for classroom teachers, informal educators, and outreach staff at non-governmental organizations and government agencies.
- Provide easy access to online resources for use in teaching coastal and ocean science, including expanding VASG distance-learning capacity for teachers and other audiences.

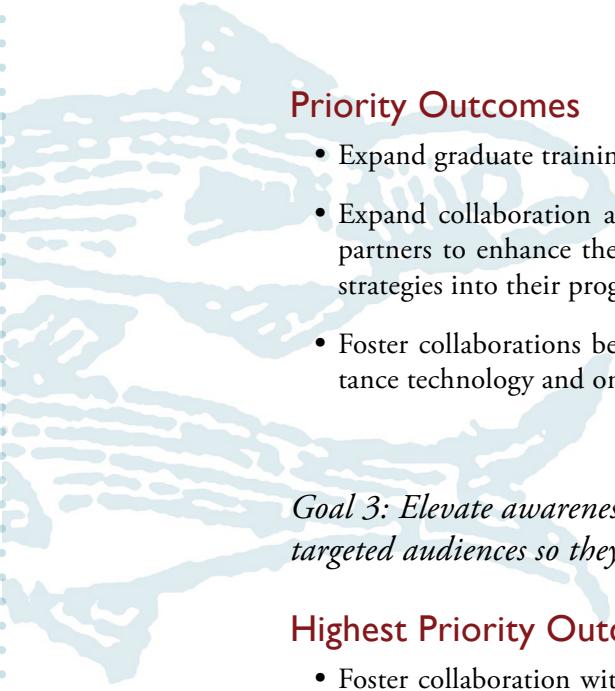
Priority Outcomes

- Design and implement teacher professional development based on educational best practices.
- Provide service to education organizations in order to promote coastal and ocean science education regionally and nationally.
- Develop and implement a comprehensive program evaluation and monitoring protocol to assess effectiveness, provide real-time feedback, and identify impacts of educational programs.

Goal 2: Enhance ability of scientists and extension staff across the VASG partner universities to communicate their work to coastal and ocean stakeholders.

Highest Priority Outcomes

- Enhance understanding of effective techniques and strategies for communication to non-scientists among graduates students, post-doctoral staff, and early career scientists.
- Increase collaboration with scientists to design effective, “broader impacts” outreach activities.



Priority Outcomes

- Expand graduate training in communicating ocean sciences in informal settings.
- Expand collaboration and networking with staff in other focus areas and university partners to enhance their impact through integration of educational tools, skills, and strategies into their programming.
- Foster collaborations between researchers and the education community through distance technology and online communities.

Goal 3: Elevate awareness and understanding of coastal and ocean science among targeted audiences so they can become more informed decision makers.

Highest Priority Outcomes

- Foster collaboration with educators in state agencies, local organizations, partner universities, and other stakeholder groups to enhance the effectiveness of Meaningful Watershed Educational Experiences (MWEEs) as defined by the Virginia Department of Education.

Priority Outcomes

- Engage K-12 students, early learners, (pre-K), families and the public-at-large in exciting and motivating interdisciplinary activities aimed at fostering life-long interest in and awareness of watershed, coastal, and ocean sciences.
- Increase awareness of coastal and ocean science issues among non-coastal teachers, community members, and leaders through targeted websites, distance learning technologies and other online resources.

Goal 4: Increase awareness and understanding of health, safety, and sustainability issues among the culinary community and consumers to enable them to make informed seafood choices.

Highest Priority Outcomes

- Provide fisheries information and resources to chefs and culinary students to foster their interest in and application of sustainable practices.
- Expand innovative strategies for delivering coastal and ocean literacy through culinary studies and programming.

Priority Outcomes

- Develop region-specific, science-based information for Virginia and Chesapeake Bay seafood consumers.
- Promote dialogue among fisheries scientists and suppliers of seafood consumer-choice information.

Virginia Sea Grant

Virginia Institute of Marine Science
PO Box 1346
Gloucester Point, VA 23062
804-684-7530

vaseagrant.vims.edu



VSG-12-10