## Further Projections under constant catches for each West Coast rock lobster super-area (excluding Dassen)

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## **Results**

A further set of fixed catch projections for super-areas A34, A56 and A8+ has been run as requested by the SWG. The TAC for A7 is assumed to remain 80 MT in all cases.

- CC\_TAC2013: 2014+ catches are set equal to the 2013<sup>1</sup> TACs
- CC\_10%\_DEC: The TAC2013 values are reduced in each super-area by 10% for three years (2014, 2015 and 2016) and thereafter these TACs remain constant. The TACs for super-area A12 are fixed at 45 MT.
- CC\_20%\_DEC: The TAC2013 values are reduced in each super-area by 20% for three years (2014, 2015 and 2016) and thereafter these TACs remain constant. The TACs for super-area A12 are fixed at 45 MT.
- CC\_10%\_DEC\_VAR2: Identical TAC values as to CC\_10%\_dec, but all future levels of poaching are assumed to increase by 25% in 2015 (and remain at that level thereafter).

Note that the 10% or 20% decreases apply to the total of all sectors combined, i.e. Offshore + Nearshore + Subsistence + Recreational.

Tables 1a-d report median B(17/14), B(17/06) and B(21/06) and values for each of the four TAC scenarios described above.

Figure 1 shows plots of TACs and biomass recovery median trajectories for each super-area (except A7) and for the resource as a whole (excluding A7). Male biomasses (above 75mm CL) relative to the 2006 levels are shown for the three TAC scenarios. The open squares shows the median expected value under OMP 2011, as evaluated in January 2013, which yielded the 35% median recovery target by 2021, and the open circles show the median expected B(21/06) values. The 5<sup>th</sup> and 95<sup>th</sup> percentiles associated with these two values are also indicated.

Figure 2 shows the TACs and median, 5<sup>th</sup> and 95<sup>th</sup> biomass trajectories for the CC\_10%\_DEC TAC scenario

Figure 3 shows the median, 5<sup>th</sup> and 95<sup>th</sup> percentiles of the TAC trajectories for each super-area (and resource as a whole) as computed in Jan 2013 (associated with OMP 2011). The CC\_10%\_DEC catches are indicated as well.

<sup>&</sup>lt;sup>1</sup> The convention used in this document is that 2013 refers to the 2013/14 season.

Table 1a: Future (2014+) TACs set at the TAC(2013) values (CC\_TAC2013).

						35%		35%	
	OS+NS+SUB+REC					target		target	
	2013	2014	2015	2016+	B(17/14)	B(17/06)	B(17/06)	B(21/06)	B(21/06)
A12	41.66	41.66	41.66	41.66	1.51	1.10	1.14	1.26	1.81
A34	264.38	264.38	264.38	264.38	0.89	1.22	1.02	1.28	1.67
A56	244.38	244.38	244.38	244.38	0.99	1.45	1.31	1.62	1.71
A7	80	80	80	80	-	1.56	-	1.98	-
A8	1526.59	1526.59	1526.59	1526.59	0.71	0.79	0.57	0.98	0.51
T(all areas)	2157.01	2157.01	2157.01	2157.01	-	1.15	-	1.35	-
T(excl A7)	2077.01	2077.01	2077.01	2077.01	0.82	1.04	0.79	1.22	0.95

Table 1b:  $CC_{10\%}DEC - TAC2013$  values decreased by 10% for three years and then remain constant thereafter.

						35%		35%	
	OS+NS+SUB+REC					target		target	
	2013	2014	2015	2016+	B(17/14)	B(17/06)	B(17/06)	B(21/06)	B(21/06)
A12	41.66	45	45	45	1.42	1.10	1.07	1.26	1.65
A34	264.38	237.94	214.15	192.73	0.92	1.22	1.05	1.28	1.76
A56	244.38	219.94	197.95	178.15	1.02	1.45	1.35	1.62	1.80
A7	80	80	80	80	-	1.56	-	1.98	-
A8	1526.59	1373.93	1236.54	1112.88	0.79	0.79	0.64	0.98	0.69
T(all areas)	2157.01	1956.81	1773.64	1608.76	-	1.15	-	1.35	-
T(excl A7)	2077.01	1876.81	1693.64	1528.76	0.87	1.04	0.84	1.22	1.09

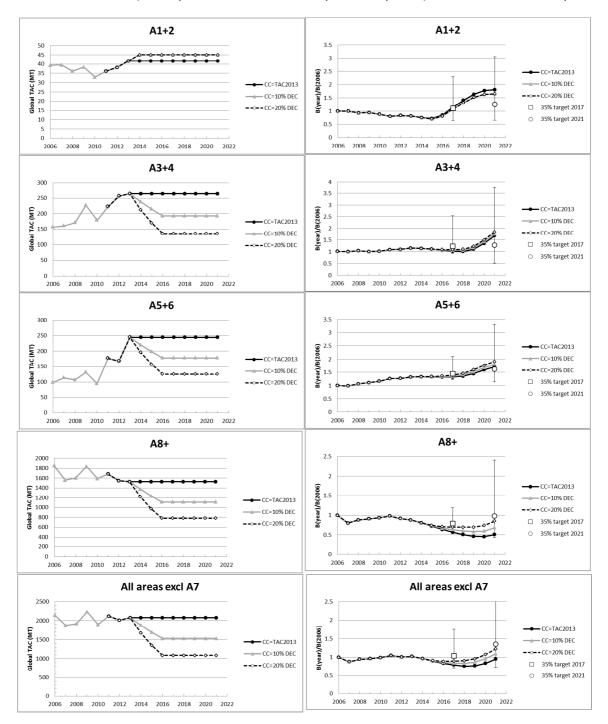
Table 1c: CC\_20%\_DEC – TAC2013 values decreased by 20% for three years and then remain constant thereafter.

						35%		35%	
	OS+NS+SUB+REC					target		target	
	2013	2014	2015	2016+	B(17/14)	B(17/06)	B(17/06)	B(21/06)	B(21/06)
A12	41.66	45	45	45	1.42	1.10	1.07	1.26	1.65
A34	264.38	211.5	169.2	135.2	0.95	1.22	1.08	1.28	1.84
A56	244.38	195.5	156.4	125.12	1.05	1.45	1.39	1.62	1.91
A7	80	80	80	80	-	1.56	-	1.98	-
A8	1526.59	1221.27	977.02	781.61	0.87	0.79	0.70	0.98	0.85
T(all areas)	2157.01	1753.27	1427.62	1166.93	-	1.15	-	1.35	-
T(excl A7)	2077.01	1673.27	1347.62	1086.93	0.93	1.04	0.90	1.22	1.23

Table 1d: CC\_10%\_DEC – TAC2013 values decreased by 10% for three years and then remain constant thereafter, and poaching is assumed to increase further by 25% in 2015 in all super-areas.

						35%		35%	
	OS+NS+SUB+REC					target		target	
	2013	2014	2015	2016+	B(17/14)	B(17/06)	B(17/06)	B(21/06)	B(21/06)
A12	41.66	45	45	45	1.42	1.10	1.07	1.26	1.65
A34	264.38	237.94	214.15	192.73	0.92	1.22	1.05	1.28	1.76
A56	244.38	219.94	197.95	178.15	1.01	1.45	1.35	1.62	1.80
A7	80	80	80	80	-	1.56	1	1.98	-
A8	1526.59	1373.93	1236.54	1112.88	0.77	0.79	0.62	0.98	0.63
T(all areas)	2157.01	1956.81	1773.64	1608.76	-	1.15	-	1.35	-
T(excl A7)	2077.01	1876.81	1693.64	1528.76	0.87	1.04	0.84	1.22	1.05

Figure 1: TACs and median biomass recovery trajectories for each super-area (except A7) and for the resource as a whole (excluding A7). Male biomasses (above 75mm CL) relative to the 2006 levels are shown for three options for fixed future catches. The open squares shows the median value expected by 2017 under OMP 2011 (which yielded a median recovery of 35% by 2021), as evaluated in January 2013.



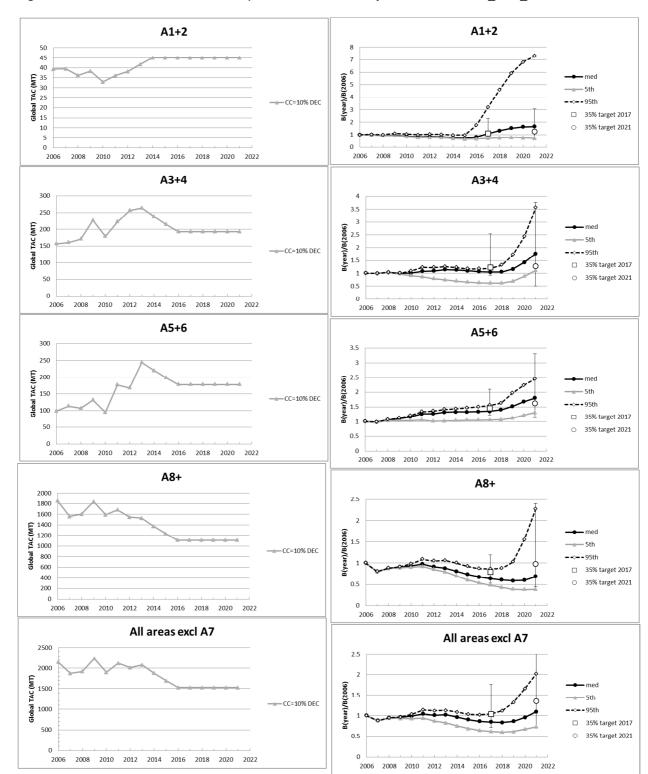


Figure 2: TACs and median, 5<sup>th</sup> and 95<sup>th</sup> percentile biomass trajectories for the CC\_10%\_DEC scenario.

Figure 3: OMP 2011 (as of Jan 2013) predicted A8+ Global TACs that would be required to reach the overall 35% rebuilding target in 2021 medians (solid black line) and 5<sup>th</sup> and 95<sup>th</sup> percentiles (grey lines) shown). The dashed line indicates the CC\_10%\_DEC TACs.

