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Update on the Dolphinfish Management Strategy Evaluation

SAFMC Meeting December 2022



Motivation

2020 Dolphin / Wahoo Stakeholder Participatory Workshops

- Built stakeholder-driven conceptual models detailing local abundance of dolphin
- Clear regional differences in use, reliance, and value of fisheries
- Perceived increased utilization on the resource; accompanied by increased user conflicts



Can we design a new management approach that reduces conflicts, maximizes achievement of stakeholder-defined management objectives, and is appropriate for the life history strategy of dolphin?



<https://safmc.net/citizen-science/dolphin-wahoo-participatory-workshops/> | <https://wahoo-participatory-workshops-final-report.pdf/>

Motivation

- Dolphin stock and fishery
 - Internationally exploited
 - Data-limited, precluding full stock assessment
 - Limited management capacity
 - Static catch limit
 - Environmentally-driven productivity
- Proposing a more adaptive approach
 - Empirical (non-model based / indicator-based) management procedure for dolphin in the South Atlantic
- Full Stakeholder process



Ongoing with collaboration from:

- SEFSC
- SAFMC
- NC State University
- Beyond Our Shores Foundation

Stakeholder Workshops

- 1st round ongoing
- Workshops designed to:
 - Introduce the management procedures and management strategy evaluation
 - To develop conceptual management objectives by exploring how stakeholders value the dolphin fishery
 - Understand uncertainties that the management procedure should be robust to
 - Receive input on the type of management procedures to be explored
 - Identify key participants for continued involvement in the process



Workshop Dates:

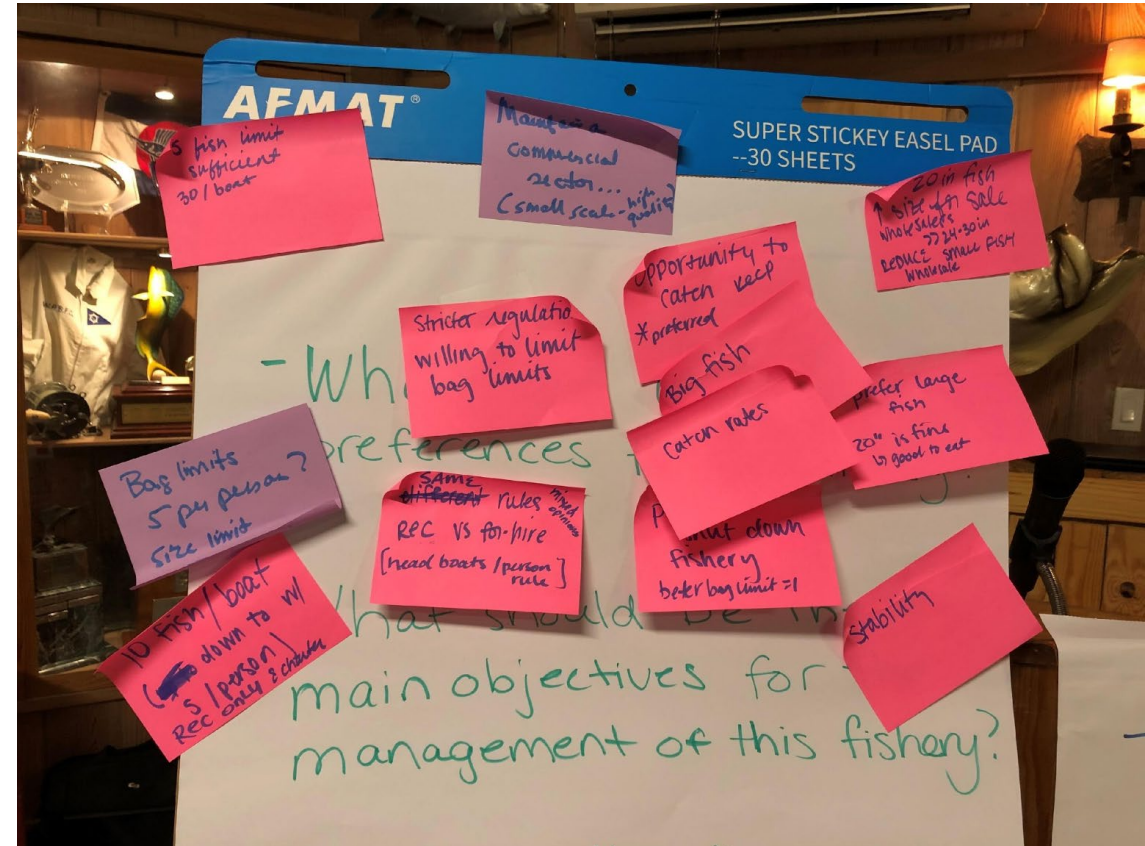
- South Florida (Oct 4-6)
 - West Palm Beach
 - Fort Lauderdale
 - Islamorada
- Southern New England (Nov 2-3)
 - Montauk
 - Narragansett
- Greater Carolinas (Jan 2023)
 - Charleston, SC
 - Wilmington, NC
 - Wanchese / Outer Banks, NC
 - Virginia Beach, VA



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Feedback

- Conceptual management objectives:
 - Ensure opportunity / access to fishery
 - Prevent fishery closures
 - Large sizes preferred
 - Stability in regulations preferred
 - Regional & sector differences in fishery goals and objectives
 - Trip / bag limits; meat vs. leisure fishery; economic & market considerations



Feedback

Uncertainties:

- Recreational catch uncertainty
- International exploitation
- Post-release mortality
- Enforcement challenges
- Importing and other economic and market considerations
- Alternate movement patterns
- Unique, area-based fishery dynamics
- Changing availability

Management Recommendations:

- Expand minimum size limit
- Area-specific management measures
- Gear-specific management measures
- Collaborate across Gulf, Caribbean, and New England Councils



Management Strategy Evaluation (MSE) Dynamics

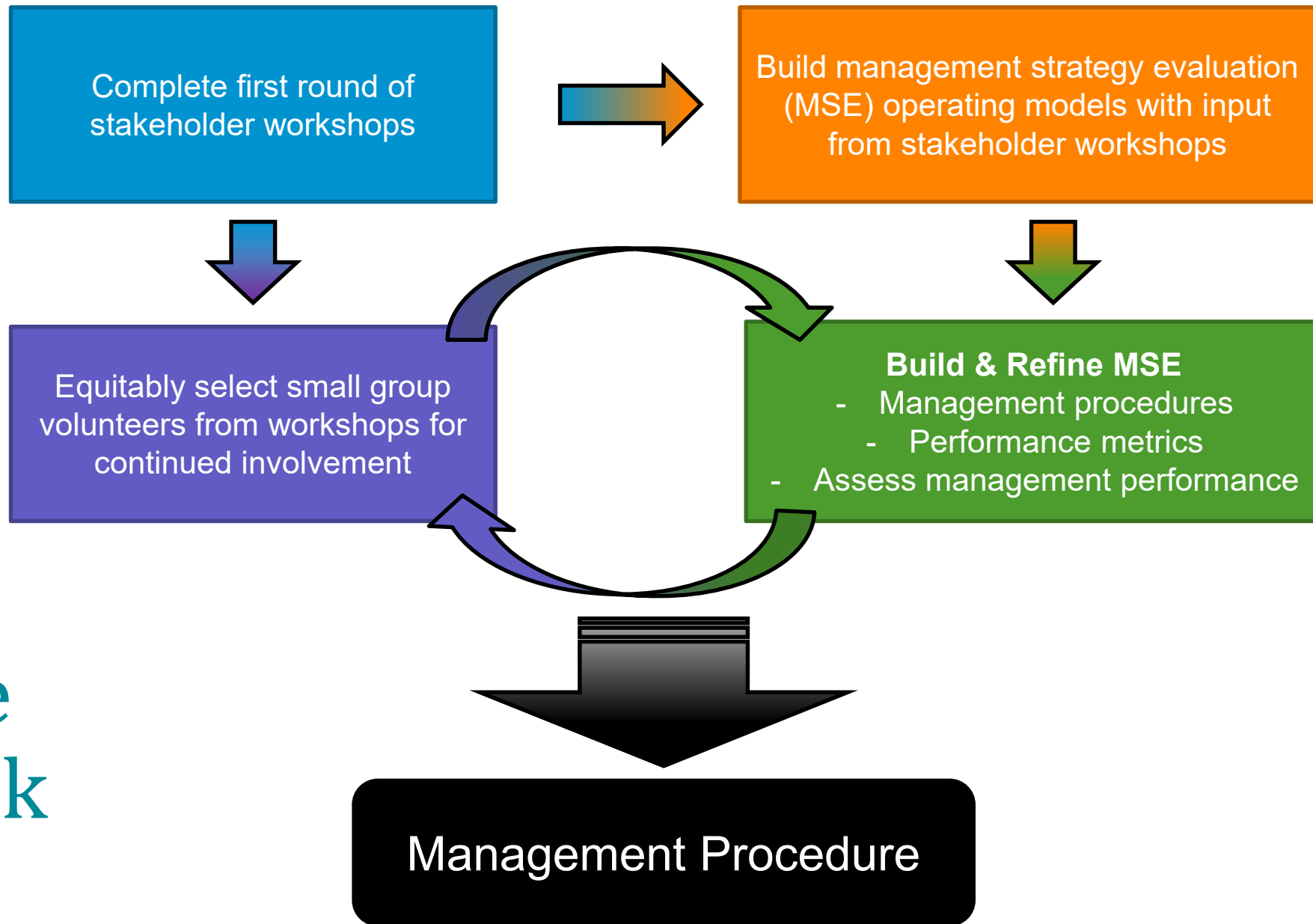
Modeling Dynamics

- Spatial & seasonal with fish movement
- Length- (or age-) based
- Potentially with climate linkages
- Empirical management procedure
 - Exploring indices for predictive ability

Analytical Technical Team

- Matt Damiano (NCSU)
- Jie Cao (NCSU)
- Cassidy Peterson (NOAA)
- Kyle Shertzer (NOAA)





Future outlook

Tentative timeline



- *January 2023* - 1st round of stakeholder workshops
- *Summer 2023* - Operating model development
- *Fall 2023* - Management procedure development
- *Winter - Spring 2024* - operationalize management objectives;
stakeholder feedback on management procedure
design and
performance
- *Mid 2024* - Report out on results

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<https://www.fisheries.noaa.gov/event/workshops-discuss-dolphinfish-mahi-mahi-management-strategy>

<https://www.fisheries.noaa.gov/feature-story/scientists-consider-more-adaptive-approaches-atlantic-dolphinfish-management>



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