

EAST COAST CLIMATE CHANGE SCENARIO PLANNING

Scenario Creation Workshop
June 21-23, 2022



New England
Fishery Management Council

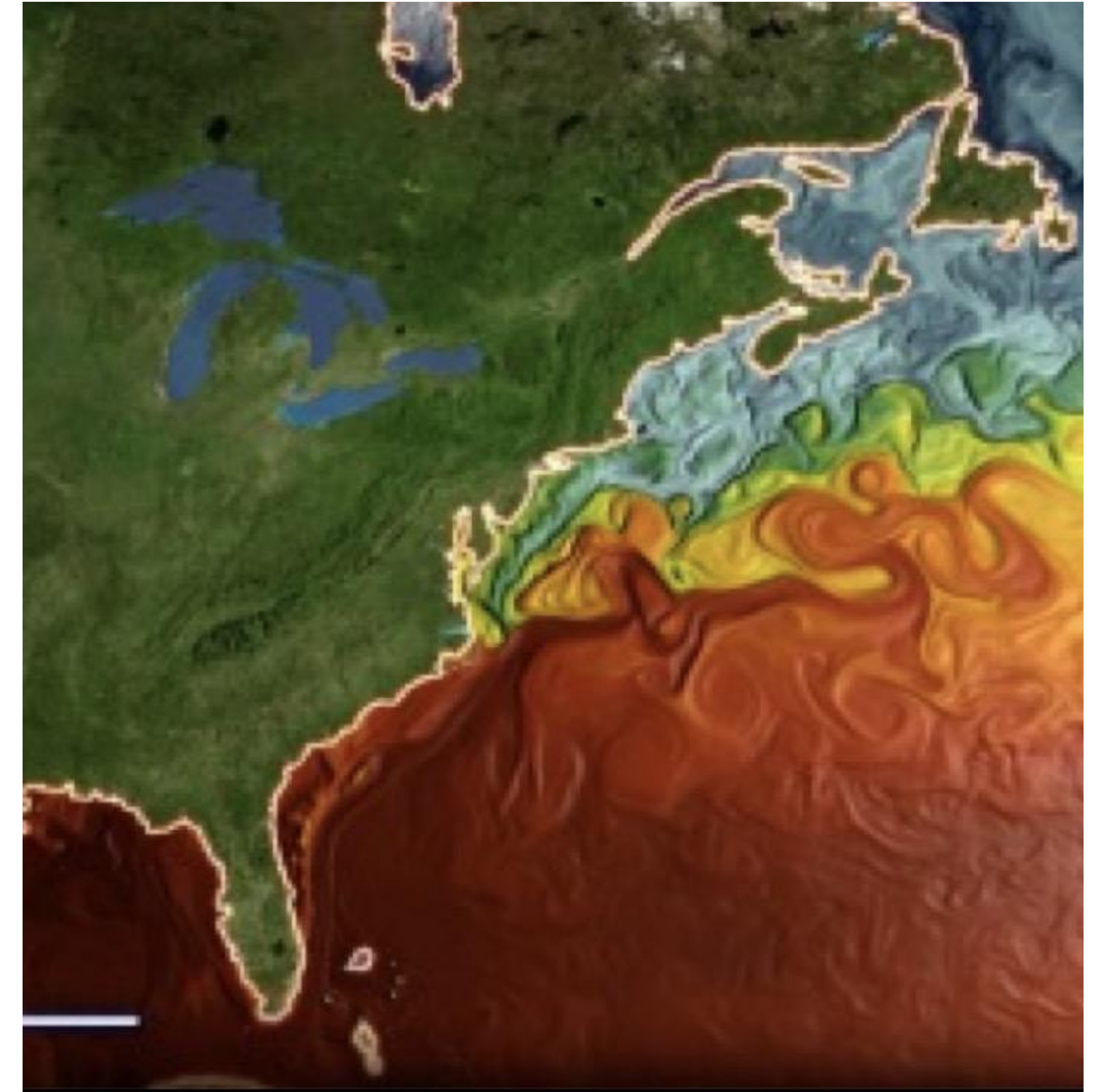


Introduction



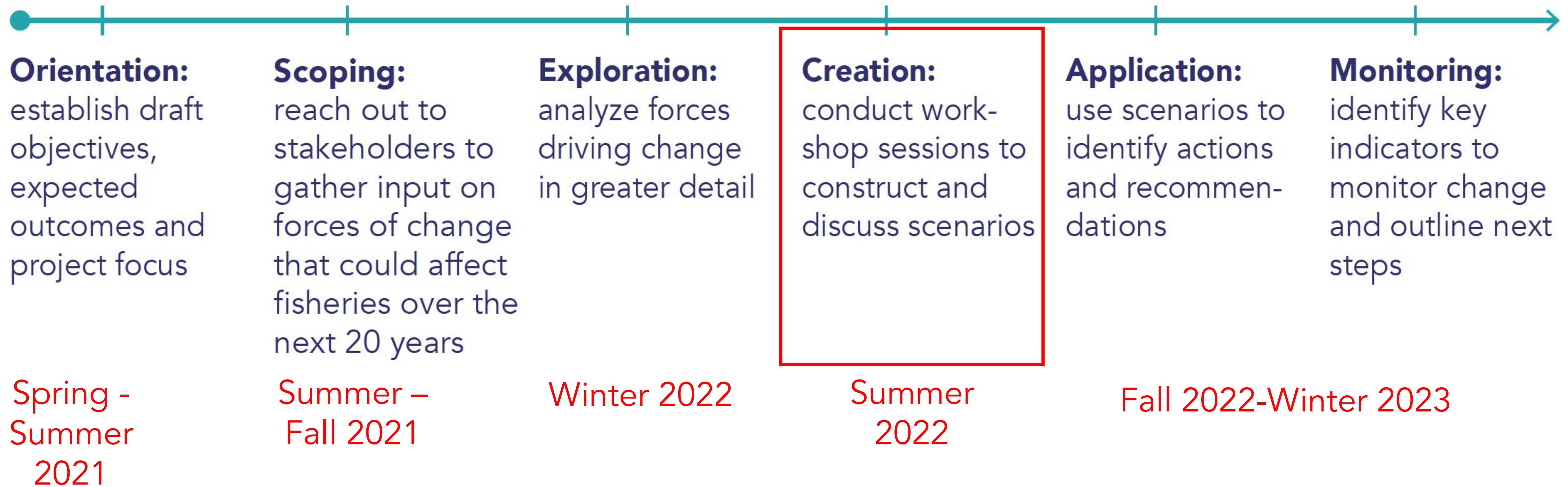
Initiative Objectives

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.

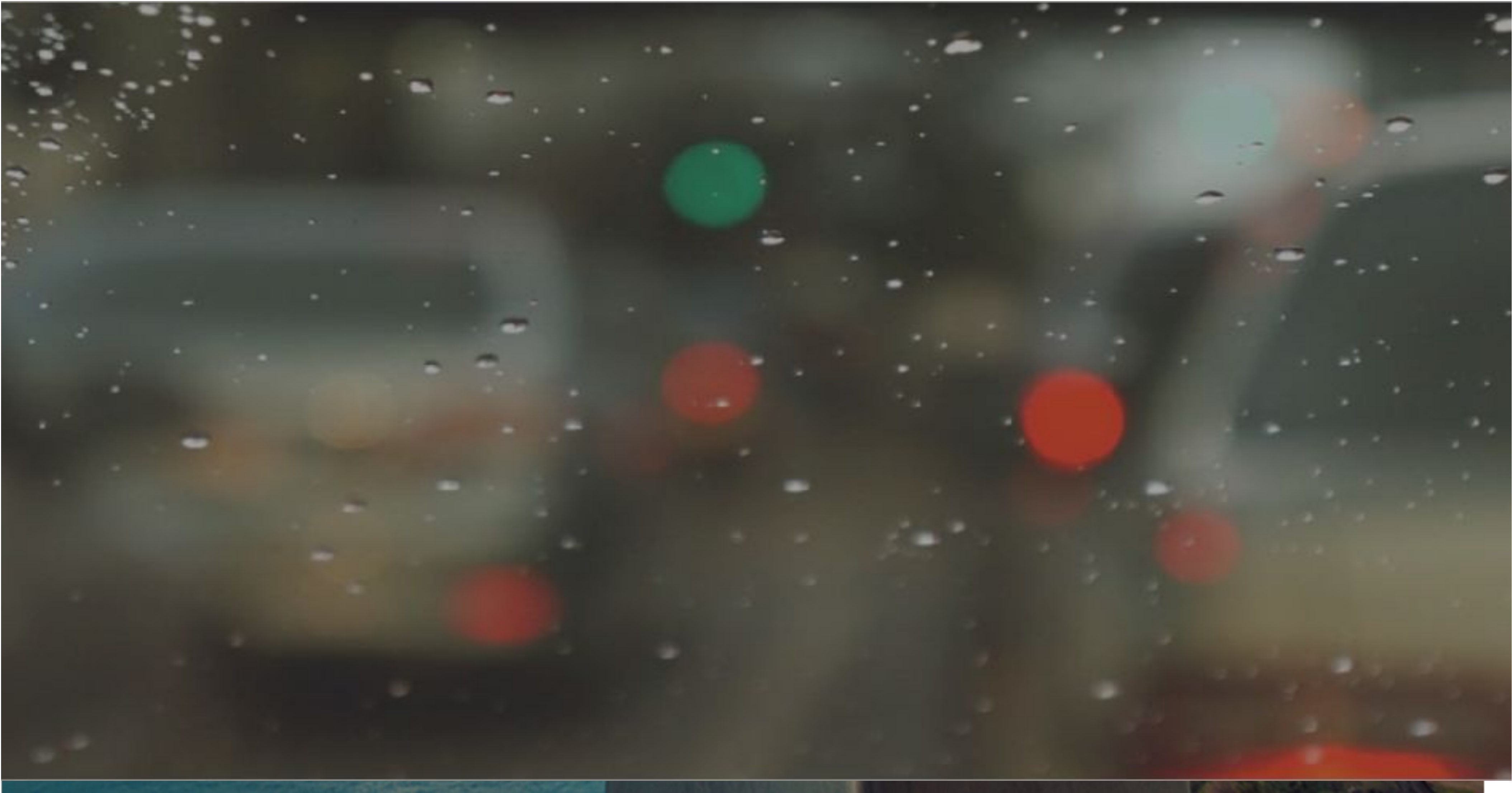


East Coast Scenario Planning Initiative Timeline

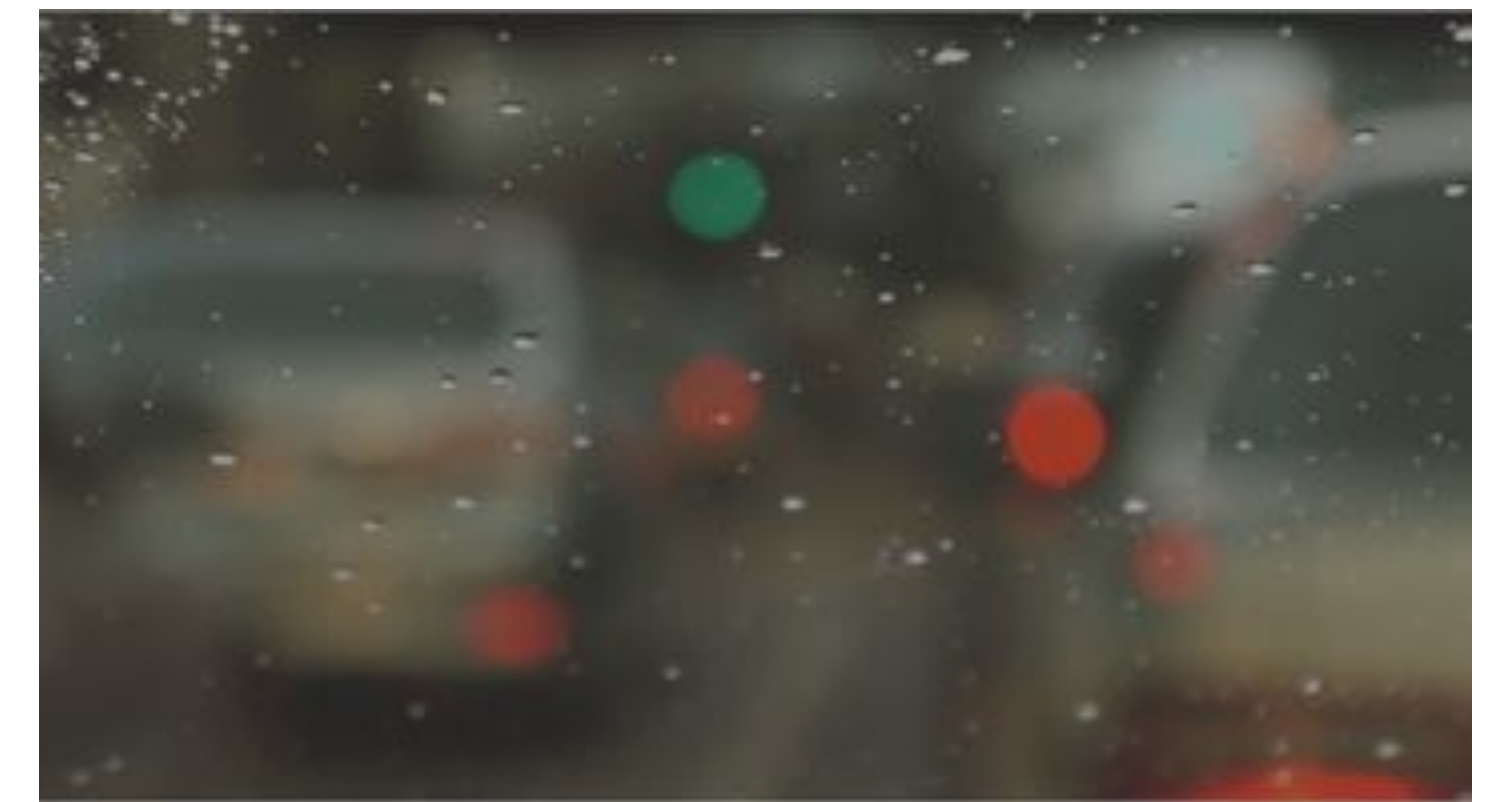
Steps in this Multi-Year Initiative



We're not good at thinking about the future



We're not good at thinking about the future



Result?

- We get surprised
- We cannot make sense of what's happening around us
- Our plans are limited or out of date
- We struggle to adapt to change or new realities

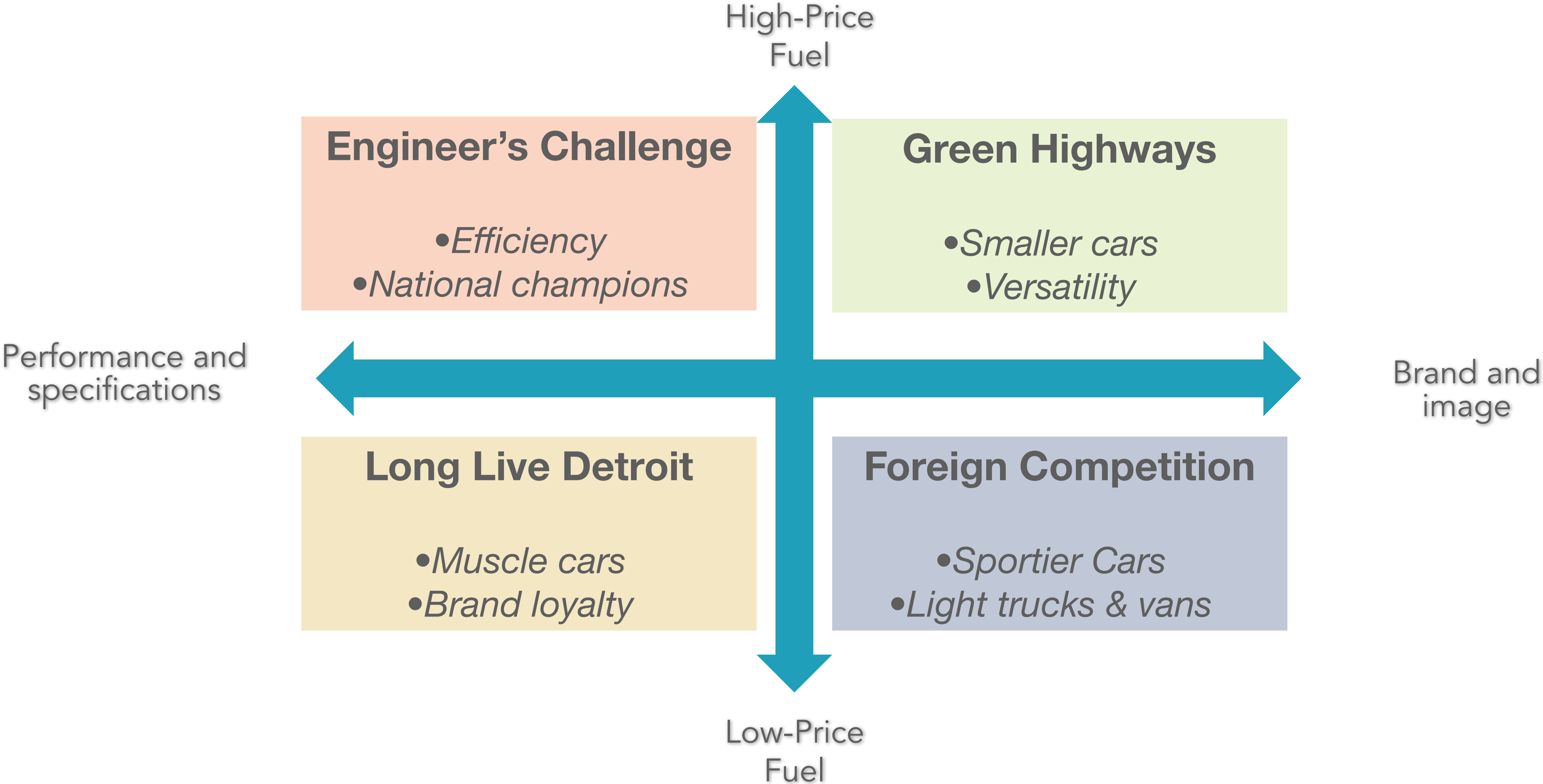
Assessing the future

- What **will** happen?
- What **should** happen?
- What **might** happen?

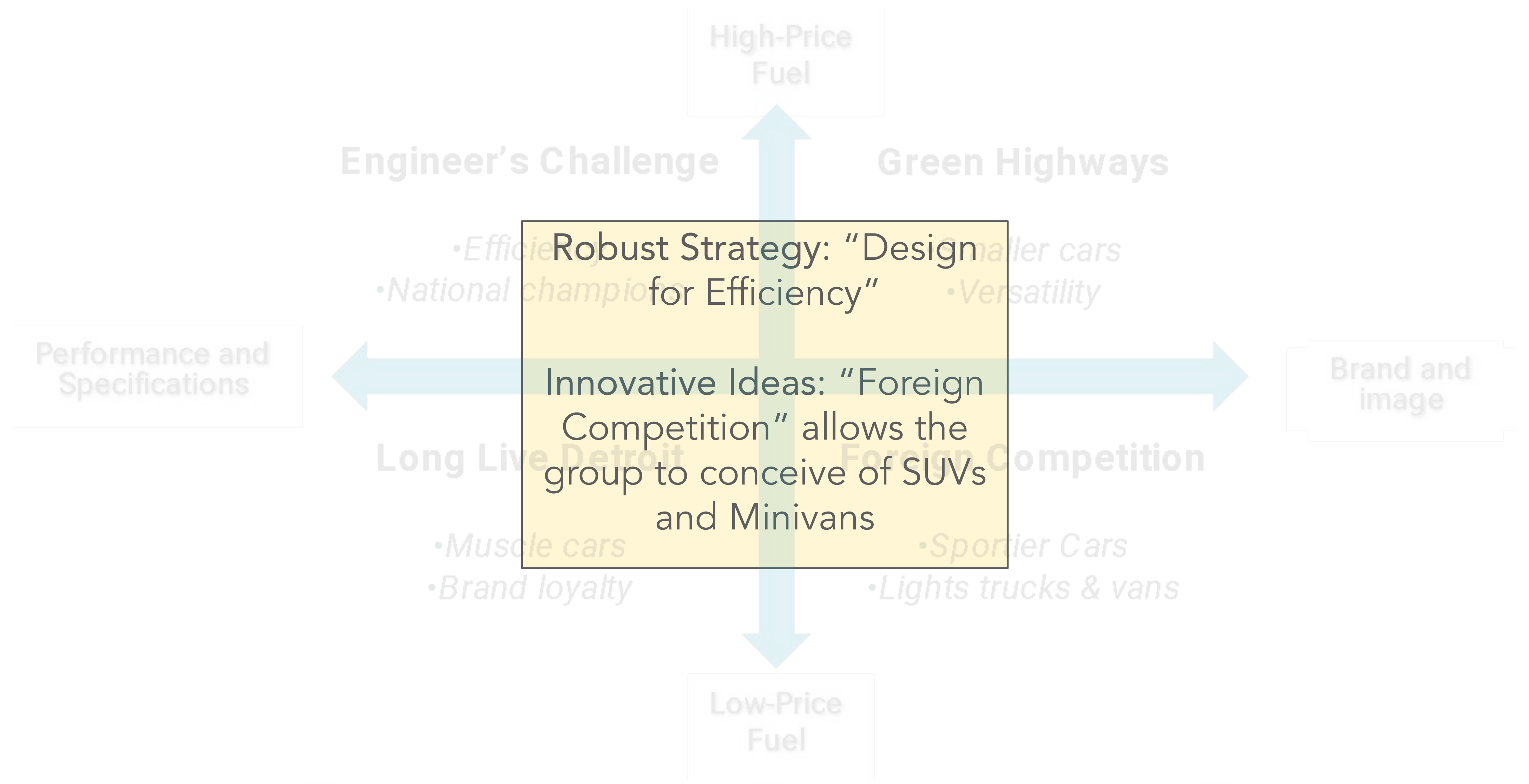
“Scenarios are stories about the ways that the world might turn out tomorrow...”

“Scenario planning uses provocative stories about the future to change the minds and actions of a group of people”

An example set of scenarios



Multiple Scenarios. Focused Actions



Benefits of scenarios

1

Quicker reactions to a changing world

2

Early and broad risk identification

3

Innovative ideas

4

More considered decisions and flexible plans

5

Alignment towards a preferred future



Why are we creating scenarios?

Project Objective

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

Framing Question

How might climate change affect stock availability and distribution, and other aspects of East Coast marine fisheries over the next 20 years?

What does this mean for effective future governance and management across multiple jurisdictions?

Workshop Objective

To develop a small number of
divergent, plausible,
challenging, relevant,
memorable stories
that outline possible conditions
facing East Coast fisheries in
the next 20 years



Workshop Agenda

Day 1

Jun 21: 9.30 – 5.30

1. Overview and Introductions
2. Drivers of Change & Building Blocks
3. Small Group Exercises: Mini-Scenario Creation
4. Gallery Walk
5. Report Out

Day 2

Jun 22: 8.30 – 4.30

6. Reflections
7. Scenario Framework
8. Small Group Exercises: Scenario Building
9. Report Out

Day 3

June 23: 8.30 – 12.00

10. Reflections
11. Scenario Comparison
12. Next Steps

Managing Expectations

- A scenario creation workshop is a different experience from many strategy / planning workshops
- The purpose is not to directly “solve a problem”, or even generate ideas to solve a problem
- It is to think carefully about future possibilities and convey these in a creative way
- These scenarios will then be used as a platform for idea generation / solution conversations later in the year
- The scenarios are not the final output of this initiative. They are a means to an end. The ultimate outcome is a set of suggestions and recommendations for how fishery governance and management should change to be successful in an era of climate change.

Ground Rules and Expectations

Be curious



Be collaborative



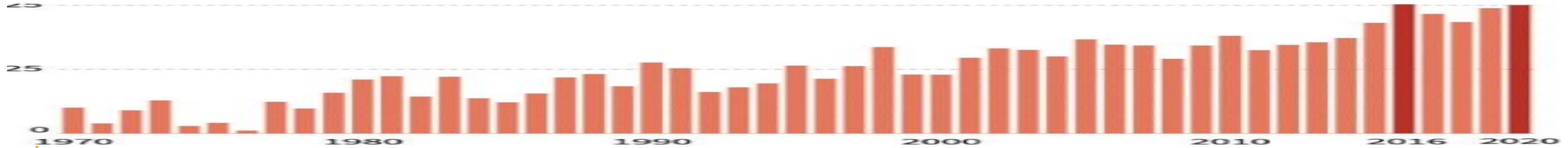
Be creative



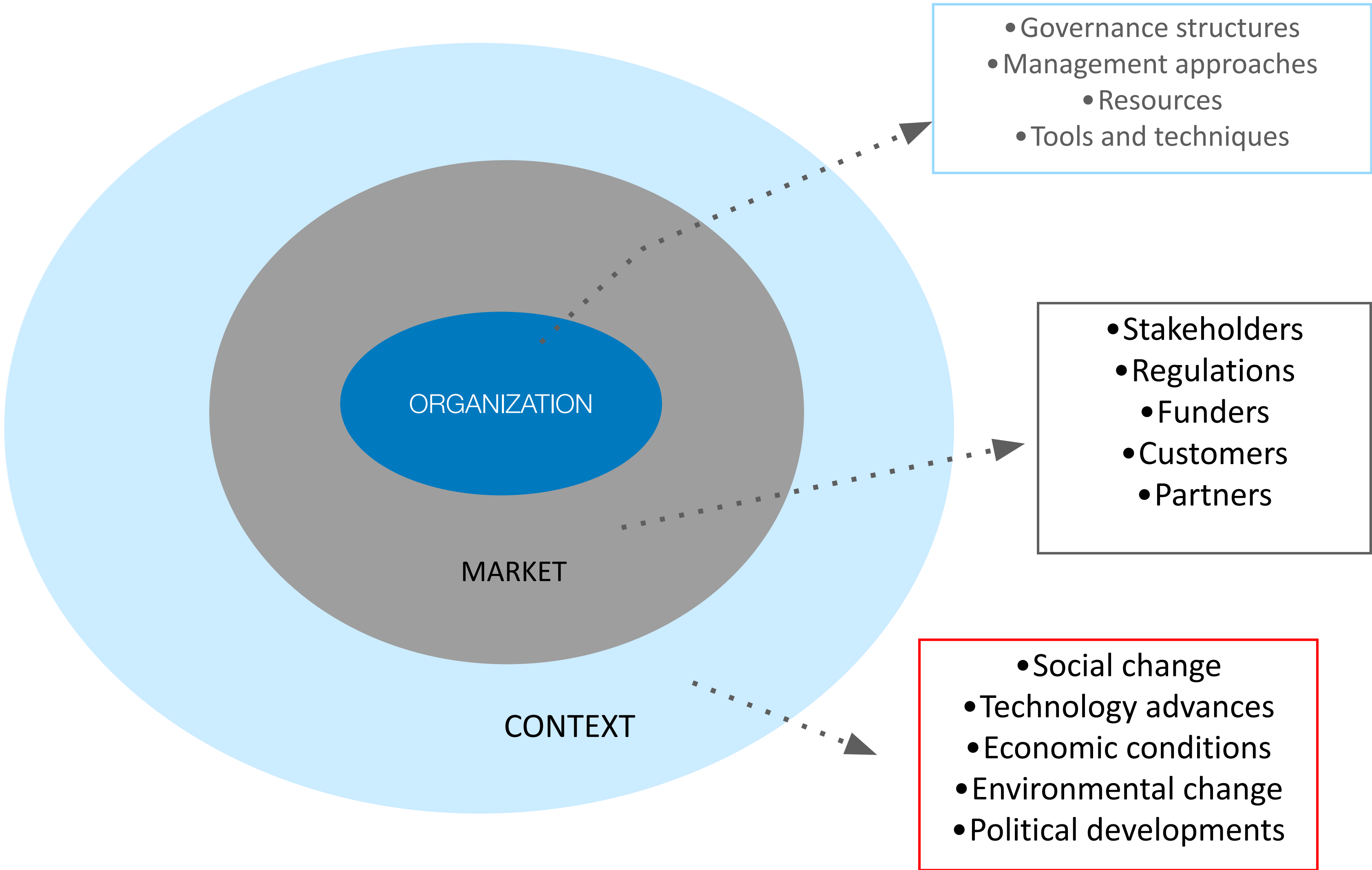
Intro Exercise

- Step away from your table and introduce yourself to someone at a different table
- Spend 5 minutes exchanging views on the following question:
- What issue that concerns climate change, fisheries and the future do you want to ensure is part of the conversation this week?
- After 5 minutes, go find another conversation partner. Introduce yourself
- Tell your new partner what your previous partner told you (in relation to the question above)

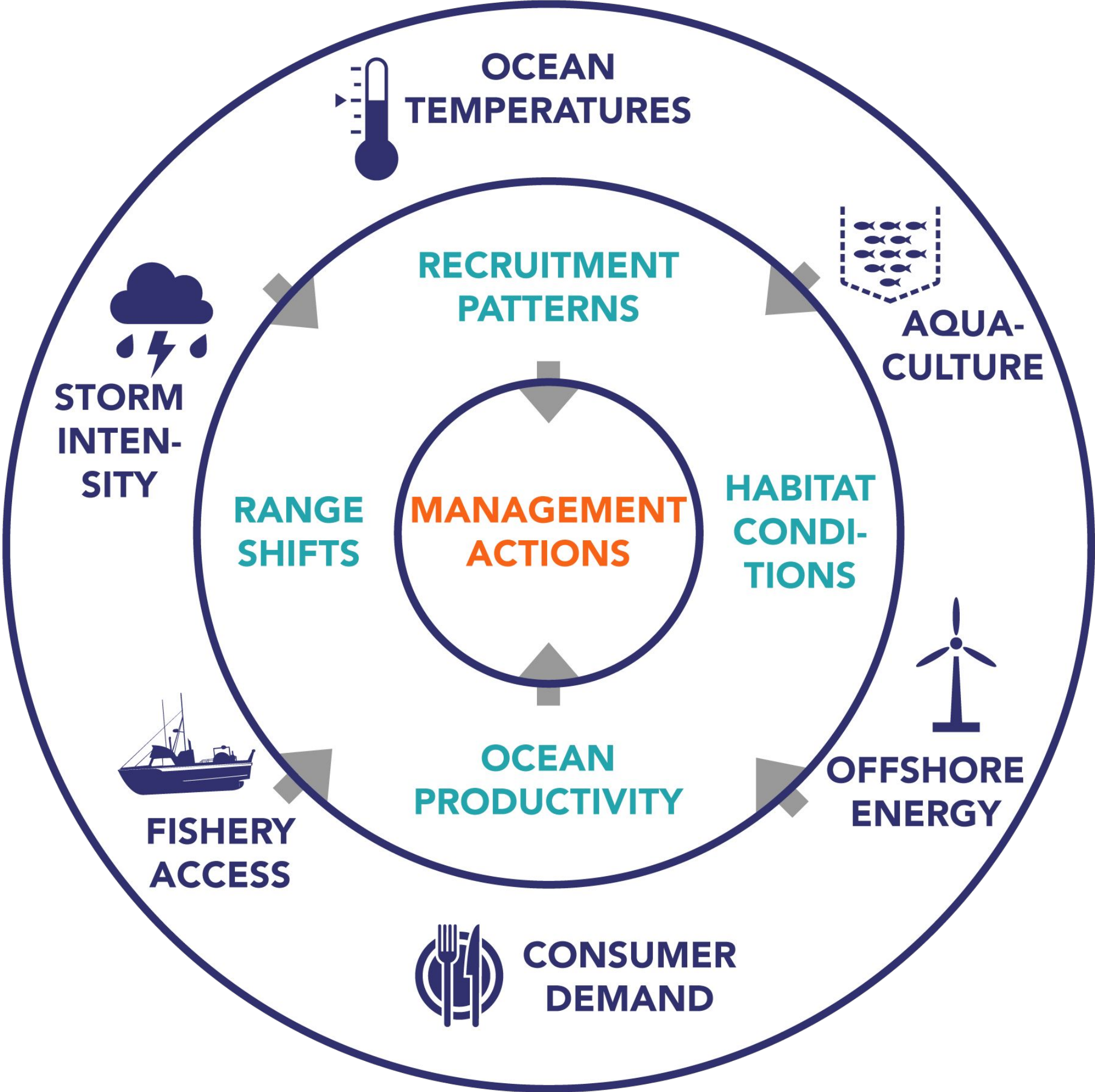
Looking Out to 2042: What's happened in the last 20 years?



Drivers of Change: Outside-In Thinking



Future of East Coast Fishing: Outside-In Thinking

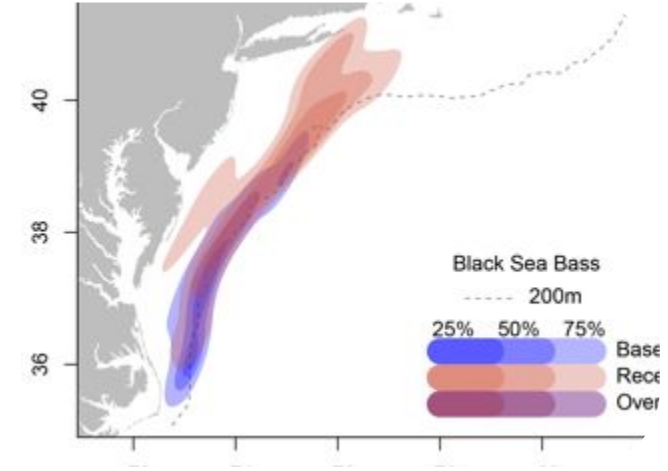


Scoping Highlights (Summer-Fall 2021)

- 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



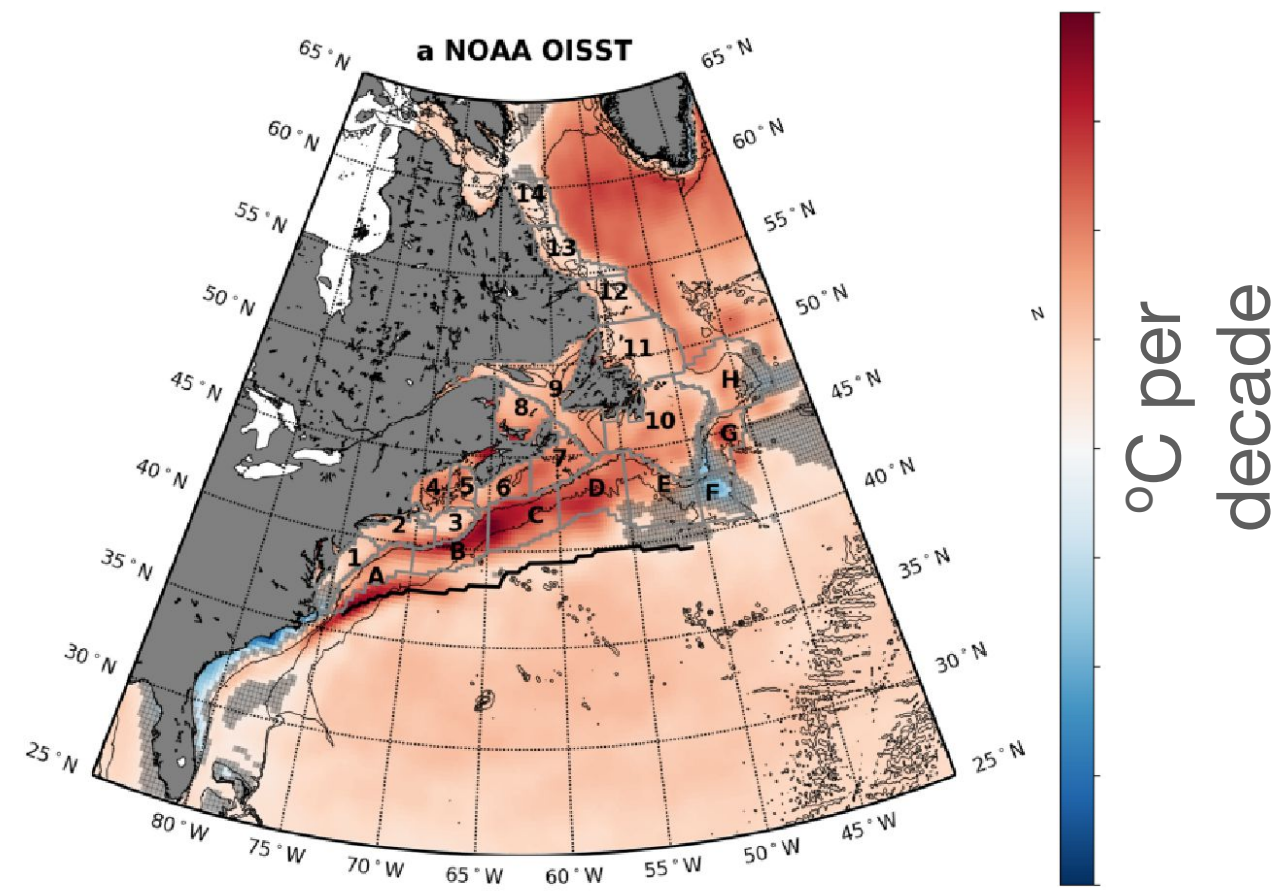
Realigning businesses to adapt to new species



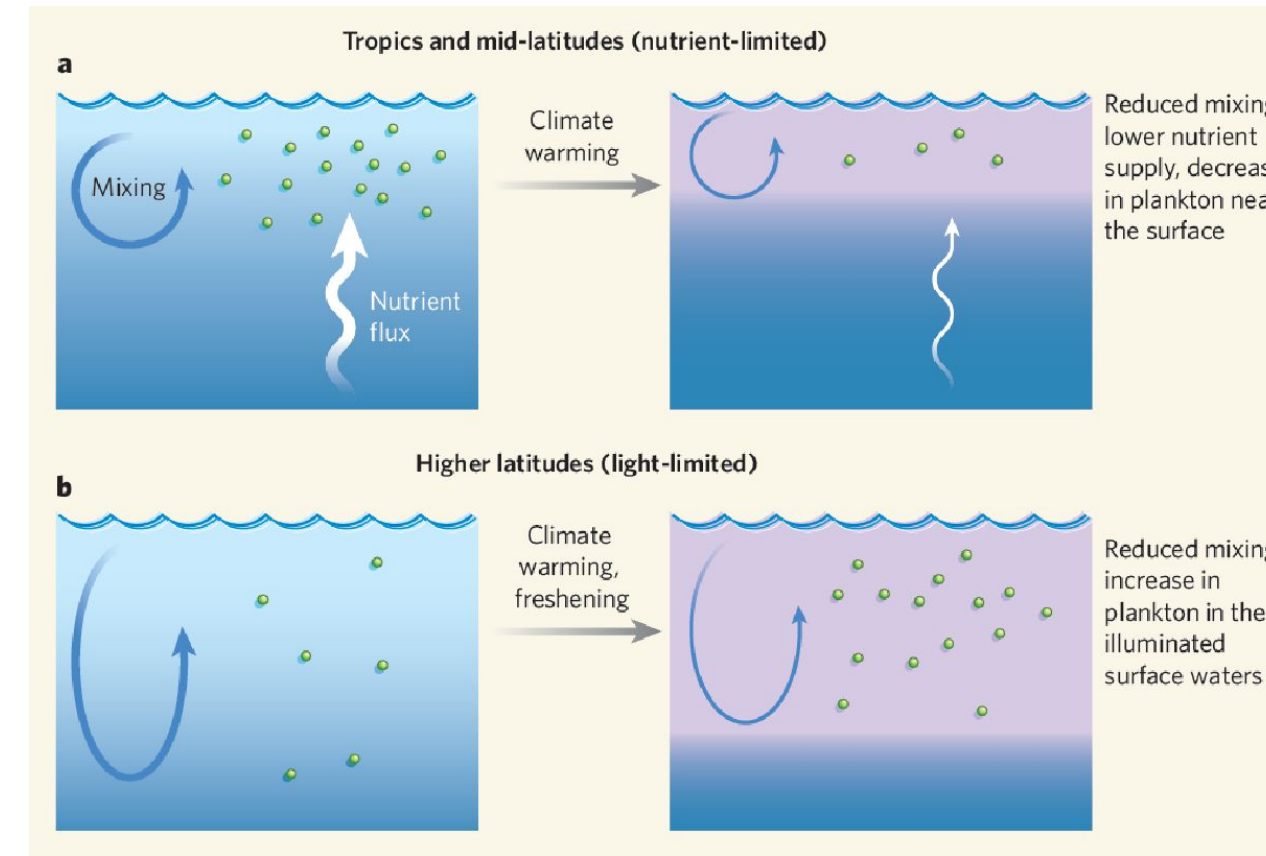
Sea level rise impacting boat access



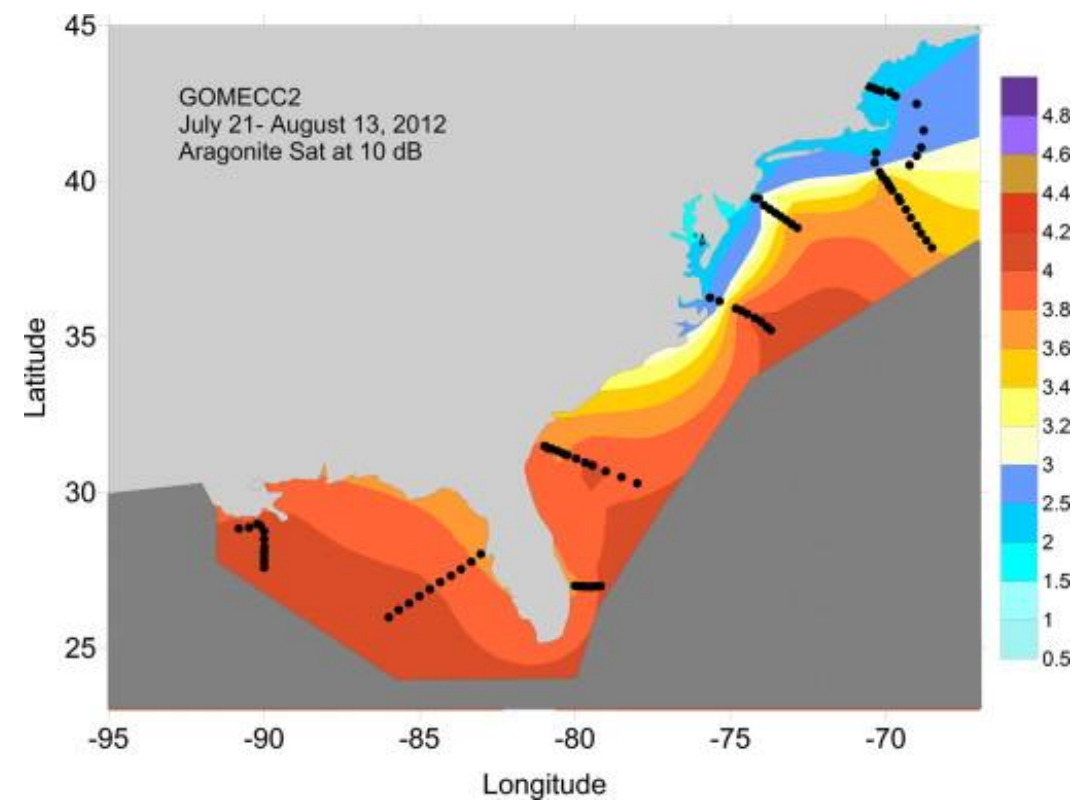
Briefing Material: Physical Drivers of Change



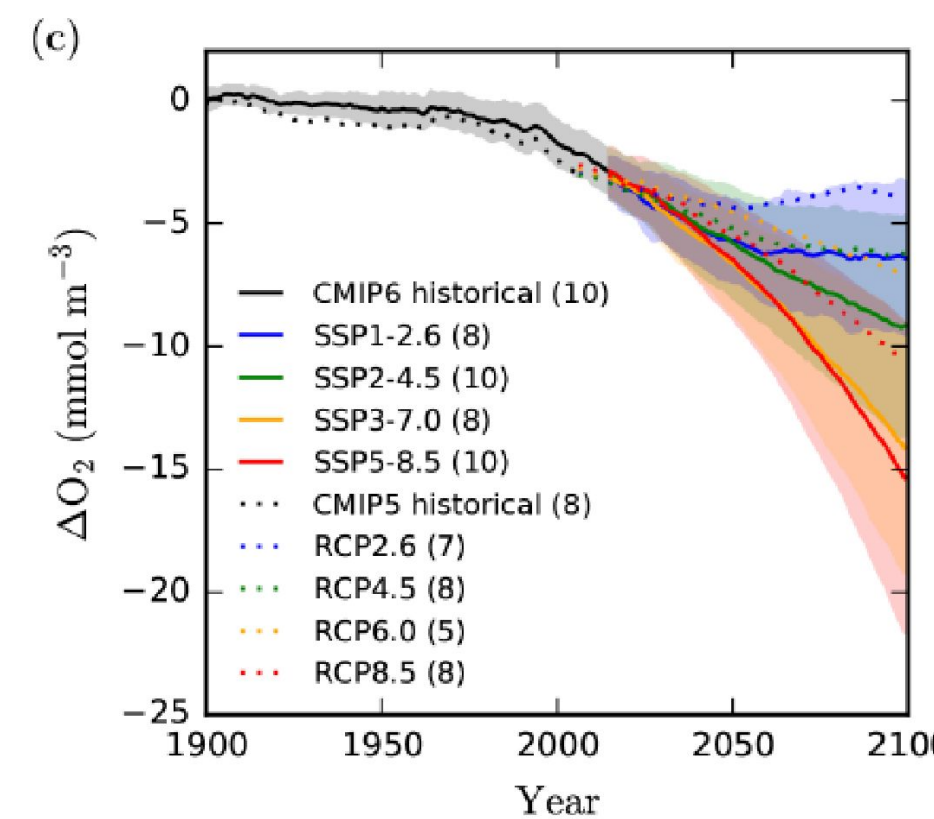
Rapid warming across much of the East Coast



Climate change affects net primary production, varies with latitude

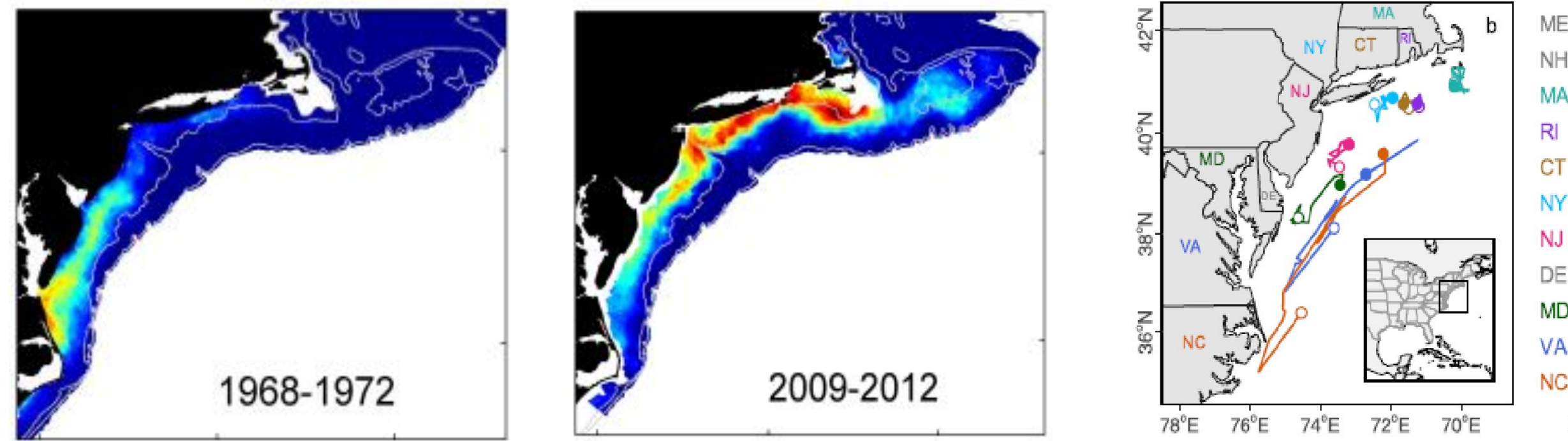


Acidification in upper ocean, but impact on shell formers more connected to water saturation

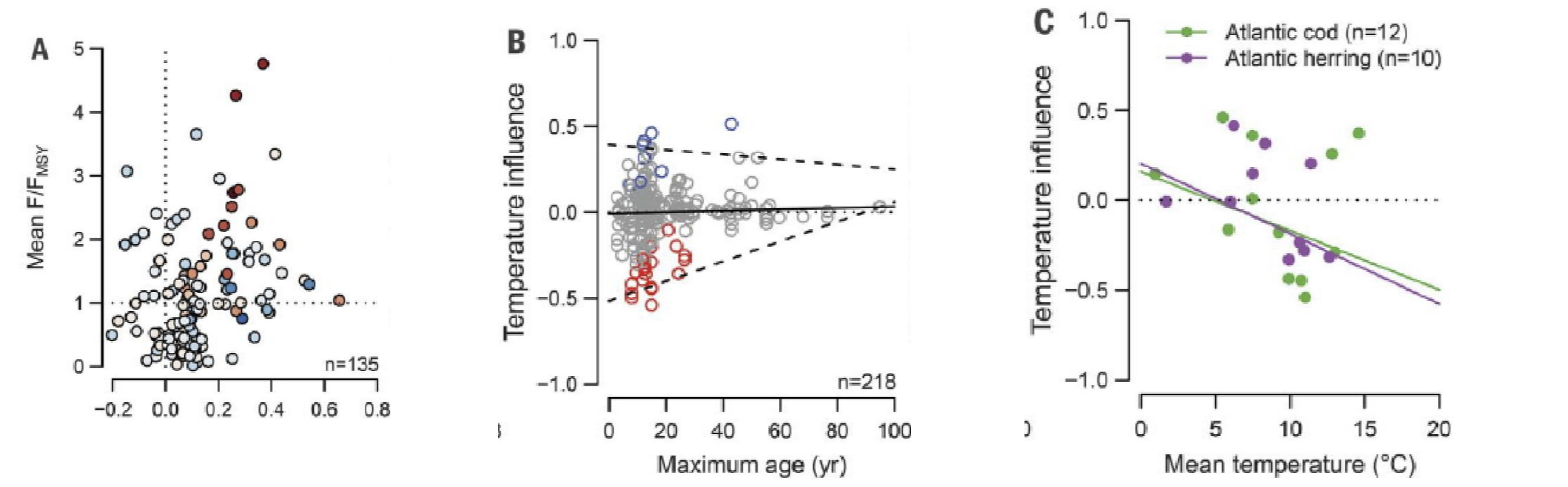


Warming and stratification lead to widespread oxygen declines

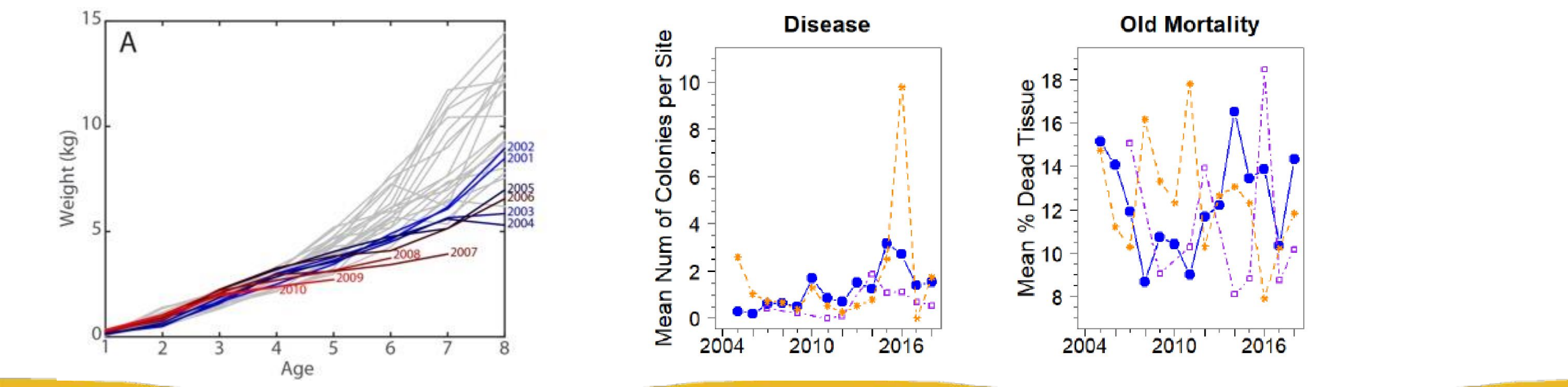
Briefing Material: Biological Drivers of Change



Most species have shifted their distribution, often driven by temperature. We've also seen changes in migration timing.



Warming has influenced stock productivity, with larger influences on overfished populations. More significant responses in populations with faster life histories. Negative influences of species at the southern end of their range



Many species body sizes getting smaller. Disease becoming more prevalent. Combined effects of warming, acidification and hypoxia can be synergistic.

Response of organisms to climate change

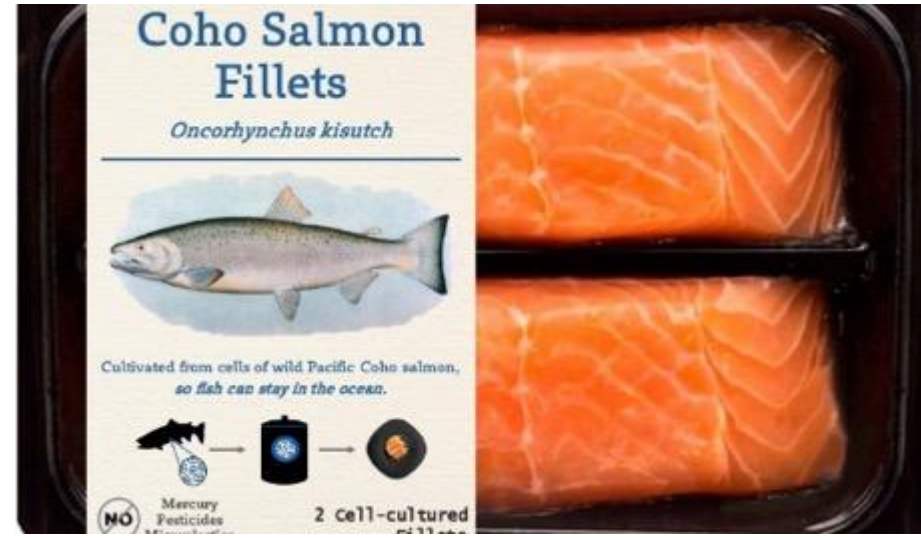
Direct Effects

- Shift in spatial distribution
- Changes in vital rates (growth rates, recruitment, mortality) □ changes in population size
- Change in the timing of important life-history events (phenology)
- Changes in community assemblages

Indirect Effects

- Changes in food availability
- Changes in habitat availability
- Occurrence or strength of predator-prey, competitive or mutualistic relationships
- Increase in disease incidence and susceptibility
- Changes in productivity, resilience and stability of ecosystem

Briefing Material: Social & Economic Drivers of Change



Demand / market conditions are shaped by: changing consumer preferences; new technologies creating alternatives to wild-caught / local seafood; international trade / supply chain issues



Fisheries might also be affected by: commercial ocean activity (e.g. offshore wind) ; population growth in coastal towns; demand for scarce waterfront space; various regulations



Fuel costs, crew wages, distances to port, availability of support services likely to affect business viability and ability to adapt to changing conditions

Have we captured the most important things that might shape fisheries over the next 20 years – especially those that affect species availability & distribution?

Scenario Building Blocks

Pre-determined Elements

Factors or forces that are 'locked-in' and confidently predictable over the time horizon

Critical Uncertainties

Important forces that have the potential to move in alternative directions over the time horizon

Wildcards

Low probability events and developments that could impact the future in significant ways in the time horizon

Predetermined Elements

1. Ocean temperatures continue to warm, affecting marine species biology & distribution
2. Regions exhibit differences in seasonal temperature changes
3. Primary production changes differently in different regions
4. Sea levels rise
5. Changing ocean uses create more competition for fisheries
6. Coastal population grows

1. Changes in ocean current systems
2. Series of extreme marine heatwaves
3. Series of Harmful Algal Blooms
4. Regime shifts caused by losses of critical food resource or changes in food web dynamics
5. Extreme market disruption (e.g. trade war, more pandemics)
6. Devastating hurricane

What might happen by 2042? Physical/Climate Uncertainties

. Rapid warming in the NW Atlantic	◀	1. Rates of ocean warming?	▶	AMOC swings toward a cooler state, stalling warming trend
Major effects	◀	2. Impact of saturation of calcium carbonate on shell-formation?	▶	Minor effects
Minor changes	◀	3. Extent of changes in the Cold Pool?	▶	Significant reduction in size and duration
Become stronger but less frequent	◀	4. Storm frequency and intensity?	▶	Become much stronger and more frequent
Impacts limited to specific locations / times & some positive effects	◀	5. Impacts of sea level rise?	▶	Causes significant impacts to many facilities & habitats
Low, decreasing impact	◀	6. Pollution & nutrient run-off in estuaries?	▶	High, increasing impact

What might happen by 2042? Biological Uncertainties

Varies by species & region – hard to generalize and identify	◀	7. Evidence of range expansion / contraction?	▶	More evident, pronounced and consistent
Limited evidence of movement or unpredictable direction	◀	8. Direction of species movements?	▶	Mostly northwards / deeper waters
Limited, minor	◀	9. Extent of range expansion / contraction?	▶	Extensive, major
Low - species movement is not replaced by other emerging fisheries in the area	◀	10. Replacement of moving species?	▶	High - most species movement is replaced by other emerging fisheries in the area
Mostly maintained, worst effects on overfished populations	◀	11. Stock production?	▶	Declines markedly across many populations
Maintained / as now	◀	12. Disease prevalence?	▶	Much higher
Low	◀	13. Extent of predation on key species?	▶	High
Minor, occasional, generally manageable impacts	◀	14. Impact of fishery interactions with protected resources or choke species?	▶	Major, ongoing impacts

What might happen by 2042? Social & Economic Uncertainties

Moderate tech advances, used by few	◀	15. Development and use of technology to support fisheries?	▶	Widely available, used extensively (e.g. gear, tracking, vessels etc.)
Declining market and lower prices as market is saturated / highly competitive (e.g. aquaculture, lab-grown fish)	◀	16. Consumer preferences for wild caught and local seafood?	▶	Growing market and higher prices as wild caught / local becomes a premium market
Marginal or positive effects on species distributions / research efforts etc.	◀	17. Impact of offshore wind installations?	▶	Mostly damaging effects on species distributions / research efforts etc.
Costs are contained creating profitable opportunities for most	◀	18. Fishing & related industry viability?	▶	Costs rise more quickly than revenues for most operators
Limited coastal armoring as 'living shoreline' alternatives become popular	◀	19. Extent and impact of coastal armoring?	▶	Significant, with widespread effect on habitats
Leads to damaging competition and less prosperous fishing communities	◀	20. Impact of alternative ocean uses, other coastal developments on fishing communities?	▶	Leads to more prosperous coastal and fishing communities

Small Group Discussions

Step 1: REVIEW and CLARIFY the Drivers of Change

- *Review the list of building blocks and discuss any points of clarification within your group*

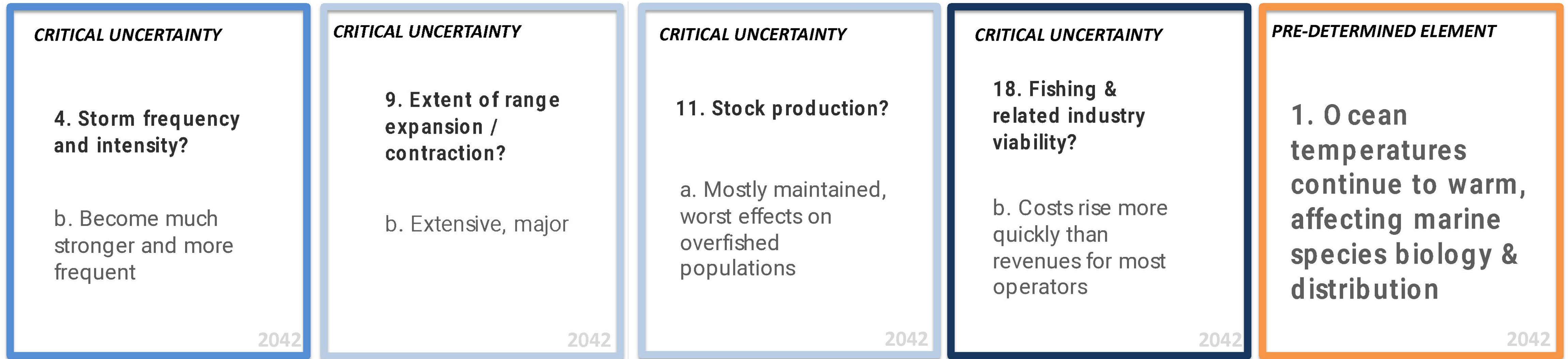
Step 2: EDIT and/or CREATE

- *If necessary, change the wording of no more than three of the cards.*
- *If you think an important pre-determined element / critical uncertainty / wildcard is missing, CREATE up to three new cards.*

Create scenarios by combining building blocks

- Each scenario combination consists of (up to) 5 cards.
- The interactions between these uncertainties should be interesting...even provocative.
- Each scenario combination should create a potential future that is **plausible, relevant, challenging, memorable** and **different** from other futures already considered.
- There are no “right” answers or “perfect” scenarios. The cards are just prompts for you to tell stories around.
- Try juxtaposing interesting combinations to get started. Play with the possibilities.
- You’ll know a good scenario combination when you see it...

Mini-Scenario Creation: An Example



HARDER TO REACH

Fish are still out there. They are just harder to reach. Fishing operators are forced to travel longer distances to access their catch. With stronger and more frequent storms, this is not only more expensive, but more dangerous. All forms of business costs are on the rise: insurance, fuel, new gear, labor, as more competition drives up costs in the industry. Recreational fishing is less popular (blame the storms). Those who stick with it are now catching very different stocks than 20 years ago.

Mini-Scenario Creation 1: An 'Expected Future'

Spread out your entire deck of cards

As a group, choose 5 of the cards that create an "Expected Future"—the story that most people in East Coast fishing broadly expect to happen in the next 20 years

Ensure that you use 4 CU cards and 1 PD cards

Using the 5 cards as a platform, describe your scenario in 2-3 sentences

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*Record
the
Cards*

*Briefly
Describe*

*Quickl
y
Name*

Challenging

to most peoples' current
conventional wisdom

Memorable

the main concept behind each scenario story
is powerful and relatively easy to
communicate

Relevant

to the project objectives and framing
question outlined in the scoping phase

Divergent

the scenarios are clearly different from
each other, helping stretch thinking in
different directions

Plausible

each scenario has the potential to occur
(even if the assessed probability is low)

Mini-Scenario Creation (1)

Expected future

Choose five cards that, when combined, best describe the 'expected future' – the story that East Coast fishing generally assumes will happen given climate change between now and 2042



1. Briefly describe the future scenario that this combination of cards creates

2. What makes this scenario interesting?

3. What evidence exists today that makes this future seem plausible?

4. Give this scenario a memorable name

What is your group's
"expected future"?

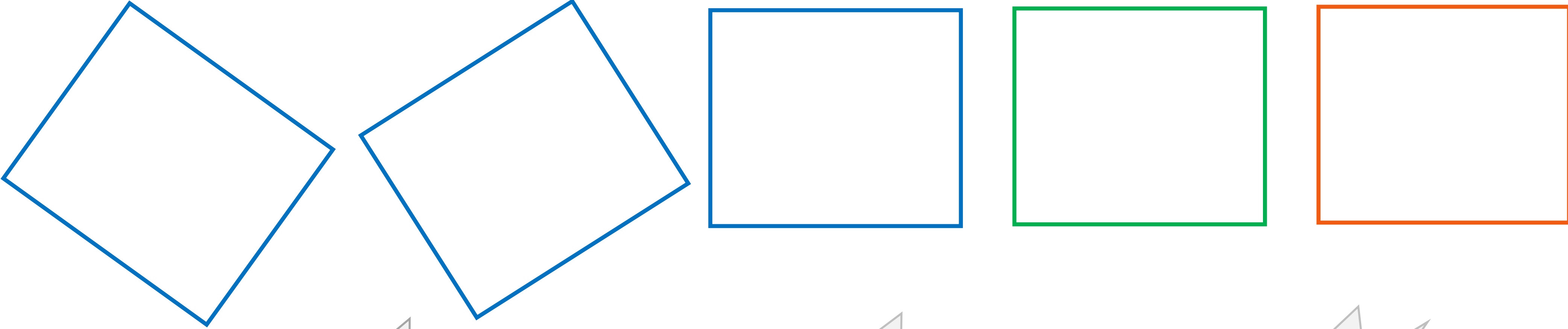


Mini-Scenario Creation 2: An 'Alternative Future'

Turn over at least 2 of the CU cards from your "Expected Future" to create an "Alternative Future"

Keep the PD card.

Use one new CU card and/or a Wildcard.



Record the Cards

Briefly Describe

Quickly Name

Mini-Scenario Creation (2)

Alternative future

Turn over at least 2 of the CU cards from your “Expected Future” to create an “Alternative Future”. Keep the PD card. Use 1-2 new CU cards or a Wildcard.

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1. Briefly describe the future scenario that this combination of cards creates

2. What makes this scenario interesting?

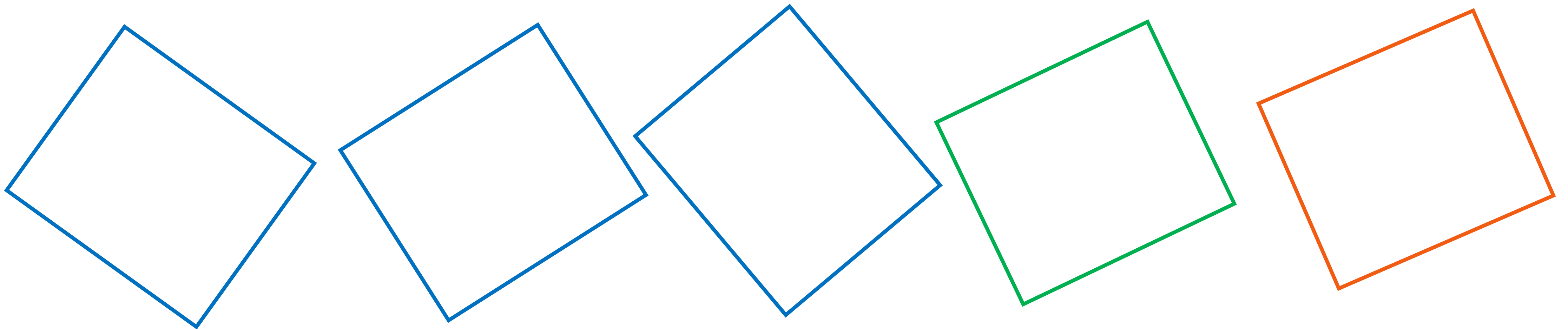
3. What evidence exists today that makes this future seem plausible?

4. Give this scenario a memorable name

Mini-Scenario Creation 3: A 'Free Form Future'

What other scenario seems interesting and compelling?

Use any combination of cards, with some bias towards those that you have not used yet, to create another scenario that is different from the first two



Mini-Scenario Creation (3)

Free-Form future

What other scenario seems interesting and compelling? Use any combination of cards, with some bias towards those that you have not used yet, to create another scenario that is different from the first two

Five empty rectangular boxes arranged horizontally, intended for selecting cards to create a scenario.

1. Briefly describe the future scenario that this combination of cards creates

2. What makes this scenario interesting?

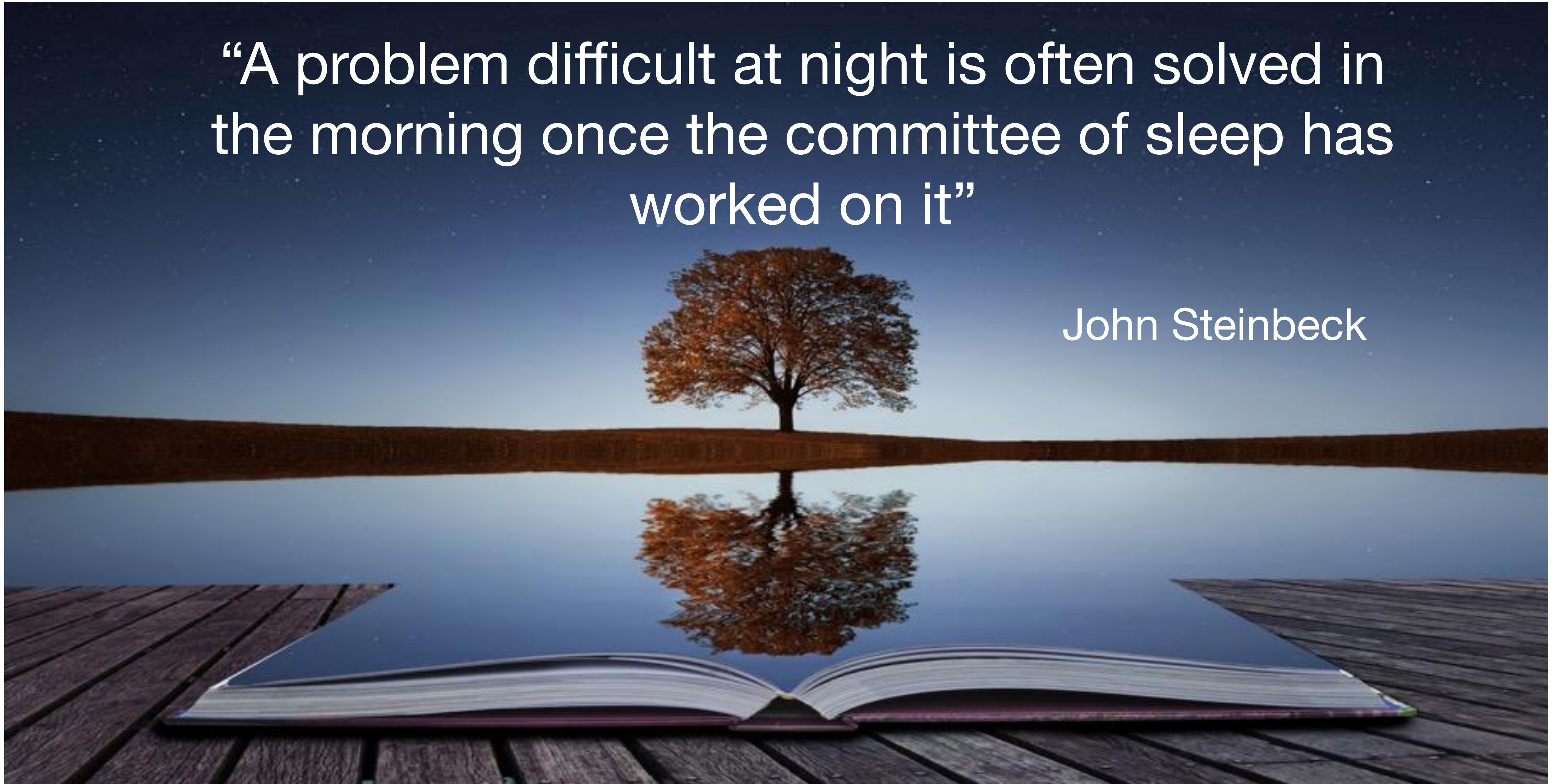
3. What evidence exists today that makes this future seem plausible?

4. Give this scenario a memorable name

Overnight Reflections: Day 1 Reflections & Day 2 Plans

“A problem difficult at night is often solved in the morning once the committee of sleep has worked on it”

John Steinbeck



Workshop Agenda

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- A scenario creation workshop is a different experience from many strategy / planning workshops
- The purpose is not to directly “solve a problem”, or even generate ideas to solve a problem
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- These scenarios will then be used as a platform for ideas generation / solution conversations later in the year
- The scenarios are not the final output of this initiative. They are a means to an end. The ultimate outcome is a set of suggestions and recommendations for how fishery governance and management should change to be successful in an era of climate change.

Challenging

to most peoples' current
conventional wisdom

Memorable

the main concept behind each scenario story
is powerful and relatively easy to
communicate

Relevant

to the strategic challenge outlined in
the scoping phase

Divergent

the scenarios are clearly different from
each other, helping “stretch” thinking in
different directions

Plausible

each scenario has the potential to occur
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Why are we creating scenarios?

Project Objective

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

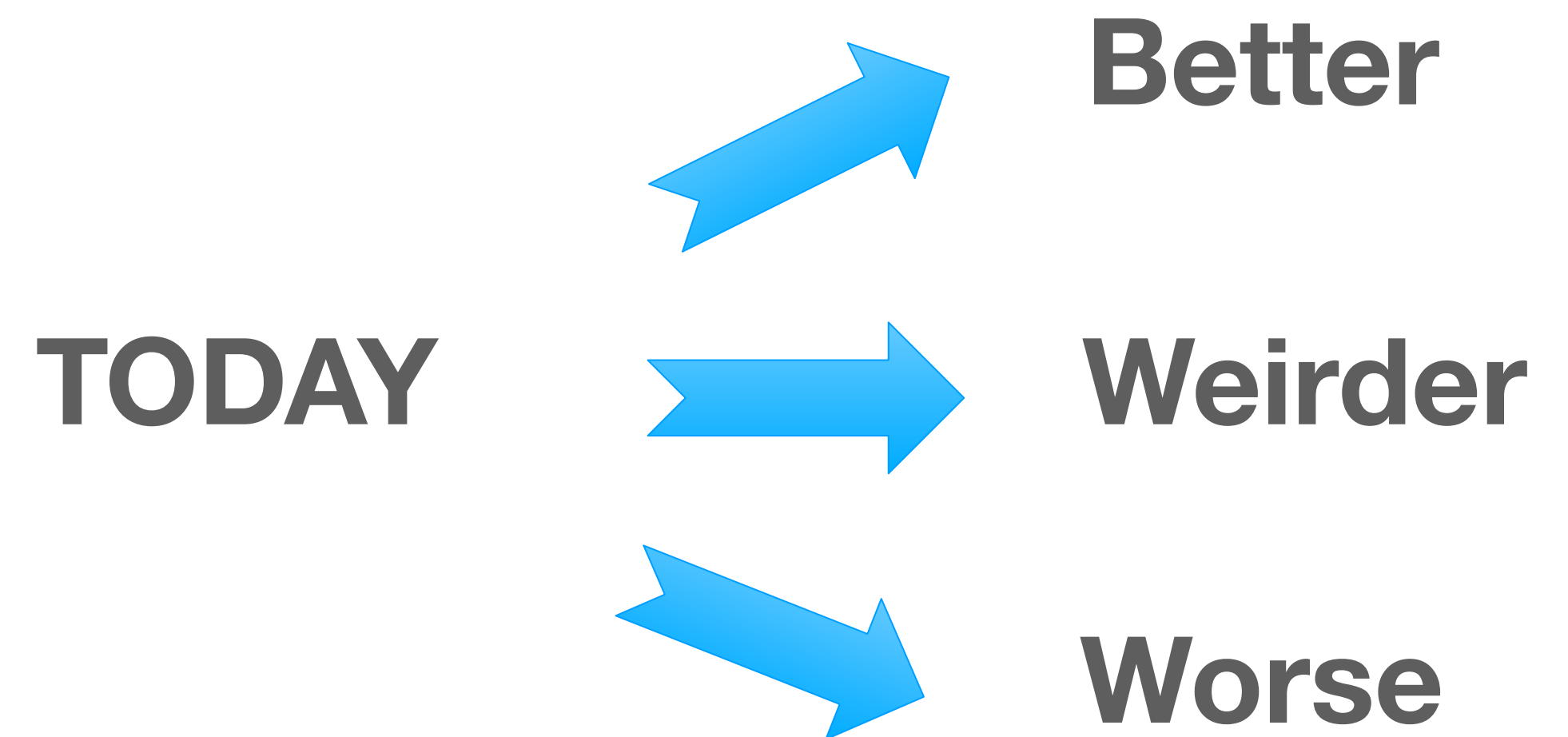
Framing Question

How might climate change affect stock availability and distribution, and other aspects of East Coast marine fisheries over the next 20 years?

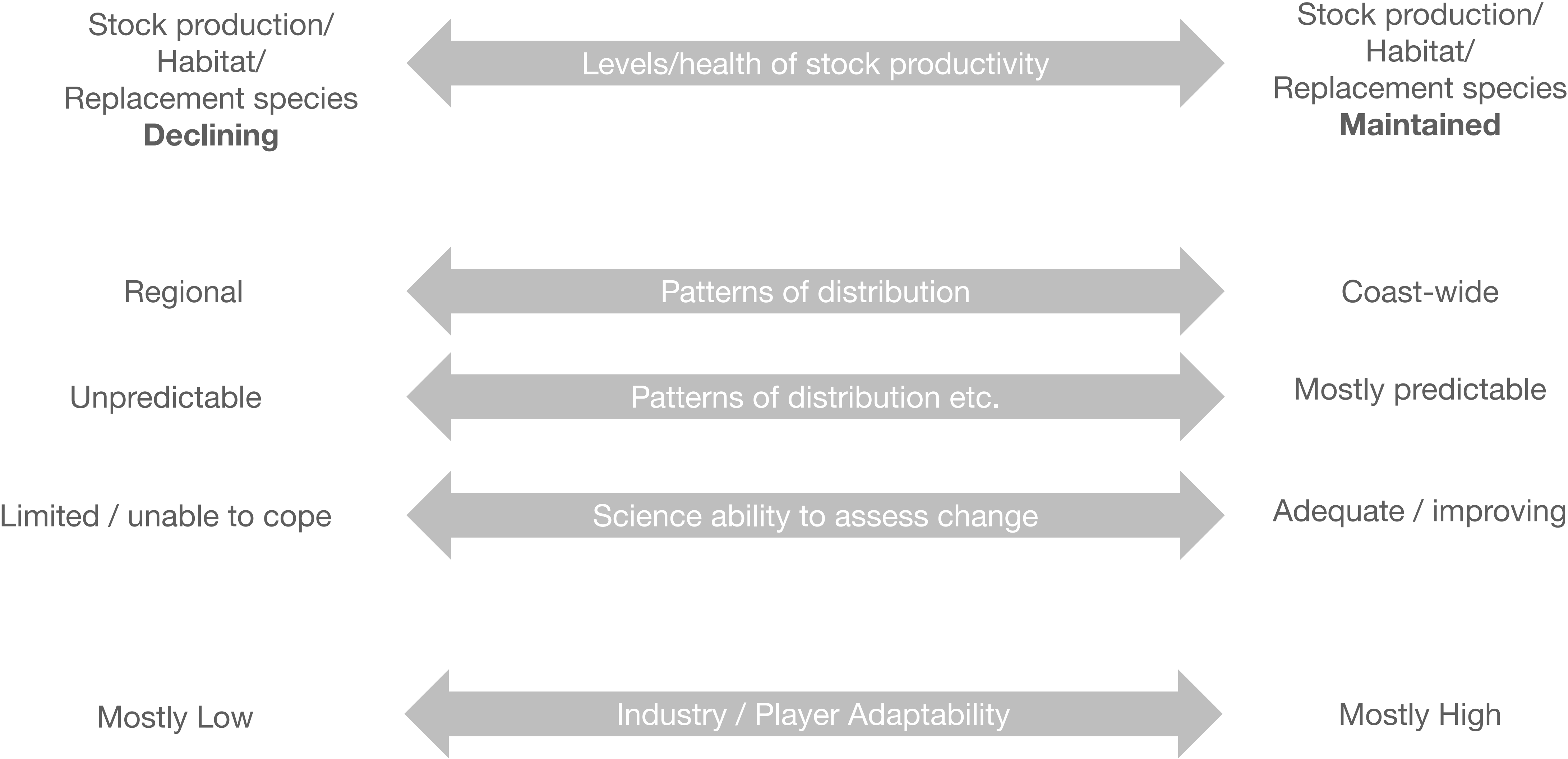
What does this mean for effective future governance and management across multiple jurisdictions?

Role of the Scenario Framework

- Scenarios are devices to broaden our thinking about future possibilities, so that we are not relying on a single view of the future
- Scenarios helps us make sense of a confusing world
- Scenarios are most useful when they ‘travel as a set’ of 3-5 stories that have a relationship to each other



Key Uncertainties Drawn from Day 1 Mini-Scenarios



Key Uncertainties from Day 1 Mini-Scenarios

Stock production
Habitat
Replacement species

Declining



Stock production
Habitat
Replacement species

Maintained

***Total Annihilation
Disruption Consolidation
Gone with the Wind
Sharknado
Stinky Business
Pork: It's What's For Dinner
We Hope Not
Rx for Prozac***

***Climate catastrophe creates growth
Shellfish solution
Changing oceans, local notions
Fisher innovation outpaces science
Manage fast / Not Half Fast
Have our fish and eat it too
Adapt & survive***

Key Uncertainties from Day 1 Mini-Scenarios

Unpredictable,
wildcard-driven,
regional (science
unable to help)

← Patterns of climate drivers / range expansion/
contraction →

Predictable, extensive, mostly
coast-wide (science helps)

Climate catastrophe creates growth
Shellfish solution
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Total Annihilation
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Manage Fast / Not Half Fast
Have Our Fish and Eat it Too
Elon Cusk
Adapt & Survive
We Hope Not
The Fix is the Kill
Rx for Prozac
Rise to the occasion

Key Uncertainties from Day 1 Mini-Scenarios

Mostly Low



Mostly High

Total Annihilation
Disruption Consolidation
Gone with the Wind
Sharknado
We Hope Not
Fix is the Kill

Climate catastrophe creates cash
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Adapt & Survive
Rise to the occasion

Draft Scenario Framework v1

New Solution Spaces

Complex:
unpredictable,
stochastic,
wildcard-driven,
(science struggles to help)

Stock production, Habitat
Replacement species etc.
Maintained

Adapt, Survive, Thrive

Challenging: extensive,
solvable, trend-driven
(science helps)

*Climate catastrophe creates growth
Shellfish solution
Changing oceans, local notions
Fisher innovation outpaces science*

*Manage fast / Not Half Fast
Have our fish and eat it too
Adapt & survive*

Patterns of climate drivers, range expansions etc.

*Total Annihilation
Disruption Consolidation
Gone with the Wind
Sharknado
Stinky Business
Pork: It's What's For Dinner*

*We Hope Not
The Fix is the Kill
Rx for Prozac*

Stock production, Habitat
Replacement species etc.
Declining

Doomsday

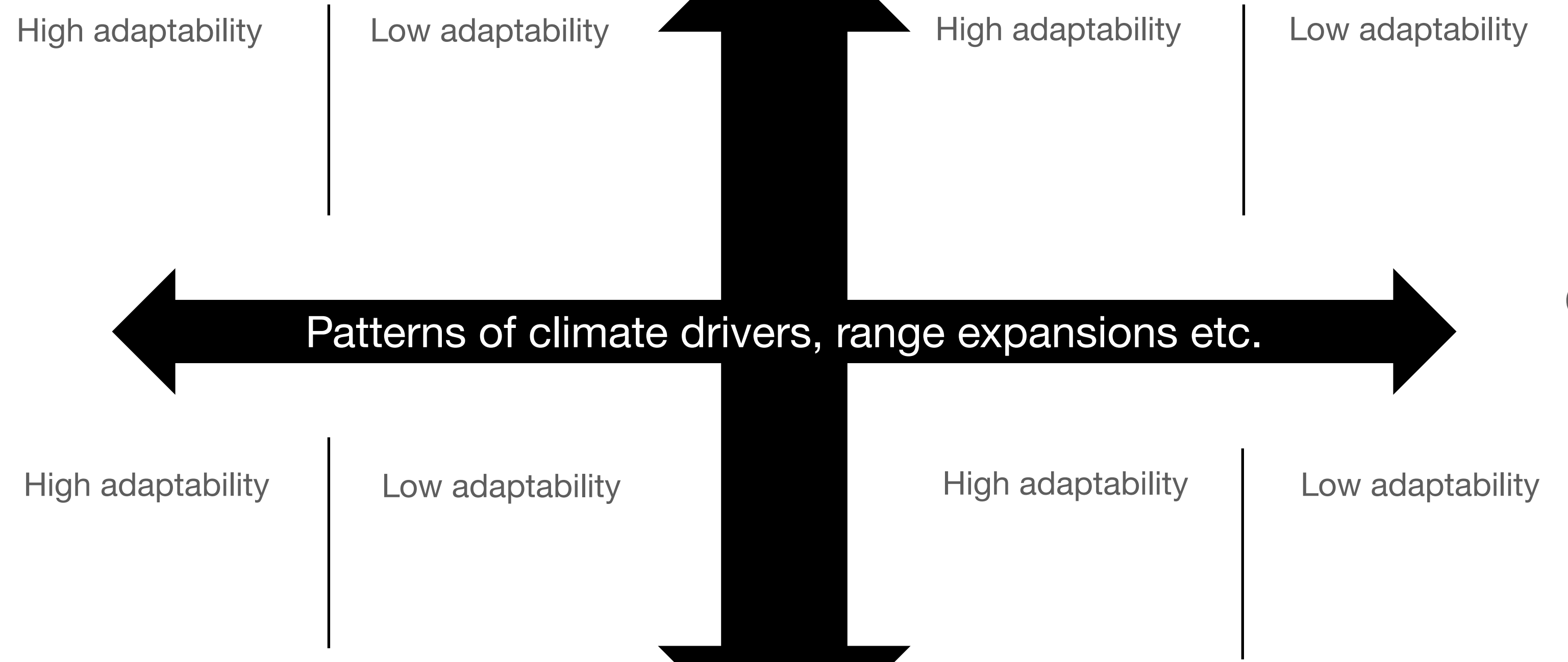
Predictably Tough

New Solution Spaces

Complex: unpredictable, stochastic, wildcard-driven, (science struggles to help)

Doomsday

Stock production, Habitat Replacement species etc. Maintained



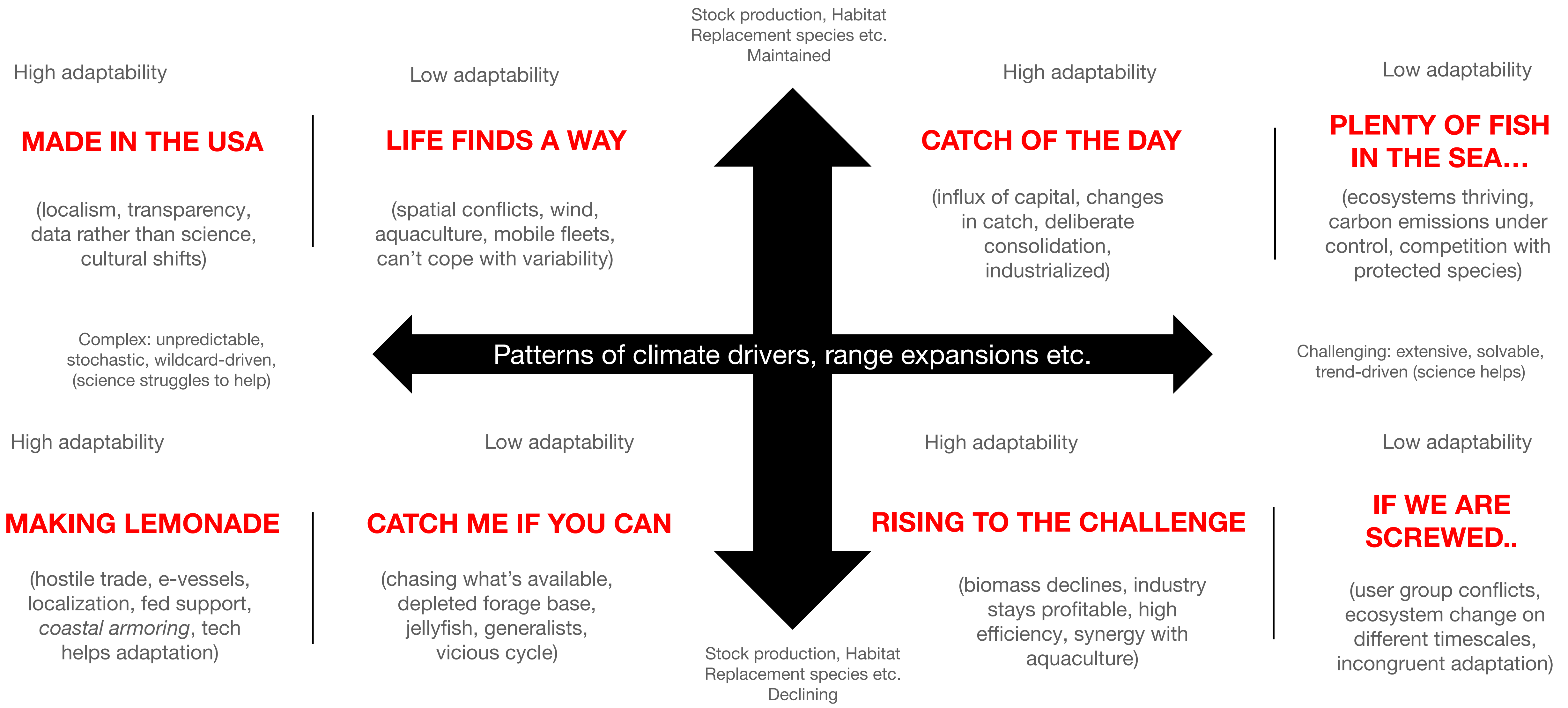
Adapt, Survive, Thrive

Challenging: extensive, solvable, trend-driven (science helps)

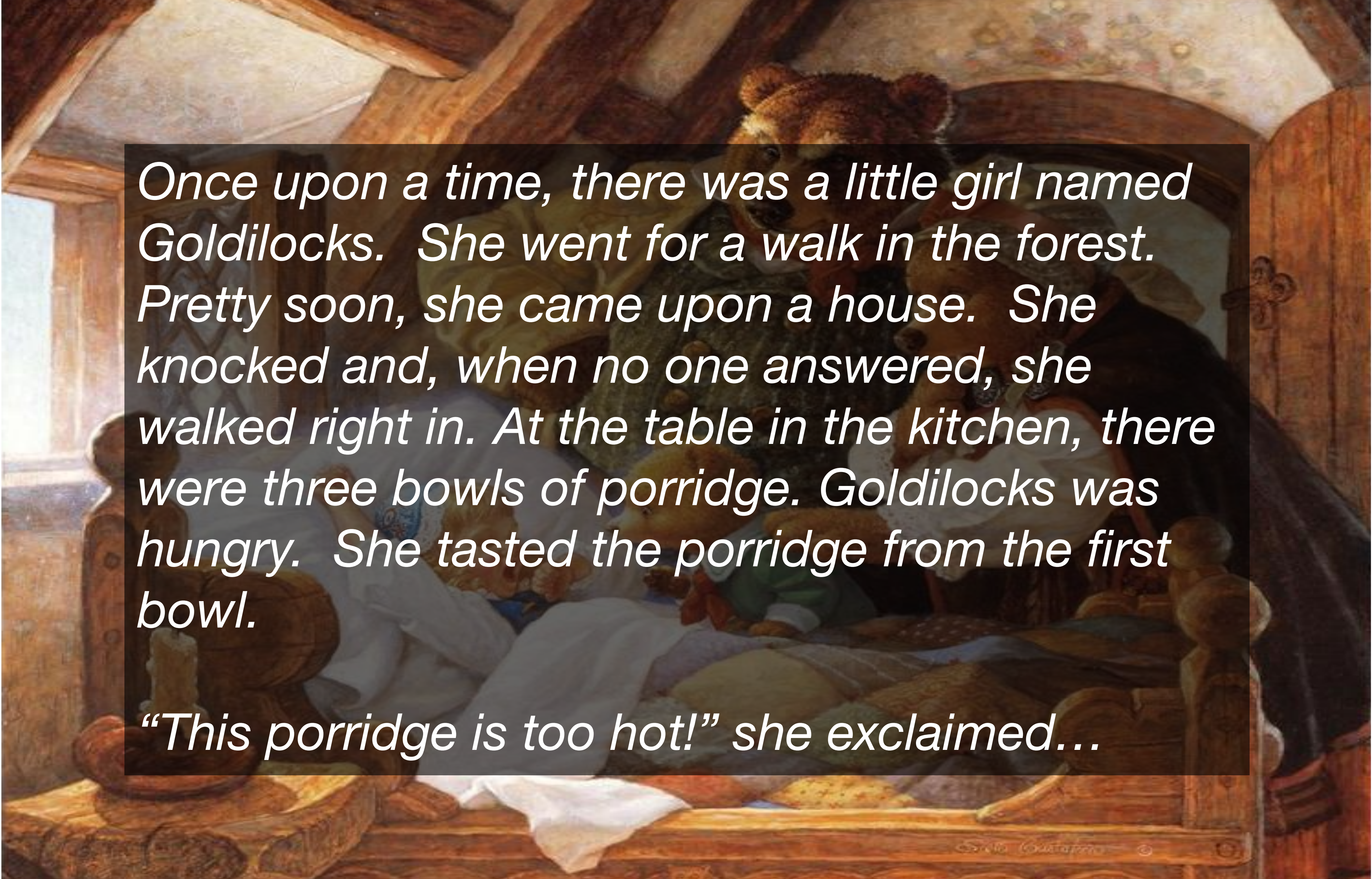
Predictably Tough

Stock production, Habitat Replacement species etc. Declining

ECSP Draft Scenario Framework



How we convey information (1)

A painting of a child in a bed with a teddy bear. The child is lying in a bed with a wooden frame, covered with a white sheet and a green blanket. A large, brown teddy bear is sitting on the bed next to the child. The room has a wooden ceiling and a window on the left side. The overall style is warm and detailed.

Once upon a time, there was a little girl named Goldilocks. She went for a walk in the forest. Pretty soon, she came upon a house. She knocked and, when no one answered, she walked right in. At the table in the kitchen, there were three bowls of porridge. Goldilocks was hungry. She tasted the porridge from the first bowl.

“This porridge is too hot!” she exclaimed...

How we convey information (2)

Name	Species	Hair / Fur	Age	Appetite Level	Size	Preliminary Porridge Assessment	Preliminary Mattress Assessment
Goldilocks	Human	Blonde	8	Moderate	Petite	N/A	N/A
Papa	Bear	Brown	12	High	Big	Too Hot	Too Hard
Mama	Bear	Tawny	11	Moderate	Medium	Too Cold	Too Soft
Baby	Bear	Red-Brown	3	Low	Small	Just Right	Just Right

Example Devices for Storytelling

A journalist looking back from 2040 and describing what has changed in a specific industry / issue / region

Someone retiring from a job in 2040 and reflecting on their career over the previous 20 years

The story of a long-distance relationship told through emails as two professionals find their careers changing between 2018 and 2035

A scene in a bar, set in 20340, as people reflect on how much the world has changed in the past 12 years

Scenario Timeline

HEADLINES IN LOCK STEP



Scenario Building (1)

Scenario Name? _____



1. Describe the important conditions in this scenario:

CLIMATE / OCEAN / PHYSICAL

BIOLOGICAL

SOCIAL & ECONOMIC

2. What events and developments have happened to create this scenario?

2022

2032

2042

3. Describe in detail what has happened to stock availability & distribution in this scenario

Scenario Building

An opportunity to spend time thinking carefully about the scenario you are building:

Summarize the main physical / biological / social & economic conditions that underpin this scenario. Draw on the building blocks of yesterday

Which quadrant?

Scenario Building (1) Scenario Name? _____

1. Describe the important conditions in this scenario:

CLIMATE / OCEAN / PHYSICAL	BIOLOGICAL	SOCIAL & ECONOMIC

2. What events and developments have happened to create this scenario?
2022 2032 2042

3. Describe in detail what has happened to stock availability & distribution in this scenario

Imagine the main storylines / headlines / developments that happen over the next 20 years in your scenario. Be as creative as possible, but remember that the events should fit the scenario

Pay particular attention to the changes in stock availability and distribution that happen in your scenario (as these are key elements of the futures we want to build)

Scenario Building (2)

Scenario
Name?



4. What is happening in fishing ports up and down the coast?

Empty text box for response to question 4.

5. What regional variations are important to note?

Empty text box for response to question 5.

6. What are the main causes for optimism in this scenario?

Empty text box for response to question 6.

7. What are the main causes for concern in this scenario?

Empty text box for response to question 7.

8. What are the main pressures facing fishery managers?

Empty text box for response to question 8.

9. What are the most important differences between this scenario (in 2042) and today's world in 2022?

Empty text box for response to question 9.



Scenario Building

An opportunity to spend time thinking carefully about the scenario you are building:

Scenario Building (2) Scenario Name? _____

4. What is happening in fishing ports up and down the coast?

5. What regional variations are important to note?

6. What are the main causes for optimism in this scenario?

7. What are the main causes for concern in this scenario?

8. What are the main pressures facing fishery managers?

9. What are the most important differences between this scenario (in 2042) and today's world in 2022?

Describe what's happening in fishing ports

Every scenarios has positive and negative stories. What are the good news stories in your scenario?

Pressures on fishery management. This will be considered further in later conversations, but it's good to get initial reactions here.

In what ways does this scenario play out differently in SA, MA and NE – or other regional differences?

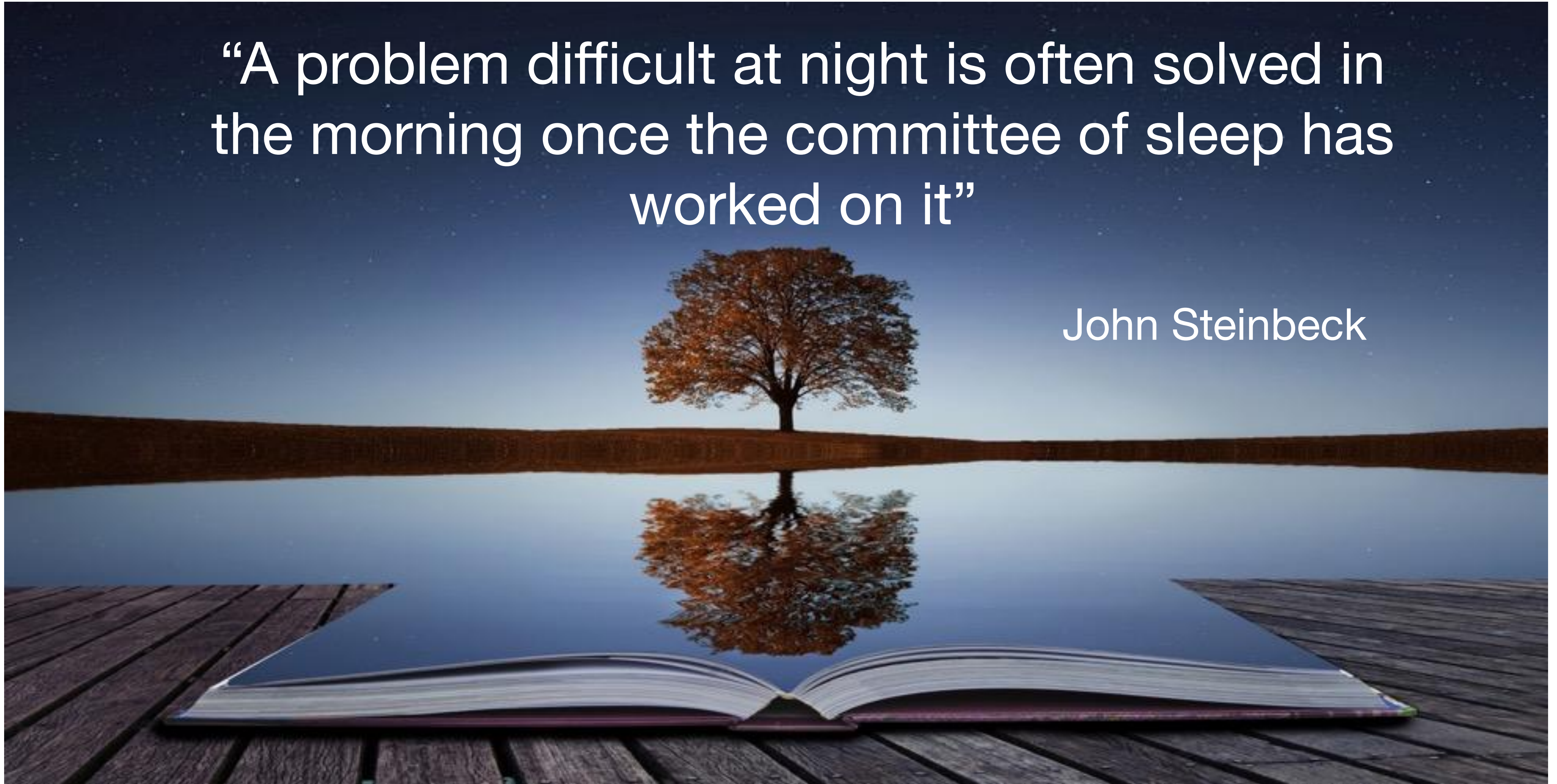
Every scenarios has positive and negative stories. What are the bad news stories in your scenario?

A chance to summarize the main differences from now and then

Overnight Reflections: Day 2 Reflections & Day 3 Plans

“A problem difficult at night is often solved in the morning once the committee of sleep has worked on it”

John Steinbeck



Workshop Agenda

Day 1

Jun 21: 9.30 – 5.30

1. Overview and Introductions
2. Drivers of Change & Building Blocks
3. Small Group Exercises: Mini-Scenario Creation
4. Gallery Walk
5. Report Out

Day 2

Jun 22: 8.30 – 4.30

6. Reflections
7. Scenario Framework
8. Small Group Exercises: Scenario Building
9. Report Out

Day 3

June 23: 8.30 – 12.00

10. Reflections
11. Scenario Comparison
12. Next Steps

East Coast Scenario Planning Initiative Timeline

Steps in this Multi-Year Initiative

Scenario Deepening

Orientation:
establish draft objectives, expected outcomes and project focus

Spring - Summer 2021

Scoping:
reach out to stakeholders to gather input on forces of change that could affect fisheries over the next 20 years

Summer – Fall 2021

Exploration:
analyze forces driving change in greater detail

Winter 2022

Creation:
conduct workshop sessions to construct and discuss scenarios

Summer 2022

Application:
use scenarios to identify actions and recommendations

Fall 2022-Winter 2023

Monitoring:
identify key indicators to monitor change and outline next steps



Scenario Deepening

1. Review of inputs from this workshop (core team)
2. Edit inputs / refine scenarios to create a first draft set of scenarios
3. Organize 3-4 scenario deepening webinars (End July - August)
 - Available to public
 - Communicate the basic stories of each scenario
 - Check for plausibility, relevance, challenge, memorability, divergence
 - Suggestions for how to improve the stories across those dimensions
 - Specific regional, stakeholder, species storylines
 - What's missing? What would you add?

Applying the Scenarios

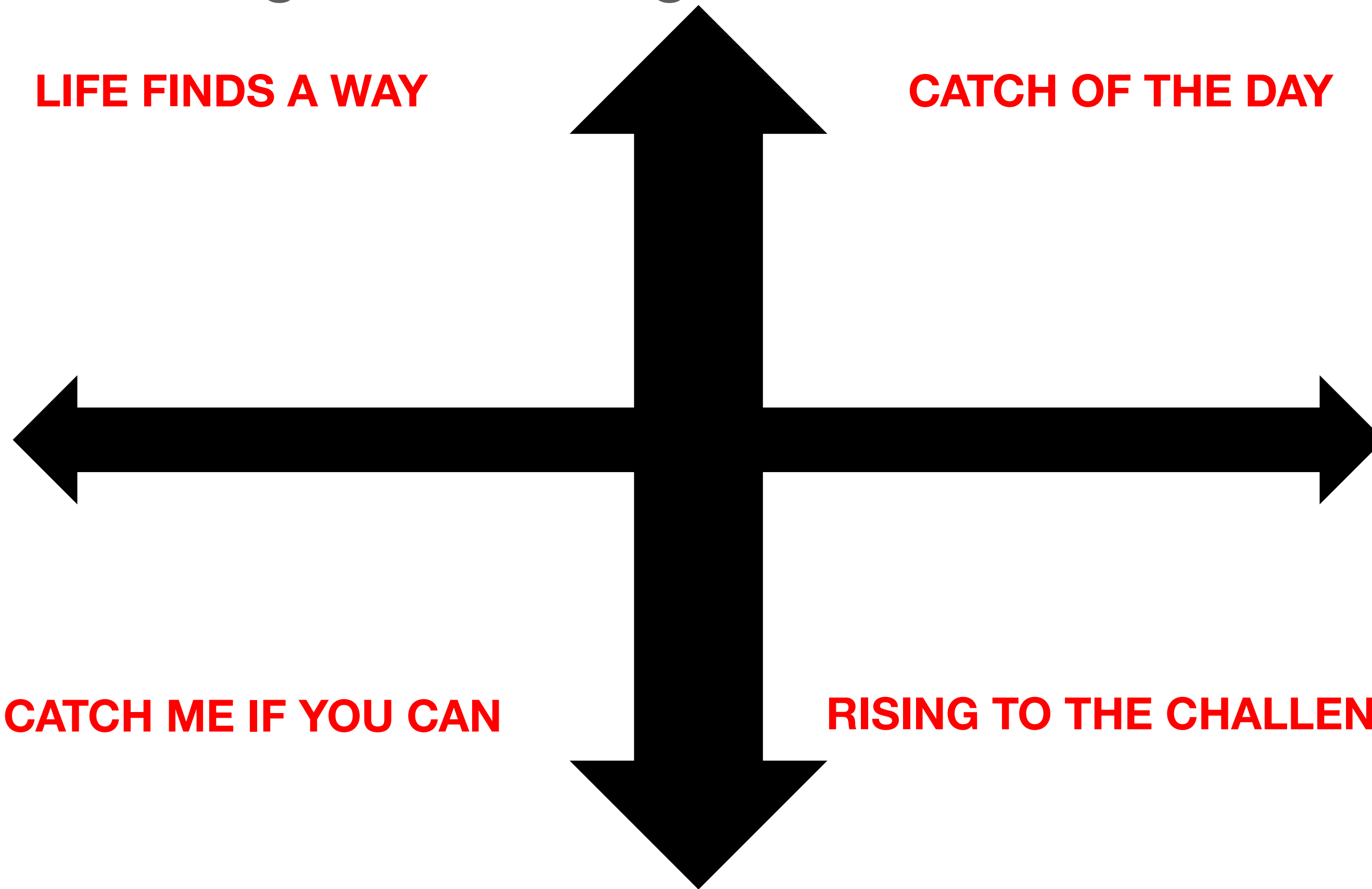
Using the scenarios as a platform to have discussions and generate ideas about governance and management changes

MADE IN THE USA

LIFE FINDS A WAY

CATCH OF THE DAY

**PLENTY OF FISH
IN THE SEA...**



MAKING LEMONADE

CATCH ME IF YOU CAN

RISING TO THE CHALLENGE

**IF WE ARE
SCREWED..**

Applying the Scenarios

Using the scenarios as a platform to have discussions and generate ideas about governance and management changes

e.g. Think specifically about **MADE IN THE USA** (a generally positive scenario)

- Will our current approaches to management / governance be successful under [these conditions] in the next 20 years? If not, what needs to change NOW to ensure success?
- What management changes have helped enable this scenario?
- What governance changes would be required to see this scenario play out as described?
- Distinguish between “assume MSA intact” / “beyond MSA”

Applying the Scenarios

Using the scenarios as a platform to have discussions and generate ideas about governance and management changes

e.g. Think specifically about **CATCH ME IF YOU CAN** (a generally negative scenario)

- Will our current approaches to management / governance be successful under [these conditions] in the next 20 years? If not, what needs to change NOW to ensure success?
- What management changes could help minimize the constraints / difficulties of this scenario?
- What governance changes could help prevent / avoid this situation?

Applying the Scenarios

Planned conversations at Council / Commission meetings during the Fall

- SAFMC
- MAFMC
- NEFMC
- ASMFC

Potential for other conversations/webinars with specific groups...

All to generate ideas for management and governance changes under different conditions of each scenario

Followed by a Summit meeting to review all ideas and prioritize / suggest recommendations

“Scenarios are stories. They are works of art rather than scientific analyses. The precision of [their content] is less important than the types of conversations and decisions they spark.”



Arie de Geus,
The Living Company

De Geus is a former corporate planning director for Royal Dutch Shell. Shell pioneered the application of scenario planning to the business world.