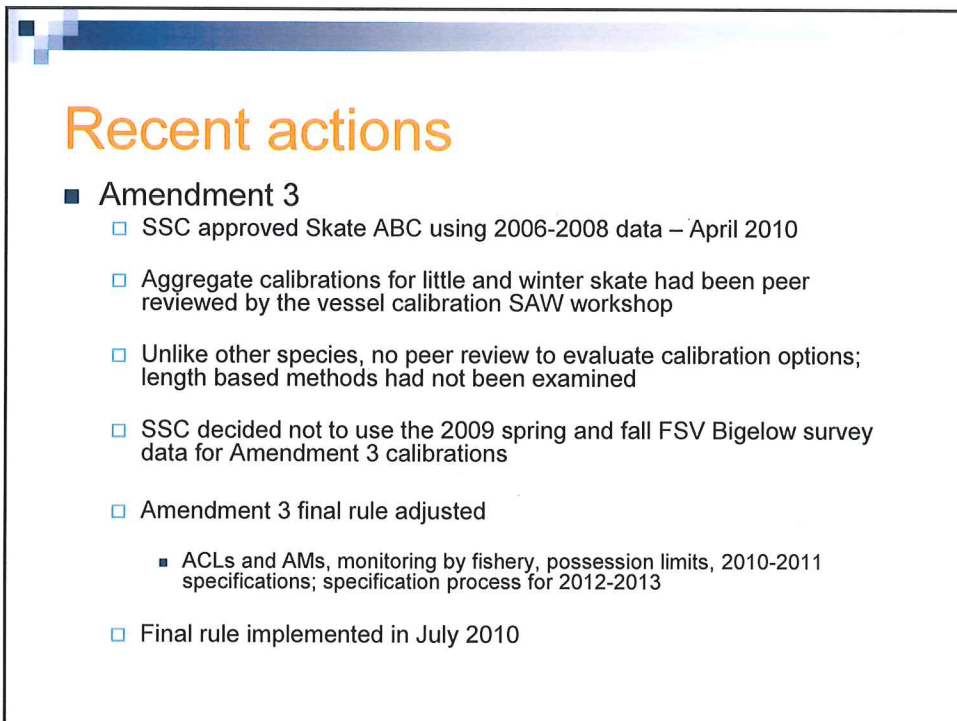


Skate calibrations

Adjustments to use FSV Bigelow data to set Skate ABCs



Recent actions

- Amendment 3
 - SSC approved Skate ABC using 2006-2008 data – April 2010
 - Aggregate calibrations for little and winter skate had been peer reviewed by the vessel calibration SAW workshop
 - Unlike other species, no peer review to evaluate calibration options; length based methods had not been examined
 - SSC decided not to use the 2009 spring and fall FSV Bigelow survey data for Amendment 3 calibrations
 - Amendment 3 final rule adjusted
 - ACLs and AMs, monitoring by fishery, possession limits, 2010-2011 specifications; specification process for 2012-2013
 - Final rule implemented in July 2010

Events

- Miller et al 2010 published in May 2010
 - Included abundance and biomass coefficients for six skates (insufficient data for rosette skate)
- Wing fishery closed in early September 2010
- Council initiates Framework Adjustment 1 to modify skate wing possession limits
- NMFS responds to FOIA request – publishes calibrated skate biomass indices through 2010 and issues status determination letter – January 2011

Recent actions

- Council approves Framework Adjustment 1 – January 2011
 - Reduces skate wing possession limit from 5000 lbs. to 2,600 lbs in May to Aug and 4,100 lbs from Sep to Apr
 - Raises TAL trigger to 85%
 - Raises incidental possession limit from 500 lbs wing weight to 1,250 lbs. wing weight

Present action

- NRCC decided that the Skate PDT should analyze calibration options and SSC should provide peer review – January 2011
- 2012-2013 specification package planned for development now and approval in September 2011

Present action

- SSC review and approval of calibration method – April 2011
- PDT will propose specifications for SSC approval – June 2011
 - New information on CY2010 discards, FY2010 landings, potential accountability measures, and discard mortality research
 - Spring 2011 survey data for little skate
- PDT will develop specifications package for Council approval – September 2011

Presentations

- Three models – data from 2008 paired calibration surveys
 - Aggregate biomass coefficients by species
 - Length based – aggregated skate species
 - Length based by a) season and b) season and region

Presentations

- Statistical framework and analysis - Miller
- Survey biomass estimates, effect on overfishing definitions (consistent strata sampling), internal validation with calibration data, disadvantages of converting FSV Albatross time series to FSV Bigelow equivalents – Sosebee
- External validation with comparable surveys and effects on potential skate ABCs - Applegate
- Presentations will refer to PDT report and some background documents
- Table 29; page 90 – summarizes impacts on ABCs
- Section 8, page 92 – PDT conclusions

External validation

External validation

- Surveys catching skates
 - ASMFC shrimp – Section 4.4.1, page 36
 - Smooth, thorny
 - Map 1-2; Figure 6-7
 - MADMF trawl – Section 4.4.2, page 41
 - Little, thorny, winter
 - Map 3-9; Figure 8-10
 - NMFS scallop – Section 4.4.3, page 49
 - Barndoor, little, rosette, winter
 - Map 10-14; 11-14
 - NEAMap inshore trawl – Section 4.4.4, page 57
 - Clearnose, little, winter
 - Map 15-18; Figure 15-17
 - SMAST camera survey (any skate)
 - Figure 18

External validation

- Chose best possible match between survey strata (Table 9; page 36)
- Compare time series of stock biomass with agreement between 2009/2010 calibrated FSV Bigelow and survey
- Best agreement between calibration model results depends on species and survey
- No strong outliers
- Winter skate biomass lowest in time series for inshore and MADMF strata

Effects on Skate ABCs

Consistent survey strata

- Changes in catch/biomass medians
 - Table 14-19; page 74-75
 - Most change for clearnose and little skates, commonly caught in inshore strata
 - Little effect on biological risk analysis
 - Biomass increased more often than not when catches were below the catch/biomass median
 - Little effect on ABC; 41,080 mt to 41,946 mt (Table 13; page 73)

Application of 2008-2009 calibrations

- ACL framework tables
 - 2007-2009 survey data; 2008-2010 survey data
 - All apply the same catch/biomass medians
 - Survey biomass differences – Table 28; page 89
 - Model 1 – Table 28; page 78
 - Model 2 – Table 22; page 81
 - Model 3S – Table 24; page 84
 - Model 3SR – Table 26; page 87

Application of 2008-2009 calibrations

- Partial effects by species – Table 30; page 91
- ABC summary – Table 29 page 90
- Most signal comes from increasing little and winter skate biomass, 26-39% increase 2007-2009 and 41-68% increase 2008-2010
- Model 2 results in lowest ABCs compared to other models – influence of little skate data

Application of 2008-2009 calibrations

- Relative effects on ABC for each model will depend on length frequencies observed in survey and skate distribution
- YOY increase (2009->2010)
 - +22% for Model 1
 - +12% for Model 2
 - +15% for Model 3S
 - +16% for Model 3SR



PDT conclusions

- Section 8.0, pages 92-93
- Use consistently sampled strata for status determination and ABC calculation with adjusted catch/biomass medians
- Convert FSV Bigelow data into FSV Albatross equivalents
- Tradeoffs in Model 1, 2, 3S/3SR advantages and disadvantages

