**Sequence of WHAM model configurations with Run9 ASAP dat file from 2023MT**

**To Try:**

Tweak age-1 -2 index selectivity assumptions

Rerun Alex’s SSRT Run1 so that can directly compare single and multi wham

**Goal: Reproducing ASAP results in WHAM**

This appendix details the sequence of model configurations explored to arrive at the latest WHAM model. In the summary table below, the following abbreviations are used: Big = Bigelow, Alb = Albatross, OFV = objective function value; ESS = effective sample size; agg = aggregate, obs = observed, stdev = standard deviation, B = biomass, SSB = spawning stock biomass.

| **Run** | **Description** | **Diagnostics** |
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| 1 | RUN9\_For\_WHAM.DAT – ASAP Run 9 but meets WHAM requirements (index age of first selectivity specification (initial guesses now set at 0) and 2) -999 in Albatross extended to 2020-2022) | General trends captured but still have some differences in F, especially at the end of the time series. Is this due to the penalized selectivity in ASAP that cannot be reproduced in WHAM? |
| 2 | Run 1 but Fix albatross selectivity for ages 9 and 10, bigelow selectivity for age-7 to mimic the ASAP parameterization | Still different than ASAP output but much better than run 1; Run 2 is also still different than SSRT run 1, though Alex changed the ESS's in SSRT run 1 |
| 3 | Run 2 but Fix all Bigelow selectivity parameters to see if can resolve remaining differences | Still did not resolve differences in F at end of time series |
| 4 | Run 3 but fix all age-specific selectivity parameters (fishery and index) to see if can resolve remaining differences | Differences reduced but still see difference in 2020-2021 F (in trend and not just magnitude); Index q’s also slightly different |
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