National SCS History & NMFS Project Overview

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Outline

• SCS History
• 6th SCS Meeting Expectations
• Active NMFS Projects:
  • NS1 Technical Guidance
  • BSIA Process
  • Stock Assessment Prioritization
  • Stock Assessment Improvement Plan
  • EBFM Implementation
  • Climate Regional Action Plans
  • Species Information System
  • Marine Recreational Information Program
SCS Meeting History

- MSRA empowered SSCs to more prominent role
- Pre-MSRA saw uneven development of SSCs across Councils
- SSCs and NMFS Science Centers have linked, complementary roles

- Developing Best Practices for SSCs
  - WPFMC; Honolulu, Hawaii; November 12-14, 2008
- Establishing a Scientific Basis for Annual Catch Limits
  - CFMC; St. Thomas, USVI; November 10-13, 2009
- ABC Control Rule Implementation and Peer Review Procedures
  - SAFMC; Charleston, SC; October 19-21, 2010
- Workshop on Ecosystem and Social Science Considerations in U.S. Federal Fishery Management
  - MAFMC; October 4-6, 2011; Williamsburg, VA
- National SCS Workshop on Providing Scientific Advice in the Face of Uncertainty: from Data to Climate and Ecosystems
  - WPFMC; February 23–25, 2015; Honolulu, HI
6th SCS Meeting Expectations

• Improved understanding of the MSE process, benefits, challenges

• Forging NMFS-Council partnerships to conduct MSEs
Future SCS Approaches

- Exploration of future directions for scientific support of sustainable fisheries
  - MSE topic this year is good example
- Compare/contrast across Councils on variety of technical issues
  - Stock structure, data-limited, P*, Fmsy proxies, ecosystem and economic approaches, etc.
  - With high NMFS engagement, or mostly among Councils
Active NMFS Projects
NS1 Technical Guidance

Current official technical guidance is dated; Restrepo et al. 1998  
A NS1 Technical Guidance Workgroup began work in March 2017

1) Reference points
   • Ranges of, and defaults for, suitable proxies for Fmsy, Blimit, and Bmsy
   • Pros & cons of F-based and catch-based overfishing limits
   • Invoking regime shifts in SDC and implementing dynamic SDC using trailing mean productivity conditions
   • Implementation of multi-year SDCs
   • Implementing system (& species complex) OY

2) Harvest policies
   • Designing, evaluating, and implementing phase-in & carry-over provisions

3) Addressing data limitations & using alternative approaches
   • Exploring alternative approaches to meeting statutory requirements in data-limited situations.
BSIA – Situation

• Fishery management decisions must be based on BSIA
  • Stock status determinations
  • Harvest recommendations (ABCs)
  • Harvest specifications (ACLs)

• Regional differences

• Interwoven SSC/agency roles

• Time between the science and management process

• Inherent assessment uncertainty
BSIA – White Paper

• Framework for determining that final decisions are based on BSIA

• Presented to the Council Coordination Committee (CCC), several Councils, and several SSCs in May-June 2017

• Plan to provide revised White Paper to CCC in February 2018
Stock Assessment Prioritization

- Provides a tool for regions to systematically investigate annual assessment needs
- Results from process are advisory and non-binding
- Implemented on a regional basis – not intended to redistribute resources between regions or to non-assessment activities
- Maintaining data streams supporting assessments is essential
- Establishes assessment targets and facilitates gap analysis
## Regional Prioritization Progress

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<thead>
<tr>
<th>Council</th>
<th>Status</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFMC</td>
<td>Initiating round 2</td>
<td>NWFSC/SWFSC staff currently initiating work to support scheduling 2019 groundfish assessments</td>
</tr>
<tr>
<td>NPFMC</td>
<td>Ongoing</td>
<td>Frequency changes provisionally adopted; Plan Teams to further investigate cost-benefit analysis</td>
</tr>
<tr>
<td>NEFMC/MAFMC</td>
<td>Ongoing</td>
<td>NRCC coordinating process for long-term, strategic scheduling of assessments for research &amp; management tracks</td>
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<tr>
<td>SAFMC</td>
<td>Ongoing</td>
<td>Initial tool developed and presented</td>
</tr>
<tr>
<td>GMFMC</td>
<td>Ongoing</td>
<td>Initial tool developed and presented</td>
</tr>
<tr>
<td>HMS</td>
<td>Ongoing</td>
<td>Initiated, working to refine and gain further expert input</td>
</tr>
<tr>
<td>CFMC</td>
<td>Ongoing</td>
<td>Awaiting new FEP/FMU changes; developing approaches to adapt tool for data-moderate/poor stocks</td>
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<tr>
<td>WPFMC</td>
<td>On hold</td>
<td></td>
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Stock Assessment Improvement Plan

NOAA Fisheries

Next
Generation
Stock
Assessment
Enterprise

Holistic & Ecosystem-Linked

Innovative

Timely, Efficient, & Effective
<table>
<thead>
<tr>
<th>Theme</th>
<th>Recommendation</th>
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| **Holistic & Ecosystem-Linked Stock Assessments** | • Routine consideration of ecosystem and socioeconomic drivers in assessments and research conducted to develop operational assessments; use the proposed decision processes, in combination with ongoing research  
• Coordinate assessment results and advice across stocks; consider broader ecosystem and fishing community factors in a more holistic evaluation of harvest control rules; improve communication of stock assessment issues and gaps to inter-disciplinary researchers. |
| **Innovative Science for Improving Stock Assessments** | • Maintain and improve fishery-independent data collection capabilities; conduct more studies to directly calibrate fish abundance from surveys; adjust coverage for shifting distributions; expand ecosystem and environmental data collection.  
• Maintain and improve fishery-dependent data collection including remote data collection (electronic monitoring); develop low-cost fish and environmental survey methods deployable from fishing vessels.  
• Utilize advanced technologies, such as sonar, robotic camera systems, automated image processing, e-DNA, and others to expand coverage, reduce stock impacts, and streamline data collection.  
• Improve assessment models with a focus on advanced statistical methods, expanding model scope, broader use of management strategy evaluation, and improve characterization of uncertainty, including the use of model ensembles; improve professionalism of the assessment data management and model development process. |
| **Timely, Efficient, and Effective Stock Assessment Enterprise** | • Prioritize stock assessment activity through implementing the new assessment data classification system and gap analysis.  
• Separate research from operational assessments; streamline the operational process; expand the scope and inclusivity of the research process; and establish a timely and efficient degree of peer-review focused on relevant issues.  
• Maintain effective stock assessments with standardized approaches and improve communication of data needs and assessment results; improved stakeholder outreach and engagement; improve training of current and future assessment scientists; and improve opportunities for assessment scientists to engage in research. |
Species Information System

- Relational database & reporting system for tracking information on stocks managed under federal FMPs
- Web-enabled user interface for record & reporting
  - Supports SIS Public Portal website
- Includes library of associated documents – stock assessment reports, status memos, etc.
- To date, 2805 assessment records entered for US stocks
Ecosystem Based Fisheries Management

• EBFM Roadmap finalized in November 2016
  ➢ Identifies actions to implement six guiding principles in the May 2016 NMFS EBFM Policy
  ➢ Calls for the development of regional implementation plans.

• Draft regional EBFM implementation plans are under development.

• Will be available for public comment by summer 2018.
NMFS Climate Science Strategy Implementation

Climate Science Objectives
- Climate-Informed Reference Points
- Robust Management Strategies
- Adaptive Management Processes
- Project Future Conditions
- Understand Mechanisms of Change
- Track Change and Provide Early Warnings
- Build and Maintain Adequate Science Infrastructure

Climate Science Strategy - 2015

Interdependent

7 Regional Action Plans 2016-2017

Climate-Ready Fisheries

http://www.st.nmfs.noaa.gov/ecosystems/climate/
MRIP: New Fishing Effort Survey FES

- Mail survey is more accurate than telephone survey
  - Better coverage
  - Higher response rates
  - Better chance of reaching people who fished

- National Academies: “The methodologies, including the address-based sampling survey design, are major improvements from the original CHTS [Coastal Household Telephone Survey] that employed random-digit-dialing.”

- Pilot studies showed FES estimates of private boat and shore fishing effort are substantially higher than CHTS estimates

- Also improvements in Access-Point Angler Intercept Survey to improve statistical sampling protocols
1. MRIP response to FES calibration model peer reviews
2. Complete evaluation of models proposed for APAIS design change calibration and peer review the selected model
3. Apply both FES and APAIS models to produce final calibrated effort and catch statistics by July 1, 2018