SAFMC Staff Review of Independent Report on Red Snapper in SEDAR 15

JUNE 2009

Data Availability

- DW reviewed available life history information, and acknowledged the lack of fecundity and other items as noted in the report
- Few if any wild stocks have the luxury of actual observations of M. The methods applied to estimate M by the DW are scientifically sound
- The DW attempted to provide historical catch records to extend the available time series, using simple linear interpolation to 0 in 1945

Data: Indices

- The DW goal is to put forth indices that may provide some signal of abundance and their reasoning is thoroughly documented.
- Precision is somewhat low for the Headboat index, but correlation is high with other indices and the index provides an important long time series.
- Concerns with lack of adequate independent indices well documented through this and all prior assessments.
- Overall, no new data are identified, and issues with available data reiterated in the review are acknowledged throughout the assessment report.

Assessment Workshop

- The Catch-Age model used by the AW is state of the art and thoroughly reviewed, and considered most appropriate
- VPA and Catch-Age models may both suffer from terminal year uncertainty.
- That VPA is preferable is an opinion not shared by the AW or RW panels.
- VPA ignores significant error sources, such as that in catch

Historical Recreational Catches

- As described by Hester and in the report, the AW did deviate from the DW recommendation of linear interpolation and a further correction was made following the AW
- The reasoning for the change is well documented, use of FWS data considered appropriate
- The AW considered prior recommendations in light of model performance, and inclusion of the FWS observations improved model fit and residual patterns
- Sensitivity runs of alternative approaches, including short time series, show that status conclusions are insensitive

Selectivity Issues

- Undisputed concerns raised with FWS observations by number and weight, and differences in observed and predicted mean weight – overall, may be related to selectivity
- It is not apparent that a domed selectivity option was evaluated during the AW
- Suggest consideration of a dome-shaped selectivity sensitivity run

Dome Selectivity run

- SEFSC currently conducting a sensitivity
- Considering several ‘shapes’ for the dome
- Final report is not yet available; pending internal review
- Preliminary reports are that model findings are insensitive to the selectivity pattern

Incomplete Assessment, Status Unknown

- Conclusion of incomplete assessment is an opinion not supported by the AW, independent peer review panel, or SSC
- Status estimates are very robust to all sensitivities
- Acknowledged uncertainty in benchmarks, this issue is subject of considerable discussion at RW and SSC and Council

Sustainable vs overfishing

- Issue to Council is not whether current F is sustainable, but how current F and biomass relate to stock potential
- Overfishing determined by rate relative to benchmark
- Even if current exploitation is sustainable, considerable yield is being sacrificed (growth overfishing)
- All support additional monitoring, further evaluation of historical catches (future SEDAR workshop)

Why is the model so robust ?

- Overwhelming signal in the data
- That signal is the decline in cohort abundance over time. Supported by recent, intensive sampling
- Models tend to be fairly robust when exploitation is very high, and when exploitation is much higher than M