



# **Ecosystem-Based Management**

## **Leveraging NOAA's Programs for Coastal and Marine Spatial Planning and Integrated Ecosystem Assessments**

A Presentation to the  
NOAA Science Advisory Board

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# Outline



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- Presentation of Briefing
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  - Relationships among EBM, IEA and CMSP
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# Purpose

- To respond to the SAB's request for clarification on the relationships among NOAA's efforts for:
  - Ecosystem-Based Management (EBM),
  - Integrated Ecosystem Assessments (IEAs)
  - Coastal and Marine Spatial Planning (CMSP)



# Issue



- *The major information points that are presented to provide clarity on the relationships between EBM, IEA, and CMSP include:*
  - *Definition of each complementary initiative*
  - *Summary of key functional linkages among them*
  - *Planning and implementation*
  - *Potential Next Steps*



# Definitions

- **“Ecosystem-based Management** is an integrated approach to management that considers the entire ecosystem, including humans. The goal of ecosystem-based management is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need...” (McLeod et. al. 2005)
- An **Integrated Ecosystem Assessment (IEA)** is: “A synthesis and quantitative analysis of information on relevant physical, chemical, ecological and human processes in relation to specified ecosystem management objectives”
- **“Coastal and marine spatial planning** is a comprehensive, adaptive, integrated, ecosystem-based, and transparent spatial planning process, based on sound science, for analyzing current and anticipated uses of ocean, coastal, and Great Lakes areas. CMSP provides a public policy process for society to better determine how the ocean, coasts, and Great Lakes are sustainably used and protected - now and for future generations.”



# Relationships among EBM, IEA & CMSP



- Ecosystem-based management is fundamental to NOAA's agency-wide approach to managing coastal and ocean ecosystems
  - Taken together, EBM, IEAs and CMSP bring science, planning and action together in unprecedented ways to sustain valued ecosystem services and healthy and productive oceans
  - IEAs and CMSP are new initiatives that complement NOAA's existing EBM efforts through science and resource management mandates and programs
- These relationships can be distilled down into core ideas:
- EBM is the *unifying principle and way of doing business* by which NOAA implements its strategic goals and objectives to enhance the sustainability of valued ecosystem services and the overall health, resilience and productivity of our nation's coasts and oceans.
  - IEAs and CMSP are, respectively, an *analytical tool and a public planning process* that, along with other relevant NOAA scientific and resource management capabilities, can inform and advance EBM across NOAA's broad stewardship mandates.

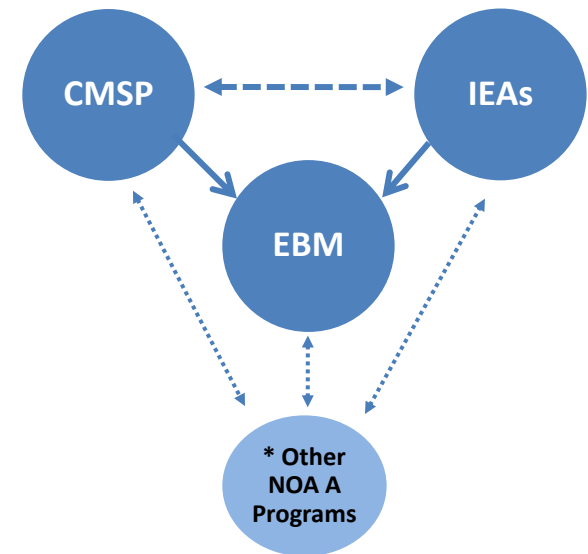


# Relationships among EBM, IEA & CMSP



- IEAs and EBM:
  - Can inform the analytical engine of EBM
  - Based on discrete management objectives, provide the scientific foundation to inform decision-making and adaptive management
  - Incorporate diverse sources of data into ecosystem models that evaluate trade-offs between ecosystem and societal goals
  - Provide managers and stakeholders options for achieving the underlying ecosystem management goals.
- CMSP and EBM
  - Provides regional planners and stakeholders with a science-based, transparent means of matching emerging human uses to appropriate ocean areas; minimize conflicts and impacts, while ensuring sustainable benefits.
  - Represents a crucial tool for achieving the goals of EBM through rational, objective spatial planning for future ocean uses.
- IEAs can contribute to CMSP in several ways
  - to fill discrete data and analytical needs,
  - to inform subsequent sectoral management decisions by action agencies implementing aspects of the regional CMS plan.

## Sustaining Ecosystem Services: EBM, CMSP and IEAs Working Together



\*There are many other NOAA programs that contribute significantly to EBM and CMSP. The SAB requested clarification on IEAs and CMSP, so the other NOAA programs are not described here.



# Making it Real: Planning to Implementation



- The National Ocean Policy has given the nation a clear mandate to implement EBM and CMSP, and highlights the value of IEAs .
- Building understanding of the conceptual linkages among EBM, IEAs and CMSP, NOAA is moving rapidly and concretely toward integrated, cohesive and strategic application of these approaches toward our broad stewardship mandates.
- This will be a continual and evolving process through:
  - NOAA-wide integration: NOC-C
  - NOAA-wide Strategic Planning: NGSP→AGM→SEE →Implementation Plans
  - NOAA-wide Capacity Building: IEA and CMSP national and regional staff and teams; close coordination of the two efforts as well as alignment with broader EBM goals, objectives, and activities internally and externally





# Potential Next Steps

- NOAA will use existing teams to enhance the integration of IEAs and CMSP with existing science and resource management efforts.
- Explore developing ecosystem.gov website:
- Expand Constituent Outreach



# NOAA Coordination & Views



- Coordination with:
  - For EBM, CMSP and IEAs, there is and will be growing:
    - Cross LO coordination and participation
    - Engagement with academia, management councils, other federal and state agencies
      - Variable by region
- What has NOAA done to address this issue:
  - NOAA has developed websites, created fact sheets, made informational briefings internally and externally; encouraged regional coordinators to reach out broadly; incorporated scoping and stakeholder outreach processes into their EBM (IEA and CMSP) initiatives
- What are NOAA's views on the subject?
  - IEAs and CMSP can both contribute to EBM. It is critical that their linkages be explored and clearly articulated.



# Desired Outcome

- SAB understands the relationships among IEAs, CMSP, and EBM.
- SAB provides guidance to NOAA on strengthening linkages toward the shared goal of sustainable ecosystem services, in a resource limited environment.



# Backup Slides



- *[if applicable]*