



Department of Conservation
Te Papa Atawhai

Conservation Services Programme Observer Report: 1 July 2008 to 30 June 2009

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Marine Conservation Services



CSP Observer Coverage Achieved versus Planned during 08/09

Fishery				Total
	Planned	Achieved	% achieved	Observer days
Orange Roughy	82	82	100%	462
Oreo's	30	30	100%	337
Hake	5	5	100%	35
Hoki	211	208	99%	1436
Southern Blue Whiting	13	14	108%	237
Ling – Deepsea	16	11	69%	139
Pelagic trawl - JMA / EMA	82	82	100%	550
Tuna Domestic	69	42	61%	273
Tuna Charter	52	35	67%	247
Scampi	30	29	97%	125
Inshore - BLL	250	250	100%	258
Inshore Trawl	250	112	45%	112
Inshore Set Net	250	112	45%	112
Squid	135	121	90%	811
Totals	1475	1133	77%	5134



Trawl Fisheries

Hoki, hake, ling and warehou species

- 56 trips observed on 30 vessels where hoki, hake, ling or warehou were targeted
- Protected species interactions were recorded from 22 trips onboard 17 vessels
- Mammal captures were almost exclusively fur seals
- One young New Zealand sea lion caught but released alive
- Majority of these fur seal captures were reported from one vessel fishing the West Coast
- Tori lines were the most prevalent mitigation device, though some vessels moved to bafflers in high winds
- Observer comments indicate that general crew awareness of bycatch issues was good





Hoki, hake, ling and warehou species

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE							
2. CEE	1,053	146	13.87	1	0.68	18	12.33
3. SEC	4,378	705	16.10	35	4.96	10	1.42
4. SOE	1,737	158	9.10	3	1.90		
5. SOU	1,612	351	21.77	20	5.70	1	0.28
6. SUB	903	401	44.41	7	1.75	1	0.25
7. CHA	2,896	887	30.63	13	1.47	45	5.07
8. CEW							
9. AKW	1	1	100.00				
10. KER							
Total	12,580	2,649	21.06	79	2.98	75	2.83

*Captures only, excludes deck strikes and other non-fishing interactions



Live interactions

Species	Caught in net	Impact against vessel	Other	Total	Comments Relating to 'Other' capture method
Seabird - Small	1			1	
Salvin's albatross	2			2	
Shy albatross	1			1	
White-capped albatross	1			1	
Buller's albatross	2	1		3	
Giant petrels (Unidentified)		1		1	
Petrel (Unidentified)	4			4	
Prions (Unidentified)		1	1	2	Collided with another bird before contact with the rigging- found sheltering on deck
Sooty shearwater	10	1		11	
White-chinned petrel		3		3	
Salvin's prion			1	1	Collided with another bird before contact with the rigging- entangled in net
Cape petrels			1	1	Landed on vessel, unable to take off
Fairy prion	1			1	
New Zealand fur seal	25			25	
New Zealand sea lion	1			1	
Total	48	7	3	58	



Dead interactions

Common name	Caught in net	Caught on warp or door	Impact against vessel	Total
Albatross (Unidentified)		1		1
Smaller albatrosses (Thalassarche spp.)		2		2
Salvin's albatross	2	2		4
White-capped albatross		13		13
Buller's albatross	5	11		16
Petrels, Prions and Shearwaters	1			1
Sooty shearwater	26	1		27
Westland petrel			1	1
White-chinned petrel	2			2
Black-bellied storm petrel	1			1
New Zealand fur seal	49			49
Total	86	30	1	117



Trawl Fisheries

Southern blue whiting

- Nine trips were observed on nine separate vessels
- Captures occurred on five of these trips
- Capture rates were for both seabirds and mammals were the lowest for the past four years
- Seabirds and pinnipeds observed actively feeding on discharged offal and floor wash
- No live captures occurred for either seabirds or mammals
- Both New Zealand sea lions were males (around 2m in length)
- Offal management was demonstrated on most vessels, however some discharged during shooting and hauling.
- Large quantities of fish meant that vessel meal plants became swamped on occasion



Southern blue whiting

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE							
2. CEE							
3. SEC							
4. SOE							
5. SOU							
6. SUB	822	332	40.39	2	0.60	22	6.63
7. CHA							
8. CEW							
9. AKW							
10. KER							
Total	822	332	40.39	2	0.60	22	6.63

*Captures only, excludes deck strikes and other non-fishing interactions



Dead interactions

Species	Caught in net	Caught on warp or door	Total
Salvin's albatross		1	1
Grey petrel	1		1
New Zealand fur seal	20		20
New Zealand sea lion	2		2
Total protected species interactions	23	1	24



Trawl Fisheries

Scampi

- Four Trips were observed on four separate vessels targeting scampi
- Protected species bycatch was reported from three of these trips
- Captures were distributed over three of the four FMAs observed
- Four of the seven interactions occurred on one vessel (four captures and one deckstrike)
 - This vessel employed a twin tori line
- Offal management techniques were employed on vessels however they proved to be highly variable, both between vessel and over the course of trips
- Rapid increase in bird abundance during hauling
- Tori lines were used by all vessels
 - Three vessels used twin tori lines, the fourth used a single line



Scampi

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE	952	91	9.56	2	2.20		
2. CEE	385	39	10.13				
3. SEC	3						
4. SOE	1,176	43	3.66	1	2.33		
5. SOU	1						
6. SUB	1,619	72	4.45	2	2.78	2	2.78
7. CHA							
8. CEW							
9. AKW							
10. KER							
Total	4,136	245	5.92	5	2.04	2	0.82

*Captures only, excludes deck strikes and other non-fishing interactions



Type of interaction

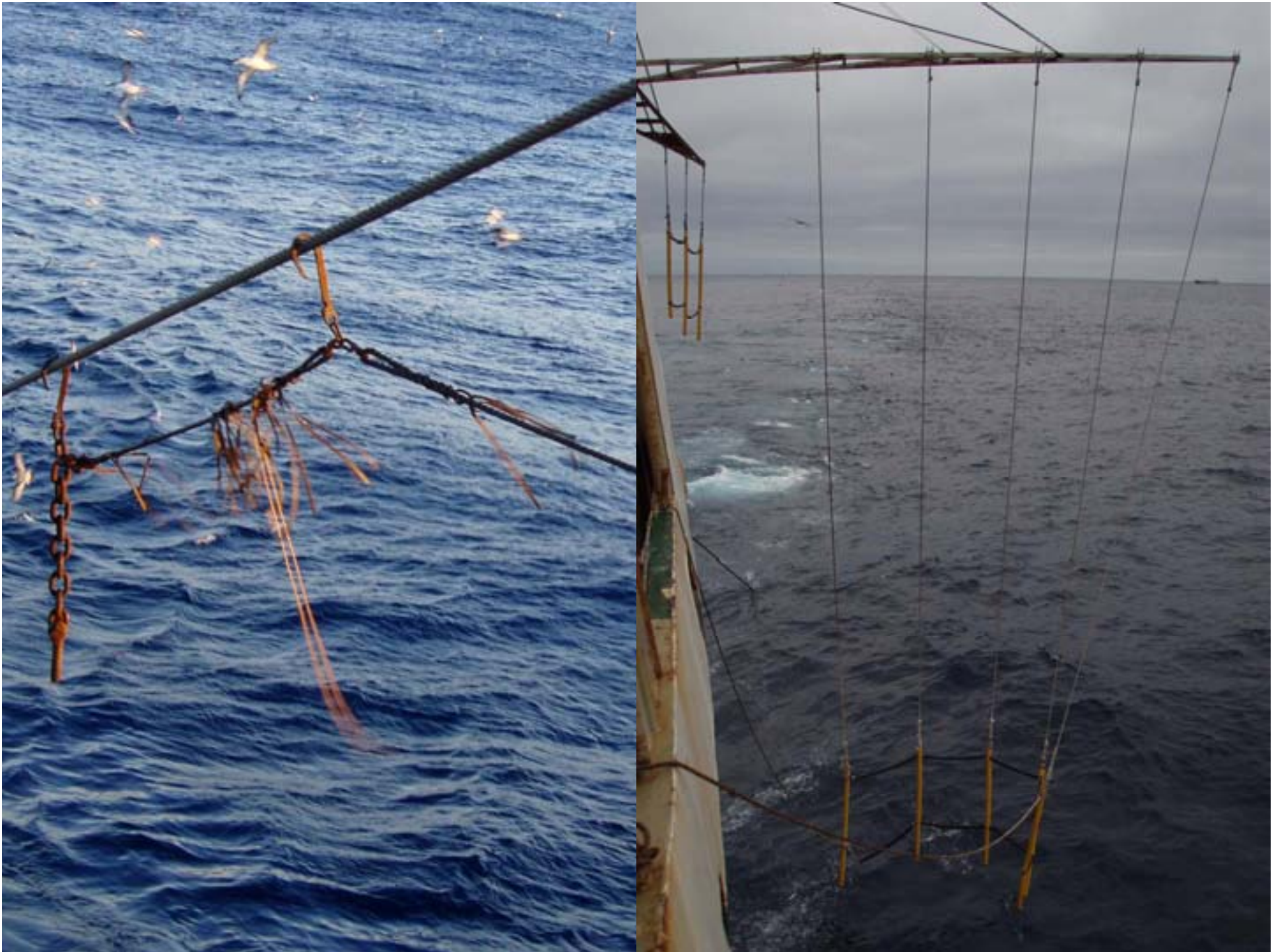
Species	Caught in net	Impact against vessel	Other	Total	Comments relating to 'Other' capture method
White-capped albatross		1	1	2	Tangled in tori line. Fell off before bits recovered
Buller's albatross	1			1	
Flesh-footed shearwater	2			2	
Total seabirds	3	1	1	5	
New Zealand fur seal	1			1	
New Zealand sea lion	1			1	
Total protected species interactions	5	1	1	7	



Trawl Fisheries

Squid

- Twenty five trips were observed on 23 vessels targeting squid
- Protected species captures were reported from 23 of these trips
- All but one vessel captured protected species
- Two hundred and sixty four interactions in total with protected species
- The majority of captures were net captures
- Bird Bafflers and Tori Lines were employed as mitigation, however warp scarers were not used
- Two vessels accounted for disproportionately high numbers of captures
 - Observer comments highlighted levels of deck lighting, gear problems and poor net-cleaning to be contributing factors
- All vessels deployed SLEDs while fishing in 6T
- Lowest level of HSL captures since 2004/05





Squid

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE	5						
2. CEE							
3. SEC	181	16	8.84	40	250.00		
4. SOE	6						
5. SOU	1,628	478	29.36	78	16.32	4	0.84
6. SUB	1,848	766	41.45	141	18.41	3	0.39
7. CHA	1						
8. CEW							
9. AKW							
10. KER							
Total	3,669	1,260	34.34	259	20.56	7	0.56

*Captures only, excludes deck strikes and other non-fishing interactions



Live interactions

Species	Caught in net	Impact against vessel	Total
Albatross (Unidentified)	3		3
Great albatrosses	1		1
Smaller albatrosses (Thalassarche spp.)	2		2
White-capped albatross	9		9
Buller's albatross	1		1
Petrels, Prions and Shearwaters	6		6
Petrel (Unidentified)	27		27
Sooty shearwater	23	1	24
White-chinned petrel	16		16
Black-bellied storm petrel		1	1
Total protected species interactions	88	2	90



Dead interactions

Species	Caught in net	Caught on warp	Other	Unknown	Total	Comments relating to 'Other' or 'Unknown' capture method	
Seabird - Large	1				1	NOT KEPT BY VESSEL.	
Albatross (Unidentified)				1	1		
Smaller albatrosses (Thalassarche spp.)	3	1			4		
White-capped albatross	35	5	1	1	42		
Buller's albatross	2	1			3		
Grey-headed albatross	1				1		
Petrels, Prions and Shearwaters				1	1		DISCARDED BY CREW OBSERVER UNABLE TO COLLECT.
Sooty shearwater	49				49		
White-chinned petrel	68				68		
Antarctic prion	1				1		
New Zealand fur seal	1				1		
New Zealand sea lion	1		1		2		FIRST SEEN WEDGED BETWEEN THE BARS OF THE SLED.
Total protected species interactions	162	7	2	3	174		



Seabird interactions by month

FMA	Jul-08	Aug-08	Sept-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Total
1. AKE													0
2. CEE													0
3. SEC									36	4			40
4. SOE													0
5. SOU			0				2	34	18	21	2	1	78
6. SUB								48	57	37	1		143
7. CHA													0
8. CEW													0
9. AKW													0
10. KER													0
Total	0	0	0	0	0	0	2	82	111	62	3	1	261



Mammal interactions by month

FMA	Jul-08	Aug-08	Sept-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Total
1. AKE													0
2. CEE													0
3. SEC									0	0			0
4. SOE													0
5. SOU			0				0	1	0	0	0	0	1
6. SUB								1	0	1	0		2
7. CHA													0
8. CEW													0
9. AKW													0
10. KER													0
Total	0	0	0	0	0	0	0	2	0	1	0	0	3



Trawl Fisheries

Pelagic Trawl- Jack mackerel and barracouta

- Thirty four trips on 17 vessels which targeted Jack mackerel, English mackerel and barracouta
- Protected species captures were reported from 16 of these trips onboard 10 separate vessels
- 11 common dolphins were captured (about half that of the previous year)
 - 10 captures occurred on one vessel
 - 8 occurred in two events hauled at a similar time
- Fur seals were the most commonly caught species, accounting for 21 of the 52 captures
- Bird numbers observed to peak during shooting and hauling
- Offal management generally observed however some vessels were observed to discharge offal during shooting or hauling on occasion



Pelagic trawl

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE							
2. CEE							
3. SEC	384	104	27.08	4	3.85	6	5.77
4. SOE	156	58	37.18				
5. SOU	233	94	40.34	10	10.64		
6. SUB							
7. CHA	951	307	32.28	3	0.98	15	4.89
8. CEW	1,322	451	34.11			7	1.55
9. AKW	126	108	85.71			6	5.56
10. KER							
Total	3,172	1,122	35.37	17	1.52	34	3.03

*Captures only, excludes deck strikes and other non-fishing interactions



Type of interaction

Species	Caught in net	Caught on warp or door	Impact against vessel	Unknown	Total
Albatross (Unidentified)	1				1
White-capped albatross	1				1
Buller's albatross		2			2
Common diving petrel			1		1
Prions (Unidentified)				1	1
Sooty shearwater	5				5
Westland petrel	1				1
White-chinned petrel	5				5
Fairy prion	1				1
Common dolphin	11				11
New Zealand fur seal	21				21
Pilot whale	2				2
Total protected species interactions	48	2	1	1	52

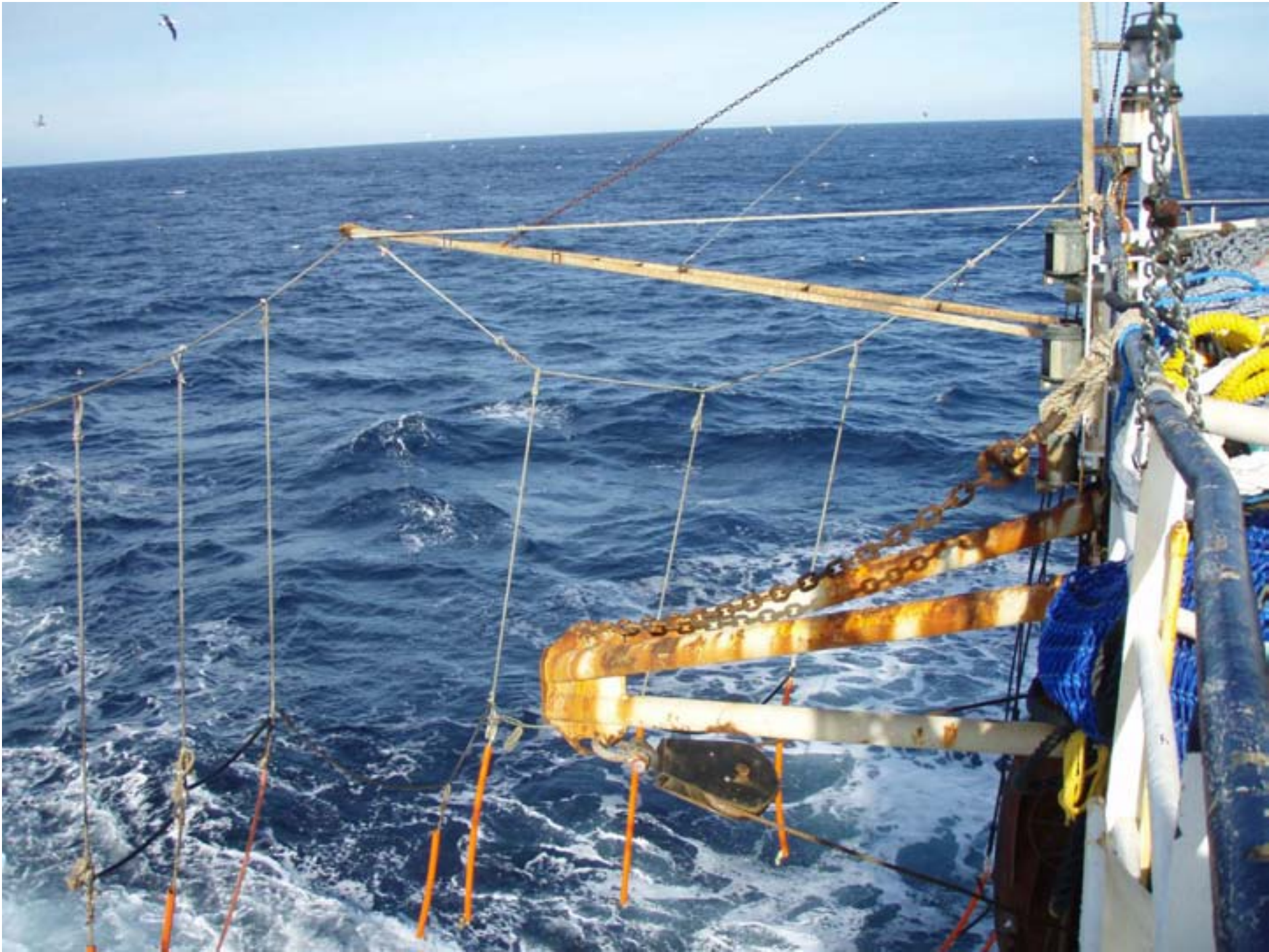




Trawl Fisheries

Oreo / orange roughy

- 23 trips were observed on nine separate vessels
- Protected species captures were reported from seven trips on four vessels (not including protected coral taxa)
- There was an even split between live releases and mortalities
- Deck strikes were the most common form of interaction
- Bird bafflers were the most common mitigation device used
- Generally fewer marine mammals sighted than in other fisheries according to observer comments
- Bird abundance around the vessels was also reported to be lower than in some other fisheries
- Some reports of offal discharge from one vessel during shooting and hauling





Deepwater trawl

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE	441	209	47.39				
2. CEE	1203	39	3.24				
3. SEC	592	190	32.09	1	0.53		
4. SOE	2980	1,277	42.85	4	0.31		
5. SOU	46	9	19.57				
6. SUB	1340	698	52.09			1	0.14
7. CHA	24	24	100.00				
8. CEW							
9. AKW	231	143	61.90				
10. KER		0					
Total	6,857	2,589	37.76	5	0.19	1	0.04

*Captures only, excludes deck strikes and other non-fishing interactions



Type of interaction

Species	Caught in net	Caught on warp or door	Impact against vessel	Unknown	Total
Albatross (Unidentified)	1			1	2
Southern royal albatross			1		1
Salvin's albatross			2		2
Chatham Island albatross		1			1
Petrel (Unidentified)	1				1
Common diving petrel	1				1
White-chinned petrel			1		1
Southern cape petrel		1			1
White-faced storm petrel			1		1
New Zealand fur seal	1				1
Total protected species interactions	4	2	5	1	12



Inshore Fisheries

Inshore trawl

- Observers achieved 634 seadays on 36 inshore trawl vessels during the January/February period 2009
- Protected species interactions were recorded on 19 vessels.
- While no mitigation is required, observers reported that mitigation devices were used on approximately 50% of trawls
- Forms of warp-deflectors were the most common type of mitigation device in use
- Highest rate of seabird capture came from SEC
- A single capture event of 31 spotted shags
- Offal management was seen to be variable between vessels; as were the quantities of offal produced









Inshore trawl

FMA	Effort Tows	Observed Tows	Coverage (%)	Seabird Captures*	Seabirds per 100 tows	Mammal Captures	Mammals per 100 tows
1. AKE	9,295	241	2.59	2	0.83	1	0.41
2. CEE	10,527						
3. SEC	12,336	880	7.13	63	7.16	2	0.23
4. SOE	1,320						
5. SOU	3,205	155	4.84	4	2.58	1	0.65
6. SUB	1,625						
7. CHA	12,996	509	3.92	13	2.55	9	1.77
8. CEW	1,873	38	2.03				
9. AKW	2,724	108	3.96				
10. KER							
Total	55,901	1,931	3.45	82	4.25	13	0.67

*Captures only, excludes deck strikes and other non-fishing interactions



Live interactions

Species	Caught in net	Impact against vessel	Other	Total	Comments relating to 'Other' capture method
Albatross (Unidentified)	1	2		3	
Smaller albatrosses			1	1	Tori Line entanglement, released by crew (Either white-capped or Salvin's)
Buller's and Pacific albatross			1	1	Tori Line entanglement, released by crew
White-capped albatross			2	2	Tori Line entanglement, released by crew
Petrel (Unidentified)	1	3		4	
Flesh-footed shearwater			1	1	Entangled in Bird baffler dropper line
Prions (Unidentified)		1		1	
Sooty shearwater	2			2	
Fairy Prion			1	1	Fairy Prion found on deck with injured leg, most likely come aboard to rest. Put back
Storm Petrel		1		1	
Green turtle	1			1	
Total protected species interactions	5	7	6	18	



Dead interactions

Species	Caught in net	Caught on warp or door	Unknown	Total
Albatross (Unidentified)		3	1	4
White-capped albatross		11		11
Salvin's albatross		10		10
Gull or tern		2		2
Sooty shearwater	10			10
Spotted shag	33			33
Bottlenose dolphin	1			1
Common dolphin	9			9
New Zealand fur seal	2			3
Total protected species interactions	56	26	1	84





Inshore Fisheries

Bottom longline- Ling, bluenose, hapuku and bass

- Three trips were observed on three separate vessels targeting ling, bluenose, hapuku and bass
- Protected species interactions were reported for one of these vessels.
- Ling was the primary target on observed sets
- Tori lines were not always used by vessels
- Observer comments indicate birds were actively feeding on offal and lost baits during hauling





Bottom longline- Ling, bluenose, hapuku and bass

FMA	Effort Lines	Observed Lines	Coverage (%)	Number of hooks observed	Seabird Captures*	Seabirds per 1000 hooks	Mammal Captures	Mammals per 1000 hooks
1. AKE	2,211	9	0.41	57,824				
2. CEE	4,225							
3. SEC	1,449	73	5.04	221,050	6	0.027		
4. SOE	2,474							
5. SOU	638							
6. SUB	316							
7. CHA	1,097							
8. CEW	419							
9. AKW	1,201							
10. KER								
Total	14,030	82	0.58	278,874	6	0.022	0	0.00

*Captures only, excludes deck strikes and other non-fishing interactions



Species	Alive	Dead	Total
Buller's albatross		4	4
Grey petrel	2		2
Total protected species interactions	2	4	6

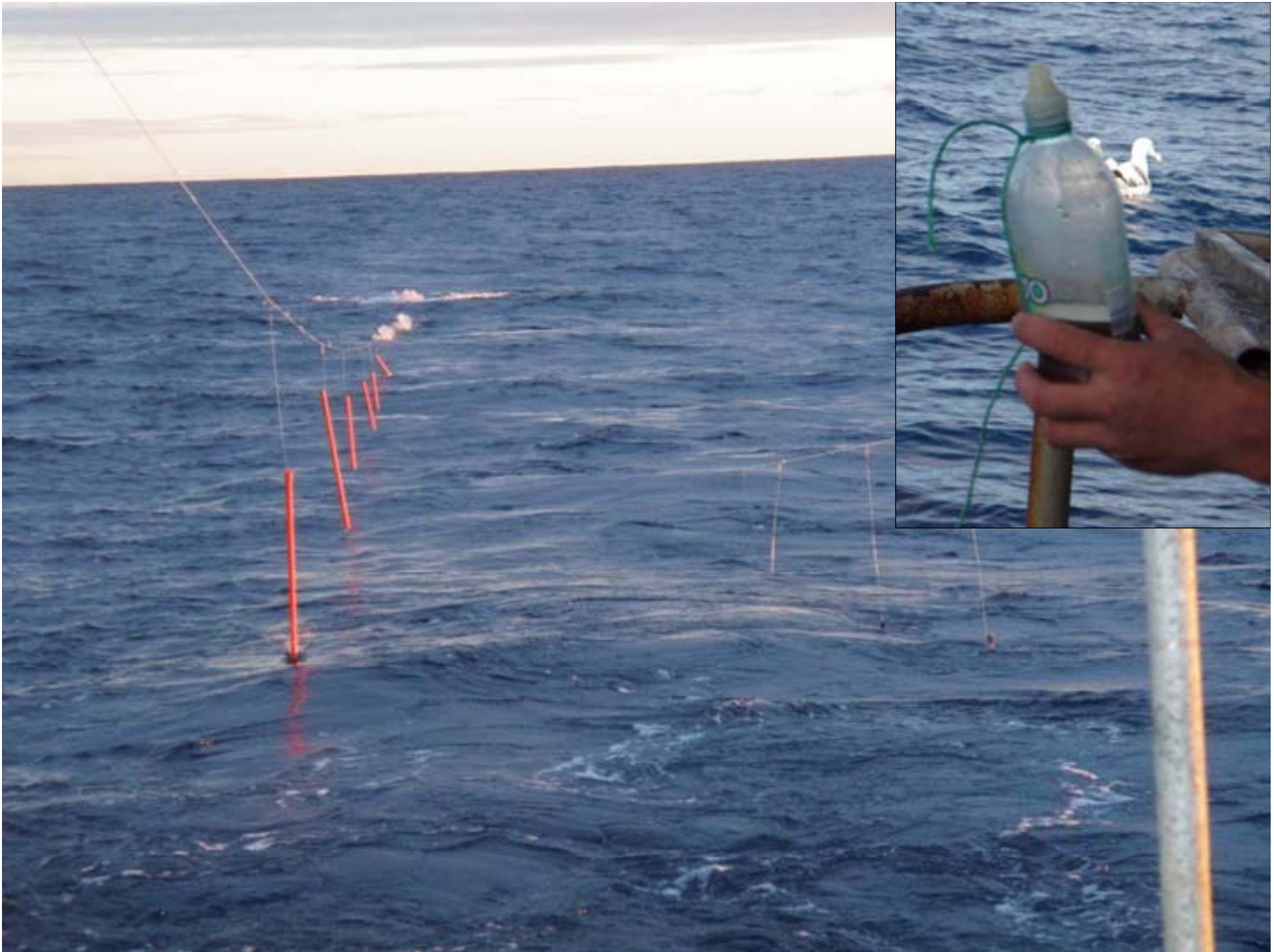
- All animals were hook captures
- Five were hooked in the wing while one was hooked in the beak



Inshore Fisheries

Bottom longline- Snapper

- Twenty inshore snapper vessels were observed resulting in a total of 252 seadays (four to 22 days per vessel)
- Mitigation techniques varied from use of line weighting to tori line and offal management.
- Tori lines were of variable construction and were not always deployed
- Black petrels and flesh-footed shearwaters were the most common birds captured
- Of the 11 black petrel captures, eight were reported from one vessel over a short period





Bottom longline- Snapper

FMA	Effort Lines	Observed Lines	Coverage (%)	Number of hooks observed	Seabird Captures*	Seabirds per 1000 hooks	Mammal Captures	Mammals per 1000 hooks
1. AKE	5,666	276	4.87	324,450	31	0.096		
2. CEE	2							
3. SEC								
4. SOE								
5. SOU								
6. SUB								
7. CHA	7							
8. CEW	14							
9. AKW	49							
10. KER								
Total	5,738	276	4.81	324,450	31	0.096	0	0.00

*Captures only, excludes deck strikes and other non-fishing interactions



Live interactions

Species	Caught on hook	Impact against vessel	Tangled in line	Other	Unknown	Total	Comments relating to 'Other' capture method
Petrels, Prions and Shearwaters			1			1	Landed on deck. Released by crew
Black petrel		2			1	3	
Common diving petrel				1		1	
Buller's shearwater	2					2	
Flesh-footed shearwater	4	3	5			12	
Black-backed gull**	1					1	
Total protected species interactions	7	5	6	1	1	20	

**Although black-backed gulls are not protected under the Wildlife Act 1953, this has been included for completeness



Dead interactions

Species	Caught on hook*	Tangled in line	Other	Total	Comments relating to 'Other' capture method
Black petrel	7	1		8	
Buller's shearwater	1			1	
Flesh-footed shearwater	4			4	
Fluttering shearwater		1		1	
Black-backed gull**	1			1	
Blue penguin			1	1	XLB dead when gaffed out of water. Very smelly. No visible injuries. Found in water, not related to fishing activity. Rotten.
Total protected species interactions	13	2	1	16	

**Although black-backed are not protected under the Wildlife Act 1953, this has been included for completeness



Inshore Fisheries

Setnet

- Seventeen observer trips undertaken on 17 vessels.
- Protected species captures were recorded on 13 of these vessels
- Mitigation devices, in the form of pingers, were used on four vessels and for only 16 of the 947 observed sets
- Observers reported that offal management was practiced by a number of vessels
- One Hector's dolphin was captured
- One White Pointer shark was captured
- The majority of bird captures resulted in live releases



Setnet

FMA	Effort Nets	Observed Nets	Coverage (%)	Length of nets observed (m)	Seabird Captures*	Seabirds per 1000m net	Mammal Captures*	Mammals per 1000m net	Protected Fish Captures*	Protected Fish per 1000m net
1. AKE	6,277									
2. CEE	1,437									
3. SEC	3,459	743	21.48	338,297	20	0.059	1	0.003		
4. SOE	13									
5. SOU	505	121	23.96	99,990	1	0.010			1	0.010
6. SUB										
7. CHA	1,182	83	7.02	99,440			1	0.010		
8. CEW	1,606									
9. AKW	7,512									
10. KER										
Total	21,991	947	4.31	537,727	21	0.039	2	0.004	1	0.002

*Captures only, excludes deck strikes and other non-fishing interactions



Live interactions

Species	Caught in net	Impact against vessel	Other	Total	Comments relating to 'Other' capture method
Albatross (Unidentified)			6	6	Bird landed on vessel- assisted off by crew member
Giant petrels (Unidentified)	1			1	
Petrel (Unidentified)			1	1	
Sooty shearwater	6			6	
Westland petrel		1		1	
White chinned petrel		1		1	
Cape petrel	6			6	
Total protected species interactions	13	2	7	22	



Dead interactions

Species	Caught in net	Impact against vessel	Other	Total
Cape petrel	2			2
Yellow-eyed penguin	5			5
Hector's dolphin	1			1
New Zealand fur seal	1			1
White pointer shark	1			1
Total protected species interactions	10	0	0	10



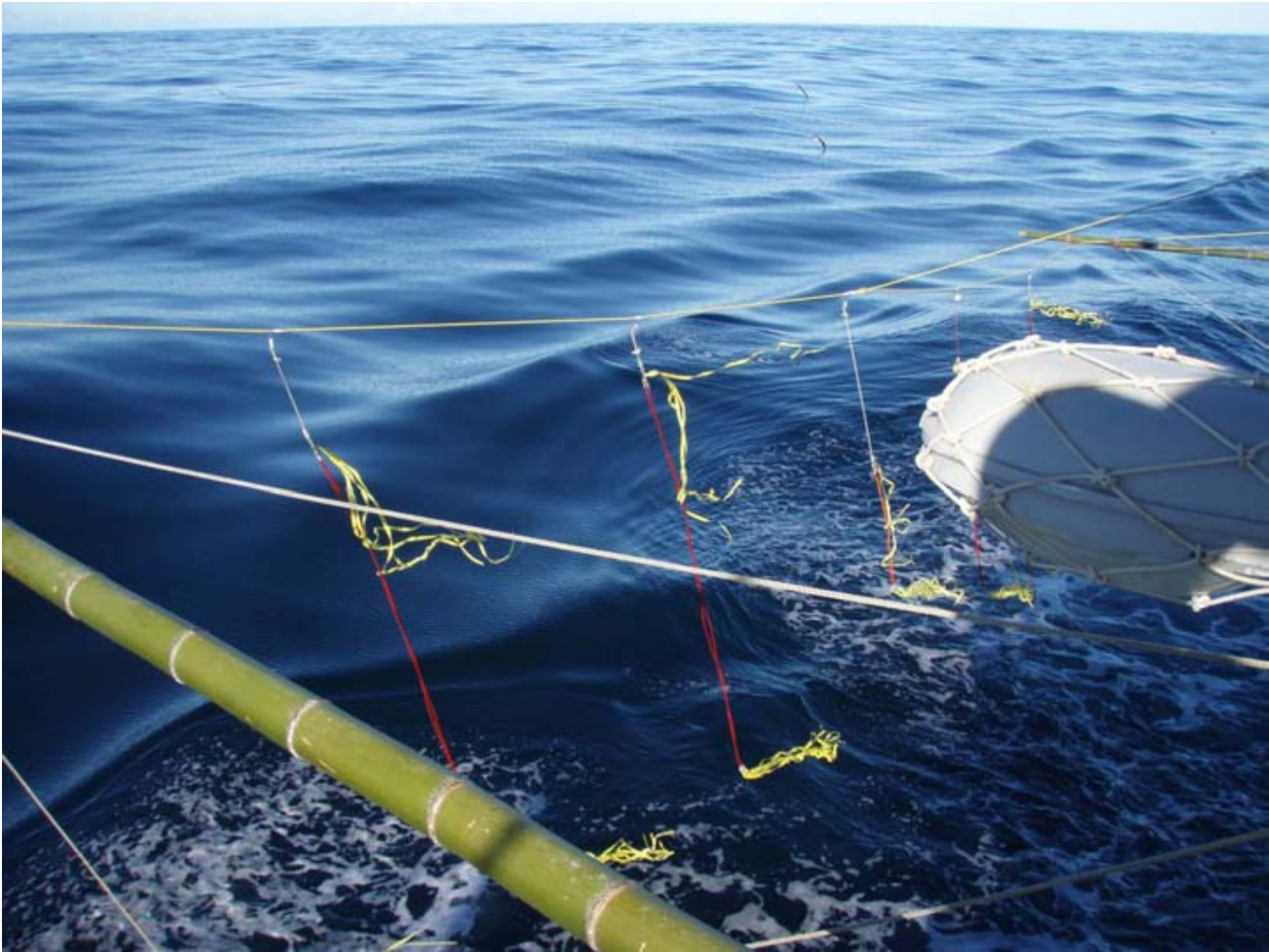




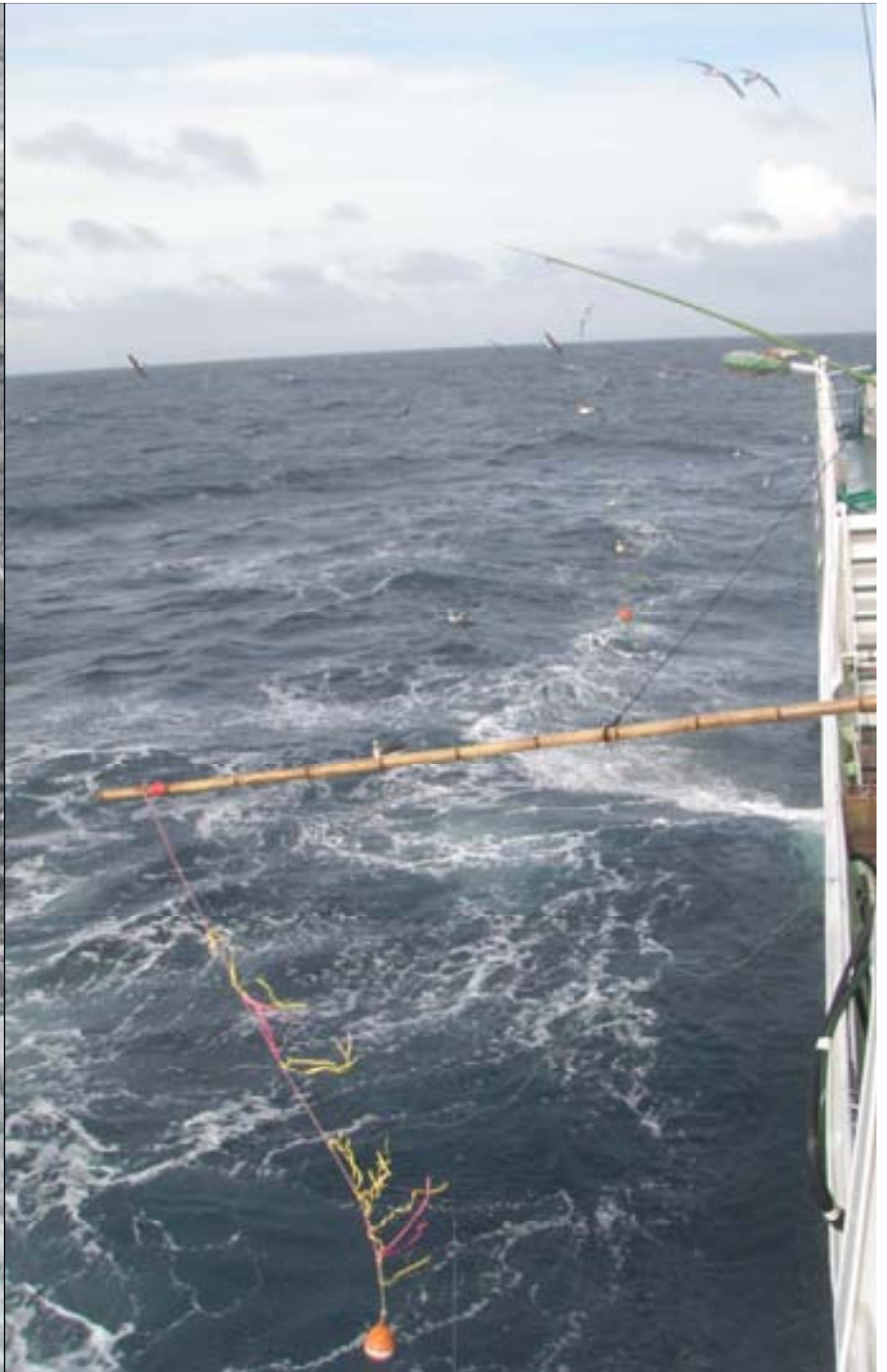
Surface Longline

Charter vessels

- All four foreign charter vessels were observed.
- 100% observer coverage
- Seabird and marine mammal captures were observed on all four vessels
- Effort relatively even between CHA and SOU
- Higher levels of bird captures in CHA
- Higher levels of mammal captures in SOU
- Vessels used between one and three tori lines, some used bristle curtains and water cannons during hauling.
- Observers identified a number of factors which could have contributed to captures, including moon phase and delays during hauling









Surface Longline- 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	1	1	100.00	2,841				
2. CEE								
3. SEC								
4. SOE								
5. SOU	94	98	104.26	281,157	27	0.096	3	0.011
6. SUB								
7. CHA	103	110	106.80	314,385	6	0.019	8	0.025
8. CEW								
9. AKW	1	1	100.00	2,699				
10. KER								
Total	199	210	105.53	601,082	33	0.055	11	0.018

*Captures only, excludes deck strikes and other non-fishing interactions





Species	Alive	Dead	Decomposing	Total
Black-browed albatross (Unidentified)	1			1
Buller's albatross	12	14	1	27
New Zealand white capped albatross		2		2
Wandering albatross (Unidentified)	1			1
White-chinned petrel		2		2
New Zealand fur seal	10		1	11
Total protected species interactions	24	18	2	44



Seabird interactions by month

FMA	Jul-08	Aug-08	Sept-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Total
1. AKE												0	0
2. CEE													0
3. SEC													0
4. SOE													0
5. SOU										1	25	1	27
6. SUB													0
7. CHA											2	4	6
8. CEW													0
9. AKW												0	0
10. KER													0
Total	0	0	0	0	0	0	0	0	0	1	27	5	33



Mammal interactions by month

FMA	Jul-08	Aug-08	Sept-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Total
1. AKE												0	0
2. CEE													0
3. SEC													0
4. SOE													0
5. SOU										0	2	1	3
6. SUB													0
7. CHA											4	4	8
8. CEW													0
9. AKW												0	0
10. KER													0
Total	0	0	0	0	0	0	0	0	0	0	6	5	11



Surface Longline

Domestic tuna and swordfish

- Seventeen trips were undertaken on 12 vessels
- Protected species captures were reported from 10 of the twelve vessels
- Two leatherback turtles were captured within 24 hours of each other
- One bottle nosed whale captured
- Bird captures dominated by albatross species
- Overall fewer seabirds caught than the previous year. More mammals and reptiles caught than the previous year
- Observer comments indicate a large range in the offal management practices employed
- Tori lines operated by almost all vessels
- Unused and discarded baits observed to be an attractant to seabirds



Surface Longline- 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	1,073	94	8.76	99,955	9	0.090	2	0.020		
2. CEE	815	41	5.03	37,140	3	0.081	1	0.027		
3. SEC										
4. SOE										
5. SOU	2									
6. SUB										
7. CHA	92	5	5.43	6,200	2	0.323	1	0.161		
8. CEW	5									
9. AKW	202	11	5.45	12,550			2	0.159	2	0.159
10. KER	5	1	20.00	1,000						
Total	2,194	152	6.93	156,845	14	0.089	6	0.038	2	0.013

*Captures only, excludes deck strikes and other non-fishing interactions



Species	Alive	Dead	Total
Antipodean albatross		2	2
Northern royal albatross		1	1
Black-browed albatross (Unidentified)	1		1
Buller's albatross	1	2	3
Campbell albatross		1	1
New Zealand white capped albatross		1	1
Salvin's albatross		1	1
Mid-sized Petrels & Shearwaters		1	1
Black petrel		2	2
Westland petrel		1	1
New Zealand fur seal	5		5
Southern bottlenose whale	1		1
Leatherback turtle	2		2
Total protected species interactions	10	12	22



Seabird interactions by month

FMA	Jul-08	Aug-08	Sept-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Total
1. AKE	0	0		4	3		0	1			0	1	9
2. CEE	2										0	1	3
3. SEC													0
4. SOE													0
5. SOU													0
6. SUB													0
7. CHA												2	2
8. CEW													0
9. AKW		0								0	0		0
10. KER										0			0
Total	2	0	0	4	3	0	0	1	0	0	0	4	14



Mammal interactions by month

FMA	Jul-08	Aug-08	Sept-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Total
1. AKE	2	0		0	0		0	0			0	0	2
2. CEE	0										0	1	1
3. SEC													0
4. SOE													0
5. SOU													0
6. SUB													0
7. CHA												1	1
8. CEW													0
9. AKW		2								0	0		2
10. KER										0			0
Total	2	2	0	0	0	0	0	0	0	0	0	2	6



Bottom Longline

Deepsea ling

- Two separate fishing trips observed on the same vessel
- 30% coverage of the over the course of the year
- Coverage achieved on two areas; SOE and SUB
- Two seabirds captures, no mammal captures
 - Capture rate lower than any previous year
- Tori line observed to be used at all times
- Deck hose used to deter birds during hauling
- Offal and unused bait discards were closely managed



Bottom Longline- Deepsea ling

FMA	Effort Tows	Observed Tows	Coverage (%)	Number of hooks observed	Seabird Captures*	Seabirds per 1000 hooks	Mammal Captures	Mammals per 1000 hooks
1. AKE								
2. CEE	170		0.00					
3. SEC	32		0.00					
4. SOE	134	103	76.87	1,064,700	0		0	
5. SOU	220		0.00					
6. SUB	284	146	51.41	1,400,700	2	0.001	0	
7. CHA								
8. CEW								
9. AKW								
10. KER								
Total	840	249	29.64	2,465,400	2	0.001	0	0.000

*Captures only, excludes deck strikes and other non-fishing interactions



Deepsea ling bottom longline captures

Species	Alive	Dead	Total
Grey petrel		1	1
Erect-crested penguin	1		1
Total protected species interactions	1	1	2

- Both animals were hook captures
- Both occurred in April 09



