

**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 ASSUMING A CKMR CV OF 0.2 (ABTMSE V8.2.3)**

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SUMMARY

The BR MP is retuned under the most recent re-conditioning of the ABFT OMs which set the CV of the western stock CKMR estimate to 0.20, rather than the 0.05 specified previously for that reconditioning. This results in an MP which is slightly more conservative, i.e. slightly lower catches, for both the East and the West areas.

RÉSUMÉ

La MP BR est recalibrée dans le cadre du reconditionnement le plus récent des OM du thon rouge de l'Atlantique qui fixe le CV de l'estimation CKMR du stock de l'ouest à 0,20, plutôt qu'à 0,05 spécifié précédemment pour ce reconditionnement. Cela entraîne une MP qui est légèrement plus conservatrice, c.-à-d. des captures légèrement inférieures pour les zones Est et Ouest.

RESUMEN

El MP BR se ha recalibrado con arreglo al recondicionamiento más reciente de los OM para el atún rojo del Atlántico, que fija el CV de la estimación del CKMR del stock occidental en 0,20, en lugar del 0,05 especificado anteriormente para ese recondicionamiento. El resultado es un PM ligeramente más conservador; es decir, unas capturas ligeramente inferiores, tanto para la zona este como para la oeste.

KEYWORDS

Atlantic bluefin tuna; CKMR estimate; management procedure; performance

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Introduction

Results are compared for the OMs including the CKMR in ABTMSE version V8.1.0 ($CV_{CKMR} = 0.05$) and the most recent version V8.2.3 ($CV_{CKMR} = 0.2$).

- 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) BRn6: **tuned under v8.1.0**: as BR but with tuning parameters Db and Da adjusted so that the Western stock PGK=0.60 and the Eastern stock $LD*15\%=0.40$ for the new OMs.
- 3) BRn7: **tuned under v8.1.0**: as BR but with tuning parameters b ($Db = 0$) and Da adjusted so that the Western stock PGK=0.60 and the Eastern stock $LD*15\%=0.40$ for the new OMs.
- 4) BRn8: BRn6 equivalent but **tuned under the most recent v8.2.3**.
- 5) BRn9: BRn7 equivalent but **tuned under the most recent v8.2.3**.

Results and discussion

Comparative results for the previous ($CV=0.05$) and current ($CV=0.20$) re-conditionings are shown in Table 1 with associated time series of median catches and SSB/SSB_{msy} values compared in Figure 1; the second sets of results set $Db = 0$.

Performance under the current re-conditioning is slightly more conservative, i.e., catches are a little lower.

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 previous (v8.1.0; CKMR CV=0.05) and the most recent (v8.2.3; CKMR CV=0.20) versions of the new OMs. AvC30 values are in ‘000 mt. The tuning parameters a , Da , b and Db are also shown (the other tuning parameters are all as for the original BR MP).

PGK														Br30		LD*15%	LD*10%	AvC30			VarC	
EAST			α		$\Delta\alpha$																	
New OMs	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)									
		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)									
	v8.2.3	BR	1.235	0.204	0.63	1.22	(0.25; 2.18)	0.34	0.26	43.41	(11.75; 70.57)	19.00	(10.57; 31.01)									
		BRn6	1.235	0.150	0.68	1.29	(0.36; 2.26)	0.37	0.29	41.08	(11.41; 66.58)	18.39	(9.37; 29.24)									
		BRn7	1.235	0.145	0.69	1.30	(0.36; 2.27)	0.38	0.29	40.85	(11.41; 66.14)	18.29	(9.32; 29.36)									
		BRn8	1.235	0.125	0.62	1.35	(0.41; 2.33)	0.40	0.31	40.01	(11.41; 64.57)	18.16	(8.61; 30.82)									
		BRn9	1.235	0.125	0.60	1.35	(0.41; 2.33)	0.40	0.31	40.00	(11.41; 64.55)	18.18	(8.59; 30.88)									
WEST			β		$\Delta\beta$																	
New OMs	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)									
		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)									
	v8.2.3	BR	0.81	-0.0320	0.85	1.53	(0.84; 2.49)	0.76	0.67	2.41	(1.21; 3.12)	9.56	(5.11; 21.65)									
		BRn6	0.81	0.0300	0.53	1.09	(0.54; 1.88)	0.58	0.52	3.50	(1.57; 4.49)	11.46	(6.57; 19.24)									
		BRn7	1.01	0.0000	0.53	1.09	(0.53; 1.88)	0.56	0.50	3.56	(1.58; 4.60)	11.48	(7.17; 19.65)									
		BRn8	0.81	0.021	0.60	1.16	(0.59; 1.98)	0.62	0.55	3.35	(1.53; 4.33)	10.78	(6.37; 19.58)									
		BRn9	0.95	0.0000	0.60	1.16	(0.59; 1.97)	0.60	0.54	3.39	(1.54; 4.39)	11.09	(6.98; 19.31)									

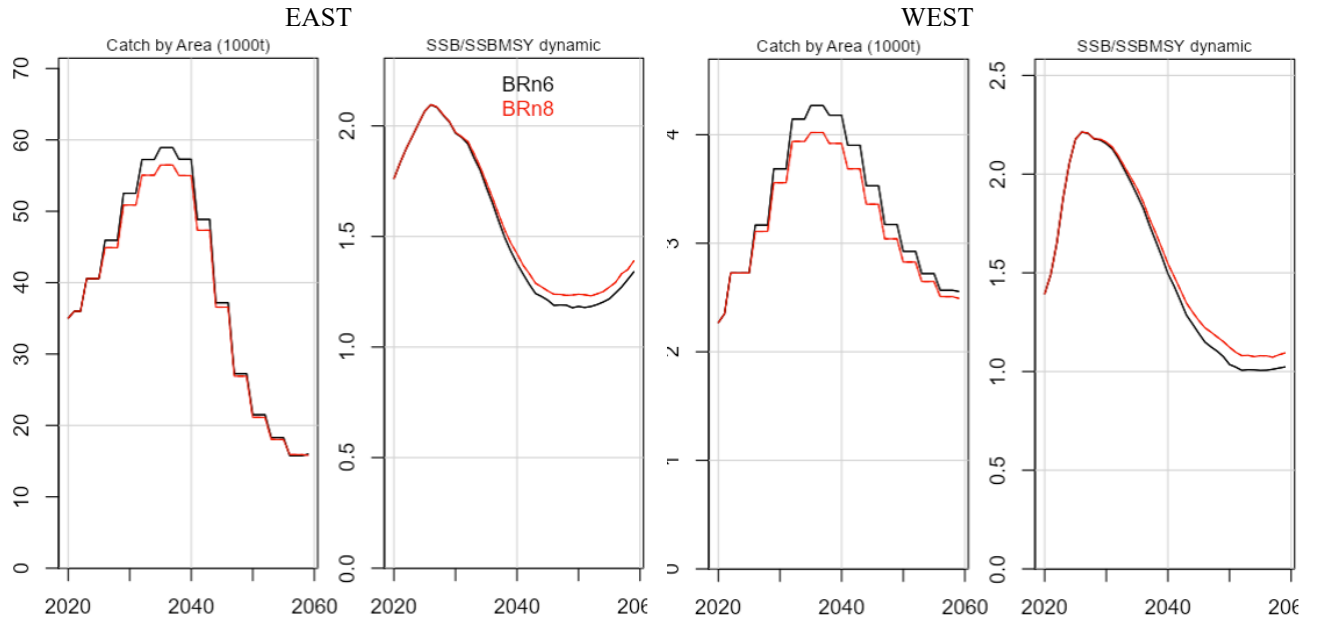


Figure 1a. Median catch (by area) and SSB (by stock) projections averaged over all OMs in the grid and the replicate simulations for BRn6 tuned to v8.1.0 OMs (in black) and BRn8 tuned under v8.2.3 (in red).

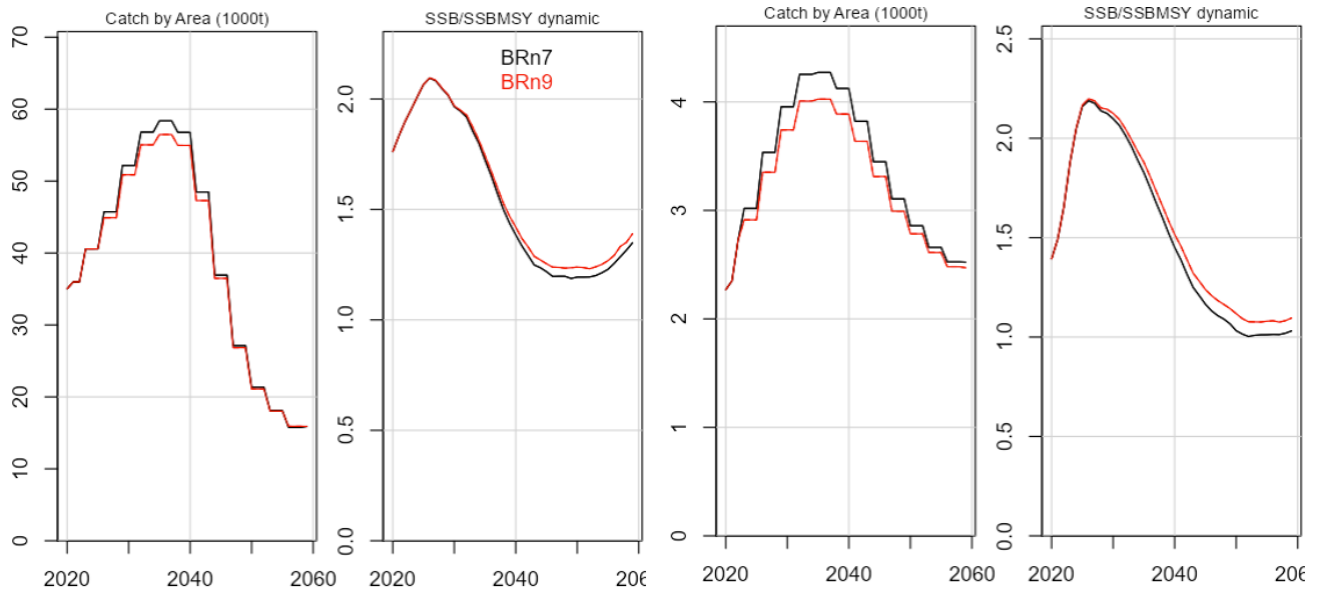


Figure 1b. Median catch (by area) and SSB (by stock) projections averaged over all OMs in the grid and the replicate simulations for BRn7 ($Db=0$) tuned to v8.1.0 OMs (in black) and BRn9 ($Db=0$) tuned under v8.2.3 (in red).