



Update: EAFM Summer Flounder Management Strategy Evaluation

Council and Board Meeting
December 14, 2021

Presentation Overview

- Quick overview of MSE project and process
- Update on activities since August
 - Outcomes from core stakeholder group workshop #2
 - Technical work group – modeling work
- Project timeline
- Council/Board questions/feedback – no action

MSE Background

- Part of Council's continued development & implementation of the EAFM Guidance Document
 - Structured decision framework: risk assessment → conceptual model → MSE
- MSE Goals: 1) Evaluate biological and economic benefits of minimizing rec discards (live and dead) and convert to landings and 2) identify management strategies to realize benefits
- MSE is a tool to test different strategies (e.g., regulations, HCR) and their ability to achieve specified management objectives before implementation
- Use an inclusive stakeholder process to help the Council/Board identify clear objectives and strategies throughout

Core Stakeholder Group

- Working in large groups can be challenging and inefficient
- Serve as main source of input to technical WG and management on project goals, model considerations, and outcomes
- Core group:
 - Represent a range of fishery perspectives
 - Bring ideas, open mind, and support process
 - Commitment to participate – workshops and in-between

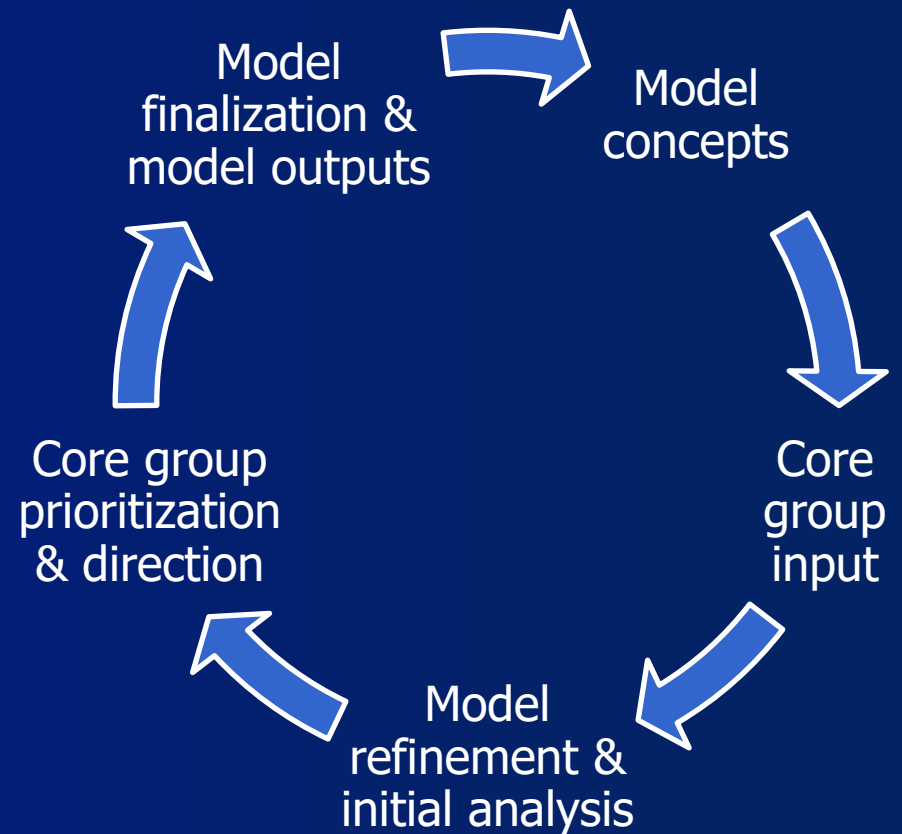
Representation Type	# of Representatives
Regional	
MA-CT	5
NY-DE	6
MD-NC	2
Stakeholder Type	
For-Hire	5
Private Recreational	3
Commercial	1
Recreational	2
Secondary Market	2
Other	2

Overview: Core Group Workshop #1

- Workshop 1: Session 1 – June 15, Session 2 – July 15
- Introduction to MSE, structured decision, and project process
- Develop consensus decision statement
 - Common understanding of the focus and expected outcomes the MSE might address
- Develop draft management objectives and draft range of alternatives/strategies
 - Approved by Council and Board in August
 - Capture overall scope and range of potential considerations
 - Further refinement and prioritization

Approach: Core Group Workshop #2

- Held November 8-9 via webinar
- Primary focus refining, clarifying, condensing and prioritizing objectives, sub-objectives, metrics, and alternatives
- Underlying emphasis on communication and understanding between core group and technical work group
 - General support and agreement for process and outcomes

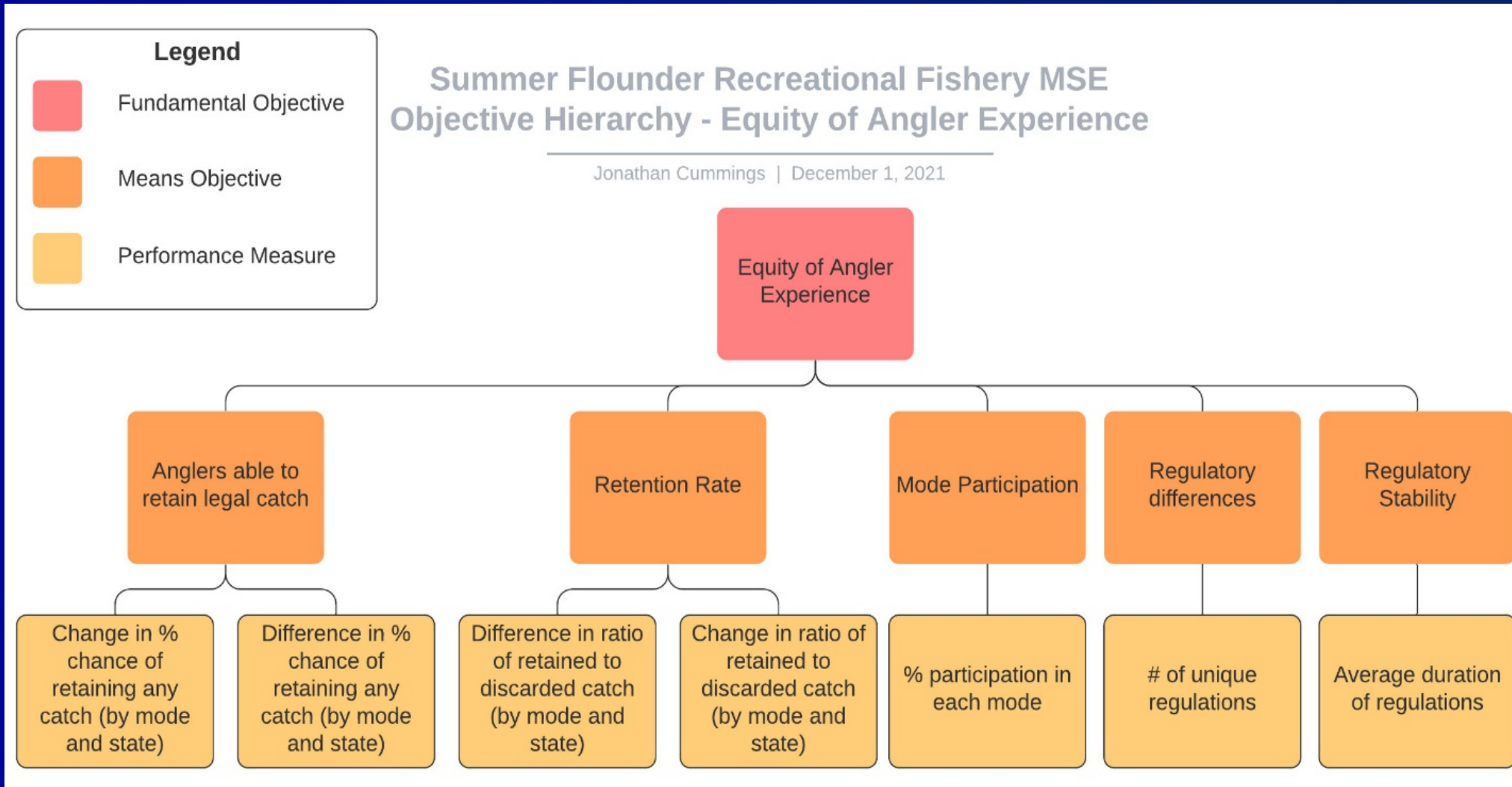


Outcomes: Core Group Workshop #2

- Management Objectives, Sub-Objectives, and Metrics
 - Initially approved 5 broad objectives and nearly 40 different sub-objectives and metrics
- Identified those most critical or a core consideration and metrics that are most informative
 - Condensed to 4 broad objectives and 15 sub-objectives and metrics

1. Improve the quality of the angler experience
2. Maximize the equity of anglers' experience
3. Maximize stock sustainability
4. Maximize the socio-economic sustainability of the fishery
5. ~~Maximize the sustainability of participation in the fishery~~

Outcomes: Core Group Workshop #2



Outcomes: Core Group Workshop #2

- Alternatives and strategies
 - Initially 15 different categories and over 80 different options
- Focus on those with greatest impact and could be appropriately modeled (directly or proxy)
 - Size, season, possession limit, enforcement/compliance, discard mortality/gear/education
- General direction and bounds to limit potential options – no specific/final options
 - E.g., 16" – 19", 3 – 6 fish possession, 150 – 365 day season

Future: Core Group Workshops

- Workshop #3
 - Tuesday, March 1st
 - Review preliminary model outputs, additional prioritization and direction, trade-off evaluation between objectives
- Workshop #4
 - 2-day workshop (hopefully in-person) in late April/early May
 - Draft final model outputs and implications
 - Finalize objective trade-offs
 - Recommendations for management consideration

Technical Work Group: Model Overview

- Operating/Biological Model
 - Not a stock assessment model but conditioned with assessment inputs
 - Summer flounder population dynamics and life history
 - Can consider spatial and sex-specific dynamics and biological uncertainties
 - E.g., how do management measures perform under different stock productivities
- Implementation/Bio-economic model
 - Behavioral model to consider angler preferences and drivers of effort
 - Simulation model to predict impacts of measures on angler behavior, welfare, and fishing mortality
 - Interactions between different recreational fishery measures (e.g., sea bass)
- Both models build off other projects and extensive peer review

MSE Simulation Model Framework

Performance Metrics

Angler metrics
Economic metrics
Biological metrics



Operating Model

Update population dynamics

Operating Model

Age and sex-structure
Length-based fishing mortality
Multiple fleets (comm/rec)
Initialize based on current assessment

Implementation Model (Economic demand model)

Realized recreational landings and discards based on management regulations

Data Generation Module

Catch estimates by fleet
Survey index
Length/Age composition
Reference Points

Management Procedure

Determine ABC
Set Recreational fishery regulations

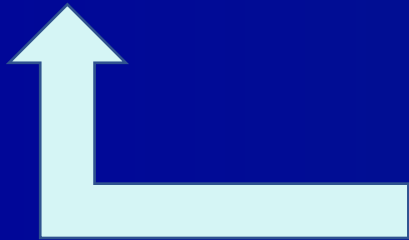
Stock Assessment

Pseudo-assessment – not trying to replicate the current assessment
(OM plus autocorrelated noise)

Management procedures

CORE GROUP SPECIFIES

- Minimum sizes
- Maximum sizes
- Slot limits
- Bag limits
- Seasons
- Others (e.g., discard mortality or compliance)
- Identify which combinations highest priority?



Next Steps

- Focus on modeling work in preparation for workshop #3
 - Technical work group taking outcomes and feedback from workshop #2
 - Developing some initial scenarios to demonstrate biological, welfare, economic outcomes across various metrics for workshop #3
- Some slight adjustments to activities and timeline
 - Added a core stakeholder group workshop to get needed input
 - Additional time for model development
- Overall timeline pushed back about 1 month
 - Still allow for consideration of results for 2023 fishery as specification process begins in August

Anticipated Tasks and Timeline

Task/Activity	Timeframe (subject to change)
Finalize technical work group membership and initial meeting	May 2020
Kick-off webinar and mock workshop with Council and ASMFC advisory panels	September 2020
Stakeholder scoping feedback form and regional workshops	January – April 2021
Finalize core stakeholder group participants; core stakeholder group workshop 1 and Council/Board meeting to develop objectives/performance metrics/alternatives; data synthesis, initial model development	May – August 2021
Continue model simulation model development; begin initial simulation testing of draft management strategies; second core group workshop to finalize objectives and metrics and refine potential alternatives; update Council/Board	September – December 2021
Continue simulation model development and initial analysis of alternative scenarios; third core group workshop to review draft model outputs and begin trade-off prioritization; refine models and outputs, as needed	January 2022 – March 2022
Fourth core group workshop to review draft final results, trade-offs and recommendations; Council and Board reviews final results and considers potential management alternatives and action to address recreational summer flounder discards	April – June 2022

Meeting Goals

- No specific decisions today – just an update
- Any feedback on project approaches, direction, or timeline

<https://www.mafmc.org/actions/summer-flounder-mse>

Questions??