

# Towards ecosystem- based management

*Regional FMC approaches and more...*

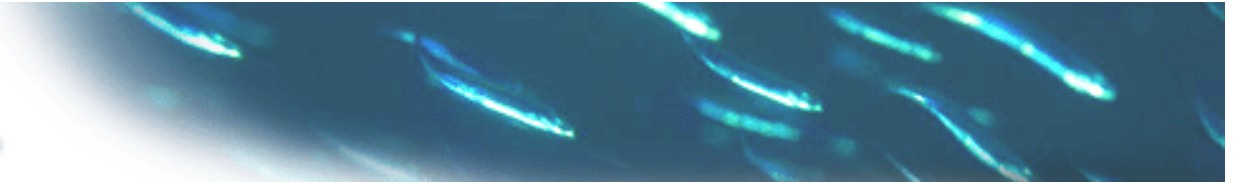
Mar 29, 2005  
Newport, RI NEFMC Meeting

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NEFMC Ecosystems Project Leader



## Presentation Overview

- **Changes / Updates**
- **Other RFMC approaches**
- **Going forward**

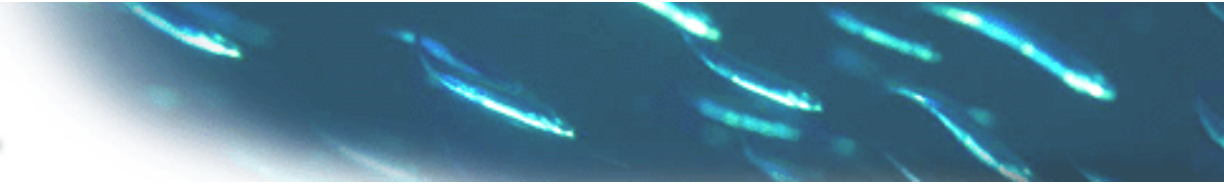


## Defining our terms: NOAA

Changes / Updates

- An ecosystem approach to management is a geographically specified and adaptive process which (a) takes account of ecosystem knowledge and uncertainties, (b) considers multiple external influences, and (c) strives to balance diverse societal objectives

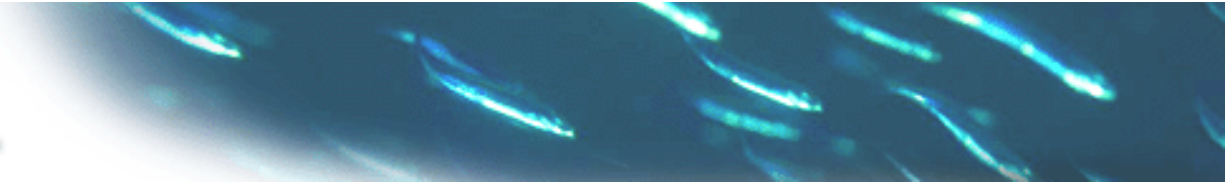
Ecosystems Principals Advisory Panel (1999)



## Defining our terms: Compass

Changes / Updates

- 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.
- Ecosystem-based management differs from current approaches that usually focus on a single species, sector, activity or concern; it considers the cumulative impacts of different sectors.



## Defining our terms: Compass

Changes / Updates

- Specifically, ecosystem-based management:
  - emphasizes the protection of ecosystem structure, functioning, and key processes;
  - is place-based in focusing on a specific ecosystem and the range of activities affecting it;
  - explicitly accounts for the interconnectedness within systems, recognizing the importance of interactions between many target species or key services and other non-target species;
  - acknowledges interconnectedness among systems, such as between air, land and sea; and
  - integrates ecological, social, economic, and institutional perspectives, recognizing their strong interdependences.



# Defining our terms



Changes / Updates

EAM

vs.

EAFM:





## EAM vs. EAFM

Changes / Updates

- EAM includes all potential uses of ecosystem services, e.g.:
  - Commercial shipping
  - Military transportation
  - Waste disposal
  - Energy generation
  - Energy and data transmission
  - Commercial fishing, whaling, sealing
  - Recreational fishing
  - Recreational diving
  - Marine-based tourism (coastal and off-shore)



## EAM vs. EAFM

Changes / Updates

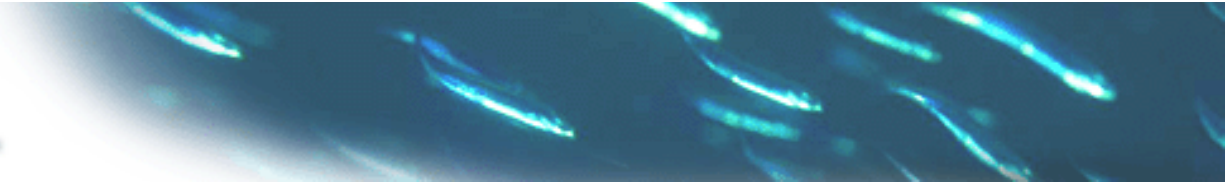
- EAFM applies a similar holistic approach, but limits the universe to fishery management, e.g.:
  - Bycatch and fishery interactions
    - Mortality of non-target and non-market species
    - Technical interactions between fisheries that share the same spatial/temporal sphere's
  - Indirect effects of harvesting
    - Habitat modifications
    - Trophic interactions
  - Interactions btwn biological and physical ecosystem components
    - Low-frequency variability (NAO, temp, salinity, etc)
    - Ecosystem re-structuring and regime shift



## EAM vs. EAFM

Changes / Updates

- EAFM:
  - Great in principal
  - Can wrap your brain around it
  - Possibly too myopic: cannot ignore impacts of competing uses for ecosystem services
- EAM:
  - Great in principal
  - Statutorily challenged
  - Possibly too comprehensive: cannot realistically factor in all ecosystem service users when designing management measures

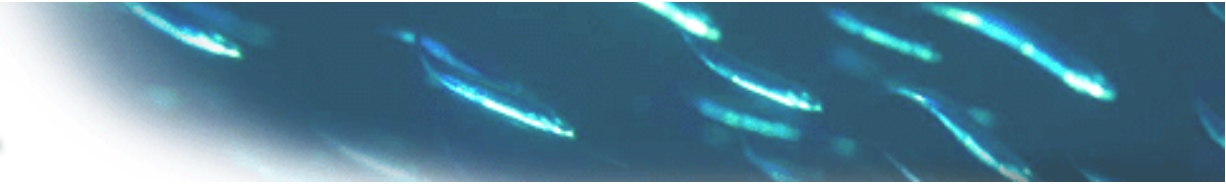


# Ecosystem management?

*OK Joe, I'll send  
the herring left...*

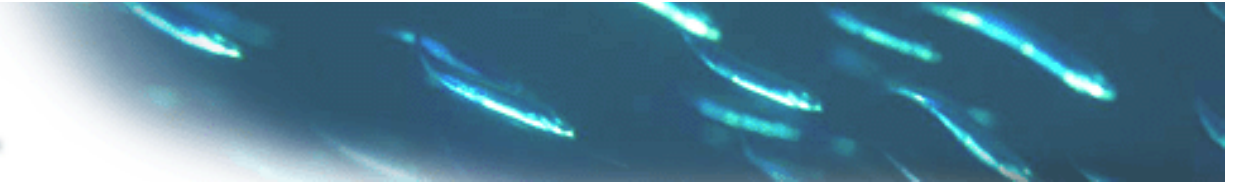
*No  
problem... I'll  
ratchet down  
the salinity a  
bit...*





# Regional Approaches

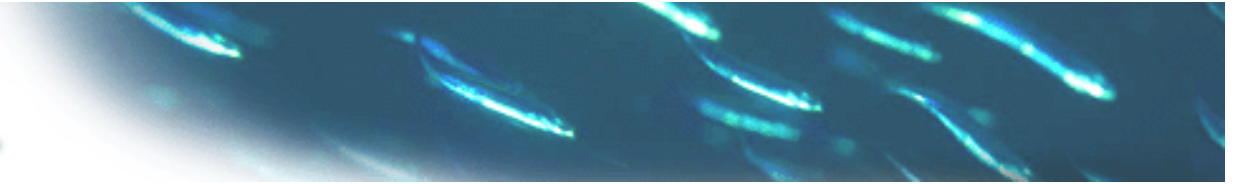




## WPFMC

### RFMC Approaches

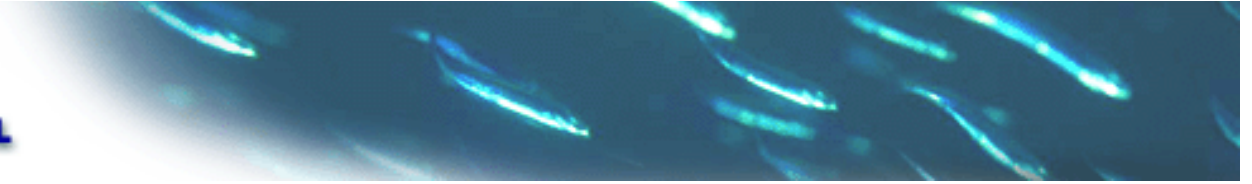
- Coral Reef Ecosystems Fishery Management Plan (2004)
  - Nation's first federal ecosystem-based plan
  - Both strategic and tactical
  - Provides objectives, measures, and feedback mechanisms (adaptive management)
- Transforming it's remaining multi-species FMP's into archipelago-based Fishery Ecosystem Plans



## NPFMC

### RFMC Approaches

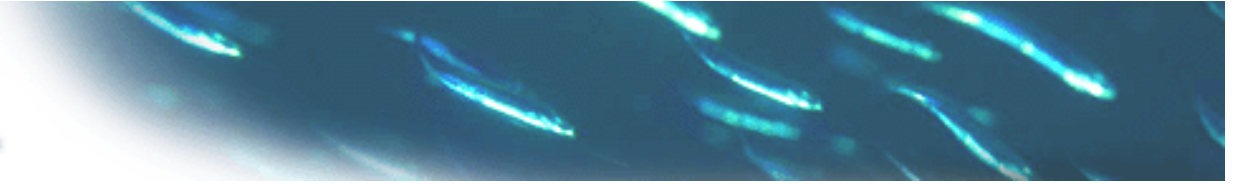
- Designated an Ecosystems Ctte
  - Defining ecosystem-based mngmt
  - Council role in poss. Reg Eco Councils
  - Implications of NOAA Strategic Plan
  - Council-level guidelines for EAFM
  - MSA provisions/req's for EAFM
  - Coordinating w/ NOAA on EAFM initiatives
- Possibly preparing a Fishery Ecosystem Plan for the Aleutian Islands



## PFMC

RFMC Approaches

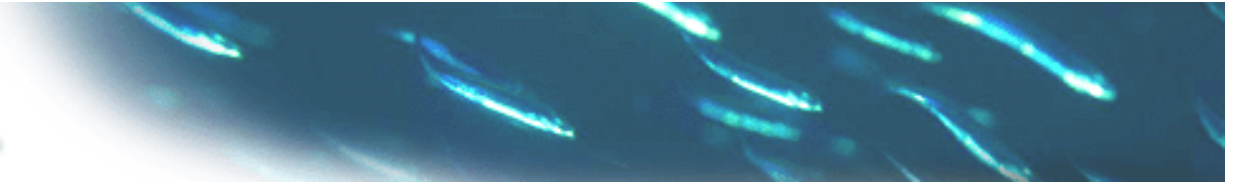
- No information



## CFMC

### RFMC Approaches

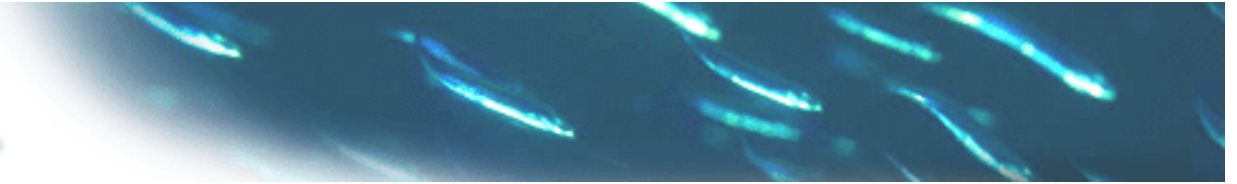
- Addressing EAFM concern exclusively through Generic EFH amendment



# GMFMC

## RFMC Approaches

- Designated an Ecosystems SSC
  - Gov't, university and private scientists “knowledgeable about fisheries ecology”
- Goal: Evolve from species-based management to EBFM
  - Building on EFH amendment
- Pilot Project
- Five-year budget:
  - Develop Fisheries Ecosystem Plan for West Florida Shelf (three year completion)
  - Initiate work on FEP for the Florida Coral Reef Tract (three year completion)



## SAFMC

### RFMC Approaches

- Developing “Comprehensive Habitat and Fishery Ecosystem Plan”
  - Building on EFM Amendment
  - Partnering w/ state, federal and other regional agencies
  - Implementation late 2005

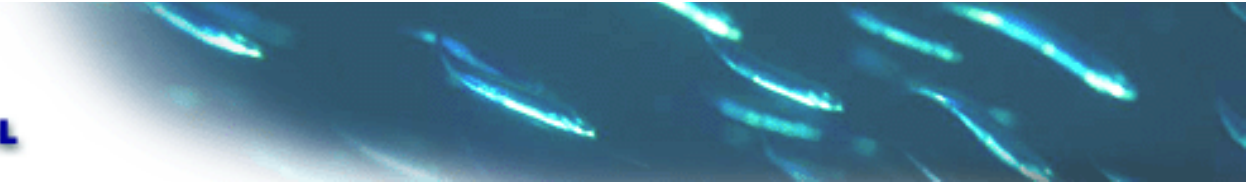


## MAFMC

### RFMC Approaches

- Designated a Council Ecosystems Ctte
- Designated staff project leader
- Attended meetings

*“During [meetings] we have discovered that the Council’s single species management approach... incl. quota management...can be construed (as EAFM). Hence, as we continue to recover stocks...we will...build on our current ecosystems-based successes.”*



# NEFMC: Where to from here?





## NEFMC

Going forward

- Pilot project requirements
    - Survey
    - Outreach
    - Data needs
    - Synthesis report
- To what end?**
- Ctte to review options, make recommendations