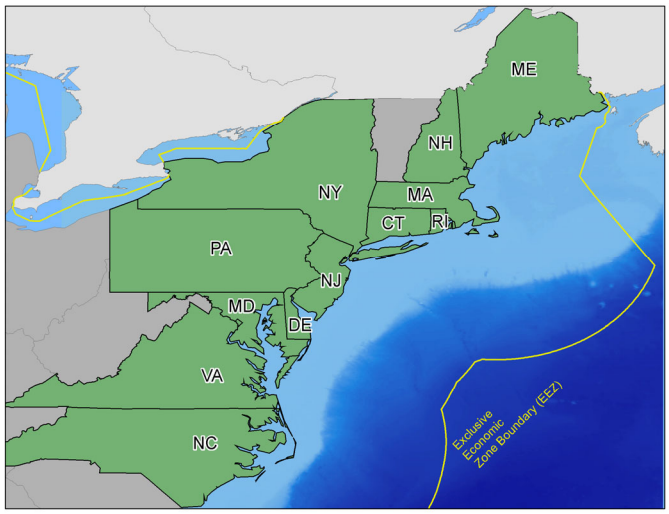
NORTHEAST REGION COORDINATING COUNCIL

Spring 2022 Meeting

May 9-10, 2022

Hybrid Meeting (Portsmouth, NH and Webinar)



Meeting Briefing Book Table of Contents

(*hyperlinked*)

2022 SPRING NRCC MEETING AGENDA

Venue at Portwalk Place – 22 Portwalk Place, Portsmouth, NH

All times are approximate

Monday, May 9

9:00 a.m. – 9:15 a.m.

1. Welcome, Introductions, Announcements
   (Reid, Sullivan)

9:15 a.m. – 3:00 p.m. (Break as needed, lunch at noon)

2. Stock Assessments
   Discussion leader: Beal, Moore, Nies
   - Overarching assessment process review

   Discussion leader: Simpkins
   - Discussion of recent research track assessments and process
   - NRCC Assessment Working Group update
   - Update on Research Track steering committee status
   - Discuss Research Track schedule and select topics for 2027

3:00 p.m. – 3:30 p.m.

3. Did Not Fish Reports
   Discussion leader: Moore/Nies
   - Updates from MAFMC and NEFMC on discussions at recent Council meetings

3:30 p.m. – 4:00 p.m.

4. COVID data gaps
   Discussion leader: Simpkins
   - Summary of progress made in developing standardized approaches to address data missing as a result of COVID

4:00 p.m. Adjourn Day 1

6:45 p.m. – Dinner at Jumpin' Jays Fish Café https://www.jumpinjays.com/

Tuesday, May 10

9:00 a.m. – 9:30 a.m.

5. Scenario Planning
   Discussion leader: Core Team
   - Update regarding Climate Change Scenario Planning meeting

9:30 a.m. – 10 a.m.

6. Aquaculture
   Discussion leader: Schillaci
   - Update regarding aquaculture, including the national strategic plan, recent guide on federal permitting, MAFMC development of an aquaculture policy

10:00 a.m. – 10:30 a.m.

7. Offshore Wind

Discussion leader: Pentony/Simpkins

- Update on offshore wind activities

10:30 a.m. – 10:45 a.m. Break

10:45 a.m. – 11:00 a.m.

8. SAFE Reports

Discussion leader: Fenton

- Update on Stock Assessment and Fishery Evaluation (SAFE) reports

11:00 a.m. – 11:30 p.m.

9. Port Sampling

Discussion leader: Simpkins

- Update on efforts to assess impacts of reduced sampling and/or approaches for sampling prioritization.

11:30 a.m. – 12:00 p.m.

10. Protected Resources – Sturgeon and Sea Turtle Bycatch

Discussion leader: Moore

- Discussion regarding the bycatch issues for sea turtles and sturgeon, which are being addressed through difference processes, but may result in intersecting mitigation measures.

12:00 p.m. – 1:00 p.m. Lunch

1:00 p.m. – 2:00 p.m.

11. FDDI and CAMS Updates

Discussion leader: Gouveia

2:00 p.m. – 2:30 p.m.

12. Future NRCC Meeting Procedures

Discussion leader: Nies

- Discuss format of future NRCC meetings (e.g., in-person meeting procedures, remote access, etc.).

2:30 p.m. – 3:00 p.m.

13. Meeting wrap-up and Other Business

- Complete any unfinished discussions or unresolved new business
- Review action items and assignments
- Identify Fall 2022 meeting date (NEFMC chair)
- Adjourn meeting

3:00 p.m. Meeting adjourns

Color code key:
ASMFC MAFMC
NEFMC NEFSC
GARFO NRCC

NRCC Fall 2021 Meeting Action Items

November 16-17, 2021 Webinar

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1. Research Track Steering Committee
   Lead: **NEFSC** to coordinate
   Appointees needed:
   Representatives from NEFMC SSC, MAFMC SSC, and ASMFC ASC;
   2 scientific representatives (1 each with experience in Northeast and Mid-Atlantic regions);
   3 NEFSC stock assessment leads with broad expertise;
   1 NEFSC ecosystem dynamics and assessment expert.
   Next step(s): NEFSC will solicit for scientific representatives.
   Groups to select other representatives and email NEFSC staff with selections.
   Due date(s): End of 2021 calendar year

2. Availability of Final Stock Assessment Reports
   Lead: **NEFSC**
   Next step(s): NEFSC will follow up with NRCC on the expected availability of stock assessment final reports.
   Due Date(s): As soon as possible

3. Research Track Assessment Process Improvements
   Lead: **NEFSC and NRCC Assessment Working Group**
   Appointees needed: NEFSC to confirm NRCC membership in single assessment working group (covering roles of both NRCC Deputies and SAURON as agreed)
   Next step(s): Continue making progress on issues raised regarding Research Track Assessment Process, to be reflected in revisions to the Process document
   Due Date(s): Update at Spring 2022 NRCC meeting

4. Port Sampling
   Lead: **NEFSC**
   Appointees needed: N/A
   Next step(s): Include port sampling on agenda for May 2022, and NEFSC will share progress on efforts to assess impacts of reduced sampling and/or approaches to prioritization for May or November 2022.
   Due date(s): May or November 2022

5. Fisheries Dependent Data Initiative (FDDI) and Catch Accounting and Monitoring System (CAMS) Updates
   Lead: **GARFO** and **NEFSC**
   Appointees needed: N/A
   Next step(s): As part of their update on FDDI and CAMS, NEFSC and GARFO will include get-backs on questions raised during the Fall 2021 meeting, including:
   a) How discrepancies between observer and vessel reported discards are handled;
   b) Whether there will be delays to the continued implementation of electronic monitoring (EM); and

c) Update on timing of process for peer review, engagement with Council staff, and implementation.
Due date(s): Update at Spring 2022 NRCC meeting

6. Did Not Fish Reports
Lead: **MAFMC** and **NEFMC**
Appointees needed: N/A
Next step(s): Council Executive Directors will include in their Council meeting agendas the possibility of reinstating the requirement of "Did Not Fish" reports for commercial and/or recreational permit holders, for discussion by the Councils.
Due date(s): December 2021 or February 2022 Council meetings

7. SAFE Reports
Lead: **GARFO**
Appointees needed: N/A
Next step(s): Continue to work on how to identify and update documents for SAFE reports.
Due date(s): Update at Spring 2022 NRCC meeting

8. Scenario Planning in-person April 2022 workshop
Lead: **Scenario Planning Working Group**
Next step(s): Plan an in-person scenario planning workshop for April 2022. Will need to revisit whether in-person will be possible and make a final decision/plan in January/February 2022. Check with John Carmichael in South Atlantic on proposed changes.
Due Date(s): January/February 2022

Spring 2022 NRCC Meeting (NEFMC Chair) – May 9-10, 2022
Location – TBD

Improving Stock Assessment Projections
2027 Research Track proposal

Background

Analytical stock assessments are typically accompanied by projections of SSB, recruitment, and fishery catch. Projections are used to set catch limits, establish rebuilding plans, and determine stock status. Given the importance of these estimates, projections are often the focus of intense debate. Common topics of debate include:

(1) Persistent biases in projections leading to over or under utilization of the resource.
(2) Failure to incorporate environmental driving variables into the projection model.
(3) Inability to determine whether recruitment regimes will persist into the future.
(4) Choices of timespans for model inputs (e.g., weights-at-age).
(5) Discrepancies between short-term and long-term (reference point) projection methodologies.

Recent research has focused on some of these topics (e.g., Brooks & Legault 2016, Wiedenmann & Jensen 2018, 2021 Applying State Space Models Research Track), and recent advancements in assessment modelling provide a framework for incorporating environmental drivers and multiple sources of uncertainty. However, there are important open questions regarding best practices for projections.

Research Focus/Goals

The goal of this research track would be to test various projection methodologies and provide guidance on good practices. Potential research objectives include:

(1) **Evaluate the past performance of stock assessment projections in the Northeast.** This objective aims to update and expand on previous research examining projection performance in our region. Quantifying past projection accuracy, and uncertainty, relative to the most recent assessment across a range of stocks provides a baseline for subsequent improvements.

(2) **Determine the most important sources of error in the projections.** Possible sources of error include inaccurate biological rates (e.g., growth, maturity, or natural morality), misspecified selectivity, inappropriate assumptions of future recruitment, or inaccurate initial abundance estimates. Building on previous work, a retrospective analysis could be carried out to evaluate this objective.

(3) **Establish guidelines for projecting future recruitment.** Recruitment is commonly projected without temporal structure on recruitment, and time spans of past recruitment used in the projections can be difficult to justify. The aim of this research objective would be to establish good practices for projecting recruitment and its uncertainty.

(4) **Examine methods for projecting biological rates (e.g., growth, maturity, and natural mortality).** Biological rates are typically projected by assuming a recent average of estimated

rates will continue into the future. However, the accuracy of this approach has not been comprehensively evaluated. Averaging approaches could be compared to more sophisticated methods, such as explicit linkages to driving variables such as density-dependence, or environmental covariates.

(5) **Establish procedures for determining when to incorporate ecosystem drivers into projections.** Incorporating ecosystem drivers is hypothesized to improve projections. However, methods for evaluating the robustness of these driving relationships, and their ability to be projected forward, are not well established. This research objective would aim to determine how to best validate relationships between ecosystem drivers and population projections, and quantify the associated uncertainty.

(6) **Short-, medium, and long-term methods.** Stock assessment projections are employed for a variety of uses, each with different time spans. For example, setting catch limits requires short-term projections, rebuilding plans require medium-term projections, and stock status determinations often require long-term projections to approximate expected conditions at equilibrium. While Magnuson-Stevens specifies that reference points reflect "prevailing ecological, environmental conditions," it is possible that the most appropriate range of observations to be interpreted as "prevailing" differ from that which should be considered for short-term projections. This research objective would aim to establish guidelines for how projection methodologies should differ, if at all, across each of these timespans.

2026 Research Track Proposal –
Consideration of ecosystem and climate information in the stock assessment process

Background

Single species stock assessments analyze a dynamic system in which fishing is assumed to be the primary driver and ecological forces are generally considered random variation. As marine environments have and will continue to change, the assumption of ecosystem stability, and therefore stability in that random variation, may prove inadequate. As a consequence, the precision and accuracy of assessment models, biological reference points, and harvest control rules may be adversely affected.

There are multiple ways to incorporate ecosystem components into stock assessments and resulting management advice. Some methods include the:

- Use of estimated weight-at-age matrices in assessment models. Trends in weight-at-age reflect all aspects of the ecosystem, including fishing, changes in ecosystem productivity, and food availability.
- Incorporation of environmental covariates into stock-recruitment relationships to reflect the impact of the environment on stock productivity
- Incorporation of environmental covariates into estimates of availability to fishery-independent or dependent surveys to reflect seasonal movements or interannual changes in distribution
- Use of natural mortality estimates from multispecies models in the single species assessment model for primary prey species

However, mechanistic relationships to explain changes in ecosystem productivity have not been easy to find or, when proposed, have not held up over time. This is because the ecosystem, and its effect on exploited stocks, is too complex to explain with a single variable. The changes currently occurring, and expected to occur in the near future, due to climate change are expected to exacerbate the difficulty in making predictions. This is in part due to the lack of historical observations under similar conditions.

A more efficient and useful approach would be to design an ecosystem simulation (or operating model), with many of the properties of a "true" ecosystem, as a tool for exploring the single- and multi- species model sensitivity to changing environmental variables and evaluating trade-offs as a consequence of technical interactions and fleet dynamics. Built using already existing software such as ATLANTIS or Ecopath with Ecosim, this northeast US shelf (NEUS) model would serve as a benchmark/framework for further testing of important environmental variables, and their effects, on economically and recreational important single species, or multispecies, stock assessments. Additionally, a peer reviewed and accepted simulation model could be directly used by fishery managers and SSCs to help develop and inform qualitative decisions and examine potential tradeoffs in light of changing ecosystem drivers.

Ecosystem and climate information can be incorporated into assessments to address multiple ecological and environmental processes, however, the region does not currently have clear operational guidance for what type of information to consider in assessments for which stocks, when it might be important, and the types of decisions this information can affect (see Link et al. 2020). A peer reviewed and agreed upon framework will streamline the process, and will help focus analytical and observational resources. Furthermore, the simulation model could be used to evaluate the performance and utility of such a decision framework via application to some case studies.

Research Focus/Goals

The goal of this research track is to address the call for Ecosystem Based Fishery Management that acknowledges changing climate conditions when providing management recommendations.

Possible objectives:

1) Develop a peer-reviewed operating model/simulation framework for the NEUS shelf that can both evaluate a range of issues (environmental covariates, multispecies models, etc), and be used to explicitly examine trade-offs
2) Develop a decision framework for how and when ecosystem processes can be evaluated (given multiple councils, multiple ways that ecosystem considerations can be incorporated into assessments and management such as impacts on TAC, productivity indicators, or additional qualitative information to SSCs/Councils to shape decision making)
3) Evaluate ecosystem and climate components across several case study stocks (such as impact of environment on recruitment, survey availability, predation mortality, etc) to examine potential tradeoffs, evaluate risk when compared to management objectives, and highlight spatial and temporal resolution of data needs to inform future sampling strategies.

Research Track Proposal 2027: Atlantic Striped Bass

Background

The coastal migratory population of Atlantic striped bass (*Morone saxatilis*) ranges from the Gulf of Maine to the coast of North Carolina. Although the migratory population is known to be comprised of multiple biologically distinct stocks - most notably the Chesapeake Bay stock, the Delaware River stock, and the Hudson River stock - it is currently assessed and managed as a single stock. A spatially explicit two-stock model was developed as part of the last research track assessment. The SARC 66 Review Panel determined the model was not ready for management use. The Panel strongly recommended continued development of the multi-stock model and was optimistic the model could become the basis for management in the future, following more extensive testing and refinement.

In particular, the Review Panel recommended more simulation testing of the multi-stock model to explore parameter estimability, test the effects of various emigration rate assumptions, better estimate abundance-at-age in the first year, and more thoroughly evaluate the choice of reference points in a mixed stock. They also recommended further examination of tagging data, including exploring alternative methods (e.g., multi-state tagging models) to estimate emigration rates and develop more robust stock composition estimates.

The Review Panel accepted the single-stock statistical catch-at-age model for use in striped bass management. The single-stock model was developed by Gary Nelson (MA DMF) and the ASMFC Striped Bass Stock Assessment Subcommittee (SAS) for SAW/SARC 46, where it was first accepted for management use, and has been refined over the course of several benchmark assessments. In addition to continuing work on the multi-stock model, the lead analyst and the SAS will explore moving the single-stock model from the custom framework to a more flexible modeling framework in order to take advantage of more modern statistical approaches and more complex dynamics for the catch-and-release component of the fishery. Using a framework like Stock Synthesis or WHAM for the single-stock model would reduce the burden on the lead analyst and SAS for future model development and updates.

Other potential changes to the assessment are the addition of a Delaware River spawning stock survey index, and a new selectivity block to accommodate the 2020 coastwide slot limit regulation.

Research Focus/Goals

(1) Develop more robust estimates of stock composition and migration rates for the Atlantic striped bass stock complex to better support a multi-stock model

(2) Refine the multi-stock model and conduct additional simulation testing to address Review Panel recommendations

(3) Transition the current custom single-stock model to another modeling framework such as Stock Synthesis or WHAM

Research Track Schedule - 26 Oct 2021

YEAR	"SPRING" STOCKS/TOPIC	"FALL" STOCKS/TOPIC
2022*	Haddock- GOM, GB, EGB (TRAC)*	Black Sea Bass, Bluefish
	Butterfish and Shortfin Squid*	
	American Plaice, Spiny Dogfish	
2023	Cod- ~4 stocks	Applying State-Space Models
2024	Golden Tilefish, Scallops	Yellowtail Flounder - CC/GOM, SNE/MA, and GB (TRAC)
2025	Atlantic herring, American lobster	Ensemble modeling
2026**	Longfin Squid (early spring)	No Fall RT
	Winter Flounders (late spring)	
2027	Monkfish	TBD

*Haddock and Butterfish/Shortfin Squid research tracks extended from 2021 to early 2022 in response to COVID and other delays/challenges.

**Longfin squid would be reviewed in early spring to allow time for MT to follow in June 2026. Winter flounders (3 stocks) would be reviewed on a more "normal" spring timeline for a following Fall MT.

Research Track Schedule - Extensions option 4 (working)				
YEAR	**"SPRING" STOCKS/TOPIC**	**"FALL" STOCKS/TOPIC**		
2022*	Haddock- GOM, GB, EGB (TRAC)* [2022 MT] Butterfish and Shortfin Squid* [2022 MT] American Plaice, ~~Spiny Dogfish~~ [2022 MT]	Bluefish [2023 MT] and Spiny dogfish [2022/3? MT] ~~Black sea bass [2023 MT]~~	BSB and Dogfish likely need more time [shifting dogfish likely requires moving 2022 MT to 2023 or taking late mgt action]	
2023	Black Sea Bass - early spring [2023 MT] Cod - 4 stocks [2023 MT] (likely to extend)	Applying State-Space Models	Early spring RT review for BSB gives time for follow on MT on schedule in 2023	Cod likely to need extension but length of extension unclear at present.
2024	Golden Tilefish [2024 MT], Scallops [2024 MT]	Yellowtail Flounder - CC/GOM, SNE/MA, and GB (TRAC) [2025 MT]		
2025	Atlantic herring [2026 MT], American lobster [ASMFC]	Ensemble modeling		
2026	Longfin Squid (early spring) [2026 MT]	No Fall RT		
2027	Monkfish [2027 MT] and TBD	TBD		

Stock	New Cycle	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Rationale for 2021+ Changes
River herring	5				2024-2028					2029-2033			Postponed from 2022 to 2023 for COVID downstream effects
Shad	5					2025-2029					2030-2034		
Striped bass - Gulf of Maine / Cape Hatteras	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	Postponed from 2021 to 2022 for COVID
Northern shrimp - Gulf of Maine	4					2025-2028				2029-2032			Postponed from 2023 to 2024 for COVID downstream effects
Sturgeon	5					2025-2029					2030-2034		Postponed from 2022 to 2024 for COVID downstream effects
American lobster - Gulf of Maine / Georges Bank	5	2021-2025										2031-2035	
American lobster - Southern New England													
Jonah crab	NA				2024-2029								
Bluefish - Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Black sea bass - Mid-Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Scup - Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Summer flounder - Mid-Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Atlantic mackerel - Gulf of Maine / Cape Hatteras	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Chub mackerel - TBD	NA												
Butterfish - Gulf of Maine / Cape Hatteras	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Longfin inshore squid - Georges Bank / Cape Hatteras	3	2021-2023			2024-2026			2027-2029			2030-2032		Assume "early spring" 2026 RT to allow spring MT
Northern shortfin squid - Northwestern Atlantic Coast	3			2023-2025			2026-2028			2029-2031			
Atlantic surfclam - Mid-Atlantic Coast	4	2021-2024				2025-2028				2029-2032			Shift clams back to original schedule due to another survey postponement
Ocean quahog - Atlantic Coast	6	2021-2026						2027-2032					Shift clams back to original schedule due to another survey postponement
Golden Tilefish - Mid-Atlantic Coast	3		2022-2024			2025-2027			2028-2030			2031-2033	
Blueline Tilefish-Mid-Atlantic Coast	NA												
Spiny dogfish - Atlantic Coast	4			2023-2026				2027-2030				2031-2034	
Goosefish - Gulf of Maine / Northern Georges Bank	3			2023-2025			2026-2028		2028-2030			2031-2032	delay RT to spring 2027; MT one year early in 2027, then 3 yrs moving forward
Goosefish - Southern Georges Bank / Mid-Atlantic													
Red deepsea crab - Northwestern Atlantic	4				2024-2027				2028-2031				
Sea scallop - Northwestern Atlantic Coast - assessment	2	completed			Spring-SAMS	Fall		Spring			Spring		
Sea scallop - Northwestern Atlantic Coast - mgt analysis	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	
Atlantic herring - Northwestern Atlantic Coast	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Eastern GB Cod TRAC	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	
Eastern GB Haddock TRAC	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	
Yellowtail flounder - Georges Bank [TRAC]	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	
American plaice - Gulf of Maine / Georges Bank	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	Postponed 2021 to 2022 for COVID
Atlantic cod - Georges Bank	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2032		
Atlantic cod - Gulf of Maine	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2032		
Haddock - Georges Bank	2			2022-2023		2025-2027			2028-2029		2030-2032		Shift haddock to 2022 for RT extension; switch back to odd years in 2027 to sync with cod
Haddock - Gulf of Maine	2			2022-2023		2025-2027			2028-2029		2030-2032		Shift haddock to 2022 for RT extension; switch back to odd years in 2027 to sync with cod
Windowpane - Gulf of Maine / Georges Bank	2	2021-2022			2024-2025		2026-2027			2029-2030		2031-2032	Swap odd/even years to stay opposite haddock (2022 to 2023; then 2027 to 2028)
Windowpane - Southern New England / Mid-Atlantic	2	2021-2022			2024-2025		2026-2027			2029-2030		2031-2032	Swap odd/even years to stay opposite haddock (2022 to 2023; then 2027 to 2028)
Winter flounder - Georges Bank	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	2026 MT assuming "late spring" 2026 RT
Winter flounder - Gulf of Maine	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	2026 MT assuming "late spring" 2026 RT
Winter flounder - Southern New England / Mid-Atlantic	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	Review SNE/MA WFL in Spring 2022 - T Wood doing bluefish RT fall; 2026 MT assuming "late spring" 2026 RT
Witch flounder - Northwestern Atlantic Coast	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	Postponed 2021 to 2022 for COVID
Yellowtail flounder - Cape Cod / Gulf of Maine	2			2023-2024			2026-2027		2028-2029		2030-2032		Postponed 2021 to 2022 for COVID, remove 2023 MT to make room for redfish
Yellowtail flounder - Southern New England / Mid-Atlantic	2			2023-2024			2026-2027		2028-2029		2030-2032		Postponed 2021 to 2022 for COVID, remove 2023 MT to make room for redfish
Acadian redfish - Gulf of Maine / Georges Bank	2	2021-2022			2024-2025		2026-2027		2028-2029		2030-2032		Shift to make room for haddock and address staff conflict, then keep 2 year cycle
Atlantic halibut - Northwestern Atlantic Coast	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Atlantic wolffish - Gulf of Maine / Georges Bank	3	2021-2023		2023-2024			2026-2027			2029-2030			Shift Ocean Pout earlier by one year (2023 to 2022) to make space for hakes, then 3 yr cycle
Ocean pout - Northwestern Atlantic Coast	3	2021-2023		2023-2024			2026-2027			2029-2030			Shift Wolffish earlier by one year (2023 to 2022) to make space for hakes, then 3 yr cycle
Pollock - Gulf of Maine / Georges Bank	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	Postponed 2021 to 2022 for COVID
White hake - Gulf of Maine / Georges Bank	3			2023-2025			2026-2028			2029-2031			Postponed 2021 to 2022 for COVID
Red hake - Gulf of Maine / Northern Georges Bank	3	2021-2022			2024-2026			2027-2029			2030-2032		Shift hakes one year later to match spec cycle
Red hake - Southern Georges Bank / Mid-Atlantic	3	2021-2022			2024-2026			2027-2029			2030-2032		Shift hakes one year later to match spec cycle
Silver hake - Gulf of Maine / Northern Georges Bank	3	2021-2022			2024-2026			2027-2029			2030-2032		Shift hakes one year later to match spec cycle
Silver & Offshore hake - Southern Georges Bank / Mid-Atlantic	3	2021-2022			2024-2026			2027-2029			2030-2032		Shift hakes one year later to match spec cycle
Barndoor skate - Georges Bank / Southern New England	2												
Clearnose skate - Southern New England / Mid-Atlantic													
Little skate - Georges Bank / Southern New England													
Rosette skate - Southern New England / Mid-Atlantic			2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Smooth skate - Gulf of Maine													
Thorny skate - Gulf of Maine													
Winter skate - Georges Bank / Southern New England													
		24	13	24	24	22	22	22	20	23	25	20	Total MT Assessments/Year

Color code
Assessments (spec dates indicated)
Mgt track - "on time"
On time mgt track - after Res Track
Early/extra mgt track - after Res Track

Stock	New Cycle	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2022+ Issues/Notes
River herring	5				2024-2028					2029-2033			
Shad	5					2025-2029					2030-2034		
Striped bass - Gulf of Maine / Cape Hatteras	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Northern shrimp - Gulf of Maine	4					2025-2028				2029-2032			
Sturgeon	5					2025-2029					2030-2034		
American lobster - Gulf of Maine / Georges Bank	5	2021-2025										2031-2035	
American lobster - Southern New England													
Jonah crab	NA				2024-2029								
Bluefish - Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Black sea bass - Mid-Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Scup - Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Summer flounder - Mid-Atlantic Coast	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Atlantic mackerel - Gulf of Maine / Cape Hatteras	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Chub mackerel - TBD	NA												
Butterfish - Gulf of Maine / Cape Hatteras	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Longfin inshore squid - Georges Bank / Cape Hatteras	3	2021-2023			2024-2026			2027-2029			2030-2032		
Northern shortfin squid - Northwestern Atlantic Coast	3			2023-2025			2026-2028			2029-2031			
Atlantic surfclam - Mid-Atlantic Coast	4	2021-2024				2025-2028				2029-2032			
Ocean quahog - Atlantic Coast	6	2021-2026						2027-2032					
Golden Tilefish - Mid-Atlantic Coast	3		2022-2024			2025-2027			2028-2030			2031-2033	
Blueline Tilefish-Mid-Atlantic Coast	NA												
Spiny dogfish - Atlantic Coast	4			2023-2026				2027-2030				2031-2034	Postpone from fall 2022 to spring 2023? Keep rest in place or shift those back a year too?
Goosefish - Gulf of Maine / Northern Georges Bank	3			2023-2025			2026-2028		2028-2030			2031-2032	
Goosefish - Southern Georges Bank / Mid-Atlantic													
Red deepsea crab - Northwestern Atlantic	4				2024-2027				2028-2031				
Sea scallop - Northwestern Atlantic Coast - assessment	2	completed			Spring-SAMS	Fall		Spring			Spring		
Sea scallop - Northwestern Atlantic Coast - mgt analysis	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	
Atlantic herring - Northwestern Atlantic Coast	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Eastern GB Cod TRAC	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	Shifting to 2-yr cycle for TRAC would open up 3 spots every 2 years
Eastern GB Haddock TRAC	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	This could be important to make room for 2 more cod assessments
Yellowtail flounder - Georges Bank [TRAC]	1	2021	2022	2023	2024	2025	2025	2027	2028	2029	2030	2031	Of course, the cod assessments should probably be "on" TRAC years ...
American plaice - Gulf of Maine / Georges Bank	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Atlantic cod - Georges Bank	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2032		Note: need to make room for 2 more cod assessments
Atlantic cod - Gulf of Maine	2		2022-2023		2024-2025		2026-2027		2028-2029		2030-2032		Note: need to make room for 2 more cod assessments
Haddock - Georges Bank	2			2022-2023		2025-2027			2028-2029		2030-2032		
Haddock - Gulf of Maine	2			2022-2023		2025-2027			2028-2029		2030-2032		
Windowpane - Gulf of Maine / Georges Bank	2	2021-2022			2024-2025		2026-2027			2029-2030		2031-2032	
Windowpane - Southern New England / Mid-Atlantic	2	2021-2022			2024-2025		2026-2027			2029-2030		2031-2032	
Winter flounder - Georges Bank	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Winter flounder - Gulf of Maine	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Winter flounder - Southern New England / Mid-Atlantic	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Witch flounder - Northwestern Atlantic Coast	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Yellowtail flounder - Cape Cod / Gulf of Maine	2			2023-2024			2026-2027		2028-2029		2030-2032		
Yellowtail flounder - Southern New England / Mid-Atlantic	2			2023-2024			2026-2027		2028-2029		2030-2032		
Acadian redfish - Gulf of Maine / Georges Bank	2	2021-2022			2024-2025		2026-2027		2028-2029		2030-2032		
Atlantic halibut - Northwestern Atlantic Coast	2	2021-2022		2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
Atlantic wolffish - Gulf of Maine / Georges Bank	3	2021-2023		2023-2024			2026-2027			2029-2030			
Ocean pout - Northwestern Atlantic Coast	3	2021-2023		2023-2024			2026-2027			2029-2030			
Pollock - Gulf of Maine / Georges Bank	2			2023-2024		2025-2026		2027-2028		2029-2030		2031-2032	
White hake - Gulf of Maine / Georges Bank	3			2023-2025			2026-2028			2029-2031			
Red hake - Gulf of Maine / Northern Georges Bank	3	2021-2022			2024-2026			2027-2029			2030-2032		
Red hake - Southern Georges Bank / Mid-Atlantic	3	2021-2022			2024-2026			2027-2029			2030-2032		
Silver hake - Gulf of Maine / Northern Georges Bank	3	2021-2022			2024-2026			2027-2029			2030-2032		
Silver & Offshore hake - Southern Georges Bank / Mid-Atlantic	3	2021-2022			2024-2026			2027-2029			2030-2032		
Barndoor skate - Georges Bank / Southern New England	2												
Clearnose skate - Southern New England / Mid-Atlantic													
Little skate - Georges Bank / Southern New England													
Rosette skate - Southern New England / Mid-Atlantic			2022-2023		2024-2025		2026-2027		2028-2029		2030-2031		
Smooth skate - Gulf of Maine													
Thorny skate - Gulf of Maine													
Winter skate - Georges Bank / Southern New England													
		24	13	24	24	22	22	22	20	23	25	20	Total MT Assessments/Year

Color code
Assessments (spec dates indicated)
Mgt track - "on time"
On time mgt track - after Res Track
Early/extra mgt track - after Res Track

NRCC Meeting May 9-10, 2022

East Coast Scenario Planning Update

This document provides an update on recent and upcoming activities surrounding the East Coast Scenario Planning initiative. Most actions are centered around preparing for a forthcoming Scenario Creation Workshop (June 21-23, 2022). Accordingly, this document contains updates that focus on:

1. The process for determining Scenario Creation workshop attendees.
2. The specific agenda for the Scenario Creation workshop.
3. Plans for the Application Phase that will follow the Scenario Creation workshop.

   Item 3 could benefit from NRCC discussion, input and feedback. Does the NRCC support this general approach for the Application Phase of this initiative? Are these next steps in line with expectations? Does the NRCC have other ideas the core team should consider to help identify potential management measures and governance changes to address the scenarios developed?

   Remaining funds for this initiative are uncertain until the in-person scenario workshop details are finalized; however, it is likely additional funds will be needed to support the draft plans outlined for the Application Phase. Does the NRCC have recommendations about where those funds could come from, or should plans be scaled back to remain under current funding levels?

1. Process for Determining Attendees for upcoming Scenario Creation Workshop

The Core Team has designed and implemented a process to ensure that attendees at the workshop represent a broad set of stakeholder interests as well as all three East Coast regions. Instead of directly selecting people and sending invitations, we used an application process to solicit interest and identify a suitable, diverse group of potential participants. This approach is designed to be more inclusive and transparent.

The approach followed the steps below:

- The Core Team designed an online application questionnaire, so that applicants could provide basic information (e.g. contact details), their role and interest in East Coast fisheries, and specific interest in attending this workshop. Applicants were also invited to suggest any other names that they felt would be valuable contributors to the workshop. Applicants were informed that they would need to attend the workshop in-person, June 21-23 in Washington, D.C.
- The invitation to complete applications was sent out to those on Council/Commission/NMFS mailing lists as well as to respondents to the Fall 2021 scoping questionnaire who indicated an interest in further participation and to attendees of the recent exploration webinars.

- The initial request resulted in 89 applications, including commercial operators, recreational anglers, scientists, NGO representatives, fishery managers and others, from all three regions (and beyond).
- The Core Team mapped the initial respondents against a list of target and minimum numbers for each role/region category (see information in Table 1 below). These numbers provided us with a rough guide to ensure that workshop attendees would be drawn from a diverse range of interests and regions.
- Based on matching the targets with actual applicants - and using additional suggestions drawn from applicants and the Core team - we extended the invitation to apply out to a further group of around 80 individuals to plug gaps in representation. This secondary request resulted in an additional 16 applications to attend the workshop.
- The Core Team then reviewed the 105 applications and sought to winnow down to 75, based on target numbers for roles and regions, and an assessment of whether applicants would be valuable contributors in the workshop. Table 1 provides the basic breakdown of the 105 applicants, according to primary role.
- The draft list of 75 selections was then validated with Council/Commission/NMFS leadership to check for any needed changes or requirements. In some circumstances, additional invitations were sent out to fill some gaps according to target requirements.
- The list of invitations is currently being finalized, and all applicants will be notified of whether they have been selected to attend the workshop by May 11.

Table 1: Target numbers per region and for all three regions combined (regions include New England, Mid-Atlantic, and South Atlantic), and actual applicants for all regions combined.

Stakeholder Type	Target, Per Region	Target, All Regions	Minimum, Per Region	Minimum, All Regions	Actual Applicants, All Regions
Commercial	8	24	5	15	19
Recreational	8	24	5	15	16
Manager	2	6	2	6	14
Science	3	9	2	6	29
NGO	2	6	2	6	14
Other	2	6	2	6	14
Total		**75**		**54**	**105**

Please note regarding Table 1:

- At least 10 applicants identified themselves as coast-wide (rather than affiliated with a specific region). The Core Team is making adjustments to the target numbers to take account of this.
- The totals for 'actual all regions' reflect the **primary** role that respondents identified. Many respondents fill multiple roles.
- **The NRCC will be provided with a separate table (prior to the meeting) that provides up-to-date details of final invited attendees, organized by role and region.**

2. Agenda / Approach to Scenario Creation Workshop

The Scenario Creation workshop will be held on June 21-23, 2022 at the Doubletree Hotel, Crystal City, Washington D.C. The workshop will be open to the public to listen via webinar for all plenary discussions, not including smaller break-out groups. Participants on the webinar will be able to provide input through a chat function. If members of the public show up at the meeting that are not on the participant list they will be able to observe, but not participate in the meeting. The draft agenda for the workshop is shown in Appendix 1. This is an internal agenda that provides additional details for the design and facilitation team. The public agenda (shared with all participants) will be a streamlined version of this.

The agenda provides full details of the planned conversations, but the following points are worth noting:

It is important to set expectations that a scenario creation workshop is a different experience from many strategy or planning sessions. The purpose is to reach agreement on a framework or set of scenarios. It is not to "solve the problem" – those conversations happen later in the Application Phase (in sessions in the Fall/Winter), with the scenarios as a tool to help us. The focus of this workshop will be on the future with all its uncertainty. We will encourage participants to be creative and open-minded throughout the process.

- Day 1 will be spent reviewing the work to date (i.e. what is likely to shape East Coast fisheries in the next 20 years, and how confident are we about predictions) and then numerous small groups will each create their own "mini-scenarios" (quick-fire stories about what might happen in the next 20 years). This will result in a large number of possible scenario stories. After the session ends on Day 1, the Core Team will review the mini-scenarios and discuss the patterns that are emerging.

- Day 2 will start by focusing on the range of mini-scenarios and discussing any patterns. Through facilitated conversations and suggestions, the full group will emerge with a scenario framework (or small number of scenarios) to explore in more detail. The rest of the day will be spent with small groups working on devising the details of a particular scenario, and also reviewing the ideas emerging from other groups. At the end of Day 2, we will have a candidate scenario framework and basic stories.

- Day 3 will be spent in plenary. We will work to ensure that each scenario story is plausible, challenging, relevant, memorable and divergent – and that the Core Team has a clear idea of what additional work is needed to further develop the scenarios.

Following the workshop, the Core Team will refine and develop the scenarios and produce a v1.0 Draft Scenario Report. This report will be produced by mid-late July 2022.

3. After the Scenarios: Preview of Application Phase

The Application Phase of the initiative is where we *apply* the scenarios to help generate ideas and offer solutions to the challenges highlighted in the initiative. In our case, this means exploring what the different scenarios mean for future fishery management and governance and reaching conclusions about any recommendations for changes.

The Application Phase will run from July 2022 to January 2023, and will include three distinct parts. This approach is subject to confirmation, based on funding availability.

i. **Scenario Deepening**. In late July / August, a series of 3-4 online Scenario Deepening webinars will be held. The purpose of these webinars is to refine and add detail to the scenarios. Webinar participants will be given an opportunity to review the Draft Scenario Report and add their comments and ideas to the narratives. This might mean a focus on more regional perspectives, or paying more attention to particular species, or adding elements that make the narratives more relevant, plausible and divergent from each other. This series of webinars also provides an opportunity for engagement with stakeholders who were not able to attend the Scenario Creation workshop in person. Following the webinars, the Core Team will revise and finalize the scenarios, and decide upon a suitable format for communication. This could be a written report, a slide deck, a series of websites or video reports.

ii. **Implications and Options Conversations.** From September to November 2022, the Scenario Report will be used as a platform for a series of Implications and Options conversations. Sessions will be organized so that participants will consider and discuss questions such as:

- Under each scenario, what are the particular challenges (and opportunities) that fisheries governance and management would face?
- How well would our current fishery governance and management arrangements cope if these new scenario conditions were to occur?
- What needs to change in fisheries governance and management to prepare for these scenario possibilities?
- What are the tools and processes that need to be advanced <u>now</u> in order to ensure that fisheries are governed and managed effectively in an era of climate change?

These conversations will be held at various Council and Commission meetings during the Fall. We suggest that we target the following meetings and secure slots on the agenda for discussion:

- SAFMC Meeting: September 12-16, 2022, Charleston, SC
- NEFMC Meeting: September 27-29, 2022, Gloucester, MA
- MAFMC Meeting: Oct 4-6, 2022, Dewey Beach, DE
- ASMFC Annual Meeting: November 7-10, 2022, Arlington, VA

It will be important to be flexible in designing each of these conversations. There is no guarantee that each meeting will be of the same duration or have the same number of participants. There might also be an opportunity to run some meetings or online webinars with other groups outside the existing Council/Commission process. Accordingly, the Core Team will prepare an approach / agenda for these conversations that is customizable according to requirements. Further, it may also be necessary to receive ideas and suggestions through other means, such as written submissions and individual conversations.

The output of these sessions (and other sources of input) will be a set of ideas (a "long list") for how fishery management and governance might need to evolve and adapt to better prepare and cope with an era of climate change.

iii. **Summit Meeting**. The Core Team will review notes from all of the conversations (the "long list") and create a document that outlines potential future solutions / changes for fisheries governance and management. This document will form the material to be discussed at a Summit Meeting (likely January 2023) with a selected number of fishery managers from a range of different regions and jurisdictions. The Summit Meeting will review potential solutions and discuss a series of priority recommendations. At this stage, we envisage that this summit meeting would be for 40-50 participants - again from a variety of roles, but geared mostly toward fishery managers and policy makers. The size of this meeting may be driven by budget constraints.

Following the Application Phase, the final stage of the initiative will run from February – April 2023. This phase will focus on completing the Final Deliverable reports, and designing a process to continue using the scenarios as a way of informing East Coast fishery management and governance in the future.

Appendix 1
East Coast Scenario Planning
Scenario Creation Workshop
Draft Agenda v1.0
Doubletree Hotel, Crystal City
Tuesday June 21, 2022

Day 1

9.30am	**Welcome, Overview & Introductions** Welcome from members of the ECSP Core Team • Overview of Initiative • Introduction to scenario planning and thinking about the future • Workshop Agenda, Ground Rules and Expectations • Introduction exercise (e.g. paired listening conversations) *This intro session should reinforce the point that this workshop is different from many strategy workshops that participants might have attended in the past. More future-focused, more creative, more free-wheeling. Also, a reminder that this is NOT the solutions workshop - that will be for sessions in the Fall.*
10.15am	**Review of Drivers of Change** Present a very short summary of briefing material • Review of 3 Drivers of Change webinars General discussion about the factors that will shape the future of East Coast fisheries. If we have some of the speakers / presenters from Drivers of Change webinars (e.g. Janet Nye, Ira Laks), we can ask them for input. But this session does not need to include structured presentations. Explain scenario 'building blocks' and offer suggestions regarding which factors are: • Pre-determined (confident predictions) • Critical uncertainties (important but unpredictable) • Wildcards (unlikely but plausible events) *This is a general discussion intended to bring everyone up to speed on the Drivers of Change, even if they have not read the briefing materials too closely. It will also stress how this workshop is focused on thinking about the future, rather than centered on addressing the problems of today.*

11.00am	Break
11.15am	**Building Blocks** *This session offers a structure for us to think about all the complex issues that we dealt with in the earlier sessions.* Provide participants with a pre-prepared list of drivers of change, divided into Pre-Determined Elements, Critical Uncertainties and Wildcards. This list will also be presented in a set of cards. [We may also send these out for participants to review in advance] First opportunity for small group conversations. Each table group (10 groups) will contain a facilitator, note-taker and ~ 7-8 participants. Seated at their tables, small groups will have the chance to discuss the materials, offer any edits to the cards and add their own ideas on blank cards. This will be followed by an explanation of the mini-scenario creation activity that groups will conduct for the rest of the day.
12.00pm	**Mini-Scenario Creation - Part 1** Small Group Conversations, arranged with 10 groups of 7-8 people (plus core team facilitator, note-taker). 1. Group chooses cards and sets out an Expected Future. Records their ideas on a worksheet. (50 minutes) 2. Small group report out. Each group has 2 minutes to report out on their Expected Future, followed by a plenary discussion. Is there some alignment across various expected futures?
1.15pm	Lunch
2.15pm	**Mini-Scenario Creation – Parts 2 and 3** Small Group Conversations continued. • Groups complete two more mini-scenario worksheets (Alternative Future and Divergent Future). (35 minutes each)
3.30pm	**Break – Gallery Walk** Each group's worksheets displayed for review by other teams

4.00pm	**Small Group Report Out** Each group reports out on their work (3 mini-scenarios) • ~7 minutes per group Plenary discussion looking for common themes from small groups • Discuss framework possibilities
5.30pm	Main session adjourns
6.00pm	Core Team convenes to suggest a framework • This is the chance for a smaller group to work on 'pattern recognition' and propose a framework for the following day

Day 2

8.30am	**Day 1 Reflections & Hopes for Day 2**
9.00am	**Proposal(s) for framework(s)** • Based on Day 1 conversations • Open conversation, at some point suggest a framework and get reactions from the full group. Likely to be a 2x2 matrix, but other frameworks are possible • We could start people in pairs or groups of four to discuss, then move to a full group conversation
10.15am	Break
10.30am	**Scenario Building - Breakout Groups** • New configuration of groups each work on a specific scenario drawn from the framework • Combine oceanographic, biological, social/economic developments into 3-5 coherent stories about EC fisheries 2022 – 2042 • Complete a storytelling worksheet • Plan on 4 scenarios (A, B, C, D) • Depending on numbers, this could be 4 groups (20 per group) or 8 groups (10 per group) • Prefer 8 groups, so imagine groups A1, B1, C1, D1, A2, B2, C2, D2

12.00pm	Lunch
1.00pm	**Scenario Building: Carousel Exercise** For Group A1: Two stay in that group, and are joined by two each from B1, C1, D1 For Group B1: Two stay, and are joined by two each from A1, C1, D1 For Group C1: Two stay, and are joined by two each from A1, B1, D1 For Group D1: Two stay, and are joined by two each from A1, B1, C1 Exactly the same pattern for the second track (i.e. A2, B2, C2, D2) Newly configured groups review the scenario. What is important and compelling about this story? What would you add to make it more relevant, challenging, memorable, plausible etc.? Are you comfortable that this scenario is sufficiently distinct and divergent from the other scenarios? *Note: we could make this more dynamic with a full carousel, (i.e. participants moving through 3 other groups in an hour, but that might be too confusing and fragmented)*
2.15pm	**Scenario Building: Combinations** Tracks combine. Original members of Group A1 combine with original members of Group A2. They compare their scenario findings and discuss the main commonalities and hash out points of difference, emerging with one broad story for Scenario A. Same deal for Groups B, C and D
3.00pm	Break
3.15pm	**Review of Scenarios – Plenary** • Each group (A, B, C, D) summarizes main themes of their scenario and presents out in plenary • Full group conversation, looking for patterns, logic gaps, inconsistencies etc. • Do we have a good set of scenarios here? • What are we missing?
4.30pm	Adjourn

Day 3

8.30am	**Day 1 Reflections & Hopes for Day 2**
9.00am	**Scenario Review and Comparison** Plenary discussion to test for: • Plausibility (can each story conceivably happen in 20 years?) • Relevance (do the stories tell us different things about changing stock distribution / availability, and do we think they will raise relevant questions about governance and management?) • Challenge (do the stories challenge some of our assumptions about what we currently think will happen?) • Memorable (can we bring more powerful stories and ideas into each?) • Divergent (are the 3-5 stories meaningfully different from each other?) Are there important issues that the scenario do not yet cover? We could organize and present key ideas in a matrix / table format to clarify distinctions between scenarios Large paper wall / whiteboard would be useful.
10.30am	Break
11.00am	**Next Steps** • Suggestions and recommendations for deepening and finalizing the scenarios • Explanation of how they will be used in Phase 5 (application / implications) sessions • What lessons can we draw right now?
12.00pm	Adjourn
12.00 - 2.00	Core Team Debrief and Lunch

Links to Aquaculture Documents

MAMFC Draft Aquacultue Policy Documents
https://www.mafmc.org/council-events/2022/eop-committee-may10

Joint Subcommittee on Aquaculture
Joint Subcommittee on Aquaculture
(Draft) Economic Development Outline
National Strategic Plan for Aquaculture Research
Strategic Plan to Enhance Regulatory Efficiency in Aquaculture

NOAA Aquaculture Guides
Guide to Permitting Marine Aquaculture in the United States (2022)
Guide to Federal Aquaculture Grant and Financial Assistance Services 2021

2021 FALL NRCC MEETING SUMMARY

Webinar

November 16-17, 2021

Attendees

Atlantic States Marine Fisheries Commission (ASMFC)
Spud Woodward, Chair, Day 2
Joe Cimino, Vice-Chair
Bob Beal, Executive Director
Toni Kerns, Interstate Fishery Management Program Director

Mid-Atlantic Fishery Management Council (MAFMC)
Mike Luisi, Chair
Wes Townsend, Vice-Chair, Day 2
Dr. Chris Moore, Executive Director
Brandon Muffley, Staff
Dr. Paul Rago, Chair, Scientific and Statistical Committee (SSC)

New England Fishery Management Council (NEFMC)
Eric Reid, Chair
Rick Bellavance, Vice-Chair
Tom Nies, Executive Director
Chris Kellogg, Deputy Director
Dr. Lisa Kerr, Chair, SSC

NOAA Fisheries Northeast Fisheries Science Center (NEFSC)
Dr. Jon Hare, Science and Research Director
Dr. Michael Simpkins, Chief, Resource Evaluation and Assessment Division
Dr. Russell Brown, Chief, Population Dynamics Branch

NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO)
Mike Pentony, Regional Administrator
Sarah Bland, Assistant Regional Administrator for Sustainable Fisheries
Dave Gouveia, Assistant Regional Administrator for Analysis and Program Support
Liz Sullivan, Sustainable Fisheries Division (NRCC staff support)
Laura Hansen, Sustainable Fisheries Division (NRCC staff support)

Guest Presenters
Jonathan Star, Principal, Scenario Insight, Day 2

Additional Attendees
Geoff White, ASMFC, ACCSP Director
Karson Coutre, MAFMC Staff, Day 2
Julia Beaty, MAFMC Staff, Day 2
Mary Sabo, MAFMC Staff, Day 2
Kiley Dancy, MAFMC Staff, Day 2
José Montañez, MAFMC Staff, Day 2

Dr. Richard Merrick, NEFMC SSC, Day 1
Janice Plante, NEFMC Staff
Deirdre Boelke, NEFMC Staff, Day 2
Moira Kelly, GARFO Staff, Day 2
Maria Fenton, GARFO Staff, Day 2
John Carmichael, SAMFC Deputy Executive Director, Day 2
Roger Pugliese, South Atlantic Fishery Management Council (SAFMC) Staff, Day 2

Public Attendees
Jay Odell, The Nature Conservancy, Day 2
Kelly Whitmore, MA DMF Staff, Day 2

Note: NRCC decisions and action items that resulted from this meeting are in bold for ease of reference.

– Day 1 –

1. Stock Assessments

Dr. Mike Simpkins began with a presentation on the Research Track Steering Committee (RTSC). Overall, the NRCC supported convening the RTSC, recognizing that there were details still to be worked out. The NRCC was also supportive of the proposed membership: One representative from each Council's SSC and Commission's ASC; two scientific representatives (one with Northeast stock assessment experience/expertise, one with Mid-Atlantic, both chosen through solicitation, rather than appointment); three NEFSC stock assessment leads with broad experience; one NEFSC ecosystem dynamics and assessment expert; and a Chair (**Action Item #1**). The NRCC settled on the Chair being from NEFSC (rather than selected from the existing membership), and remaining fixed (rather than rotating) for possibly 3 years, at which point it could be reassessed.

Much of the remaining discussion revolved around the role of the RTSC, with five roles being proposed: 1) Identifying critical assessment research needs, 2) monitoring progress of research track assessments, 3) developing annual research track assessment proposals, 4) considering the need for reevaluation of a research track stock's structure, and 5) communicating assessment research outcomes and findings. After some discussion, the proposal was modified to exclude the monitoring of research track assessments, at least once the research track working group was formed.

Next, Dr. Simpkins provided an overview of the assessment process improvements. The role of the assessment oversite panels (AOP) was discussed, specifically that the AOP is reviewing assessment and backup assessment plans, not peer reviewing the actual assessments. Additionally, the NRCC recommended clarifying that the AOP peer review level guidelines are not proscriptive, they allow flexibility for the AOP members to use their judgment beyond the descriptions of each level. Dr. Paul Rago suggested that there be an "angst" meter, and Dr. Russell Brown emphasized that the purpose of the AOP is for transparency for stakeholders. Dr.

Simpkins added that the AOP is providing guidance on the time needed for peer review, and, while the AOP provides their advice, the NRCC is the final decision-maker if there are challenges in accommodating all the assessments within the time allotted for a peer review panel. Dr. Brown referenced an instance where an assessment biologist came back to the AOP requesting the level be increased. In the running list of improvements still to be made, Mr. Tom Nies' question suggested clarifying that, when there are more, or more complex, assessments than can be reviewed in the time allotted for a peer review panel, the NRCC may opt to downgrade assessment review levels or extend the panel duration. Mr. Nies also requested that the quality assurance/quality control for Level 1 assessments be prioritized. The NEFSC will confirm the NRCC membership in a single working group, covering the roles of both NRCC Deputies and SAURON, continue making progress on the issues raised regarding the research track assessment process, to be reflected in the process document, and will update at the Spring 2022 meeting (**Action Item #3**).

Dr. Simpkins provided a quick recap of how the management track schedule has changed, but no additional changes were made. There was a brief discussion of the research track working group processes, and Dr. Simpkins explained that they are looking for ways to get lessons learned from existing working groups.

2. Port Sampling

Mr. Dave Gouveia provided a presentation of the port sampling program. GARFO receives the funds to support the program, and provides NEFSC with the total number of length samples that can be collected given the available funds, and the NEFSC uses a stratified sampling plan to allocate those length samples. GARFO provides this information to the port sampling contractor. Funding in recent years has been either reduced or flat, and the cost of the contract has increased, which has resulted in decreases in the number of samples that can be collected, to the point that a) the number of samples isn't enough for statistical purposes and b) the contract has become financially unsustainable.

The impetus for this agenda item was a question at a recent MAFMC meeting, regarding the low number of tilefish samples. Mr. Mike Pentony asked if the NRCC would want to prioritize the samples to maximize certain species. Dr. Simpkins, however, explained that by prioritizing certain species now, it can cause a problem later, if a species become a priority but there is a lack of historical data. Mr. Joe Cimino asked if the States could play a role in increasing the number of samples. Dr. Jon Hare raised the possibility of running some simulations of how length samples could be prioritized. The NRCC agreed that Port Sampling would be added to the agenda for Spring 2022, and the NEFSC would share progress on efforts to assess impacts of reduced sampling and/or approaches to prioritization for either the Spring or Fall 2022 meeting (**Action Item #4)**.

– Day 2 –

3. Fisheries Dependent Data Initiative (FDDI) and Catch Accounting and Monitoring System (CAMS)

Mr. Gouveia provided an update on Fisheries Dependent Data Initiative (FDDI) and Catch Accounting and Monitoring System (CAMS). The draft implementation plan for FDDI is not yet available for the NRCC, but a project manager has been hired to ensure that items like this are accomplished, and they plan to have it ready by the Spring 2022 meeting. The new electronic vessel trip report (eVTR) data model, which will support the expansion of new data needs, is an infrastructure change that provides a structure that can take on new reporting requirements and be shared with other data streams. Dr. Chris Moore asked if there was a link between FDDI and port sampling, and Dr. Brown explained that when CAMS is operational, it will link with port sampling, but that isn't possible yet. Mr. Bob Beal inquired how these efforts are related to having the Atlantic Coastal Cooperative Statistics Program (ACCSP) being the one-stop shop. Mr. Gouveia explained that that ACCSP has been a partner on these efforts and there are frequent meetings between staff. Mr. Eric Reid asked what the plan is to reconcile differences between vessel reports and observer reports, and Dr. Brown indicated he would follow up on this (**Action Item #5a**). Mr. Nies expressed concern about the timing, whether data would be available for spring assessments, and Dr. Simpkins stated that landings data had just been produced and were being reviewed by NEFSC data users and that discard data had not been produced yet, so there was some possibility that prior discard estimation approaches may be needed. Dr. Simpkins indicated that the timing and process for NRCC engagement and peer review of CAMS was still being determined (**Action Item #5c**), as the focus right now was on development and technical review Mr. Nies also asked whether there would be delays in implementation of electronic monitoring (EM) due to CAMS, and an update will be provided at the Spring 2022 meeting (**Action Item #5b**).

4. Electronic Vessel Trip Reports (eVTR) and Did Not Fish Reports

Dr. Moore explained that, since the implementation of eVTR, the MAFMC has been hearing that some stakeholders are interested in resuming collection of did not fish (DNF) reports, which GARFO stopped requiring in August 2015. Mr. Rick Bellavance indicated that he was generally supportive, especially for the for-hire fleet. He mentioned that with the transition from paper to electronic VTRs, it is hard to know whether vessels are not submitting or did not fish, which means it is not possible to tell if outreach and training are working. He also expressed it would be consistent with the South Atlantic, which requires DNF reports. Mr. Nies asked if this is a regulatory decision, and therefore is the NRCC the correct place to discuss, and Mr. Pentony explained that GARFO took the lead on removing the requirement for DNF reports due to the detailed regulation changes. It would be regulatory, and Mr. Pentony indicated that he would not support pursuing unless both Councils supported and it went through the public process.

Mr. Mike Luisi asked about the administrative burden of following up with vessels that did not submit reports, and Mr. Gouveia indicated that it might be easier given the electronic nature of the VTRs, and raised the question of what the goal of requiring DNF would be, and who the requirement would apply to. Mr. Pentony suggested that the Councils would need to consider

this. The NRCC agreed that the Councils could discuss it at their upcoming meetings (**Action Item #6**), and Mr. Pentony added that it could get complicated if one Council wanted to pursue but the other did not.

5. Offshore Wind Update

Mr. Pentony and Dr. Hare provided updates on offshore wind. There are multiple ongoing projects (at least 12 in 2022) that involve both GARFO and NEFSC providing input and conducting reviews for Magnuson-Stevens Act, Essential Fish Habitat (EFH), and Section 7 of the Endangered Species Act (ESA). Mr. Cimino brought up that the Bureau of Ocean Energy Management (BOEM) has a requirement for information on guidance for mitigating impacts to commercial and recreational fisheries. Mr. Pentony explained that a group of states submitted a letter to BOEM on the compensatory mitigation issue, as a result of some meetings moderated by the University of Delaware. GARFO staff attended, but it was the states developing recommendations to provide to BOEM. Overall, GARFO agrees with many of the points submitted by the states, and has been concerned about using the Coastal Zone Management Act (CZMA) approach to deal with mitigation. The reviews vary from state to state, which can have unequal results. Mr. Pentony indicated support for having a regional approach to address all concerns. Mr. Cimino asked if GARFO staff would participate in a technical working group that would work on this guidance, and Mr. Pentony said he expected so.

Mr. Reid raised a concern about the use of ex-vessel price, in estimating the value of fisheries, rather than using an economic multiplier. Mr. Bellavance raised concerns about the importance of sand lance to both protected resources and highly migratory species in wind areas. Mr. Nies expressed concerns about staff time spent on wind projects, which might affect the agency's ability to work on Council actions. Mr. Pentony agreed that this is a significant concern, and while the agency can reduce the time spent on each review for National Environmental Policy Act (NEPA) and EFH, it cannot provide a template response for its responsibilities under Section 7 of the ESA. Dr. Hare also added that surveys are going to be affected, and NEFSC is starting to figure out how to mitigate that, but waiting, in part, on the budget process to resolve.

6. Stock Assessment and Fishery Evaluation (SAFE) Reports

Ms. Maria Fenton provided an update on the SAFE reports. Prior to the switch to the new NOAA Fisheries webpages in 2019, GARFO had its own web page for SAFE reports. However, when the webpages switched, the old pages were archived, and there is not a way to roll over the old pages into the new format. At the Fall 2020 meeting, a hybrid approach was discussed, where the Councils would host the SAFE report documents, and GARFO would post links to those documents. Ms. Fenton explained that this approach is still being developed, but adapted to meet the formatting requirements of the new webpages. Each fishery management plan (FMP) page would have a subheading for the SAFE reports, which both fits the webpage formatting and follows the webpage visitors' logic better. The goal is to create the pages in 2022, but still need a plan on how to maintain the pages. Ms. Sarah Bland added that we need to have a simple process to follow, so that at the end of the process, we have all of the document needed to update the SAFE reports. Mr. Nies brought up that while there is the assessment process, final assessment reports since 2019 are still not available, and this proposal might

require some re-design of Council webpages. Work will continue on developing the plan and GARFO will provide an update at the Spring 2022 meeting (**Action Item #7**).

7. East Coast Climate Change Scenario Planning

Mr. Jonathan Star provided a presentation on the work done by the East Coast climate change scenario planning core team. Scoping was conducted in summer and fall 2021. A webinar, held on 3 dates, was attended by over 250 participants, and an online questionnaire to gather input on the initiative received over 380 responses. Overall, there is a lot of interest and general support for the project objectives. As a result of scoping, the core team had some suggestions for revising the objectives. Mr. Star also gave an overview of the upcoming activities, including distributing a full summary of findings from scoping, holding webinars to investigate the driving forces, and hold a workshop in March or April 2022 to construct scenarios.

The proposed changes to the draft project objectives are shown below, with underlined words representing additions and strike-through indicating removal.

1. Explore how East Coast fishery governance and management issues will be affected by climate driven change in fisheries, particularly shifting stock availability and distributions, including changes in habitat and overall productivity.

2. Advance ~~Develop~~ a set of tools and processes that provide flexible and robust ~~resilient~~ fishery management strategies, which continue to promote fishery conservation and resilient fishing communities, and ~~effectively~~ address uncertainty in an era of climate change.

Dr. Moore supported the modifications. Mr. Pentony suggested the "which continue" parenthetical in #2 was not needed. He also suggested that the new text in #1 seemed to be shifting away from how to adapt governance structures in response to climate change, into how should we manage fisheries in response to climate change. Changes in habitat *might* lead to changes in stock distribution, but if the question is about governance, that only is pertinent if the stock changes distribution. Dr. Hare added that rather than "shift," the word should be "change," and recommended the end be rephrased "changes in stock distribution productivity and availability." After further discussion, it was agreed that for objective 1, the final version would be:

1. Explore how East Coast fishery governance and management issues will be affected by climate driven change in fisheries, particularly changing stock availability and distribution.

Mr. Reid brought up the issue of permit suites being affected if species change location, and Ms. Toni Kerns responded that it's hard to say what tools will come out of the scenarios, and the core team is trying to be as open as possible, and not have a predetermined set of actions in mind.

The NRCC agreed that they want the next workshop to be in-person in April 2022, but that the topic should be revisited in January or February (**Action Item #8**). **Update**: An intersessional call is being planned for mid-March to discuss.

8. Other Business

Discussion of the research track assessment process had been tabled from Day 1. It was renewed during other business. Ms. Kern stated that, for data workshop advertisements, she had not seen many calls for data. Dr. Simpkins explained that research tracks operate different from each other, because it is up to the chair how they step through the terms of reference (TOR). We have a joint chairs working group, to learn from each other, but have not set up rules that all working groups must follow.

Mr. Nies asked if the NRCC would be approving the 2027 research track topic, but Dr. Simpkins stated that would be done at the Spring 2022 meeting. Mr. Nies asked about the timing for the final assessment reports becoming available, and Dr. Simpkins said the management track final reports should be clearing soon, and would follow up (**Action Item #2**).

Mr. Nies raised a concern that his staff was still being asked to sign more data confidentiality reports for research track working groups, but the guidance has been updated to clarify that Council staff and state employees who already have existing confidentiality agreements should not need to sign. Mr. Nies also asked about some issues with the recreational data. Dr. Simpkins provided some background about the issues for estimating the Gulf of Maine (GOM) cod recreational catch, and Mr. Brown added that the Marine Recreational Information Program (MRIP) was not designed to estimate the catch of GOM cod, but all stocks, and with a very short season, MRIP can give unreliable estimates.

Mr. Nies asked if there will be enough time for the cod research track assessment, and Dr. Simpkins and Dr. Brown both agreed that timing was a concern, as did Dr. Lisa Kerr, who is the chair of the working group. Dr. Hare asked when there would be clarity on the structure recommended by management. Mr. Nies said that historically, management has followed the NEFSC's recommendation for assessments, but it has been unclear which should come first. Additionally, there are concerns about whether Canada will buy into the results of the research track. Dr. Brown expressed concern about science driving the decision. Dr. Hare stated that it is not an issue for any one group, but an issue for all (GARFO, NEFSC, NEFMC), and that he would set up a call with NEFMC.

Next Meeting

The Spring 2022 NRCC meeting is scheduled for May 9-10, 2022. NEFMC is chairing. The decision to hold the meeting virtually or in-person will be made closer to the date, based on current conditions.

NRCC MEETING SUMMARY
2022 MARCH INTERSESSIONAL
Webinar
March 17, 2022

Attendees
Atlantic States Marine Fisheries Commission (ASMFC)
Spud Woodward, Chair
Bob Beal, Executive Director
Toni Kerns, Interstate Fishery Management Program Director
Patrick Campfield, Fisheries Science Program Director

Mid-Atlantic Fishery Management Council (MAFMC)
Mike Luisi, Chair
Dr. Chris Moore, Executive Director
Brandon Muffley, Staff
Dr. Paul Rago, Chair, Scientific and Statistical Committee (SSC)

New England Fishery Management Council (NEFMC)
Eric Reid, Chair
Rick Bellavance, Vice-Chair
Tom Nies, Executive Director
Chris Kellogg, Deputy Director
Dr. Lisa Kerr, Chair, SSC

NOAA Fisheries Northeast Fisheries Science Center (NEFSC)
Dr. Jon Hare, Science and Research Director
Dr. Michael Simpkins, Chief, Resource Evaluation and Assessment Division

NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO)
Mike Pentony, Regional Administrator
Moira Kelly, Acting Assistant Regional Administrator for Sustainable Fisheries
Dave Gouveia, Assistant Regional Administrator for Analysis and Program Support
Liz Sullivan, Sustainable Fisheries Division (NRCC staff support)
Laura Hansen, Sustainable Fisheries Division (NRCC staff support)

Guest Presenter
Jonathan Star, Principal, Scenario Insight

Additional Attendees
John Carmichael, South Atlantic Fishery Management Council (SAFMC) Executive Director
Roger Pugliese, SAFMC Staff
Deirdre Boelke, NEFMC Staff
Kiley Dancy, MAFMC Staff
Travis Ford, GARFO Staff
Kaitlyn Shaw, GARFO Staff
Nicole Cabana, NEFSC Staff

Sean Hayes, NEFSC Staff
Sean Lucey, NEFSC Staff
Wendy Morrison, NMFS Office of Sustainable Fisheries Staff

Public Attendees
None

Note: NRCC decisions and action items that resulted from this meeting are in bold for ease of reference.

1. NRCC Scenario Planning Working Group Presentation

Mr. Jonathan Star provided a presentation that first summarized the work undertaken since the update given to the NRCC in November 2021. In February and March 2022, three Drivers of Change webinars were held, each with a different focus: oceanographic, biological, and social/economic, with the goal of educating, engaging, and providing a focus for the next phases of the work. Mr. Star then described the next step of the process, a scenario creation workshop. This would be a 2.5-day workshop, with plenary and breakout sessions, proposed for June 21-23, 2022, for approximately 75 attendees, plus 10-15 facilitators, note-takers, and support staff. Following this, there would be a series of "scenario deepening" webinars in the summer, to add details to the basic scenarios created at the workshop, and then additional workshops and working sessions in the fall to develop tools, processes, and changes in fisheries governance and management. Mr. Star and the scenario planning core team were specifically looking for input from the NRCC on whether it agreed with the key elements of the scenario workshop proposal and whether there were suggestions/preferences to inform decisions on attendees, location, and other arrangements. The core team was also interested in any general input from the NRCC as the initiative moves forward.

Overall, the NRCC supported the scenario workshop proposal. Some clarifying questions were asked. There would likely be space for some non-participating attendees to listen in-person, and there could be opportunities for public comment, either from those attendees or from people listening remotely. The facilitators would be members of the core team, and while many of those individuals do not have facilitator training, in this case, the facilitation would be for small groups that are generating ideas, rather than either larger groups or groups trying to make a decision, which (in Mr. Star's experience) are the types of groups that require more professional facilitation. Mr. Star would provide the facilitation for the large group discussions. The issue of timing the meeting in June, especially for fishermen, was raised, but Mr. Star explained that May was too soon, and the other weeks in June already had Council and Commission meetings scheduled. There was also some discussion of funding. Ms. Toni Kerns informed the NRCC that there was sufficient money with the NOAA Fisheries grant (administered by the ASMFC) to cover all participants' travel except for federal staff or Council staff; the grant also cannot cover Council members' stipends if any attend, but it can pay for travel costs.
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Regarding attendees, there was significant discussion. The goal is to have a suitable balance across stakeholder groups as well as a regional balance (from Florida to Maine). Many highlighted the importance of getting the right people around the table to have a productive workshop, that not all of the categories identified by the core team were of equal importance, and some should be down-weighted. Also, some individuals might cover multiple categories (e.g., industry members who are also Council members). Mr. Star explained that he is looking for three categories of people: Stakeholders, knowledge holders, and some outsiders – people who have not been heavily involved in the fishery management process in the past. He added that there was no expectation that there would be equal representation for each category. He also explained that while fishery manager perspectives were very important, their input would likely be more useful in the fall sessions, when the focus would be on developing responses to the scenarios. The core team will use a broadly distributed questionnaire, which would include demographic information and ask for the applicant's interest and potential contribution, and would use this to create a "short list" of participants. This list would be distributed to the NRCC or input before final decisions are made. While some were uncertain about Mr. Star's inclusion of "outsiders," Mr. Star emphasized that the vast majority of participants would be people who are involved in oceans or fisheries and familiar with regional issues and constraints, but there would hopefully be new voices who could provide a different perspective for developing scenarios. Demographic information (e.g., gender and number of years in fisheries) may be used to try to increase diversity, if other things like roles and geography are not sufficiently diverse (and there are enough applicants). **The NRCC recommended removing some stakeholder types such as community leaders and possibly economic development interests, suggesting the focus really be about individuals that are most likely to be affected.**

Regarding location, the **NRCC generally agreed that Washington DC metro area should be considered to be at the top of the list**, given its central location, although Baltimore and Providence could also be considered. All agreed that Atlanta and Raleigh/Durham should not be further considered as options due to increased costs associated with more airline travel.

For general input, Mr. Tom Nies raised that the timing of the fall workshops could be difficult, given other Council activities. He also asked for explanation of how that phase works, and how decisions get made. Mr. Star replied that it is difficult to answer now, because we don't have the scenarios yet, to then say what responses could be developed and what that would lead to. Mr. Bob Beal asked if the there are rules of engagement, such as whether outputs are confined by current laws. Mr. Star said that, ideally, all options are on the table, but it could be a decision to say that we assume nothing changes under the Magnuson Stevens Act, or that we could assume changes are possible. Mr. Pentony added that we want to be sure we get scenarios that are distinct, requiring different responses.

Mr. Star ended by thanking the NRCC for its input. The core team will continue to think about the feedback received, especially about how to get a balance of roles and diversity, and how to structure the questionnaire to get applicants that will help the process move forward.

Next Meeting

The Spring 2022 NRCC meeting is scheduled for May 9-10. NEFMC is chairing.