Lobster Draft Addendum XXVI/Jonah Crab Draft Addendum III

February 6, 2018

Overview

- Problem Statement
- Management Options
- Public Comment Summary
- LEC Report
- AP Report

Problem Statement

- Current harvester reporting requirements do not provide the level of info needed to respond to mgmt. issues
  - Spatial information is too coarse to respond to mgmt. actions
  - Lack of information on depth of fishery
  - Not all harvesters are required to report
- While the lobster fishery moves further offshore and the Jonah crab fishery primarily occurs in federal waters, the majority of biological sampling occurs inshore
  - Many stat areas are not meeting the 3 sample/season baseline in the stock assessment
  - Greatest data gaps in offshore GBK

TC Analysis on % Reporting in ME

- Board tasked TC w/ investigating a statistically valid sample of harvester reporting
- TC report:
  - TC recommends 100% harvester reporting to accurately account for all trap hauls and spatial extent of effort
  - In interim, current 10% harvester reporting in Maine is sufficiently precise, in large part due to size of fishery
  - Precision of 10% reporting would increase if sampling focused on active permit classes which contain a large # of vessels and have high variance in landings (Option B)

Issue 1: Percent Harvester Reporting

Option A: Status Quo

- Minimum of 10% reporting w/ expectation of 100% reporting over time
- If state at 100% reporting, maintain that %

Option B: Maintain Current Reporting Effort – Optimal Approach

- If state at 100% reporting, maintain that %
- For states w/ less than 100% reporting, maintain current level of effort but distribute through an optimal approach (from TC report)
- Expectation of 100% reporting over time through use of electronic reporting

Issue 1: Percent Harvester Reporting

Option C: 100% Harvester Reporting

- **Sub-Option 1:** 100% trip level reporting
- **Sub-Option 2:** 100% trip level reporting; however, commercial harvesters who landed less than 1000 lbs of lobster and Jonah crab in the previous year can submit monthly landings reports

Electronic Reporting

- Electronic reporting highly encouraged by PDT & TC
  - Cost effective method to increase reporting
  - Flexibility to collect expanded data elements
- Recommended states use eTrips or eTrips Mobile
  - Can be implemented at little to no cost to states
  - Approved by GARFO for eVTRs
  - Well established relationship between ACCSP and ASMFC
- States can use a different platform for electronic reporting but must be API compatible

Issue 2: Reporting Data Components

Option A: Status Quo

- Unique trip ID, vessel #, trip start date, stat area, # of traps hauled, # traps set, species, pounds, trip length

Option B: Expanded Data Elements

- Depth, bait type, soak time

Option C: Gear Configuration Elements

- # traps per trawl, # buoy lines

Board can chose both Options B and C

Issue 3: Spatial Resolution

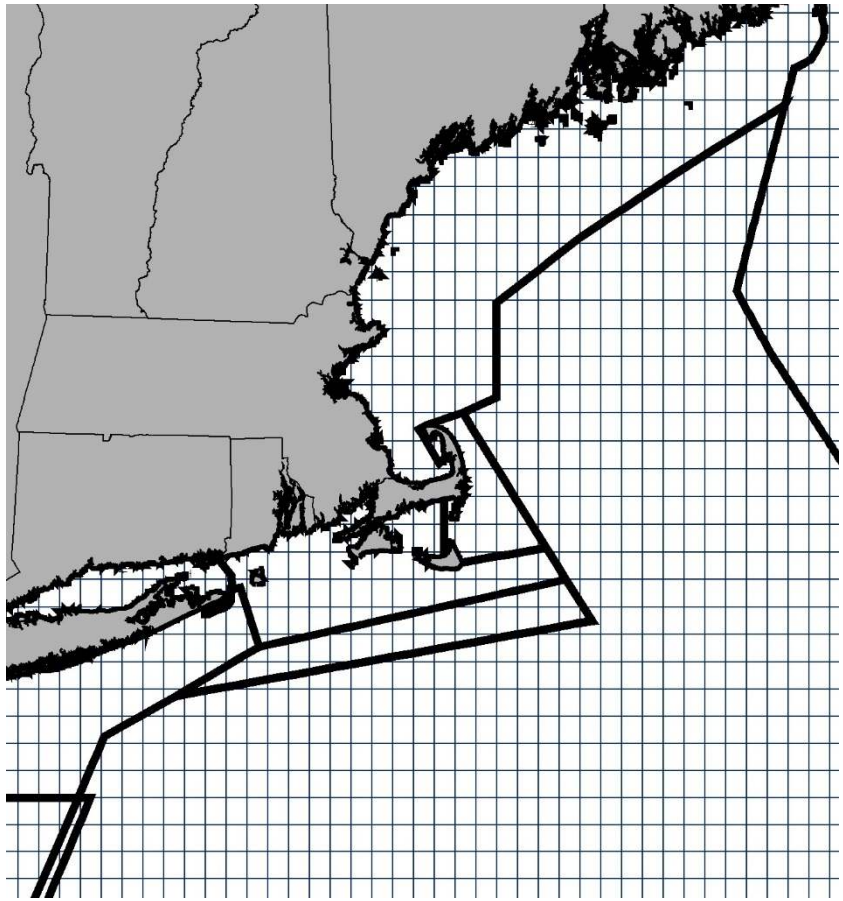
Option A: Stat Area

Option B: Stat Area & LCMA

Option C: Stat Area & Distance from Shore

- 0-3 miles
- 3-12 miles
- >12 miles

Option D: 10 Minute Squares



Issue 3: Spatial Resolution

Option E: Electronic Tracking (can be combined with other options)

- As a first step, one year pilot program to test electronic tracking devices in fishery
- Subcommittee (Board, PDT, industry, LEC) will design pilot program
- Technologies evaluated based on ease of compliance, ability to determine trap hauling vs. steaming, industry feedback, cost-per-fishermen, LEC feedback
- After 1 year, Board can end program, extend program, or pursue implementation of tracking in fishery

Biological Sampling for States

Biological Sampling

- States conduct a minimum of 10 sea/port sampling trips in lobster/Jonah crab fishery
- If states comprise more than 10% of coastwide landings in either the lobster or Jonah crab fishery, conduct additional sampling trips

Recommendations For Federal Waters

- Establish harvester reporting requirement for lobster-only federal permit holders
- Create a fixed-gear VTR
- Implement a targeted lobster sampling program in federal waters

Public Comment Summary

Public Hearings

- 8 public hearings held in 7 states (ME-NJ)
- 130 individuals attended

Written Comment

- 13 written comments received
- Majority (9) from organizations including NGOs, industry associations, NEFMC
- Remaining from individuals

Issue 1: Percent Harvester Reporting

	Status Quo	10% Modified	100% Sub-Option 1	100% Sub-Option 2
Written Comments				
Individual		4		
Organization	1	2	11	2
Public Hearings				
ME	1	57		
NH				24
MA				
RI	1			
CT	3			
NY			5	
NJ				
Total	**6**	**63**	**16**	**31**

Issue 2: Harvester Reporting Elements

	Status Quo	Effort/Location Elements	Gear Elements
Written Comments			
Individual			
Organization	1	8	12
Public Hearings			
ME	60		
NH	24		1
MA	1		
RI		1	1
CT	1		
NY	5		
NJ		10	10
Total	**92**	**19**	**24**

Issue 3: Spatial Resolution

	Stat Area	LCMA	Distance	10' Squares	Tracking
Written Comments					
Individual			2		
Organization	1	1	2	9	7
Public Hearings					
ME	51		50	3	
NH	2		3	3	
MA				2	
RI		1			
CT		1		1	
NY					
NJ				1	
Total	**54**	**3**	**57**	**19**	**7**

Additional Comments

Federal Recommendations

- 16 comments in support of 100% harvester reporting for federally permitted vessels.
- 7 comments in support of a fixed-gear VTR for federal waters.
- 3 comments in support of a targeted biological sampling program in federal waters; others cautioned against increased observer coverage

Protected Resources

- Several NGOs recommended subsequent action to address the recent North Atlantic right whale deaths.

LCMA 4 and 6 Season Closures

- NJ and CT fishermen highlight economic impacts of current season closures
- Requirement to remove gear extends length of season closure and prevents them from fishing for other species

LEC Report

- LEC did not have specific recommendations regarding level of harvester reporting or data elements
  - LEC supports efforts to collect as much data as possible, but offers the comment that it is unreasonable to expect strict enforcement of incomplete/incorrect reports if requirements are complex
  - While usefulness of data elements may vary state to state, there may be ancillary utility in having information on depth, bait type, and soak time
- LEC supports development of vessel tracking as a means to enhance enforcement of the fishery

AP Report

- AP met via conference call on January 17th
  - Reviewed the management issues
  - Reviewed public comment to-date
  - Provided recommendations to the Board
- AP Attendance:

David Cousens (ME)
Bob Baines (ME)
Robert Nudd (NH)
Sooky Sawyer (MA)
Grant Moore (MA)
John Whittaker (CT)
Jack Fullmer (NJ)
Sonny Gwin (MD)

AP Report: Issue #1

- 5 AP members supported 100% harvester reporting for federal vessels
  - Of 5, 2 AP members supported 10% harvester reporting in state waters but 100% reporting in federal waters
- 2 AP members supported maintaining current 10% harvester reporting requirement
  - Of 2, 1 supported the redistribution of current 10% harvester reporting to focus on active permits (Option B)
- 1 AP member suggested an optional reporting program for recreational fishermen so they can provide their knowledge/information to managers

AP Report: Issue #2

- 4 AP members supported a re-design of federal VTR to encompass data needs of lobster fishery
  - Current form not presented in a logical order
  - Different fishermen interpret data elements differently
- Comments on Option B:
  - 1 AP member supported inclusion of 'soak time' but did not see need for 'bait type'
  - 1 AP member expressed concern about 'depth' given a trawl can span a range of depths
- Comments on Option C:
  - 1 AP member supported inclusion of # traps per trawl, # buoy lines because it is pertinent to the ALWTRT discussions

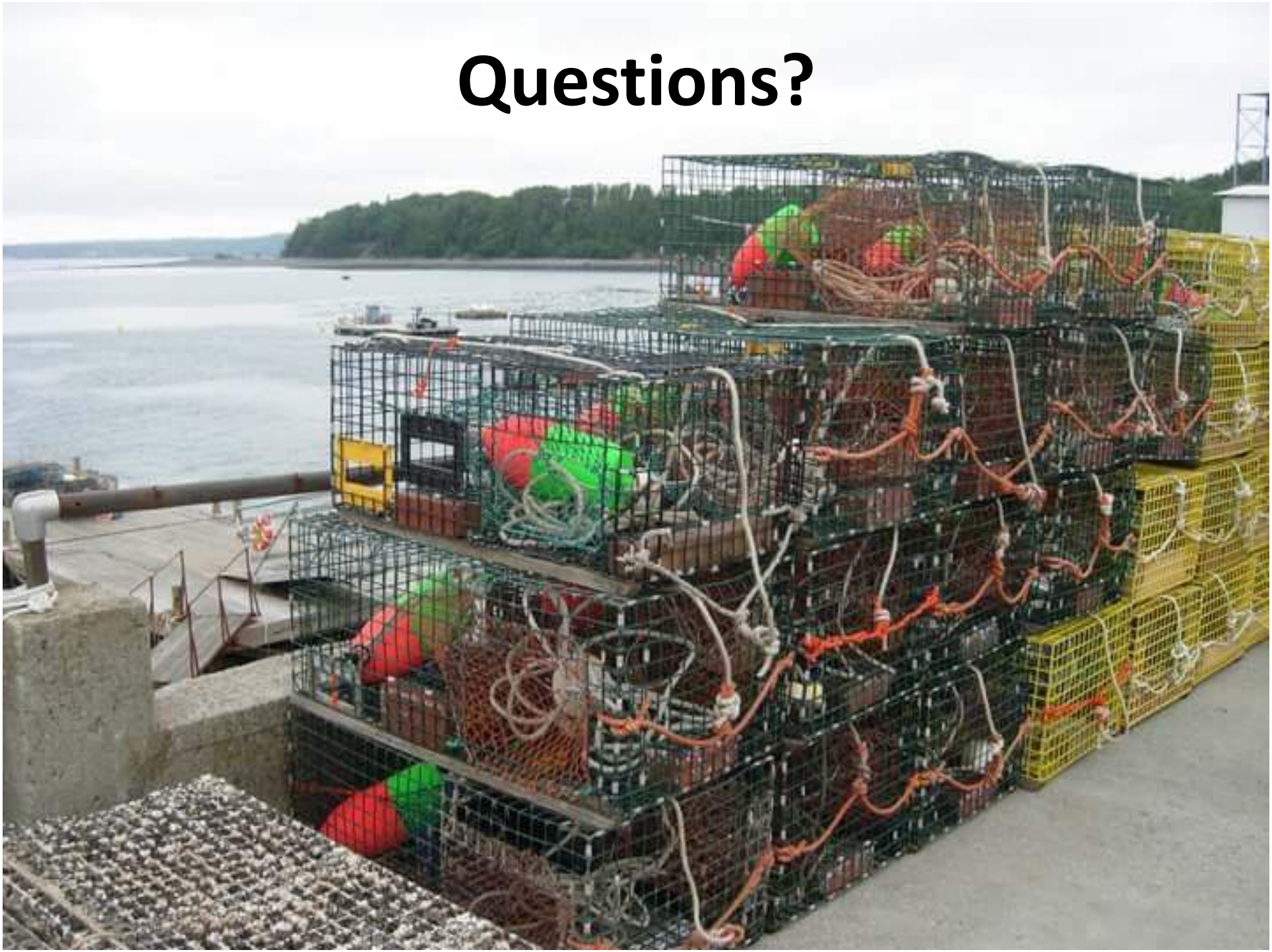
AP Report: Issue #3

- Comments on Option E (tracking program)
  - 5 AP members did not support Option E commenting that the cost will fall on fishermen and it is not appropriate for inshore
  - 1 AP member supported exploration of electronic tracking for federal vessels, especially given increase in Jonah crab fishery
- Comments on Option D (10 minute squares)
  - 2 AP members supported use of 10 minute squares as long as fishermen do not have to fill out a separate form per square
  - Will help fishery in long run because it will provide a history of where the fishery is taking place
- 1 AP member supported Option B (stat area and LCMA)
- 1 AP member did not support Option C (distance from shore) since Long Island Sound is all state waters

AP Report: Additional Comments

- 1 AP member supported greater sea/port sampling over whole range of fishery
- 1 AP member highlighted importance of reporting being ‘fishermen friendly’ (i.e. logical and simple)
- 1 AP member cautioned against the Board moving towards the requirements found in the groundfish fishery

Questions?



SNE Workgroup: Goals and Objectives

February 6, 2018

Introduction

- At Annual Meeting, the Board tasked the SNE Workgroup with reviewing the goals and objectives by which the SNE stock is managed
- SNE Workgroup met via conference call on January 22nd to discuss applicability of current goals and objectives in the FMP
  - Are the current goals and objectives applicable to our present situation?
  - Are there other, or additional, objectives that would be more applicable?
  - Do we need separate objectives for the SNE and GOM/GBK stocks?

Review of Current Goals/Objectives

While the SNE Workgroup found some goals and objectives are still pertinent…

> *"ensuring that changes in geographic exploitation patterns do not undermine success of ASMFC management program"*

…other objectives may no longer be germane.

> "*minimizing the risk of stock depletion and recruitment failure"*

As a result, the SNE Workgroup concluded that the goals/objectives may need to be updated to address current issues in the fishery.

Potential Revised Objectives

Applicable to Both Stocks

- Evaluate differential spatial dynamics between inshore vs. offshore.
- Adopt/maintain programs in each mgmt. unit to reduce latent effort and manage active effort as a means of protecting and enhancing the lobster resource, and reducing interactions with protected species.
- Promote consistency of regulations and regulatory timelines between states and NOAA Fisheries, where possible, to ensure cohesive and effective mgmt. of each LCMA.
- Promote adequate and effective sampling of harvest, discard, and bio data throughout the lobster stock, particularly offshore.
- Investigate further stock connectivity within, and between, the GOM/GBK and SNE stocks, particularly as it relates to enviro changes, to inform the appropriate scale for mgmt. of the species.
- In light of dramatic changes in stock condition, promote further research, including studies on growth, maturity, mating, reproductive success, and recruitment, particularly offshore.

Potential Revised Objectives

Applicable to SNE Stock

- Given the apparent negative impacts of climate change on the SNE stock, enhance the protection of spawning stock biomass for lobster, where practical, in order to add resiliency to the remaining pop by providing the potential for good recruitment, if and when environmental conditions are conducive.
- Scale the SNE fishery to the diminished size of the SNE resource, while preserving a viable mixed lobster/crab fishery.
- Manage the SNE stock as a multi-species fishery, ensuring compatible management of all species.
- In light of climate change, evaluate the reference points for SNE based on the current state of the environment, recognizing the effects of changes in habitat availability, predation, and temperature, which may limit rebuilding of the stock.

Next Steps

- Changes to the goals/objectives will require an Amendment
- Board needs to consider its desire to undertake such an action as well as timing
  - Several on-going issues: development of Draft Addendum XXVII, 2020 Benchmark Stock Assessment, discussions of protected resources

2020 American Lobster Benchmark Stock Assessment Terms of Reference

American Lobster Management Board

February 6, 2018

Terms of Reference for Stock Assessment Process

1. Estimate catch and catch-at-length from all appropriate fishery dependent data sources including commercial and potential discard data.
   a. Provide descriptions of each data source (e.g. geographic location, sampling methodology, variability, outliers). Discuss data strengths and weaknesses (e.g. temporal and spatial scale, gear selectivities, sample size) and their potential effects on the assessment.
   b. Justify inclusion or elimination of each data source.
   c. Explore improved methods for calculating catch-at-length matrix.

2. Present the abundance data being considered and/or used in the assessment (e.g. regional indices of abundance, recruitment, state-federal and other surveys, length data, etc.).
    a. Characterize uncertainty in these sources of data.
    b. Justify inclusion or elimination of each data source.
    c. Describe calculation or standardization of abundance indices.

3. Evaluate new information on life history such as growth rates, size at maturation, natural mortality rate, and migrations.

4. Identify, describe, and, if possible, quantify environmental/climatic drivers.

5. Use length-based model(s) to estimate population parameters (e.g., effective exploitation rate, abundance) for each stock unit and analyze model performance.
    a. Evaluate stability of model(s). Perform and present model diagnostics.
    b. Perform sensitivity analyses to examine implications of important model assumptions, including but not limited to growth and natural mortality.
    c. Explain model strengths and limitations.
    d. Justify choice of CVs, effective sample sizes, or likelihood weighting schemes.
    e. State assumptions made and explain the likely effects of assumption violations on synthesis of input data and model outputs.
    f. Conduct projections assuming uncertainty in current and future conditions for all stocks. Compare projections retrospectively with updated data.

6. Update and develop simple, empirical, indicator-based trend analyses of reference abundance, effective exploitation, and develop environmental drivers for stock areas.

7. Update the current exploitation and abundance reference points (i.e., targets and thresholds). Explore and, if possible, develop alternative reference points and reference periods that may account for changing productivity regimes due to environmental effects.

8. Characterize uncertainty of model estimates, reference points, and stock status.

9. Perform retrospective analyses, assess magnitude and direction of retrospective patterns detected, and discuss implications of any observed retrospective pattern for uncertainty in population parameters and reference points.

10. Report stock status as related to overfishing and depleted reference points (both current and any alternative recommended reference points). Include simple description of the historical and current condition of the stock in layman's terms.

11. Address and incorporate to the extent possible recommendations from the 2015 Benchmark Peer Review.

12. Develop detailed short and long-term prioritized lists of recommendations for future research, data collection, and assessment methodology. Highlight improvements to be made by next benchmark review.

13. Recommend timing of next benchmark assessment and intermediate updates, if necessary relative to biology and current management of the species.

Terms of Reference for External Peer Review

1. Evaluate thoroughness of data collection and presentation and treatment of fishery-dependent and fishery-independent data in the assessment, including the following but not limited to:
    a. Consideration of data strengths and weaknesses,
    b. Justification for inclusion or elimination of available data sources,
    c. Calculation of catch-at-length matrix,
    d. Calculation and/or standardization of abundance indices.

2. Evaluate the methods and models used to estimate population parameters and reference points for each stock unit, including but not limited to:
    a. Use of available life history information to parameterize the model(s)
    b. Model parameterization and specification (e.g. choice of CVs, effective sample sizes, likelihood weighting schemes, etc.).
    c. The choice and justification of the preferred model. Was the most appropriate model used given available data and life history of the species?

3. Evaluate the identification and characterization of environmental/climatic drivers.

4. Evaluate the estimates of stock abundance and exploitation from the assessment for use in management. If necessary, specify alternative estimation methods.

5. Evaluate the methods used to characterize uncertainty in estimated parameters. Were the implications of uncertainty in technical conclusions clearly stated?

6. Evaluate the diagnostic analyses performed, including but not limited to:
    a. Sensitivity analyses to determine model stability and potential consequences of major model assumptions
    b. Retrospective analysis

7. Evaluate the preparation and interpretation of indicator-based analyses for stocks and sub-stock areas.

8. Evaluate the current and recommended reference points and the methods used to calculate/estimate them. Recommend stock status determination from the assessment or specify alternative methods.

9. Review the research, data collection, and assessment methodology recommendations provided by the Technical Committee and make any additional recommendations warranted. Clearly prioritize the activities needed to inform and maintain the current assessment, and provide recommendations to improve the reliability of future assessments.

10. Review the recommended timing of the next benchmark assessment relative to the life history and current management of the species.

11. Prepare a Peer Review Panel TOR and Advisory Report summarizing the Panel's evaluation of the stock assessment and addressing each Peer Review Term of Reference. Develop a list of tasks to be completed following the workshop. Complete and submit the Report within 4 weeks of workshop conclusion.

Assessment Schedule

Event/Product	Required Participants	Date/Deadline
Assessment Planning/TC Workshop	TC and SAS	November 2017
Terms of Reference presented to Lobster Management Board for approval	ASMFC Science Staff and Lobster Management Board	Winter Meeting 2018
Researcher/Data Workshop	TC and SAS	May 14-17, 2018
Data/Assessment Workshop	SAS	January 2019
Assessment Workshop	SAS	September 2019
Peer Review Workshop	Lead analysts, SAS Chair, TC Chair, Peer Review Panel	May 2020
Lobster Management Board Meeting to Review Assessment	SAS Chair, Peer Review Panel Chair, and Lobster Management Board	August 2020