

## **NOAA FISHERIES**

**Greater Atlantic Regional** 

**Fisheries Office** 

# Right Whale Management February 2021 Update

**Atlantic States Marine Fisheries Commission** 



#### **MMPA:**

### Atlantic Large Whale Take Reduction Plan

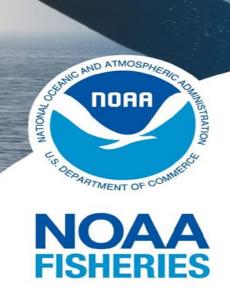
- Proposed Rule
- Draft Environmental Impact Statement

#### **ESA**:

#### **Section 7 Consultation**

Batched Fisheries Biological Opinion





## Proposed Rule and Draft Environmental Impact Statement

#### Take Reduction Plan: April 2019 Team Direction



Develop recommendations to reduce mortalities and serious injuries of right whales in U.S. fisheries by 60% to 80% to below the potential biological removal level

- Assumes mortalities and serious injuries of unknown origin occur equally in U.S. and Canada
- Decision Support Tool (DST) used to compare/evaluate measures
  - CIE Peer Review late 2019
- Start with northeast lobster and Jonah crab fisheries (93% of vertical lines where right whales occur)





#### **Basic Principles for Alternative Development**

## Risk reduction of 60% or greater as assessed with Decision Support Tool

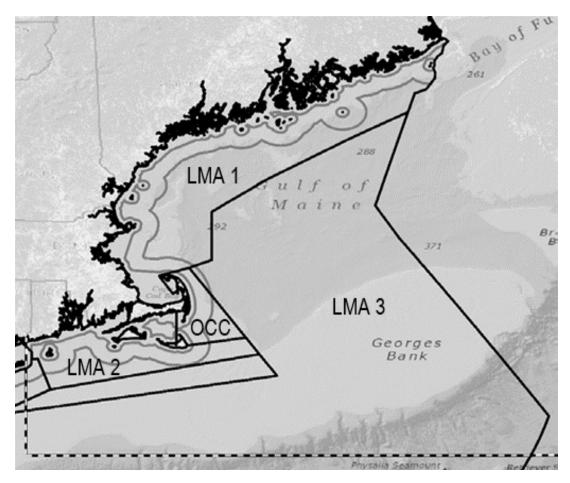
#### **Apply April 2019 TRT Recommendations**

• Include broad application of reduced line and weak rope across jurisdictions

#### **State and Federal Scoping**

#### **NMFS Approach**

- Jurisdictional approach: State proposals, American Offshore Lobster Association for LMA3
- Direct the most protection to areas of predictable high seasonal aggregations
- Substantial risk reduction across areas of cooccurrence
- Precautionary measures everywhere



#### **April 2019 Take Reduction Team Results**



#### **Near-Consensus Recommendation**

#### • Approach:

- Achieve at least 60% risk reduction (DST)
- Spread risk reduction across jurisdictions

#### • Results:

 Broad application of reduced line and weak rope

State/Jurisdiction	Vertical Line Reduction	Gear Modification	Est. % Risk Reduction
Maine permitted vessels through LMA1	50% vertical line reduction through LMA1 (50% risk reduction)	LMA 1 - Weak rope outside of 3 miles on 3/4 length of buoy line (toppers) (11.6% risk reduction)	61.6%
NH LMA1	30% vertical line reduction (30% risk reduction)	1700 lb breaking strength or sleeves (28.5 % risk reduction)	58.5%
Massachusetts LMA1 and Outer Cape	outer Cape (24% risk reduction) strength or equivalent		60%
	30% vertical line reduction, not including MBRA fishermen (-5%) (25% risk reduction)	(11% risk reduction)	
LMA 2 - Massachusetts and Rhode Island	18% (2018 - 2020) vertical line reduction (18% risk reduction)	1700 lb or equivalent (42% risk reduction)	60%
LMA 2 / 3 Overlap – Massachusetts, Rhode Island	Trawling up to 30 traps (from 20) (30% risk reduction for that area)		
LMA 3	Accelerate planned line reduction 18% by 2020	Rapid research on alternatives to introduce weak rope or weak link elements in to offshore line	18% + TBD Commitment to 60%

### What tools were used: how and why



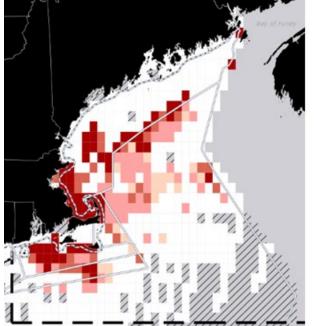
### To select measures and estimate risk reduction:

- Decision Support Tool (spring 2020)
   Whales + vertical lines + strength of gear
- CIE Peer Review late 2019

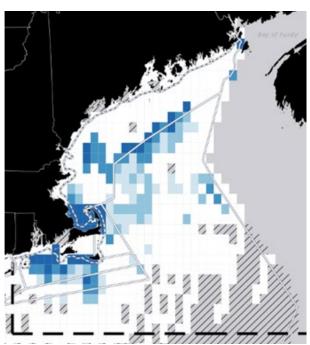
## To assess the potential biological impacts:

- Percent co-occurrence reduction: IEC/NMFS co-occurrence model
  - Whales + vertical lines
- Percent line reduction
- Percent total line weakened

Baseline Co-occurrence



Preferred Alternative- Change



Darker red cells represent areas of high co-occurrence

Darker blue cells represent areas with greater decrease in co-occurrence

White cells represent low to no co-occurrence

Grey cells represent area where we have insufficient data for co-occurrence

#### PREFERRED ALTERNATIVE / PROPOSED RULE

#### **ALWTRP Measures**

- Trawl up by distance from shore (outside of exempt or state waters)
- Restricted areas changed from closure to closed to buoy lines
- Two new restricted areas:
  - South Island Restricted Area Feb -Apr
  - LMA 1 Restricted Area
    - Analyzed: restricted area Oct Jan
    - Co-proposal 1-A: no restricted area
    - **Co-proposal 1-B:** restricted area Oct-Jan based on future determinations
- Region-wide conversion to weaker line
  - LMA1, 2 and Outer Cape: Minimum number of Insertions based on distance from shore
  - LMA3: full weak line or equivalent top 75% of one of the two buoy lines

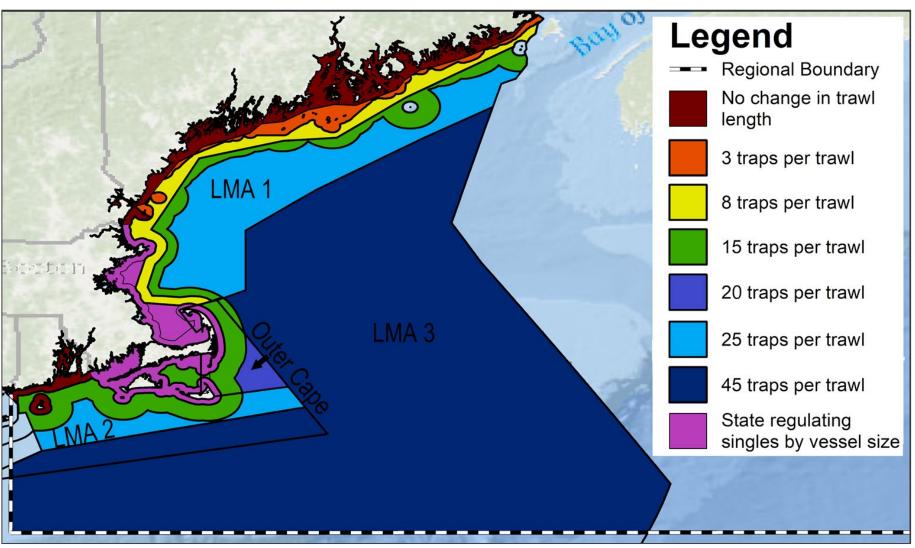
#### Other State or Fishery Management Measures

- Ongoing and planned line reduction in LMAs 2 & 3
- No singles on MA vessels larger than 29 ft permitted
- Credit for the Massachusetts Restricted Area (MRA) from Feb - Apr
- Delayed open of MRA state waters until surveys confirm whales have left



#### Preferred Alternative/Proposed Rule: Line Reduction Measures







#### **Preferred Alternative Restricted Areas** 288 MRA: Feb - Apr control GSC: Apr - June Maine LMA1 : Oct - Jan South Island: Feb - Apr Restr. Area **Great South** Channel Georges Massachusetts Bank South Island Physalia Seamount

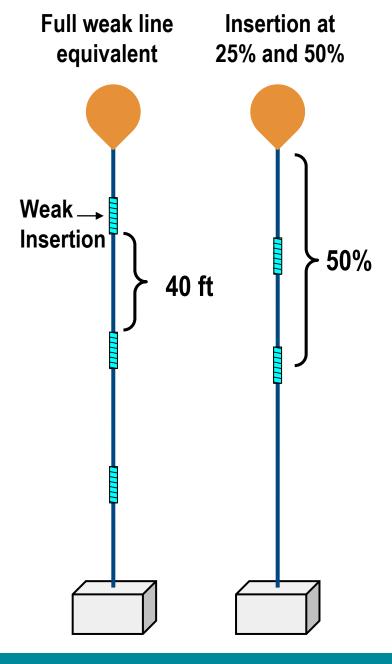
# Preferred Alternative: Seasonal Restricted Areas

- Existing restricted areas
   (in blue) modified to
   allow ropeless (with
   Exempted Fishing Permit)
- State waters of MRA would be closed by MA in May unless whales leave the area
- Up to two new seasonal ropeless areas proposed (in yellow)

#### **Preferred Alternative: Weak Line Measures**

Risk Reduction =  $\frac{\text{\# of inserts X 40ft}}{\text{depth X scope ratio}}$  X risk reduction for full weak line

Area	Insertion % from the top	Source
State waters	1 weak insertion at 50%	ME, MA
Maine state waters outside exemption area and all northeast 3 to 12 nm	2 weak insertions at 25% and 50%	ME, MA
12 nm to border (all northeast)	1 weak insertion at 33%	ME, MA
LMA3-weak line (75%)	One full weak line top 75%, standard line on the other end	AOLA



**Example: New Hampshire** 

**Preferred Alternative: Gear Marking** 

Federal Water Marks

State Water Marks

• State specific colors (new and existing marks):

**Maine = Purple** (already implemented through state regs)

**New Hampshire = Yellow** 

Massachusetts = Red

Rhode Island = Silver/gray

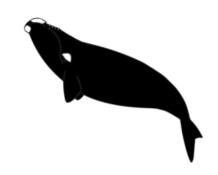
LMA3 = Black

 New three-foot long mark within two fathoms of surface system

- State waters: two one-foot marks, top and bottom half of buoy line
- Federal waters: six-inch green mark within one foot of long mark



#### **Summary of Risk Affects Analysis**



#### **Preferred Alternative Selection:**

• Risk reduction estimated by Decision Support Tool .............~64%

#### **Draft Environmental Impact Statement Analysis:**

- Reduction in right whale/buoy line co-occurrence ......~69%
- Proportion or rope in buoy lines weakend ......~30%



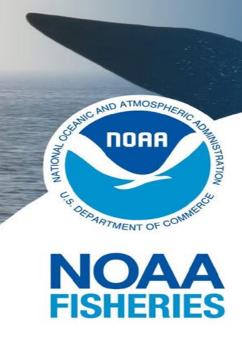
#### **Summary of Compliance Costs**



Measures	Proposed Measures Costs (in millions \$)		
	First Year	6 Years	<b>Vessels Affected</b>
Gear marking	\$2.0	\$12.0	3,970
Weak rope	\$2.2	\$2.2	2,855
Trawling up	\$2.7 - \$11.0	\$13.2 - \$45.0	1,712
Restricted Areas	\$0.1 - \$0.3	\$0.6 - \$1.9	55
Line cap	-	-	-
Total Cost	\$6.9 - \$15.4	\$28.0 - \$61.0	
Total Value of Fisheries	> \$600 million per year		

Data from Chapter 6 of the DEIS





# **Batched Fisheries Biological Opinion**

#### **Endangered Species Act, Section 7**

ESA section 7(a)(2) requires federal agencies to ensure that any action by a federal agency is not likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat





#### **Definitions**

"Jeopardize the continued existence of": Engage in an action that reasonably would be expected to reduce appreciably the likelihood of the survival and recovery of a species in the wild by reducing the reproduction, numbers, or distribution of that species.

**Destruction or adverse modification of critical habitat:** direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species

**Biological Opinion:** Conclusion of formal consultation documenting the consulting agency's analyses and determinations



#### The Federal Action

#### Authorization of the fisheries:

- Lobster
- Red Crab
- Multispecies
- Monkfish
- Dogfish

- Bluefish
- Skates
- Mackerel/Squid/Butterfish
- Summer flounder/Scup/Black sea bass
- Jonah crab (no prior consultation)

NEFMC's Omnibus Habitat Amendment 2

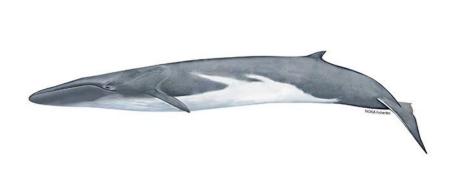
Right Whale Conservation Framework for Federal Fisheries in the GAR

#### The Action Area

Maine through Key West, Florida



#### Species Likely to Be Adversely Affected





#### **Large Whales**

- Fin
- North Atlantic right
- Sei
- Sperm

#### **Sea Turtles**

- Green, North Atlantic DPS
- Kemp's ridley
- Leatherback
- Loggerhead, Northwest Atlantic DPS



- **Fish**
- Atlantic salmon
- Atlantic sturgeon
- Giant manta ray

#### **Determination in the Draft Opinion**

The proposed action is not likely to jeopardize any listed species or destroy or adversely modify any critical habitat.

#### **Incidental Take Statement:**

- Lethal and non-lethal take: loggerhead, Kemp's ridley, green, and leatherback sea turtles; Atlantic sturgeon, Atlantic salmon, and giant manta rays
- Non-lethal take: fin, sei, sperm, and North Atlantic right whales
- Zero lethal take of large whales authorized

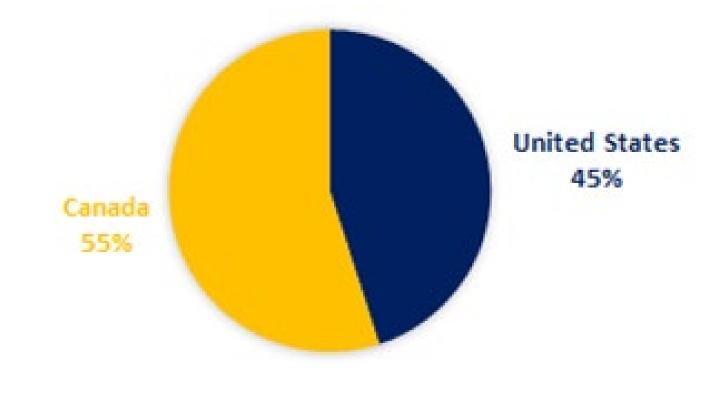
#### North Atlantic Right Whale Analysis

- Estimated M/SI (overall, assigned to U.S. fisheries)
- Estimated interactions, including non-lethal
- Conservation Framework (need to reduce M/SI further)
- Analysis of the likelihood of jeopardy (population projections and qualitative analysis)
- Determination in the Draft Opinion
- Other Considerations



# Estimated M/SI (Vessel Strikes and Entanglements) by Country 2010-2019

	Average Annual
Estimated M/SI	20.1
Estimated U.S.	9.05
Estimated CAN	11.05



#### M/SIs Assigned to U.S. Entanglements

Cause of M/SI was entanglement?	Confirmed to Country?	Assumption	Attributed to U.S. fisheries?	Average Annual M/SI
Yes	U.S.	Uses observed number	100%	0.2
Yes	Unknown	Uses 50:50 split with Canada	50%	1.9
Unknown (observed)	U.S.	Uses observed entanglement:vessel strike ratio	74%	0.07
Unknown (observed and unobserved)	Unknown	Use observed entanglement: vessel strike ratio; 50:50 split with Canada	37%	4.55
Total				6.7

# M/SIs (Entanglements) Assigned to U.S. Federal Waters

Fishey	Assumption	Average annual M/SI
Total U.S.		6.72
Federal Pot/Trap	73% risk in federal waters (DST)	4.82
Federal Gillnet	Gillnet takes occurred in federal waters	0.125
Total Federal		4.94



#### Total Estimated Entanglements (Lethal and Non-lethal)

Fishey	Assumption	% Population Estimated Entangled Annually
Total	Used scarring rates from Hamilton et al (2019)	30.25%
U.S. fixed gear	Applied 50:50 U.S./Canada split	15.125%
Fixed Gear in U.S. federal waters	Applied 73% risk in federal waters (DST)	11.04%





#### **Analysis Conducted to Determine Necessary M/SI Reduction**

- Additional reductions in M/SI are needed to ensure the fisheries are not likely to appreciably reduce survival and recovery
- To assess the level needed, projected the female population over 50 years
  - Proposed ALWTRP risk reductions implemented at year 1
  - Additional M/SI reductions of 0, 25, 50, 75, 95, 100% implemented year 10
- Data available at time of assessment
  - M/SI estimates from 2010-2018
  - Population estimate of 412
- 95% reduction at year 10 was needed

#### **Conservation Framework - Overview**

- What it Is
- What it Includes
- Phased Approach
- Evaluation
- Adaptive Management



Note: The recent population estimate triggered a reevaluation. In this reevaluation, the overall additional reduction of 95% remained the same, but the timing of reductions under the Conservation Framework was adjusted

Photo credit: Florida Fish and Wildlife Commission Image taken under NOAA Research Permit 665-1652.



#### **Conservation Framework**

#### What it is

- Outlines NMFS' commitment to implement measures in federal fixed gear fisheries necessary for the recovery of right whales
- Provides a phased approach and flexibility to the fishing industry
- Does not specify particular measures, but sets target reductions in M/SI

#### What it includes

- Four phased approach
- Assumes no reduction in M/SI from vessel strikes or in Canadian waters
- Adaptively manages through periodic evaluations
  - Measures can be scaled back based on changes in the population or risk reduction from other sources



#### **Conservation Framework - The Details**

Phase	Year	Conservation Framework Action Description	Reduce M/SI to
	Annually	Annual updates, as appropriate, to interested parties	
1	2021	ALWTRP rulemaking in Northeast lobster and Jonah crab trap/pot fisheries	2.2
2	2023	Rulemaking to reduce M/SI in gillnet and other pot/trap (i.e., those not included in Phase 1) fisheries	2.13 (60% reduction)
Evaluate	2023-2024	Review data on right whale population and threats to assess progress; assess measures taken by Canada	
3	2025	Rulemaking to further reduce M/SI in fixed gear fisheries in federal waters	0.85 (60% reduction)
Evaluate	2025-2026	Comprehensive evaluation and determination of extent to which further measures are needed	
4	2030	Rulemaking to further reduce M/SI in fixed gear fisheries as determined in the 2025-2026 evaluation	Goals identified in 2025-2026 (up to 87% or 0.11 M/SI)



#### **Conservation Framework - The Evaluations**

- After phases 2 and 3, evaluate information on:
  - Population status, distribution, and habitat use
  - Calving and survival rates
  - Entanglements and vessel strikes in U.S. and Canadian waters
  - Changes to the federal fisheries (e.g., changes in co-occurrence due to shifts in where the fishery operates or changes in effort/operation)
  - Apportionment of M/SI to country (U.S., Canada) and cause (entanglement, vessel strike)
- After phase 3, rerun population projections with most recent data

#### **Conservation Framework - Adaptive Management**

- Will evaluate significant new information (e.g., population status, risk reduction) when available to determine whether changes to the Framework are needed
- Includes the scheduled evaluations after phases 2 and 3
- Target reduction will be adjusted if M/SI from other sources is reduced
  - Reduction in one M/SI every two years (i.e., 0.5 M/SIs per year)
     would reduce phase 4 from 87% to 28%
  - Reduction in one or more M/SI each year would trigger a determination of whether measures in phase 4 are needed



#### Assessing the likelihood of jeopardy

#### **Theoretical Population Trajectories** Is this an population trajectory without the action (i.e., no fishing) appreciable reduction in the likelihood of survival and recovery? Population trajectory with the action (i.e., future fishing) If yes = jeopardy

Years into future

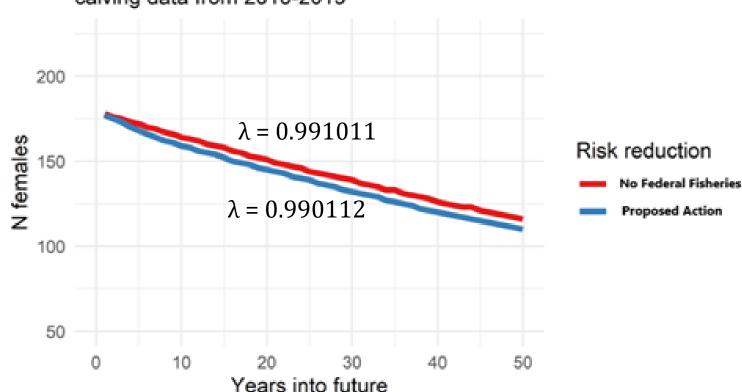
- **Scenario without the action**: No federal fishery
- Scenario with the proposed action: Fisheries under 10 FMPs with measures implemented under the Conservation Framework



# Assessing the Likelihood of Jeopardy Projection Models

#### NARW population projections

Risk reduction in a given set of fisheries; calving data from 2010-2019



- Compare female population under two scenarios
- Difference of 5 females at year 10
- With the exception of 1 year, the difference in females remains 5-6 for years 11-50
- 96% of the simulations show a declining trend with no federal fishery; 97% with the proposed action

# Assessing the Likelihood of Jeopardy Qualitative Analysis

#### **Sublethal Effects**

- Confounded by sublethal effects from other sources (e.g., prey availability, climate variation, vessel strike), but sublethal effects will be reduced under the Framework
- Would result in improved trajectories under both scenarios

#### **Genetics Analysis**

Not expected to result in a genetic bottleneck

#### **Determination in Draft Opinion**

Based on our analysis, the proposed action -- which includes the Conservation Framework -- will not appreciably reduce the likelihood of survival and recovery of North Atlantic right whales compared to the no action scenario

The proposed action **is not likely to jeopardize** any listed species or destroy or adversely modify any critical habitat



#### **Other Considerations**

- Even with a very high level of risk reduction in U.S. fisheries, the trajectory will not increase if M/SIs continue to occur at current levels in Canadian waters
- Trajectories projected if Canada were to reduce M/SI at same times and levels as the United States
- Trajectory turns positive if both countries take actions to reduce M/SI
- Committed to continue to work with Canada through bilateral forums

#### **NARW Public Input Opportunities**

#### **ALWTRP Proposed Rule and Draft Environmental Impact Statement**

- Comments due March 1, 2021
- Use <u>Regulations.gov</u>, search for NOAA-NMFS-2020-0031.
- Four remote public hearings Feb 16, 17, 23, 24; 6:30 pm ET each night
- See fisheries.noaa.gov/ALWTRP for documents and additional information

#### **Draft "Batched" Biological Opinion**

- Feedback due February 19, 2021
- Email feedback to <a href="mailto:nmfs.gar.fisheriesbiopfeedback@noaa.gov">nmfs.gar.fisheriesbiopfeedback@noaa.gov</a>
- See <a href="https://www.fisheries.noaa.gov/resource/document/draft-biological-opinion-10-fishery-management-plans">https://www.fisheries.noaa.gov/resource/document/draft-biological-opinion-10-fishery-management-plans</a> for additional information
- Court-ordered deadline to complete BiOp May 31, 2021





# Questions?



# Thank you





# Management Response to Lobster 2020 Benchmark Stock Assessment



American Lobster Management Board February 2, 2021

#### **Outline**



- 1. Background
- 2. Review of Assessment Results
- 3. Assessment and Peer Review Recommendations
- 4. Potential Actions

# Background



- In October 2020, the Board accepted the 2020 Benchmark Stock Assessment and Peer Review for management use
  - GOM/GBK stock is not overfished; not experiencing overfishing
  - SNE stock is depleted; not experiencing overfishing
- The Board adopted new reference points as recommended in the assessment and peer review
- Consideration of management response postponed to February 2021

#### **Abundance Reference Points**



- Three abundance reference points
  - Fishery/industry target
    - Stock's ability to replenish itself not jeopardized; may indicate a degrading of economic conditions for the lobster fishery
  - Abundance limit
    - Stock abundance level below this threshold is considered depleted; stock's ability to replenish itself is diminished
  - Abundance threshold
    - Stock abundance level below this threshold is considered significantly depleted and in danger of stock collapse
    - This is the only reference point established for SNE stock

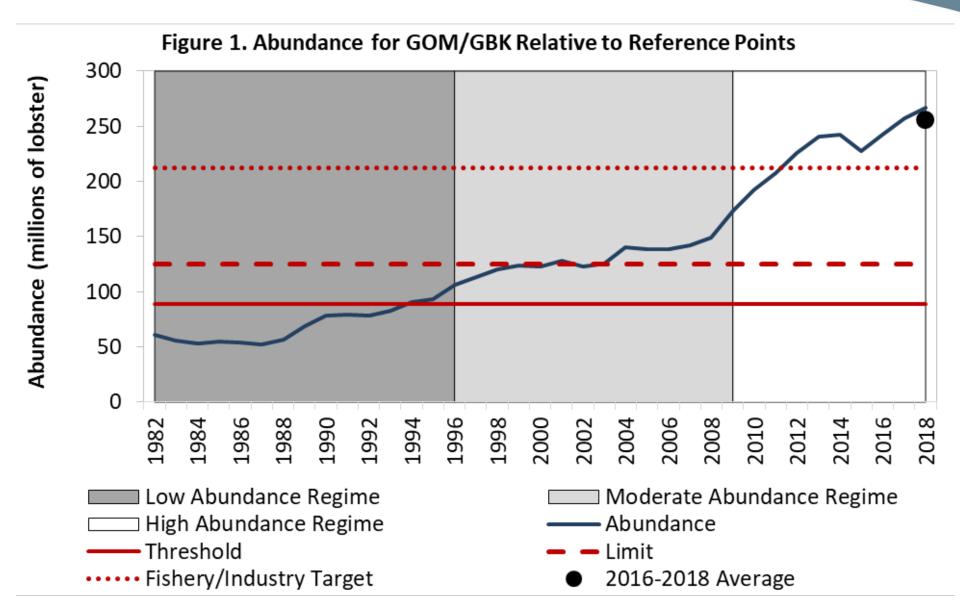
## **Exploitation Reference Points**



- Two exploitation reference points
  - Exploitation threshold
    - stock is considered to be experiencing overfishing if exploitation exceeds the threshold
  - Exploitation target
    - 25th percentile of exploitation during the current abundance regime

## Stock Status: GOM/GBK

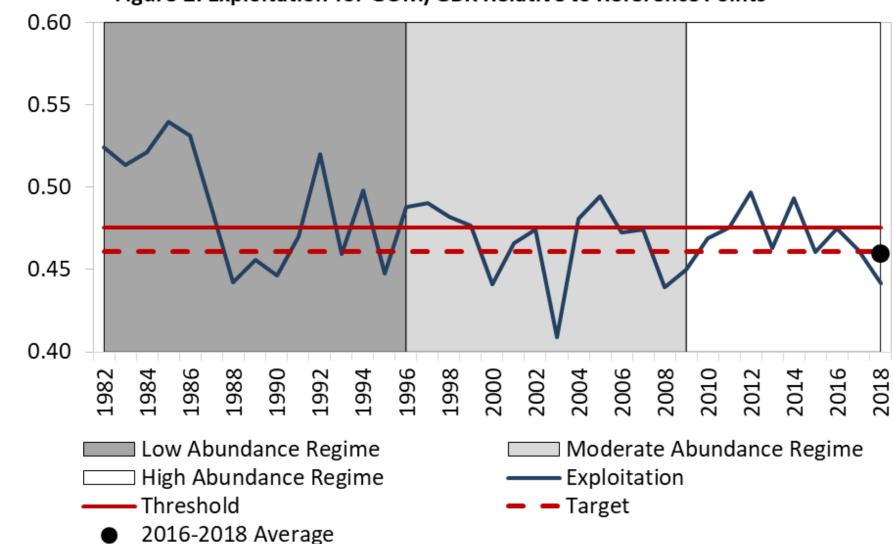




## Stock Status: GOM/GBK



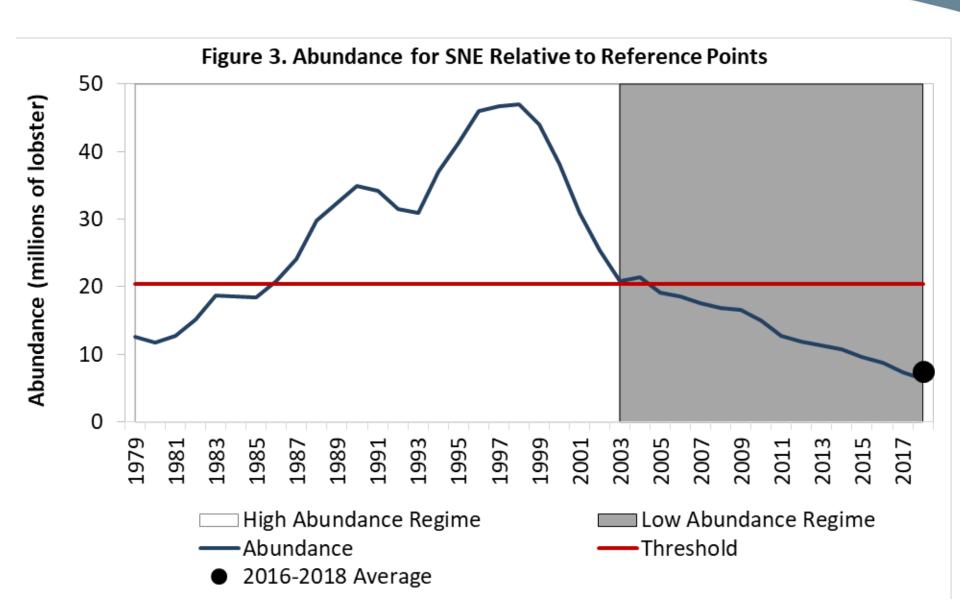




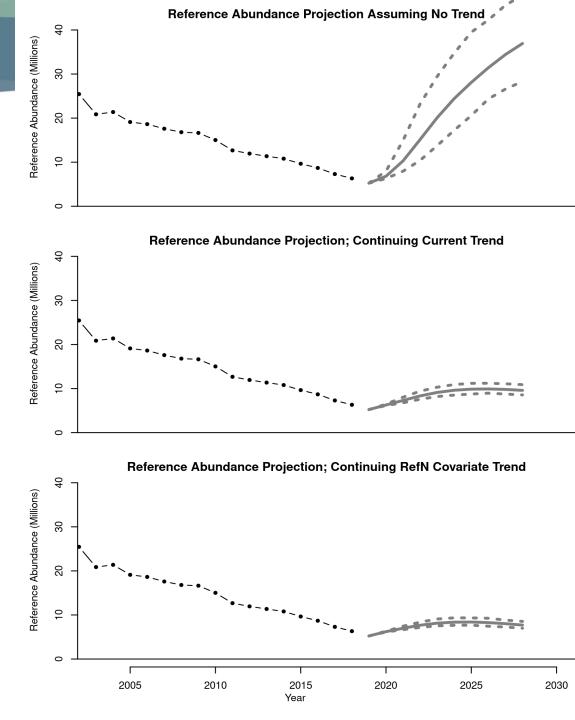
Exploitation (Catch/Abundance)

#### **Stock Status: SNE**



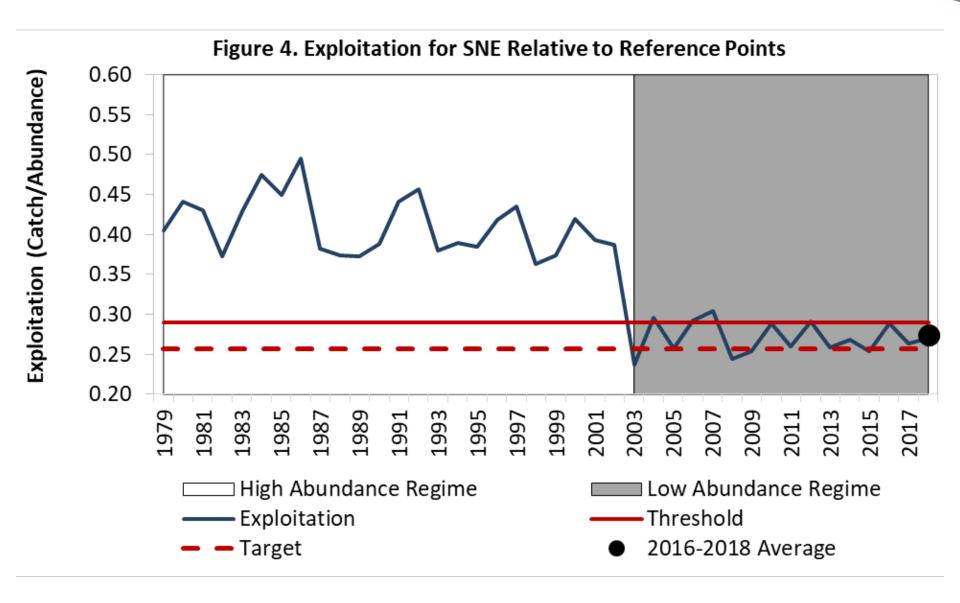


- In the absence of mortality, reference abundance projected to increase with recruit abundance exceeding the maximum abundance for the current regime
- Increases in abundance are likely to be limited due to the projected continuing decline in recruitment



#### **Stock Status: SNE**





#### **Stock Status: SNE**



#### Additional considerations:

- Recruitment indices indicate stock is not rebuilding and is in recruitment failure
- Contraction of stock distribution has continued, becoming apparent in the offshore portion as well as inshore
- SNE landings have continued to decline to low in 2018
- Disease remains high in RI and MA, all four temperature indicators are negative, environmental stress may have lethal and sublethal effects
- Evidence that environmental influences have resulted in a decreasing recruitment rate. Substantive measures needed to increase adult abundance to improve recruitment success.

#### **Assessment and Peer Review Recommendations**



#### GOM/GBK

- No recommended management action at this time
- Economic analysis to provide advice on appropriate action to stabilize fishery when abundance falls below target

#### • SNE

- "significant management action to halt the decline of abundance and increase reproductive capacity and recruitment to the stock, such as a moratorium, is recommended if abundance falls below this threshold"
- No specific measures proposed

#### **Assessment and Peer Review Recommendations**



#### Both Stocks

- annual "Data Update" process to monitor changes to stock abundance
- annual updates of all indicators & development of science-based rule for conditions triggering an earlier than scheduled assessment
- continued use and exploration of indicators to understand the relative merits of indicator-based management controls
- management strategy evaluation could inform appropriate management targets or measures to meet defined objectives

## Potential Actions: GOM/GBK



- GOM/GBK: Provide guidance for development of Addendum XXVII (GOM/GBK resiliency)
  - Standardization of management measures (e.g. V-Notching, Gauge/Vent Sizes, Trap Tags for Losses)
  - Consider a trigger mechanism for management measures responding abundance falling below fishery/industry target
  - Potential management measures would be identified through socioeconomic analysis to identify management measures

#### **Potential Actions: SNE**



- Consider initiating management action to address depleted SNE stock status
- Task TC with analysis of impacts of potential management options on stock
  - Need specific direction on reductions/measures to be analyzed, e.g. Impact of reducing fishing mortality by X-Y%
  - Following 2015 assessment TC analyzed impacts of some management changes
- Consider impacts of forthcoming changes in response to Atlantic Large Whale Take Reduction Plan



# Questions?



# Lobster Management Strategy Evaluation

February 2, 2021

### Background



- Management and Science Committee tasked a subcommittee for exploring the development of a management strategy evaluation (MSE)
- American lobster identified as an ideal candidate for MSE

 Need to identify Board's interest in pursuing an MSE and priority level given competing management needs

#### An Introduction to MSE



- MSE is a collaborative process to build a simulation tool for evaluating management actions (Deroba)
- Stakeholders and Managers identify goals or desired outcomes for a fishery.
- Stakeholders and Managers work with scientists (population modelers, ecosystem scientists, economists, sociologists) to:
  - Translate management goals into measurable quantities
  - Identify candidate management actions intended to achieve management goals.

#### An Introduction to MSE



 Scientists run simulations and evaluate how different management scenarios performed for achieving management goals.

 Managers and stakeholders examine the performance of different management actions under different situations and select preferred management actions.

## The MSE Road Map





Stakeholders and Managers identify:

- Objectives
- Related metrics
- Uncertainties
- Management actions or procedures

Scientists create a virtual reality (simulation) of the system:

- Data collection
- Assessment
- Harvest rule
- Ecosystem dynamics
- Human/fleet behavior
- Economic model
- Other
- Uncertainties
- Record metrics

Stakeholders and Managers Review

- Management action performance...
- ...via tradeoffs in metrics

#### Managers

- Select and implement an action or...
- Have a plan or suite of plans that can be enacted when needed.

(Deroba)

#### Critical early role of Stakeholders and Managers:

- Identify what they want to achieve: Management goals and objectives. For example but not constrained to:
  - Maximize landings
  - More stable or predictable landings
  - Maximize profits / profitability
  - Maintain fleet diversity and participation
- Performance Metrics (measurements of fishery performance)
  - What is your basis for assessing success of a management actions?
    - Total Landings, value of landings, resource health and resilience, etc.
  - Will be the basis for choosing among management actions.
  - Will be used to demonstrate tradeoffs among objectives.

# Critical early role of Stakeholders and Managers:

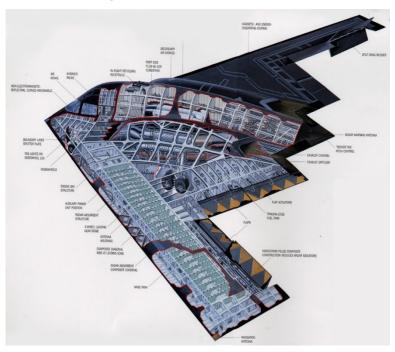
- Identify possible management actions to evaluate
  - What should management do to achieve your objectives?
  - Can be conceptual (e.g., minimize interannual variability in catch)
  - Some may not be realistic, and this should be clarified
  - Forms foundation for the management procedures/actions to be simulated

# **MSE Closed-loop Simulation**



- Virtual reality (S. Cadrin)
- Flight simulator (J. Deroba, et al.)
- Play "what if" scenarios with no real world risk (G. Fay)

#### reality

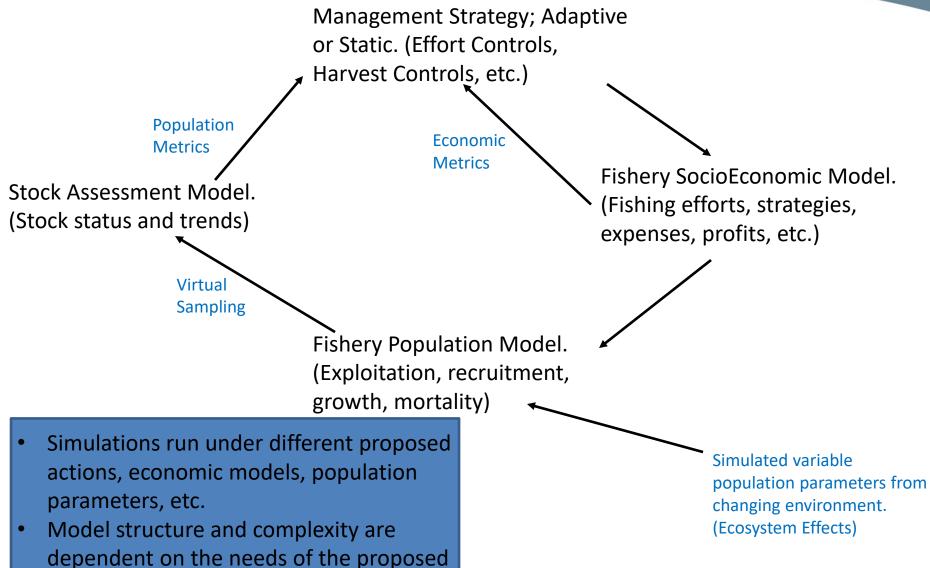


#### simulations



#### **Example of Closed-Loop Simulation Modeling**





management goals.

#### Managers Select Preferred Actions Based on Results



- Selection of a management action might entail:
  - Finding an "optimal" action, but rarely possible.
  - Finding a suite of actions that perform similarly.
  - Identifying actions that perform better under some circumstances.
  - Eliminating obviously bad options (sometimes easiest)
- Actions may be implemented immediately or held in reserve for future circumstances.
- Consider how to scale "Strategic" long-term considerations down to "tactical" short-term realities

#### **MSE Pros and Cons**



#### **PROs**

- Forces explicit consideration of objectives (especially long-term)
- Having a management strategy makes decision making easier
- Feedback control allows whole of management cycle to be evaluated
- Explicit focus on uncertainty & robustness not optimality
- Formal system for comparing management performance among options
- Tradeoffs associated with multiple objectives explicitly addressed

#### **CONs**

- Forces explicit consideration of objectives
- Complex, specialized expertise required
- Development can be lengthy (plan accordingly)
- MSEs do not explicitly provide tactical advice (implementation on the ground)

#### **Focal Areas**



- Stock productivity resiliency <u>(recommended)</u>
  - Performance of management actions in response to changing productivity indicated by settlement and YOY indicators
- Socio-economic resiliency
  - Addresses stock assessment recommendation for socioeconomic analysis to inform management action in response to abundance declines
- Whale interactions
  - Incorporate whale interactions within evaluation of management strategies
- Climate change impacts
  - Explicitly link environmental drivers to population dynamics within evaluation of management strategies

#### Benefits of a Lobster MSE



- Direct stakeholder inclusion in the process
  - Input used to develop objectives, management strategies, and performance metrics
- Explicit incorporation of socio-economic considerations
- Availability of resources and tools to support a lobster MSE
  - Lobster stock assessment model and projection models
  - Canada DFO lobster MSE
  - NEFSC socio-economic support

#### **MSE Resource Needs**



- Lobster Technical Committee and ASMFC Staff
  - Similar to a benchmark stock assessment
- Lobster Board
  - Participation in stakeholder workshops and review progress updates
- Facilitator
- Travel for MSE Workshop participants
- Biological/Environmental Modelers
- Socio-economic Modelers

# **Potential Workload Tradeoffs**



Potential 2023 Jonah crab stock assessment

Development of GOM resiliency addendum

 Potential work to support management response to 2020 lobster stock assessment

Ongoing and future whale interaction work

2025 lobster stock assessment

#### **Board Feedback**



 Is there Board desire to pursue and use a MSE for supporting a future management framework?



 What timeframe would the Board want to pursue a MSE?

 Does the Board agree with the recommended focal area (stock productivity resiliency)?

# Acknowledgments



 Jon Deroba, Gavin Fay, Amanda Hart, Allan Hicks, Brian Irwin, Sarah Gaichas



# Executive Order on Northeast Canyons and Seamounts Marine National Monument



American Lobster Management Board February 2, 2021

### Background

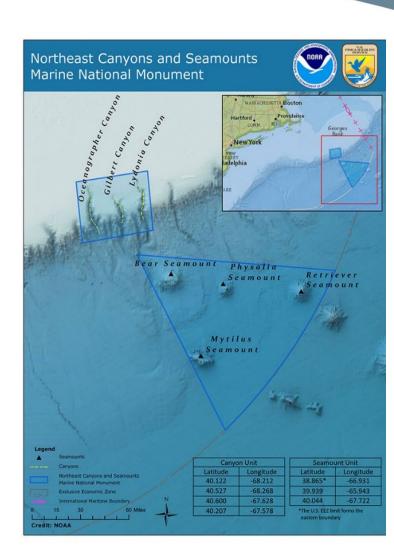


- On January 20th, 2021, President Biden issued an Executive Order (EO) on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis
- Section 3 of the EO requires a review of the 2020 proclamation allowing commercial fishing in the Northeast Canyons and Seamounts Marine Monument
  - Interior Secretary shall report findings to the President by March 21, 2021

# **Monument History**



- Northeast Canyons and Seamounts Marine Monument was established in September 2016 by Presidential Proclamation under the Antiquities Act of 1906
- The Proclamation prohibited commercial fishing with a sevenyear exemption for American lobster and red crab fishing
- The Commission provided a letter to the Obama Administration stating preference for the NEFMC regulatory process over the establishment of a marine monument (May 9, 2016)



#### **Monument Modification**



- On June 5, 2020, President Trump issued a Proclamation on Modifying the Northeast Canyons and Seamounts Marine National Monument.
  - Returned commercial fishery management authority to the Magnuson-Stevens Act (and other applicable laws)
  - Did not otherwise modify the Monument

#### **Board Action**



- Consider if Board wishes to provide comments during the review period
- No open period for public comment, but a letter could be sent to the Secretary of the Interior
  - If desired, forward recommendation to ISFMP Policy Board



# Questions?