



Australian Government
Australian Fisheries Management Authority

ISMP Annual Report 2020

AFMA Observer Program



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Introduction

The Southern and Eastern Scalefish and Shark Fishery (SESSF) Integrated Scientific Monitoring Program (ISMP) provides fisheries managers, research organisations, environmental agencies, the fishing industry and the wider community with independent, reliable, verified and accurate information on the fishing catch, effort and practice of Commonwealth vessels.

ISMP data, collected by the Australian Fisheries Management Authority (AFMA) observers, is utilised in the SESSF Harvest Strategy through a tiered framework that assesses the stock status of commercial species. The stock assessments are ranked according to the amount of data that is required and how the assessments measure abundance. Data needs for specific species depend on what stock assessment tier is used (for more information refer to the [Harvest Strategy Framework](#) for the SESSF).

The ability to collect ISMP data, including biological data, in the SESSF is dependent on many factors. The key influences impacting the ability of AFMA's observers to meet biological, spatial and temporal targets include fishing effort, availability of target species, weather conditions, availability of vessels and availability of observers in relation to AFMA's other commitments. In addition to this, AFMA suspended the Observer Program in March 2020 following careful consideration of the risk to the observers of contracting or spreading COVID-19 and ensuring compliance with various governments' social distancing and management measures. AFMA's Observer Program continued to be suspended until October 2020, whereby limited coverage resumed. However, observers were placed on vessels where there was an existing obligation or where the trip was considered to warrant observer coverage, including on Orange Roughy voyages and deemed vessels, and where no other monitoring option was available or appropriate.

This report summarises the biological data collected in the 2020 calendar year against targets outlined in the [SESSF Data Plan 2017-20](#) and spatial and temporal data targets against the Proportional Method for data collection as described by Bergh et al. (2009). The following legend has been used to provide visual representation of performance against these targets.

KEY	
RED	<50% of Target
ORANGE	50 – 75% of Target
GREEN	>75% of Target

Observer Sea Days

Total Sea Days by Stratum

Table 1. Annual ISMP targets and achieved sea days by strata (2020)

Commonwealth Trawl Sector Sea Days 2020				
Stratum	Zone	Gear	Target	Actual
Eden/Lakes	60	Danish Seine	19	7.0
Eden/Lakes	20	Danish Seine	21	8.0
Eden/Lakes Inshore	20	Trawl	45	15.2
Eden/Lakes Offshore	20	Trawl	20	7.8
NSW Inshore	10	Trawl	19	5.0
NSW Offshore	10	Trawl	13	1.0
NSW (GEM Spawn)	10 (GEM)	Trawl	20	0.0
NSW (royal red)	10 (JAQ)	Trawl	4	1.0
South West VIC	50	Trawl	25	15.0
East TAS	30	Trawl	29	45.0
East TAS (Roughy)	30 (ORY)	Trawl	65	70.0
West TAS	40	Trawl	17	37.0
West TAS (GRN Spawn)	40 (GRN)	Trawl	20	155.0
East Coast Deep Water	70	Trawl	0	0.0
Total			317	367.0

Sea Days by Quarter

Table 2. Quarterly ISMP targets and achieved sea days by strata (2020)

Commonwealth Trawl Sector Sea Days by Quarter 2020												
Stratum	Zone	Gear	Q1		Q2		Q3		Q4		2020 Total	
			Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Eden/Lakes	60	Danish Seine	5	4.0	5	0.0	4	0.0	5	3.0	19	7.0
Eden/Lakes	20	Danish Seine	5	5.0	5	0.0	5	0.0	6	3.0	21	8.0
Eden/Lakes Inshore	20	Trawl	9	8.5	12	0.0	12	0.0	12	6.8	45	15.2
Eden/Lakes Offshore	20	Trawl	3	1.5	6	0.0	6	0.0	5	6.2	20	7.8
NSW Inshore	10	Trawl	5	5.0	5	0.0	5	0.0	4	0.0	19	5.0
NSW Offshore	10	Trawl	2	1.0	4	0.0	4	0.0	3	0.0	13	1.0
NSW (GEM Spawn)	10 (GEM)	Trawl	0	0.0	10	0.0	10	0.0	0	0.0	20	0.0
NSW (royal red)	10 (JAQ)	Trawl	1	1.0	1	0.0	1	0.0	1	0.0	4	1.0
South West VIC	50	Trawl	7	12.0	7	3.0	5	0.0	6	0.0	25	15.0
East TAS (30)	30	Trawl	11	6.0	7	13.0	4	17.0	7	9.0	29	45.0
East TAS (Roughy)	30 (ORY)	Trawl	0	0.0	35	28.0	30	42.0	0	0.0	65	70.0
West TAS	40	Trawl	4	18.0	2	0.0	6	9.0	5	10.0	17	37.0
West TAS (GRN Spawn)	40 (GRN)	Trawl	0	0.0	10	35.0	10	120.0	0	0.0	20	155.0
East Coast Deep Water	70	Trawl	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total			52	62.0	109	79.0	102	188.0	54	38.0	317	367

Biological Data Collection Summary

Total Lengths Collected

Table 3. Target and actual lengths collected (2020) (CTS)

Commonwealth Trawl Sector Lengths Collected 2020						
Species		Number of Lengths				
Common Name	Species Code	Target	Observers	Port Samplers	Total	% Collected
Alfonsino	BYS	1000	285	136	421	42%
Blue Grenadier (N-spawn)	NS GRN	1500	870	1765	2635	176%
Blue Grenadier (Spawn)	S GRN	2000	14923	0	14923	746%
Blue Warehou (East)	E SEM	1000	177	528	705	71%
Blue Warehou (West)	W SEM	2000	0	24	24	1%
Blue-eye Trevalla	BWA	0	27	0	27	NA
Deepwater Sharks (East)	E DEEP SRK	1000	292	597	889	89%
Deepwater Sharks (West)	W DEEP SRK	1000	567	0	567	57%
Gemfish (East)	E GEM	2000	208	1668	1876	94%
Gemfish (West)	W GEM	2000	973	12	985	49%
Jackass Morwong (East)	E TAK	1000	525	1798	2323	232%
Jackass Morwong (West)	W TAK	1000	277	0	277	28%
John Dory	JOD	2000	174	2105	2279	114%
Pink Ling (East)	E CUS	1000	449	1521	1970	197%
Pink Ling (West)	W CUS	1000	382	69	451	45%
Mirror Dory (East)	E ZNE	1000	182	1781	1963	196%
Mirror Dory (West)	W ZNE	1000	432	50	482	48%
Ocean Perch (Inshore)	HFR	1000	245	877	1122	112%
Ocean Perch (Offshore)	37287093	1000	363	1355	1718	172%
Orange Roughy (10)	OR 10	1000	8612	0	8612	861%
Orange Roughy (40)	OR 40	1000	1451	0	1451	145%
Orange Roughy (30)	OR 30	0	476	0	476	NA
Orange Roughy (20)	OR 20	0	74	0	74	NA
Oreo's other	ORO/ONV	1000	277	337	614	61%
Redfish	CXF	2000	215	2079	2294	115%
Ribaldo	RIB	1000	553	870	1423	142%
Royal Red Prawn	JAQ	2000	509	0	509	25%
School Whiting (Trawl)	ILQ	1000	47	2278	2325	233%
School Whiting (D. Seine)	ILQ	1500	890	2772	3662	244%
Silver Trevally	TRZ	2000	12	0	12	1%
Smooth Oreo	SSO	1000	21	0	21	2%
Spotted Warehou (East)	E SEP	1000	518	1007	1525	153%
Spotted Warehou (West)	W SEP	1000	2648	0	2648	265%
Tiger Flathead (Trawl)	PHI	1000	1789	1460	3249	325%
Tiger Flathead (D. Seine)	PHI	1000	586	1480	2066	207%
Hapuka	WHA	1000	0	35	35	4%
Ocean Jacket	NLY	1000	350	0	350	35%
King Dory	ZCT	1000	173	1085	1258	126%
Frostfish	SFS	1000	928	0	928	93%
Total		45,000	41,480	27,689	69,169	

Table 4. Target and actual lengths collected (2020) (GABT)

Great Australian Bight Trawl Lengths Collected 2020						
Species		Number of Lengths				
Common Name	Species Code	Target	Observers	Port Samplers	Total	% Collected
Bight Redfish	CXZ	2000	1511	0	1511	76%
Blue Grenadier (N-spawn)	NS GRN	500	152	0	152	30%
Deepwater Flathead	FTL	2000	2635	0	2635	132%
Jackass Morwong GAB	G TAK	1000	366	0	366	37%
Ocean Jacket	NLY	1000	931	0	931	93%
Gemfish GAB	G GEM	1000	11	0	11	1%
Total		7,500	5,606	0	5,606	

Lengths Collected by Quarter

Table 5. Lengths collected by quarter (2020) (CTS)

Commonwealth Trawl Sector Lengths by Quarter 2020					
Species		Lengths Collected			
Common Name	Species Code	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Alfonsino	BYS	256	8	61	96
Blue Grenadier (N-spawn)	NS GRN	949	587	388	711
Blue Grenadier (Spawn)	S GRN	0	3704	11219	0
Blue Warehou (East)	E SEM	205	148	37	315
Blue Warehou (West)	W SEM	0	24	0	0
Blue-eye Trevalla	BWA	0	17	10	0
Deepwater Sharks (East)	E DEEP SRK	344	267	240	38
Deepwater Sharks (West)	W DEEP SRK	251	0	0	316
Gemfish (East)	E GEM	203	558	699	416
Gemfish (West)	W GEM	424	136	385	40
Jackass Morwong (East)	E TAK	702	472	529	620
Jackass Morwong (West)	W TAK	277	0	0	0
John Dory	JOD	585	626	490	578
Pink Ling (East)	E CUS	480	355	581	554
Pink Ling (West)	W CUS	254	69	27	101
Mirror Dory (East)	E ZNE	433	597	501	432
Mirror Dory (West)	W ZNE	288	52	92	50
Ocean Perch (Inshore)	HFR	279	246	479	118
Ocean Perch (Offshore)	37287093	424	402	340	552
Orange Roughy (10)	OR 10	0	3239	5373	0
Orange Roughy (40)	OR 40	0	0	1451	0
Oreo's other	ORO/ONV	320	187	50	57
Redfish	CXF	1684	0	518	92
Ribaldo	RIB	503	397	120	403
Royal Red Prawn	JAQ	509	0	0	0
School Whiting (Trawl)	ILQ	1419	273	315	318
School Whiting (D. Seine)	ILQ	2165	457	392	648
Silver Trevally	TRZ	12	0	0	0
Smooth Oreo	SSO	21	0	0	0
Spotted Warehou (East)	E SEP	306	365	409	445
Spotted Warehou (West)	W SEP	398	563	1445	242
Tiger Flathead (Trawl)	PHI	1478	518	317	936
Tiger Flathead (D. Seine)	PHI	623	338	375	730

Commonwealth Trawl Sector Lengths by Quarter 2020					
Hapuka	WHA	0	4	27	4
Ocean Jacket	NLY	250	0	0	100
King Dory	ZCT	471	435	201	151
Frostfish	SFS	322	191	415	0
Total		16,835	15,235	27,486	9,063

Table 6. Lengths collected by quarter (2020) (GABT)

Great Australian Bight Trawl Sector Lengths by Quarter 2020					
Species		Lengths Collected			
Common Name	Species Code	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Bight Redfish	CXZ	972	0	37	502
Blue Grenadier (N-spawn)	NS GRN	0	0	0	152
Deepwater Flathead	FTL	1209	0	837	589
Jackass Morwong GAB	G TAK	98	0	0	268
Ocean Jacket	NLY	0	0	656	275
Gemfish GAB	G GEM	11	0	0	0
Total		2,290	0	1,530	1,786

Total Otoliths Collected

Table 7. Target and actual otoliths collected (2020) (CTS)

Commonwealth Trawl Sector Otoliths Collected 2020						
Species		Otoliths Collected				
Common Name	Species Code	Target	Observers	Port Samplers	Total	% Collected
Alfonsino	BYS	1000	93	0	93	9%
Blue Grenadier (N-spawn)	NS GRN	800	429	203	632	79%
Blue Grenadier (Spawn)	S GRN	1000	1772	0	1772	177%
Blue Warehou (East)	E SEM	450	6	41	47	10%
Blue Warehou (West)	W SEM	450	2	0	2	0%
Blue-eye Trevalla	BWA	0	65	62	127	NA
Gemfish (East)	E GEM	650	176	317	493	76%
Gemfish (West)	W GEM	500	616	0	616	123%
Jackass Morwong (East)	E TAK	600	237	389	626	104%
Jackass Morwong (West)	W TAK	600	150	0	150	25%
John Dory	JOD	500	37	549	586	117%
Pink Ling (East)	E CUS	400	135	520	655	164%
Pink Ling (West)	W CUS	400	240	0	240	60%
Mirror Dory (East)	E ZNE	0	0	347	347	NA
Mirror Dory (West)	W ZNE	0	77	0	77	NA
Ocean Perch (Inshore)	HFR	400	44	522	566	142%
Ocean Perch (Offshore)	37287093	1000	145	743	888	89%
Orange Roughy (10)	OR 10	1000	1622	0	1622	162%
Oreo's other	ORO/ONV	0	5	0	5	NA
Orange Roughy (40)	OR 40	500	619	0	619	124%
Orange Roughy (30)	OR 30	0	20	0	20	NA
Redfish	CXF	1000	184	451	635	64%
Ribaldo	RIB	300	223	157	380	127%
Royal Red Prawn	JAQ	75	0	0	0	0%

Commonwealth Trawl Sector Otoliths Collected 2020						
School Whiting (Trawl)	ILQ	300	25	298	323	108%
School Whiting (D. Seine)	ILQ	300	145	305	450	150%
Silver Trevally	TRZ	75	0	0	0	0%
Smooth Oreo	SSO	500	9	0	9	2%
Spotted Warehou (East)	E SEP	450	177	434	611	136%
Spotted Warehou (West)	W SEP	450	497	0	497	110%
Tiger Flathead (Trawl)	PHI	450	246	433	679	151%
Tiger Flathead (D. Seine)	PHI	700	275	726	1001	143%
Hapuka	WHA	500	0	0	0	0%
Total		15,350	8,271	6,497	14,768	

Table 8. Target and actual otoliths collected (2020) (GABT)

Great Australian Bight Trawl Otoliths Collected 2020						
Species		2020 Calendar Year				
Common Name	Species Code	Target	Observers / Crew*	Port Samplers	Total	% Collected
Bight Redfish	CXZ	570	465	0	465	82%
Blue Grenadier (N-spawn)	NS GRN	500	112	0	112	22%
Deepwater Flathead	FTL	570	640	0	640	112%
Gemfish GAB	G GEM	600	0	0	0	0%
Total		2,240	1,217	0	1,217	

Otoliths Collected by Quarter

Table 9. Otoliths collected by quarter (2020) (CTS)

Commonwealth Trawl Sector Otoliths Collected by Quarter					
Species		Otoliths Collected			
Common Name	Species Code	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Alfonsino	BYS	0	15	78	0
Blue Grenadier (N-spawn)	NS GRN	267	59	47	259
Blue Grenadier (Spawn)	S GRN	0	872	900	0
Blue Warehou (East)	E SEM	22	25	0	0
Blue Warehou (West)	W SEM	2	0	0	0
Blue-eye Trevalla	BWA	15	22	75	15
Gemfish (East)	E GEM	227	109	23	134
Gemfish (West)	W GEM	106	100	387	23
Jackass Morwong (East)	E TAK	154	133	89	250
Jackass Morwong (West)	W TAK	150	0	0	0
John Dory	JOD	172	149	136	129
Pink Ling (East)	E CUS	203	140	171	141
Pink Ling (West)	W CUS	93	18	129	0
Mirror Dory (East)	E ZNE	74	93	29	151
Mirror Dory (West)	W ZNE	0	11	66	0
Ocean Perch (Inshore)	HFR	107	132	143	184
Ocean Perch (Offshore)	37287093	356	221	175	136
Orange Roughy (10)	OR 10	0	941	681	0
Oreo's other	ORO/ONV	0	2	3	0
Orange Roughy (40)	OR 40	0	0	619	0
Orange Roughy (30)	OR 30	20	0	0	0

Commonwealth Trawl Sector Otoliths Collected by Quarter					
Redfish	CXF	313	151	73	98
Ribaldo	RIB	160	117	32	71
School Whiting (Trawl)	ILQ	125	91	107	0
School Whiting (D. Seine)	ILQ	162	96	79	113
Smooth Oreo	SSO	8	1	0	0
Spotted Warehou (East)	E SEP	110	122	136	243
Spotted Warehou (West)	W SEP	95	190	212	0
Tiger Flathead (Trawl)	PHI	259	165	129	126
Tiger Flathead (D. Seine)	PHI	343	136	153	369
Hapuka	WHA	0	0	0	0
Total		3,543	4,111	4,672	2,442

Table 10. Otoliths collected by quarter (2020) (GABT)

Great Australian Bight Trawl Otoliths Collected by Quarter					
Species		Otoliths Collected			
Common Name	Species Code	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Bight Redfish	CXZ	250	0	75	140
Blue Grenadier (N-spawn)	NS GRN	0	0	0	112
Deepwater Flathead	FTL	254	0	183	203
Gemfish GAB	G GEM	0	0	0	0
Total		504	0	258	455

Attachments

SESSF ISMP Scalefish Zones

