

Proposed Framework for East Coast Climate Change Scenario Planning Initiative

July 2021

Overview

In November 2020, the Northeast Region Coordinating Council (NRCC) agreed to move forward with an east coast scenario planning initiative as a way to explore jurisdictional and governance issues related to climate change and shifting fishery stocks. The NRCC consists of leadership from the Atlantic States Marine Fisheries Commission (ASMFC), Greater Atlantic Regional Fisheries Office (GARFO), Mid-Atlantic Fishery Management Council (MAFMC), New England Fishery Management Council (NEFMC), and Northeast Fisheries Science Center (NEFSC). In addition, the NRCC and the South Atlantic Fishery Management Council (SAFMC) agreed that the SAFMC should participate in the process as well given that governance issues related to climate change and shifting stocks will need to be addressed along the entire East Coast.

Scenario planning is a tool that managers can use to test decisions or develop strategy in a context of uncontrollable and uncertain environmental, social, political, economic, or technical factors.¹ It is a structured process for managers to explore and describe multiple plausible futures and to consider how to best adapt and respond to them. Scenario planning is not a tool for predicting future conditions; rather, scenarios are essentially stories about plausible combinations of future conditions that allow for explicit consideration of uncertainty in future conditions. Scenarios are created in response to a focal question developed based on a major strategic challenge faced by an organization.

This document describes a proposed plan for a coordinated East Coast Scenario Planning Initiative. Some of the content below is adapted from the July 2020 recommendations of an NRCC scenario planning working group,² which was formed in 2020 to explore this concept and provide recommendations to the NRCC. The working group included representatives from all NRCC partners as well as NMFS Headquarters and the SAFMC.

As this process develops, additional information and documents will be posted to a dedicated website: <https://www.mafmc.org/actions/climate-change-scenario-planning>.

Core Team

The core team for this project, listed below, will serve as the primary technical group working on this project in coordination with a contracted facilitator. Along with the facilitator, the core team will be responsible for much of the research, planning, coordination, and compiling of materials for this process. The core team is analogous to a Fishery Management Action Team (FMAT) or Plan Development Team (PDT) used in the development of Council management actions. The NRCC may determine that additional expertise is needed on this technical working group.

¹ National Park Service, 2013. Using Scenarios to Explore Climate Change: A Handbook for Practitioners. National Park Service Climate Change Response Program. Fort Collins, Colorado. Available at: https://www.nps.gov/parkhistory/online_books/climate/CCScenariosHandbookJuly2013.pdf.

² Available at: <https://www.mafmc.org/s/Scenario-Planning-WG-Summary-Document-Final-Version.pdf>

Organization	Representative
MAFMC	Kiley Dancy
ASMFC	Toni Kerns
NMFS GARFO	Moira Kelly
NEFMC	Deirdre Boelke
NMFS NEFSC	Sean Lucey
SAFMC	Roger Pugliese
NMFS HQ	Wendy Morrison

Facilitation

The NRCC agreed that an experienced process facilitator should be contracted to support the scenario planning exercise through the majority of the process. Jonathan Star of Scenario Insight³ has been contracted as the facilitator for this process as of May 2021. The facilitator will be expected to work with the core team on major steps of this process including conducting a scoping process for gathering preliminary stakeholder input, developing materials and logistics for a scenario building workshop, facilitating and summarizing a scenario building workshop, and facilitating a follow up process to explore applications of the scenario building outcomes.

Funding for the facilitator will be provided by The Nature Conservancy (TNC), which was awarded a grant from the Gordon and Betty Moore Foundation to support East Coast scenario planning efforts in partnership with the NRCC. The Atlantic States Marine Fisheries Commission has agreed to administer these funds, which are expected to cover some costs of this initiative including process facilitation, meeting facilities and/or technology contracts for remote meeting platforms, potentially public invitational travel, and other miscellaneous expenditures such as printing, outreach, or scoping surveys.

In addition to the funding described above, NMFS has secured additional funds to support this initiative. These funds are expected to be used to support workshop logistics, facility rentals, general support for the scenario planning workshops, and other costs of the initiative. Each of the participating organizations have also committed resources to support travel and participation of staff and members.

Benefits of Scenario Planning

As noted above, scenario planning is a tool that managers can use to test decisions or develop robust strategies in a context of uncontrollable and uncertain environmental, social, political, economic, or technical factors. In the case of the NRCC, conducting an east coast scenario planning exercise will be designed to evaluate challenging climate change related management and governance issues in a changing ocean environment across multiple jurisdictions. Scenario planning can be a useful tool in not only exploring and describing multiple plausible futures, but also to advance discussion of how an organization can plan for or adapt to different possible future scenarios.

Scenario planning can consider broader uncertain forces in the world such as societal change, climate and environmental change, as well as changes in the policy and legal environment, and consider how these drivers that are outside of the organization's control may affect organizational priorities and planning. Some benefits of scenario planning are that this process:

- Forces participants to explore their underlying assumptions and perceptions about the range of possible future conditions.

³ <http://scenarioinsight.com/about/>

- Reduces the tendency for managers to become overconfident in their expectations of future conditions, too focused on a limited view of the future, or paralyzed by uncertainty.
- Provides a way to organize complex information about changing conditions and stimulates creative and innovative thinking about how to prepare for change, in a way that is disconnected from the typical regulatory process.
- Provides an opportunity for proactive thinking and planning, allows participant groups to be well positioned to be collectively ahead of the curve instead of merely reacting to new and dynamic information as it occurs.
- Can enhance stakeholder engagement, provide diversity and equity in decision making, and foster creativity and social innovations from stakeholders.

Draft Initiative Objectives and Focal Question

The NRCC has approved the following draft objectives and focal question to be considered during a scoping process and potentially refined based on scoping input:

Draft Initiative Objectives

The objectives for this initiative should address the question “Why are we doing this work?”

- (i) **To explore how fishery governance and management issues will be affected by climate-driven change in fisheries, particularly shifting stock availability and distributions.**
- (ii) **To develop a set of tools and processes, which provide flexible and resilient fisheries management strategies that effectively address uncertainty in an era of climate change.**

Strategic Challenge and Draft Focal Question

The “strategic challenge” these fishery management organizations are facing is essentially: **How should East Coast fishery management governance evolve in an era of climate change?** We might all have our ideas on the answer to that question, but if we are using scenarios, then the only correct answer is “it depends.” A suitable evolution of governance will depend on how climate change affects fisheries, and we don’t know the answer to that question right now. Hence the need for a scenario initiative, with the following draft focal/framing question:

How will climate change affect stock distribution, availability, and other aspects of fisheries over the course of the next 20 years? And what does this mean for effective future governance and management across multiple jurisdictions?

We cannot know the precise answer to this question. But we can create scenarios that provide us with a range of possibilities. These possibilities will then force us to think about a wide range of effective future governance/management models, and then decide upon any changes needed.

Draft Expected Outcomes

The core team and facilitator have identified the following expected outcomes and products of this initiative, with the potential for this list to be refined as the project progresses:

- A set of scenarios that describe different ways that climate change could affect the future of east coast fisheries
- An understanding of the implications of these scenarios and the challenges and opportunities facing fishery management in the future, including a better understanding of the limitations of current systems

- A set of near-term and long-term management priorities that help achieve fishery management objectives under a range of different future conditions
- Recommendations for the Councils, Commission, and NMFS on policies that could address governance challenges and improve our ability to adapt to varying future scenarios
- A list of data gaps, research needs, and monitoring needs for changing conditions.
- A framework for ongoing conversation and idea generation with and amongst various stakeholders

Structure for Oversight and Participation

The ultimate decision-making management body for this process will be the NRCC with the addition of at least one South Atlantic representative. Given the number of management groups involved and the variation in their decision-making processes and timelines, it is unlikely to be feasible to seek explicit approval at each process step from each management body. Instead, it is expected that participating organization representatives will provide periodic updates to their respective management bodies and seek their feedback for incorporation into the core team/NRCC process.

It is also possible that Council and Commission advisory bodies could be used to inform various parts of the process where appropriate. Specifically, Committees, Advisory Panels, Technical Committees, and/or SSCs could provide input during the scoping process, during the development of specific driving forces to be explored during a scenario building workshop, and in the development of applications and products from this process. Members of these groups could also be identified to participate directly in the planned workshops. Consideration will need to be given to the feasibility of engaging and the level of involvement of these groups, weighing the additional complexity of involving many different groups.

As the process develops, further discussion will occur to identify how participants will be directly involved in the development of the scenarios and/or the development of applications and recommendations.

Proposed Scenario Planning Process and Timeline

The proposed scenario planning process consists of six major steps and is outlined in the table below. This process is adapted from the recommendations of the NRCC working group in July 2020 and is loosely based on the scenario planning process outlined in the NPS 2013 scenario planning handbook.

The NRCC working group recommended that the NRCC adopt a two-workshop model: the first workshop would be held to develop the draft scenarios in phase 4, and the second workshop would be held in phase 5 to discuss how the insights from these scenarios should be applied in the management process, including developing recommendations for management and governance strategies and priorities.

Table 1: Proposed process for scenario planning, adapted from NRCC working group July 2020 recommendations and based loosely on NPS 2013 Handbook stepwise process. Approximate timeline is tentative pending further NRCC discussion.

	Goal	Steps	Outcomes/Products	Who/What	When
Phase 1: Orientation	Establish project objectives, guidance structure, process, and timeline	<ul style="list-style-type: none"> ● Form core team ● Develop facilitation contract ● Establish process, purpose, and scope of project, including focal issue (strategic challenge) to explore ● Determine decision-making structure ● Determine type of desired outcomes ● Plan for scoping process 	<ul style="list-style-type: none"> ● Framework and timeline for a proposed process ● Contract with outside scenario planning expert/facilitator ● An understanding of the purpose, desired outcomes, focal issue, and scope of project ● Plan for scoping 	<ul style="list-style-type: none"> ● Core team and facilitator with input from NRCC if needed 	Late 2020 – Early Summer 2021
Phase 2: Scoping	Gain stakeholder perspectives on focal issue and external driving forces for east coast fisheries	<ul style="list-style-type: none"> ● Work with core team and facilitator to conduct structured outreach (“scoping” process) ● Refine project objectives and focal question if needed based on scoping feedback 	<ul style="list-style-type: none"> ● Synthesize public and stakeholder input for further use in process, particularly regarding focal question and external driving forces to be further explored during scenario building workshop ● Introduce stakeholders to scenario planning and potential application in this context ● Build preliminary list of possible workshop participants 	<ul style="list-style-type: none"> ● Core team, facilitator, interested stakeholders and public 	Summer/Fall 2021 (Virtual)

<p>Phase 3: Exploration</p>	<p>Identify and analyze drivers, variables, trends, and uncertainties</p>	<ul style="list-style-type: none"> ● Identify and describe drivers, variables, and uncertainties from interviews with experts, advisory bodies, core team, public input results ● Identify potential impacts of these drivers ● Plan for discussion during synthesis phase (i.e., scenario building workshop) 	<ul style="list-style-type: none"> ● A list of drivers, variables, or uncertainties that are likely to impact east coast fisheries over the specified time horizon ● Supporting introductory information on these drivers, such as overview text, tables, conceptual models, charts, or maps that will help process participants discuss potential impacts 	<ul style="list-style-type: none"> ● Core team & facilitator, with input from experts, management & advisory bodies, stakeholders 	<p>Fall 2021 (In person and/or virtual)</p>
<p>Phase 4: Synthesize & Create Scenarios</p>	<p>Produce small number of scenarios using critical drivers and potential impacts identified in Phase 3</p>	<ul style="list-style-type: none"> ● Determine critical uncertainties with large impact on focal issue ● Hold workshop to build scenario frameworks and choose scenarios ● Develop scenario narratives ● Review scenarios for plausibility 	<ul style="list-style-type: none"> ● 3-5 plausible, relevant, challenging and divergent scenarios using critical uncertainties to inform, inspire and test actions/strategies 	<ul style="list-style-type: none"> ● Core team works with input from NRCC, others. ● Planned workshop to create scenarios 	<p>Late 2021/ Early 2022 (In person)</p>

<p>Phase 5: Applications</p>	<p>Answer “So what?” questions: What are the impacts of these plausible futures? What can we do about it?</p>	<ul style="list-style-type: none"> ● Identify scenario implications ● Use scenarios to inform development of management strategies and priorities, and policy recommendations for future governance and research ● Develop recommendations applicable to collective group of participants and/or individual management organizations 	<ul style="list-style-type: none"> ● Report with list of actions, strategies, or areas for additional research based on discussions initiated by scenarios 	<ul style="list-style-type: none"> ● Core team works with input from NRCC, others. ● Workshop to understand management implications 	<p>Spring/Summer 2022 (In person)</p>
<p>Phase 6: Monitoring</p>	<p>Identify important indicators (trigger points) that can signal changes in the environment as future unfolds</p>	<ul style="list-style-type: none"> ● Select indicators to monitor ● Monitor environment changes 	<ul style="list-style-type: none"> ● List of indicators and early warning signals for continued research and monitoring ● A monitoring strategy 	<ul style="list-style-type: none"> ● Core team works with input from NRCC, others 	<p>Summer/Fall 2022 (In person and/or virtual)</p>