



# **Calibration Workshop II**

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**APAIS Calibration Model Peer Review**

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# Calibration Workshop Overview

## When & Where

- **September 8-10, 2014 in Charleston SC**

## Goals

- **Consider if APAIS changes impacted catch estimates**
- **Evaluate how to adjust estimates to maintain the time series**
- **Provide guidance on addressing future changes**



# APPROACH

- Panel of technical representatives from the Northeast through the Gulf of Mexico
  - Councils, States, Commissions, NMFS, University
- Plenary sessions for presentations and general discussion
- Breakout groups to develop recommendations
  - Addressing survey design changes
  - Evaluating 3 methods for this calibration



# TERMS OF REFERENCE

- Review Calibration Workshop I (2012) approaches
- Review evaluations of 2013 APAIS changes
- Evaluate the feasibility of separating sampling and fishery changes
- Recommend calibration approaches for pre-2013 estimates.
- Discuss key factors calibration approaches should consider and how future data may affect calibration approaches



# Calibration Recommendations

## Calibration is required

- Continuity is necessary
- It is not appropriate to compare estimates based on the new survey design to management parameters such as Annual Catch Limits (ACL) based on the old design.
- The appropriate long-term solution is to calibrate existing estimates to the new survey method estimates.
- Interim methods are needed for management and assessment



# Calibration Recommendations

Consider 3 calibration approaches & thoroughly evaluate before selecting a final approach

- Two ratio methods
  - Complex and Simple
  - Can be applied in short term, serve as the interim approach
- One model based method
  - More time and effort, benefit from future data
- Address temporal changes in survey coverage
- Regional assistance is needed to develop and evaluate
  - Calibration Workgroup Ongoing since Workshop



# Direct Catch Ratio

- Simpler of the 2 ratio methods
- Total Catch / Peak Catch
- Assumes distribution of catch throughout the day is unchanged
- Does not use info from non-peak times
- Recommended as the interim approach



# Complex Ratio

- Incorporates relative effort distributions and trip sampling weights
- More use of non-peak info
- Assumptions to meet for an unbiased estimator were unknown





# Model Based

- Regression model to classify trips as catch periods (morning, peak, evening)
  - Not actual time, rather what the trip resembles
- Adjust prior years so trip ratios match 2013 and create adjusted trip weightings
- Assumes model will predict periods, and time of day periods capture characteristics
- Uses more explanatory variables & improves with more data



# Future Survey Change Recommendations

- Consider calibration during initial design
  - Side by side testing, Avoid “calibrating calibrations”
- Outreach and education are critical
- Existing estimates are needed until management and assessments are updated
- Peer Review calibration methods
- Revise time series

