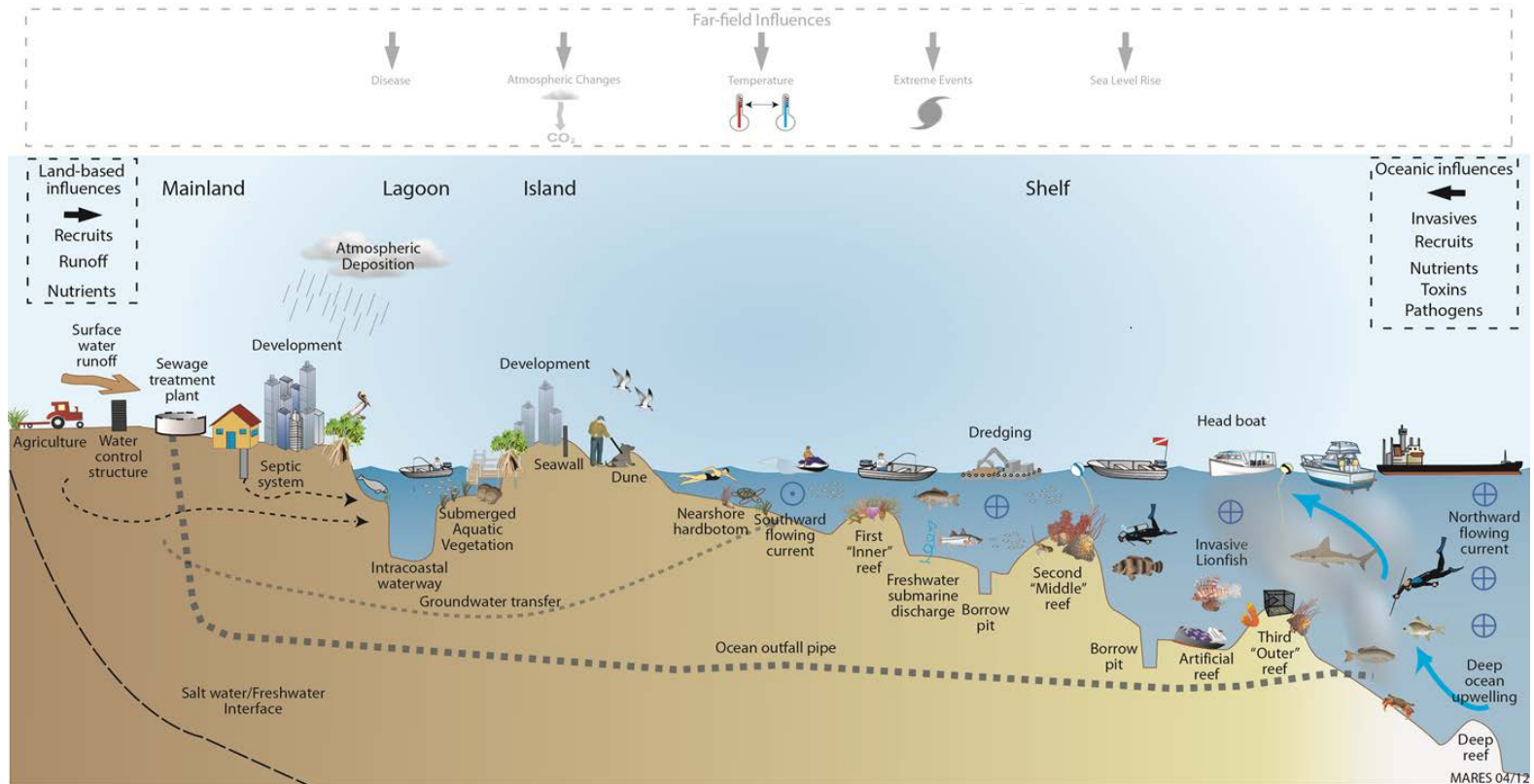


Ecosystem-Based Management

A US perspective



Rebecca L. Shuford
 US National Oceanic and Atmospheric Administration
 AORA Workshop: Making the Ecosystem Approach Operational
 20-22 January 2-16
 EEA Headquarters, Copenhagen, Denmark

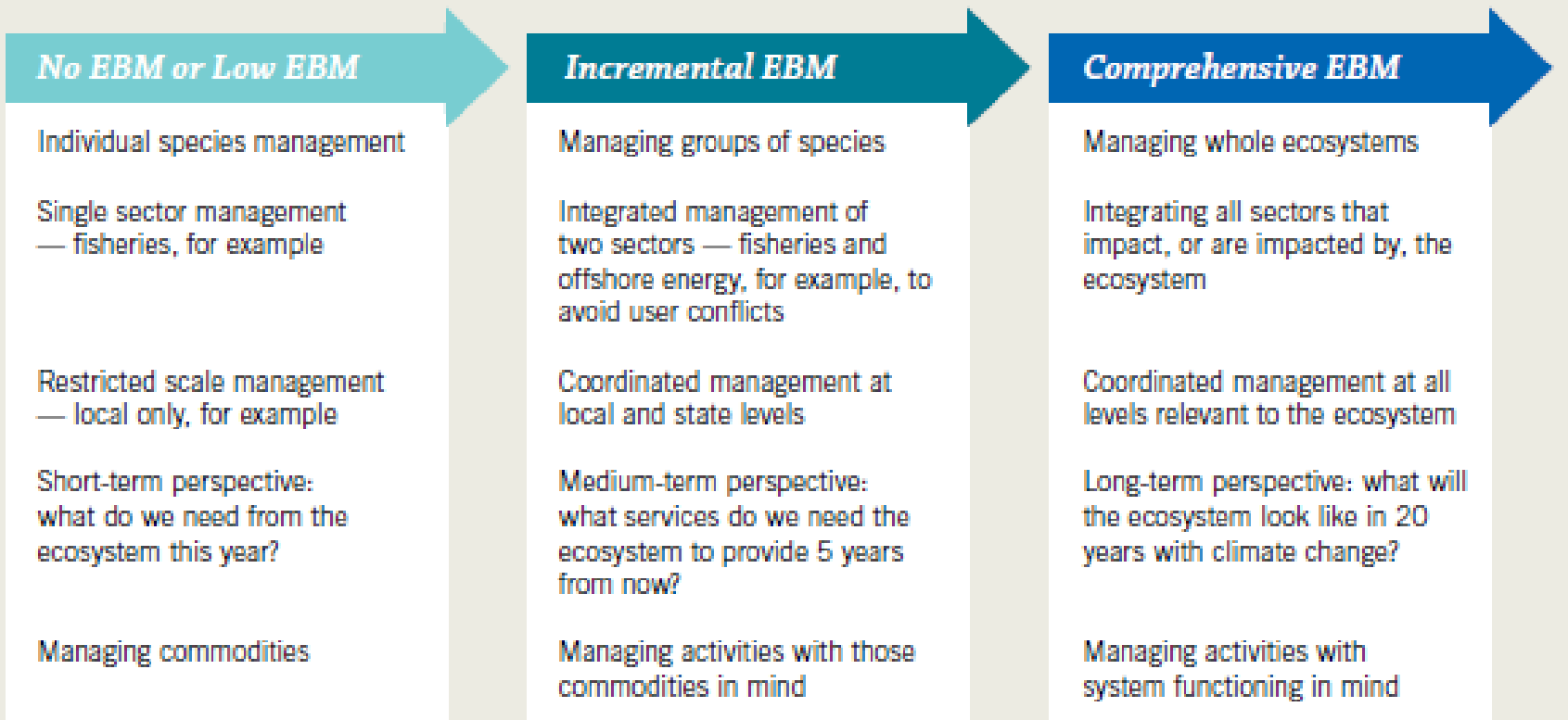
Outline

- EBM as a Continuum
- Status of EBM in US Federal Programs
- NOAA's Integrated Ecosystem Assessment Program
- BOEM's ecosystem efforts in the Atlantic

The EBM Continuum/ Spectrum

THE EBM SPECTRUM

Ecosystem-based management is as much a process or journey as an endpoint. That journey involves a spectrum of EBM effort: from no EBM in practice (the status quo in many places)... to incremental EBM (sectoral management with some ecosystem-based decision-making)... to comprehensive, multisectoral EBM.



Sectoral Continuum

EBM PROMOTES INTER-SECTORAL COORDINATION

ECOSYSTEM-BASED MANAGEMENT

Fisheries
Policy

Maritime
Policy

Energy
Policy

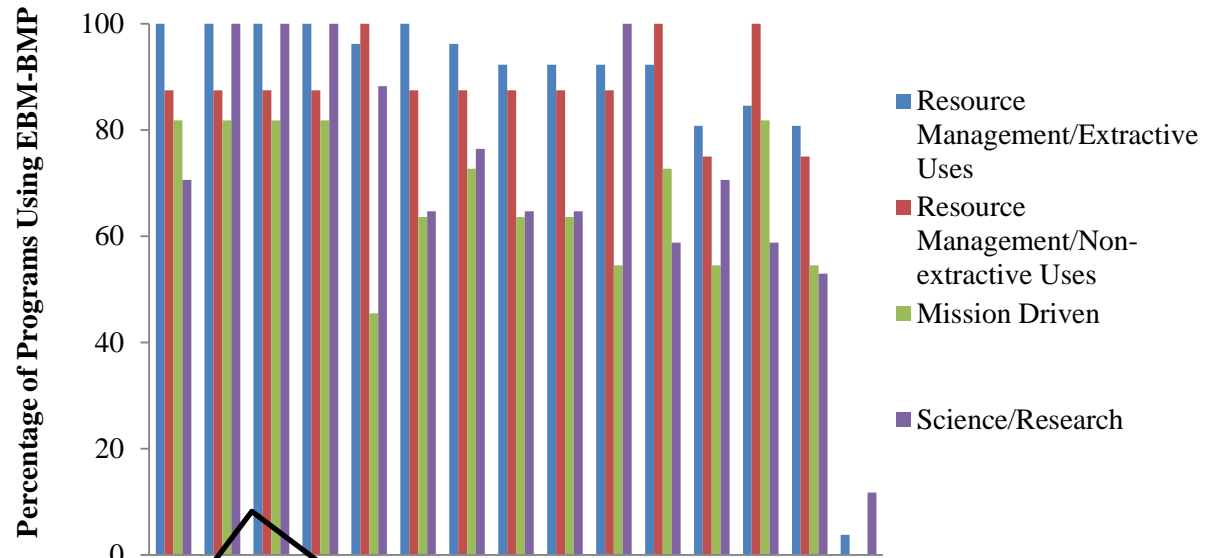
Agriculture
Policy

Coastal
Development
Policy

Environmental
Policy

Other Sector
Policies

Status of marine and coastal ecosystem-based management among the network of U.S. federal programs



92.3%

65.8%

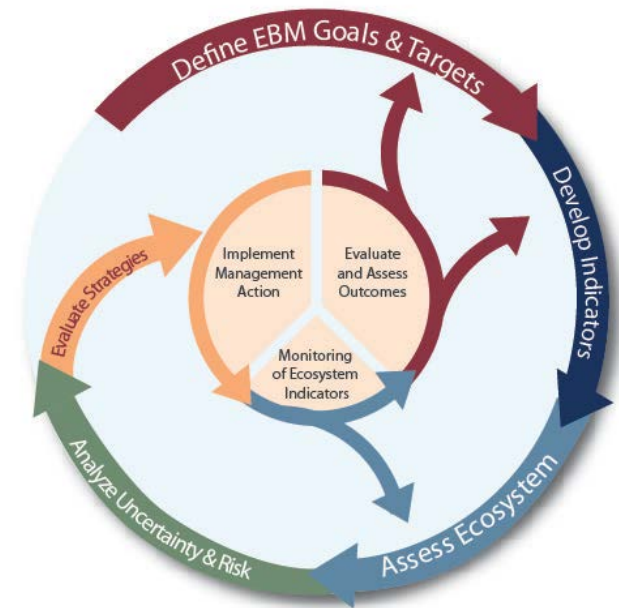
Dell'Apa, et al: Marine Policy 60 (2015) 249-258

<http://ecosystems.noaa.gov/Home.aspx>

NOAA's Integrated Ecosystem Assessment (IEA) Program

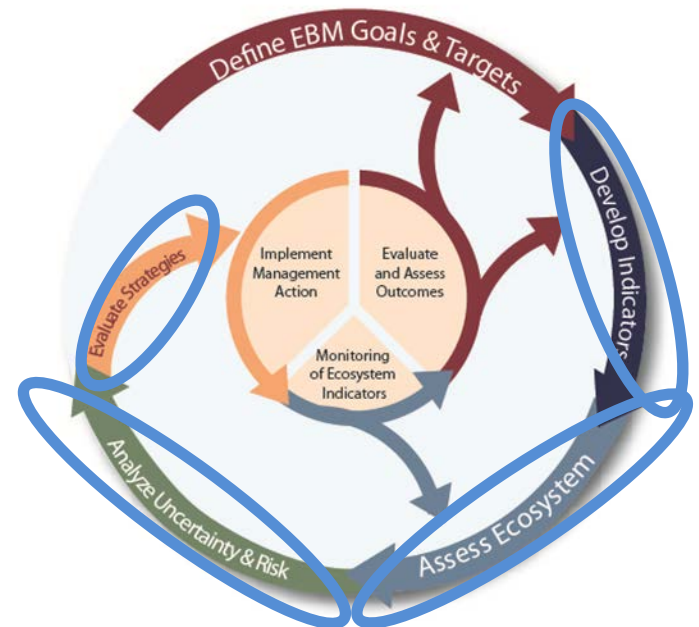
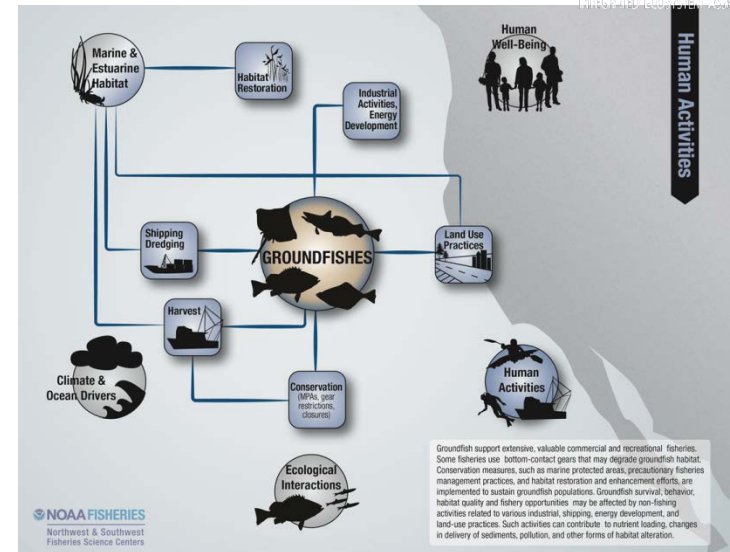
IEAs Provide an Analytical Framework to Implement EBM

- Is a decision-support process that synthesizes and analyzes diverse data and ecosystem model outputs
- Is modular, iterative, scaleable, and adaptable
- Shares a common national framework, yet with regional variation in implementation
- Provides assessments of the ecosystem across and within multiple ocean-use sectors



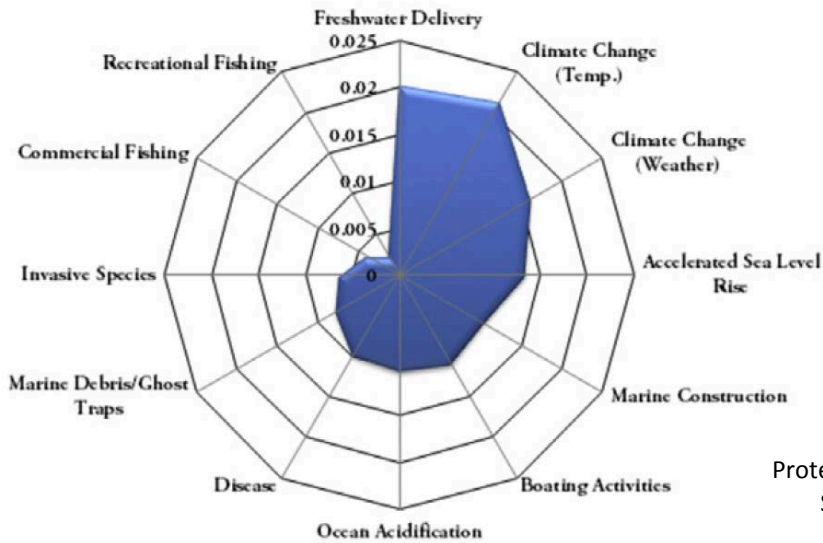
Groundfish in the CCIEA

- Groundfish represent one of the best integrated components across the California Current IEA
- Well represented in most indicators of ecological integrity (diversity, food web)
- First component with Risk Assessment
- Multiple Management Strategy Evaluations (MSEs) conducted
- Groundfish fisheries are focus of human dimensions work (especially effects of IFQs)

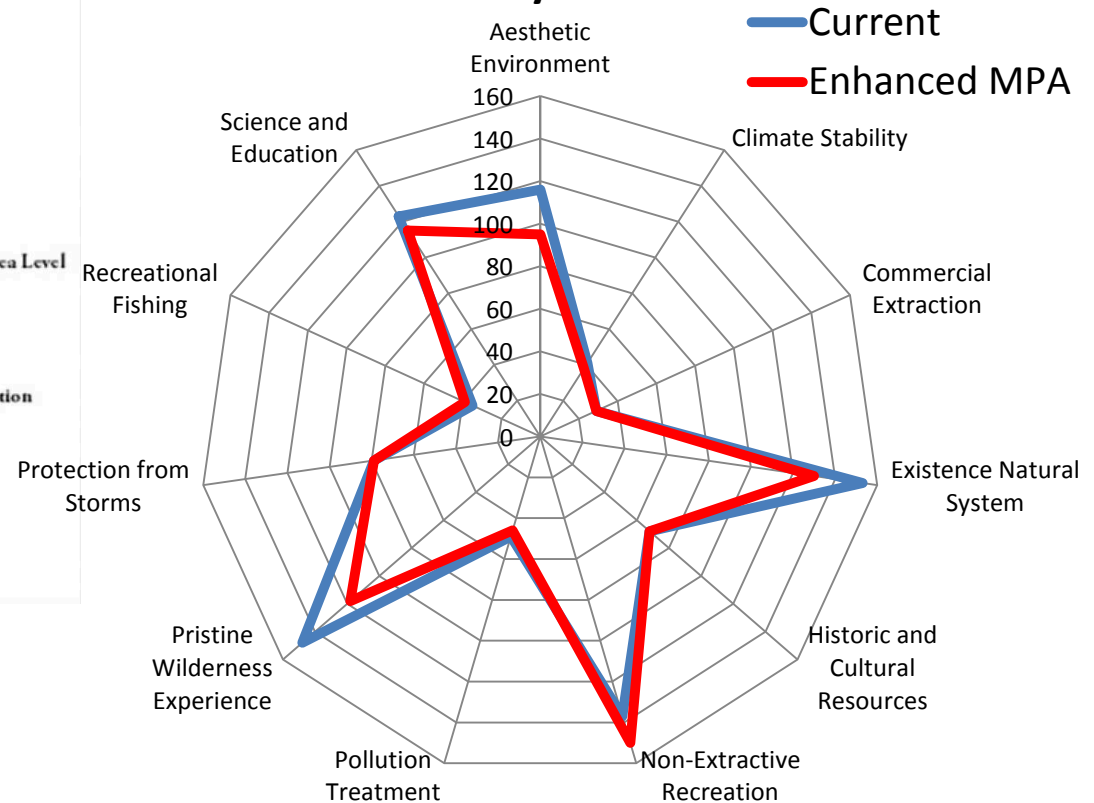


Example: Ecosystem Service Trade-offs in the Gulf of Mexico

Non-Extractive Recreation



MSE: Cumulative Stress on Ecosystem Services

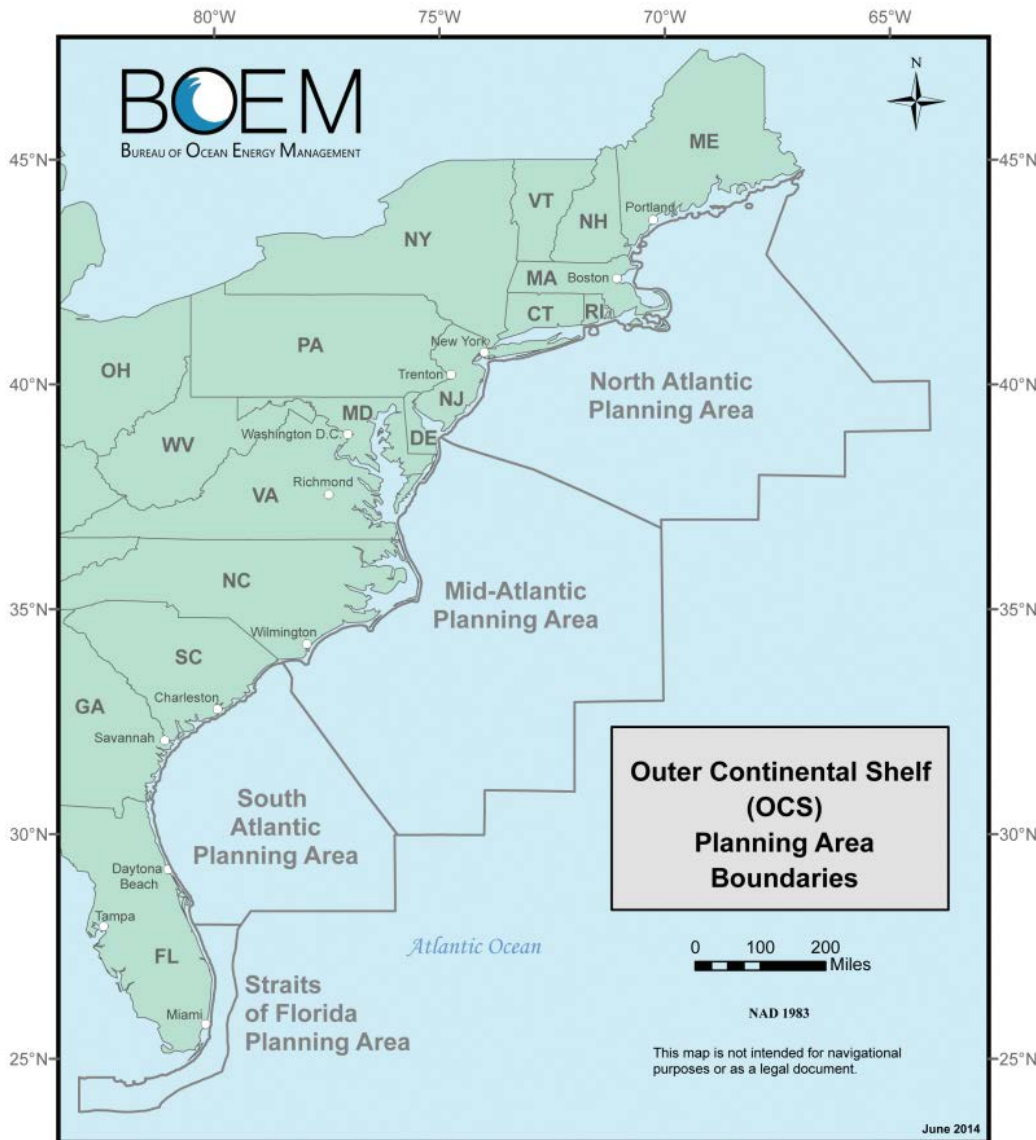


Engaged with the Northeast and Mid-Atlantic RPBs to support ocean planning

- Growing partnership with both RPBs/ ROCs
- Near-term activities include:
 - Region-specific ecosystem service indicators and metrics
 - Maps for ocean plan - representing use patterns, ecologically important (and vulnerable) areas



BOEM in the Atlantic

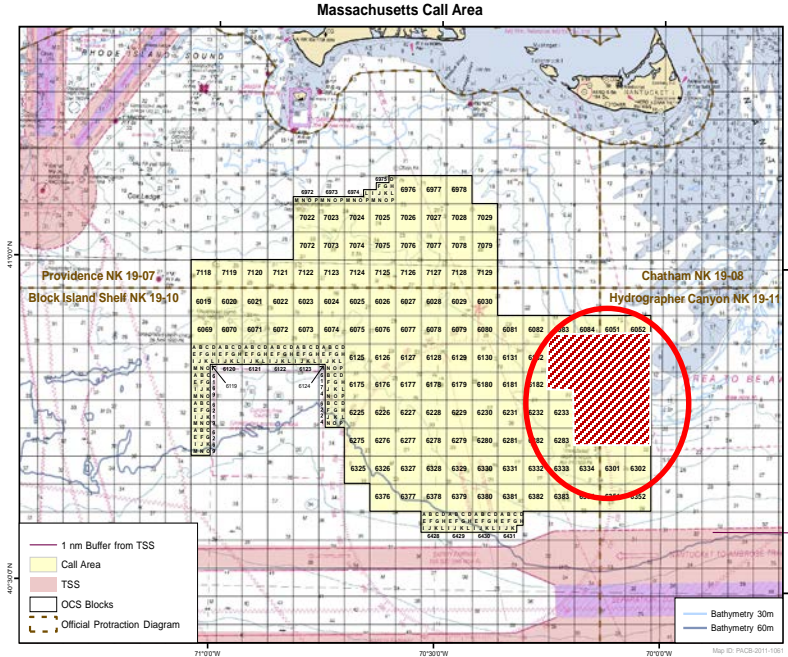


Conducting studies in the Atlantic on all three BOEM-regulated activities:

- Marine Minerals
- Renewable Energy
- Conventional Energy

Renewable Energy Example

Proposed Wind Energy Lease Areas Massachusetts coast



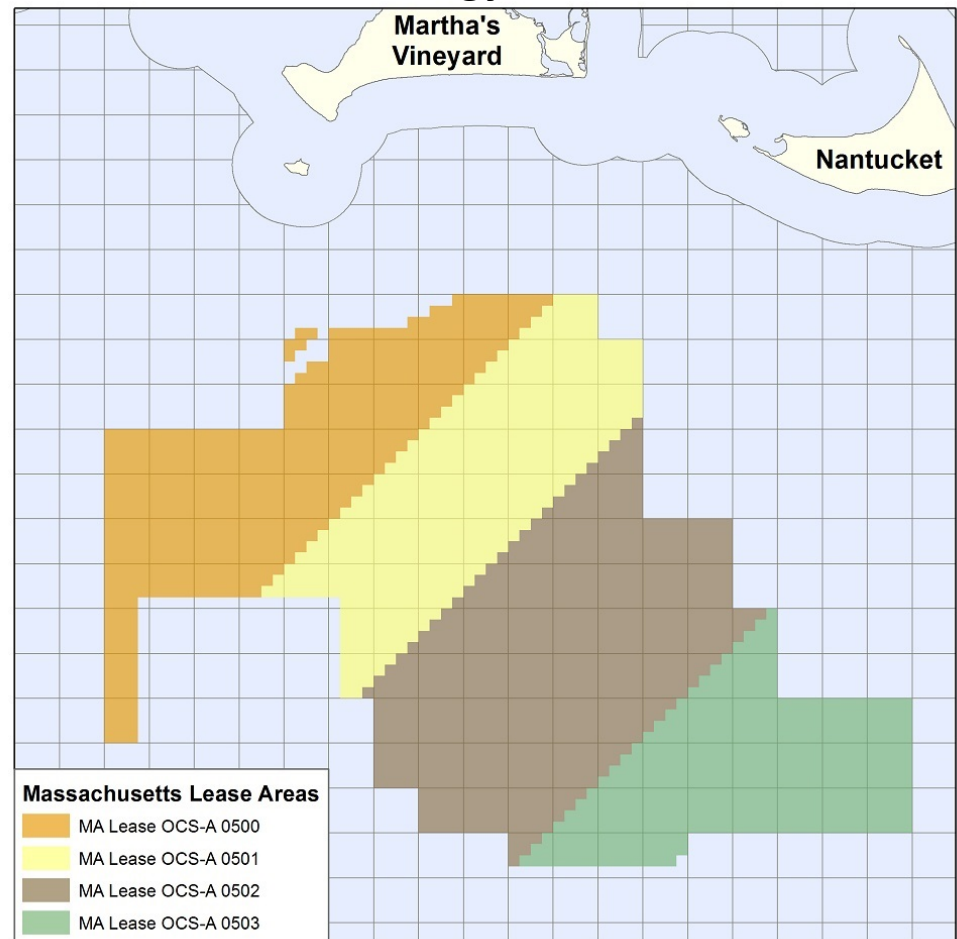
Nantucket Shoals proved to be a foraging hotspot for wintering long-tailed ducks.



Renewable Energy Example

Final wind energy lease sale areas avoid conflicting interests such as the duck foraging ground, essential fish habitats, vessel traffic, and national security.

Final Wind energy Lease Sale Area



Contacts

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