“Investing in the growth of the blue economy, including all economic activities related to oceans, seas, and coasts, is essential to getting the post-COVID-19 economy back on track.” Rebuilding The U.S. Economy Through The Blue Economy: Oceans Caucus Foundation and Consortium for Ocean Leadership.

Part - 1: Narrative

Why Mississippi? The Coalition’s Vision for the Regional Growth of its Blue Economy Cluster

The Gulf Blue Initiative (GBI) region statutorily qualifies as an underserved population and as economically distressed, as detailed in the Appendix – iv: Equity. In the past two decades, seven major disasters have significantly impacted the region’s economy. These are: 1) Covid-19 Pandemic – starting in 2020 (DR-4528-MS), 2) Hurricane Ida – 2021 (EM-3569-MS), 3) Hurricane Zeta – 2020 (EM-3550-MS), 4) Gulf of Mexico Freshwater Flooding – 2018 (89 - Mississippi), 5) Mississippi River Flood – 2012 (55 - Mississippi), 6) Deepwater Horizon Oil Spill - 2010 (49 - DWH), and 7) Hurricane Katrina – 2005 (DR-1604-MS).

The GBI is a collaboration among public and private coalition members and partners formally branded as Gulf Blue(SM) in July of 2021. This initiative is based on a series of studies, reports, and strategic plans identifying blue economy industry sectors and represents a unified cluster aligning the coalition members to create a regional strategy to retain Mississippi’s talent, “Stop the Brain Drain,” and drive economic growth and resiliency – the sum being greater than the parts.

A 2019 study by SeaAhead, Inc. found coastal Mississippi hosts one of the nation’s most diversified aggregations of commercial, institutional and government ventures that employ science and technology to develop and harness the resources of the ocean to benefit society and industry. The diverse efforts in recent years of the coalition members have developed critical capacity and regional assets. These assets include a recognized world class marine aquaculture center, a one-of-a-kind marine test range for testing drones, CUBEnet, that spans riverine to deep ocean conditions, and nationally recognized community college workforce development programs. Leveraged through the Phase 2 implementation of the proposed Phase 1 cohesive regional strategy via three interrelated component projects, this EDA investment will help tip the GBI region toward a transformational knowledge-based economy yielding competitive advantages for new and existing blue economy industry sectors and higher wage jobs.

The vision for GBI is to be a globally recognized transformational driver of economic growth through innovation and the knowledge-based blue economy in the Gulf of Mexico region.

Covid-19 highlights again the importance of diversifying Mississippi’s coastal economy that currently relies too heavily on tourism (1 of every 5 jobs). The Gulf Blue Initiative: Driving Resilience through Regional Economic Growth (a steady-state economic resilience initiative) will mitigate Mississippi’s GBI region, shown in Figure 1, against natural and economic disasters by diversifying its economic base via a collaborative regional approach. The GBI is focused on an industry driven problem statement for growing the region’s innovation sector of the blue economy and its needed workforce to create high-wage Science, Technology, Engineering and Mathematics (STEM) and light manufacturing jobs. An example is Ocean Aero that during the pandemic started planning and setting up its manufacturing operations in Gulfport, MS (40+ high-wage STEM jobs) where it is working with The University of Southern Mississippi, (USM) on training, testing and validation of its innovative uncrewed surface/subsurface drone system using CUBEnet.
The GBI has three goals: 1) Create a culture of innovation and knowledge economy, 2) Establish a foundation for workforce development and sustainable job growth promoting higher-wage jobs and inclusion, and 3) Build broader capacity for economic development to support a more resilient regional economy. While these goals serve to remedy unmet regional economic needs, they also serve to meet critical longer term societal needs to address food, national/defense, energy, and environmental securities.

To meet these goals, USM is working collaboratively with coalition members and partners focused on six convergence opportunities: 1) Uncrewed Maritime Systems; 2) Ocean-Friendly Plastics; 3) Precision Marine Aquaculture; 4) Ocean & Coastal Data and Analytics; 5) Smart Ports; and 6) Sea-Space systems. Leveraging these opportunities, three proposed interconnected component projects will enhance the innovation eco-system, develop a diverse talent pipeline to support evolving workforce needs, and build economic development capacity in diverse communities around innovation based economic strategies.

Economic Opportunity in the Blue Economy Cluster

In 2020, a National Oceanic and Atmospheric Administration (NOAA) report on the U.S. Ocean Economy stated, “GDP from the ocean economy grew 5.7 per cent between 2014 and 2015, more than twice as fast as the U.S. economy as a whole, which grew by 2.7 percent.” The overall global ocean economy is expected to double in value to over $3 trillion by 2030. The National Ocean Economics Program’s current data identifies 1,090 blue economy establishments in Mississippi’s coastal counties contributing over $2.3 billion in GDP. The GBI aims to enhance our region’s global competitiveness to capture and take advantage of this more rapidly growing blue economy sector.

In this newly defined GBI region, new ocean-related industries are emerging in aquaculture (onshore & off), environmental restoration, and resource management. Moreover, traditional sectors are modernizing with the adoption of advanced materials and manufacturing processes, autonomous systems/drones, and advance sensors and data analytics. However, Mississippi’s innovation index is ranked near the bottom at 290 out of the 360 MSA’s nationally. The pieces are here and primed, but we need support to boost the innovation ecosystem and take advantage of the coastal resources.

Coalition Members, Role and Commitment to Economic Growth

The University of Southern Mississippi (USM) (Coalition Lead), a Carnegie Foundation R1 very high research activity university, will provide leadership in innovation with research expertise in ocean engineering, marine sciences, polymer and high-performance materials, and economic development. USM’s Hattiesburg and coastal campuses are investing – over $60 million to date – in growth of the labor force through educational programming; research leading to new and expanding businesses and innovations; and direct involvement in economic development activities.

Jackson State University (JSU), a Carnegie Foundation R2 high research activity university, will provide leadership with its research expertise in engineering and data science. Its I-Corps site trains teams of faculty and students to move ideas from the lab to the market, through innovation and entrepreneurship. JSU, the fourth largest historically black college/university (HBCU), is deeply committed to labor force preparation of underrepresented minorities and demonstrating leadership in equity, diversity, and inclusion.

Mississippi Development Authority (MDA), the State’s lead economic development agency, has intensified its recruitment strategy for global businesses in blue economies. MDA focuses on innovation-based economic development strategies. The agency supports small business startups and operates the Minority and Small Business Office. It manages the State’s Gulf Coast Restoration Fund.
Mississippi State Port Authority at Gulfport, a deep-water, ‘strategic defense port’, and international seaport, supports waterborne commerce and logistics for import/export and workforce development in assisting Mississippi companies and organizations in reaching global markets. 

**Southern Mississippi Planning and Development District (SMPDD)** develops and maintains the region’s Comprehensive Economic Development Strategy (CEDS) which supports economic development programs. SMPDD coordinates and sponsors workforce development strategies throughout the region. 

**Mississippi Gulf Coast Community College (MGCCC)** is a primary provider of workforce training in Harrison, Jackson, George, and Stone counties and is committed to developing, and delivering education and training that is demand driven to meet the labor force needs of the GBI cluster. MGCCC received in 2021, one of the first Centers of Excellence Designations for Domestic Maritime Workforce Training and Education from the Maritime Administration in the U.S. Department of Transportation. 

**Pearl River Community College (PRCC)** is a primary provider of workforce training in Forrest, Lamar, Pearl River, Marion, Jefferson Davis, and Hancock counties and is committed to developing, and delivering education and training including an uncrewed aerial & marine technology program. 

**Mississippi Enterprise for Technology, Inc. (MSET)** is a private, non-profit 501c3 supporting existing industries and establishing partnerships with new businesses promoting technology and entrepreneurial development at NASA’s John C. Stennis Space Center. It has a Partnership Intermediary Agreement (PIA) with the Naval Meteorology and Oceanography Command (NMOC) at Stennis. 

**University of Southern Mississippi Research Foundation (USMRF),** a non-profit 501c3, supports and enhances the research mission of USM by promoting the increase of useful knowledge and encourages the development of intellectual properties owned by USM supporting business and economic development, as well as, managing the Gulf Blue Accelerator Program and co-working space. 

Additional details for each coalition member and their role are available in Appendix – i: Regional Assets. 

**Component Projects for the Innovation Sector of the Blue Economy** 

GBI represents a unified cluster-building effort to align the members – educational institutions, nonprofits, public-sector agencies (federal, state and down to local), financial organizations, and businesses – in working toward a common vision. Three broad component projects in support of the GBI’s vision have been identified that will leverage the region’s existing blue economy assets and enhance them as well as create new assets. The projects are private-sector and demand-driven with the aim to increase competitiveness, promote creation of higher wage jobs, and attract private-sector investments. **They are to be designed for long-range sustainability beyond ARPA funding and employ a nested dependency model approach that supports environmentally sustainable development.** The coalition members through these projects are committed to advancing equitable economic development of all affected communities in both urban and rural areas of the region. The 2019 TIP Strategies Report, **Coastal Mississippi Investment Opportunities Analysis,** identified the readiness for growth of an innovation economy as one of the top three opportunities for the region and is the evidence-base for the anticipated outcomes. 

Note: Under Phase 1 it is expected the three component projects that follow will be broken apart into separate projects for Phase 2 based on implementation requirements such as location, construction or non-construction, work plan, matching funds, and coalition member leading. 

**1) Culture of Innovation: Blue Tech Innovation, Entrepreneurship, and Commercialization** - The coalition under Phase 1 will develop tools, catalog assets, and provide expertise in conducting blue-tech research and identifying innovation opportunities. The region will place emphasis on growing entrepreneurship assets such as access to capital & equity funding, business development, expansion, and
access for underserved rural communities. USMRF is currently piloting its Gulf Blue Accelerator Program (GBAP), a cohort-based program for assisting blue-tech startup companies with customer discovery, business model development, mentoring, prototyping, and capital access. Phase 1 will develop a web portal as a tool to enhance the GBAP, the GBI industry engagement strategy, and other blue-tech focused regional commercialization efforts. Phase 2 BBBRC projects will be submitted supporting collaborative R&D leading to new innovations. USMRF will centrally link the GBAP model throughout the region during Phase 2, thus creating a leveraged network in the GBI region. Lead – USM with JSU as a co-lead. Other coalition members – USMRF, MDA (International Trade & Investment Office, Entrepreneurship & Innovation Office, and Minority and Small Business Office), Port of Gulfport, and MSET. Partners – federal agencies, Mississippi Small Business Development Centers, small businesses, entrepreneurs, industry, nonprofits, foundations, private lenders, investment groups, and corporate investors.


Anticipated measurable outcomes are: Private sector dollars invested ($150 million+), jobs created (300+), new startups (15+), and higher wages in the economically distressed region. Anticipated Phase 2 funding request under this component: $12 million. Match $5+ million.

2) Sustainable Job Growth: Advance Workforce Development - Under Phase 1 an asset discovery initiative (to include convening meetings with employers) will be conducted relative to: labor force preparation in each county and new and refined community colleges and K-12 skill tech training programs meeting the needs of new and expanding businesses within the blue economy. In Phase 2 infrastructure capacity will be increased to include Maritime Multi-craft Technology, cybersecurity, AR/VR – virtual reality, and uncrewed maritime systems programs. USM, supported by Hearin Foundation, is designing a program for building connections between coastal Mississippi high schools, regional industry, and higher education to introduce and educate high school students on the STEM career opportunities in the coastal corridor. These efforts will continue to grow during Phase 1 and into Phase 2. In Phase 1 planning will be conducted for the Phase 2 expansion in GBI region of this program. In addition, during Phase 1, USM will complete planning for expansion of its Gulf Park Business & Workforce Education & Conference Complex to providing a multidisciplinary state of the art educational center. The center will host programs and meetings to encourage and facilitate collaboration between the business and academic sectors; to build and advance the current and future workforce; realign academic programs; provide professional development for experienced working professionals and non-traditional students leading to advanced skills and certifications; develop curriculum for labor force preparation; and provide outreach for K-12 teachers and students. In Phase 2 construction will be completed of the Complex’ expansion.

Leads – USM, MGCCC, & PRCC. Other coalition members – JSU, Port of Gulfport (workforce development & local unions), and SMPD (Local Workforce Development Area). Partners – federal agencies (Job Corps), AccelerateMS (State’s new Office of Workforce Development), state & local Workforce Investment Network (WIN) Job Centers, nonprofits, foundations, and small business and industry.

Meets EDA investment priorities – Equity and Workforce Development that support workforce education and skills training activities directly connected to the hiring and skill needs of the blue economy business community and that result in well-paying, quality jobs.
Anticipated measurable outcomes are: Jobs created or retained (3,000+) and higher wages in the GBI region. Anticipated Phase 2 funding request under this component: $16 million. Match $4+ million.

3) Building Capacity: Knowledge- and Innovation-based Communities - Under Phase 1 blue economy assets will begin to be inventoried and equity and sustainability plans designed to assist municipalities and counties in developing innovation-based economic development strategies that insure an overarching blue economy focus leading to high-wage jobs, with care to support diversity, equity, and inclusion. Phase 1 may also include feasibility studies to determine if there is market demand to support any proposed blue-tech incubator/accelerator project. Phase 1 information will be used in Phase 2 to develop equity and resiliency plans to benefit communities and will be integrated into SMPDD’s updated Comprehensive Economic Development Strategies (CEDS) targeting high-wage jobs supporting diversity, equity, and inclusion. Phase 2 planning grants provided through SMPDD to rural communities will aid in developing strategies where none currently exist. Phase 2 might also require infrastructure improvements to align with innovation-based economic development strategies. Lead – SMPDD. Coalition partners – USM (Regional Economic Competitiveness Officer), MDA, and MSET. Partners – Counties, municipalities, nonprofit, foundations, and industry economic development offices.

EDA investment priorities – Equity, Recovery & Resilience through business diversification, Manufacturing through identification of county/municipality assets that can support domestic production of blue tech innovative, high-value products and production technologies, Technology-Based Economic Development through development planning, technical assistance and university/community colleges expertise, Environmentally-Sustainable Development through economic development planning that helps address environmental, restoration, and climate change issues.

Anticipated measurable outcomes are the: Increase percentage of organizations implementing economic development initiatives from the CEDS process leading to private investment, job creation and retention. Increase percentage of sub-state jurisdiction members participating in the SMPDD economic development activities. Anticipated Phase 2 funding request under this component: $3 million. Match $750+ thousand.

Accessibility of matching funds for Phase II proposal: Each coalition member is committed to fulfilling the 20% match for each component project. Matching funds include Gulf Coast Restoration Fund, RESTORE Act funds, GOMESA funds, state of Mississippi bond funds, state workforce development funds, private foundations, and other funds as may be identified and obtained prior to Phase 2 submission.

Barriers to Implementation and Strategies to Mitigate
Rural areas in the GBI region experience numerous difficulties in implementing economic development projects stemming from their small population size, low labor participation rates and knowledge capital, which means limited human and financial resources, leadership, professional staffing, commitment to complete projects, and a lack of diversification. To mitigate these barriers the GBI will employ a hub and spoke approach, whereby the rural areas of the region will leverage the resources of the coalition members in the more urbanized areas to directly address these disadvantages. Additionally, the region is losing professional, scientific, technology, engineering and math graduates (NAICS 54) to other states. The component projects are specifically focused on growing the innovation economy to help retain these workers.

Timeline
The Phase 1 Technical Assistance period is for 12 months. A detailed GANTT chart is included in Part – 6: Budget Narrative, Staffing Plan, and Timeline.