

Outline for future EA2OHS stakeholder engagement

The Atlantic Ocean Research Alliance Working Group on the Ecosystem Approach to Ocean Health and Stressors (EA2OHS) Engagement Strategy:

The EA2OHS Engagement Strategy requires approaches that will transform the coordination and communication practices to enhance implementation and the provision of knowledge for Ecosystem Based Management (EBM). To be successful an engagement strategy requires the long-term commitment of multiple partners and involves a spectrum of approaches and methods that are effective in advancing EBM.

The EA2OHS Engagement strategy will employ the following approaches as needed:

- **ENGAGE** - work with the science and management partners throughout the process to identify informational needs, co-develop products and approaches to address those needs, and resolve obstacles.
- **INFORM** - provide balanced and objective information with respect to the EBM process, objectives, obstacles, alternatives, opportunities and/or solutions. Ensure effective communication and collaboration with partners by employing credible tools.
- **PARTNER** - work with new and current science and management partners in each phase of EBM implementation including the development of alternatives, the identification of the solutions, and the leveraging of resources to enhance EBM implementation.

The EA2OHS Engagement strategy builds upon on-going integrated networks of partnerships. Among the strengths, the AORA EA2OHS program brings to this effort is a history of effective collaboration across the science-management field in living marine resources, as well as, active collaborations with stakeholder, academic, government agencies and non-governmental organizations. To strengthen science and management capabilities that will support EBM implementation, the AORA EA2OHS program will aim to strengthen existing partnerships and strategically seek out new collaborations.

Target stakeholders:

- energy (renewables and carbon based)
- maritime (shipping)
- biotechnology
- fisheries (commercial, recreational & aquaculture)

What are the messages?

- AORA Ecosystem Approach to Ocean Health and Stressors:
 - *Objective:* To engage key ocean-use stakeholders and cross-pollinate across sectors, to ascertain stakeholder needs for further development of ecosystem based management and the required underpinning knowledge base.
 - *Why?* To inform and enable improved decision-making with respect to marine ecosystem management (i.e. trade-offs among users and resources). Understanding the interconnectedness of ecosystem components will aid in maintaining resilient and productive ecosystems (including the human communities on which they depend), balance the impacts on and services provided by the marine ecosystem, even as they respond to climate, habitat, ecological, and other environmental changes.
- EBM Background
 - What is EBM? Ecosystem-based management is an integrated adaptive management approach to help marine managers consider tradeoffs to protect and sustain diverse and productive ecosystems and the services they provide. Informed by science, it incorporates the entire ecosystem, including humans, into management decisions.
 - What are some of the benefits of EBM?
 - optimize benefits among a diverse set of societal goals
 - identify trade-offs and benefits among activities and resources within an ecosystem
 - understand the cumulative impacts of a management action beyond just a single issue
 - help communicate risks, uncertainties, and implications of management decisions
 - ensure more transparent decision processes
 - science-based EBM approach will enhance collaboration, leverage opportunities, and improve decision-making
 - Three areas of engagement with stakeholders and relevant case studies:
 - Sharing ocean space through spatial planning;
 - Case Study: Reducing threats of vessel and marine mammal collisions. Ocean-going vessels present a measurable threat of lethal collision with many marine species worldwide, notably large whale species. Various modifications to conventional vessel operations were used to reduce the threat. Modifications have been instituted by coastal states following adoption by the International Maritime Organization (IMO) The U.S. and Canada proposed modifications to shipping lanes and the proposals were

approved by IMO and instituted. (Silber et al. / Marine Policy 36 (2012) 1221–1233).

- Data and knowledge sharing for planning and management choices that could benefit business and environmental decision-making;
 - Case Study: The Northeast (U.S.) Ocean Data Portal (NortheastOceanData.org) is an information resource and decision support tool for ocean planning, management, and decision making from Long Island Sound to the Gulf of Maine (Northeast U.S. states). The Portal provides user-friendly access to maps, data, tools, and information needed by a broad range of government entities, non-government organizations, and ocean stakeholders. The Portal brings together key types of data on ocean uses and the environment. Data priorities and products are developed in close association with the Northeast Regional Planning Body and stakeholders with expertise in the topics. To serve a diverse range of users, such as researchers, industries, and environmental conservation organizations, the Portal offers multiple ways to view and explore the data.

- Exploration of opportunities and tools to assess impacts on and the status of marine resources.
 - Case Study: Climate change is already affecting fishery resources and the communities that depend on them. Climate change has been implicated in the shifting distributions, abundances, and phenology of fish and shellfish species in marine ecosystems. These impacts are expected to intensify in the future thus increasing the need to understand which species may be most vulnerable to climate-related environmental change. NOAA Fisheries has developed a vulnerability assessment to quantify a species' exposure and sensitivity to expected climate change. The results can help fishery managers and researchers identify highly vulnerable species and more effectively target research and assessment resources on species of greatest concern. (NOAA Technical Memorandum NMFS-OSF-3 October 2015)

- Potential next steps of the EA2OHS Engagement Strategy?
 - Survey to explore on-going EBM or EBM-like activities from among stakeholders
 - Explore knowledge requirements, training needs & opportunities.
 - Prepare case studies further forthcoming engagement opportunities
 - Identify Pilot Projects

- How can stakeholder groups participate?
 - Share EBM approaches, tools and/or case studies they are using or considering to form business strategies
 - Share any training materials they have developed and/or used
 - Co-develop a communication network to inform with respect to EBM implementation and/or ideas on how to improve it.