

Red Snapper P* Workgroup Report

The Red Snapper P* Workgroup (WG) met by Webinar on February 3, 2021 to review and apply the ABC Control rule to develop a P* recommendation for red snapper. Results will be presented to the SSC at its April 2021 meeting. Members of the Workgroup included Jeff Buckel, George Sedberry, Wally Bublely and Anne Lange (Chair). Mike Errigo, Chip Collier and Genny Nesslage also participated in the Webinar.

The WG discussed the appropriate Tiers to assign to each of the four Dimensions of the ABC CR in order to develop a P* recommendation.

Dimension I: Assessment Information –

Tier 2 - Quantitative assessment provides estimates of either exploitation or biomass, but not MSY benchmarks; requires proxy reference points. (-2.5)

Dimension II: Uncertainty Characterization –

Tier 2 - High -Key Determinant – reflects more than just uncertainty in future recruitment. (-2.5)

Previously, (SEDAR 15 based on the 2009 ABC control rule) this Dimension was assigned a Tier 3 - Medium- Uncertainties are addressed via statistical techniques and sensitivities, but full uncertainty is not carried forward in projections (-5%). However, given rebuilding, increased recruitment, and improvements in BAM to address uncertainty, the WG recommends moving this Dimension to Tier 2.

Dimension III: Stock Status –

Tier 4 - Stock is both overfished and experiencing overfishing (-7.5)

Dimension IV: PSA Score – (MRAG value=3.14, moderate (P=1.71; S=2.63))

Tier 2 - Moderate Risk. Moderate productivity, vulnerability, susceptibility, score 2.64-3.181 (-5)

P* Adjustment: Sum of Dimensions I-IV= -2.5-2.5-7.5-5= 17.5

P* determined as: 50-adjustment: P*= 50-17.5=32.5%, giving P=67.50%, the recommended probability of rebuild.

P*=32.5%

P_{rebuild}= 67.5%.

The WG then specified projections for the OFL and ABC.

OFL: projections at F_{msy} ($P^* = 50\%$) with R (average) from the S-R curve.

ABC: projections at $F_{rebuild}$ with R (average) from S-R curve

Run projections at both $P_{rebuild} = 70\%$ (current) and $P_{rebuild}=67.5\%$

Given improvements to the BAM and its ability to assess uncertainties, as well as the stock being more productive than previously thought, this lower $P_{rebuild}$ may be warranted.

Also run projections for the OFL and ABC scenarios at each of the $P_{rebuild}$ levels, for R at the average of recent high R time period (to be determined by analysts).

The WG was also asked to comment on any difficulties encountered while applying the ABC CR. We had no difficulties while applying the ABC CR, however, the WG questioned, given the stock is in a rebuilding plan, when can/should the SSC consider changes to the $P_{rebuild}$ or other aspects of the rebuilding plan.