

EAST COAST CLIMATE CHANGE SCENARIO PLANNING

Council Coordinating Committee
May 18, 2022



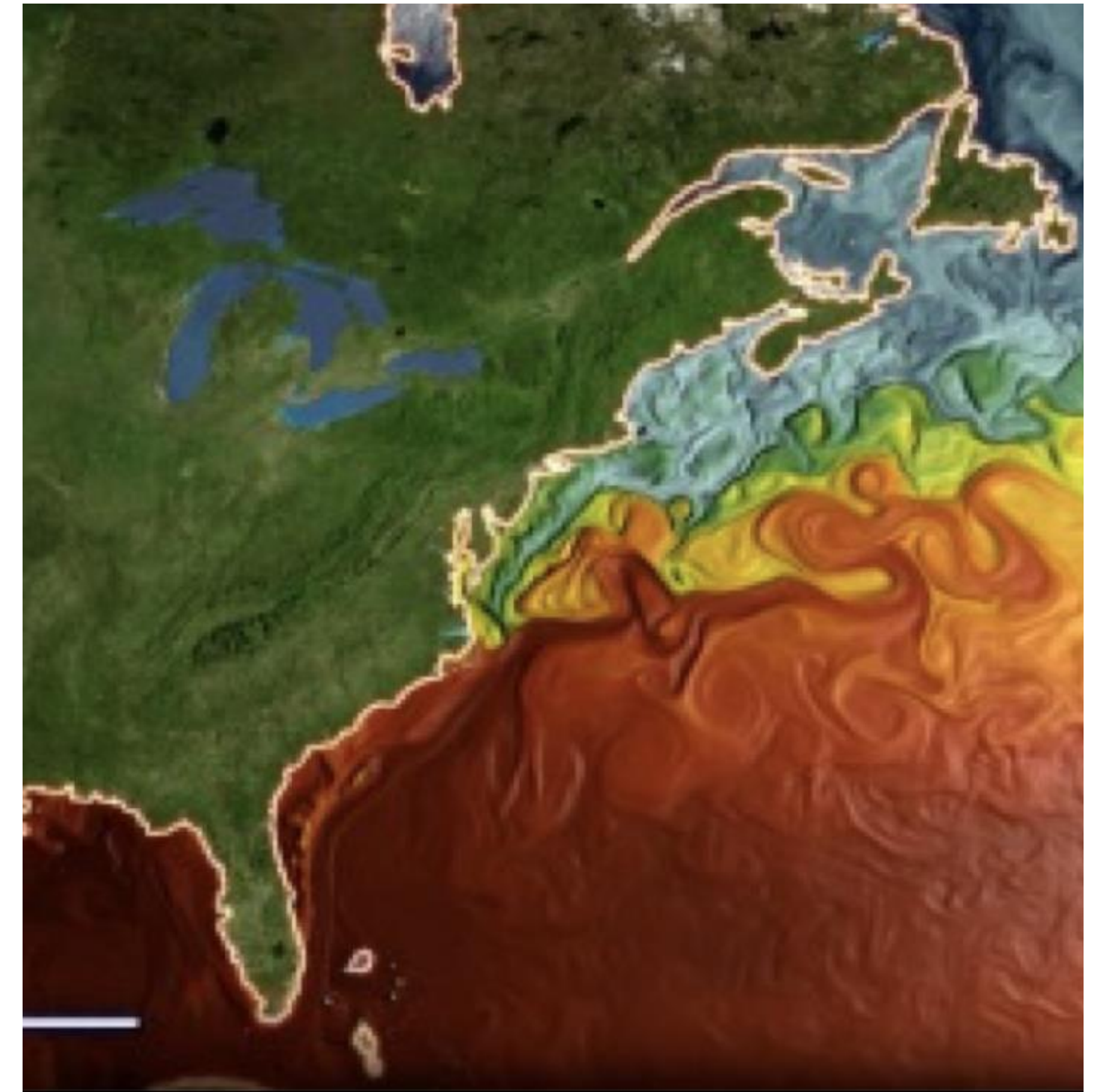
Who is Involved?

- Atlantic States Marine Fisheries Commission
 - New England Fishery Management Council
 - Mid-Atlantic Fishery Management Council
 - South Atlantic Fishery Management Council
 - NOAA Fisheries
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- “Core team” of representatives from each organization working with contracted facilitator
 - Oversight from Northeast Regional Coordinating Council + South Atlantic Council



Initiative Objectives

1. 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. 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.



What is Scenario Planning?

- A tool for planning and action in the context of an uncertain future
- If we knew that certain conditions would occur in the future, what would we do now to prepare?

What if...

- *Species distribution changes accelerate?*
- *The Gulf Stream continues to move/weaken?*
- *The frequency and intensity of extreme weather events increases?*
- *Recreational fishing effort increases or decreases substantially?*
- *Consumer seafood preferences and demand change substantially?*

What is Scenario Planning?

- Under different assumptions of future conditions:
 - Which management actions and governance strategies are **likely to be beneficial** under a range of future conditions?
 - Which management actions and governance strategies **should be avoided** due to reduced flexibility or increased difficulty of adapting to future conditions?



What is Scenario Planning?

- Not a prediction or forecast – a framework for allowing explicit consideration of uncertainty in future conditions
- Stimulates creative, innovative thinking
- Avoids focus on narrow view of the future

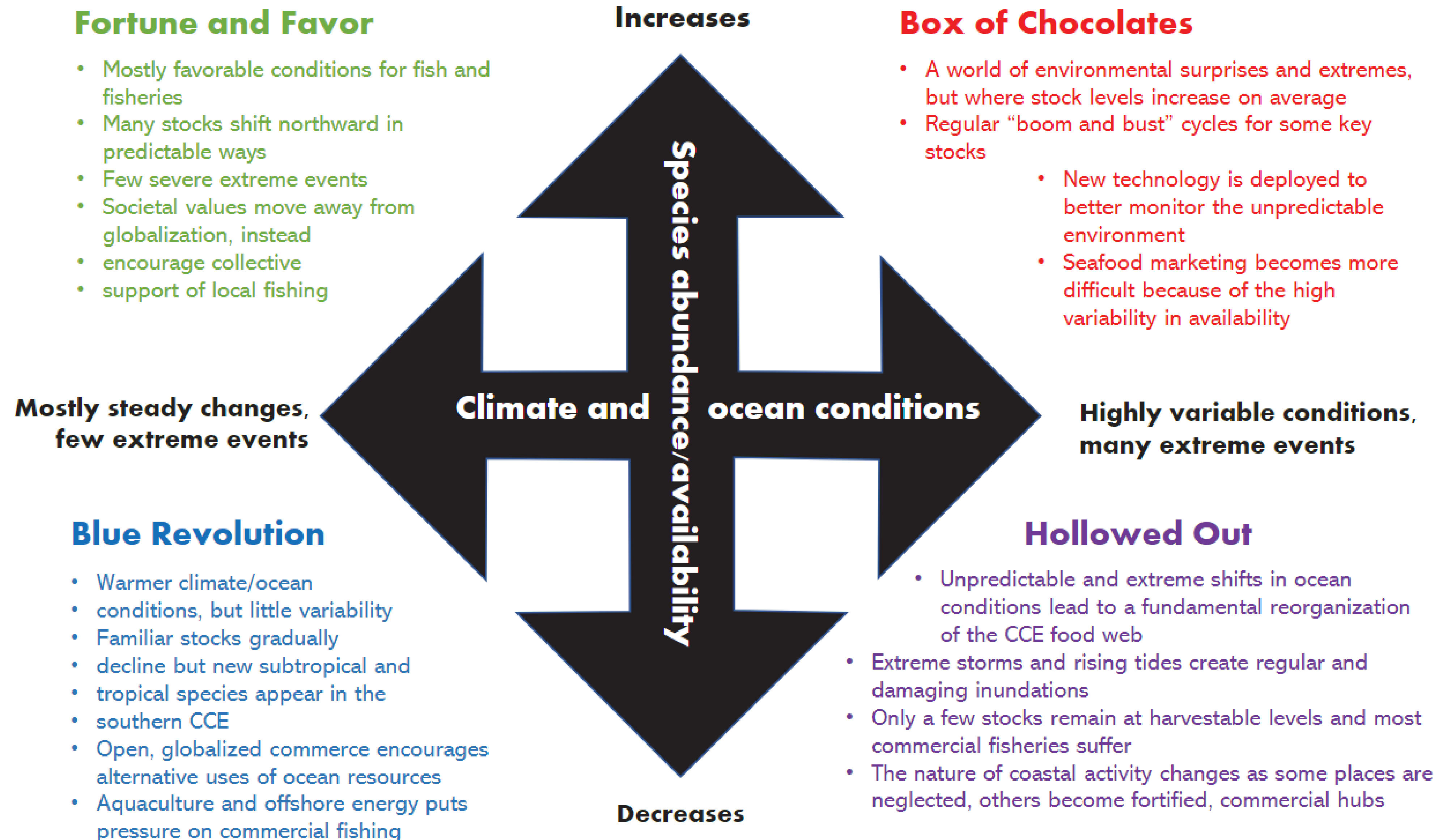
Planning for One Future



Planning for a Range of Futures

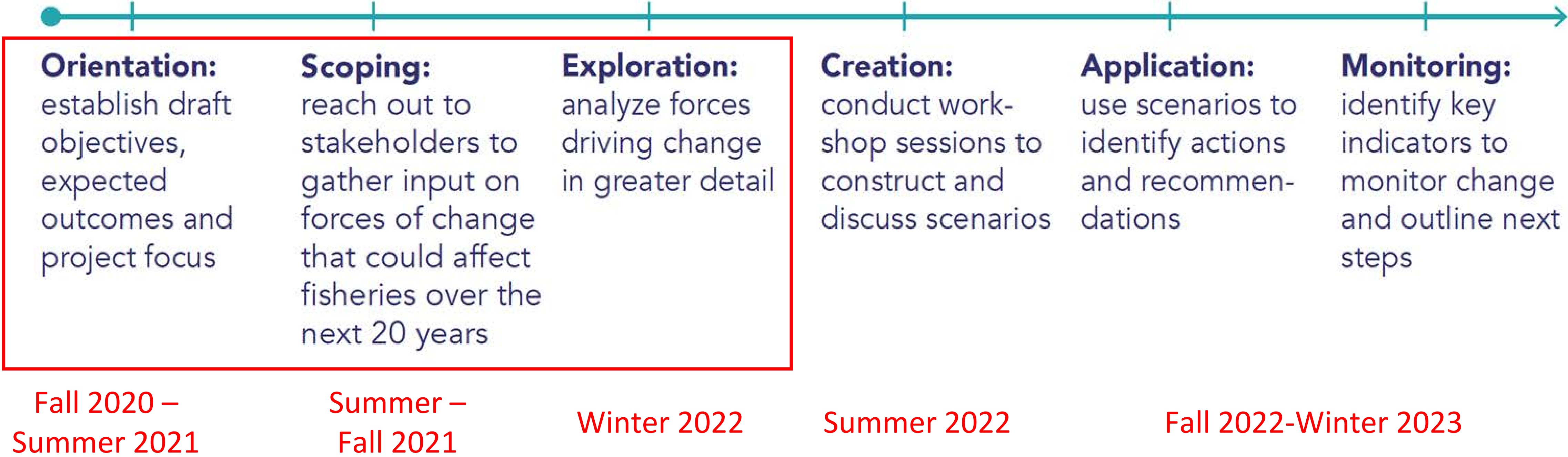


Example: Pacific Fishery Management Council Scenarios (2020)



East Coast Scenario Planning Initiative Timeline

Steps in this Multi-Year Initiative



Scoping Highlights (Summer-Fall 2021)

- Scoping activities :
 - Introductory materials (website, brochures, videos)
 - 3 introductory webinars (over 250 attendees)
 - Online questionnaire (383 responses)

EAST COAST CLIMATE CHANGE SCENARIO PLANNING

An initiative designed to prepare fishing communities and fishery managers for an era of climate change

Starting in 2021, the management bodies shown on the right are collaborating on a multi-year scenario planning initiative along the entire US Atlantic seaboard.

Fishing communities and managers have always faced a world of uncertainty. Ocean conditions change frequently and often unpredictably. Adapting to fierce storms, fish showing up in new places or disappearing from accustomed ones, unusually warm (or cold) water, and other changes have always been a part of life for those on or around the ocean.

The coming decades promise to be more challenging than the past. Climate change is a growing threat to marine fisheries worldwide. On the East Coast of the United States, some species have already experienced climate-related shifts in distribution, abundance, and productivity. A continuation – or acceleration – of these changes has the potential to strain existing fisheries management and governance systems.

In an era of climate change, we cannot be exactly sure of the conditions we might face in 20 years' time. But one thing is certain: all those involved in fisheries need to prepare for different, unexpected futures.

HOW YOU CAN GET INVOLVED

- Attend a kick-off webinar
- Complete a questionnaire
- Keep informed

See Page 4 for more details.

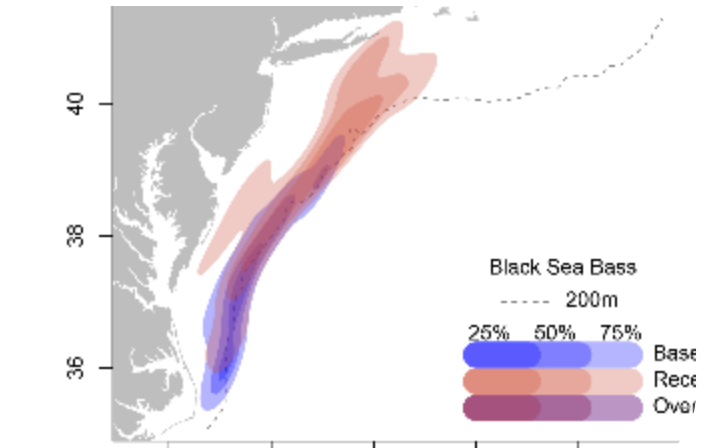
Logos: New England Fishery Management Council, MD-ATLANTIC FISHERIES, NOAA FISHERIES, and the US Department of Commerce.

Scoping Highlights (Summer-Fall 2021)

- Some insights:
 - High level of interest in these issues
 - Stakeholders **already seeing effects of climate change**
 - Identified range of oceanographic, biological, social & economic **drivers of change** over next 20 years



Florida species shifting north



Some species moving North/East



Changes in productivity and fish size



Shifts in timing or frequency of spawning



Estuarine habitat loss



New food web dynamics



Realigning businesses to adapt to new species



Sea level rise impacting boat access

Exploration Phase: Drivers of Change Webinars

Oceanographic Drivers of Change

February 14, 2022

1. Ocean temperature
2. Currents
3. Long term cycles
4. Cold pool
5. Water chemistry
6. Primary production
7. Extreme weather
8. Sea level rise

Biological Drivers of Change

February 23, 2022

7. Distribution changes
8. Productivity changes
9. Seasonal timing
10. Habitat vulnerability
11. Disease & Harmful Algal Blooms

Social & Economic Drivers of Change

March 2, 2022

12. Population growth & demographics
13. External cost factors
14. Infrastructure and working waterfronts
15. Consumer demand and market dynamics
16. Technological change
17. Competing ocean uses
18. Social vulnerability & environmental justice

Next Phases: Scenario Creation, Applications, Monitoring

Steps in this Multi-Year Initiative



Scenario Creation Workshop: June 21-23, 2022

- 2.5 day in person workshop in Arlington, VA
- Approximately 75 participants
- Balance across stakeholder groups & regions
- Partial webinar streaming (plenary discussions only)



Scenario Creation Workshop: June 2022

- Create 3-5 different scenarios to consider how climate change might affect East Coast fisheries in the next 20 years
- Different possible combinations of oceanographic, biological, and socioeconomic conditions
- Plausible, challenging, relevant, memorable stories that describe what we **might** face over the next 20 years



Application Phase: July 2022-Early 2023

Use scenarios as a **platform** to discuss future fishery governance and management issues:

- How well would our current systems work if these new scenario conditions were to occur?
- What would need to change to better prepare for these scenario possibilities?
- What are the tools and processes that need to be advanced now to ensure that fisheries are governed and managed effectively in an era of climate change?



Application Phase: July 2022-Early 2023

1. **Scenario Deepening** (July – August 2022): 3-4 webinars held in July-August to refine and add detail to scenarios before finalization
2. **Implications and Options Conversations** (September - November 2022): Use scenarios as platform to suggest challenges, opportunities, and recommendations at various management body meetings
3. **Summit Meeting** (December 2022 – January 2023): Compile ideas from implications and options conversations

Project Outputs

- ❑ **A set of scenarios** a few stories that describe – in qualitative terms – different ways in which a changing climate might affect the future of East Coast fisheries
- ❑ **A better understanding** of the challenges and opportunities facing fishery management in the future
- ❑ **A set of near-term and long-term management priorities** that help achieve fishery management objectives under a range of different future conditions
- ❑ **Policy recommendations** for broader governance changes that improve our ability to adapt to future scenarios
- ❑ **A list of data gaps, research needs, and monitoring needs** for changing conditions
- ❑ **A framework** for ongoing conversation and idea generation for all stakeholders to use

For Additional Information

- <https://www.mafmc.org/climate-change-scenario-planning>
- Core Team:

Organization	Representative
MAFMC	Kiley Dancy
ASMFC	Toni Kerns
NMFS GARFO	Travis Ford
NEFMC	Deirdre Boelke
NMFS NEFSC	Sean Lucey
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NMFS HQ	Wendy Morrison
Process Facilitator	Jonathan Star, Scenario Insight