



Developing the
**BLUE
ECONOMY**
of Florida's Gulf Coast

An executive report on research conducted through
Gulf Coast Community Foundation's BIG—Bright Ideas
on the Gulf Coast initiative

GULF COAST
COMMUNITY FOUNDATION



Did You Know?

\$11.8 billion is the estimated current economic value of Sarasota Bay in terms of tourism, jobs, recreation, and property. Yet the untapped potential of the marine sciences means **the future value of this resource is much greater.**

95 scientists and 180 interns lead innovative research at Sarasota's Mote Marine Laboratory. Exciting fields include studies of the disease resistance of sharks, the wound-healing properties of stingrays, restoration of coral reefs, and red tide and water quality monitoring.

80% of all living organisms on earth are found under the ocean. Yet, oceans remain one of the last frontiers of discovery. **Less than 5% of our oceans have been fully explored,** and more than 10 million marine species are yet to be identified.

90% of all seafood consumed in the U.S. is imported. **Florida, surrounded by oceans, buys \$2.6 billion of seafood from overseas** and imports more aquaculture food products than any other state.

50% of Sarasota County schoolchildren qualify for free or reduced-cost lunch programs. This means at least 21,000 children often go hungry, even though we could raise more seafood from the oceans in our backyard.



What Does It Mean?

No other state has three contiguous National Estuary Programs (Tampa Bay, Sarasota Bay, Charlotte Harbor). A network of organizations in the region work to conserve the ecology and economy of the Gulf Coast's diverse coastal resources. Every regional educational institution offers degree programs with direct ties to the sea. Local seafood and aquaculture businesses are growing with support from entrepreneurs and investors. **Developing a marine-sciences cluster can transform our region into a hub for ocean research, marine technology, and sustainable seafood.**

Mote is conducting research in more than two dozen programs, including biomedical, microbiology, immunology, ocean engineering and technology, and fisheries ecology. Research by Mote and our regional educational institutions expands the boundaries of scientific knowledge and may have direct applications for regional businesses. **Commercializing technology creates opportunities to spin off new businesses, fund continuing research, and expand the regional economy.**

A growing number of programs are connecting students with the sea. From Riverview High School's aquaculture greenhouse to the Sarasota Ocean Preservers youth program, hands-on learning exposes students to STEM education and excites interest in the next generation of scientists. **The Gulf Coast region can encourage collaboration among scientists, educators, businesses, and environmental organizations to become the center of ocean learning in the southeastern U.S.**

In 2013, over \$697 million of farmed fish and shellfish products were imported to Florida, while just \$15 million of exports were produced in the state. With this trade deficit, **the market potential for expanding Florida-raised seafood is substantial. Growing the region's fisheries and aquaculture capacity means that more value-added production can happen right here,** providing jobs and investment in the regional economy.

Initiatives to connect schools with local food are expanding in Florida. Sarasota County Schools—with a \$7.2-million food budget—has set a goal to source at least 50% of school foods from the region. **Expanding the Gulf Coast's sustainable-food systems can provide local seafood to schools, restaurants, and stores while investing funds back into the region to provide jobs and feed families.**

This is our blueprint for growing the Gulf Coast region's marine-science cluster into the most innovative Blue Economy in the southeastern U.S.

An underwater photograph of a coral reef. The water is clear and blue. In the foreground, there are several large, branching coral structures with a yellowish-orange hue. In the background, there are more diverse coral species, including some with blue and purple tones. The overall scene is vibrant and healthy.

About This Report

Bright Ideas on the Gulf Coast

Gulf Coast Community Foundation recently launched a new initiative called BIG—Bright Ideas on the Gulf Coast. BIG is an entrepreneurial support network that matches start-ups and “idea generators” with business planning and other specialized expertise to help get their business ideas to the next step. The network leverages existing resources to nurture innovative ideas and new business opportunities in the region, from Boca Grande through Manatee County.

BIG also promotes four targeted business sectors in which our region can compete nationally: digital arts, health innovation, sports performance, and marine science. From an initial roundtable meeting convened under the BIG banner, a network of marine-science resources has grown to include experts from Mote Marine Laboratory, The Chiles Group, Bay Shellfish Company, Global Aquaculture Alliance, Southeast Venture Holdings, Sarasota and Manatee counties, as well as Gulf Coast Community Foundation Board members, donors, and regional leaders. This group quickly coalesced, established new partnerships, and began generating and implementing BIGger ideas for our region’s marine-sciences sector.

Our Region’s Blue Economy

Prompted by the progress of BIG’s marine-science group, Gulf Coast commissioned an economic development strategy and cluster study of our region’s “Blue Economy.” The study identifies the region’s assets and potential growth opportunities for the marine-sciences cluster.

The Blue Economy includes institutions and businesses active in aquaculture, fisheries, biomedicine, biotechnology, marine engineering, water quality, coastal ecology, sustainable foods, agritourism, and recreation. Thousands of jobs and tens of millions of dollars in economic activity are tied to the activities, resources, and habitat of the region’s waters. By continuing to conserve, leverage, and learn from the wonderfully diverse coastal ecosystems in our backyard, we can grow our region into the premier marine sciences hub in the southeastern U.S.

This effort will build on the work of BIG’s marine-science roundtable and provides a blueprint for action that other networks may follow. Cluster studies are invaluable tools to support regional action, spur implementation at the state and regional level, and inform leaders about the Gulf Coast’s significant, but largely hidden, Blue Economy.

**A full study will be released in spring of 2015 and will be available at GulfCoastCF.org.
To learn more about BIG and become involved, visit BIGgulfcoast.org.**



Growing Our Blue Economy: Spotlight on Sustainable Marine Science and Technology

Several significant global trends are reshaping our future, and the Gulf Coast region is poised to address these emerging challenges.

The world's population and food needs are growing. By 2030, aquaculture will account for two-thirds of global seafood production. Yet Florida continues to import far more seafood than we produce. Sustainable farmed and wild fisheries can offset this trade imbalance, protect Florida's ocean resources, and grow more food regionally and responsibly.

Oceans represent the next wave of scientific discovery. Marine exploration may unlock future advances in technology and medicine from the sea. Mote Marine Laboratory is leading research into the disease resistance and wound-healing capabilities of sharks, skates, and stingrays. Real-world applications of this research include treating battlefield wounds and fighting the growing number of microbes around the world.

Clean water may soon be the world's most limited resource. Algae blooms and poor water quality cause billions of dollars in damage to public water systems, commercial fishing, and the regional tourism economy. Technologies to treat and improve water quality, restore coral reefs, and fight red tide are being developed by Mote.

Capitalizing on these opportunities can transform the Gulf Coast into a marine innovation hub, in turn growing businesses, providing quality jobs, and diversifying the regional economy. The strategies outlined here cover critical near-term recommendations for growing the Gulf Coast's Blue Economy.

Connect People

The Gulf Coast region attracts entrepreneurs, educators, and leaders. People here are passionate, and not just about sailing, but about becoming engaged and transforming our communities. Gulf Coast Community Foundation's BIG initiative has begun to tap into this talent, but with your engagement many more connections can be made.

- Continue to expand the BIG marine-science group into a self-sustaining entrepreneurial and leadership-development network.

- Raise the profile of Mote as a world-class research facility through education, outreach, and marketing.
- Coordinate the efforts of regional ocean-oriented environmental, education, and advocacy organizations.

Grow Businesses

Among a growing network of local farms, seafood producers, and restaurateurs on the Gulf Coast are the only harvester of Sunray Venus clams, a venture capital fund dedicated to sustainable foods, the first producer of bottarga in the nation, and one of the largest organic food distributors in the southeastern U.S. With your involvement, we can lead the way in creating sustainable regional food systems for the future.

- Recruit and expand marine-science companies, including at least one "anchor" company in sustainable foods or marine technology.
- Encourage commercialization of technologies from research centers to spin off new business opportunities.
- Expand regional seafood processing and distribution facilities to move from a commodity-based to a value-based, export-oriented regional economy.

Attract Investment

Funding for start-up businesses and for research into emerging technologies is critical. Public investment in research is declining, but public-private partnerships, equity investments, and venture philanthropy are the economic tools of the future. With your help, the region can provide the infusion of capital necessary to jump-start innovation in the marine sciences.

- Align regional economic development plans and incentive programs to cover marine sciences industries.
- Catalog and leverage the intellectual property, patents, and research of Mote.
- Attract private funding to support promising research at Mote and regional institutions.

Leverage Research

For six decades, Mote Marine Laboratory has been among the world's top marine research centers. Mote along with Eckerd College, USF Sarasota-Manatee, State College of Florida, New College, and Ringling College provide a network of educational facilities and degree programs with direct ties to the ocean. Together, we can establish the Gulf Coast as a premier global marine-research hub.

- Establish a Research Commercialization Advisory Council with Mote and other educational partners to align, guide, and fund critical research.
- Position Mote as the premier organization for Marine Stewardship Council certification and fisheries-improvement projects in the southeastern U.S.
- Create more STEM education initiatives for youth in marine science, aquaculture, and fishing to provide career pathways and encourage entrepreneurs.

Conserve Resources

Sarasota Bay is home to a dazzling array of fish and wildlife. Cortez is one of the oldest fishing villages in Florida. Our Gulf Coast region sits right in the middle of the largest shellfish grounds in the state. Working together, we can conserve these resources and become a leader in sustainable resource management.

- Support regional conservation and management plans to preserve the environmental and economic integrity of coastal resources.
- Conduct an inventory of regional waters and lands suitable for shellfish harvesting, aquaculture, and seafood-processing facilities.
- Leverage existing infrastructure and research facilities for marine science research (e.g., Port Manatee and Mote facilities).



Recent Successes



Fish sticks served in school cafeterias are first caught in Alaska, processed in Asia, and re-imported to the U.S. Why can't we produce more seafood here?

In the historic fishing village of Cortez, grey striped mullet is a top export. Mullet roe is exported to Asia or Europe for as little as \$10 per lb. But that same Gulf Coast–raised mullet is reimported to restaurants across the U.S. for upwards of \$100 per lb. Anna Maria Fish Company is leading the way in breaking this cycle. Mullet bottarga, or sun-cured roe, is now being produced right here and mullet is appearing on more regional menus. Processing more seafood regionally reduces the ecological footprint of our food and drives economic opportunity.



Caviar is a costly delicacy. Overfishing has endangered wild sturgeon stocks. Why can't we conserve natural resources and sustainably produce food?

Mote launched a demonstration project to responsibly raise Siberian sturgeon and produce best-selling caviar. Mote researchers developed technology to farm sturgeon in on-shore tanks while using less water. Now, that research is paying dividends to the region. Southeast Venture (Seven) Holdings recently purchased the caviar operation and licensed technology from Mote. Seven Holdings is dedicated to developing commercially viable and sustainable agriculture and aquaculture operations. This is one of the region's first examples of commercializing research through a public-private partnership.



Florida has the second-longest coastline of any state, but ranks 12th in seafood production. Why can't we leverage our resources into a new economic engine?

Oysters and clams are native to Florida, but only recently have these healthy and environmentally friendly food sources been commercially cultivated. Florida's clam production has grown dramatically in the past decades, but the industry is built on a single clam species and largely isolated to a single region. With research and investment by public-private partners, the Sunray Venus clam is the newest addition to Florida's booming bivalve aquaculture industry. This native species is now being planted in Tampa and Sarasota Bays and through new distribution deals will soon be arriving at local restaurants.

Learn More and Get Involved

BIG is a community-engagement initiative of Gulf Coast Community Foundation to encourage regional entrepreneurship.

BIGgulfcoast.org

Mote Marine Laboratory is a nonprofit, independent marine research institution dedicated to the conservation and sustainable use of marine biodiversity, healthy habitats, and natural resources.

mote.org

Sarasota Bay Estuary Program is an intergovernmental partnership dedicated to restoring and protecting Sarasota Bay.

sarasotabay.org

Sarasota Bay Watch is a grassroots, nonprofit organization dedicated to preserving and restoring Sarasota Bay's ecosystem through education and citizen participation.

sarasotabaywatch.org

START is a regional, citizen-based nonprofit that supports scientific research and public awareness to preserve our marine environment.

start1.org

Riverview High School maintains an aquaculture facility with live fish and corals and a research vessel to foster environmental stewardship. **Sarasota County Schools'** Farm to School program seeks to expand locally sourced, sustainable foods.

sarasotacountyschools.net

Florida Sea Grant is a university-based program providing research, education, and assistance to conserve coastal resources and enhance economic opportunities.

flseagrant.org

IFAS Extension offices in Sarasota and Manatee counties support community initiatives and volunteer opportunities in food systems, environmental resources, and youth and community development.

sarasota.ifas.ufl.edu

manatee.ifas.ufl.edu

The Florida Department of Agriculture and Consumer Services, which runs the Fresh from Florida locally sourced food and Farm to School programs, offers info on local producers and more.

freshfromflorida.com

Gulf Coast Community Foundation thanks Mote Marine Laboratory, The Chiles Group, and Bay Shellfish Co. for use of photographs in this report. Gulf Coast also gratefully acknowledges Mote and Dr. Michael Crosby, Ed Chiles, Dean Eisner, Jeff Sedacca, and other participants in BIG for their expertise and assistance.

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