

MARACOOS Strategic Operational Plan: 2016-2021

Executive Summary

Background

The **Mid-Atlantic Bight (MAB)** extends 1000 km alongshore, from Cape Cod, MA to Cape Hatteras, NC. It includes five major estuarine systems and a wide continental shelf cut by a deep cross-shelf valley and multiple shelf-break canyons. The region encompasses 10 states, the District of Columbia, 107 congressional districts and ~78M people (25% of US population). The nation's highest coastal population density makes increasingly competing demands for marine and coastal resources. Ports in the region handle 25% of the total U.S. waterborne commerce, and include the nation's largest petroleum product hub and the world's largest Naval base. The MAB is a dynamic boundary between the less variable waters to our north and south, with complex seasonal physical dynamics resulting in a highly variable 3-D thermal structure. These dynamics structure shellfish and migratory fish habitats that support both commercial and recreational fisheries, and directly impact our weather. Developed watersheds and urban estuaries, impacted by a century of industrialization and growing coastal populations, degrade coastal water quality and diminish recreational economies. Inundation driven by tropical storms and northeasters are year-round threats to the large populations that live on the broad coastal plain. While the region's electrical power grid is the most congested in the nation, the high population density, reliable winds, and wide continental shelf combine to support the nation's nascent offshore wind energy development projects.

In addition to these conditions unique to the MAB, *warming of the climate system is unequivocal (IPCC, AR5, 2015)*. Present and future generations will be challenged by its accelerating global impacts, including melting of land and sea ice, rising sea levels, ocean acidification (OA), and deoxygenation (hypoxia), and more frequent extreme weather. Improved knowledge of the trends and variability of our changing environment is required to address the challenges of energy, food, water and economic security and resiliency on regional, national and international scales. In the Mid-Atlantic, global sea level rise, along with coastal subsidence from the last glacial retreat, combine to produce a regional hot-spot for rising sea levels, creating a higher baseline for land falling hurricanes and devastating northeasters. Climatic warming and OA are altering MAB fish and shellfish habitats. The Mid-Atlantic's dense population further increases the region's economic sensitivity to climate change, where, for example, new rainfall patterns and more frequent extreme weather conditions are impacting homes, businesses, farms and reservoirs.

MARACOOS Project Prioritization and Selection Process

Stakeholder Engagement

MARACOOS priorities reflect the many different factors described above that impact the wise use and management of marine and coastal resources and are built upon an inclusive, iterative, and bottom-up stakeholder input process. Initial engagement of stakeholders was extensive, both geographically and programmatically. MARACOOS engages many levels of federal, state, and local/regional governments, business and industry sectors, non-governmental organizations,

community groups, academic partners, and coastal residents of the MARACOOS region. Input is gathered at community and in-person meetings, workshops, training sessions, focus groups, through web-based feedback services and through review of strategic plans, prioritization documents, and needs assessments compiled by partner organizations at local, regional, and federal levels. Engagement is on-going throughout the region and MARACOOS is committed, as is evident through its formal Stakeholder Liaison Program, to growing and maintaining a strong, diverse, and engaged user base that provides regular inputs on needs and priorities. Through stakeholder engagement, MARACOOS also gathers critical assessment on the effectiveness of the regional system in satisfying its diverse user needs. In addition to Mid-Atlantic stakeholder engagement, MARACOOS also has international liaisons with stakeholder groups in Brazil, Korea, Spain, South Africa, Portugal, and Indonesia.

MARACOOS Membership and Board of Directors

In addition to ongoing and regular contributions to needs assessments, gap identification, and priority identification, stakeholders may choose to participate more directly in MARACOOS priority setting through the governance framework of the non-profit MARACOOS Corporation. It is through membership in MARACOOS that the Board of Directors are nominated and elected. MARACOOS members populate electing cohorts, including subregional, business and industry, non-governmental organizations, state and local government, and academic representatives, and are elected to 3-year terms on the MARACOOS Board of Directors at the annual MARACOOS business meeting.

The Board of Directors, as the elected representatives of the MARACOOS membership, provides general oversight and policy guidance, adopts implementing documents and strategic plans, and advises on major decisions for MARACOOS. Bylaws of the Corporation set the responsibilities of the Board. The Board works with MARACOOS staff, through bi-annual meetings, bi-weekly teleconferences, and individual discussions to review region-wide needs and priorities from all stakeholders and determine annual guidance on program implementation, as well as long term strategic planning.

Strategic Planning and Priority Setting

MARACOOS, through its Board of Directors and rich stakeholder engagement process, executes annual work plans that are designed to meet the long range goals and objectives of a Strategic Plan. This Plan, adopted by the MARACOOS Board of Directors, sets a 5-year planning horizon for the program, and is reviewed annually to ensure that the organization is focused on relevant, appropriate, and timely activities while still maintaining its focus on overarching goals and objectives tied to the national observing enterprise. The goals, objectives, and recommended actions represent a collection of expressed needs, gathered over years and geographies, carefully matched with the capabilities of MARACOOS Principal Investigators, Staff, and Board of Directors to create a cost-effective, operational observing system.

A number of factors are taken into consideration when prioritizing annual allocation of resources within the organization. MARACOOS leadership evaluates funding levels, progress toward strategic plan goals/objectives, and existing program capabilities along with partner

support for activities, and potential impact of an investment to individuals, organizations, and populations as a whole. The results of these comparisons are presented to the members of the Board who then provide guidance on the balancing of resources and priority setting for the most efficient and effective operations.

Annual Evaluation

In addition to reviewing the priority of activities with respect to stakeholder needs and interests, MARACOOS evaluates each program component area annually based on a number of criteria. The evaluation process provides information needed to assess the effectiveness, efficiency, and impact of each component within the system, and informs a decision-making process that determines additional investment, sustainment, or retirement of individual observing assets, services, or component groups.

A number of factors are considered in the evaluation of each component area; these include: IOOS Program Office guidance; demonstrated level of need or use; uniqueness of service; potential for positive, significant impact; reasonable use of financial and human resources; ability to integrate into existing regional and national networks; level of customer utility and number of identified users; balance of partner contributions; level at which partners rely on the component area of operations; cost of operations and maintenance; and performance record. An evaluation of component areas using these criteria allows MARACOOS to select which projects to continue or discontinue.

Summary

An ongoing prioritization, strategic planning, and annual evaluation process provides MARACOOS with the tools necessary to assess whether the investments made by the system are meeting the goals and objectives identified priorities in the Strategic Operational Plan. These priorities are collected continuously, and are reviewed annually in concert with performance of each component of MARACOOS. Annual work plans are guided by advice and counsel from the Board with particular emphasis on meeting goals/objectives while balancing user needs, regional priorities, system capabilities and strengths, and funding. A significant role of the Board is to assist in seeking and securing additional financial support for MARACOOS. Over the course of the five-year planning cycle, long-range strategic objectives are defined, refined, and adopted that provide for overarching goals to ensure that the investments made by MARACOOS generate real and lasting value to the Mid-Atlantic region. The Strategic Operational Plan document is updated every five years.