

Conservation Services Programme Observer Report: 1st July 2010 to 30 June 2011

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Marine Species and Threats

Department of
Conservation
Te Papa Atawhai



CSP Observer Coverage Achieved vs. Planned 2009/10

Fishery	Days Planned	Days Achieved	% achieved	Total Observer days (CSP/ Mfish)
Orange Roughy	88	67	76	620
Hake	5	5	100	132
Hoki	187	139	74	1210
Southern Blue Whiting	32	34	106	307
Ling – Deepsea	27	24	89	169
Pelagic trawl - JMA / EMA	66	55	83	514
Tuna Domestic	69	58	84	369
Tuna Charter	53	37	70	243
Scampi	32	26	81	354
Inshore - BLL	200	93	47	93
Inshore Trawl	540	306	57	306
Inshore Set Net	0	0	-	100
Squid	109	127	117	779
Totals	1408	971	69	5196



bycatch for mapping.csv Events

• <all other values>

speceis_class

• Fish

• Reptiles

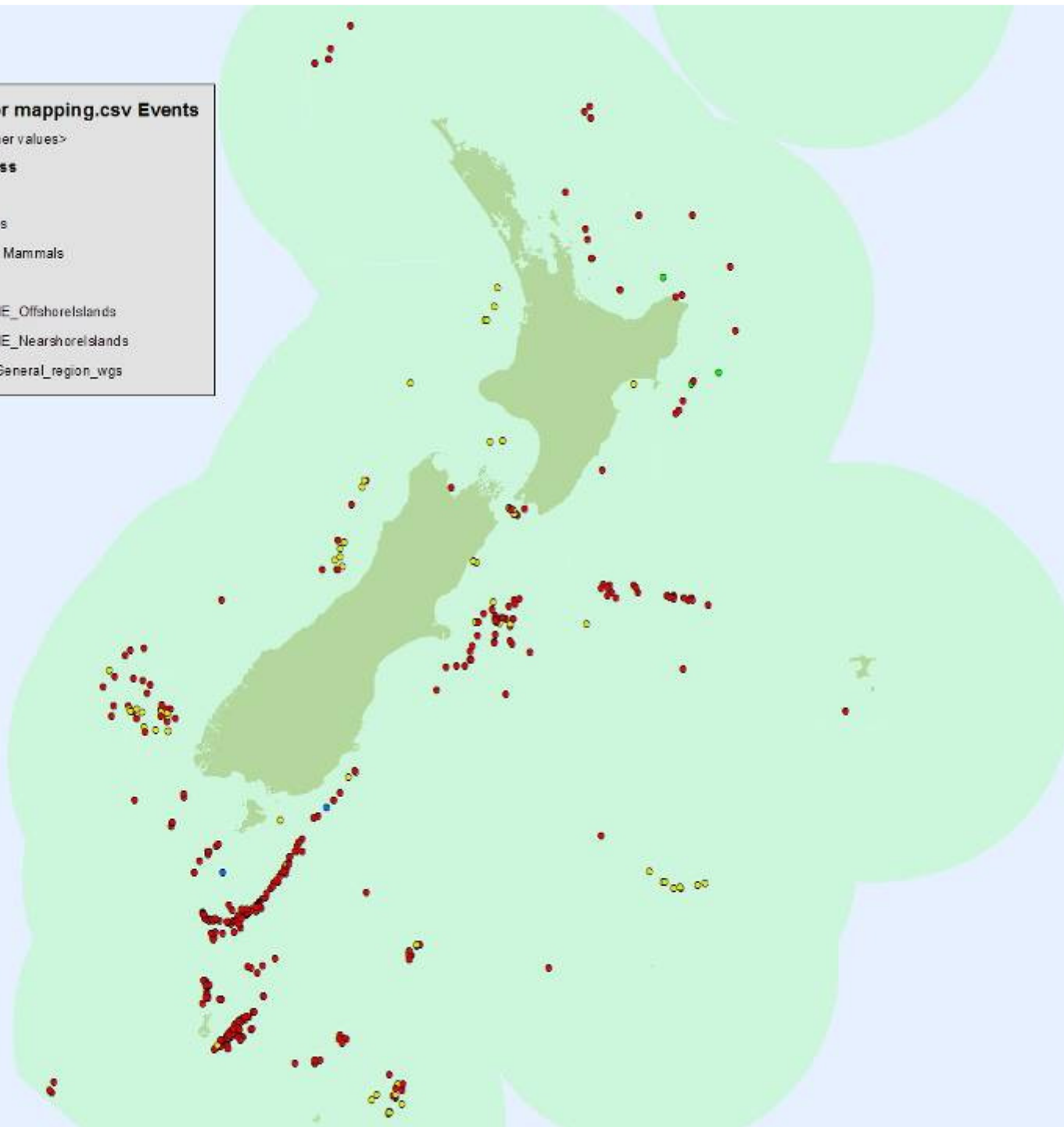
• Marine Mammals

• Birds

■ MARINE_OffshoreIslands

■ MARINE_NearshoreIslands

■ FMA_GeneraL_region_wgs



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Hake, hoki, ling, warehou



FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures *	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows	Protected Fish Captures	Fish per 100 tows	Coral Catch (kg)	Coral Catch per 100 tows (kg)
1. AKE	11	3	27.27	0	0.00	0	0.00	0	0.00	5.3	176.67
2. CEE	1206	141	11.69	6	4.26	0	0.00	0	0.00	0	0.00
3. SEC	3598	686	19.07	30	4.37	9	1.31	1	0.15	256	37.32
4. SOE	1715	288	16.79	11	3.82	3	1.04	0	0.00	26.1	0.94
5. SOU	1386	346	24.96	34	9.83	0	0.00	3	0.87	2.7	0.72
6. SUB	792	262	33.08	12	4.58	0	0.00	0	0.00	2.5	0.92
7. CHA	3471	1,053	30.34	7	0.66	13	1.23	0	0.00	2.4	0.23
8. CEW	19	0	0.00	0	-	-	-	-	-	-	-
9. AKW	19	0	0.00	0	-	-	-	-	-	-	-
10. KER	0	-	-	-	-	-	-	-	-	-	-
Total	12,217	2,779	22.75	100	3.60	25	0.90	4	0.14	295.00	10.62



Most observed fishery in terms of number of tows

Overall reduction in bycatch rate for mammals but similar for seabirds

highest number of protected shark captures in any fishery

Cook strait vs West Coast split

Majority animals dead

Dominated by net captures



Southern blue whiting

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows	Coral Catch (kg)	Coral Catch per 100 tows (kg)
1. AKE	0	0	-	-	-	-	-	-	-
2. CEE	0	0	-	-	-	-	-	-	-
3. SEC	0	0	-	-	-	-	-	-	-
4. SOE	0	0	-	-	-	-	-	-	-
5. SOU	0	0	-	-	-	-	-	-	-
6. SUB	1,112	405	36.42	11	2.72	27	6.67	0	0.00
7. CHA	2	0	0.00	-	-	-	-	-	-
8. CEW	0	0	-	-	-	-	-	-	-
9. AKW	0	0	-	-	-	-	-	-	-
10. KER	0	0	-	-	-	-	-	-	-
Total	1,114	405	36.36	11	2.72	27	6.67	0.00	0.00



Coverage over a three month period

Increased number of interaction compared to previous years

Highest sea lion capture rates (10 males 1 female)

One vessel accounted for a third of marine mammal captures

4 vessels with higher capture rates



Scampi

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows	Coral Catch (kg)	Coral Catch per 100 tows (kg)
1. AKE	780	140	17.95	18	12.86		0.00	5	3.57
2. CEE	912	71	7.79	1	1.41		0.00	51	71.83
3. SEC	2	1	50.00		-		-		-
4. SOE	1982	221	11.15	4	1.81	1	0.45	57.7	26.11
5. SOU		0	-		-		-		-
6. SUB	1078	157	14.56	64	40.76	1	0.64	0	0.00
7. CHA		0	-		-		-		-
8. CEW		0	-		-		-		-
9. AKW		0	-		-		-		-
10. KER		0	-		-		-		-
Total	4,754	590	12.41	87	14.75	2	0.34	113.70	19.27



2 vessels 75% of captures

Dominated by net captures

Project underway to mitigate net captures

Increased observer reporting to identify nature of captures



Squid

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows	Protected Fish Captures	Fish per 100 tows	Coral Catch (kg)	Coral Catch per 100 tows (kg)
1. AKE	0	0	-	-	-	-	-	-	-	-	-
2. CEE	0	0	-	-	-	-	-	-	-	-	-
3. SEC	385	66	17.14	6	9.09	2	3.03	-	0.00	1.3	0.00
4. SOE	91	6	6.59	0	0.00	0	0.00	-	0.00	5.3	88.33
5. SOU	1997	648	32.45	74	11.42	4	0.62	3	0.46	1746.5	269.52
6. SUB	1600	548	34.25	55	10.04	0	0.00	-	0.00	1.1	0.20
7. CHA	0	0	-	-	-	-	-	-	-	-	-
8. CEW	0	0	-	-	-	-	-	-	-	-	-
9. AKW	0	0	-	-	-	-	-	-	-	-	-
10. KER	0	0	-	-	-	-	-	-	-	-	-
Total	4,073	1,268	31.13	135	10.65	6	0.47	3	0.23	1754.20	138.34



Seabird captures on almost all vessels- though high variability in capture rate

Captures dominated by sooty shearwaters and white-capped albatross

Second highest rate of basking shark capture (also second highest number of captures)

Observed marine mammal capture rate reduced by half



Pelagic trawl- Jack mackerel and barracouta

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows	Protected Fish Captures	Fish per 100 tows	Coral Catch (kg)	Coral Catch per 100 tows (kg)
1. AKE	1	0	0.00	-	-	-	-	-	-	-	-
2. CEE	0	0	-	-	-	-	-	-	-	-	-
3. SEC	394	86	21.83	3	3.49	1	1.16	0	0.00	1.1	1.28
4. SOE	44	33	75.00	0	0.00	0	0.00	0	0.00	0	0.00
5. SOU	283	91	32.16	7	7.69	1	1.10	2	2.20	10.1	11.10
6. SUB	2	0	-	-	-	-	-	-	-	-	-
7. CHA	537	189	35.20	0	0.00	1	0.53	0	0.00	0.7	0.37
8. CEW	940	240	25.53	0	0.00	3	1.25	0	0.00	8.2	3.42
9. AKW	253	119	47.04	0	0.00	4	3.36	0	0.00	0	0.00
10. KER	0	0	-	-	-	-	-	-	-	-	-
Total	2,454	758	30.89	10	1.32	10	1.32	2	0.26	20.10	2.65



Observer coverage down slightly

Common dolphin captures in AKW

Highest basking shark capture rate – Barracouta target

Mammal captures limited to 3 of the 14 observed vessels



Deepwater trawl

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows	Coral Catch (kg)	Coral Catch per 100 tows (kg)
1. AKE	419	129	30.79	0	0.00	0	0.00	48.60	37.67
2. CEE	1167	312	26.74	0	0.00	0	0.00	91.95	29.47
3. SEC	730	133	18.22	1	0.75	0	0.00	59.00	44.36
4. SOE	1542	257	16.67	0	0.00	0	0.00	125.50	48.83
5. SOU	23	2	8.70	1	50.00	0	0.00	0.00	0.00
6. SUB	1394	402	28.84	0	0.00	0	0.00	1,057.20	262.99
7. CHA	64	61	95.31	0	0.00	0	0.00	0.30	0.49
8. CEW	0	0	-	-	-	-	-	-	-
9. AKW	202	82	40.59	0	0.00	0	0.00	2,625.68	3,202.05
10. KER	0	0	-	-	-	-	-	-	-
Total	5,541	1,378	24.87	2	0.15	0	0.00	4008.23	290.87



Decreased observer coverage

Low bycatch of seabirds and mammals

Southern royal albatross captured

Coral catch highest in AKW- both rate and weight

Coral catches patchy though more regular than in other fisheries- large numbers of small catches with some very large events (up to 1500kgs)



Inshore trawl

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE	8601	115	1.34	0	0.00	0	0.00
2. CEE	11154	398	3.57	1	0.25	1	0.25
3. SEC	15072	0	-	-	-	-	-
4. SOE	242	0	-	-	-	-	-
5. SOU	4405	7	0.16	0	0.00	0	0.00
6. SUB	41	0	-	-	-	-	-
7. CHA	13727	235	1.71	1	0.43	0	0.00
8. CEW	2242	14	0.62	0	0.00	0	0.00
9. AKW	2756	0	-	-	-	-	-
10. KER	0	0	-	-	-	-	-
Total	58,240	769	1.32	2	0.26	1	0.13



Coverage directed at poorly observed ECNI fisheries

Some flat fish trawl coverage in CHA

Mitigation use and offal management highly variable

Generally low captures



Inshore BLL- Ling bluenose and hapuku

FMA	Effort Lines	Observed Lines	Coverage (%)	Number of hooks observed	Seabird Captures*	Seabirds per 1000 hooks	Mammal Captures	Mammals per 1000 hooks
1. AKE	1675	12	0.72	10,290	2	0.194	0	0.000
2. CEE	3526	125	3.55	102,450	1	0.010	0	0.000
3. SEC	506	77	15.22	41,851	0	0.000	0	0.000
4. SOE	397	0	0.00	-	-	-	-	-
5. SOU	523	0	0.00	-	-	-	-	-
6. SUB	36	0	0.00	-	-	-	-	-
7. CHA	1348	12	0.89	9,500	0	0.000	0	0.000
8. CEW	544	0	0.00	-	-	-	-	-
9. AKW	952	0	0.00	-	-	-	-	-
10. KER	1	0	0.00	-	-	-	-	-
Total	9,508	226	2.38	164,091	3	0.018	0	0.000



Focus on the sparsely observed CEE fleet

Mitigation and offal management practices highly variable

Low numbers of captures-

BUT

Two black petrels caught in northern extent of observer coverage



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Setnet

FMA	Effort Nets	Observed Nets	Coverage (%)	Length of nets observed (m)	Seabird Captures*	Seabirds per 1000m net	Mammal Captures	Mammals per 1000m Net
1. AKE	7630	0	0.00	0	-	-	-	-
2. CEE	1384	8	0.58	7,000	0	0	1	0.143
3. SEC	4744	467	9.84	166,700	0	0	3	0.018
4. SOE	8	0	0.00	0	-	-	-	-
5. SOU	583	0	0.00	0	-	-	-	-
6. SUB	1	0	0.00	0	-	-	-	-
7. CHA	771	0	0.00	0	-	-	-	-
8. CEW	1637	0	0.00	0	-	-	-	-
9. AKW	7348	0	0.00	0	-	-	-	-
10. KER	0	0	-	-	-	-	-	-
Total	24,106	475	1.97	173,700	0	0	4	0.023



Observer coverage focused on northern East Coast South Island

Wider temporal spread than in previous years

No seabirds captured

2 dusky dolphins and two fur seals captured

Captures spread over vessels with bycatch and bycatch rates being highly variable



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SLL- Charter tuna

FMA	Effort Sets	Observed Sets	Coverage (%)	Number of hooks observed	Seabird Captures*	Seabirds per 1000 Hooks	Mammal Captures	Mammals per 1000 Hooks
1. AKE	2	2	100.00	4,763	0	0.000	0	0.000
2. CEE	0	0	-	-	-	-	-	-
3. SEC	0	0	-	-	-	-	-	-
4. SOE	0	0	-	-	-	-	-	-
5. SOU	89	89	100.00	215,609	24	0.111	10	0.046
6. SUB	0	0	-	-	-	-	-	-
7. CHA	60	60	100.00	149,700	5	0.033	1	0.007
8. CEW	0	0	-	-	-	-	-	-
9. AKW	0	0	-	-	-	-	-	-
10. KER	0	0	-	-	-	-	-	-
Total	151	151	100.00	370,072	29	0.078	11	0.030

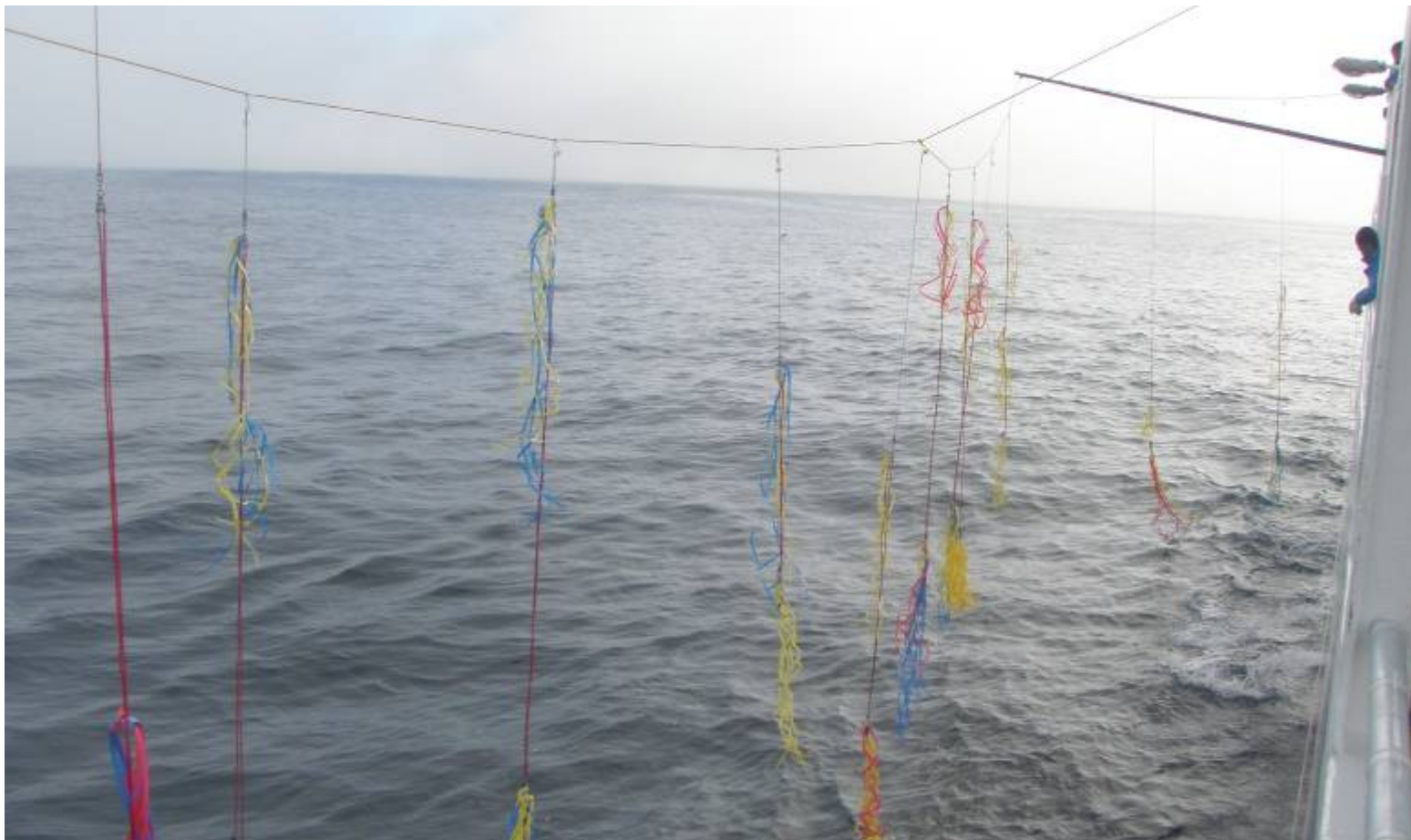


100% observer coverage

Effort reduced over previous years- still focused on CHA/SOU boundary

Reduced captures over previous year, more in line with those before

Numerically dominated by Buller's albatross



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SLL-

Domestic tuna and swordfish

FMA	Effort Sets	Observed Sets	Coverage (%)	Number of hooks observed	Seabird Captures*	Seabirds per 1000 Hooks	Mammal Captures	Mammals per 1000 Hooks	Reptile Captures	Reptile per 1000 Hooks
1. AKE	1368	64	4.68	64,926	6	0.092	0	0.000	1	0.015
2. CEE	954	69	7.23	69,037	6	0.087	1	0.014	2	0.029
3. SEC	0	0	-	-	-	-	-	-	-	-
4. SOE	0	0	-	-	-	-	-	-	-	-
5. SOU	0	0	-	-	-	-	-	-	-	-
6. SUB	0	0	-	-	-	-	-	-	-	-
7. CHA	255	13	5.10	14,380	0	0.000	0	0.000	0	0.000
8. CEW	3	0	0.00	-	-	-	-	-	-	-
9. AKW	150	23	15.33	24,527	7	0.285	0	0.000	0	0.000
10. KER	26	0	0.00	-	-	-	-	-	-	-
Total	2,756	169	6.13	172,870	19	0.110	1	0.006	3	0.017



Coverage reduced compared to previous years

Coverage greatest in AKE and CEE

Captures greatest in AKW

Three leatherback turtles caught – released alive

Offal and bait management highly variable

11 of 19 seabirds captured on a single vessel



Deepwater BLL

FMA	Effort Lines	Observed Lines	Coverage (%)	Number of hooks observed	Seabird Captures*	Seabirds per 1000 hooks	Mammal Captures	Mammals per 1000 hooks
1. AKE	0	0	-	-	-	-	-	-
2. CEE	68	0	0.00	-	-	-	-	-
3. SEC	858	40	4.66	81,648	5	0.061	0	0.000
4. SOE	1839	109	5.93	223,778	11	0.049	0	0.000
5. SOU	104	0	0.00	-	-	-	-	-
6. SUB	334	124	37.13	411,269	11	0.027	0	0.000
7. CHA	0	0	-	-	-	-	-	-
8. CEW	0	0	-	-	-	-	-	-
9. AKW	0	0	-	-	-	-	-	-
10. KER	0	0	-	-	-	-	-	-
Total	3,203	273	8.52	716,695	27	0.038	0	0.000



High degree of variability between vessels in terms of fishing operation and capture rate

Captures dominated by white-chinned petrels

Most captures appear to be on setting

Captures spread through all periods of coverage



Moving forward

New ways of reporting

Vessel breakdown

Tie in with other work

Suggestions?



Vessel	Observed tows	Birds captured	Birds per 100 tows	Mammals captured	Mammals per 100 tows
1	58	7	12.07	3	5.17
2	203	1	0.49	4	1.97
3	140	1	0.71	2	1.43
4	157	1	0.64	0	0.00
5	42	0	0.00	1	2.38
6	84	0	0.00	0	0.00
7	28	0	0.00	0	0.00
8	13	0	0.00	0	0.00
9	12	0	0.00	0	0.00
10	6	0	0.00	0	0.00
11	5	0	0.00	0	0.00
12	4	0	0.00	0	0.00
13	4	0	0.00	0	0.00
14	2	0	0.00	0	0.00
Total	758	10	1.32	10	1.32

Vessel	Observed tows	Birds captured	Birds per 100 tows	Mammals captured	Mammals per 100 tows
1	153	20	13.07	1	0.65
2	90	18	20.00	0	0.00
3	99	13	13.13	0	0.00
4	52	11	21.15	0	0.00
5	162	11	6.79	2	1.23
6	51	10	19.61	0	0.00
7	105	9	8.57	0	0.00
8	24	8	33.33	1	4.17
9	77	8	10.39	0	0.00
10	56	7	12.50	0	0.00
11	70	7	10.00	1	1.43
12	21	7	33.33	0	0.00
13	73	6	8.22	0	0.00
14	32	6	18.75	0	0.00
15	27	3	11.11	0	0.00
16	23	2	8.70	0	0.00
17	32	2	6.25	0	0.00
18	69	1	1.45	1	1.45
19	30	1	3.33	0	0.00
20	22	0	0.00	0	0.00
Total	1268	150	11.83	6	0.47

