

TAC values for 2011/12 season for four candidate OMPs for the West Coast rock lobster resource

S.J. Johnston and D.S. Butterworth.

Table 1: The TAC values (all MT) for the 2011/12 season associated with the various candidate OMPs. The first column reports the 2010/11 season values.

	2010 season	2011 season $\alpha=2400$ "1.40 tuning"	2011 season $\alpha=3000$ "1.30 tuning"	2011 season $\alpha=3500$ "1.21 tuning"	2011 season $\alpha=3000$ "1.30 tuning" Current sector split
Global T	2286.20	2287.54 (+0.06%)	2430.51 (+6.31%)	2514.57 (+10.0%)	2430.56 (+6.31%)
Global A1+2	37.67	36.13	36.13	36.13	33.20
Global A3+4	208.26	215.11	222.62	227.04	210.22
Global A5+6	125.93	136.93	136.93	136.93	116.59
Global A7	394.27	315.93	348.82	368.93	372.32
Global A8+	1720.09	1583.44	1686.01	1746.32	1698.21
Offshore T	1528.22	1402.40 (-8.2%)	1545.38 (-0.01%)	1629.44 (+6.6%)	1658.22 (+8.5%)
Offshore A1+2	0	0	0	0	0
Offshore A3+4	51.9	67.71	75.23	79.65	81.16
Offshore A5+6	0	20	20	20	20
Offshore A7	383.99	308.61	341.50	360.84	367.46
Offshore A8+	1092.33	1006.08	1108.65	1168.96	1189.60
Nearshore T	451	451	451	451	451
Nearshore A1+2	24.17	24.17	24.17	24.17	24.17
Nearshore A3+4	72.48	72.48	72.48	72.48	72.48
Nearshore A5+6	32.2	32.2	32.2	32.2	32.2
Nearshore A7	0	0	0	0	0
Nearshore A8+	322.15	322.15	322.15	322.15	322.15
Subsistence T	200*	251	251	251	200
Subsistence A1+2	6.6	8.30	8.30	8.30	6.60
Subsistence A3+4	41.4	52.06	52.06	52.06	41.4
Subsistence A5+6	49.2	61.86	61.86	61.86	49.2
Subsistence A7	0	0	0	0	0
Subsistence A8+	102.6107	129.00	129.00	129.00	102.6
Recreational T	107	183	183	183	121.54

*This was the allocation made, not the actual catch estimated to have been taken (which is ~270 MT)

Details of the OMP calculations

The input data are reported in Tables 2a-e. These data are were reported in Glazer 2011a,b,c,d and OLRAC (2011).

The resultant resource indices calculated in the OMP using the data in Tables 2a-e are as follows:

$\bar{J}_{2011}=1.153$ (this is the super-area and gear combined index of current abundance relative to the 2005-2009 average).

$J_{2011}^{trap} = 1.073$ (this is the trap gear index averaged over super-areas where data are available)

$J_{2011}^{hoop} = 1.215$ (this is the hoop gear index averaged over super-areas where data are available)

$J_{2011}^{FIMS} = 1.224$ (this is the FIMS index averaged over super-areas where data are available)

$J_{A1+2,2011} = 0.956$ (this is the gear-combined index of abundance for super-area A1+2)

$J_{A3+4,2011} = 1.917$ (this is the gear-combined index of abundance for super-area A3+4)

$J_{A5+6,2011} = 1.421$ (this is the gear-combined index of abundance for super-area A5+6)

$J_{A7,2011} = 0.885$ (this is the gear-combined index of abundance for super-area A7)

$J_{A8+,2011} = 0.753$ (this is the gear-combined index of abundance for super-area A8+)

The five indices above are what are used to determine if Exceptional Circumstance (EC) should be invoked for any one of the super-areas due to very poor resource performance.

The values of X_{crit}^{area} below which EC would be declared for that super-area are:

$$X_{crit}^{A1+2} = 0.7$$

$$X_{crit}^{A3+4} = 0.85$$

$$X_{crit}^{A5+6} = 0.7$$

$$X_{crit}^{A7} = 0.8$$

$$X_{crit}^{A8+} = 0.7$$

Thus no EC are invoked for season 2011/12.

References

Glazer, J.P. 2011a. Standardised CPUE indices in the West Coast rock lobster hoopnet fishery. DAFF document, FISHERIES/2011/AUG/SWG-WCRL36.

Glazer, J.P. 2011b. Area-disaggregated standardised CPUE indices in the West Coast rock lobster trapboat fishery. DAFF document, FISHERIES/2011/AUG/SWG-WCRL37.

Glazer, J.P. 2011c. An index of abundance for Area 1+2 West Coast rock lobster. DAFF document, FISHERIES/2011/AUG/SWG-WCRL38.

Glazer, J.P. and D.S. Butterworth. 2011d. Issues related to interpolation of empty interaction cells in the West Coast rock lobster context. DAFF document, FISHERIES/2011/AUG/SWG-WCRL39.

OLRAC. (2011) Updated male somatic growth rate estimates for input into the OMP for West Coast rock lobsters. FISHERIES/2011/AUG/SWG-WCRL/42.

Table 2a: Input data for the 2011 OMP TAC calculations for Area 1+2.

	Trap CPUE	Hoop CPUE	FIMS CPUE	Somatic Growth of 70mm male lobster
2005	-	1.353	-	2.708
2006	-	1.281	-	2.804
2007	-	1.387	-	3.791
2008	-	1.135	-	3.530
2009	-	1.556	-	7.132
2010	-	1.041	-	3.582

Table 2b: Input data for the 2011 OMP TAC calculations for Area 3+4.

	Trap CPUE	Hoop CPUE	FIMS CPUE	Somatic Growth of 70mm male lobster
2005	-	0.512	1.712	3.368
2006	-	0.410	0.239	3.231
2007	-	0.830	0.267	2.410
2008	-	1.356	1.548	4.134
2009	-	1.436	0.009	3.515
2010	-	1.331	3.863	3.252

Table 2c: Input data for the 2011 OMP TAC calculations for Area 5+6.

	Trap CPUE	Hoop CPUE	FIMS CPUE	Somatic Growth of 70mm male lobster
2005	-	0.854	0.241	4.055
2006	-	0.949	0.119	3.918
2007	-	1.198	1/267	3.097
2008	-	1.477	0.756	4.821
2009	-	1.245	0.706	4.202
2010	-	1.513	0.662	3.939

Table 2d: Input data for the 2011 OMP TAC calculations for Area 7.

	Trap CPUE	Hoop CPUE	FIMS CPUE	Somatic Growth of 70mm male lobster
2005	0.624	-	15.79	3.281
2006	0.767	-	13.96	3.088
2007	0.465	-	21.88	3.291
2008	0.375	-	9.665	4.493
2009	0.592	-	5.088	2.981
2010	0.950	-	3.487	3.412

Table 2e: Input data for the 2011 OMP TAC calculations for Area 8+.

	Trap CPUE	Hoop CPUE	FIMS CPUE	Somatic Growth of 70mm male lobster
2005	0.938	1.073	62.71	2.649
2006	0.820	0.960	79.18	2.512
2007	0.739	0.839	106.65	1.691
2008	0.831	0.885	101.43	3.415
2009	0.835	1.023	101.19	2.796
2010	1.003	1.121	93.10	2.533