Snapper Grouper Management Strategy Evaluation

Input needed from the Council

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What is a Management Strategy Evaluation (MSE)

- Quantitative approach to evaluate different management approaches.
- Inform, not prescribe, how different management approaches would perform under similar framework and assumptions.
- Compare across different performance metrics to evaluate how the approach could achieve different objectives.
- Repeatable process so that management can adapt based on new information.

MSE for the Snapper Grouper Fishery

- Management of Red Snapper has been a challenge for the Council.
- Did not need to develop acceptable biological catch levels or annual catch limits.
- Many stocks are in rebuilding plans and stock must be rebuilt.
- Number of discards has been increasing and limit potential landings in the fishery
- There was a desire for a new approach to manage the fishery.

Background for the Snapper Grouper MSE

- In 2022, the SAFMC contracted with Blue Matter Science to develop a management strategy evaluation
  - Input – BAM assessments for Black Sea Bass, Gag, and Red Snapper
  - Evaluated – Status quo, full retention, minimum size limits, and spatial closures
  - Performance – probability of rebuilding, relative short-term landings, relative long-term landings, and fraction discarded
  - Robustness test – difference in natural mortality, recreational catch levels, effort, and recent recruitment

Snapper Grouper MSE Outputs

- Developed a modeling framework to work with multiple snapper grouper species
- Matched the BAM assessment outputs
- Developed 132 different management scenarios
  - Five management categories –status quo, full retention, minimum size limits, nearshore spatial closures, and offshore spatial closures
  - Combined different management approaches
  - Evaluated different levels of recreational effort

Trade-Off Plot

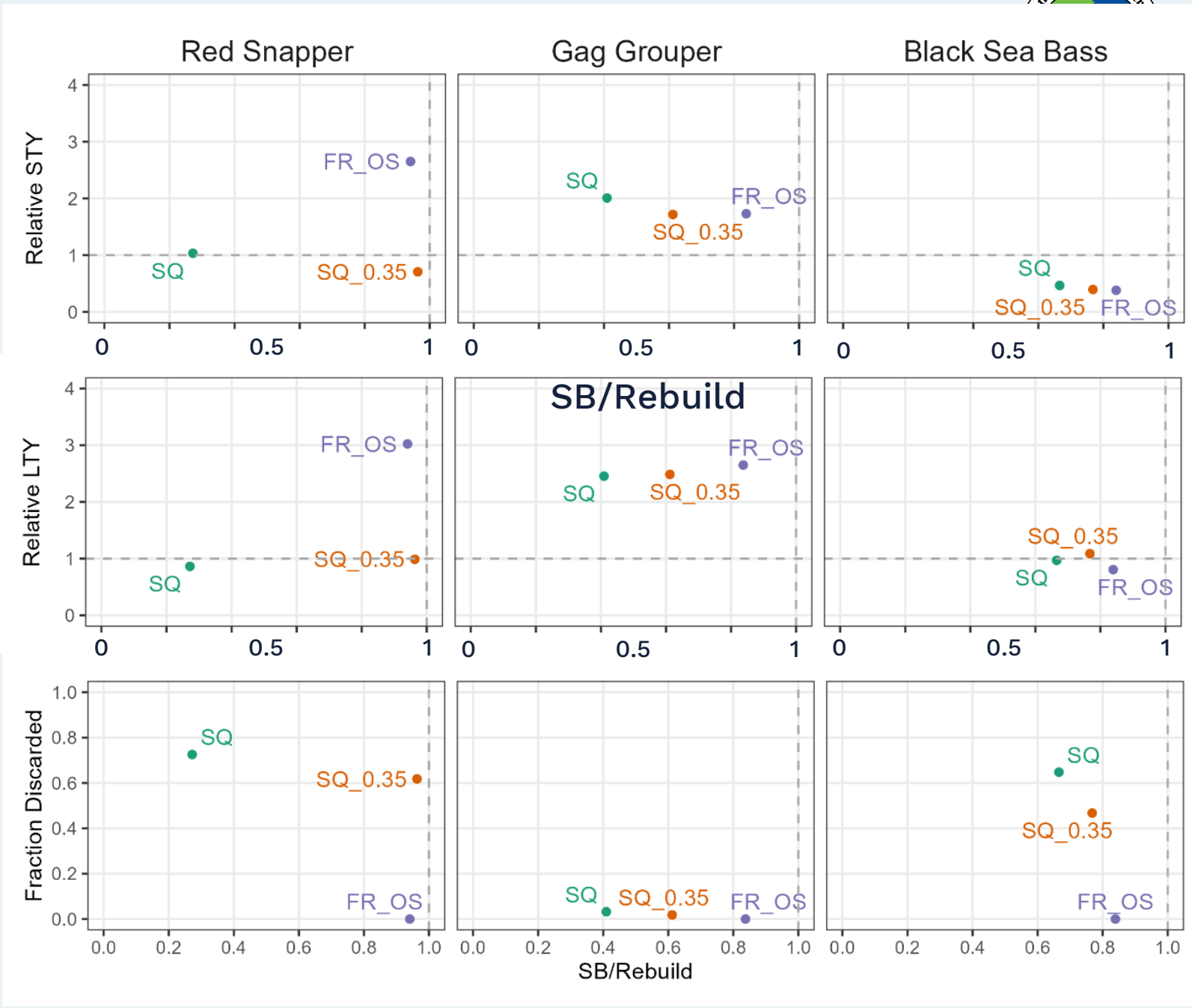
Trade-offs for Red Snapper, Gag, and Black Seas Bass under four objectives

Scenarios

- Status Quo (SQ, green),
- Status Quo with 35% of current recreational effort (SQ_.35, orange),
- full retention with all fishing effort moved to Offshore (FR_OS, purple).

Results

- Status quo performed worst of spawning stock biomass
- Full retention offshore tend to perform better for Red Snapper and Gag but worse for Black Sea Bass



MSE Continuation

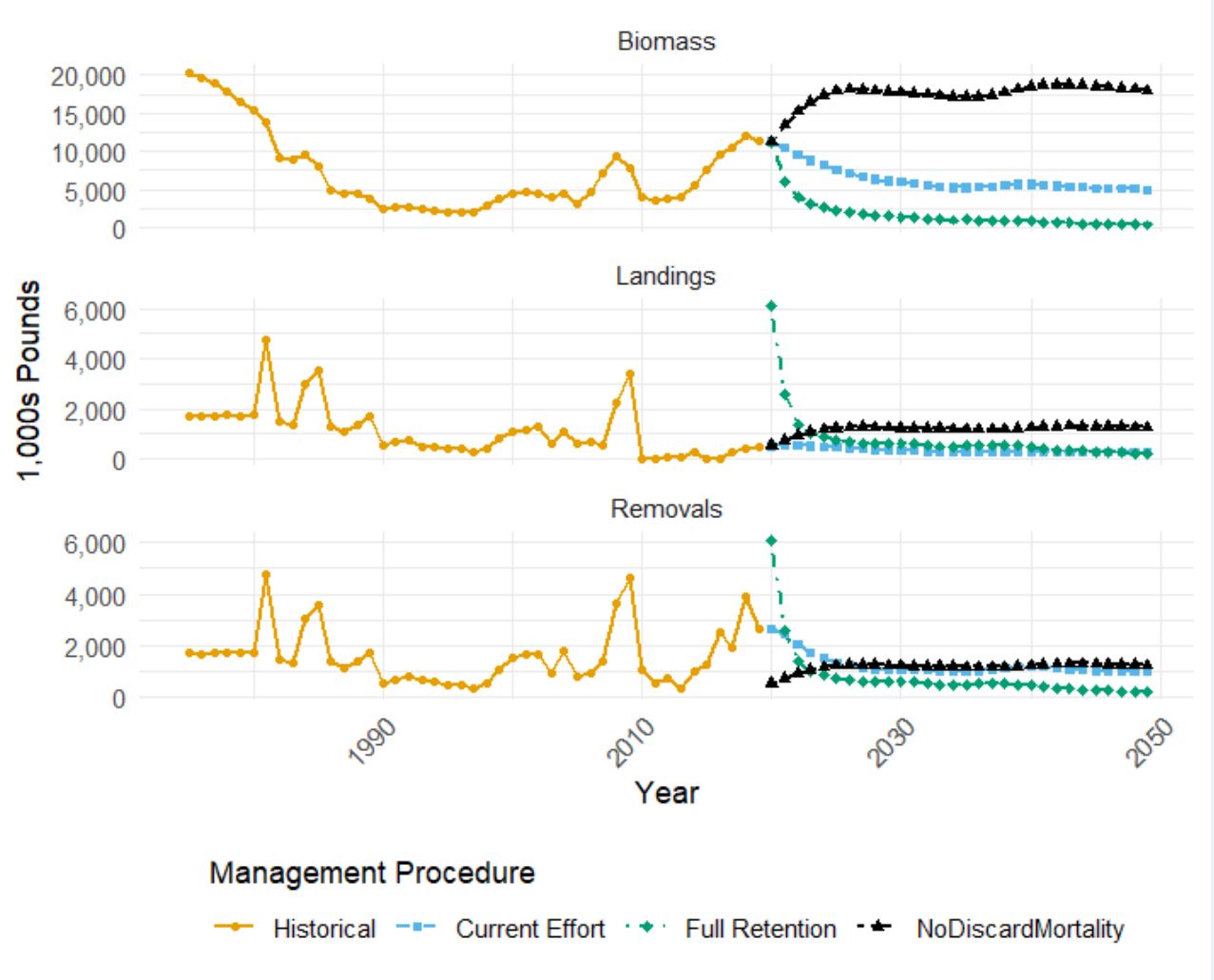
- New contract with Blue Matter through September 2026 to revise the MSE based on Council and stakeholder feedback
  - Management scenarios need to be refined
  - Explore other objectives
  - Address additional uncertainties
- Other ongoing work
  - Situation Assessment (University of Florida)
    - Investigated perspectives among stakeholders to help gather future stakeholder input.
  - Stakeholder Input (University of Florida)
    - Panel to help develop survey and aid in the MSE development
    - Survey to gather input from the public on different management scenarios

Select MSE Management Scenarios

- What management scenarios does the Council want to explore through the MSE or through the stakeholder survey? Likely select 3 scenarios
  - ❑Spatial management (most promise in previous MSE)
  - ❑Seasonal management
  - ❑Size limits (least effective in previous MSE)
  - ❑Bag limits
  - ❑Harvest tags (extremely complicated)
  - ❑Mandatory retention/mandatory stopping
  - ❑Mandatory reporting
  - ❑Aggregate bag limits*

Describe Aggregate Bag Limits

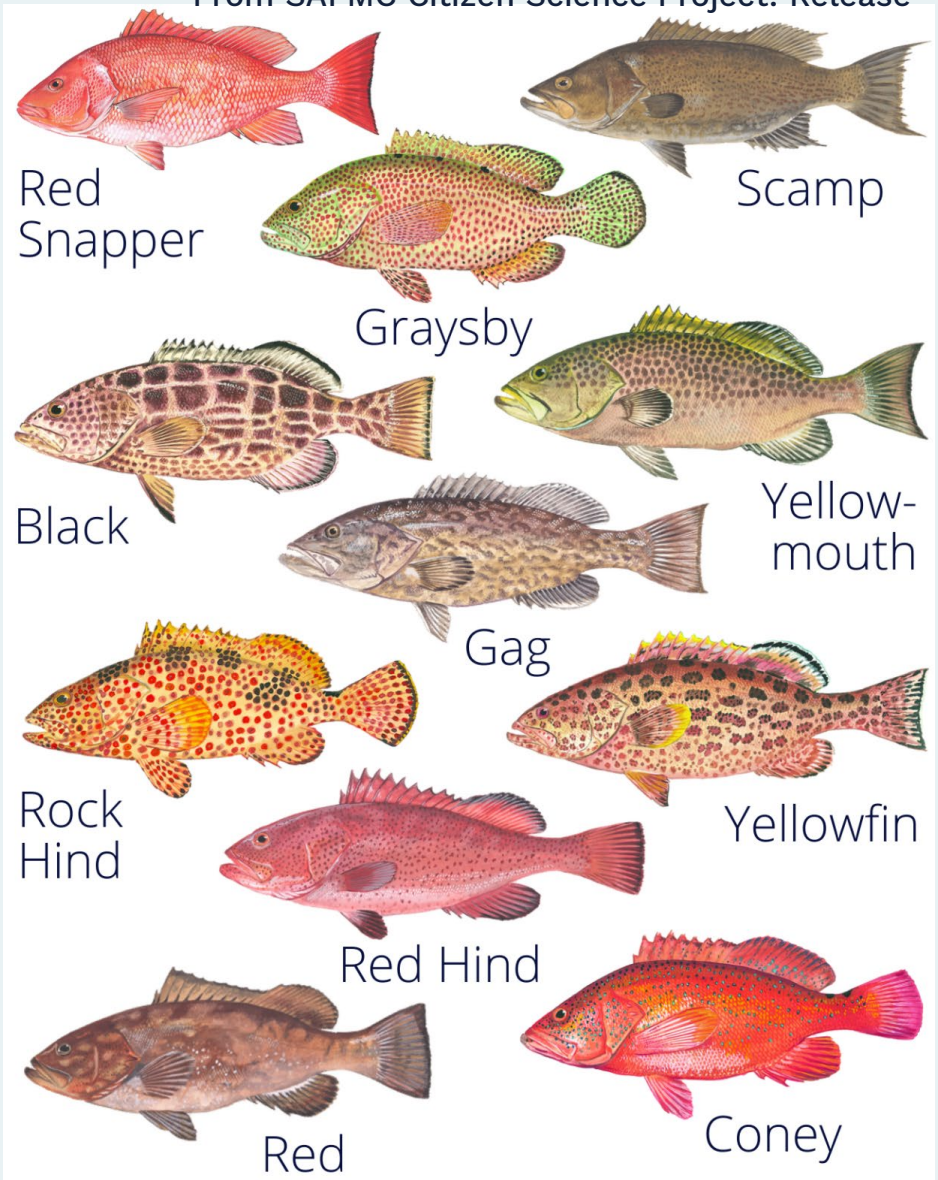
- How does the Council envision aggregate bag limits?
- Assume this will be applied on top of current aggregates?
- Should all species be included in the aggregate limit?
  - Need to weigh aggregate limit (5 or 10 fish might not be enough)
  - Desirability of fish in the aggregate (behavior may not change if reaching aggregate of Tomtate)



Choose MSE Species

- What species would the Council like to have included in revised MSE?
  - ❑Species with stock assessments (13 federally and 4 state) – Tier 1
  - ❑Species with indices of abundance (additional 14 species in trap or diver surveys) – Tier 2
  - ❑All snapper grouper species (55 species)
  - ❑A modified list of snapper grouper species

From SAFMC Citizen Science Project: Release



Select Approaches for Additional Species

Estimating Abundance and Biomass

- ❑ Recondition model using data limited framework for all species.
  - Could result in considerable time to model species
  - May not have sufficient time to develop management scenarios
- ❑ Use available assessments and only used data limited framework for a small subset of species (MSE Technical Team Suggestion).
  - Results more consistent with stock assessments
  - Some stock assessments are old and not using FES

Select Performance Objectives

- ❑Successfully rebuilds overfished stock in rebuilding timeframe or avoiding overfished status
  - ❑Must haves for monitoring health of population
- ❑Short-term landings
  - ❑Use average landings from Yrs 1-3
- ❑Long-term landings
  - ❑Use average landings last 10 years of projection)
- ❑Discard fraction
  - ❑Lower is better
- ❑Access for recreational anglers
  - ❑Angler days or trips
- ❑Economic proxy
  - ❑Revenue index based on trip multipliers
- ❑Distributional equity
  - ❑Reductions are shared equally across areas and modes

Council Input

Select Scenarios

- ❑Spatial: Nearshore/Offshore
- ❑Seasons: provide range
- ❑Aggregate Limits: provide range
- ❑Harvest Tags
- ❑Mandatory Retention/Stopping
- ❑Mandatory Reporting
- ❑Minimum Size Limit
- ❑Individual Species Bag Limit

Council Input

Select Species

- ❑ All Snapper Grouper Species
- ❑ Tier 1 – Assessed Species
- ❑ Tier 1 + Tier 2 – (Species with indices)
- ❑ Selected list of Tier 1 and Tier 2 Species

Council Input

Select Performance Objectives

- ❑ Rebuilding probability or avoid overfished status
- ❑ Short-term landings (Yrs 1-3)
- ❑ Long-term landings (Yrs last 10 years in projection
- ❑ Discard fraction
- ❑ Access (angler days or trips)
- ❑ Economic Proxy (revenue index)
- ❑ Distributional equity (share by region/mode)

Council Input

Describe the Aggregate Bag Limit

- ❑ All current bag limit remain
- ❑ Select range for the bag limit
- ❑ Select species to include in aggregate
- ❑ Should aggregate species vary by area
- ❑ How to treat species not commonly targeted?

Questions and Council Discuss