

# SSC Report to NEFMC: Monkfish ABCs & CATT Analyses

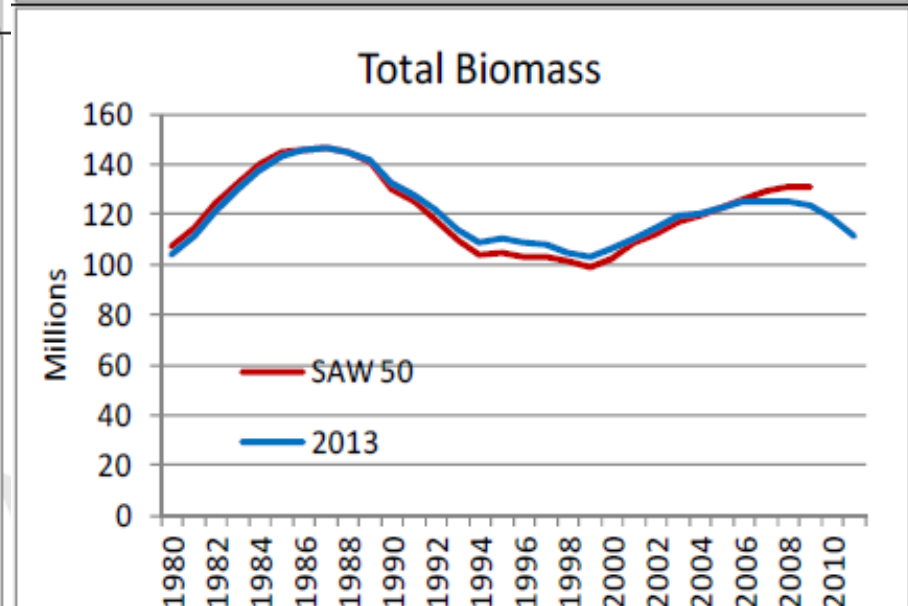
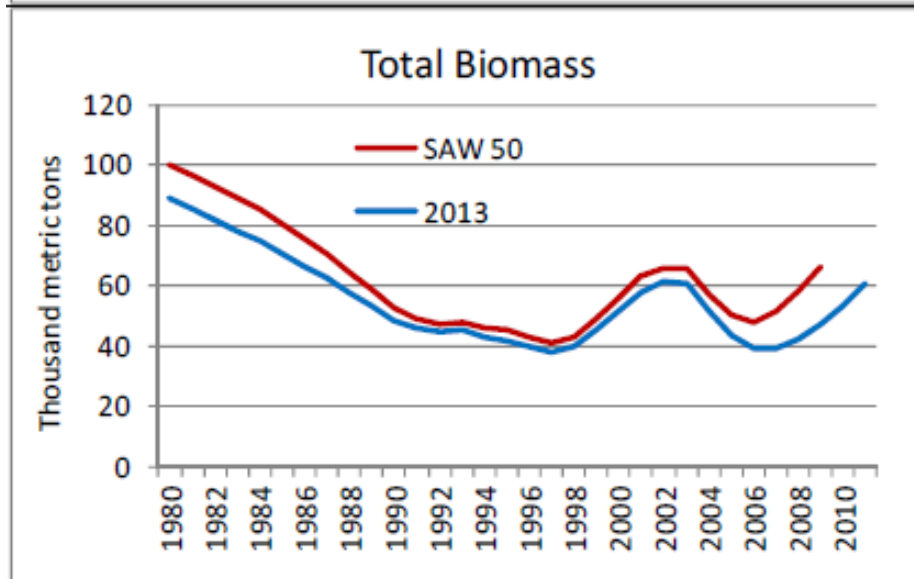
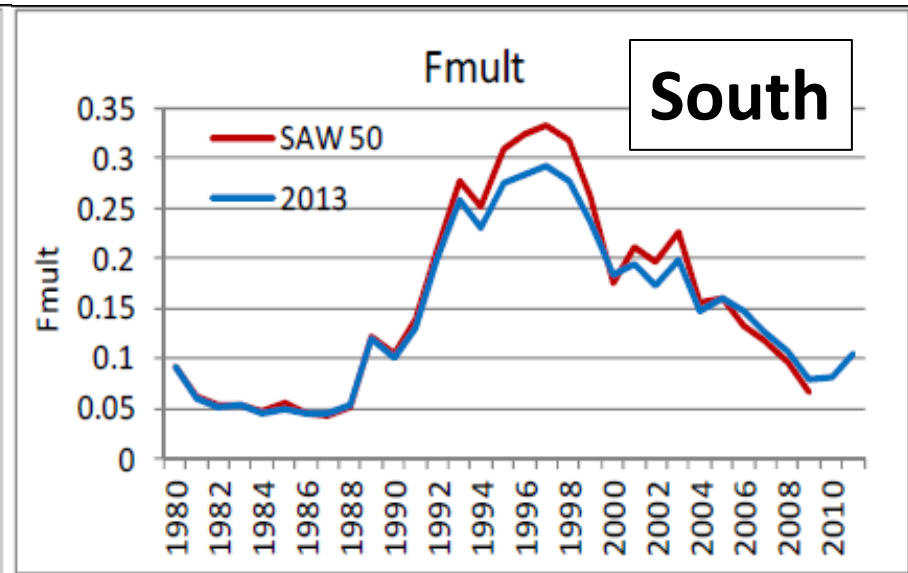
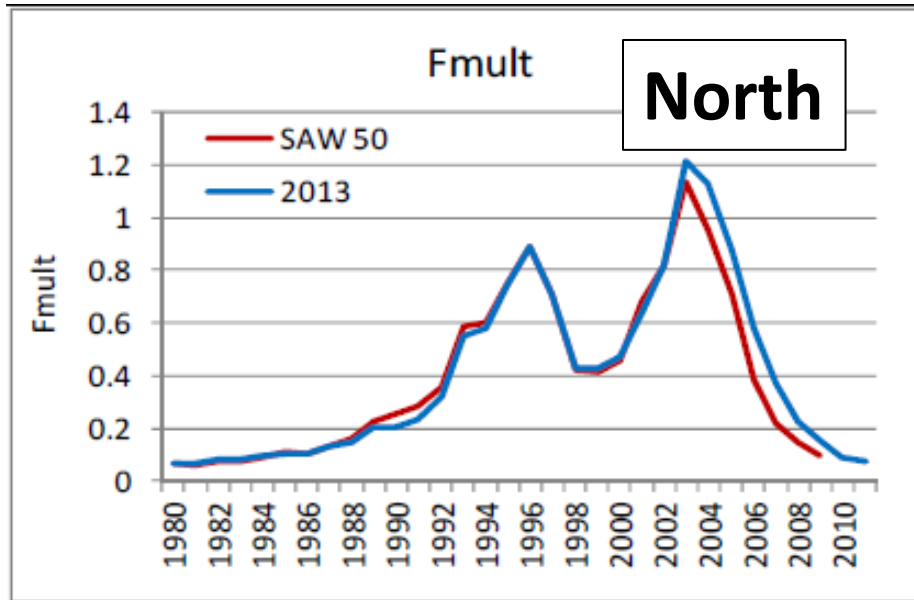
Portland, ME  
June 18, 2013

Jake Kritzer, SSC Chair

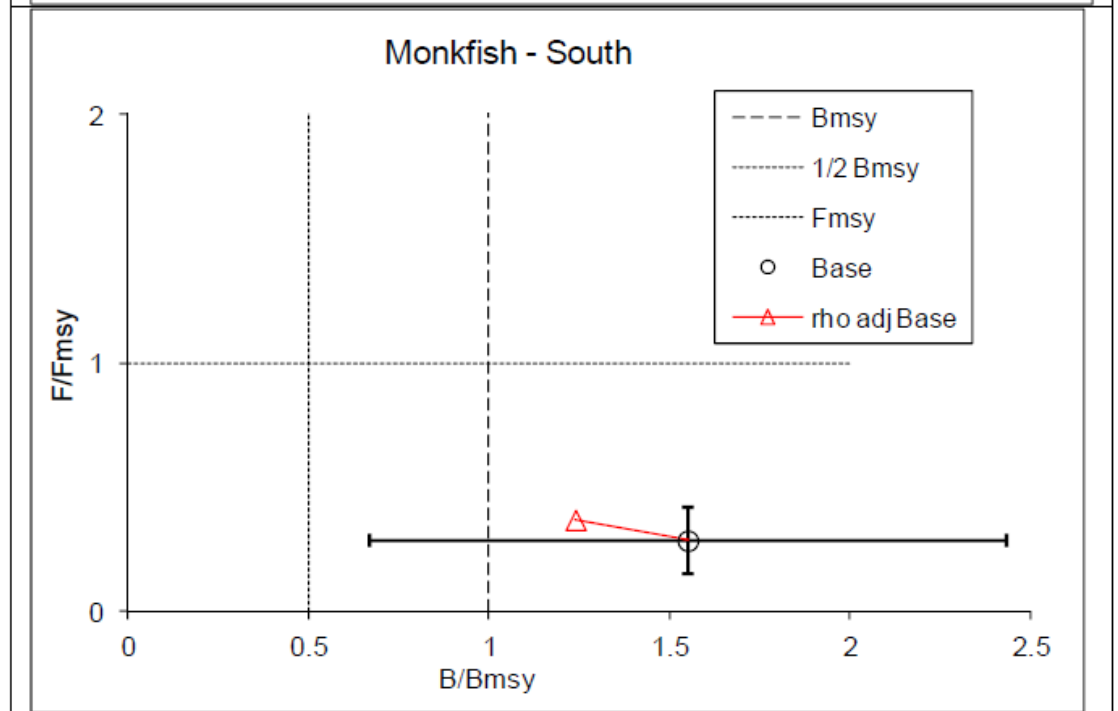
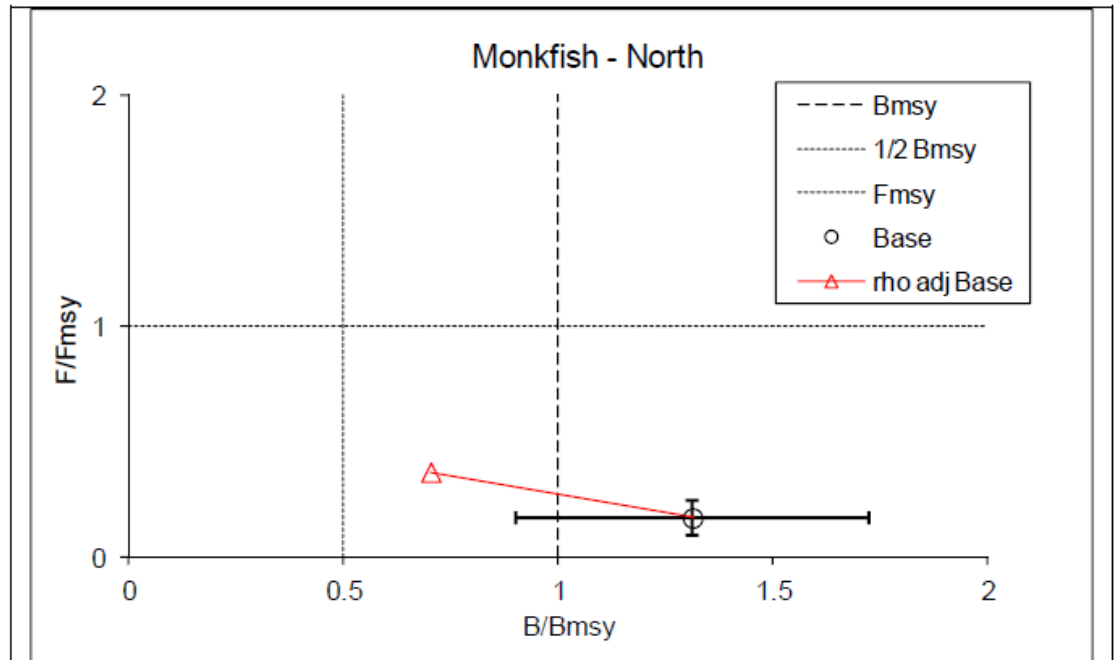
# Monkfish TORs

- 1) Review the 2010 Monkfish April 8-9, 2013 Operational Assessment documents, including any updates to biomass and overfishing reference points, for the purpose of developing Acceptable Biological Catch (ABC) recommendations for the monkfish resource for fishing years 2014 – 2016 for both the northern and southern monkfish management areas.
- 2) Review the Monkfish Plan Development Team's calculations for ABCs based on the most recent assessment using the default ABC control rule for monkfish and develop updated ABC recommendations for both management areas for fishing years 2014 – 2016 that account for uncertainty in the estimates of the overfishing levels (OFLs).

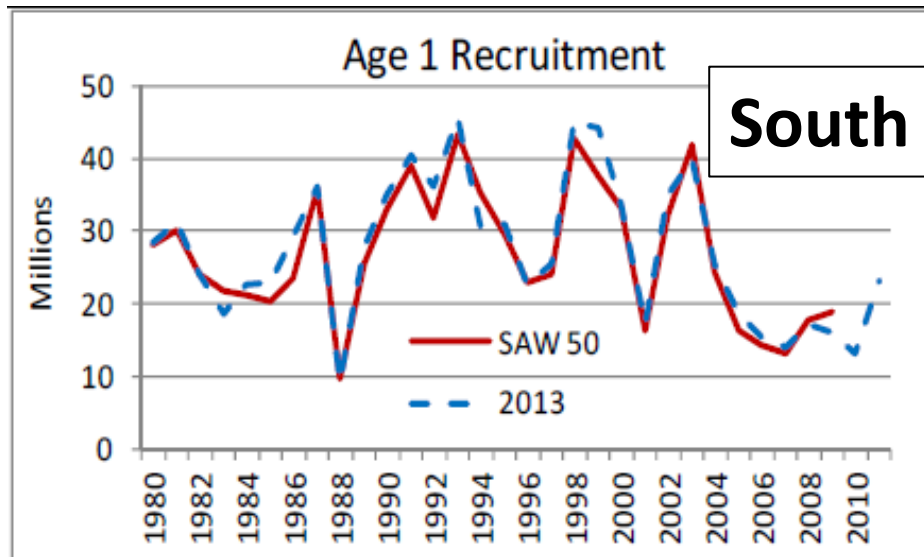
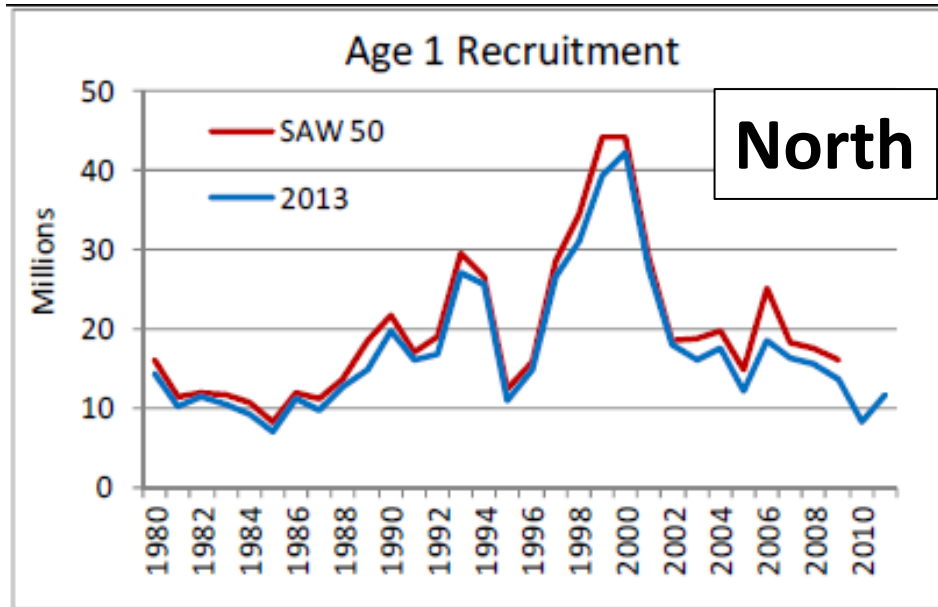
# Biomass & Fishing Mortality



# Stock Status

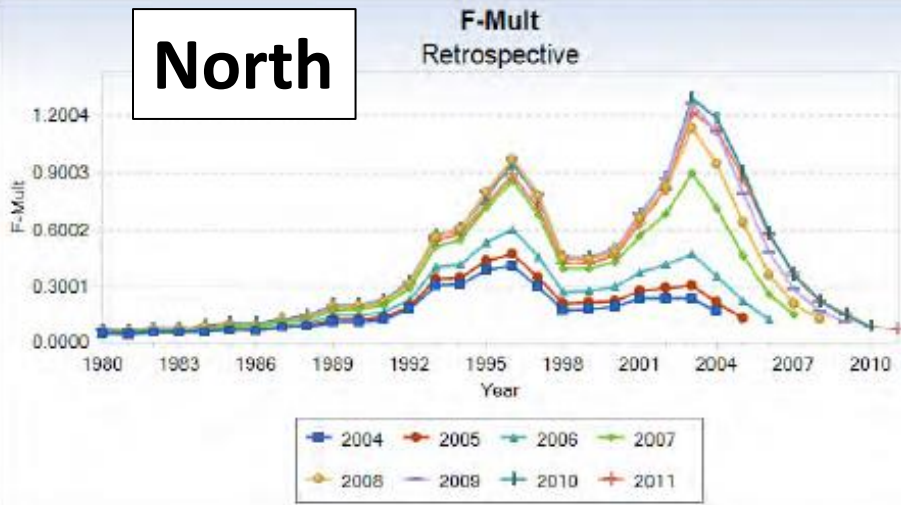


# Recruitment Patterns

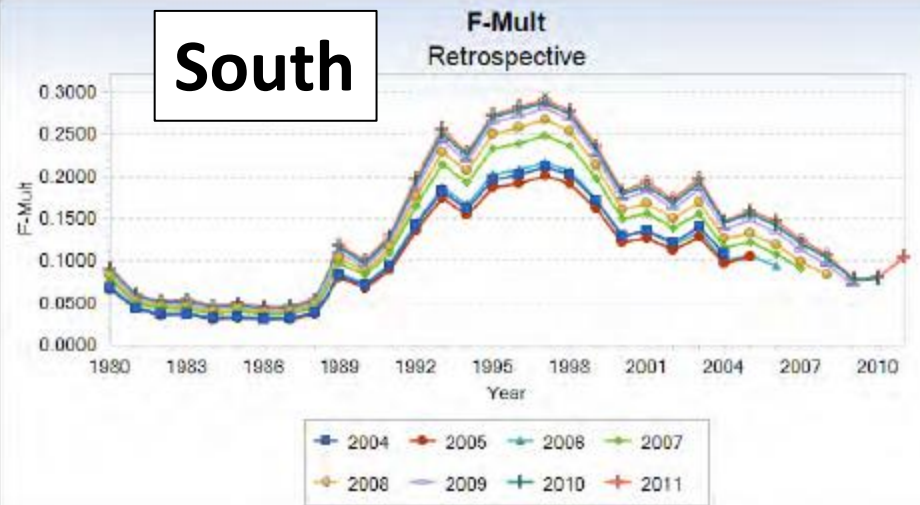


# Retrospective Patterns

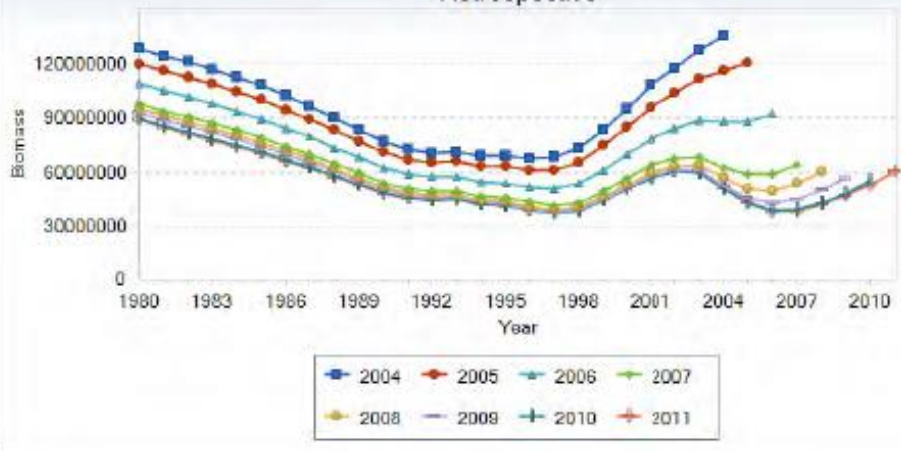
North



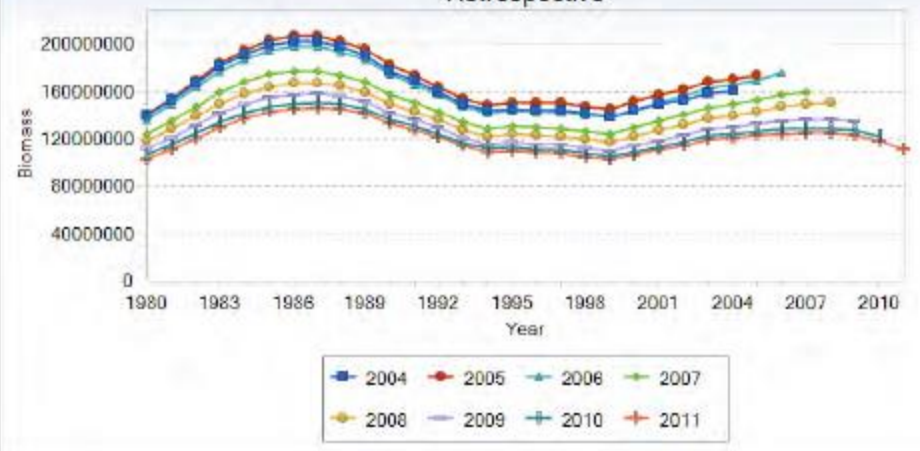
South



**Stock Biomass Retrospective**



**Stock Biomass Retrospective**



# Review Panel Report

*Projections of biomass and catch are likely over-optimistic due to the retrospective patterns in both stocks.*

*Considering consistency of retrospective pattern demonstrated in 2010 and 2013 assessments, the Panel agreed that an adjustment for the retrospective pattern should be made. However, the Panel expressed concern that the adjustment to the initial stock size for projections without change to reference points creates an inconsistency in determination of stock status.*

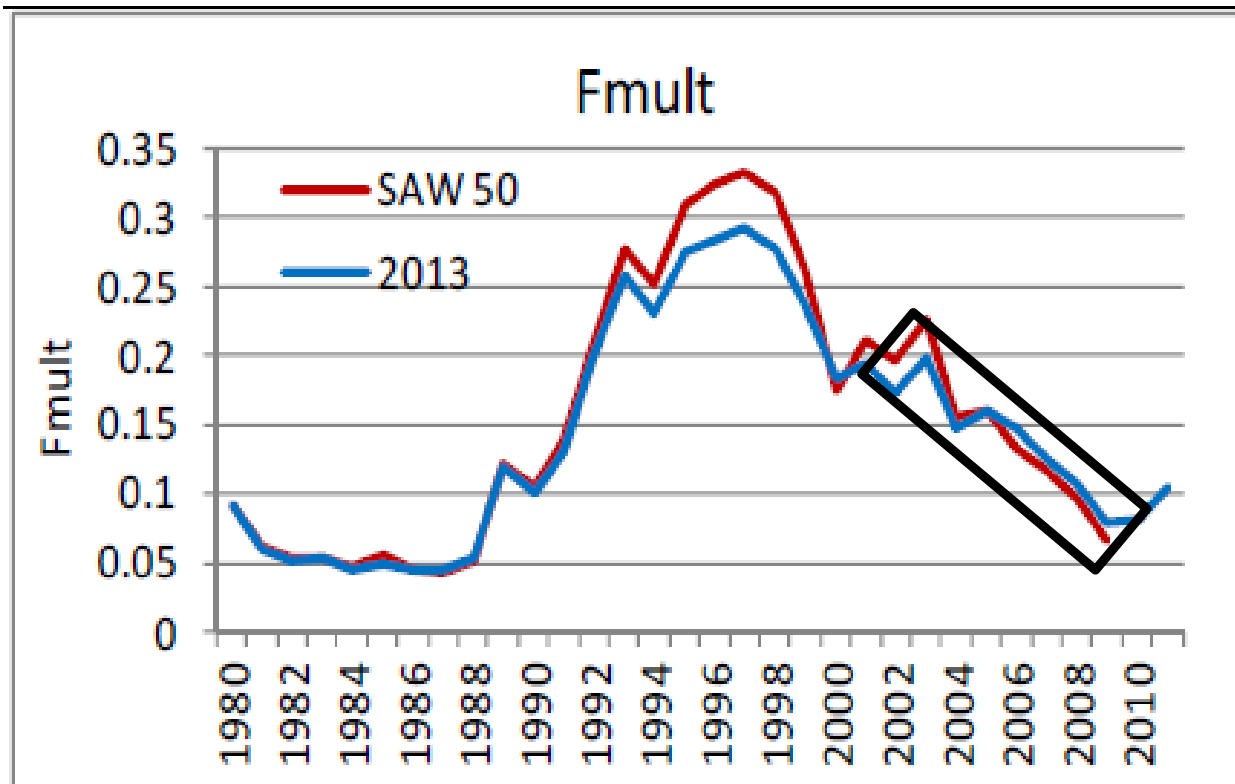
## Key issues:

- SSC concluded it would like to see ABC options based on retrospective-adjusted estimates.
- Opposite conclusion of SAW50 review panel.
- Adjustments to the time series exceed those allowable within operational assessments
- Mohn's rho adjustment is only option.

# Current Control Rule

ABC should be set as:

*...the product of the average exploitation rate during the recent period of stable or increasing trend in biomass for each management unit and the most recent estimate of exploitable biomass.*





# SSC Recommendations

- Need to consider additional analyses and alternatives before offering catch advice.
- OFL/ABC options be developed after applying adjustments for retrospective bias, per the advice of the peer review panel.
- ABC options developed using retrospective e-adjustment biomass and alternative values of  $F_{ABC}$  such as  $75\%F_{MAX}$ ,  $F_{40\%MSP}$ , and others that the PDT would like to propose.
- Options based on retrospective-adjusted biomass and alternative values of  $F_{ABC}$  should be developed using both the terminal year biomass carried forward and projected biomass.
- Additional analyses include updated catch data through 2012.
- Consider status quo ABCs.

# CATT Analyses TORs

- 1) Review the basic approach used by the CATT to identify important juvenile groundfish habitat and spawning locations.
  - a. Is the basic approach sound? Are there any red flags?
  - b. Are choices and assumptions made by the CATT to analyzing groundfish hotspots reasonable and appropriate?
  
- 2) Are the analyses, results, and hotspot summaries used by the CATT appropriate for developing management options?
  
- 3) Are there important caveats about the data and results that the Council should recognize?
  
- 4) Given the shortcomings of currently available data for this purpose, can the SSC recommend data that should be collected on a routine basis to evaluate the performance of habitat and spawning management areas?

# TOR1: Basic approach?

- Analysis is sound.
- No red flags.
- Assumptions are reasonable.

# TOR2: Appropriate for developing management alternatives?

- Yes.
- Objectives:
  - Should be clear.
  - Ideally with quantitative metrics, but qualitative judgment will be needed given data limitations.
  - Importance of research & monitoring going forward.
- Best used with diverse array of additional info., e.g., spawning observations from fishermen.
- Adaptability of management will maximize performance.

# TOR3: Caveats?

- Possibility of mismatches between timing of survey and spawning.
- Untowable areas.
- Species considered.
- Juvenile presence = important & vulnerable habitat.
- Displacement of effort → unintended consequences?

# TOR3: Caveats? (con't)

- Stationarity of importance of a given area for juveniles and/or spawning:
  - Patterns changing with abundance.
  - Ecosystem change.
- Time period selected for data represents current and forthcoming conditions.

SSC reiterates support for the validity and applicability of the analysis.

# TOR4: New information?

- Ecological and socio-economic data:
  - Ecosystem value of specific trophic components.
  - Market value of harvested species.
  - Fleet composition & capacity to harvest each spp.
- Observer data:
  - Fully utilize existing samples and data.
  - Expanded sampling for more detailed information on diet, reproduction, etc.
- Local ecological knowledge of fishermen, collected and analyzed in a systematic way.

Questions?