



STRATEGIC PLAN  
**2024-2027**

**COLLABORATIVE**  
*TEAM SCIENCE*  
**INNOVATING**  
WORKFORCE DEVELOPMENT  
**ISSUE-ORIENTED**  
CONNECTING

# INTRODUCTION

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The National Sea Grant College and Program Amendments Act of 2008, originally passed in 1966, declares Sea Grant's objectives are to increase the understanding, assessment, development, utilization, and conservation of the Nation's ocean, coastal, and Great Lakes resources by providing assistance to promote a strong educational base, responsive research and training activities, broad and prompt dissemination of knowledge and techniques, and multidisciplinary approaches to environmental problems. A focus on education, research and training, knowledge transfer, and a multidisciplinary (even inter- and transdisciplinary) perspective is more relevant than ever and is needed to address today's coastal, estuarine and marine challenges. However, our educational, research, outreach, and disciplinary landscape has changed dramatically in Sea Grant's 56 years and what Sea Grant does, and needs to do, has changed too.

In fact, all aspects of our world are changing and changing rapidly. With change comes opportunities. We need ever more novel answers to increasingly complex coupled social, economic, ecological, technological, and cultural challenges in Virginia's coastal zone. The Commonwealth, region and nation need Virginia Sea Grant (VASG) more than ever to produce new knowledge, tomorrow's workforce and businesses, novel solutions that transcend disciplines, sectors and job functions, and to facilitate greater community engagement, inclusion, belonging and knowledge integration to tackle these challenges. Virginia Sea Grant will rise to the occasion, develop bold, innovative strategies that are transformative, expand inclusion, shape an exciting future, and lead.

VASG will be at the forefront of what is possible for a Sea Grant program. We will do this through the forward-thinking goals, objectives and strategies laid out in this plan. We will be the most creative and integrated Sea Grant program in the nation, through the proactive leveraging, orchestrating, and nurturing of a diverse, Commonwealth-wide, university-based organizational network with a culture of belonging. Diversity of expertise, knowledge and perspectives is the essential ingredient to innovation. To enable hunches and ideas to collide and produce novel solutions, VASG will invest in people, their ideas, skills and capabilities. VASG is proud of the impact and difference our past investments in people have made in the world, and we will continue to be humbled and proud of the contributions made by our people.

We will do all of this together, with our partners, and our community. Together, we will do more for Coastal Virginia.

## SUMMARY OF PLANNING PROCESS

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VASG is a multi-university partnership, forming an agile organizational network comprised of a broad portfolio of expertise. Our communities of practice, expertise, knowledge, and interests cross both institutional and functional (research, education, outreach, communication) boundaries. We adhere to rigorous network management and diversity, equity, inclusion, justice, and accessibility (DEIJA) principles that seek to optimize creativity, innovation, responsiveness, belonging, reach, impact, and performance.

VASG is headquartered at the Virginia Institute of Marine Science (VIMS), part of William & Mary (W&M), and composed of the University of Virginia, Virginia Tech, and George Mason, Old Dominion, and Virginia Commonwealth Universities, which represent all of Virginia's coastal, estuarine and marine science, technology, engineering, and mathematics doctoral degree-granting institutions. VASG's leadership and advisory structure includes its Research & Education Advisory Committee (REAC) with representatives from all of the partner institutions and the External Advisory Committee (EAC) composed of clients, stakeholders and partners in the public, private and non-profit sectors. The REAC and EAC meet regularly throughout the year. VASG administers its outreach and extension services through four entities - VIMS Marine Advisory Services; Virginia Tech Cooperative Extension, Seafood Agriculture Research & Education Center (AREC); W&M Law School, Virginia Coastal Policy Center (VCPC); and Old Dominion University's Institute for Coastal Adaptation & Resilience. The Extension Portfolio meets quarterly.

# SUMMARY OF PLANNING PROCESS

Strategic planning is a management tool, and while it produces an output, one of its greatest values is in establishing a culture of openness, transparency, and commitment to on-going dialogue with partners, stakeholders, and staff. VASG will listen, not only during strategic planning, but also daily. We will listen to and engage not only those that VASG has worked with for years, but those with whom we have never worked. We will listen to those that challenge us to think and act differently.

In regular REAC and EAC meetings and all of our events and activities, VASG is continuously reflecting upon the effectiveness of its programming, emerging needs and opportunities, and strategies for making a difference. Thus, this strategic plan is a living document. It records a snap-shot in time of VASG's strategic vision, objectives and tactics, but those are continuing to evolve and adapt to the changing conditions. Change is constant, and accelerating in many areas. VASG must keep up to remain impactful.

## THE NOTABLE PROCEDURAL STEPS THAT LED TO THE CREATION OF THIS PLAN INCLUDE:

- VASG Program Lead whitepapers - SWOT analysis, recommendations, implementation strategy.
  - Communications Center*
  - Professional Development*
  - Competitive Research & Education*
- Dedicated strategic planning meetings with VASG's university Research & Education Advisory Committee and stakeholder External Advisory Committee. SWOT analysis, Brainstorming, Prioritization, Strategic Plan and Implementation Plan Suggestions.
  - January 26, 2022*
  - February 23, 2022*
  - July 14, 2022*
  - July 19-20, 2022*
- VASG Leadership retreat - May 23-24, 2022
- One-on-one and focus group stakeholder Interviews
  - Private sector (11)*
  - NGOs (10)*
- Economic development organizations (6)
- Federal Congressional (8)
- State Congressional (3)
- Community colleges (5)
- Faculty (12)
- Local government (19)
- State government (12)
- Federal facilities (1)
- Private foundations (3)
- Students, fellows and alumni (28)
- Professional mentors (5)
- Extension portfolio meetings on strategic plan
  - February 11, 2022*
  - February 16, 2022*
  - March 23, 2002*
  - April 5, 2022*
  - April 15, 2022*
  - May 19, 2022*
  - June 21, 2022*
  - July 27, 2022*
- Stakeholder survey. June 2022 (N 168)

Collectively and iteratively this community engagement method resulted in draft versions of a strategic plan that was often used in subsequent discussions.

# VISION

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VASG envisions a future where an environmentally-informed people from diverse backgrounds live, work, and play along our coasts and in our oceans in harmony with the natural resources that attract and sustain them.

The VASG vision complements the vision articulated in the National Oceanic and Atmospheric Administration (NOAA) National Sea Grant Office's strategic plan.

# MISSION

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VASG's mission is to provide transformative, integrated education, research, communication, extension, legal and policy programs, to nurture the coastal, estuarine and marine workforce that create novel solutions to challenges in coastal communities, and to drive creativity through diversity of thought, life experiences, and a sense of belonging.

# CORE VALUES

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VASG's core values are foundational concepts upon which all other things grow - our organizational culture and operations, our people and their strengths, and the topics which we work on to serve our community. VASG is an honest, neutral broker of the best available knowledge We build long-term, trusting relationships in our communities.

## **Collaboration & Strategic Partnerships**

We can accomplish little alone; we seek interests that align, resources that are leveraged to produce synergistic outcomes, avoid duplication by filling gaps, and nurture partnerships for the short and long-term as laid out in our partnership typology.

## **Sustainability & Resilience**

We seek sustainable ecosystem services that in turn, support thriving human communities and economies, with particular attention to social and climate justice impacts as environmental conditions change.

## **Accountability, Reach & Impact**

We operate with integrity and transparency, maintaining high quality and relevant programming, filling gaps in the landscape, in order to extend the reach of our research, education, extension and communication services and maximize our impact.

## **DEIJA**

We strive to establish a culture of belonging where all perspectives engage without judgement or shame; where our community shows respect and sensitivity to all lived experiences; and we strive to overcome systemic challenges and reach new heights of knowledge integration and innovation.

## **Investment in People**

People solve problems. Not scientific findings, engineering, decision-support tools, legal analysis...but rather the people, with the knowledge, skills, competencies, and will to act upon the knowledge and assistance provided by Sea Grant.

# CROSS-CUTTING PRINCIPLES

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## Adaptive Management and Change

Change is constant across all operational elements and topical areas of VASG. Thus, we must instill the adaptive, flexible, fluid thinking and problem-solving skills to thrive in an uncertain future.

## Knowledge Integration

Co-production of knowledge, team science, collaborative research, and the integration of research, extension, outreach and communication are all essential tools to achieve sustainability and resilience.

## DEIJA

All ideas, all minds, all perspectives are valued and essential to achieve the change and adaptive competencies society needs, and such innovation will only come from integrating knowledge and ensuring all feel a sense of belonging.

Hard decisions require effective listening and communication, and informed, bold, smart risks and decisions. VASG is not afraid of making mistakes. We will learn from every life experience and will build a professional community to meet today's and tomorrow's coastal challenges.

# HOW WE WORK

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VASG will attend to the coastal zone in Virginia and the coastal, estuarine and marine interests in the broader geographic region of the Commonwealth and NOAA, including the Chesapeake Bay and the Mid-Atlantic Region. Furthermore, VASG will work regionally, nationally and internationally, as appropriate, to advance the interests of the Commonwealth and our partners. VASG is committed to fill targeted, critical gaps in the landscape of organizations, capacity, and resources in order to maximize impact, i.e., VASG will seek to address needs not addressed by others.

VASG will invest in people and their places. We will seek to provide them the capacity to be tomorrow's coastal, estuarine and marine science, management, policy, business, and community leaders. Consequently, VASG will focus on graduate students, post-graduates, and undergraduates in a wide range of relevant natural and social science, engineering, law and policy, and other disciplines.

We will serve the private, non-profit, public sector, and citizenry. In particular, we will serve local, state, and federal coastal, estuarine and marine resource agencies, the private sector (e.g., aquaculture industries, watermen, seafood processing industries, engineering/architectural and other resilience and water management industries, and other maritime industries), nongovernmental organizations (NGOs), and educational professionals (e.g., K12 teachers, culinary institutes). VASG will invest in the outreach capacity to address critical, unmet needs among these target audiences.

## FOCAL AREAS: WORKFORCE DEVELOPMENT & LITERACY

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VASG will develop transformational workforce development, coastal, estuarine and ocean literacy, and professional development programming – continuing its nationally recognized fellowship and training programs. VASG targets its programming toward specific audiences in positions of influence to achieve the greatest impact. Investing in people, and their professional skills, produces a multiplier effect, extending VASG’s impact years after our resource investment. Most citizens and current students in the United States received little if any in-depth classroom instruction in ocean sciences during their K-12 classroom years.

### GOAL:

A diverse environmentally literate public that participates in lifelong formal and informal engagement opportunities.

#### ACTION:

Create and implement educational resources and opportunities that are diverse, equitable, inclusive, just, and accessible for learners to explore multiple ways of learning and knowing, and to develop their curiosity and learning abilities throughout their lives.

#### DESIRED OUTCOMES:

- Individuals consider themselves environmentally literate lifelong learners who utilize knowledge to support, build, and restore healthy natural and human communities.
- Tribal nations, under-represented communities, and others facing social and climate justice issues have access to formal and experiential learning, training, and research experiences.

#### ACTION:

Develop, provide, and assess research, curricula, tools and other resources for teachers, students, and lifelong learners to support personal choice, participatory decision-making and community planning processes.

#### DESIRED OUTCOMES:

- Effective environmental literacy instruction for K-12 educators through both formal and informal education pedagogies.
- Effective environmental literacy instruction for key “bridges” between research findings and end-users.

## FOCAL AREAS: WORKFORCE DEVELOPMENT & LITERACY

### GOAL:

A diverse, skilled, entrepreneurial, environmentally-literate, and innovative workforce is engaged and enabled to build prosperous lives and livelihoods in a changing world, and address critical local, regional, and national coastal, estuarine and marine needs.

### ACTION:

Prepare a responsive and diverse workforce to advance and benefit from sectors that support the needs of coastal communities and ecosystems, and to adapt and thrive in changing conditions.

### DESIRED OUTCOMES:

- A diverse, highly competitive workforce through fellowships, internships and other educational and professional development opportunities.
- Effective peer-mentoring, executive coaching, and career-advancing professional development pedagogy for life-long professional cohort

### ACTION:

Increase opportunities for students and learners at all levels (technical and vocational, undergraduate, graduate, post-graduate, and alumni) to gain knowledge and experience addressing issues that are important to our oceans and coasts and their respective watersheds.

### DESIRED OUTCOMES:

- Comprehensive workforce development strategy and programs through extensive partnerships crossing community college, undergraduate, graduate, post-graduate, professional sectors.
- A diverse professional cohort of students, alumni, and mentors in an inclusive, supportive, life-long network.

### ACTION:

Identify and remove barriers to accessing training and learning opportunities so that Virginia's diverse population is connected to and prepared for the range of career paths that support the needs of coastal communities.

### DESIRED OUTCOMES:

- Participation and inclusion of under-represented and diverse groups, disciplines, and perspectives, particularly Tribal nations, under-represented communities, and others facing social and climate justice issues.
- All members of a community are enabled and feel welcome to explore and pursue the variety of occupations that are essential to sustain coastal, estuarine and ocean communities, economies and ecosystems.

## FOCAL AREAS: COASTAL RESILIENCE

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With the greatest level of relative sea level rise on the U.S. East Coast and significant historical, cultural, social, economic, and defense infrastructure, Virginia is currently feeling the impacts of climate change and is extremely vulnerable. Adaptation is a necessity on a large scale, although we have pockets of greater vulnerability where the immediate problems are more acute. Virginia has taken significant action - Coastal Master Plan, Community Flood Fund, university climate centers, etc. - and many organizations, resources, and initiatives have focused on the region. VASG will spark innovation that leads to novel, feasible design, policy, planning and management solutions, and community and economic development opportunities that enhance ecological, economic, and sociocultural resilience. We will prioritize serving vulnerable, at-risk, and diverse coastal communities throughout Coastal Virginia.

### GOAL:

Coastal communities have the capability and resources to prepare for and adapt to extreme and chronic weather and coastal hazards, climate change, economic disruptions, and other threats to community health and well-being.

### ACTION:

Improve and expand exchanges of knowledge to better identify the diverse needs of communities and to increase the public's understanding of changing conditions and related impacts.

### DESIRED OUTCOMES:

- Key decision makers are aware of changing conditions, their impacts, and adaptation options to enhance resilience, particularly the expansion of successful models.
- Expansion of cross-sector and -disciplinary partnerships and venues for building collaboration and integrating perspectives.

### ACTION:

Work with communities to advance collaborative comprehensive planning, actionable science, and adaptive management strategies.

### DESIRED OUTCOMES:

- Communities utilize planning and adaptive strategies to enhance community resilience and adapt to natural hazards and changing environmental, economic, and sociocultural conditions, including resilience assessment tools, novel designs, innovative policy, legal and financial mechanisms, and with particular attention to military, Tribal, and socio-economically vulnerable communities.
- Novel legal, policy, and finance solutions, community engagement opportunities, socioeconomic analysis, and community development strategies.

## FOCAL AREAS: COASTAL RESILIENCE

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### **ACTION:**

Work with communities to explore and support diversification, strengthening, sustainability, and social equity within coastal economic sectors and the blue economy.

### **DESIRED OUTCOMES:**

- Comprehensive workforce to grow a water adaptation and innovation economy (e.g., resilience design, off-shore wind and other renewable energies, emerging fisheries and aquaculture, and targeting young fishermen, under-represented communities, veterans, and other social and climate justice communities).
- Public-private partnerships leveraging regional assets to drive actionable science, engineering, design, and other resilience solutions.

### **ACTION:**

Collaborate with diverse partners and stakeholders, especially Tribal nations, under-represented groups, and the most vulnerable, to advance plans and management practices for protecting and managing resources.

### **DESIRED OUTCOMES:**

- Novel resilience designs for nature-based shoreline protection, storm and wastewater management, flood control, property access, resilient buildings, and other highly integrated blue-green-gray designs to enable equity, just, and fair changes in coastal development patterns.

## FOCAL AREAS: SUSTAINABLE AQUACULTURE & FISHERIES

The social, cultural, and economic significance of commercial and recreational fishing and aquaculture in Virginia is immeasurable. Although, the economic value exceeds \$1 billion annually. Virginians fish, farm, and recreate in the Chesapeake Bay, the coastal lagoons, and the Atlantic Ocean. Seafood safety and sustainable fisheries and aquaculture are legacy programs for VASG, with programming addressing issues from harvest to table cloth, from recreational to commercial, from individuals to small businesses, from efficient industrial production to community-based solutions, and from high-end restaurants to urban and suburban food deserts. VASG will advance the sustainability and resilience of fisheries, aquaculture, and the coastal communities that depend upon them through research, education, outreach, and extension services.

### GOAL:

Domestic fisheries, aquaculture, and other coastal natural resources supply food, jobs, and economic and cultural benefits.

### ACTION:

Promote and support harvest and processing techniques that lead to safe, sustainable, high-quality food, and socioeconomic and ecosystem benefits.

### DESIRED OUTCOMES:

- Enhanced knowledge and technology transfer in domestic aquaculture, and commercial and recreational fisheries, including emerging advanced technologies, offshore aquaculture, fisheries, and other emerging topics in a changing environment.
- Coastal, estuarine, and marine resource industries employ strategies that ensure biosecurity and safe seafood.
- Coastal, estuarine, and marine resource industries understand and employ strategies and technologies that ensure safe and sustainable seafood supplies and products.

### ACTION:

Support development of a trained and diverse workforce, and enhance technology transfer in a manner that recognizes a variety of methodologies and approaches, including those based on traditional and local knowledge.

### DESIRED OUTCOMES:

- Natural resources are sustained to support fishing communities and industries, including aquaculture, commercial, recreational, and subsistence fisheries, and young fishermen, Tribal nations, and other under-represented communities.
- Sound science, services, technologies, and tools are available and accessible for resource managers, fishing and aquaculture communities, Tribal nations, under-represented communities, and other stakeholders.

## FOCAL AREAS: HEALTHY COASTAL ECOSYSTEMS

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Healthy Coastal Ecosystems is central to all of VASG's focal areas. VASG's relevance hinges on demonstrating this connection to healthy coastal ecosystems and communities in everything we do. We attend to the Chesapeake Bay and the coastal and Mid-Atlantic and southern North Atlantic Ocean, particularly state and federal waters off the Virginia coast, but also other regions that directly benefit Virginia and its ecosystems and communities. Virginia's Middle Peninsula was named a NOAA Habitat Focal Area and the significance of marshes in coastal rural locations is critical to Virginia's overall resilience. Ecosystem boundaries are shifting with climate and new partnerships and areas of inquiry are needed to ensure vibrant and healthy coastal ecosystems and communities under these dynamic conditions. Highly integrated and transdisciplinary research, education, and outreach efforts are needed to achieve vibrant, healthy coastal ecosystems and communities in the current environment of change.

### GOAL:

Coastal and marine habitats, ecosystems, and the services they provide are protected, enhanced, or restored.

### ACTION:

Co-develop, improve, and share knowledge, decision-support tools, technologies, and approaches to protect and restore ecosystems.

### DESIRED OUTCOMES:

- Evidence-based science, traditional and local knowledge, and innovative solutions inform and improve the management, conservation, and resilience of coastal habitats.

### GOAL:

Land, water, and living resources are managed by applying sound science, tools, and services to sustain resilient ecosystems that support ecological and human communities and economies, and support Tribal Nations and other under-represented communities.

### ACTION:

Identify and advance successful strategies that enhance resilient ecosystems and watersheds in the context of changing conditions, including environmental variability and climate change.

### DESIRED OUTCOMES:

- Novel resilience designs that integrate blue-green-gray infrastructure to advance adaptation and resilience to flooding, sea level rise, erosion and other impacts of environmental variability and climate change.

## CLOSING

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VASG aims to have a culture of continuous improvement and learning, spurring innovation through the integration of diverse perspectives, knowledge and expertise. We monitor our performance with nationally reported performance metrics and operational measures that monitor the effectiveness, structure, and function of our organizational network. VASG invests in a diverse group of people to produce ideas and innovation, making the best use of their ideas, skills and capabilities. VASG is proud of the impact and difference its fellows, staff, and partners make in the world now, and will make in the future. If you have any further questions about VASG, please visit us at [www.vaseagrant.org](http://www.vaseagrant.org).





PHOTOGRAPHY BY AILEEN DEVLIN / VASG

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**[WWW.VASEAGRANT.ORG](http://WWW.VASEAGRANT.ORG)**

# ADDENDUM: PERFORMANCE MEASURES

## WORKFORCE DEVELOPMENT & LITERACY PERFORMANCE MEASURES

- Number of Sea Grant products that are used to advance environmental literacy and workforce development.
- Number of people engaged in Sea Grant-supported informal education programs.
- Number of Sea Grant supported graduates who become employed in a job related to their degree within two years of graduation.

## COASTAL RESILIENCE PERFORMANCE MEASURES

- Number of communities that adopt/implement sustainable economic and environmental development practices and policies as a result of Sea Grant activities.
- Number of communities that adopt/implement hazard resilience practices to prepare for and respond to minimize coastal hazardous events.

## SUSTAINABLE AQUACULTURE & FISHERIES PERFORMANCE MEASURES

- Number of fishers, seafood processors, aquaculture industry personnel or seafood consumers who modify their practices using knowledge gained in fisheries sustainability and seafood safety as a result of Sea Grant activities.

## HEALTHY COASTAL ECOSYSTEMS PERFORMANCE MEASURES

- Number of resource managers who use ecosystem-based approaches in the management of land, water, and living resources as a result of Sea Grant activities.
- Number of acres of coastal habitat protected, enhanced, or restored as a result of Sea Grant activities.

## REQUIRED CROSS-CUTTING PERFORMANCE MEASURES

- Sea Grant Staffing: Number of individuals and full-time equivalents (FTEs) by Sea Grant
- Core Funding Proposals: Number and Origination of Core Funding Pre- and Full- Proposals
- Number of Volunteer Hours
- Number of Sea Grant-Sponsored/ Organized Events
- Number of Attendees at Sea Grant-Sponsored/ Organized Events
- Number of Public or Professional Presentations
- Number of Attendees at Public or Professional Presentations
- Number of Marinas Certified as "Clean Marina" by the Clean Marina Program as a result of Sea Grant Activities
- Visitor Attendance: Number of people that visit museums, aquariums, and other informal education institutions hosting NOAA-supported exhibits or programs (NEW; Pilot)
- Environmental Actions: Number of people participating in environmental actions through NOAA education programs (NEW; Pilot)
- Number of Sea Grant tools, technologies and information services that are used by our partners/customers to improve ecosystem-based management
- Economic and societal impacts and benefits derived from Sea Grant activities (market and non-market; jobs and businesses created or sustained; patents/licenses)
- Number of Postsecondary Students and Degrees Financially-Supported by Sea Grant in Higher Education Programs (Undergraduate, Graduate)
- Number of P-12 Students who participated in Sea Grant-supported formal education programs
- Number of P-12 Students Reached Through Sea Grant-Trained Educators
- Number of educators who participated in Sea Grant-supported professional development programs
- Number of individuals certified or recertified in Hazard Analysis Critical Control Point (HACCP) as a result of Sea Grant activities
- Number of peer-reviewed publications produced by Sea Grant