

# Towards EBFM

Trends, emerging issues  
and data needs

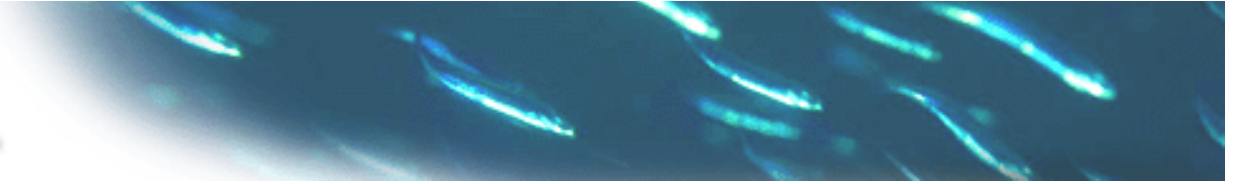
Ecosystems Decision Tools Workshop  
Key Largo, FL  
Feb 16, 2005

Chad Demarest, NEFMC



## Presentation Overview

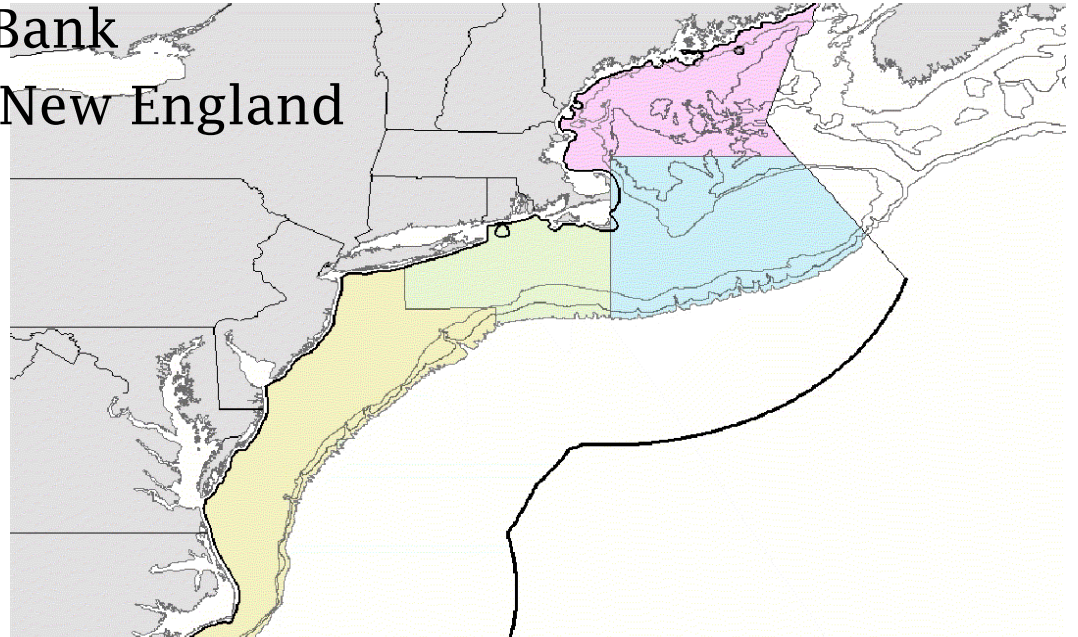
- **NEFMC: the basics**
- **Trends and predictions**
- **Emerging issues**
- **Data/information needs**



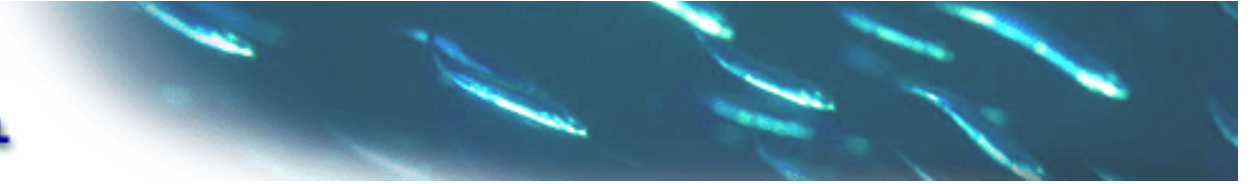
# The basics

## NEFMC

- One of eight US regional FMC's
- Federal waters (generally >3 nm's out to 200 nm's)
- Three management areas
  - Gulf of Maine
  - George's Bank
  - Southern New England

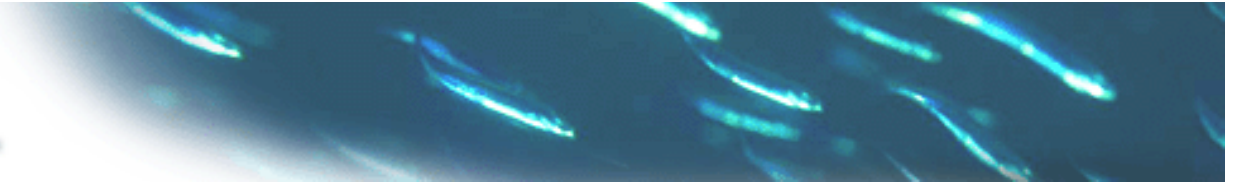






## Other fisheries in our area

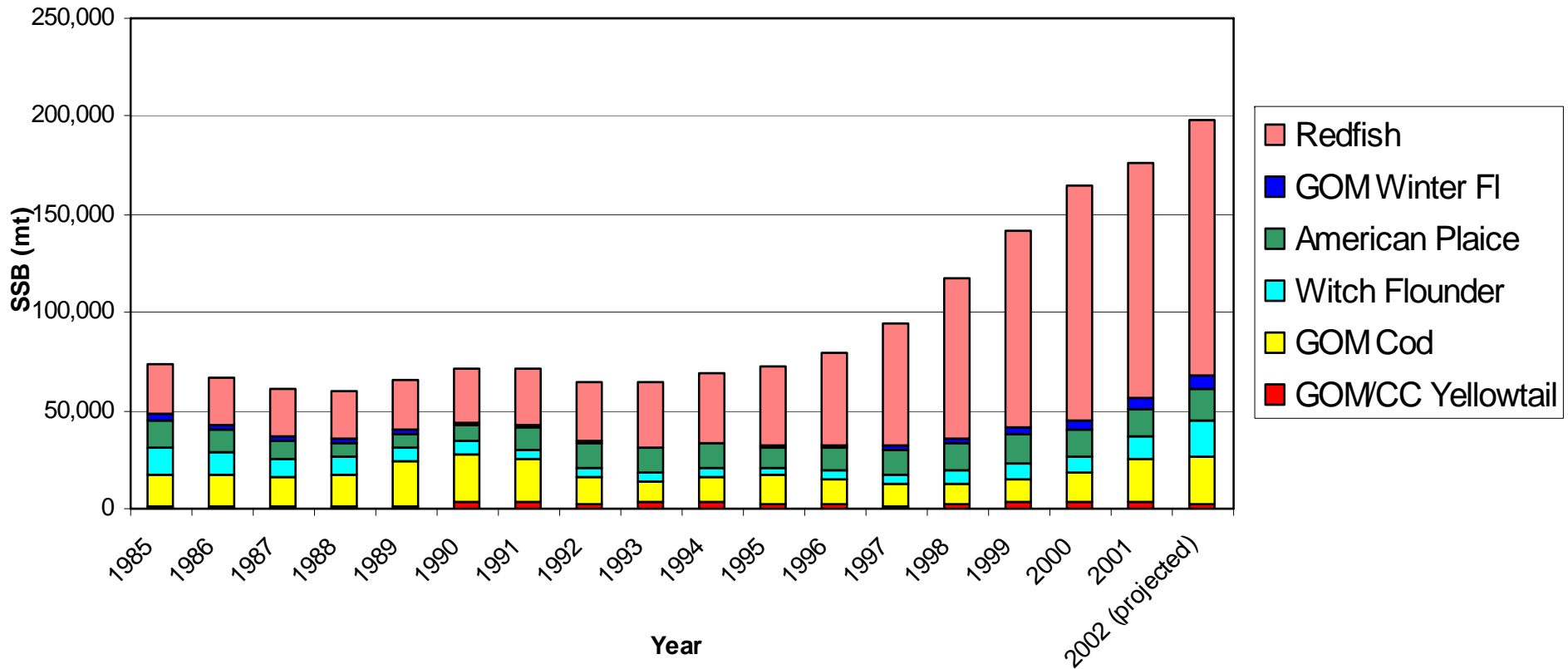
- MAFMC
  - Bluefish
  - Surf Clam/Ocean Quahog
  - Squid/Mackerel/Butterfish
  - Black Sea Bass/Scup/Summer Flounder
  - Dogfish\*
- ASMFC
  - Northern Shrimp
  - Lobster
  - Striped Bass
- Other
  - Hagfish
  - Pelagics



**Trends**



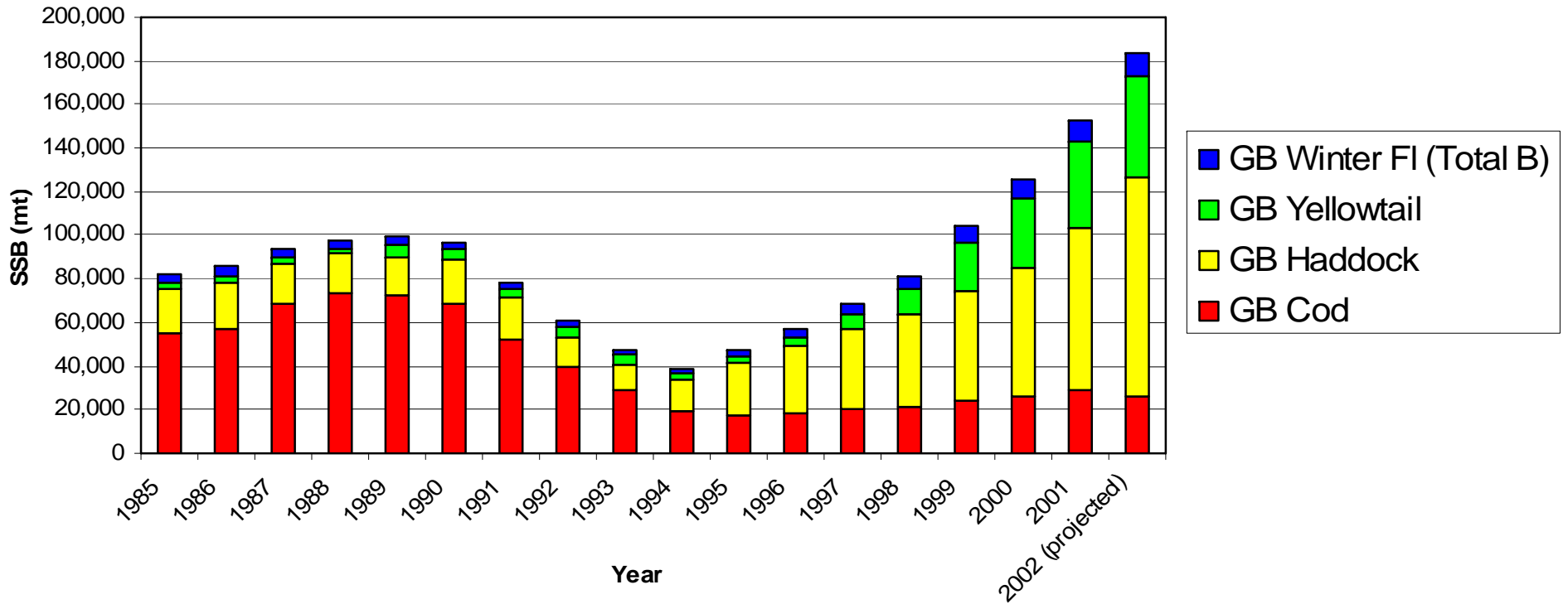
SSB for 6 GOM Groundfish Stocks, 1985-2002



\*2002 projections are from Groundfish PDT work for Amendment 13.

# GB groundfish stocks SSB

SSB for 4 GB Groundfish Stocks, 1985-2002

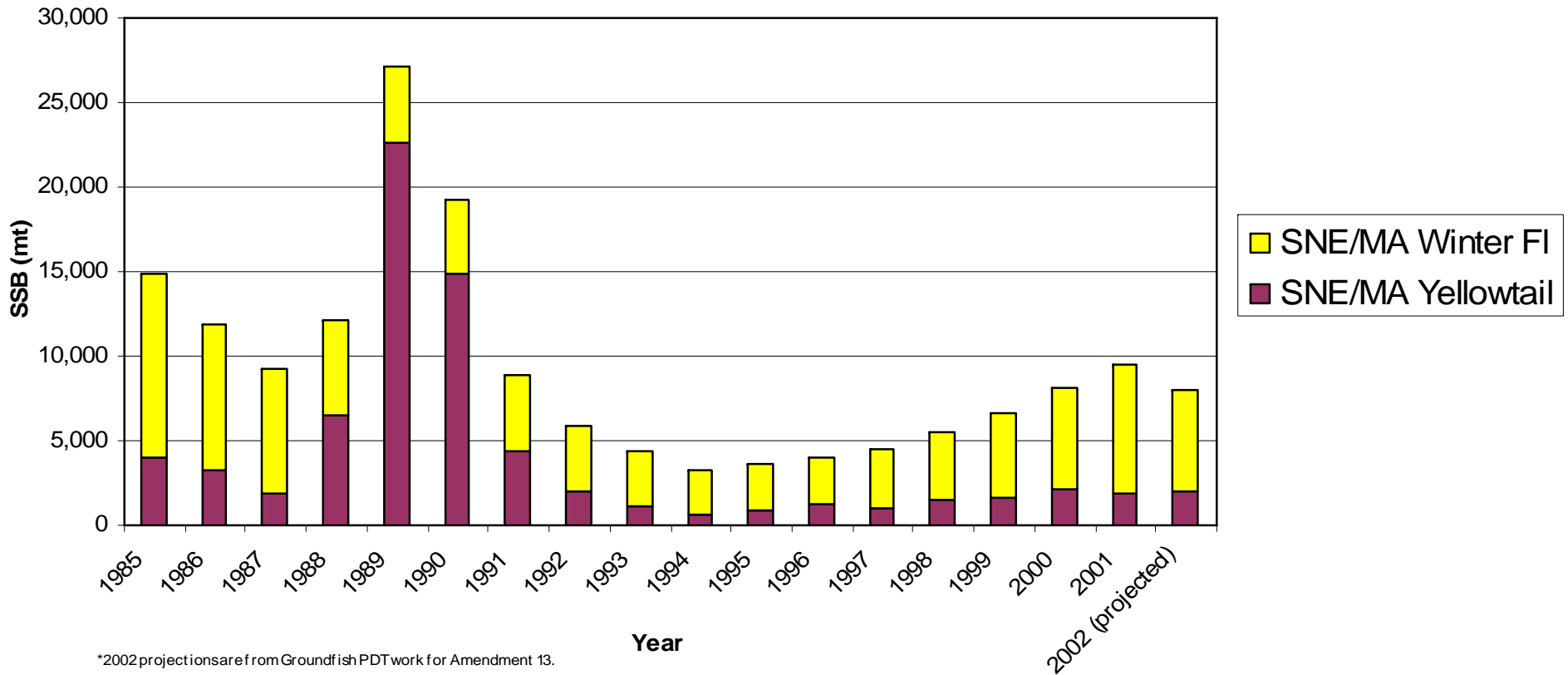


\*2002 projections are from Groundfish PDT work for Amendment 13.

\*2002 total B estimate for GB winter flounder from short-term projections in NMFS GARM Report (2002).

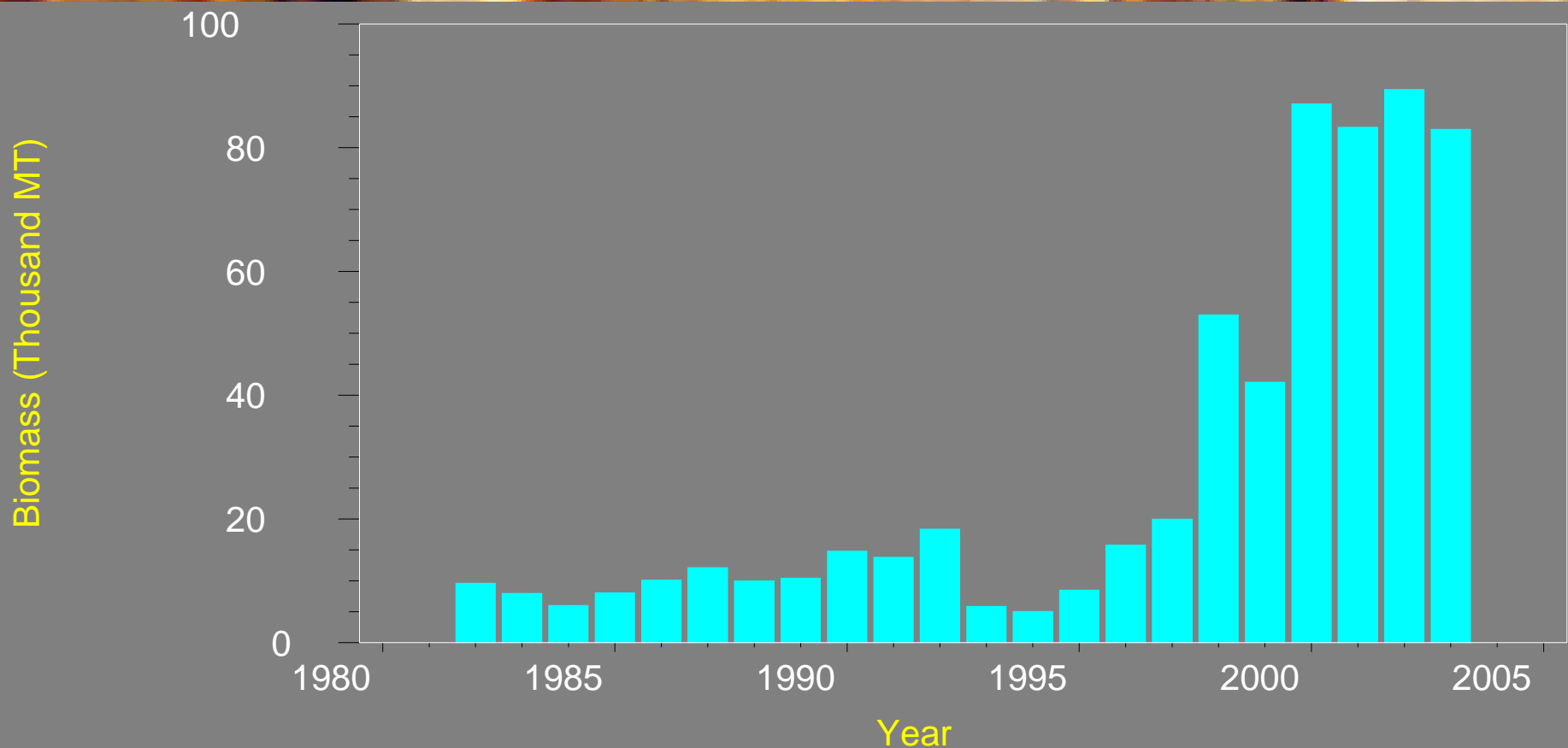


SSB of 2 Southern NE Groundfish Stocks, 1985-2002



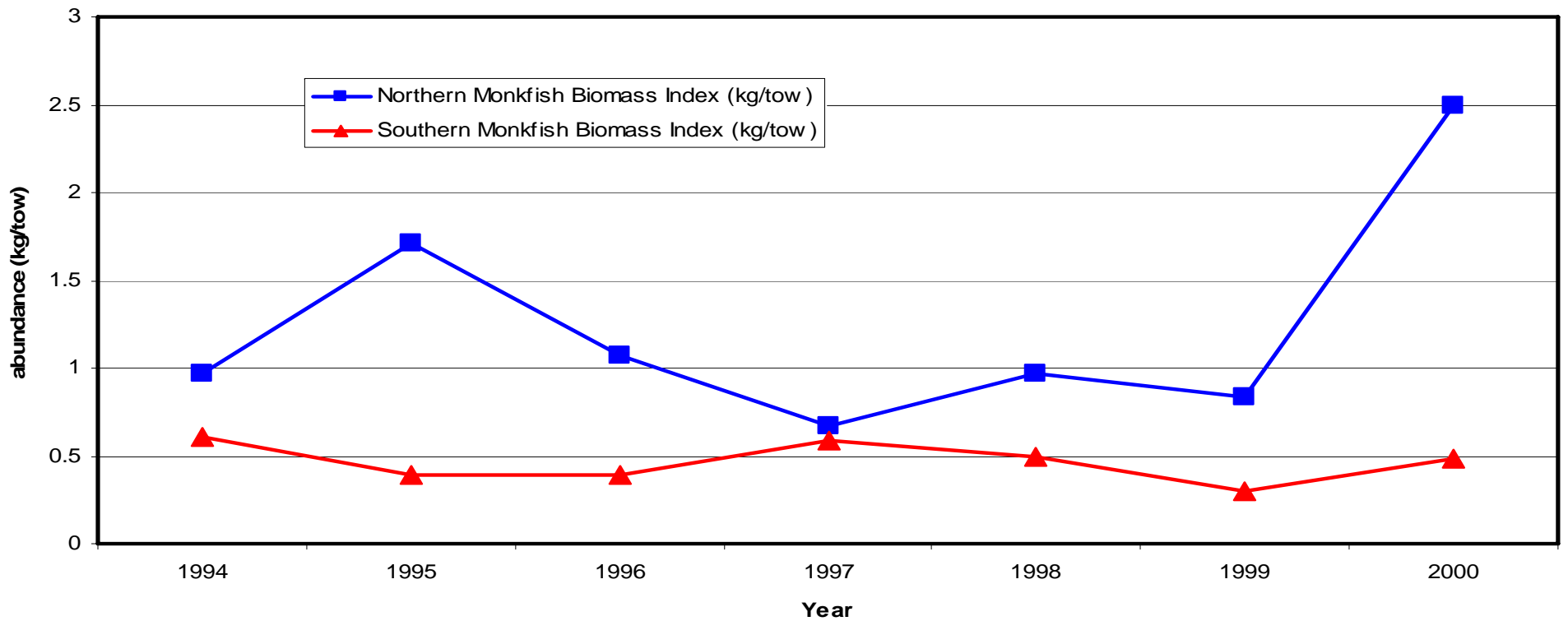
\*2002 projections are from Groundfish PDT work for Amendment 13.

# Atlantic Sea Scallop biomass



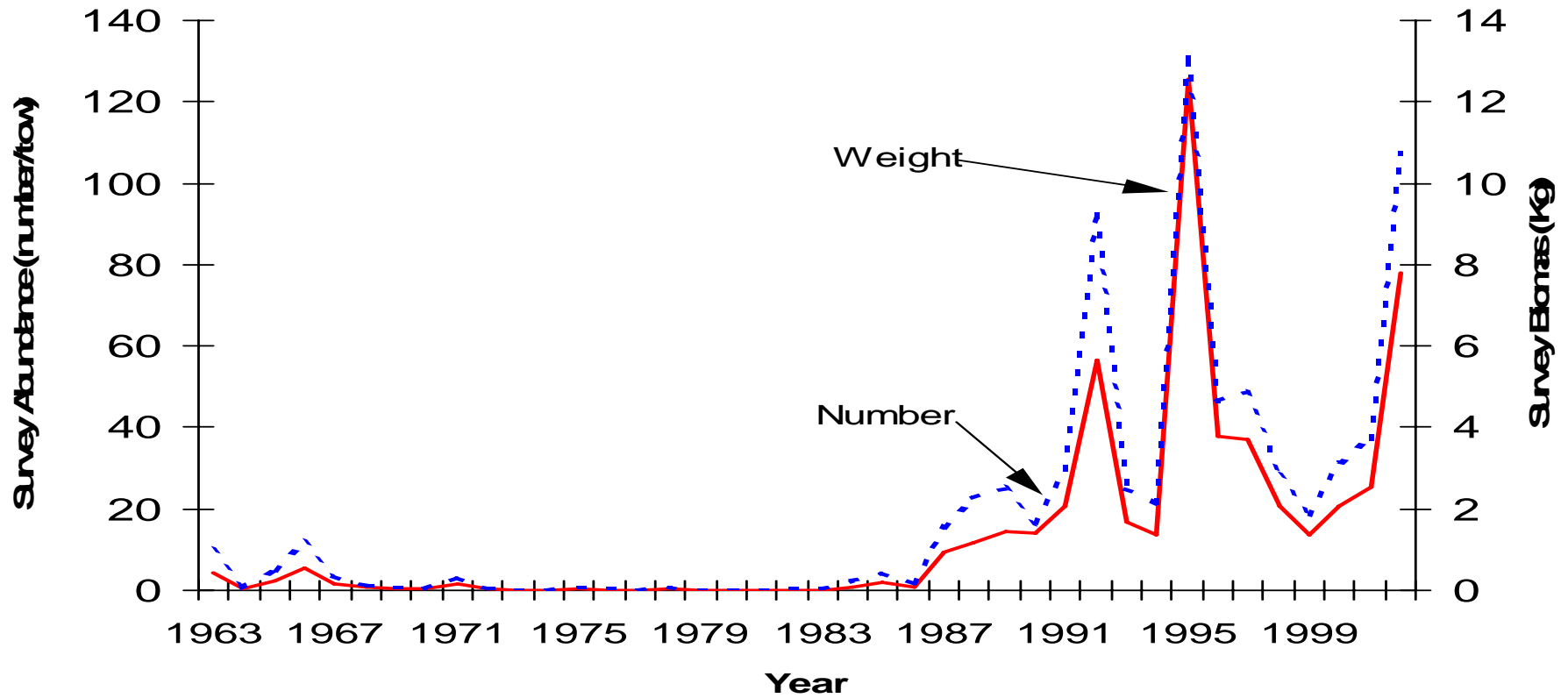


Trends in Monkfish Biomass from the Autumn Trawl Survey





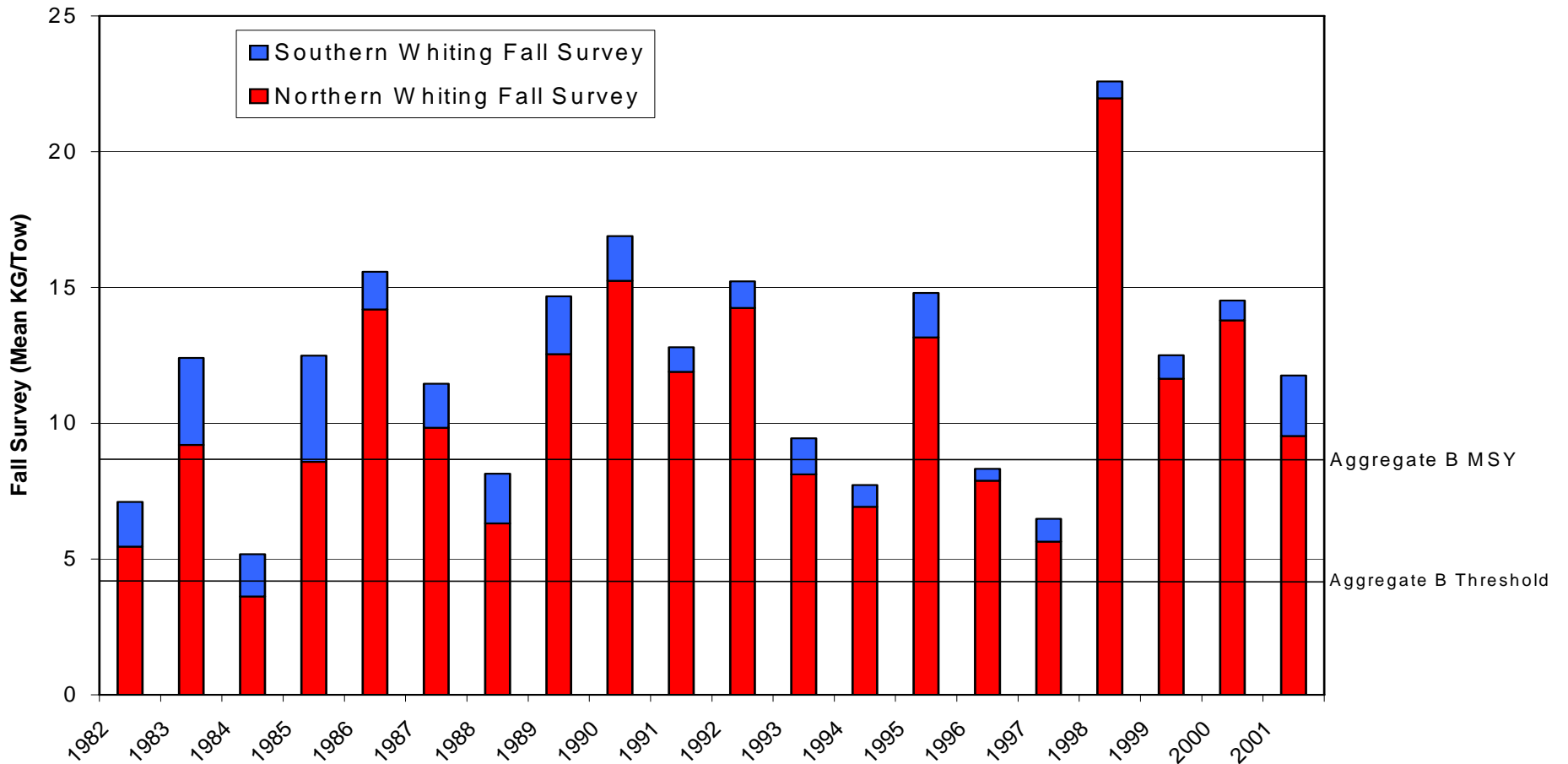
### Autumn Survey

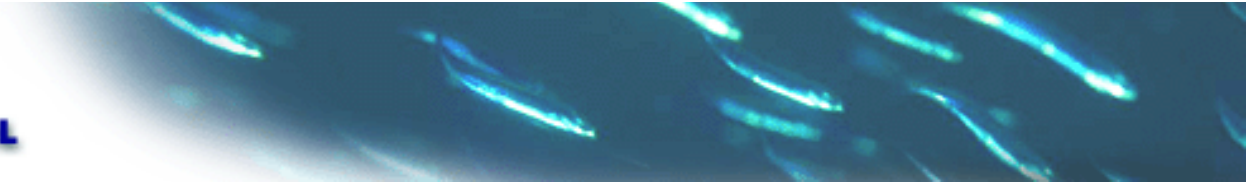




# Whiting abundance

**Survey Abundance of Whiting, 1982-2001**



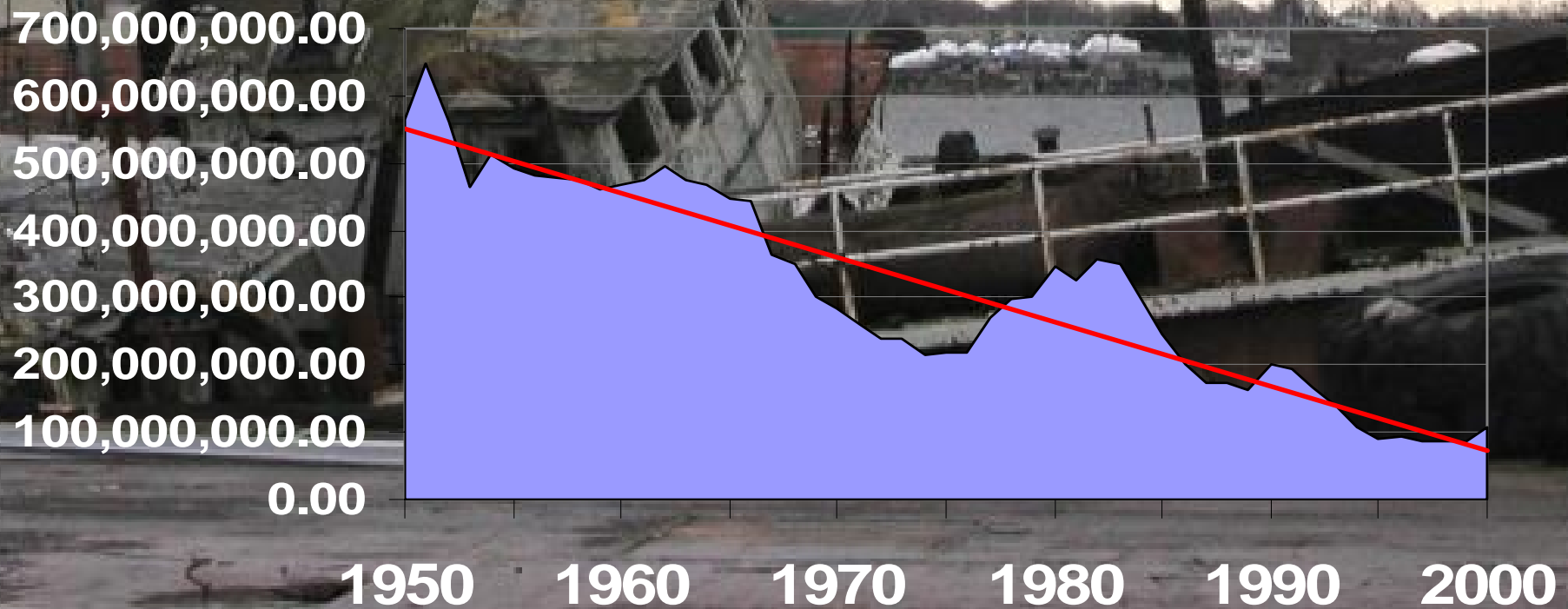


Predictions

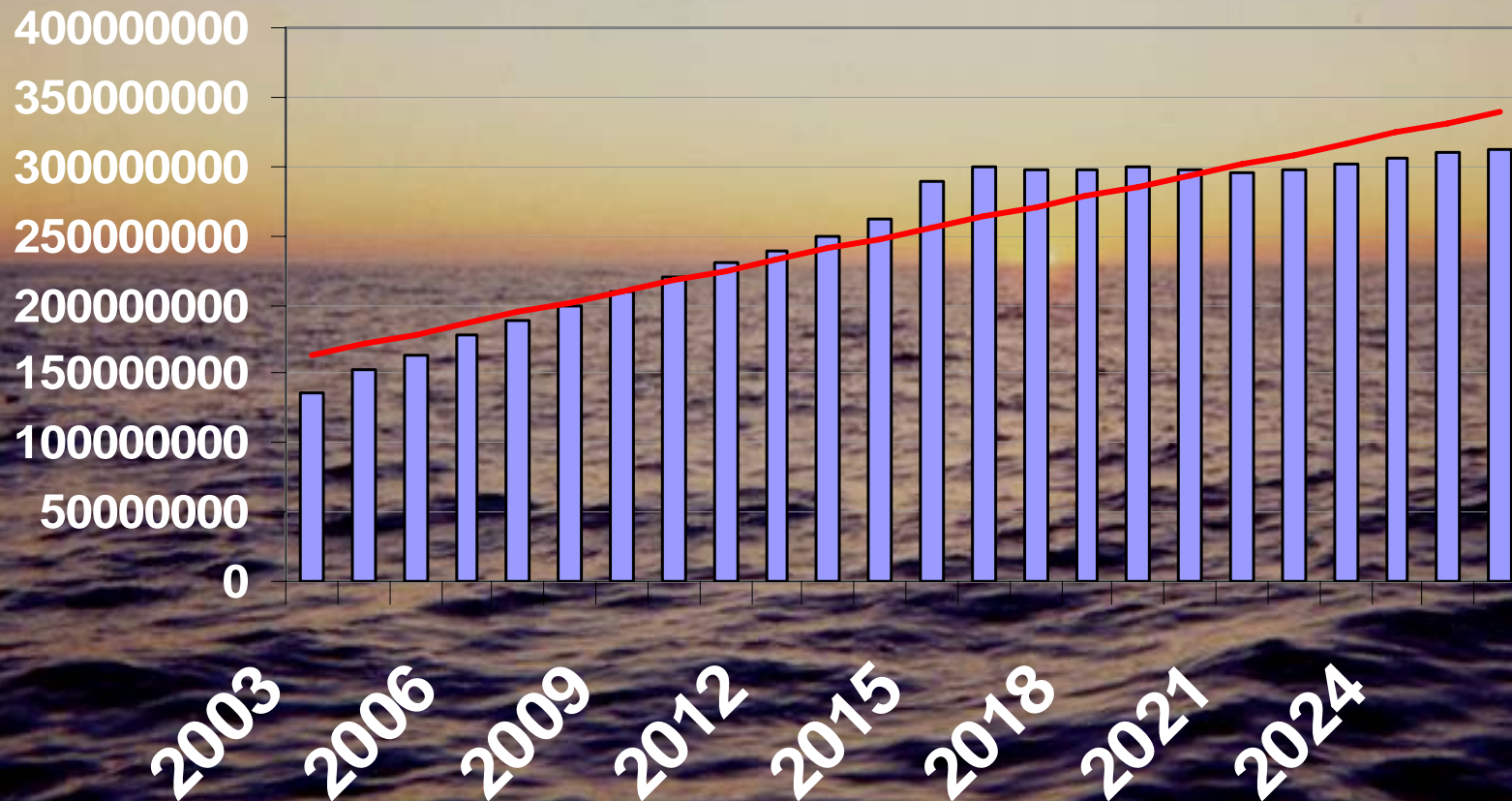
Net result?

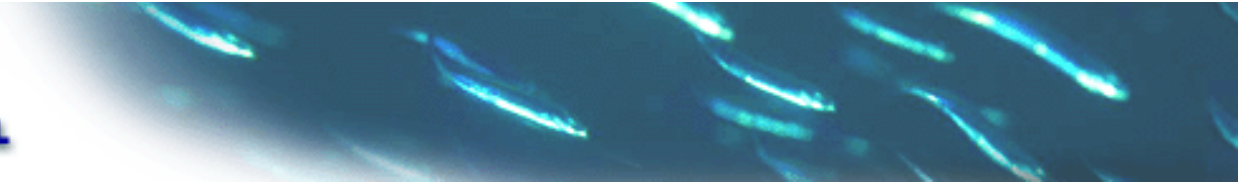
Things are looking up...

# Groundfish landings, 1950 - 2000



# Predicted groundfish landings, 2003 - 2026





Emerging issues

## Evolving management

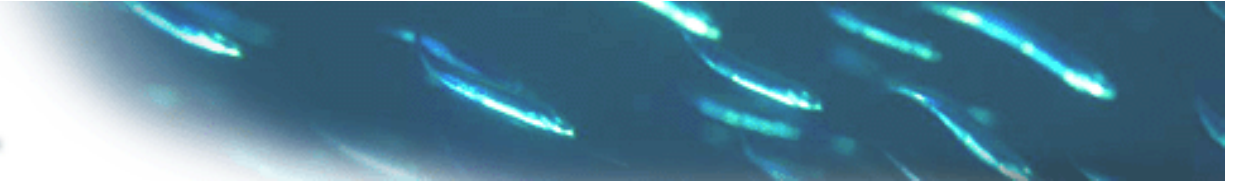
- From...stock-specific rebuilding
- To...integrated, multi-fishery management
- As stocks grow technical interactions will increase
  - Trade-offs
  - Preparedness



## Open-access

### Emerging issues

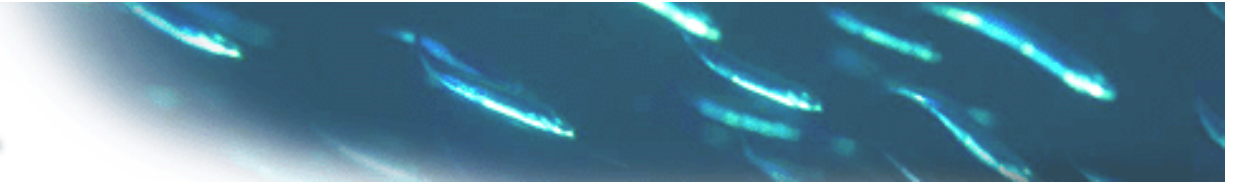
- Sea scallop day-boat fishery
  - Inaccurate self-reporting
  - Difficulty ascertaining actual effort
  - Constraining effort will have ripple effect



## Emerging issues

# Herring

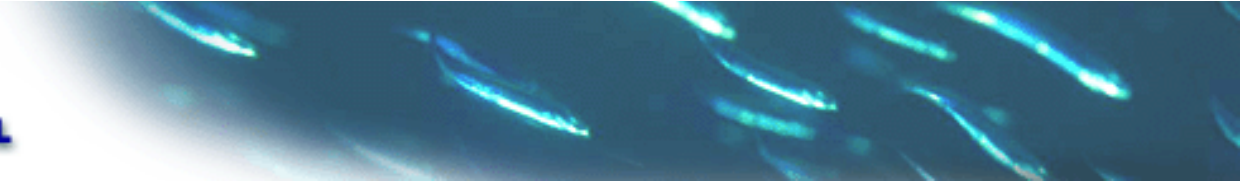
- Effort reduction in inshore areas
  - Localized depletion
  - Forage species
  - Tuna, whales, cod, stripers
  - Lobster, mackerel



## EFH

### Emerging issues

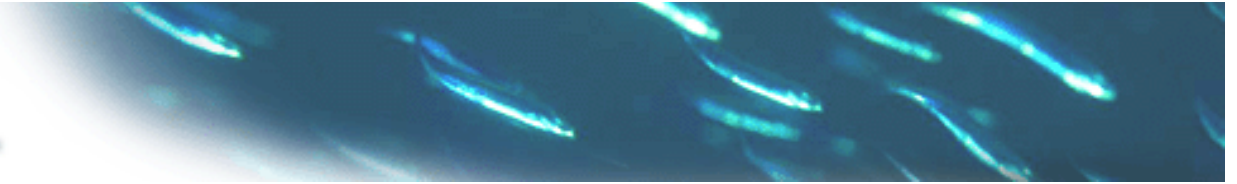
- EFH designations
  - Data levels (1 – 4)
  - Purpose of designation
- EFH protection
  - Integrated, multi-fishery protection of sensitive habitat
- High-res benthic maps
- Quantifying link btwn habitat and productivity



## Dogfish

Emerging issues

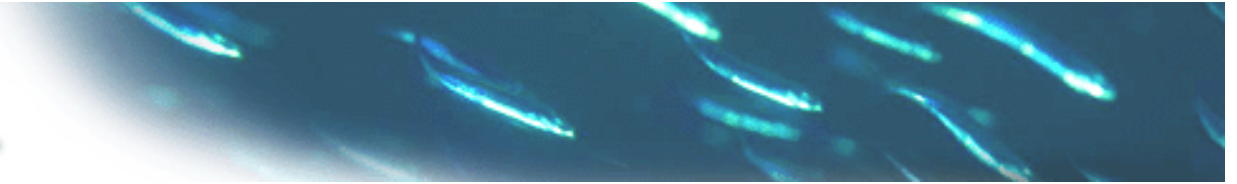
There is a strong desire amongst all NE fisherman, commercial and recreational, to harvest dogfish at exceedingly high levels



Data needs

## Generic

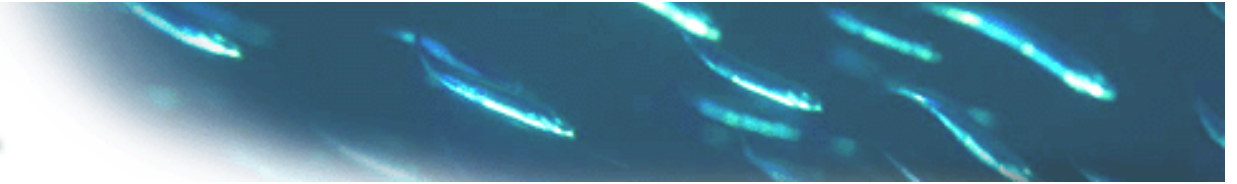
- Food web: Geographic/seasonal information on predator-prey interactions
- Improved catch information
- Improved effort information



## Data needs

# Generic

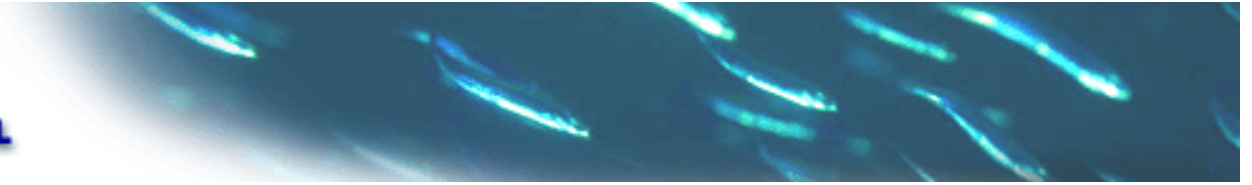
- Non-fishing activities
  - All fluid discharge sites
  - All watersheds
  - Non-fluid disposal sites
  - Water transportation facilities and patterns
  - Concentrations of non-point source discharge
  - Locations of other activities that affect the marine environment
- Economic /social
  - Location of fishing communities
  - Geographic characterization of economic dependence on fishing activities (including non-consumptive uses)
  - Location of major support infrastructure
  - Market distribution system
  - Areas where stakeholders reside
  - Population areas



## Data needs

# Specific

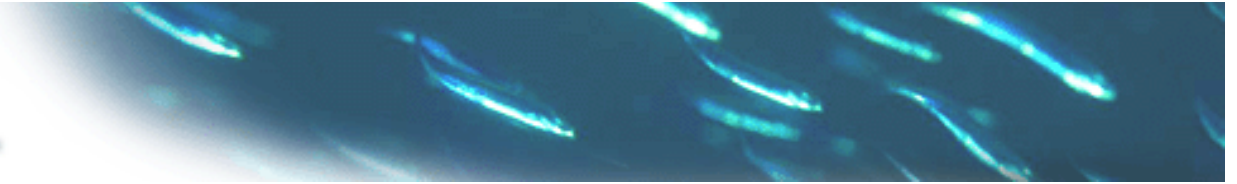
- Habitat
  - High-res bathymetry and substrate data
  - Level 4
  - Fishing effort
- Biological
  - Spatially explicit target, by-product and bycatch
  - Low-frequency variability in physical environment
  - Improved fishing effort linkage across and within fisheries



## Specific

### Data needs

- Economic
  - Improved cost data
  - Spatially explicit fishing effort
    - Intra- and inter-fishery
  - Linkages from ocean to market
- Social
  - Need for non-economic social indicators



Data needs

## Specific

- Cumulative effects
  - Focus on indicators
  - Develop assessment techniques
  - Alternative-specific impacts for management actions
- Models for management
  - Integrated
  - Formalized