

EAST COAST CLIMATE CHANGE SCENARIO PLANNING

Update to Mid-Atlantic Fishery Management Council: December 2021
Adapted from Update to NRCC: November 2021



New England
Fishery Management Council



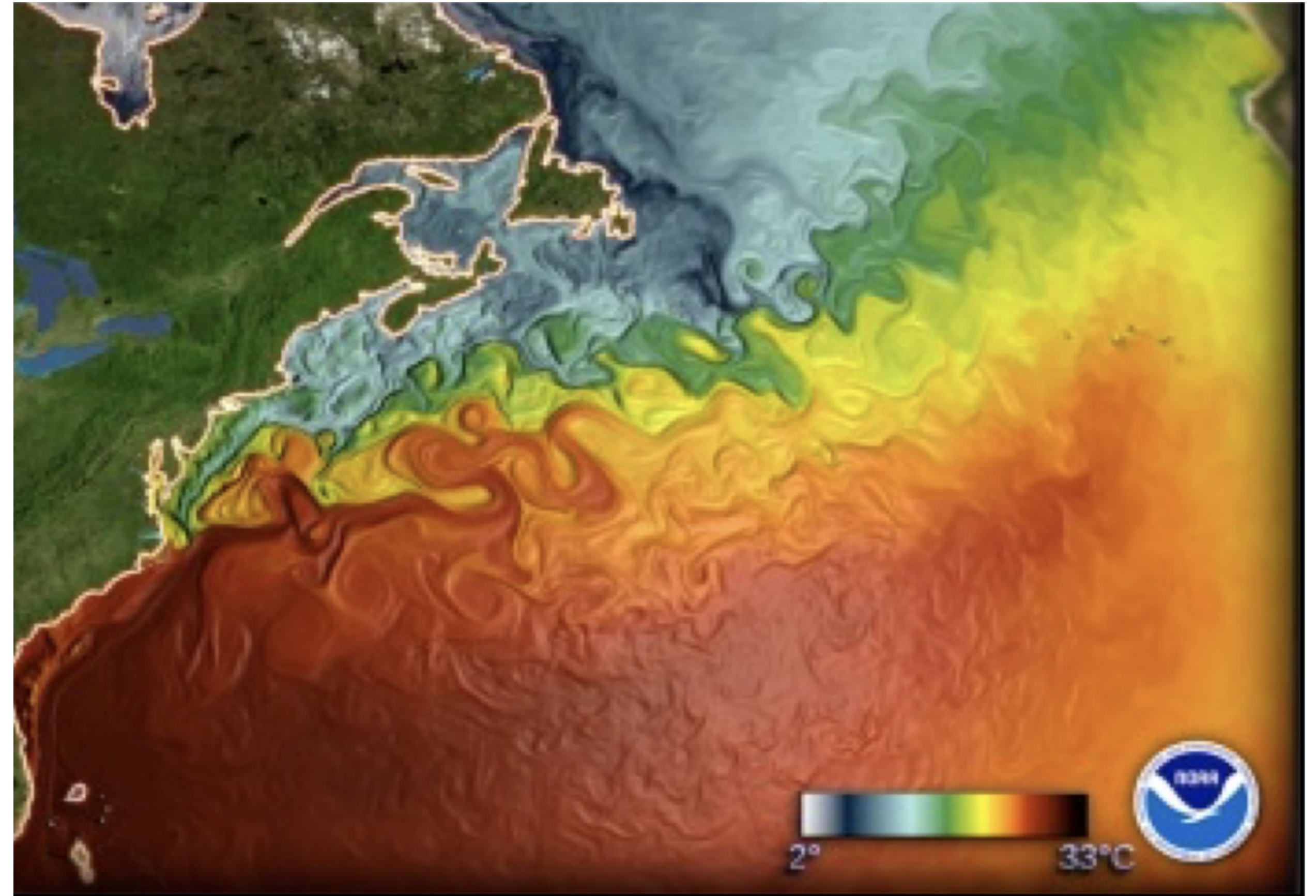
MID-ATLANTIC FISHERY
MANAGEMENT
COUNCIL



- 1 Describe the work undertaken since previous update to MAFMC in April 2021, with a focus on the draft/initial findings from the Scoping phase of the work (Summer/Fall 2021)**
- 2 Overview of activities and timing for the next phases of the initiative**

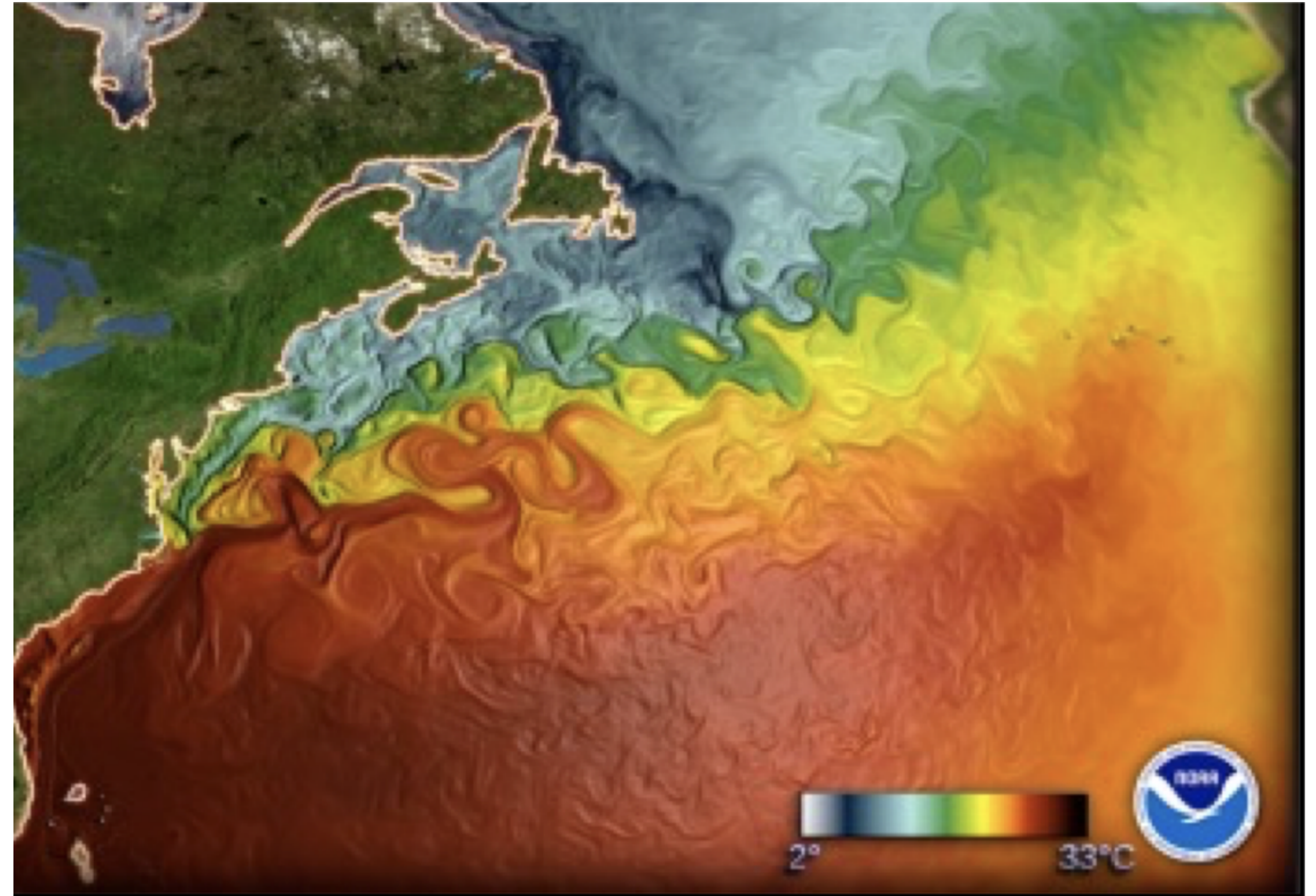
East Coast Climate Change Scenario Planning

- Climate Change Scenario Planning initiated by the Northeast Region Coordinating Council (NRCC) + South Atlantic Council in November 2020 to explore jurisdictional and governance issues related to climate change and changes in fishery stock distribution
- Previously discussed by MAFMC in April 2020 and April 2021



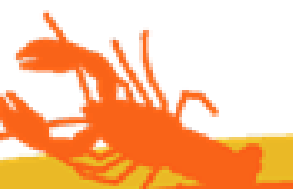
East Coast Climate Change Scenario Planning

- 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.
- Structured process for managers to explore and describe multiple plausible futures and consider how to best adapt and respond to them.

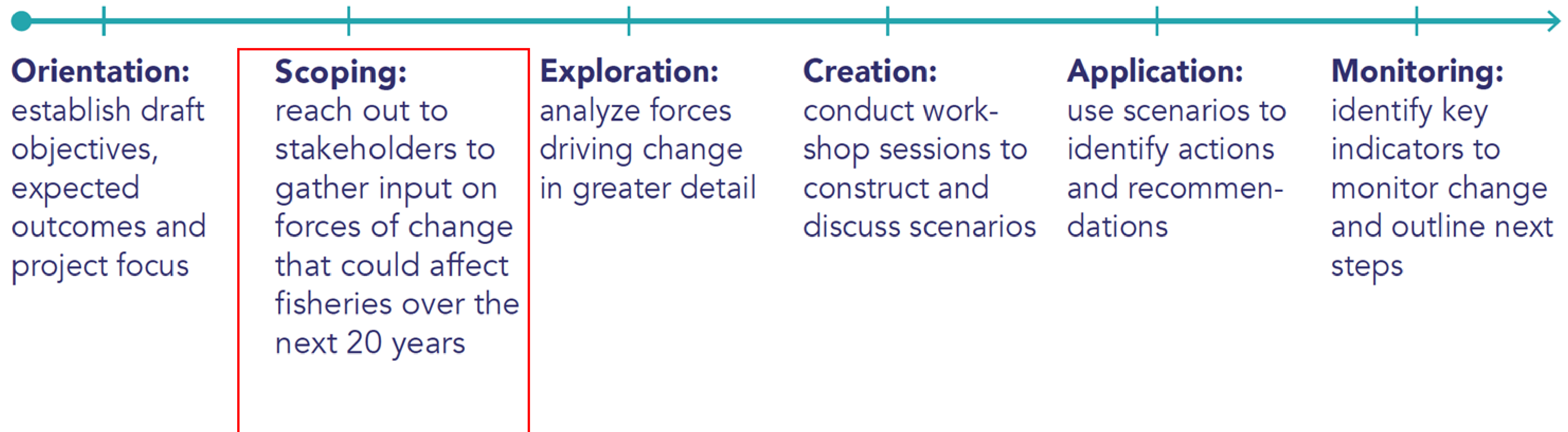


ECSP Core Team

Organization	Representative
MAFMC	Kiley Dancy
ASMFC	Toni Kerns
NMFS GARFO	Moira Kelly
NEFMC	Deirdre Boelke
NMFS NEFSC	Sean Lucey
SAFMC	Roger Pugliese
NMFS SERO	Karla Gore
NMFS HQ	Wendy Morrison
Process Facilitator	Jonathan Star, Scenario Insight



Steps in this Multi-Year Initiative



Summer - Fall 2021

Phases in this timeline were outlined in ECSP process overview document, July 2021, available at <https://www.mafmc.org/climate-change-scenario-planning>

Our Work So Far: Scoping Highlights

1. Created a set of **introductory materials** (brochures, videos) and redesigned the website (<https://www.mafmc.org/climate-change-scenario-planning>) to ensure the process is transparent and accessible.
2. Designed and presented a **webinar**, held on three dates (Aug 30, Sep 1, Sep 2) attended by over 250 participants. The webinar introduced the initiative, explained scenario planning, and provided participants with a chance to review the project objectives and provide their own perspective on climate change.
3. Designed and conducted an online **questionnaire** to gather input on the initiative, and on the forces of change that could affect fisheries over the next 20 years (and will hence feature in our scenarios). We received 383 responses, containing a wealth of information and perspectives from a wide range of stakeholders.

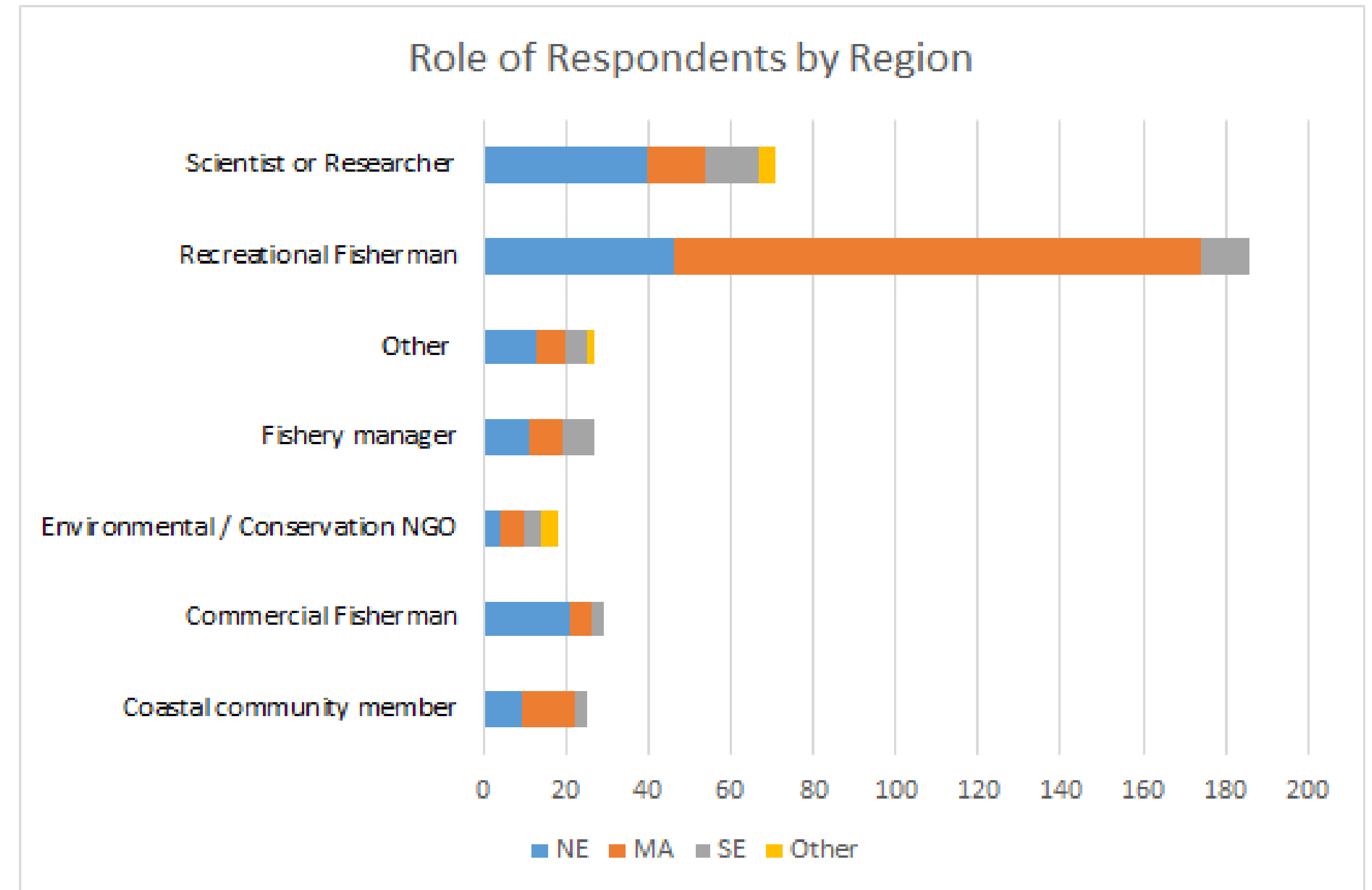
Scoping Phase: Summary of Findings

What did the webinars and questionnaire tell us?

- 1. There is a lot of interest in this subject.** Most people realize that climate change will affect fisheries and are supportive of efforts that help all stakeholders prepare for changes. Over 70% of questionnaire respondents (~280 people) would like to continue to be informed and stay involved in this initiative.
- 2. Stakeholders are already seeing the effects of climate change** on many different aspects of fisheries and coastal life, and they expect to see more impacts in the future.
- 3. There is general support for the project objectives,** focal questions, and expected outcomes. We received several comments concerning recommended changes to the objectives and have made some minor adjustments accordingly.
- 4. Stakeholders identified a broad range of factors that might shape east coast fisheries** in the next 20 years. Each region and group, while having unique experiences, had a similar overall perspective when considering how climate change may shape the future of fisheries.
- 5. The next phases of the initiative must strike a balance between focus and scope.** Participants recognize the wide-ranging scope of this exercise and the importance of gathering and engaging wide-ranging input in the process; however, the central questions of this initiative will require some more focused discussions.

Scoping Phase: Summary of Online Questionnaire

- Online questionnaire asked participants about project objectives and outcomes, factors shaping change, suggested actions and any other advice for conducting the project
- Mainly open-ended, free-form questions
- **383 responses from all regions and a wide range of stakeholders**
- Comprehensive coding analysis of this qualitative data to be included in full scoping report
- At this stage, the data is most useful for two purposes:
 1. Should we make any adjustments to the project objectives?
 2. What factors will be most important to include in the scenario analysis?



Scoping Phase: Modifications to Project Objectives, Focus, Outcomes

We received a large number of comments regarding the objectives. In our analysis, we coded the responses into the following categories.

1. Changes to existing objectives are needed (100)
2. Support objectives with no changes needed (80)
3. Suggestion for additional objectives (32)
4. Things to note and consider given existing objectives (34)
5. Other comments (19)
6. Disapprove of objectives (7)

1

- Objectives are vague: add specific goals or tools
- Expand scope beyond stock distribution: look at habitat, productivity, non-climate drivers
- Emphasize conservation
- Add language about supporting fishing communities
- Objectives are too specific / restrictive

3

- Support and improve fishery science
- Identify EBFM strategies
- Advise and inform fisheries stakeholders about implications of climate change
- Revaluation of historic landings with regards to states' allocations

4

- How will objectives be measured; include a timeline

5,6

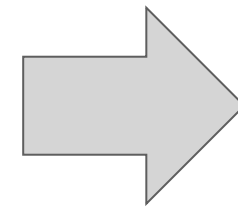
- Climate change isn't real
- Climate has always changed - we should let everything adjust and help if needed

Based on this feedback, the NRCC adopted some adjustments to objectives

Scoping Phase: Modifications to Project Objectives, Focus, Outcomes

We asked participants for feedback on these draft project objectives:

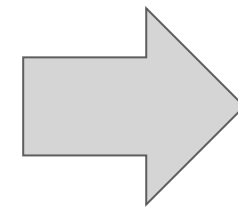
1. Explore how fishery governance and management issues will be affected by climate-driven change in fisheries, particularly shifting stock availability and distributions.



NRCC adopted revised objectives

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

2. 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.



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

Scoping Phase: Some Factors to Include in Scenario Analysis*

Certainties: What important factors will shape the next 20 years?

- Ocean temperature change
- Ocean acidification
- Sea-level rise

Uncertainties: what are the most important, unpredictable factors likely to shape the next 20 years?

- Fish stocks: health and spatial distribution
- Degree of habitat loss
- Rate of ecosystem change
- Rate of sea level rise
- Impacts on fishing industry and communities

Wildcards: what developments could surprise us, and radically reshape fisheries in the next 20 years?

- Impacts of storms and severe weather
- Changes in ocean currents
- Fishery loss

Other social, technological, economic or political factors

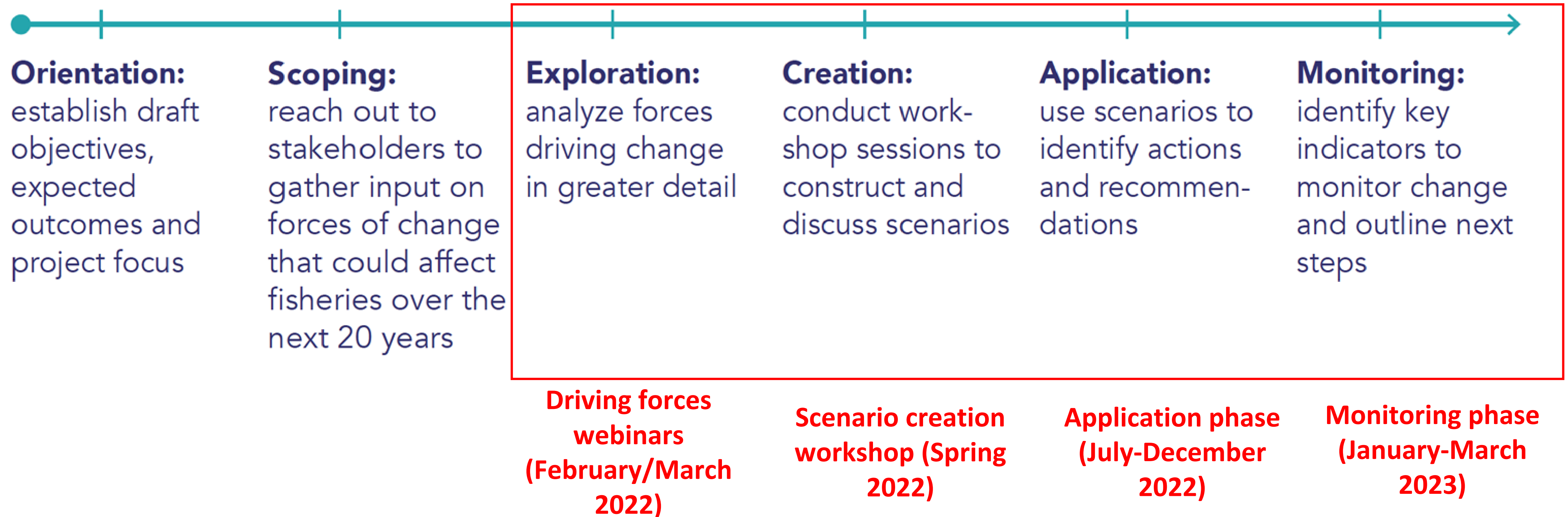
- Competing interests with other ocean users
- Loss of working waterfronts / communities
- Changes in consumer demand
- Degree of stakeholder cooperation

*Illustrative list (not comprehensive)

No significant regional / stakeholder differences

We plan to undertake further research on the most frequently mentioned factors

Steps in this Multi-Year Initiative



- Additional information, including scoping webinar presentation recordings, available at: <https://www.mafmc.org/climate-change-scenario-planning>
- Full scoping summary to be posted this month
- Information about exploration phase webinars (mid-Feb to early March) to be communicated in early 2022

