Review of current status of calibration method development and use

Gulf Transition Team Workshop
February 23-25, 2022
Calibration I

A. Review of current status of calibration method development and use

B. Overview of calibration methods, limitations and future use considerations - Consultants

C. Potential Hybrid Approach whereby all available rec catch series are used in assessments while research is ongoing
Gulf Survey Calibrations

• Transition plan required for NOAA MRIP certification:
  Policy Directive 04-114

• Transition plan may require development of calibrations to account for survey differences in comparisons of survey estimates:
  Procedural Directive 04-114-01

• Necessary when multiple surveys are in use, to facilitate a common standard for:
  • Evaluation of annual catch trends
  • ACL Monitoring
Background and Context

● Five GSMFC/NOAA Workshops over seven years
  ○ Red Snapper Workshops I-III (sponsored by GSMFC/NOAA)
  ○ November 2013-December 2014
    ■ Focus on coordination among partners
    ■ “Integration” of specialized surveys into MRIP
    ■ Need to meet management and stock assessment needs
  ○ Consultant Report from first workshop presented:
    ■ Options for survey development
      ● Improvements to general survey
      ● Stand alone specialized “targeted” surveys
Background and Context (cont.)

Red Snapper Workshop IV (2018) (Sponsored by GSMFC/NOAA)

• Survey designs were either certified (LA, MS, AL) or close to completing certification (FL)
• Focus was on **calibration options** and producing an **integrated** Gulfwide catch estimate
  • Calibration would focus on conversion between current FES-based survey and state survey estimates
  • **Modeling** as well as **simple ratio** based approaches were considered
    • Modeling would take time to investigate (and might not be needed)
    • Simple Ratio based approaches could be developed more quickly
      • Already in use in fisheries and other applications
    • **As more data become available, opportunity to improve calibrations and investigate alternate approaches**
GSMFC/NOAA Calibration Workshop 2020

- Workshop V 2020
- State-MRIP Ratio-Based Survey Calibration methods.
  - SERO methods for converting FES based catch estimates to CHTS standard used in last assessment for development of ACLs.
- MRIP Consultant input on methods.
- Discussion of next steps
  - Transition Team SG
    - Transparency (Data access)
    - Research needs
      - Drivers for differences between estimates
      - Calibration updates (how to handle)
Gulf Survey Timelines

• LDWF LA Creel: 2014-present
  • FES Benchmarking (2015-2017)
  • APAIS Benchmarking (2015)
• ADCNR Snapper Check: (2014*-Present)
  • Benchmarking (2018-2019)
• MDMR Tails n’ Scales: (2015*-Present)
  • Benchmarking: (2018-2019)
• FWC State/Gulf Reef Fish Survey: 2015*-Present)
  • Benchmarking: (2015-2019)
Gulf Survey Calibrations

• General method: Simple ratio based approach

• Considerations included:
  • Minimum needs (e.g., ACL development, Annual catch trends)
  • Survey compatibility (e.g., alignment of estimation domains)
  • Survey coverage (e.g., geographic, temporal, sample universe)
  • Relationship of trend information among surveys
  • Applied at the domain level (ratios vary by species, area, time period).
NOAA Fisheries White Paper Options

Option 1 – *NOAA Fisheries recommended approach*

a) Use current fully calibrated MRIP Time Series for MS-FL and convert LA for assessment and management purposes (common standard).

b) Use common standard for assessment, convert MRIP based ACLs to alternative survey standards to support state level management. State surveys used to monitor catch.

c) Integrate MS-FL, to produce a single estimate, convert MRIP based ACLs to alternative survey standards for use in assessment and management.

Option 2 – Rescale MRIP to state survey standards for management and assessment.

Option 3 – Use MRIP to cover species not covered by state surveys.

Option 4 – Continue to use CHTS based estimates and manage with the state survey standards.
Current status of calibrations

- SSC Workshop in 2020 - Accepted calibrations with modifications to improve consistency among states
- Council recommended implementation of red snapper calibrations beginning in January 2023; currently undergoing review and rulemaking
- Congressional Directive JES 2021:
  - Calls for an independent assessment, based on the results of the two prior items, to how best calibrate the Federal and State recreational catch data programs in the Gulf of Mexico to a common currency.
- State Directors/NOAA Meeting 2021 - renewed commitment to completing the transition process
Congressional Directives

Joint Explanatory Statement for Division, B--Commerce, Justice, Science, and Related Agencies Appropriations Act, 2021:

(1) an independent assessment of the accuracy and precision of both the Federal and State recreational catch data programs in the Gulf of Mexico;

(2) recommended improvements to be made to the Federal and State recreational catch data programs in the Gulf of Mexico to improve accuracy and precision;

(3) an independent assessment, based on the results of the two prior items, to how best to calibrate the Federal and State recreational catch data programs in the Gulf of Mexico to a common currency.
A priority is to rapidly **refocus the transition process** to address the use of state surveys for stock assessments and monitoring.

**Understanding differences in state and federal surveys** is critical to building trust and confidence for their use in management and science.

A **common database** for storing state survey data is needed to increase transparency and improve data access.

Increased and transparent **federal-state communication** going forward is critical.