



**NOAA**  
**FISHERIES**

# Overview of NEFSC Habitat Research

Tom Noji

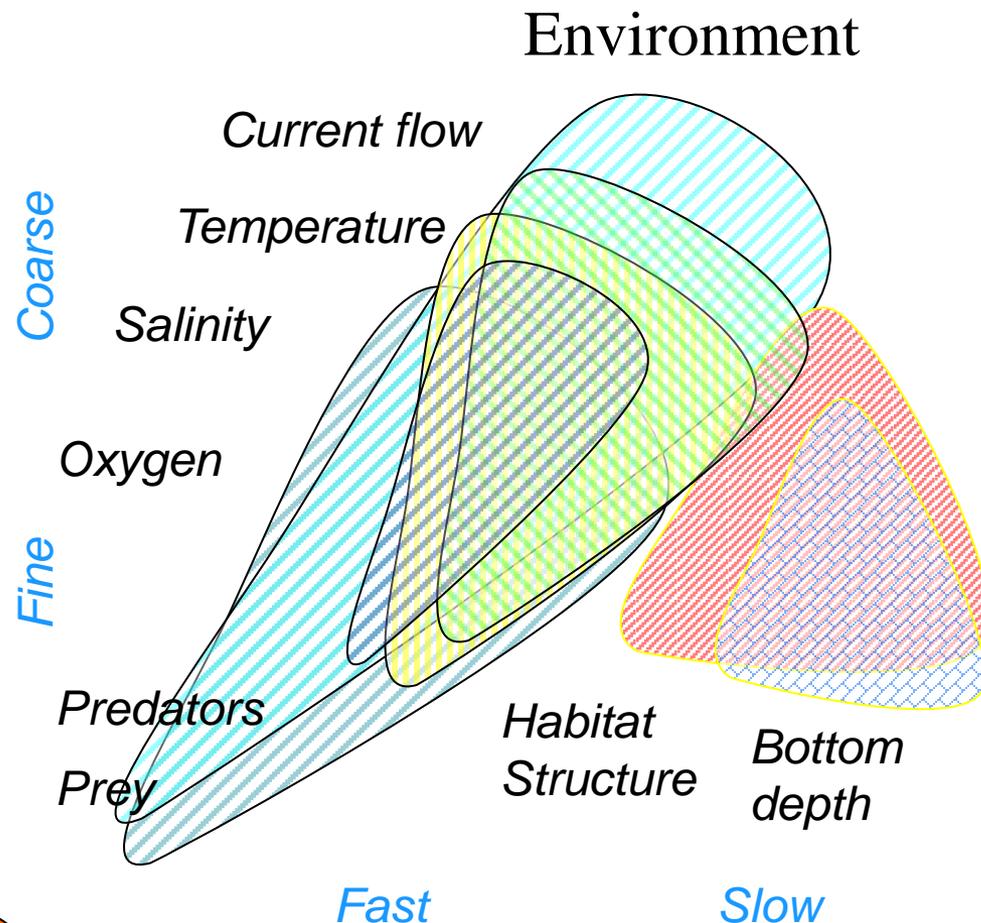
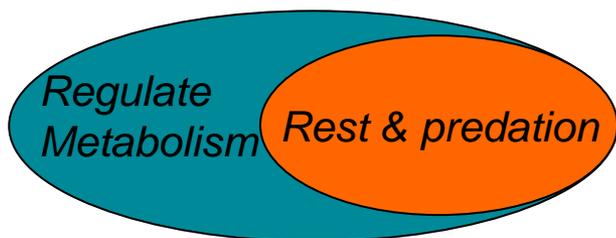
NEFSC Ecosystem and Climate Science Program Review

Introduction to NEFSC Science Session

June 6, 2016

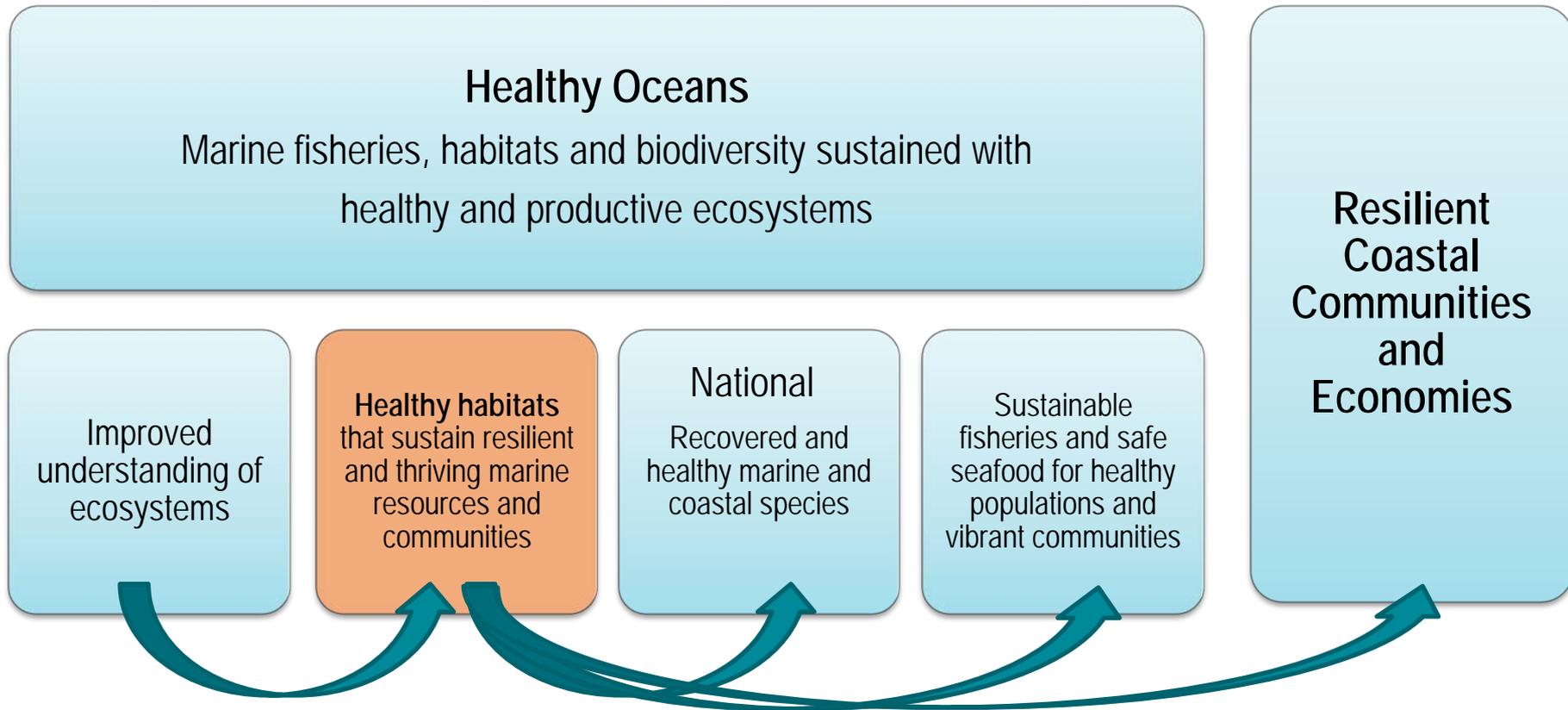
# Habitats

- Individuals
- Dynamic
- Ecosystem change
- Human activities
- Interactive



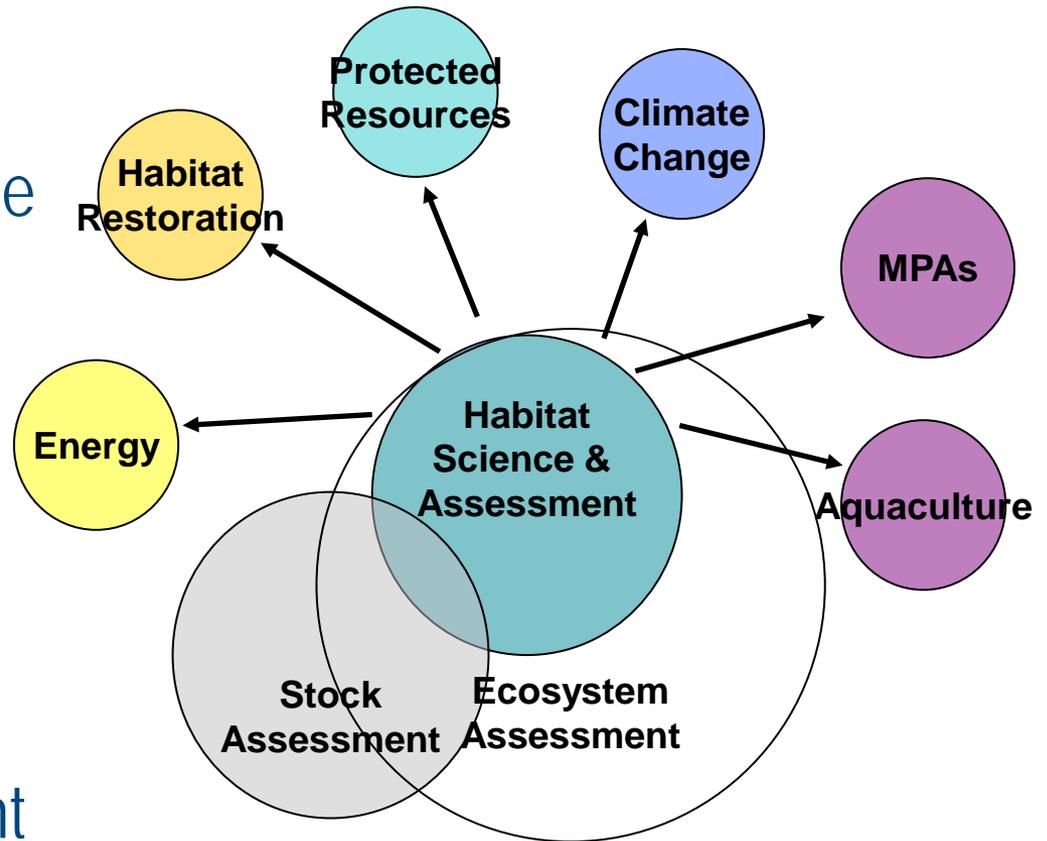
<http://www.nefsc.noaa.gov/publications/tm/tm208/>

# NOAA Habitat Science Goals



# NEFSC Habitat Research Portfolio

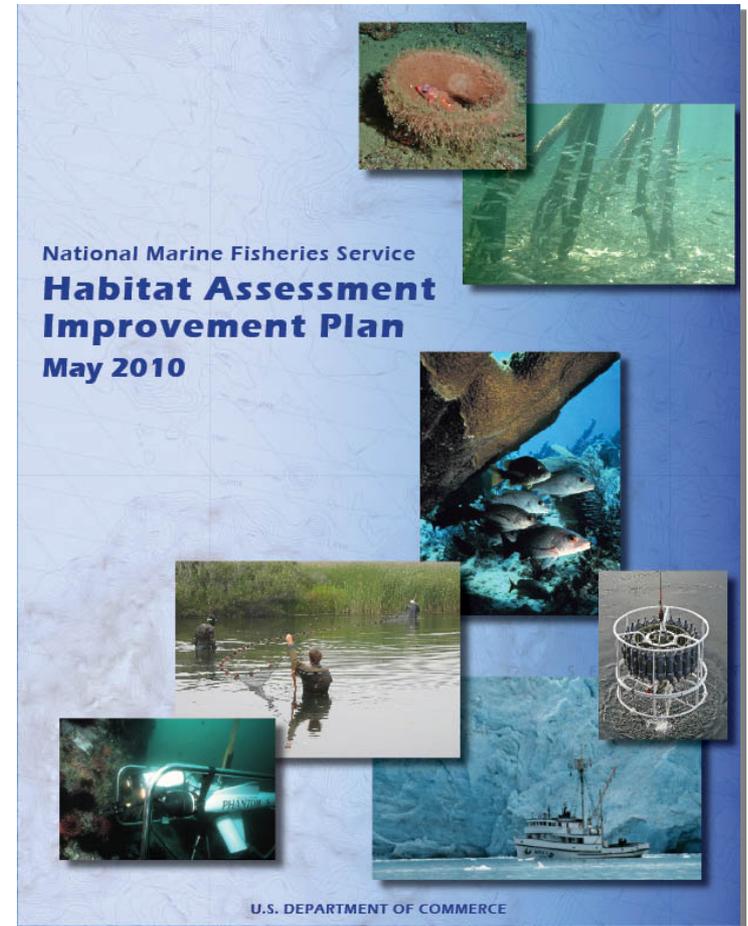
- Suitability
- Characterization
- Vulnerability & resilience
- Change & response
  
- Field surveys
- Field experimentation
- Lab experimentation
  
- Support to management



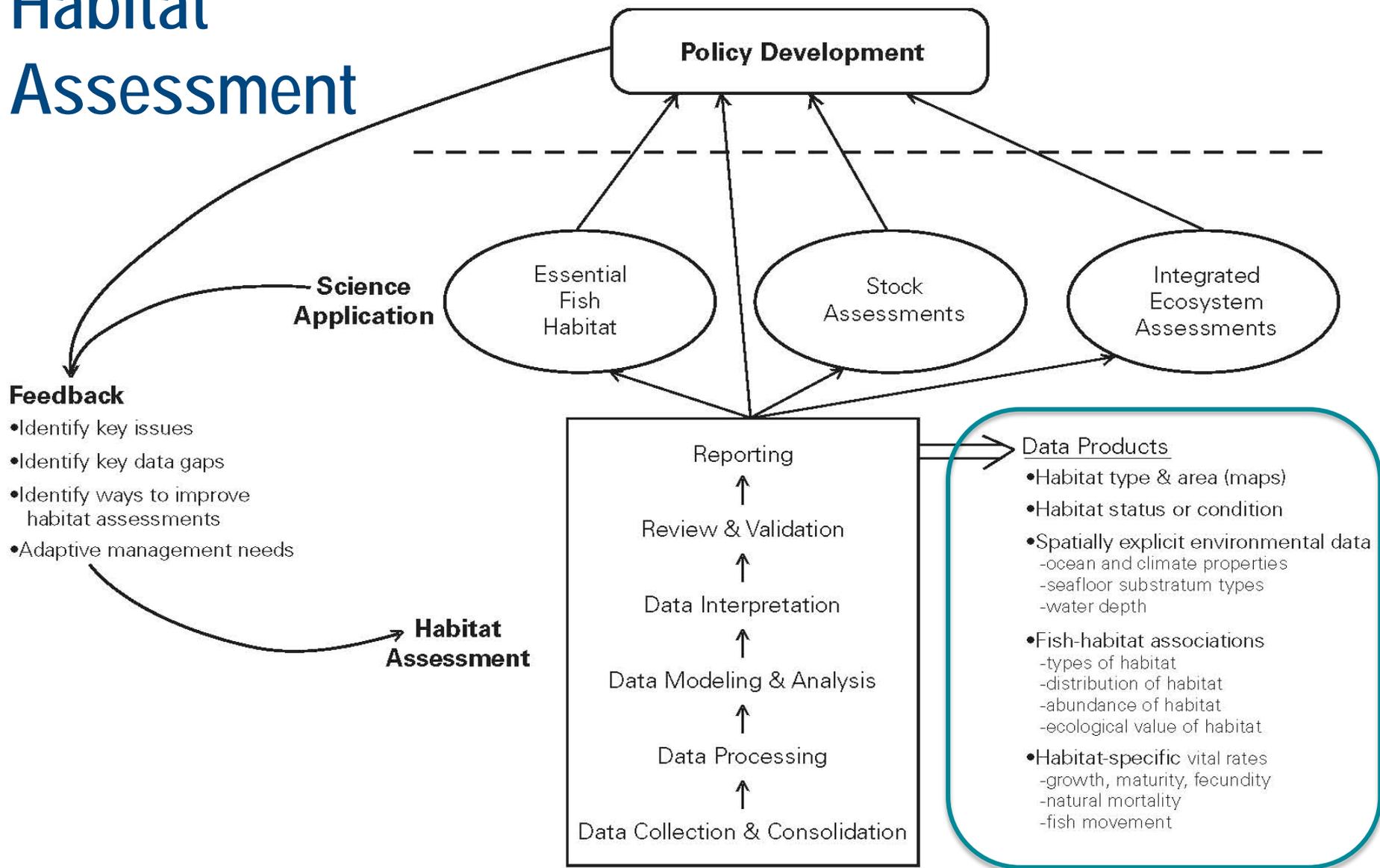
HAIP 2010

# Fisheries Habitat Research Priorities

- Stock status, protected, socio-economic impacts
- Habitat Assessment Improvement Plan
- Habitat Assessment Prioritization Working Group



# Habitat Assessment



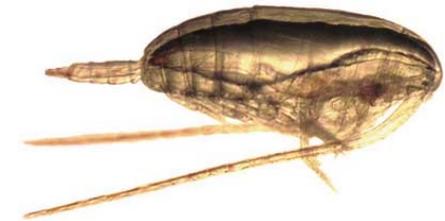
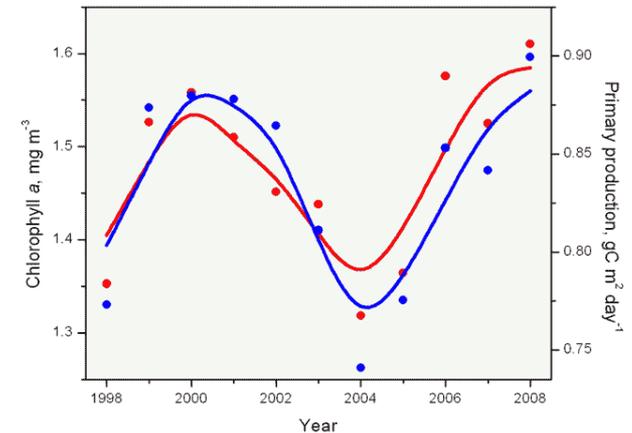
# Habitat Assessment Prioritization

- Stock status
- Stock value
- State of the science
- Habitat assessment efficiencies
- "Other"



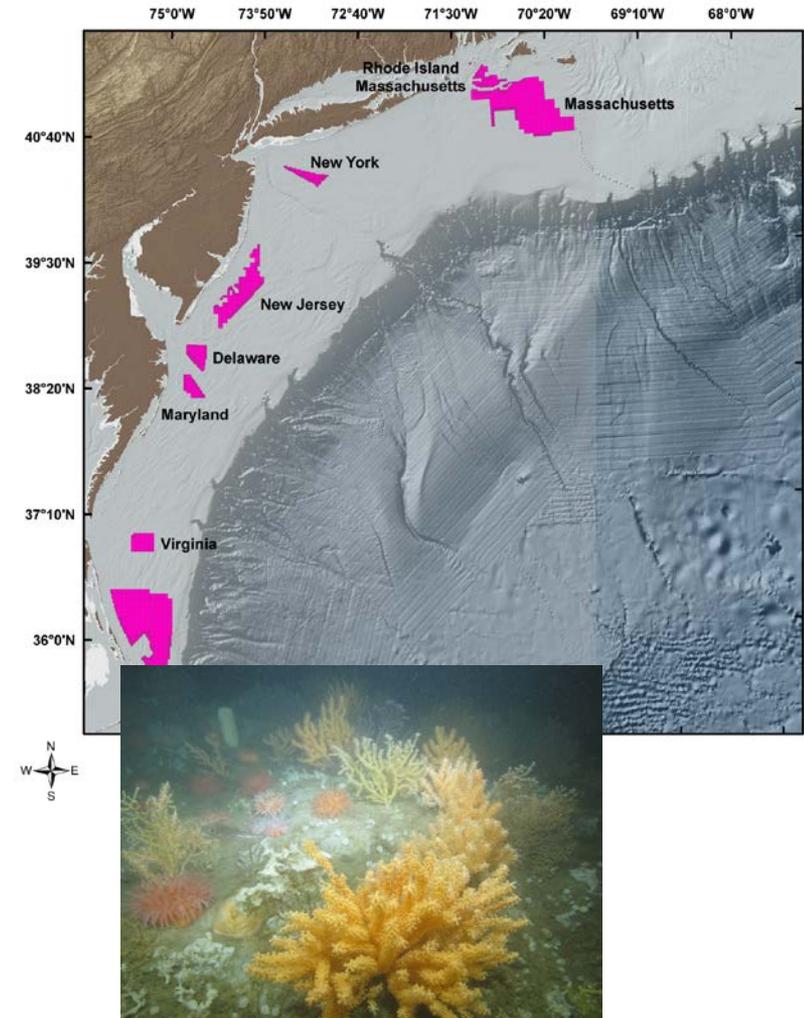
# Pelagic Habitat Surveys & Monitoring

- NEFSC Climate Science Program – 2009 – **Jonathan Hare - Talk**
  - Ecosystem Indicators – **Kevin Friedland - Talk**
  - eMOLT – **Jim Manning - Poster**
  - EcoMon – **Jerry Prezioso - Poster**
  - CTD – **Paula Fratantoni - Poster**
  - EcoOp – **Stace Beaulieu - Poster**
  - Cooperative Research – **John Hoey - Poster**
- Water Quality – **Julie Rose – Poster**
- Primary production
- Salmon River Habitat

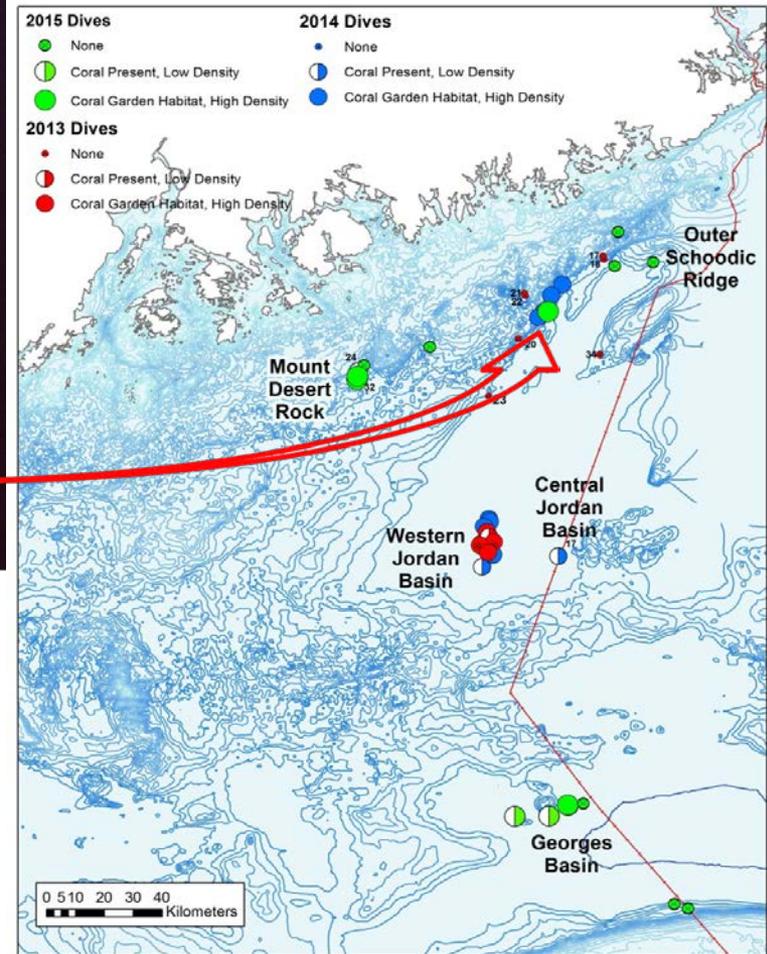
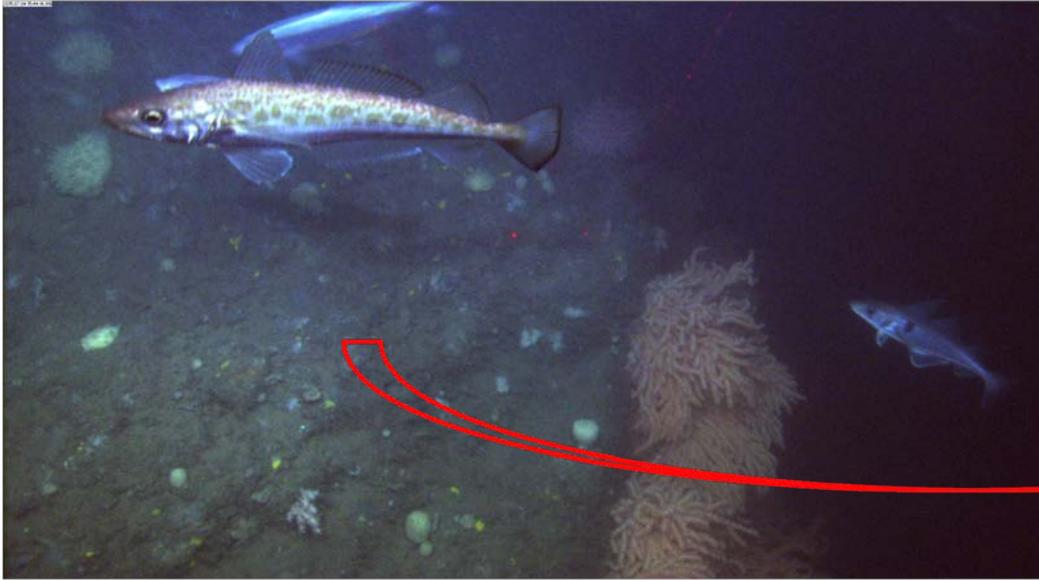


# NEFSC Benthic Habitat Surveying

- Habitat Characterization – Vince Guida – Poster / 3-D Images
  - Georges Bank Trawl Effects
  - Gulf of Maine Invasive Tunicates
  - DelMarVa Rocky Habitats
  - Wind Energy Area Vulnerability Assessments
- Deep-Sea Coral Habitats – Dave Packer – Poster / Story Board
- State EFH Geodatabase – Jeff Pessutti – Poster / Demo



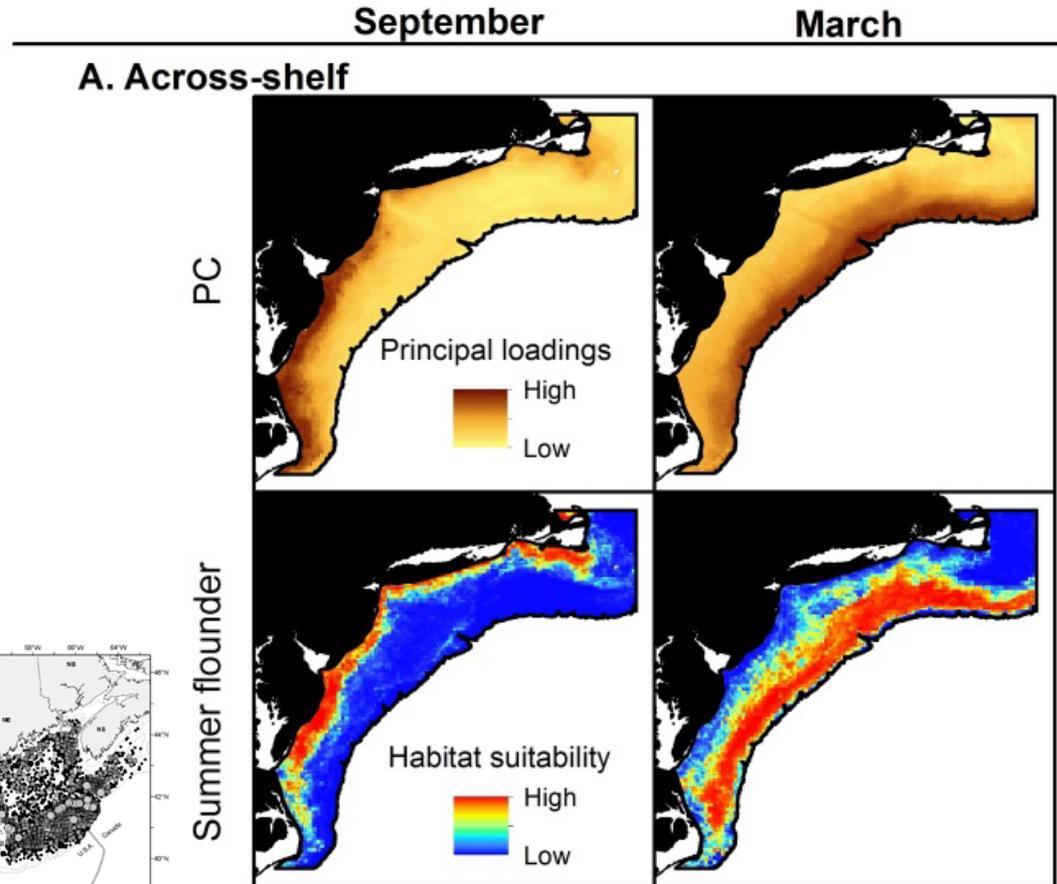
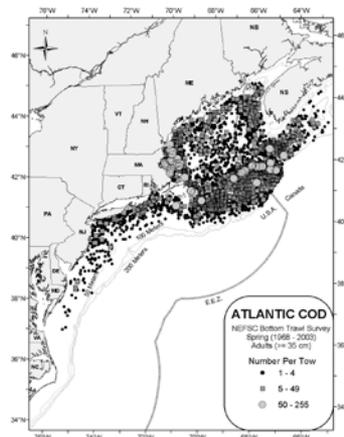
# Exploring Deep-sea Corals in the Gulf of Maine: A Story Map



- A collection of maps or images that tell the story of a particular project or subject of interest.
- They can quickly focus on a current event by integrating links to real-time data sources or they can allow you to view, pan, or zoom into underwater maps or images.
- The user is in control of the tools and has the ability to navigate across a range of environmental and geographical topics.

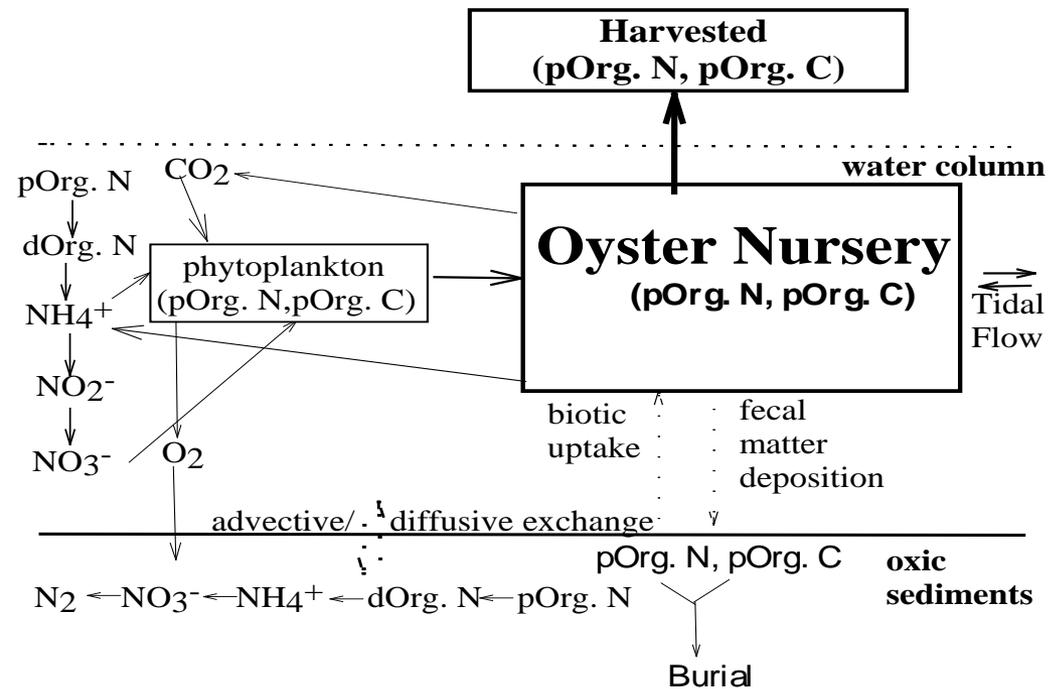
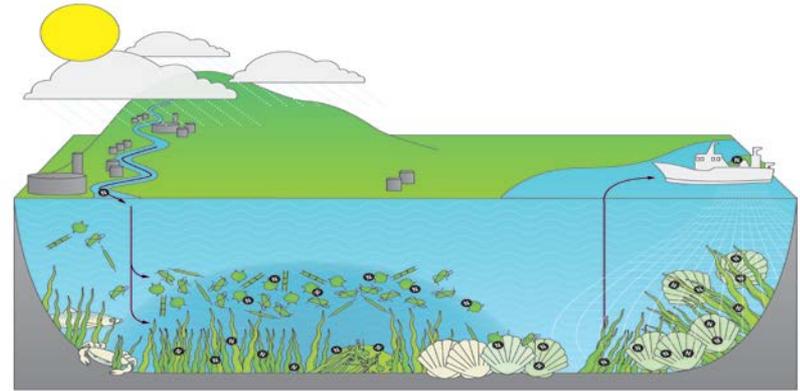
# Integration with Trawl Survey Data

- EFH Source Reports
- Habitat suitability–  
**McHenry & Welch –  
Poster / Animation**
- Marine conservation



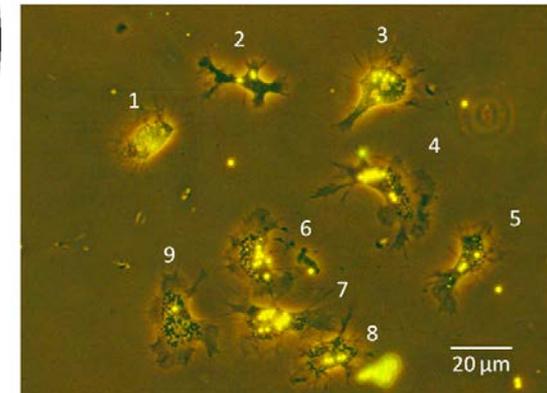
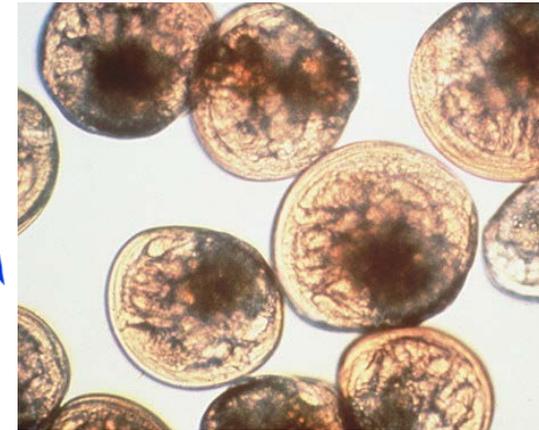
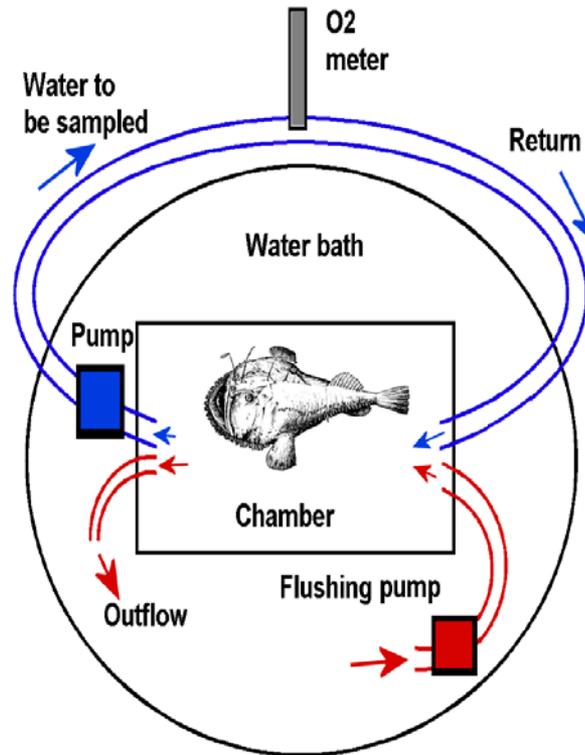
# Field Experimentation

- Effects of dredging on oyster habitat / aquaculture
- Effects of Floating Upwelling Systems
- Nutrient Bioextraction – **Julie Rose – Poster**
- Provision of ecosystem services by shellfish aquaculture
- Habitat fidelity / tagging

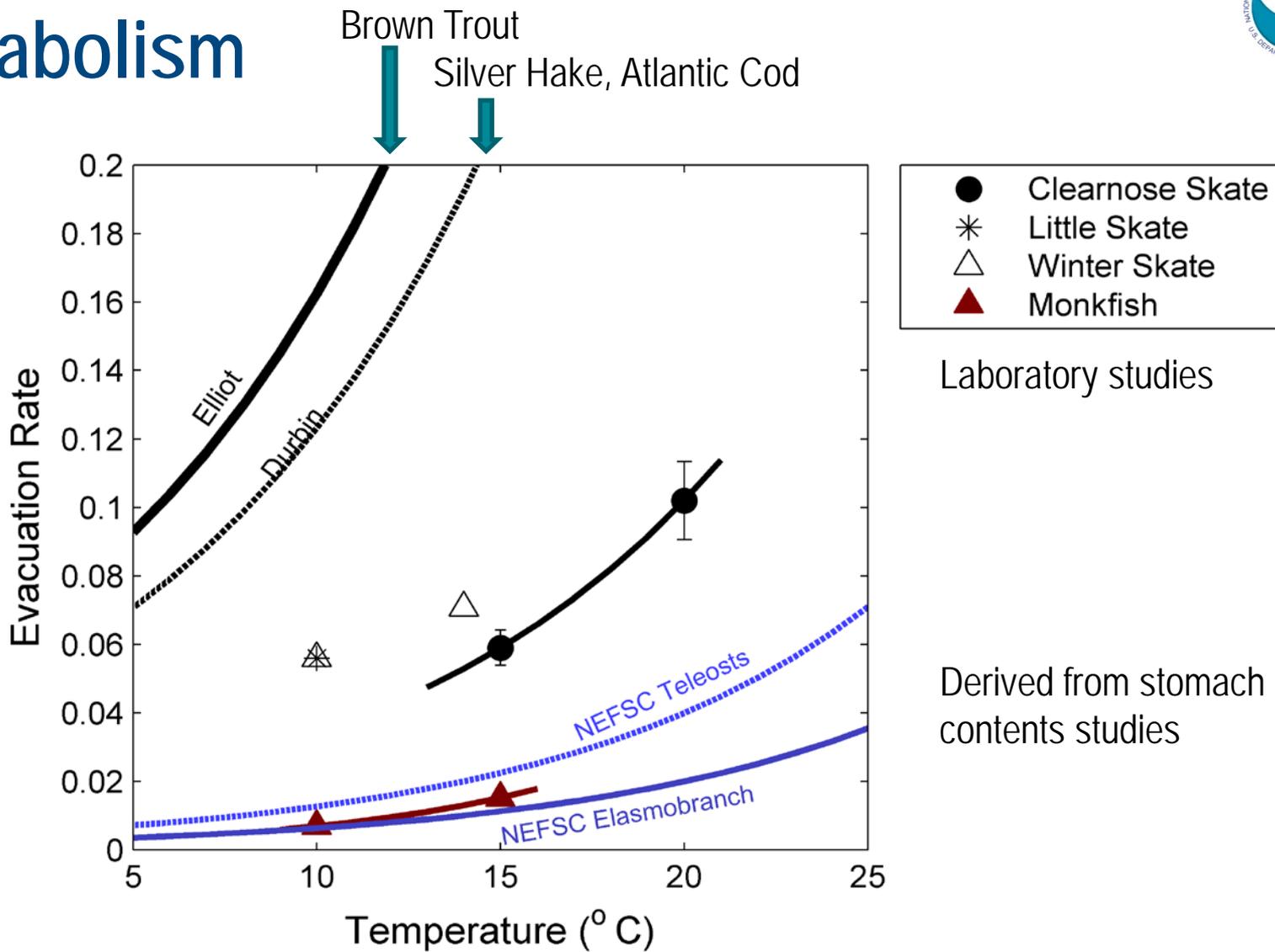


# Laboratory Studies

- Early life stage metabolism
- Adult metabolism –  
**Phelan & Rosendale - Poster**
- Cellular responses
- Ocean Acidification –  
**Phelan – Poster**
- Other water quality, predation



# Metabolism



# Prospectus

- Stock assessment improvement
- Climate effects on wild capture fisheries, cultured fisheries and supporting infrastructure
- Expansion of offshore industries
- Integrated multi-trophic approaches

