

Supplementary Table

Summary of data types used and parameters estimated or fixed for each model. N.A. denotes that the parameter is not applicable to the model.

Data type or parameter	Full dynamics	ASPM	ASPM-R-FIX
Data			
All size composition	Yes	No	No
Adult indices	Yes	As for Full dynamics	As for Full dynamics
Parameters			
Log of unfished recruitment	Estimated	As for Full dynamics	As for Full dynamics
Initial recruitment (R1) deviation	Estimated	As for Full dynamics	As for Full dynamics
Recruitment deviations in log space	Estimated for 1942-2016	Fixed at 0 for 1942-2016	Fixed at 0 for 1942-1979 and fixed estimates from the ASPM that was forced to match the recruitment index
Spawner-recruit steepness	Fixed at 1	As for Full dynamics	As for Full dynamics

Data type or parameter	Full dynamics	ASPM	ASPM-R-FIX
Standard deviation for recruitment in log space (σ_R)	Fixed at 1	As for Full dynamics	As for Full dynamics
Bias correction	Fixed at 0 for 1942-1952 and 0.95 for 1953-2016	N.A.	Fixed at 0 for 1942-1979 and 1 after 1980
Initial fishing mortality	Estimated	As for Full dynamics	As for Full dynamics
Catchability coefficient (q)	Estimated	As for Full dynamics	As for Full dynamics
Selectivity parameters	Estimated	Fixed at estimates from the full dynamics model	Fixed at estimates from the full dynamics model
Growth	Fixed (see Supplementary Text)	As for Full dynamics	As for Full dynamics
Natural mortality	Fixed (1.6 at age 0, 0.386 at age 1, and 0.25 age 2 and older)	As for Full dynamics	As for Full dynamics

Data type or parameter	Full dynamics	ASPM	ASPM-R-FIX
Proportion maturity-at-age	Fixed (0.2 at age 3, 0.5 at age 4, 1 at age 5 and older)	As for Full dynamics	As for Full dynamics
Number of estimated parameters	320	8	8