Scientific and Statistical Committee Report on Skates and Whiting

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Introduction

- The Scientific and Statistical Committee met in Providence, RI April 12-13, 2011 to address skates and whiting
- Presentations and documents prepared by the Skate and Whiting Plan Development Team were reviewed
- Guidance requested on skate calibration approaches and whiting ABC calculations

Skates

The Scientific and Statistical Committee was asked to:

- Approve a FSV Bigelow calibration method to be used to set Skate ABC specifications and to determine stock status.
- Approve calibration of FSV Bigelow catches to FSV Albatross equivalents, rather than the reverse which would make it easier to directly apply future survey data.
- Approve the use of a consistent set of FSV Bigelow strata to adjust biological reference points and adjust the catch/biomass medians as a basis for setting ABC.

Skates ToR 1 (Bigelow Calibration Method)

- **The SSC recommends that model 1 be used to estimate calibration coefficients and set the skate ABC specifications and to determine stock status for 2012 and 2013.**
  - Model 1 treats the individual species separately and is well suited for winter and little skates which drive the fishery and were well represented in calibration experiments.
  - When comparing the advantages and disadvantages of the 3 candidate models as shown in Table 7 of the PDT report, Model 1 displayed two distinct advantages:
    - It is species specific and accounts for species specific behavior
    - It is easier to apply than more complicated models
  - The estimates of the 2009 and 2010 ABC shown in Table 29 of the PDT report are similar for all three models and thus robust to model choice.

Skates ToR 2 (Bigelow to Albatross)

- **The SSC approves calibration of FSV Bigelow catches to FSV Albatross equivalents for use in ABC determination.**
  - Albatross to Bigelow requires changing reference points
    - Additional error arises from uncertainty of calibration
  - Converting zero Albatross catches a problem

Skates ToR 3 (Survey Strata)

- **The SSC approves the use of a consistent set of FSV Bigelow strata to adjust biological reference points and adjust the catch/biomass medians as a basis for setting ABC.**
  - Reconstruction of the entire time series to conform to current sampling practices is necessary to provide a consistent view of time series trends.

Whiting

- The Scientific and Statistical Committee was asked to discuss the Whiting PDT's evaluation of Acceptable Biological Catch (ABC) setting options and provide guidance to the PDT for developing draft ABC specifications in Amendment 19.

Whiting Methods

For red and silver hake, the Whiting PDT considered and developed three potential methods for setting hake ABCs, using data and analysis from the benchmark assessment (NEFSC 2011).

- Method 1 assumed a constant fraction of the overfishing limit as a buffer to account for scientific uncertainty (e.g., 75% of the overfishing limit).
- Method 2 was based on uncertainty in both the overfishing threshold and in stock biomass distributions.
- Method 3 was based on an initial evaluation of uncertainty in both the overfishing threshold and in stock biomass distributions, but expressed as a constant fraction of the overfishing limit.

Whiting

The SSC Recommends that:

- **ABCs for whiting/hakes should be based on uncertainty in both the overfishing threshold and in stock biomass distributions (method 2);**
  - Supports risk-based catch limits
  - Probability of overfishing can be re-evaluated for each specification cycle
- **A range of overfishing probabilities should be communicated to the Council; and**
  - Including both sources of uncertainty (the overfishing threshold and recent surveys)
- **Offshore hake should be included in the ABC for southern silver hake.**
  - Mixes-species fishery
  - Small portion of offshore hake in the mixed-species catch
  - Challenges in monitoring species-specific catch limits