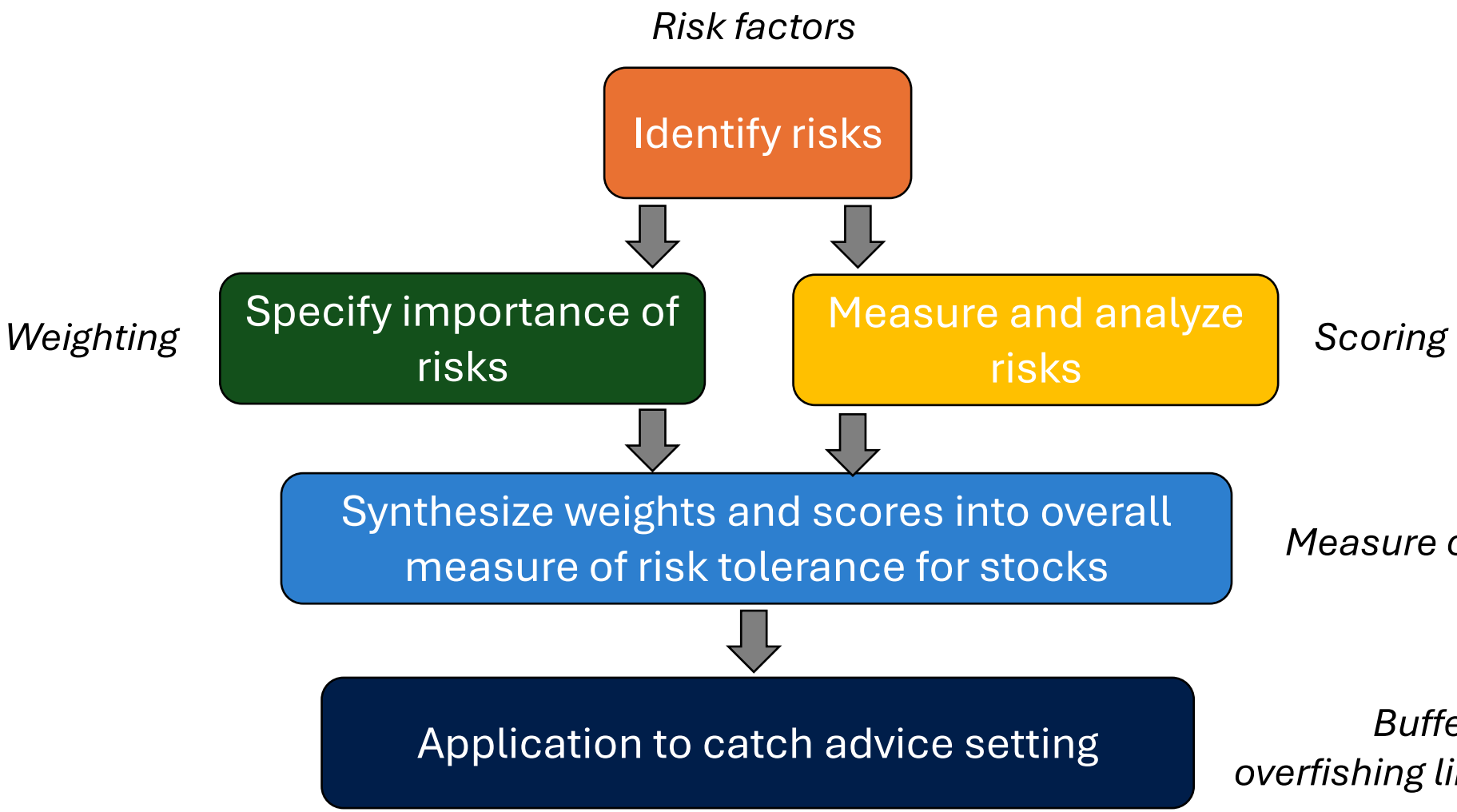
Evaluating the Council's New Risk Policy in the context of ABC Control Rules

September 2, 2025

CESC Meeting Project Update

Lisa Kerr

NEFMC Development of a New Risk Policy



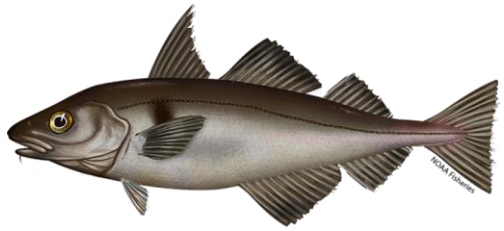
Project Goals and Objectives

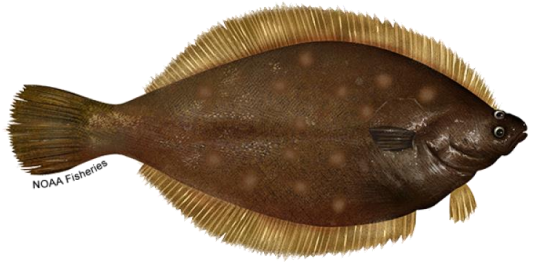
Goal: To qualitatively and quantitatively evaluate the performance of the NEFMC's new Risk Policy.

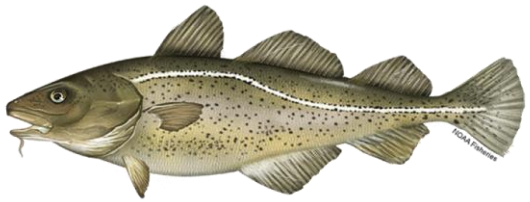
Obj. 1: Evaluate the Council's updated Risk Policy and demonstrate factor scoring and potential for integration with ABC Control Rules. (Spring and Summer 2025)

Obj. 2: Develop Management Strategy Evaluation (MSE) framework to evaluate the performance of the Risk Policy in the context of groundfish ABC Control Rules. (Summer and Fall 2025)

Obj. 3: Work with the NEFMC project oversight team to co-develop priorities and alternative scenarios for the MSE and conduct simulation testing. (Fall and Winter 2025)







Progress Update

Activities to date

Project Milestones

- Characterized current NEFMC harvest control rules
- Explored Risk Policy integration into HCRs
- Demonstrated scoring of Risk Policy factors
- Explored and synthesized Risk Policy performance evaluation
- Planning MSE (ongoing)

Presentations

- Overview and plan (kickoff) to Project Oversight Team (4/28/25)
- Overview to CESC (5/6/25)
- Overview to NCLIM working group (5/19/25)
- Scoring demonstration to Risk Policy Working Group (6/18/25)
- Project Oversight Team (7/15/25)

Other engagement

- NEFMC staff weighting exercise (3/25/25)
- NEFMC meeting, mock weighting exercise (4/14 /25 and 4/15/25)
- Scaling meeting w/ Risk Policy Subgroup (5/16/23)
- Correspondence on scoring feedback w/ Risk Policy members

Risk Policy Scoring Demonstration

Scoring of Groundfish Stocks

Less Risk Averse → More Risk Averse

Factor	-4	-3	-2	-1	0	1	2	3	4
SSB Stock Status	Well Above SSB Target		Rebuilt		≥75% but < 100%		< 75 but Above Threshold		Overfished
New Recruitment Factor	Multiple Large YCs		Recent Large YCs		Average, No trend		Recent Low Recruitment Or No info		Persistent Low Recruitment
Assessment Type, Performance					Analytical	Analytical, Minor Retro	Analytical, Major Retro	Empirical	Empirical, Missing Data
Climate Vulnerability					Low	Moderate	Moderate, Negative Direction	High	High, Negative Direction
Fish Condition					Good	Above Average	Neutral	Below Average	Poor Condition
Commercial Fishery Characterization	Score 0 Positive Outlook		Score 1		Score 2		Score 3		Score 4, Negative Outlook
Recreational Fishery Characterization	Score 0 Positive Outlook		Score 1		Score 2, or No Rec Fishery		Score 3		Score 4, Negative Outlook

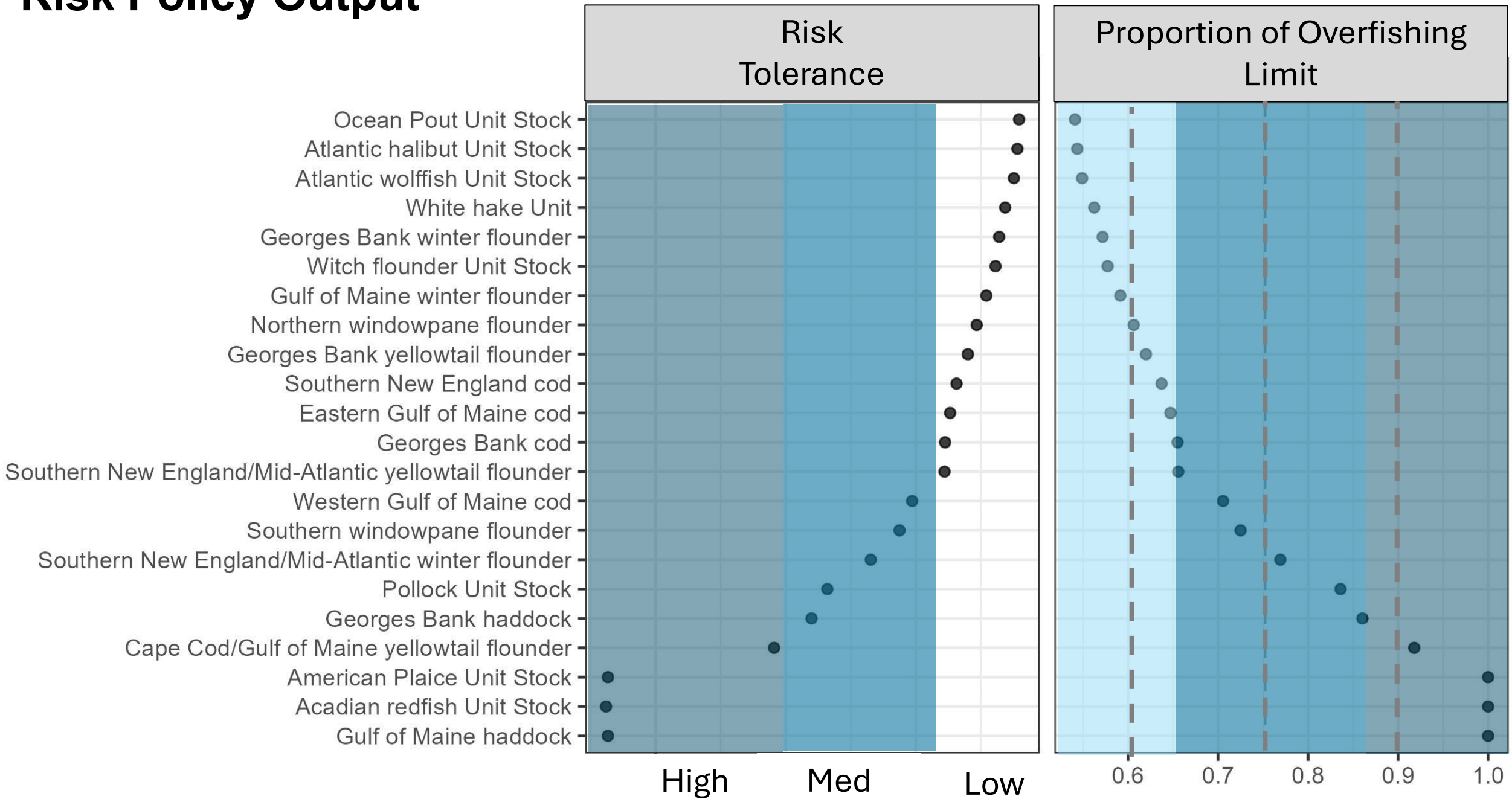
NEFMC Risk Policy Demonstration and Evaluation

- Applied Risk Policy to the 22 stocks in the Northeast Multispecies Fishery Management plan
- Evaluated the scoring rubric and identified challenges in application
- Demonstrated sensitivity of the Risk Policy performance to various structural assumptions:
  - Factor weighting schemes (uniform or Council defined)
  - Scaling of factor scores (max 1, 2, or 4)
  - Possible range of scores for each factor (some factors can have negative scores)
  - Number of factors scored (including commercial and recreational fishery characterization and excluding fish condition).
  - Impact of assessment type scoring constraints on z-scores

Harvest Control Rule Integration

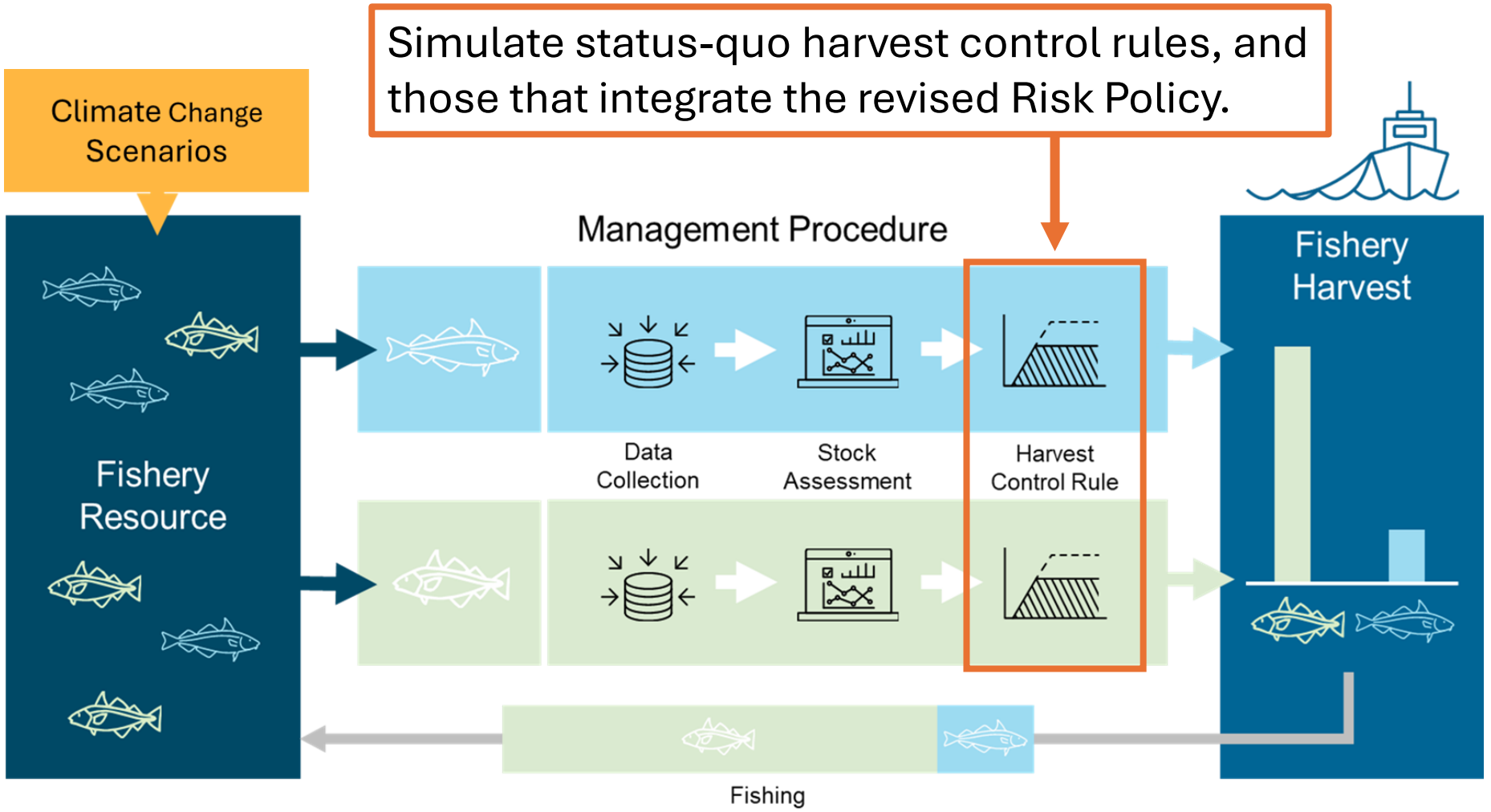
Integration with ABC Control Rules

Risk Policy Output



MSE Scenario Scoping

Testing Performance



Next Steps: Comparing the performance of groundfish harvest control rules (status-quo vs. risk policy integrated).

6 initial scenarios for stochastic simulation (~100 iterations)

- 2 stocks: GOM haddock, WGOM cod
- 2 HCRs: status quo, dynamic buffer
- 2 Alternative factor weightings: NEFMC global, uniform

Scenario	Stock	HCR	RP factor weighting
1	GOM haddock	Status quo (no risk policy integration)	NA
2	GOM haddock	RP integrated (dynamic buffer)	NEFMC Global
3	GOM haddock	RP integrated (dynamic buffer)	Uniform
4	WGOM cod	Status quo (no risk policy integration)	NA
5	WGOM cod	RP integrated (dynamic buffer)	NEFMC Global
6	WGOM cod	RP integrated (dynamic buffer)	Uniform

Then, use these results to inform subsequent simulations. Options could be:

- Add a tiered HCR option (would start with fixed scientific uncertainty buffers in each tier)
- Add an empirical stock (which might benefit from a tiered approach)
- Explore the behavior of alternative weightings

Questions