

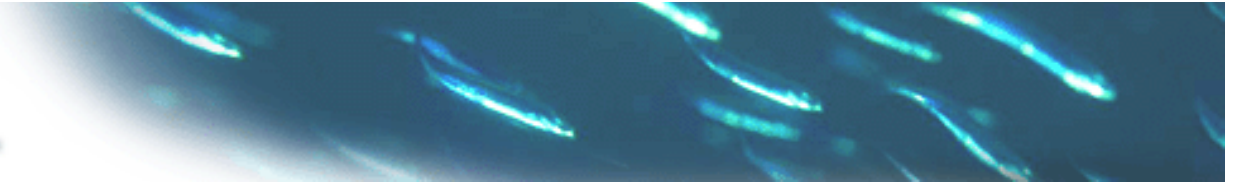


Towards EBFM

Trends, emerging issues
and data needs

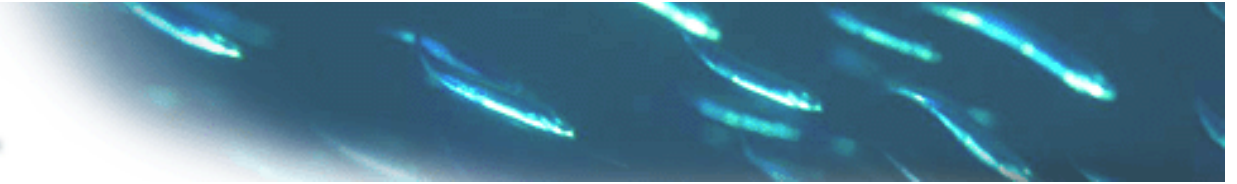
Ecosystems Decision Tools Workshop
Key Largo, FL
Feb 16, 2005

Chad Demarest, NEFMC



Presentation Overview

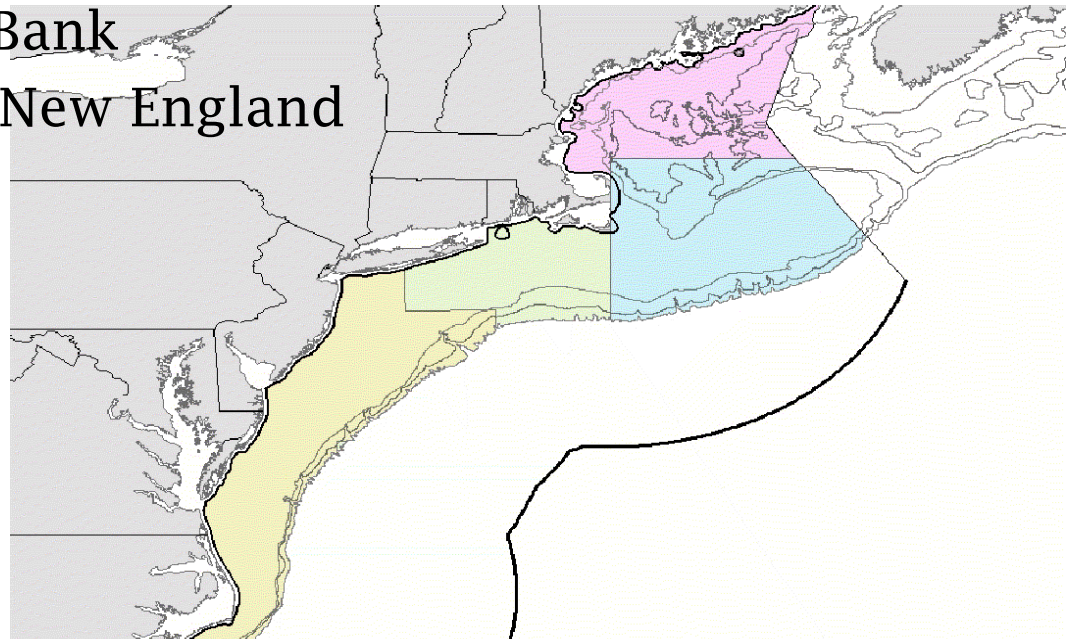
- **NEFMC: the basics**
- **Trends and predictions**
- **Emerging issues**
- **Data/information needs**

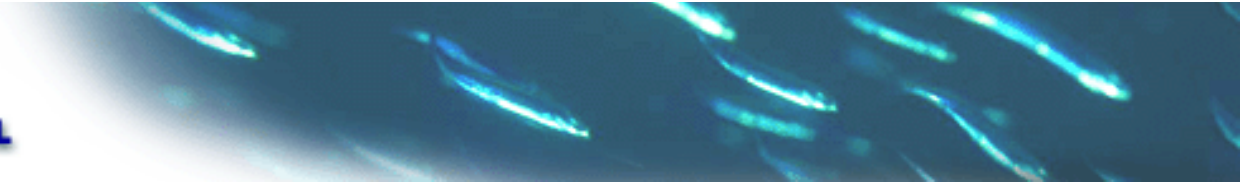


The basics

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

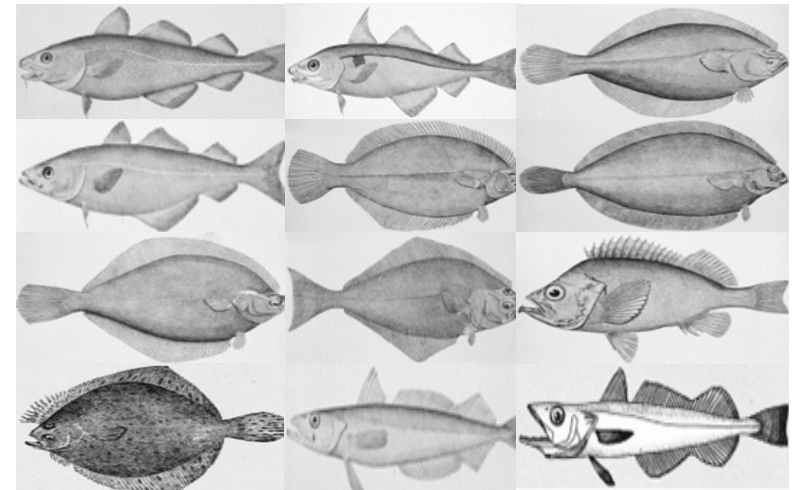


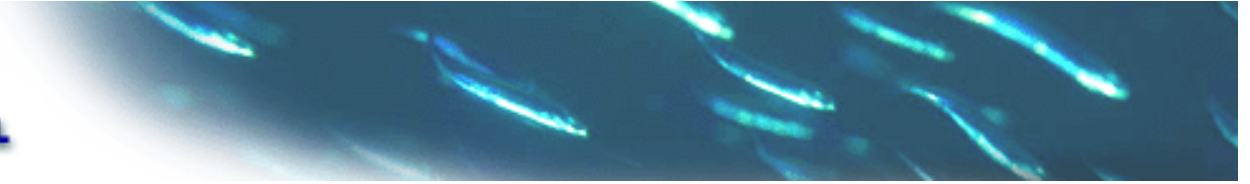


The basics

Our fish and plans

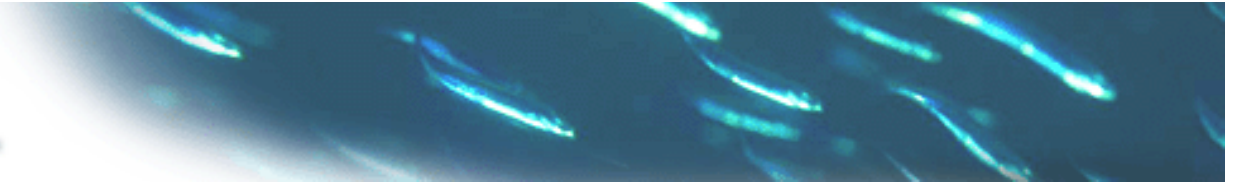
- 20 Species
- Seven Fishery Management Plans
 - Northeastern Multi-species (groundfish)
 - Small mesh
 - Large mesh
 - Atlantic Sea Scallops
 - Monkfish
 - Red Crab
 - Atlantic Herring
 - Skate Complex
 - Atlantic Salmon
 - Essential Fish Habitat





Other fisheries in our area

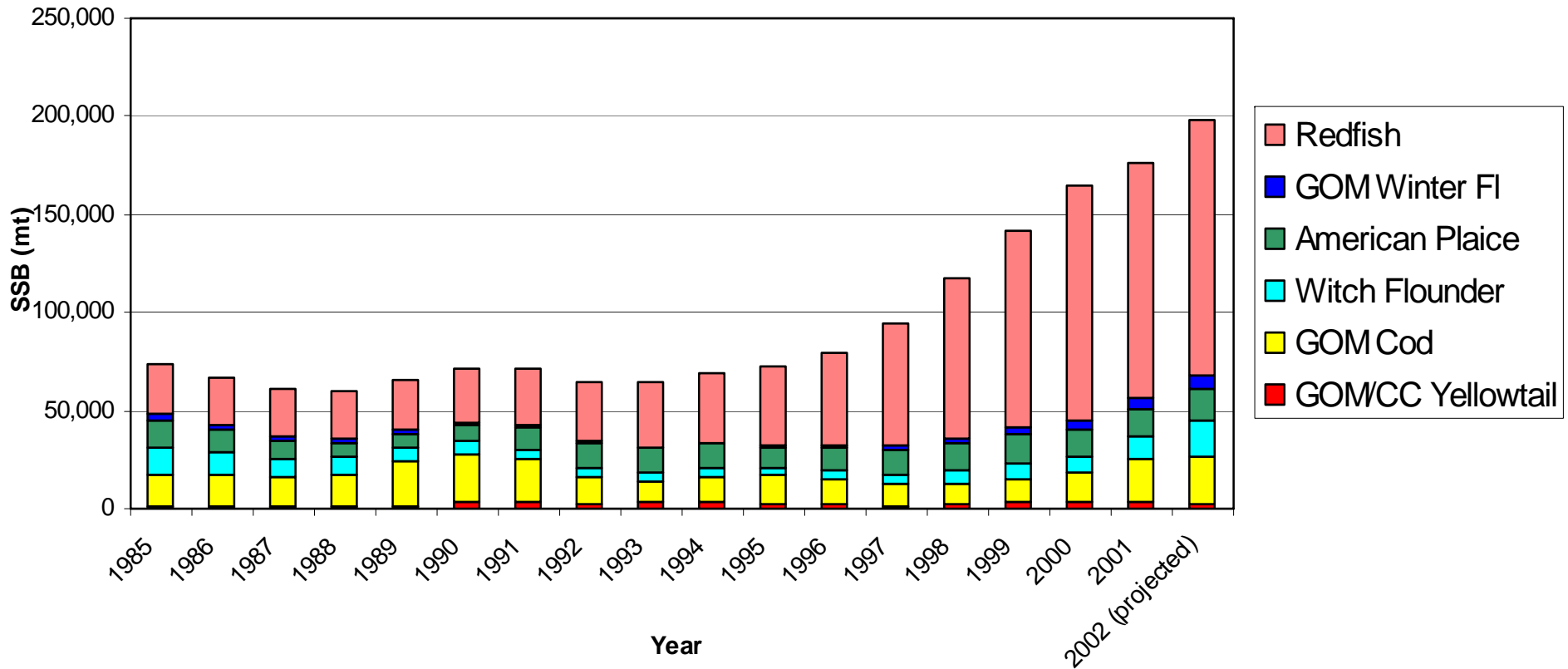
- MAFMC
 - Bluefish
 - Surf Clam/Ocean Quahog
 - Squid/Mackerel/Butterfish
 - Black Sea Bass/Scup/Summer Flounder
 - Dogfish*
- ASMFC
 - Northern Shrimp
 - Lobster
 - Striped Bass
- Other
 - Hagfish
 - Pelagics



Trends



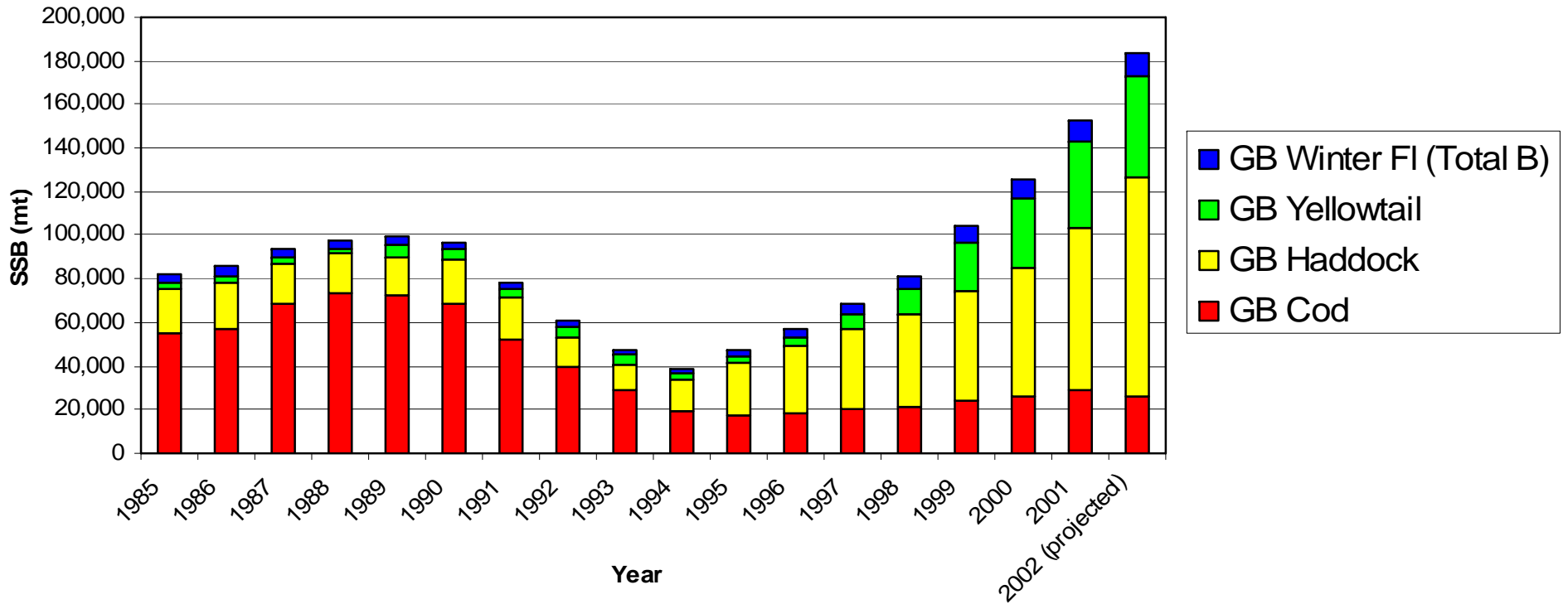
SSB for 6 GOM Groundfish Stocks, 1985-2002



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

GB groundfish stocks SSB

SSB for 4 GB Groundfish Stocks, 1985-2002

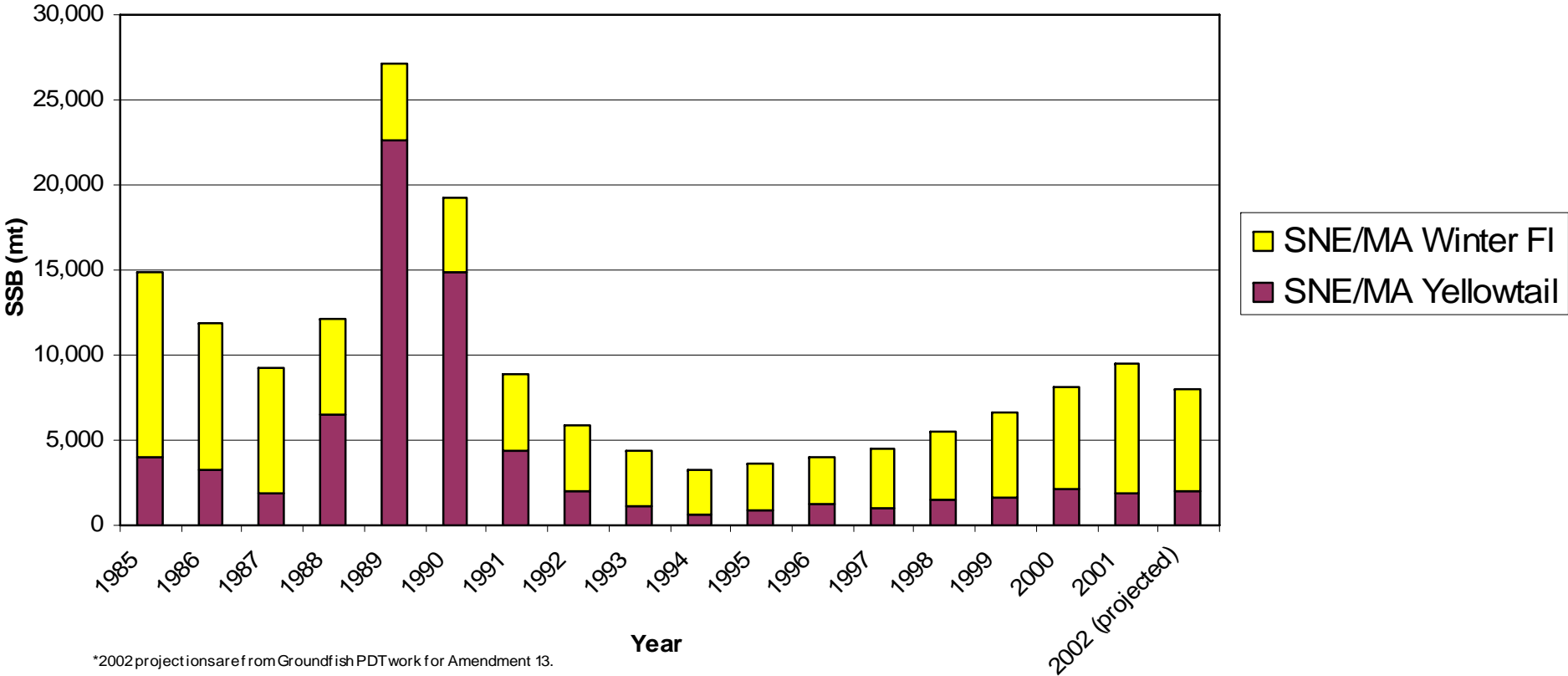


*2002 projections are from Groundfish PDT work for Amendment 13.

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

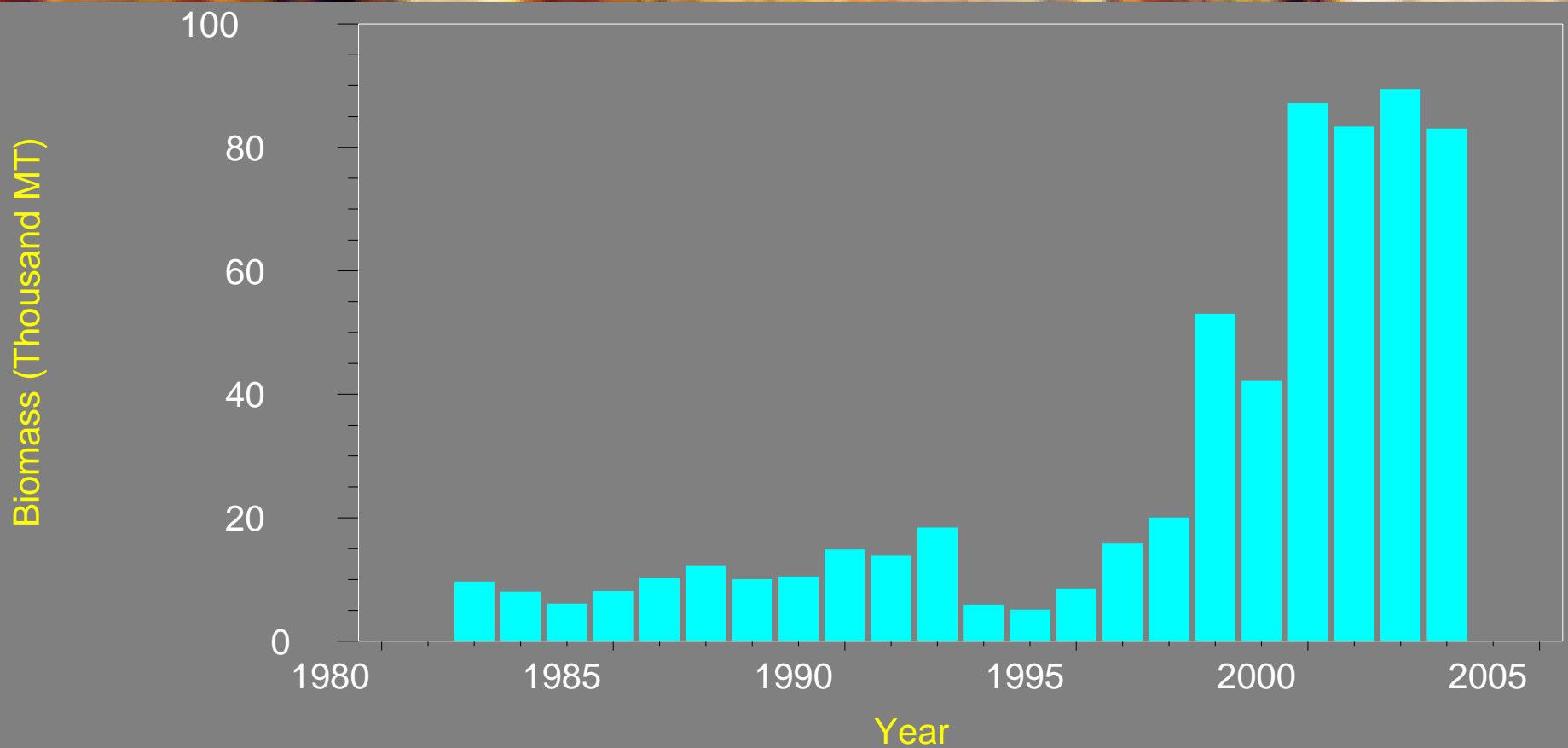


SSB of 2 Southern NE Groundfish Stocks, 1985-2002



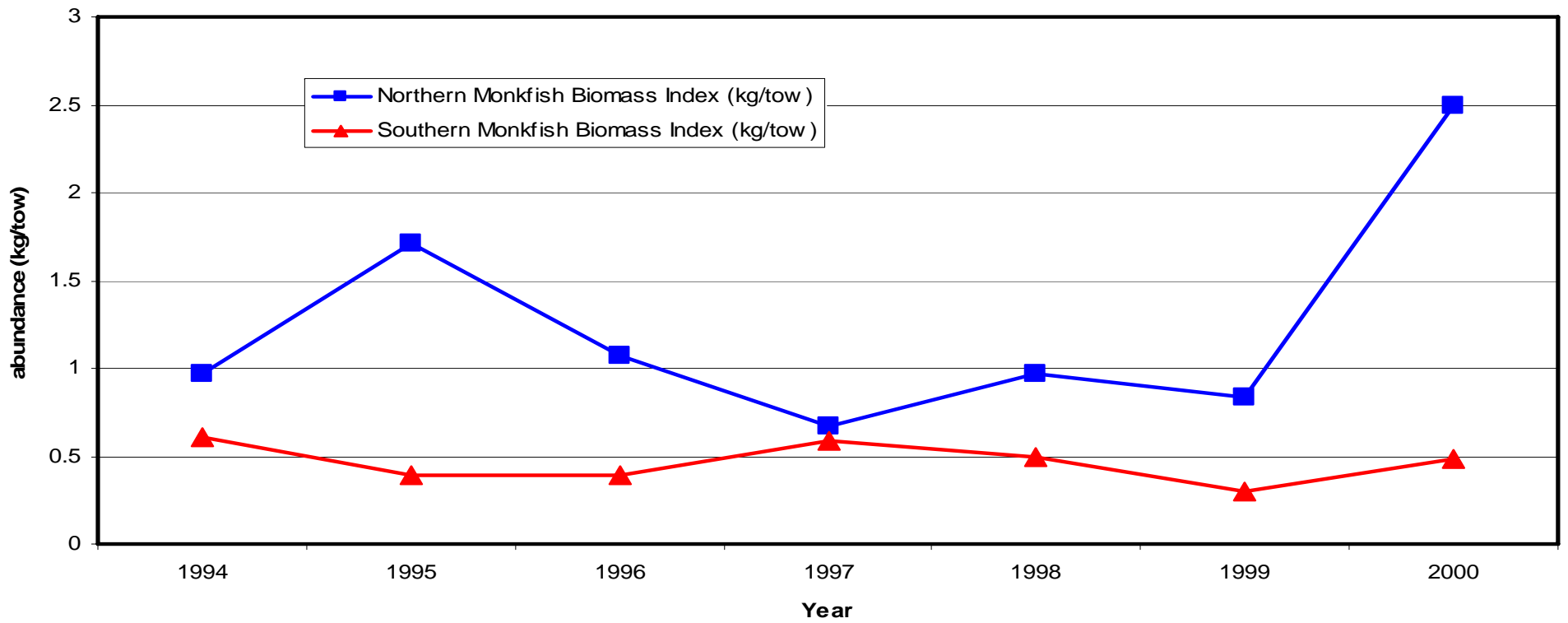
*2002 projections are from Groundfish PDT work for Amendment 13.

Atlantic Sea Scallop biomass



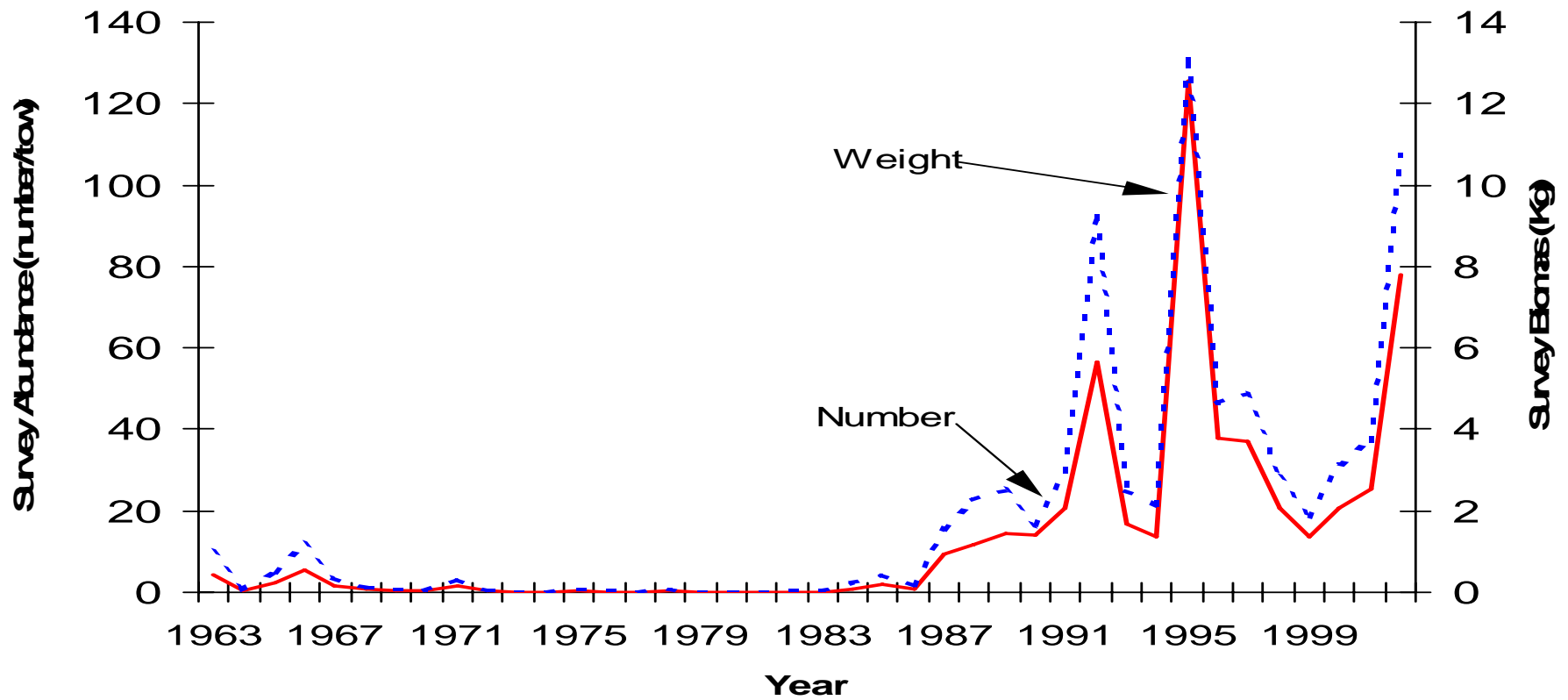


Trends in Monkfish Biomass from the Autumn Trawl Survey



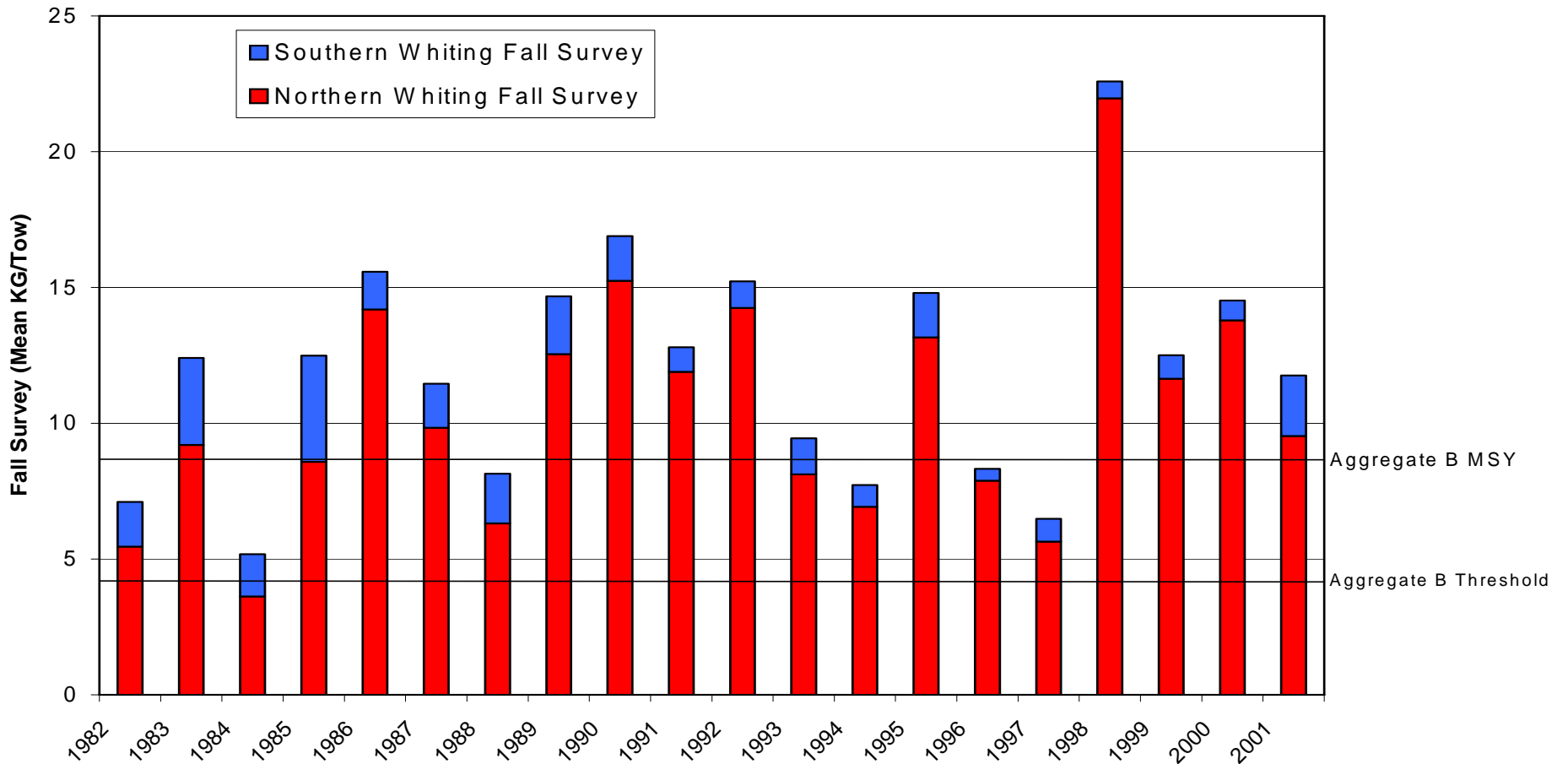


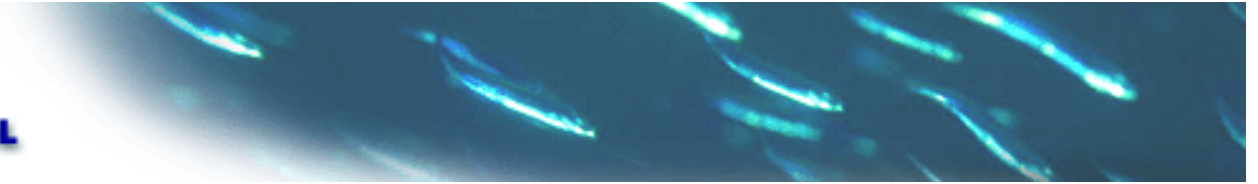
Autumn Survey





Survey Abundance of Whiting, 1982-2001



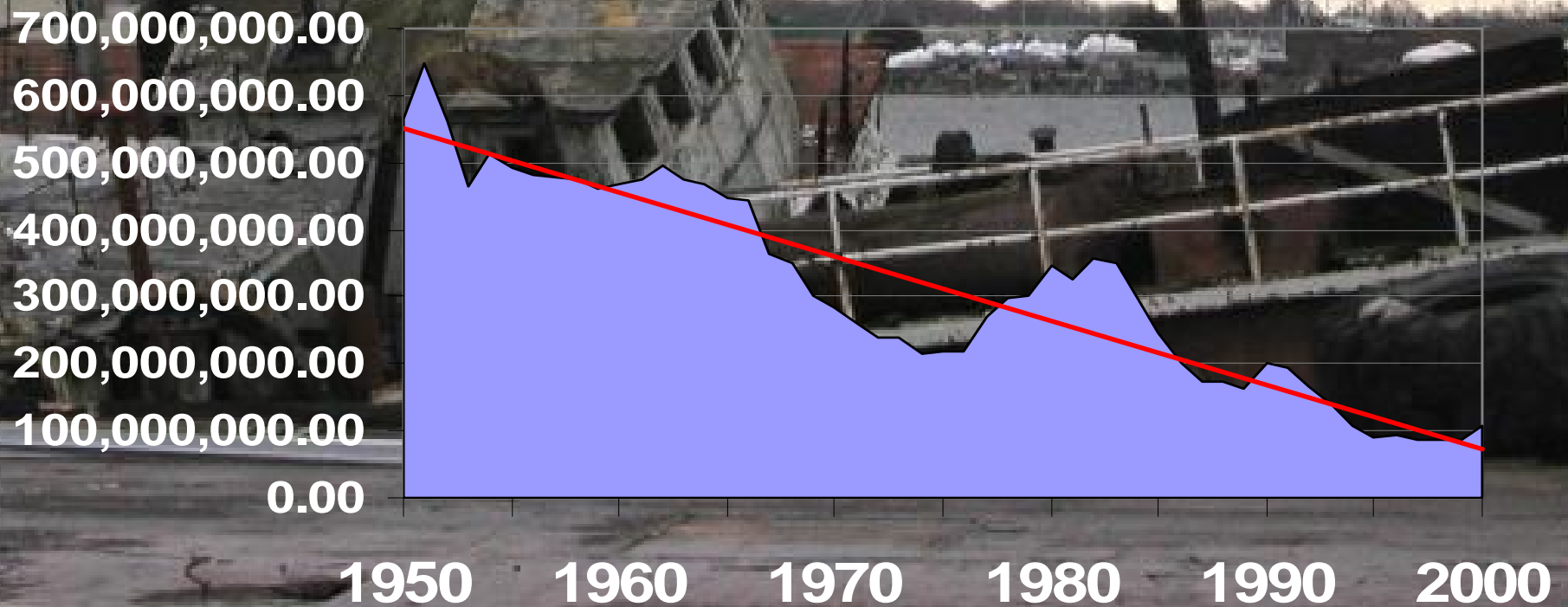


Predictions

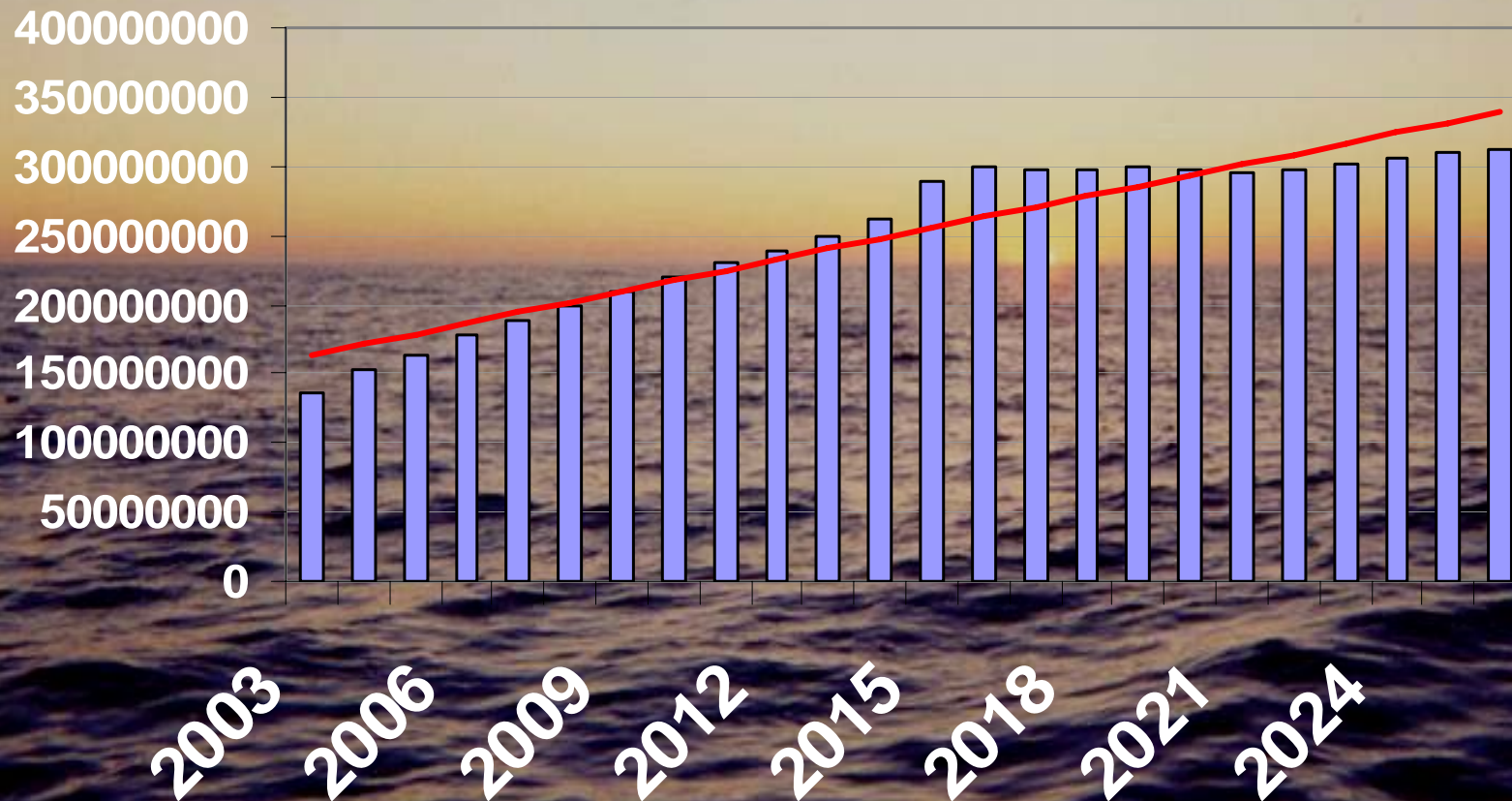
Net result?

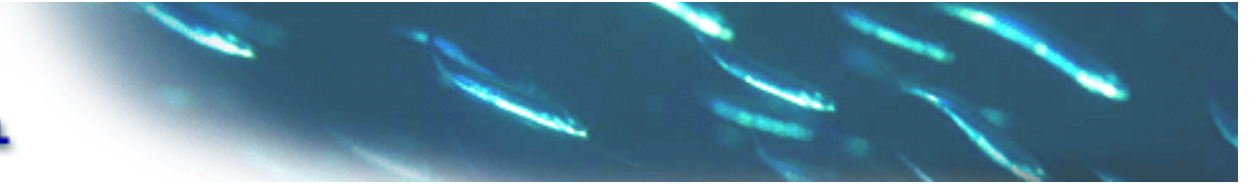
Things are looking up...

Groundfish landings, 1950 - 2000



Predicted groundfish landings, 2003 - 2026





Emerging issues

Evolving management

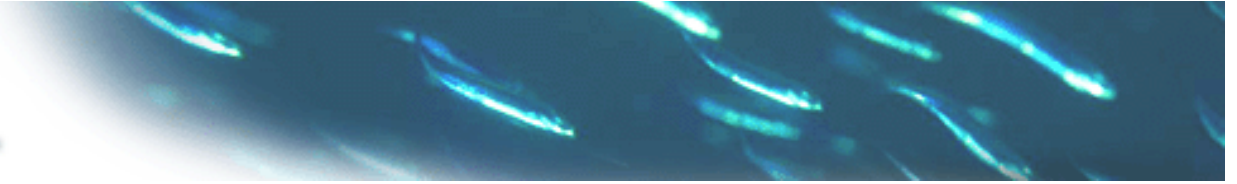
- From...stock-specific rebuilding
- To...integrated, multi-fishery management
- As stocks grow technical interactions will increase
 - Trade-offs
 - Preparedness



Open-access

Emerging issues

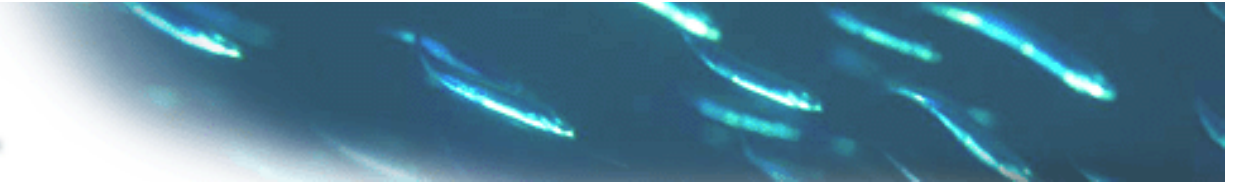
- Sea scallop day-boat fishery
 - Inaccurate self-reporting
 - Difficulty ascertaining actual effort
 - Constraining effort will have ripple effect



Emerging issues

Herring

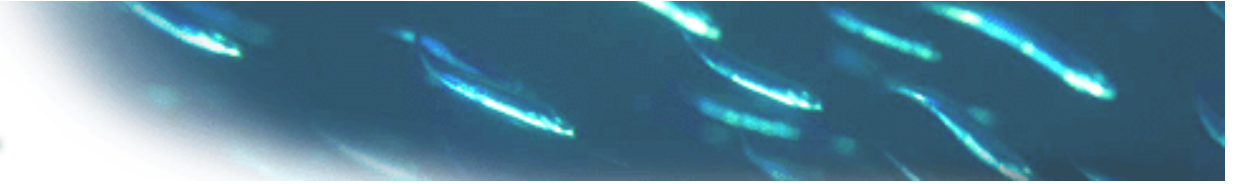
- Effort reduction in inshore areas
 - Localized depletion
 - Forage species
 - Tuna, whales, cod, stripers
 - Lobster, mackerel



EFH

Emerging issues

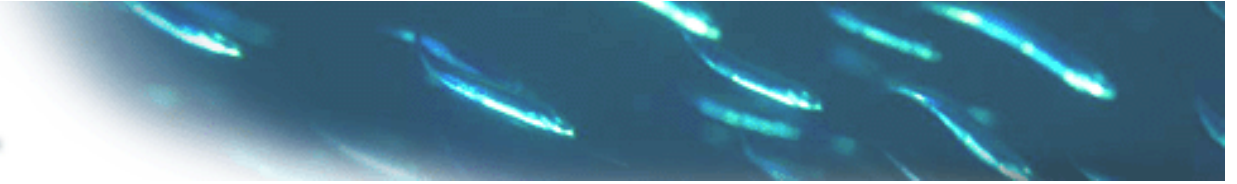
- EFH designations
 - Data levels (1 – 4)
 - Purpose of designation
- EFH protection
 - Integrated, multi-fishery protection of sensitive habitat
- High-res benthic maps
- Quantifying link btwn habitat and productivity



Emerging issues

Dogfish

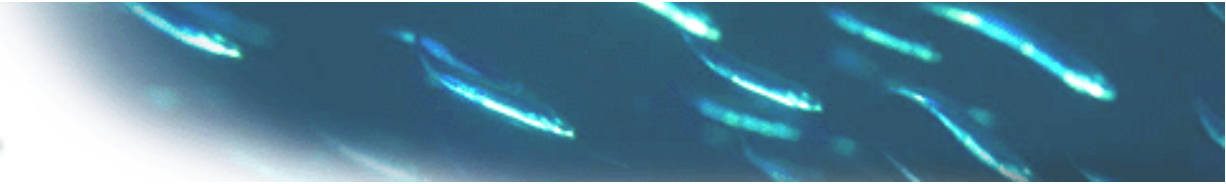
There is a strong desire amongst all NE fisherman, commercial and recreational, to harvest dogfish at exceedingly high levels



Data needs

Generic

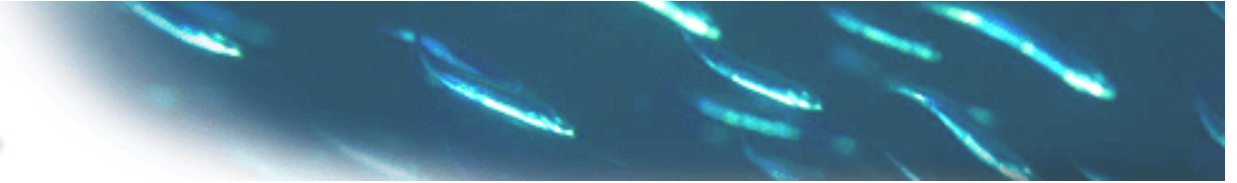
- Food web: Geographic/seasonal information on predator-prey interactions
- Improved catch information
- Improved effort information



Data needs

Generic

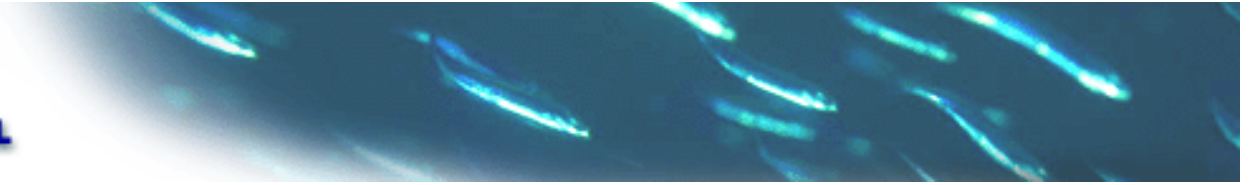
- Non-fishing activities
 - All fluid discharge sites
 - All watersheds
 - Non-fluid disposal sites
 - Water transportation facilities and patterns
 - Concentrations of non-point source discharge
 - Locations of other activities that affect the marine environment
- Economic /social
 - Location of fishing 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



Specific

Data needs

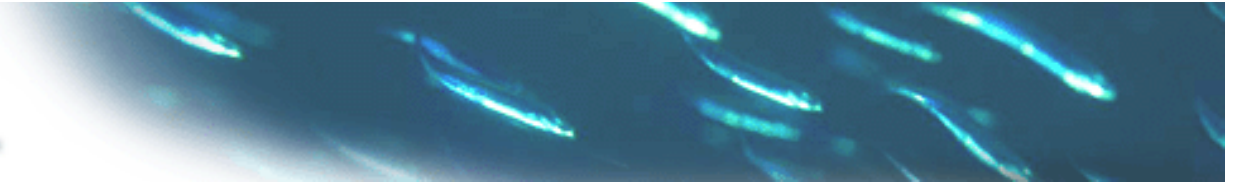
- Habitat
 - High-res bathymetry and substrate data
 - Level 4
 - Fishing effort
- Biological
 - Spatially explicit target, by-product and bycatch
 - Low-frequency variability in physical environment
 - Improved fishing effort linkage across and within fisheries



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