Snapper-Grouper Management Strategy Evaluation: Situation Assessment

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Overview

Management Strategy Evaluation (MSE)

SAFMC Snapper-Grouper MSE

Situation Assessment Approach

Some Preliminary Results

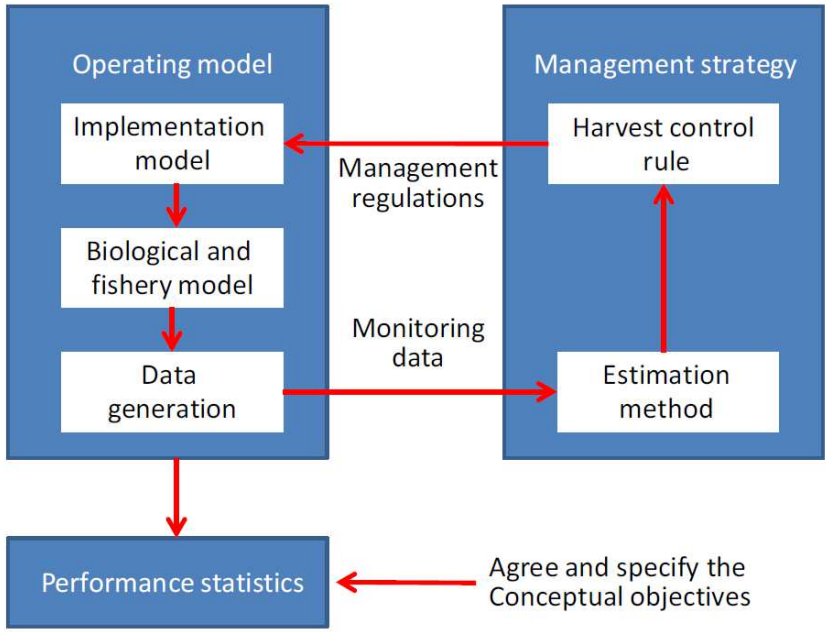
Implications for future of S-G MSE

Management Strategy Evaluation (MSE)

Aims: Evaluate performance of management systems and identify robust procedures

Involves modeling the whole fishery management system

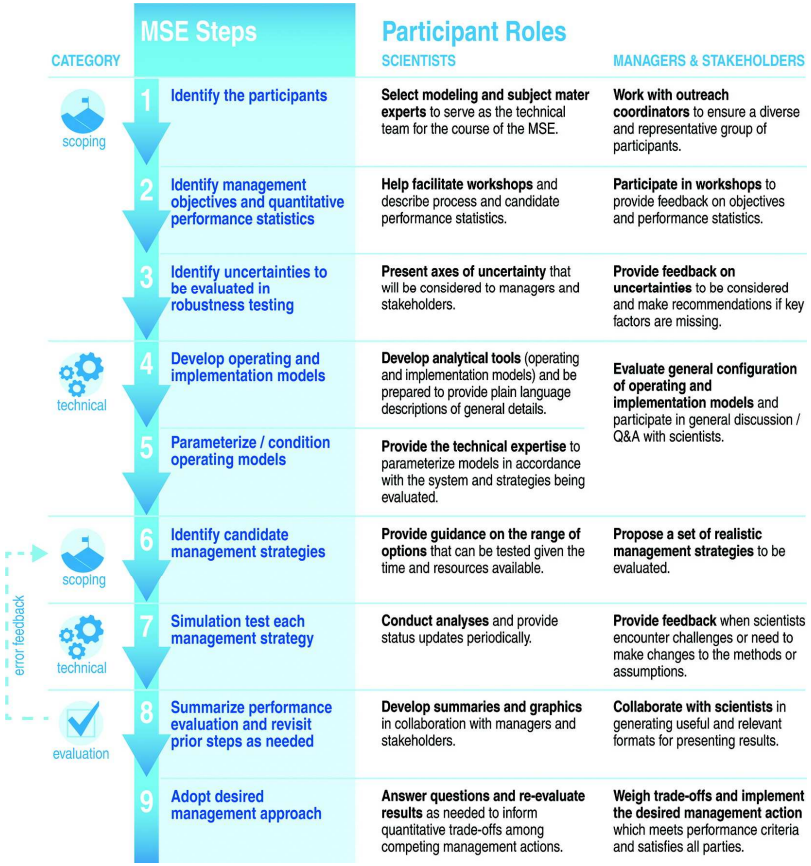
Stakeholder involvement



Punt et al. (2014) Fish & Fisheries 17: 303-334

Stakeholder involvement in MSE

- Stakeholder involvement seen as improving buy-in, reducing implementation barriers, providing information, mutual learning
- Benefits from clearly defined roles, explicit and transparent process, goals and objectives
- Participatory modeling framework



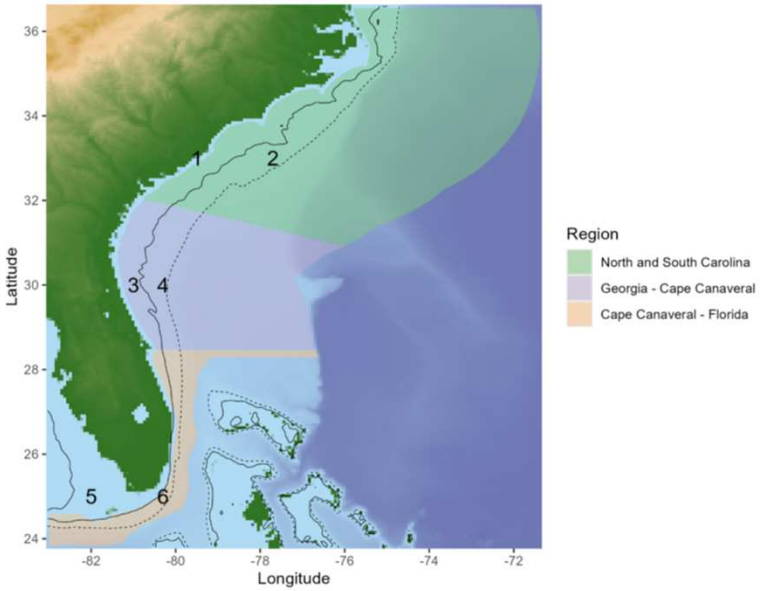
Goethel et al. (2019) CJFAS 76: 1895-1913

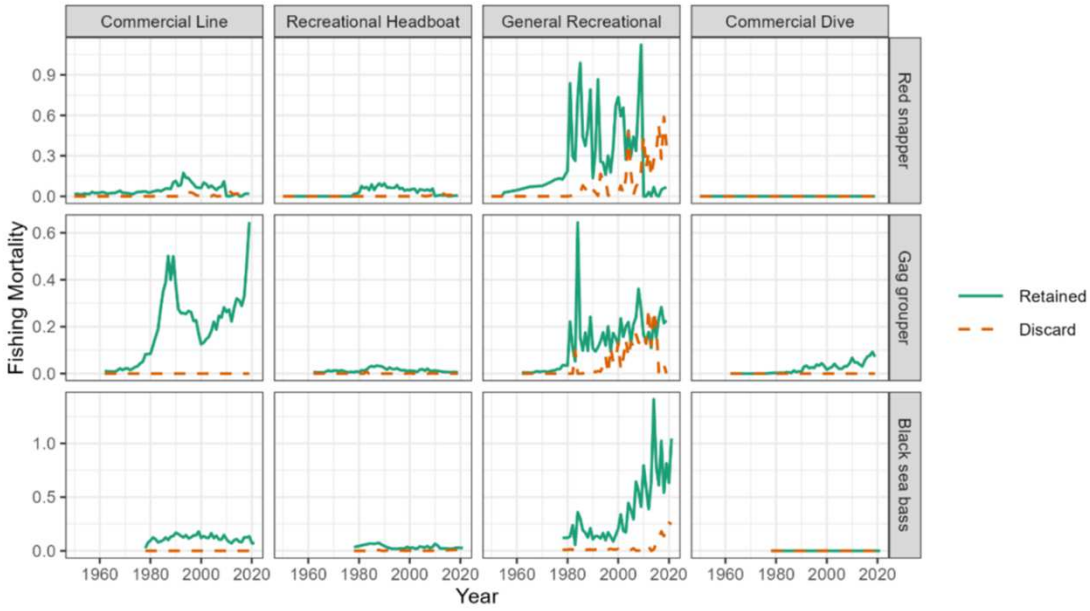
SAFMC Snapper-Grouper MSE

- Council Initiative (2022-24), contracted with Blue Matter Science
- Focus on strategies to reduce the number of released fish to improve yield throughout the fishery snapper grouper fishery
- Considering the need for fishery access and resource use while preventing overfishing and rebuilding overfished stocks.
- Opportunity to evaluate different management strategies and their associated biological, social, and economic tradeoffs.

SAFMC Snapper-Grouper MSE

bluematter





SAFMC Snapper-Grouper MSE

Operating Models

- Base
- Low M
- High M
- Reduced (historical) rec. removals
- Effort creep
- Recent recruitment

Management Scenarios

- Status quo
- Full retention
- Minimum length limit
- Nearshore fishing only
- Offshore fishing only

Performance metrics

- Probability rebuild
- Relative short-term landings
- Relative long-term landings
- Fraction discarded

Stakeholder involvement in S-G MSE

- Multiple presentations to, and consultations with Snapper-Grouper AP, SSC, Council
- Public scoping sessions
- (Technical Working Group)

S-G MSE Next Steps

Project: Situation Assessment (this project)

Project: Recreational Angler Attitudes and Preferences in the South Atlantic Snapper Grouper Fishery

RFP: Continue Development of a Management Strategy Evaluation for the Snapper Grouper Fishery

Situation Assessment: Why and How

Helps guide the stakeholder engagement and communication aspects of the ongoing SAFMC snapper-grouper MSE.

Qualitative exploration to understand the breadth of perspectives within the snapper-grouper management context in relation to the fishery, its management, discard mortality, and the MSE.

Situation Assessment

Data collection

- Qualitative study
- Semi-structured interviews using general interview guide approach
- Some elements informed by theoretical framework of Reasonable Person Model
- Interviews (27) with wide range of fisheries and management stakeholders
- Purposive and snowball sampling
- Interviews conducted via zoom

Data analysis

Conventional Content Analysis to identify patterns and themes (Hsieh & Shannon, 2005)

Interview Guide overview

Section 1: Stakeholder Identity and Involvement in the South Atlantic Snapper-Grouper Fishery (SA-SG)	• Identity and personal experience
Section 2: SA-SG Fisheries Management and strategies	• Perspectives on fishery population, management, concerns, and science
Section 3: SA-SG discard mortality	• Experience, ideas to reduce discard mortality, and limitations
Section 4: Management and Engagement (Experiences with management)	• Participation and decision-making experience
Section 5: Views on the MSE	• Familiarity, role and management scenario ideas
Section 6: Performance and success criteria	• Success criteria for management options
Section 7: Perspectives on new administration	• Potential effects of new administration and possible exploration through MSE

Conventional Content Analysis

Key Steps

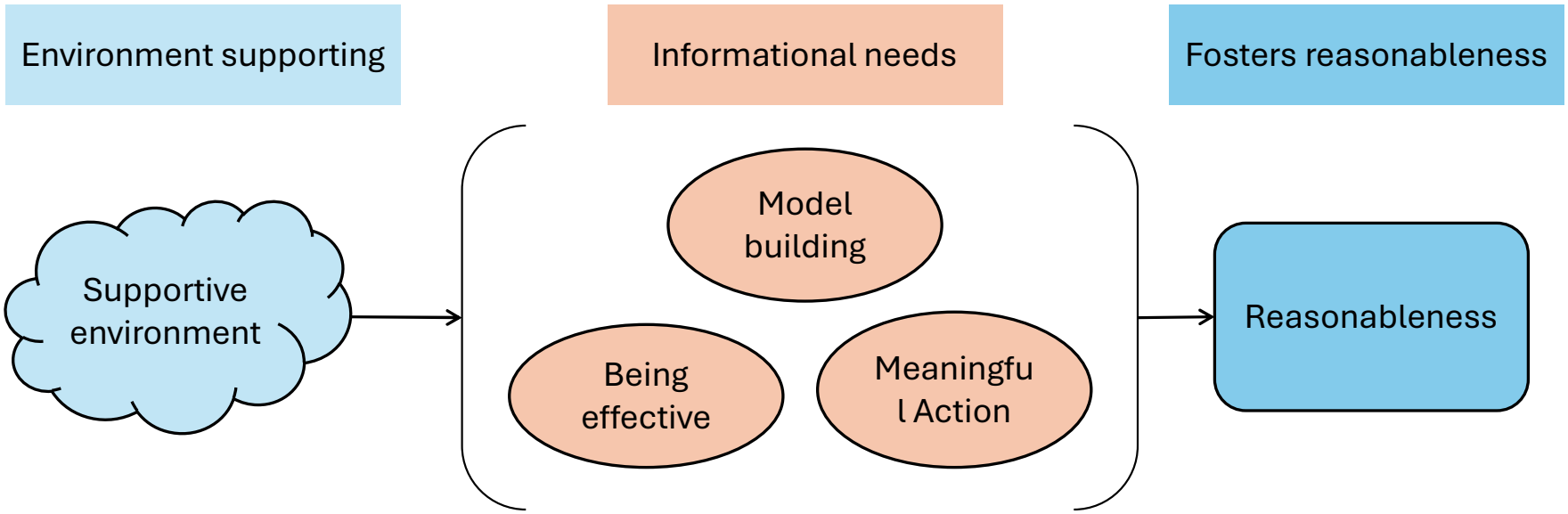
- *Open coding*: Code segments that capture significant aspects of participants' experiences and views.
- *Review*: Ensure consistency, merge redundant codes
- *Develop Themes*: Group codes into meaningful themes that represent key concepts
- *Refine*: Combine themes based on patterns.
- *Reflexivity*: Maintain awareness of personal biases to ensure transparency.

Reasonable Person Model

- People are more likely to engage constructively, make informed decisions, and cooperate when they operate within a supportive environment that meets their informational needs and fosters reasonableness.
    - *reasonableness* refers to a state where individuals can think clearly, make informed decisions, and act effectively in their environment
- Used to develop some interview questions and serve as a theoretical framework during analysis

Theoretical Framework

Reasonable Person Model (Kaplan & Kaplan, 2009)



27 Interviewees

Sector	No. of interviewees
Recreational fisher	5
Recreational association	2
Commercial fisher	5
Spearfisher	2
Charter capt	3
Headboat operator	1
Council member	8
Council staff	1
SSC member	2
SEP member	2
SG AP member	8
SG AP Rec member	6
Scientist (population, economics)	5
NOAA staff	3
State agency staff	3
ENGO staff	2

Some Preliminary Results
(Analysis Ongoing)

Overview presented in order of interview guide

Highlighting some emerging themes

Reasonable Person Model

Perceived changes in the fishery

- Snapper-Grouper Populations
  - Decreased abundance for all species except red snapper
    - Causes: Development, climate change, habitat loss, wáter quality, species migration, increased fishing pressure, discard mortality, increased efficiency (tech)
  - Increased abundance of red snapper
    - Causes: Regulations, closures
- Industry make-up
  - Rapid increase in private rec. boats, charter growth, headboat reduction
- Technology
  - Increased efficiency

Perceptions on Council management of the Snapper-Grouper Fishery

- Overall, Council seen as ‘doing what they can’ under a limiting system where data are perceived as ‘poor/old’ and decisions are ultimately governed by the MSA.
- Slow bureaucratic process where decisions take years – opposite to the dynamic nature of fisheries.
- Some decisions (or lack of timely decisions) aren’t understood.
- Regional differences are not addressed well.
- Council could be nimbler, adapt more quickly
- Council could be more proactive and precautionary

Some perceived ‘big picture’ issues

- **MSA** seen as restrictive yet open to interpretation and in need of reauthorization to be updated to the times, address definitions, and phrasing (must vs may)
- **Private recreational sector** has increased greatly but is perceived as less closely monitored and regulated than the commercial and charter (headboat) sectors.
- **Some stakeholders perceive lack of political will** to monitor and regulate recreational sector and address discard mortality issue.
- Many stakeholders appreciative of **science** but feel that it’s hampered by use of **poor and/or old data** (recreational removals, discard mortality rates, not accounting for changing environment) and underfunded. Some question scientific management targets (‘abundance’ vs. ‘age-structure based’).
- **Management of red snapper discards** perceived to be stuck in a loop. Needs new approaches and different mindset? Some perceive lack of political will to address the issue.
- Some perceived **inter-sectoral equity** concerns.

Perspectives on Engagement and Participation

- Decision making process is complex and has a learning curve.
- Those immersed for years are comfortable with it but newer folks or those in the periphery (attend meetings, public comment, etc.) find it difficult to grasp.
- Interacting through public comment feels generally less impactful that other more direct involvement. Sometimes public comment feels like the council must do that as a formality but don’t listen.

Perceptions of MSE

- **Many are usure about the role of the MSE,** variously thought it was related to improving stock assessments, improving data, or using multispecies approach.
- Those most familiar with the MSE find it at least somewhat helpful.
- Skepticism since no new data are being used and only three species are considered.
- Some are hopeful that it can help ‘get management unstuck’.
- Some doubt political will to implement identified strategies.
- Some believe it is too complex and will further erode peoples’ trust.
- Those not involved in AP, SSC, Council were not familiar with the MSE

Some MSE Scenario ideas (out of 26 total)

- Effect of quality of recreational data on management
- Effect of closing bottom inshore
- Effects of gear modifications , spatial closures
- Test aggregate bag limit
- Catch and release fishery
- Address regional differences and needs
- Economic impact of regulations on charter/headboat operators
- Effects of increasing multiday boats to 1000lb of gag
- Effect of storm events

Some suggested performance metrics

- Biomass
- Recruitment
- Population health
- Stock sustainability
- Criteria depends on the species
- Fair and equitable access

- Realistic results

Perceived impacts of administration change

- Considered unknown/uncertain by most
- Possible impacts
  - ‘More flexible regulations could get management out of its current rut’
  - ‘Executive order on red snapper’
  - ‘Less rules (10 for 1)’ seen as either good or problematic
  - ‘Loose staff’
  - ‘Stop funds’
  - ‘Will choose Council appointments’

- MSE generally not seen as opportunity to look at potential changes from new administration (adds complexity; leave politics aside)
- Some interested, e.g. MSE on opening RS fishery scenarios

Reasonable Person Model

Does the MSE help people to think clearly, make informed decisions, and act effectively?

Building Mental Models

- **MSE helped with model building,** but only for the most involved stakeholders.
- **MSE Understanding**: Stakeholders, particularly those not closely involved in management, are unclear on the purpose of the MSE, with conflicting expectations about its scope and function.
- **Science and Data Issues**: Use of data and assessments viewed as ‘old’, ‘poor’, and/or conflicting with own observations reduces trust in the MSE.

Being Effective

Complexity: Technical language and complex science create a barrier to asking meaningful questions — even for those who are motivated to participate.

Learning: At least some stakeholders are motivated to learn more technical aspects, especially when scientists are engaged and receptive to learning about stakeholder knowledge.

Slow process: Some feel disheartened by the slow timeline between science and management, which undermines their sense of agency or purpose. Some even stop engaging with the process.

Engagement limitations: Time constraints, information overload, and a lack of rapport with managers limit stakeholders' capacity to engage — even when opportunities are available.

Meaningful Action

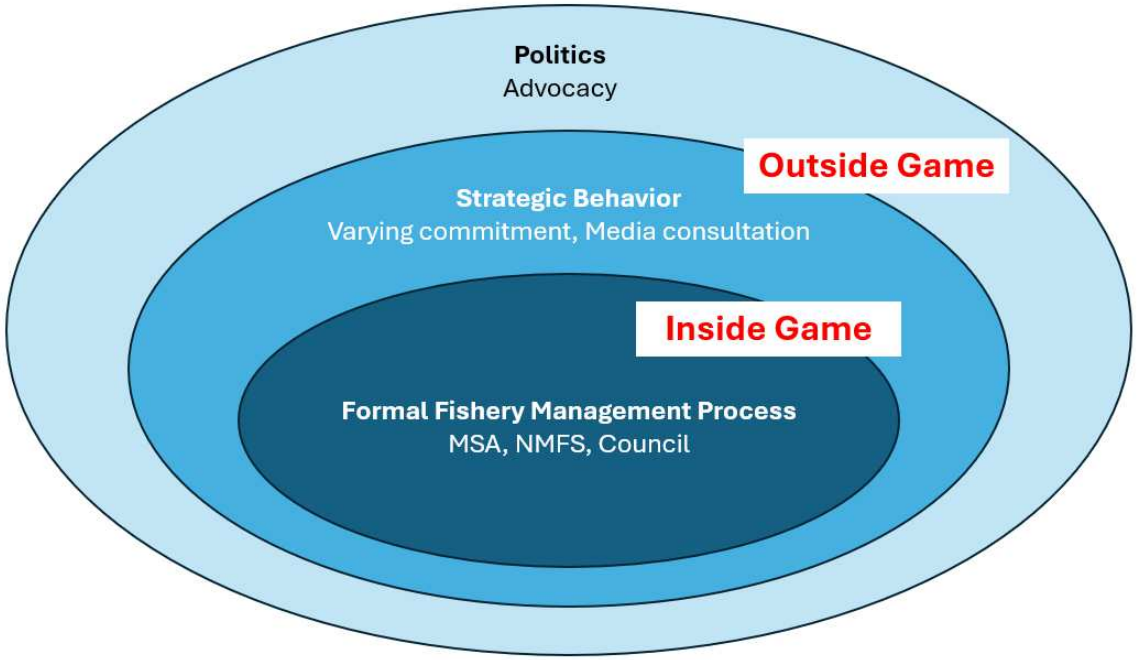
Constraints imposed by MSA and Council process: Legal and bureaucratic constraints, such as the Magnuson-Stevens Act, are seen as limiting what stakeholders and managers can do. Nonetheless, importance in decision making of the individuals making up the Council was also highlighted.

Political influence: Ability to influence management through political means outside of the Council process varies among stakeholder groups and brings a sense of disempowerment to some.

Feeling unheard: Stakeholders not closely involved in the Council process often feel unheard, perceiving the public input process as dismissive or symbolic.

Importance of participating: Despite frustrations, stakeholders still see the importance of voicing their opinions and engaging with the process.

‘Inside Game and Outside Game’



Modified from Jaffee (2020) *Beyond Polarization*, Island Press

Implications for Future of S-G MSE

- Need to provide opportunity for extended, in-depth engagement. Working group of representatives from different stakeholder groups and organizations.
- Systematic use of MSE to explore implications of concerns about data quality, discard mortality estimates etc.
- Stakeholder input to consolidate scenarios and performance metrics, interpret results, and promote identified strategies
- Future role of MSE depends in part on how it’s used in the formal management process and outside

Thank You!

- All participants in the interview study

- SAFMC for funding