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BR MP RUNS UNDER THE OPERATING MODELS FOR ATLANTIC BLUEFIN TUNA MSE RE-CONDITIONED TO INCLUDE THE CLOSE-KIN MARK RECAPTURE ESTIMATE OF WESTERN STOCK SCALE WITH OM29 AND OM35 UPDATED (ABTMSE V8.1.0)

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SUMMARY

The re-tuning of the ABFT MP as previously advised (to take account of the inclusion of the west CKMR estimate in the OM conditioning) is updated to take account of recent updates in the conditioning of OM29 and OM35 as advised by Carruthers. The retuning hardly affects the performance statistics for the West, but those for the East become a little more conservative in terms of catches.

RÉSUMÉ

Le recalibrage de la MP du thon rouge de l'Atlantique, précédemment préconisée (pour tenir compte de l'estimation CKMR de l'Ouest dans le conditionnement des OM) est actualisé pour tenir compte des récentes mises à jour du conditionnement de l'OM29 et de l'OM35 tel que conseillé par Carruthers. Le recalibrage affecte peu les statistiques de performance pour l'Ouest mais celles pour l'Est deviennent un peu plus conservatrices en termes de captures.

RESUMEN

La recalibración del MP para el atún rojo del Atlántico que se había recomendado anteriormente (para tener en cuenta la inclusión de la estimación CKMR para el oeste en el condicionamiento de los OM) se ha actualizado para tener en cuenta las recientes actualizaciones en el condicionamiento de OM29 y OM35, tal como aconseja Carruthers. La recalibración apenas afecta a las estadísticas de desempeño del oeste, pero las del este se vuelven un poco más conservadoras en cuanto a capturas.

KEYWORDS

Atlantic bluefin tuna; CKMR estimate; management procedure; performance

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Introduction

All the results provided are for the OMs including the west CKMR. V8.1.0 has the updated versions of OM29 and OM35.

1) BR: the original BR MP which was used to provide TAC recommendation for 2023-2025 (tuned to Western and Eastern stock PGK values of 0.60).
2) BRn3: tuned under v8.0.4: as BR but with tuning parameters □□ and □□ adjusted so that the Western stock PGK=0.60 and the Eastern stock LD*15%=0.40 for the new OMs.
3) BRn5: tuned under v8.0.4: as BR but with tuning parameters □ (□*b* =0) and □□ adjusted so that the Western stock PGK=0.60 and the East ern stock LD*15%=0.40 for the new OMs.
4) BRn6: BRn3 equivalent but tuned under v8.1.0.
5) BRn7: BRn5 equivalent but tuned under v8.1.0.

Results and discussion

The retuning hardly affects performance statistics for the West, but those for the East become a little more conservative in terms of expected catches. This is because the PGK value for the East increases to 0.70 so that the LD*15% threshold can be met for the Eastern stock (see **Table 1**).

Trajectory plots for Catch and for SSB/SSBMSY for the previous and the now updated OMs for the different MPs are shown in **Figure 1a** and **Figure 1b**.

Table 1. Stochastic Br30, AvC30, LD*15%, LD*10% and VarC values (weighted medians with 5%- and 95%iles for the OM grid across all simulations) for a series of MPs across all OMs in the grid, for the new OMs. AvC30 values are in '000 mt. The tuning parameters □, □□, *b* and □□ □are also shown (the other tuning parameters are all as for the BR MP).

					PGK	Br30		LD*15%	LD*10%	AvC30		VarC	
EAST			α	$\Delta\alpha$									
New OMs	v8.0.4	BR	1.235	0.204	0.66	1.27	(0.33; 2.25)	0.42	0.34	43.49	(12.25; 70.77)	19.16	(10.21; 27.99)
		BRn3	1.235	0.22	0.63	1.23	(0.29; 2.20)	**0.40**	0.31	44.00	(12.35; 71.70)	18.99	(10.29; 28.31)
		BRn5	1.235	0.25	0.63	1.23	(0.29; 2.21)	**0.40**	0.31	43.99	(12.34; 71.68)	18.88	(10.28; 28.16)
	v8.1.0	BR	1.235	0.204	0.65	1.25	(0.30; 2.22)	0.36	0.29	43.49	(11.56; 70.77)	19.09	(10.21; 29.17)
		BRn3	1.235	0.220	0.62	1.21	(0.26; 2.17)	0.34	0.27	44.00	(11.68; 71.70)	18.78	(10.29; 29.37)
		BRn5	1.235	0.250	0.62	1.21	(0.26; 2.17)	0.34	0.27	43.99	(11.67; 71.68)	18.79	(10.28; 29.40)
		BRn6	1.235	0.150	0.70	1.33	(0.41; 2.29)	**0.40**	0.32	41.13	(11.41; 66.79)	18.29	(9.12; 31.88)
		BRn7	1.235	0.145	0.70	1.34	(0.41; 2.30)	**0.40**	0.32	40.89	(11.41; 66.29)	18.31	(8.94; 31.96)
	WEST		β	$\Delta\beta$									
New OMs	v8.0.4	BR	0.81	-0.0320	0.87	1.63	(0.78; 2.80)	0.68	0.61	2.33	(1.20; 3.03)	9.47	(5.10; 22.59)
		BRn3	0.81	0.0270	**0.60**	1.20	(0.57; 2.24)	0.58	0.52	3.29	(1.48; 4.29)	11.05	(6.38; 20.61)
		BRn5	0.98	**0.0000**	**0.60**	1.21	(0.57; 2.24)	0.56	0.50	3.32	(1.47; 4.36)	11.32	(7.14; 20.84)
	v8.1.0	BR	0.81	-0.0320	0.88	1.62	(0.81; 2.72)	0.71	0.64	2.33	(1.18; 3.03)	9.46	(5.06; 22.65)
		BRn3	0.81	0.0270	0.60	1.17	(0.58; 2.11)	0.59	0.54	3.29	(1.46; 4.29)	11.23	(6.58; 20.62)
		BRn5	0.98	**0.0000**	0.60	1.18	(0.58; 2.12)	0.57	0.52	3.32	(1.45; 4.36)	11.42	(7.23; 20.70)
		BRn6	0.81	0.0300	**0.60**	1.17	(0.59; 2.10)	0.59	0.53	3.42	(1.50; 4.43)	11.18	(6.52; 19.56)
		BRn7	1.01	**0.0000**	**0.60**	1.17	(0.59; 2.10)	0.57	0.51	3.48	(1.51; 4.53)	11.28	(7.00; 20.45)

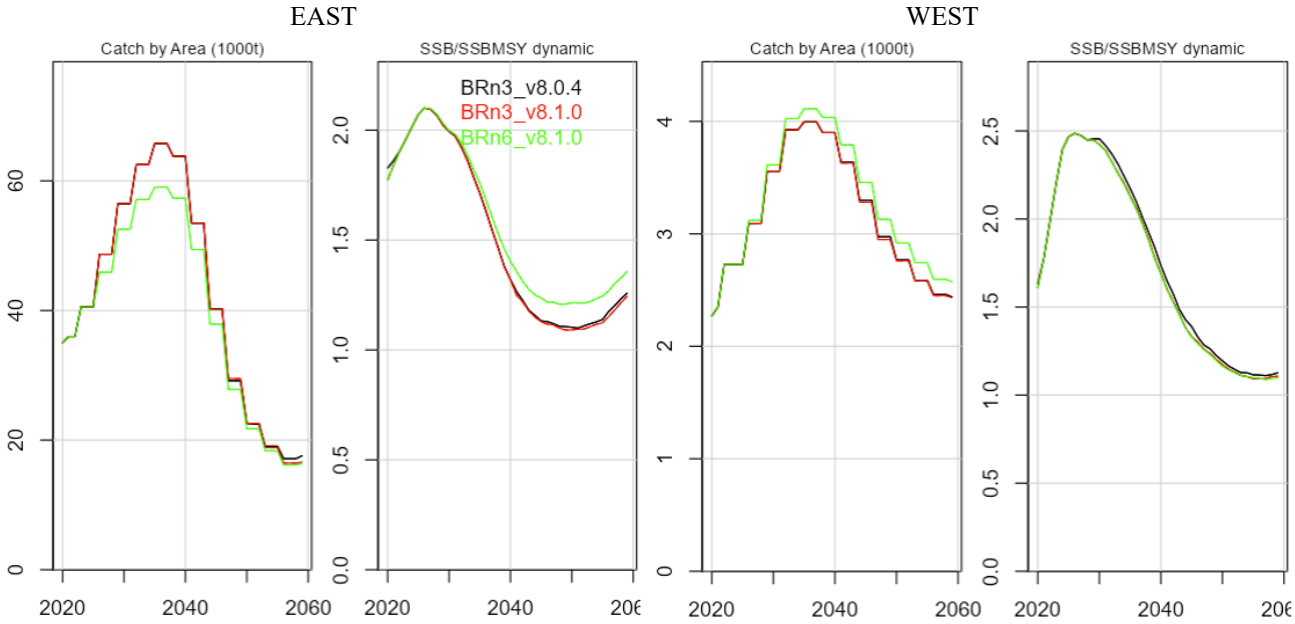

Figure 1a. Median catch (by area) and SSB (by stock) projections averaged over all OMs in the grid and the replicate simulations for BRn3, under v8.0.4 OMs (in black) and v8.1.0 Oms (in red) and BRn6 under v8.1.0 (in green).

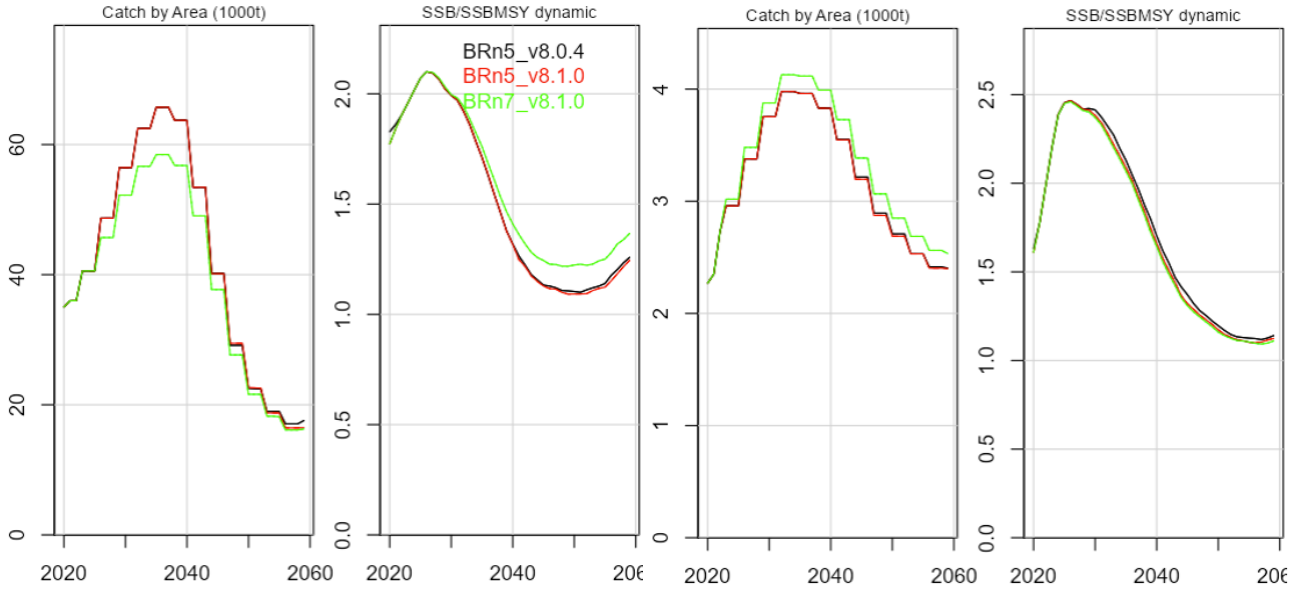

Figure 1b. Median catch (by area) and SSB (by stock) projections averaged over all OMs in the grid and the replicate simulations for BRn5, under v8.0.4 OMs (in black) and v8.1.0 OMs (in red) and BRn7 under v8.1.0 (in green).