

REBUILDING REVISION RULES RANGE OF ALTERNATIVES

The following strawman rebuilding revision rule alternatives are based on the rebuilding strategies analyzed in the Management Strategy Evaluation documented in Attachment 1. These alternatives are offered to begin discussion on a range of alternatives for further more detailed analysis. Ultimately, rebuilding revision rules would be codified in rebuilding plans and could be stock-specific or a Fishery Management Plan policy that applies to all groundfish rebuilding plans.

No Action Alternative: Revise When $P_{TARGET} < 50\%$

The No Action Alternative default rebuilding revision rule is revise a rebuilding plan if a new approved rebuilding analysis indicated a stock had less than a 50% probability of rebuilding by the target year (T_{TARGET}) specified in the rebuilding plan; the probability of rebuilding by the target year is denoted P_{TARGET} . The Council has a choice to make when revising a rebuilding plan of reducing the effective harvest rate (i.e., increasing the Spawning Potential Ratio [SPR] harvest rate) or, in order to avoid severe negative socioeconomic impacts, change the target rebuilding year in a rebuilding plan. Under the No Action alternative, this decision would be to revise the rebuilding plan to achieve a P_{TARGET} of at least 50%.

Alternative 1: Flexible Strategy - Revise When $P_{TARGET} < 40\%$

Under the Alt. 1 rebuilding revision rule, a more flexible policy is contemplated where the default rule is to maintain the current rebuilding plan unless a new approved rebuilding analysis indicated P_{TARGET} was less than 40%.

Alternative 2: Risk Adverse Strategy – Revise When $P_{TARGET} < 60\%$

Under the Alt. 2 rebuilding revision rule, a more risk adverse strategy is contemplated where the default rule is to select an SPR corresponding to $P_{INIT} = 75\%$ probability of recovering by T_{TARGET} and to maintain the rebuilding plan when a new approved rebuilding analysis indicated P_{TARGET} was $\geq 60\%$; otherwise, the plan is revised.

Alternative 3: Fixed Strategy– Revise at T_{TARGET}

Under the Alt. 3 rebuilding revision rule, the rebuilding plan would be maintained regardless of new estimates of P_{TARGET} until the target year specified in the rebuilding plan. At that point, the rebuilding plan would be automatically revised by setting the SPR to either 75% of the SPR_{PROXY} or the rebuilding SPR, whichever is greater, increasing SPR by 25% if the stock had not achieved the rebuilding objective of target spawning biomass (or the rebuilding plan would be terminated if it had). Short-term (i.e., up to the target rebuilding year) management and fishery stability would be maximized under this fixed default rebuilding revision rule but potentially at some greater risk to the stock and long-term management and fishery stability.

Considerations in Deciding a Range of Alternatives

The most important consideration at this point in contemplating rebuilding revision rules is to ensure an adequately broad set of management strategies are analyzed. The impacts of a final preferred alternative (FPA) need to be adequately foreseen and within the range of impacts analyzed in the range of alternatives chosen for detailed analysis and provided when the FPA is adopted.

Other considerations in choosing a broader range of rebuilding revision rule alternatives for more detailed analysis are variations or elaborations of the strawman alternatives above. Such variations include provisions for revising a rebuilding plan if the second (or 3rd, 4th, etc.) subsequent rebuilding analysis indicated P_{TARGET} was still less than any prescribed threshold (e.g., Alt. 1 with the provision to revise the rebuilding plan to achieve a P_{TARGET} of at least 50% if the second subsequent rebuilding analysis indicated P_{TARGET} was still below 50%). Alternatively, a rebuilding revision rule could specify a default rebuilding revision rule like the Fixed Strategy presented in the MSE and described under Alt. 3 with an alternative trigger strategy (a different trigger strategy than reducing the SPR as described under Alt. 3) or a determination of rebuilding progress and an alteration of the rebuilding plan, if needed, prior to T_{TARGET} (e.g., T_{TARGET} minus 5 [or more] years or half [or some other percentage] of the duration of T_{TARGET} minus the minimum time predicted to rebuild the stock under the most recent rebuilding analysis [$T_{F=0}$]). Alternatively, a more precautionary P_{TARGET} than 60% under Alt. 2 could inform an alternative for analysis.

PFMC
05/21/15