Science, Service, Stewardship

Status Determination Criteria
Stock Assessments
and Status Reporting

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Background

- Requirement for objective and measurable SDC
- National Standard 2 (Best Available Science)
- MSA Section 304(e)(1) (Report Status to Congress using Criteria for Overfishing Specified in Fishery Management Plan)

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Background

- In some cases SDC have been established - but there is no capability to assess the stock against those SDC.
- Some stock assessments do not provide information to evaluate status using current SDC, but recommend different SDC.
- Conflict between best available science and current SDC in the FMP.
- Process to amend FMP is often lengthy and conflicts with other priorities.

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Examples of current SDC

- **Overfishing** occurs when the 3-year moving average of the autumn survey mean weight per tow declines 20% or more, or when the autumn survey mean weight per tow declines for 3 consecutive years.

- The stock is in an **overfished** condition when the 3-year moving average of the autumn survey mean weight per tow is less than one-half of the 75th percentile of the mean weight per tow observed in the autumn trawl survey from the selected reference time series.

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Examples of current SDC

- **Overfishing** occurs when the F is in excess of the F corresponding to a 30% Static SPR.

- **Overfished** is defined as a stock size less than MSST. MSST = 1-M*BMSY.

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Examples of current SDC

- **Overfished** is defined as a stock size less than MSST
- MSST = 1-M*BMSY.
  - —Values not estimated

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Examples of current SDC

- **Overfishing** is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).

- A stock is **overfished** when it falls below its MSST, defined as whichever of the following is greater: ½ the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.
  *NOTE: ½ BMSY is one of 2 reference points used in defining MSST.

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Potential Solution

- Scientifically sound **definition** for objective and measurable overfished or overfishing SDC in FMP
- Specific **basis** for the SDC comes from best available science - stock assessment
- Specific SDC **reference point values** comes from best available science - stock assessment

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Components of SDC Overfishing

1. **Definition** - e.g. Overfishing occurs when F exceeds the Fmsy or best proxy for Fmsy. The definition would be in the FMP. The FMP could provide that the specific **basis** and **reference point value** would be determined the the peer-reviewed stock assessment process.
2. **Basis** for determination - peer reviewed stock assessment would provide the best scientific basis - e.g. estimate of Fmsy, or the proxy considered the best available (Fmax, F40% etc)
3. **Reference Point Value** - the stock assessment would also provide the specific value for the reference point corresponding to the SDC Basis e.g. Fmax = 0.23 , or Fmsy = .25, etc

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Example of Actions Moving Forward

- Spiny Dogfish – Framework Adjustment 2
  - FW 2 would define acceptable categories of peer review to determine when a change to the biological reference points represents the best available science.
  - The framework specifies that when new information is recommended by any number of defined peer review processes, the new or revised biological reference points can then be incorporated into the Council's process to craft management measures.
  - FW 2 would also identify how the Council may engage its Scientific and Statistical Committee to provide scientific advice in situations were peer reviews do not result in consensus recommendations or result in ambiguous or highly controversial scientific advice.

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Benefits of improved SDC

- Better accommodation of improvements in assessment data and methodology
- Reduced need for future FMP amendments
- Results of best available science incorporated and reported more quickly