



# Mississippi-Alabama Sea Grant Consortium 2018-23 Strategic Plan

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# 2018-2023 Mississippi-Alabama Sea Grant Strategic Plan

## Strategic Planning Process

Mississippi-Alabama Sea Grant Consortium (MASGC) staff used a multipronged approach to solicit and synthesize input from the people the program serves and professionals in the MASGC extension, outreach and education programs. The staff used the following sources of information to inform the strategic plan.

### **External and Internal Input**

The foundation of the 2018-2023 MASGC strategic plan builds upon the 2018-2021 MASGC strategic plan and the updated input that was collected in 2020. For the two-year extension of the 2018-2021 strategic plan an additional survey was released in 2020 to advisory council members, stakeholders, board of directors, and education and engagement (communications, extension and legal) team members. The feedback collected through this survey was used to update the strategic plan.

#### Advisory Council Input

The MASGC Advisory Council has 20 members who represent coastal and marine industries, non-governmental organizations and local, state and federal agencies. The Advisory Council met in March 2016 to discuss what people expect from MASGC; the unique capabilities of MASGC; the science, technology, economic, environmental, societal or other trends that will shape the future of MASGC over the next 10 years; and the top three problems MASGC should address using its research, extension, outreach and education capabilities.

#### External Stakeholder Input

The MASGC communications coordinator sent an email to more than 2,100 MASGC contacts asking them to answer the question, “Over the next 5-10 years, what coastal and marine problems should MASGC focus on solving?” The question was also shared through MASGC social media (on Facebook and Twitter). Eighty-five people provided in-depth answers to this question.

#### Extension, Outreach and Education Input

In July 2016, the MASGC extension, outreach and education staff were sent an online survey to provide input on the MASGC strategic plan. This was followed-up with a day-long, in-person meeting with extension and outreach staff on August 18, 2016, to discuss MASGC areas of strength and opportunities for the next strategic plan. The MASGC director and MASGC education director met in September to inform the development of this strategic plan.

### Use of other Relevant Planning Documents

MASGC staff reviewed other planning documents and reports to compare its needs with other organizations' needs. This helped identify leverage points to consider during the implementation of the MASGC plan. MASGC-supported staff were actively engaged in the development of these supporting documents. They include:

- Alabama Coastal Comprehensive Plan
- National Oceanic and Atmospheric Administration (NOAA) RESTORE Act Science Program's Science Plan
- National Academy of Science Gulf Research Plan Strategic Vision
- Mississippi Oyster Plan
- Mobile Bay National Estuary Program's Coastal Comprehensive Plan
- National Sea Grant leadership strengths, weaknesses, opportunities and threats (SWOT) analysis
- Nature-Based Tourism Plan for Coastal Mississippi
- The Northern Gulf of Mexico Sentinel Site Program needs assessment
- Gulf Sea Grant Oil Spill Science input synthesis reports
- Alabama Working Waterfront Coalition needs assessment
- NOAA Water Initiative Vision and Five-Year Plan
- Gulf of Mexico Resilience tools and services gap analysis
- Gulf of Mexico Alliance Action Plan
- Coastal Estuarine Research Federation Fisheries Town Hall meeting
- Sea Grant 10-Year Aquaculture Vision





Mississippi and the Gulf of Mexico through informed personal, policy and management decisions.

## Core Values

MASGC's values are essential and enduring tenets that influence the organization and support its mission. The core values support a culture of integrity within a community that is known as an honest broker. MASGC will be:

- *Diversity, Equity, and Inclusion (DEI)* – Enhance diversity, equity and inclusion by seeking and welcoming diverse perspectives to enhance cultural understanding and enable the network to pursue its vision and mission effectively and efficiently.
- *Visionary* – Advance innovative solutions that address emerging challenges (science and stewardship) and encourage creativity, initiative and innovation.
- *Collaborative* – Seek partnerships that leverage our strengths. Be responsive and accessible, respect partners, maintain scientific neutrality, integrate diverse expertise and provide the science and knowledge needed to inform stakeholders.
- *Dedicated to Sustainability* – Communicate the importance of good stewardship and the value of the services that the coastal and ocean ecosystems provide to the nation.
- *Accountable* – Operate with integrity and transparency. Maintain quality and relevance in administration, management and oversight.

## Organizational Excellence

MASGC is a consortium of nine institutions of higher education or marine laboratories that serve two coastal states (Alabama and Mississippi). MASGC members represent the lead research, extension and legal institutions of higher education in the two states. This unique structure allows MASGC to leverage the strengths of member institutions to meet the needs of MASGC constituents. The research, outreach and education arms of MASGC function as a distributed network with connections to all the consortia members. MASGC functions as a matrix with Sea Grant staff distributed across most consortia member institutions. For example, the MASGC extension and outreach program is mainly composed of staff based at the land grant institutions in the two states; the MASGC legal program is housed at a premier law school; and the institutions that share coastal science with more people than other programs in the two states support MASGC's education programming. A management team of MASGC staff located across this multi-institutional network manages MASGC.

MASGC will strive to address two specific areas to enhance the program's capabilities to meet future needs. During implementation of the 2020-2022 MASGC Strategic Plan, MASGC will strive to empower communities to make the most informed science-based decisions possible by integrating the expertise and capabilities of MASGC supported staff and its partners.

## Partnerships

MASGC will maintain its strong, mutually beneficial partnerships across academia, federal agencies, state and local agencies, non-governmental organizations and industries. MASGC will also seek additional partnerships that support its efforts to meet program goals and outcomes.



### **Shared Positions While Leveraging Partnerships**

MASGC partners with several organizations that fund or co-fund extension or outreach positions. MASGC does this when the position provides mutually beneficial results and aligns with each organization's strategic plan and objectives. MASGC will continue its leveraged partnerships. Recent examples of MASGC position funded through partnerships include:

- Community Resilience Coordinator – Initially funded through NOAA and now co-funded through the Gulf of Mexico Alliance and MASGC
- Regional Coastal Climate Resilience Specialist – Supported by NOAA and is part of MASGC outreach program
- Oyster Aquaculture Extension Specialist – Co-funded by Mississippi Department of Marine Resources, MASGC and Auburn University
- Mississippi Oyster Gardening outreach position – Funded by the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund
- Oil Spill Science Outreach Team – Communicator, manager and four content extension specialists are supported through the Gulf of Mexico Research Initiative and the four Gulf of Mexico Sea Grant College Programs
- National Water Center Extension Specialist – Supported by the National Sea Grant Office, National Weather Service via the National Water Center, and The University of Alabama
- Planning and Policy Manager – Co-supported by Smart Home America and MASGC
- Verification of the Origins of Rotation in Tornados EXperiment-Southeast (VORTEX-SE) Extension Specialist – Co-supported the National Weather Service

### **Gulf Sea Grant Programs**

Many of the pressing issues that affect the residents, businesses and communities along the Gulf Coast are of broad geographic scope. They require regionally integrated research and outreach to provide solutions. The Sea Grant programs of the Gulf of Mexico region have a long history of conducting such collaborative research and outreach, often in partnership with other NOAA, federal, state and local agencies and organizations. During this strategic plan period, the four Gulf of Mexico Sea Grant programs intend to continue this process, on topics ranging from oil spill science to community resilience research and outreach. If necessary, the Sea Grant programs will work collaboratively to deal with disasters and other new emerging threats in a timely and effective manner.

The Gulf of Mexico Sea Grant programs and Southeast Atlantic Sea Grant programs also collaborate on regional fisheries issues, which include the Gulf of Mexico Great Red Snapper Count and a southeastern U.S. Greater Amberjack project, that are of concern to the fishing community.

### **State and Local Agencies**

MASGC partners with numerous state and local agencies to meet the needs of coastal residents and visitors. Examples include partnering with the Mississippi Department of Marine Resources

and the Alabama Department of Conservation and Natural Resources on oyster farming and other fisheries-related topics. MASGC partners with many local governments, the Mississippi Emergency Management Agency and others on resilience and flooding issues. MASGC will continue to strengthen its existing relationships and develop new ones.

### **Federal Agencies**

MASGC will maintain its strong partnerships across several federal agencies, such as the Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA) and NOAA. MASGC partners with

- National Marine Fisheries Service through the Restoration Center, Southeast Fisheries Science Center and others,
- National Ocean Service through Office for Coastal Management, Office of Response and Recovery and others,
- National Weather Service as a Weather-Ready Ambassador,
- NOAA’s National Water Center,
- NOAA’s National Severe Storms Laboratory, and
- USDA Extension.

### **Public-Private**

MASGC will continue to partner with the Gulf of Mexico Research Initiative to share the latest oil spill science and with the Gulf of Mexico Alliance as a member of the Alliance Management Team, Alliance Coordination Team and as participants of the Priority Issue Teams. MASGC also will continue to partner with the Mobile Bay National Estuary Program in Alabama and will seek out partnership opportunities when the forthcoming Mississippi Estuarine Program is created.

### **Industry**

MASGC will continue to forge many formal and informal partnerships across industry. MASGC Advisory Council members include industry representatives. Other MASGC industry partnerships include Smart Home America, Insurance Institute for Business and Home Safety (IBHS) and Gulf Shores and Orange Beach Tourism.

## **Diversity, Equity, and Inclusion**

### **Engagement**

The most recent MASGC site visit report stated, “The MASGC has demonstrated a commitment for supporting underserved communities such as the Southeast Asian fishermen living along the coast of Alabama and Mississippi. Additionally, Mississippi and Alabama are home to over twenty Historically Black Colleges and Universities including Consortium member Jackson State University. From Pre-K through graduate programs, MASGC can further recruit, train, and engage underrepresented groups in fields that support Sea Grant’s coastal science and service mission.” MASGC engagement programs will continue to work with underserved communities.

## Education

MASGC will continue to support several education-focused programs. One example includes the SEA ICE (Special Enrichment Activities in Coastal Ecology) program in Mobile County, Alabama. Eleven of the 12 high schools involved in the SEA ICE program qualify as Title I (low-income) schools due to the number of students qualifying for free or reduced lunch. In five of the schools in this program, black students make up 95 percent or more of the student body. Students participating in the SEA ICE program exhibit a higher increase in environmental knowledge than their classmates who received ecology instruction only in their classroom. Other examples include the BayMobile program, a mobile marine science classroom, specifically targets Title I schools across the state of Alabama and reaches thousands of students each year and MASGC's undergraduate DEI Fellowship Program.

## Research

All MASGC requests for proposals include and honor the following language, "No person shall be excluded on grounds of race, color, age, sex, national origin or disability from participation in, denied benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from MASGC."

## Focus Areas

MASGC's overarching goal is to support sustainable coastal communities and associated environments through the application of research discovery. For the purposes of this plan, MASGC defines sustainability as the intersection of resilience using built, natural, social and economic domains (Figure 2).

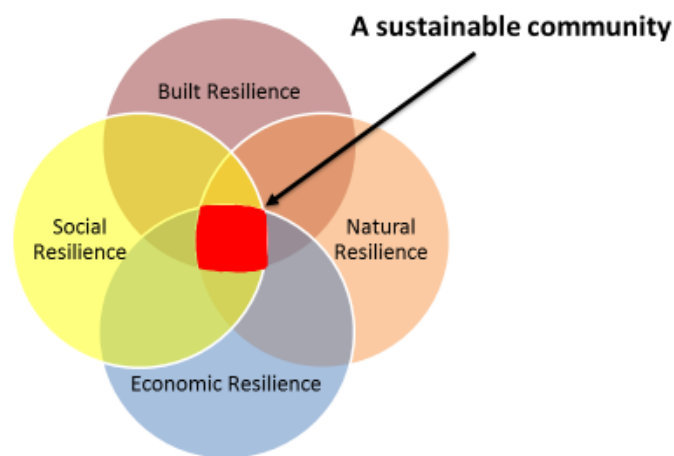


Figure 2. This diagram depicts the four **cross-cutting domains** of resilience (built, natural, social and economic). The overlap of the four domains leads to a sustainable community.

Based on the guiding principle of sustainability, the MASGC will invest resources in the following focus areas:

### 1. Healthy Coastal Ecosystems

2. **Sustainable Fisheries and Aquaculture**
3. **Resilient Communities and Economies**
4. **Environmental Literacy and Workforce Development**

The remainder of this plan provides the goals, objective and outcomes for each focus area.

### **Healthy Coastal Ecosystems**

1. **GOAL:** Habitat, ecosystems and the services they provide are protected, enhanced or restored.
  - a. **ACTION:** Develop and share science information, decision-support tools, technologies and approaches to protect and restore ecosystems.
    - i. **DESIRED OUTCOME:** Scientific understanding and technological solutions inform and improve the management and conservation of natural resources.
    - ii. **DESIRED OUTCOME:** Stewardship efforts improve due to greater awareness and understanding of ecosystem functions and services.
  - b. **ACTION:** Increase habitats, biodiversity and abundance of coastal ecosystems, fish, wildlife and plants.
    - i. **DESIRED OUTCOME:** Habitats and associated services are restored or sustained.
  
2. **GOAL:** Land, water and living resources are managed by applying sound science, tools and services to sustain ecosystems.
  - a. **ACTION:** Support a sound science- and management-driven framework that integrates observations, monitoring, research and modeling to provide a scientific basis for informed decision-making.
    - i. **DESIRED OUTCOME:** Collaborations with partners and stakeholders support planning, research and technological solutions to address resource management needs.
    - ii. **DESIRED OUTCOME:** Citizen science initiatives are used and contribute to improving our knowledge with respect to coastal communities, economies and ecosystems.
    - iii. **DESIRED OUTCOME:** Resource managers and community leaders use sound science, data, tools and the training in effective planning and decision-making processes.
  - b. **ACTION:** Identify and promote case studies and strategies that enhance resilient ecosystems and watersheds in the context of changing conditions.
    - i. **DESIRED OUTCOME:** Communities use case studies, training and tools to improve their ability to plan, prepare and adapt to future ecosystem conditions.

### **Sustainable Fisheries and Aquaculture**

3. **GOAL:** Marine fisheries, aquaculture and other marine living marine resources supply food, jobs and economic and cultural benefits.

- a. ACTION: Develop a trained workforce and enhance technology transfer in domestic aquaculture.
    - i. DESIRED OUTCOME: Increased understanding and technological solutions aid aquaculture and fisheries management and production.
    - ii. DESIRED OUTCOME: Partnerships enable the aquaculture and fisheries industries to adapt and acquire innovative technologies.
  - b. ACTION: Promote and support harvest and processing techniques that lead to safe, sustainable and high-quality food and economic and ecosystem benefits.
    - i. DESIRED OUTCOME: Fisheries and aquaculture industries employ technologies and reinforce strategies to ensure safe and sustainable seafood and products.
4. **GOAL:** Natural resources are sustained to support fishing and aquaculture industries.
- a. ACTION: Ensure sound science, services and tools are used by resource managers and the fishing and aquaculture industries.
    - i. DESIRED OUTCOME: Resource managers and fishing and aquaculture communities use science and tools to increase their capability to adapt to future resource management needs.

### **Resilient Communities and Economies**

5. **GOAL:** Coastal communities use their knowledge of changing conditions and risks to become resilient to extreme events, economic disruptions and other threats to community well-being.
- a. ACTION: Use tools and training programs to increase the public's awareness of changing conditions and the potential hazard impacts their communities, economies and ecosystems may encounter.
    - i. DESIRED OUTCOME: Community leaders utilize their increased understanding of changing conditions in their communities to implement response and adaptation strategies.
  - b. ACTION: Utilize comprehensive planning and adaptive management strategies to enhance community resilience and adapt to hazards and changing environmental and socioeconomic conditions.
    - i. DESIRED OUTCOME: Communities employ adaptive management strategies and apply tools to engage diverse members of the community to improve resilience and community sustainability.
  - c. ACTION: Increase the resilience of coastal communities through diversification, growth and strengthening of coastal economic sectors.
    - i. DESIRED OUTCOME: Communities use tools, services and technologies to create more resilient economies.
    - ii. DESIRED OUTCOME: Leaders in coastal economic sectors become more resilient through economic diversification and stronger built, social and environmental infrastructure.

6. **GOAL:** Water resources are sustained and protected to meet existing and emerging needs of the communities, economies and ecosystems that depend on them.
  - a. **ACTION:** Collaborate with stakeholders to develop and share best management practices (BMPs) and measures to protect and manage water resources.
    - i. **DESIRED OUTCOME:** Communities use science, tools and technologies to protect and sustain water resources and make informed decisions.

### **Environmental Literacy and Workforce Development**

7. **GOAL:** An environmentally literate public that is informed by lifelong formal and informal opportunities that reflect the diversity of the nation's coastal communities.
  - a. **ACTION:** Provide effective environmental literacy instruction for K-12 students by formal and informal educators.
    - i. **DESIRED OUTCOME:** Teachers and students are better informed in science, technology, engineering and mathematics (STEM) fields and can employ their knowledge to support sustainable practices within their communities including environmental justice communities.
  - b. **ACTION:** Provide effective environmental literacy opportunities and communication to public audiences, including how environmental change affects economic, social and cultural values, as well as implications for conservation and management.
    - i. **DESIRED OUTCOME:** Stakeholders develop a sense of awareness, understanding and stewardship to sustain watershed, coastal and marine ecosystems and resources through informal science education.
    - ii. **DESIRED OUTCOME:** Communities implement sustainable strategies when managing natural resources and make decisions based on information acquired through informal science education.
    - iii. **DESIRED OUTCOME:** Community members are aware of and understand changing conditions and hazards and the implications to their communities.
8. **GOAL:** A diverse and skilled workforce is engaged and enabled to address critical local, regional and national needs.
  - a. **ACTION:** Increase opportunities for K-12, undergraduate and graduate students in order to gain knowledge and experience in the science, management and education about watershed, coastal and marine resources.
    - i. **DESIRED OUTCOME:** Internships and fellowships increase literacy, experience and preparedness in areas of watershed, coastal and marine ecosystems for students.
    - ii. **DESIRED OUTCOME:** Undergraduate and graduate students are supported and have access to formal and experiential learning, training and research experiences.
  - b. **ACTION:** Prepare a resilient workforce to address the needs of coastal communities and their economies.



- i. DESIRED OUTCOME: The coastal workforce can adapt to changing environmental, social and economic conditions.

## Tracking Impacts Across Plans

This MASGC strategic plan covers six years. The application of MASGC-supported work does not follow a strategic planning cycle. As a result, it is essential to continually engage the scientists we support across multiple strategic plans (Figure 3). Maintaining the same focus areas and similar performance measures can improve the continuity between plans and improves MASGC’s ability to document societal impacts.

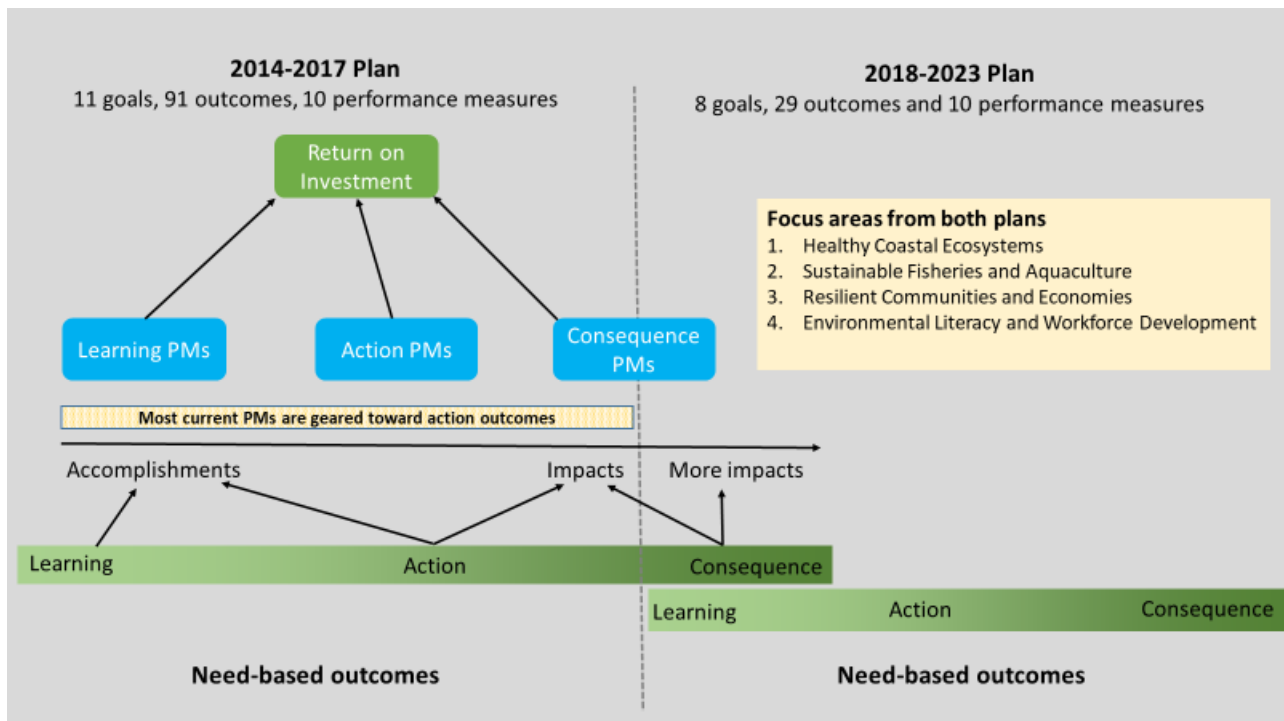


Figure 3. Comparisons between the 201-2017 and the 2018-2023 strategic plans demonstrate how consequence outcomes (long-term outcomes) are infrequently achieved during a four-year planning period. As a result, a reporting process will be developed to collect consequence outcomes from projects after a project ends.

## About MASGC

MASGC is part of a network of 34 Sea Grant college programs based at universities in U.S. coastal and Great Lakes states and territories. MASGC’s mission is to enhance the sustainable use and conservation of ocean and coastal resources to benefit the economy and environment.

Funded through the National Oceanic and Atmospheric Administration, with additional support from Alabama and Mississippi state governments and other funding sources, MASGC offers research funding to address local and regional issues, fellowships, a legal program, and extension, outreach and education programs.

The consortium’s members include Auburn University, Dauphin Island Sea Lab, Jackson State

University, Mississippi State University, The University of Alabama, The University of Alabama at Birmingham, The University of Mississippi, The University of Southern Mississippi and University of South Alabama. MASGC has extension and outreach personnel in Mississippi in Biloxi (at the Mississippi State University Coastal Research and Extension Center and with the City of Biloxi), Ocean Springs (at The University of Southern Mississippi’s Gulf Coast Research Lab) and in Oxford (at The University of Mississippi School of Law). In Alabama, MASGC has staff in Mobile (at the Auburn University Marine Extension and Research Center and the Environmental Studies Center), Gulf Shores (at Gulf Shores and Orange Beach Tourism) and on Dauphin Island (at the Dauphin Island Sea Lab). In 2017, MASGC will also have a team member based in Tuscaloosa (at the National Water Center on the University of Alabama campus). The administrative office for MASGC is at the Gulf Coast Research Lab in Ocean Springs, Mississippi.



Figure 4. Mississippi-Alabama Sea Grant Consortium member universities and laboratories and their locations in Mississippi (left) and Alabama.





**MASGP-20-048**

This publication was supported by the U.S. Department of Commerce's National Oceanic and Atmospheric Administration under NOAA Award NA14OAR4170098 and NA18OAR4170080 and the Mississippi-Alabama Sea Grant Consortium. The views expressed herein do not necessarily reflect the views of any of these organizations.