# Update on the Dolphin Management Strategy Evaluation

South Atlantic Fishery Management Council December 2023

# Acknowledgements

**Stakeholder Workshops:**
SEFSC: Mandy Karnauskas, Matt McPherson, Suzana Blake, Cassidy Peterson
SAFMC: Julia Byrd, John Hadley

**MSE Modeling Technical Team:**
SEFSC: Matt Damiano, Kyle Shertzer, John Walter, Cassidy Peterson
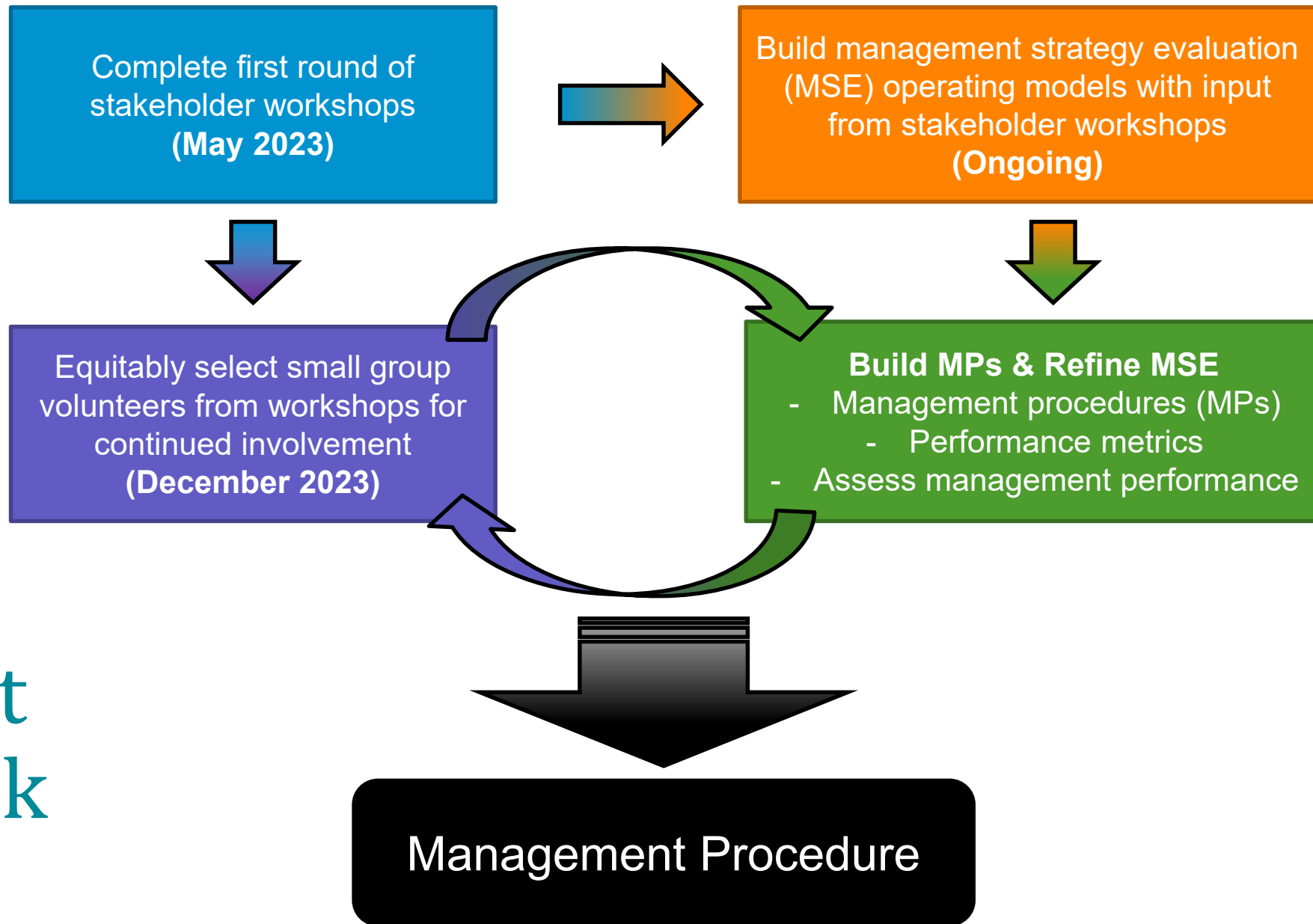NCSU: Jie Cao
OSU: Bryan Minihan
Beyond Our Shores Foundation: Wess Merten
SERO: Nikhil Mehta

**Stakeholder participants**

**Project outlook**

# Dolphin MSE Stakeholder Small Group Application

*We are looking for volunteers who will continue to advise on the Management Strategy Evaluation during 2024 as part of a small stakeholder working group.*

Working group is:

- Small (less than 20 stakeholders)
- Committing to 5–10 meetings via webinar for at least an hour at a time throughout 2024
- Selected through the SAFMC appointment process
- Appointed in December 2023

Participants should serve as representatives for their regions and industry sector, and agree to:

- Represent their colleagues to the best of their ability
- Do their best to attend all virtual working group meetings
- Invest in learning and understanding the Management Strategy Evaluation process.

# MSE Modeling Dynamics



**Modeling Dynamics**

- Spatial, seasonal, length-based operating model
- Empirical management procedure

**Ongoing work**

- Develop operating model
  - Modifying a pre-existing MARFIN-funded MSE for black sea bass and cobia (Damiano et al. *in review*)
- Gather data and exploring indicators for predictive ability
- Build and refine indices
  - VAST (Damiano et al. *in press*)
- Develop movement matrices
- Shiny app developer

**Pursuing options to recruit additional analytical assistance**

# Tentative timeline

| Time | Activity: Communication | Activity: Model development |
|---|---|---|
| Now – Winter 2023/2024 | - Selection of small stakeholder group (Dec 2023) | - Build OM framework<br>- Condition base-case OM<br>- Define alternate OM grid |
| Spring 2024 | Meetings with small group:<br>- introduce MSE and MP concepts, | - Build / condition alternate OMs |
| Summer 2024 | - Discuss operationalization of conceptual management objectives<br>- Present OM structure and OM uncertainty grid<br>- Consider form and parameterization of candidate MPs | - Develop projection model and MSE wrapper code<br>- Develop simple, proof-of-concept, candidate MPs |
| Fall 2024 – Winter 2025 | Primary demonstration with stakeholder group and managers:<br>- Demonstration of simple MP<br>- Develop performance metrics, iterative feedback | - Develop candidate MPs and performance metrics<br>- Revise candidate MPs and performance metrics |
| Spring 2025 | Secondary demonstration of refined candidate MPs to stakeholders and managers | - Continued candidate MP revision<br>- Develop data visualization tools |
| Summer – Fall 2025 | Presentation of top performing candidate MPs | - Satisficing, refinement, and elimination of poorly-performing MPs<br>- Report out on results |

# Then what?

| | Stakeholders | Modeling team | SSC | Council |
|---|---|---|---|---|
| **Operating models** | Advise on OM structure and key uncertainties | Construct | Adopt | Advise |
| **Management objectives** | Advise | Quantify | Advise on biological 'must-pays' e.g. not overfishing and rebuilding | Adopt |
| **Management Procedures** | Advise | Test and refine | Advise | Adopt and implement management procedure based on performance |

U.S. Department of Commerce  |  National Oceanic and Atmospheric Administration  |  National Marine Fisheries Service

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