BSAI Assessment Methods Workshop

BSAI Plan Team Subcommittee

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Background

- The BSAI Plan Team suggested three topics for a subcommittee meeting (*November Plan Team minutes, EBS Pacific cod section, pages 8-9, 10*)
  1. ~~Investigation of the effects of different features on the [P. cod] model outputs~~
  2. Determining what types of models should make up an ensemble
  3. When and how should the ABC be reduced from its maximum

- The SSC supports the Plan Team's recommendation to conduct a spring workshop to address these and other issues which would not be limited to just Pacific cod (*SSC minutes –December 2017, page 13*)

Purpose

- To review ensemble modeling and determine how it fits in the NPFMC system
- Discuss considerations for reducing the ABC to account for observations and uncertainties not included in the assessment model or Tier system
- Produce recommendations and a report to be considered by the September Joint Groundfish Plan Team meeting

Location, Timing, and Attendees

- In Seattle, WA sometime in June
- Co-chairs
  - Stram, Thompson, Haynie, Hicks
- Invited participants
  - All NPFMC SSC members, all Groundfish PT members, and potentially others
- Public welcome

Agenda topics

TOPIC	TENTATIVE LEAD
1. INTRODUCTIONS	Co-chairs
2. PURPOSE OF WORKSHOP	Co-chairs
3. ENSEMBLE MODELING	
3.1 Brief descriptions of ensemble modeling and model averaging	Co-chairs
3.2 Review the SSC ensemble modeling workshop in 2017	Hicks
3.3 Pros and cons of ensemble modeling	
3.4 Examples of ensemble modeling in fisheries stock assessment	Hicks
3.5 Impediments to implementing ensemble modeling in the NPFMC system	Thompson
3.6 Choosing models in an ensemble	
3.7 Combining models and assigning weights	Thompson
3.8 Workload and logistics for assessment authors	Thompson
3.9 Communicating and using results	
4. DETERMINING ABC	
4.1 Review how maxABC and ABC are determined in NPFMC system	Thompson
4.2 How can ensemble modeling inform maxABC and ABC	
4.3 Other methods of accounting for uncertainty when determining ABC	
5. REPORT	
5.1 Drafting of recommendations to bring to Plan Team	Co-chairs
5.2 Items for the agenda of the September Plan Team and other preparations	Co-chairs

Ensemble Modeling: setting the stage

3.1: Brief descriptions of ensemble modeling and model averaging

- Define ensemble modeling and model averaging

3.2: Review the 2017 SSC ensemble modeling workshop

- Perhaps get a national perspective as well from an invited speaker

3.3: Pros and cons of ensemble modeling

- Highlight some of these

3.4: Examples of ensemble modeling in fisheries stock assessment

- Examples from within the U.S. and beyond

3.5: Impediments to implementing ensemble modeling in the NPFMC system

- MSA/FMP/SAFE guidelines, when could this be implemented

Ensemble Modeling: details

3.6: Choosing models in an ensemble

- Structural differences, sensitivities, and maximum number of models

3.7: Combining models and assigning weights

- Method to combine and determining weights

3.8: Workload and logistics for assessment authors

- Who does all the work? Tools to assist. Outputs to create.

3.9: Communicating and using results

- What is reported in the assessment
- What is used for management

Determining ABC

4.1: Review how maxABC and ABC are determined in the NPFMC system

- What is the difference? Reasons for reducing the ABC. Examples

4.2: How can ensemble modeling inform maxABC and ABC

- Can ensemble modeling capture the appropriate uncertainties?

4.3: Other methods of accounting for uncertainty when determining ABC

- Buffers, tiers, etc. Can they account for all of the uncertainty?

Report

5.1: Drafting of recommendations to bring to Plan Team

- This will be done by co-chairs

5.2: Items for the September Plan Team agenda

- Coordinate items that need to be brought up to joint Plan Team

Questions?

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