

Protected Species Bycatch Liaison Coordination

CSP Project MIT2017-01

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Introduction

- Up to date knowledge of mitigation needed to ensure bycatch minimised
- Liaison Officers part of Govt's approach to promoting adoption of optimal practices

CSP project MIT2017-01 objectives:

- To provide Liaison Officers to the relevant inshore and surface longline fishing fleets, to assist those fleets in reducing their protected species bycatch, and,
- To coordinate the Liaison Officer roles with wider efforts targeted at protected species bycatch reduction in relevant fisheries to achieve the greatest reduction in bycatch possible.





The Programme

- FMA 1 bottom longline (SNA, BNS)
- Surface longline (NZ-wide)
- Coastal trawl
- Preliminary set net
- Others opportunistically

- Coordination



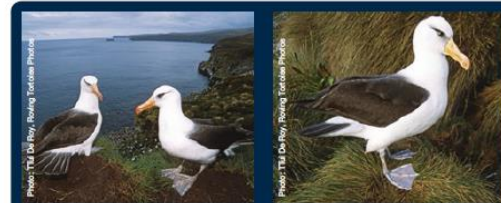
Photo: FNZ/DOC



- Initiation workshop
- Fleet identification
- Preparation of information for fishers
- Triggers finalised
- Mitigation resources identified, purchased
- Information management system created

Campbell albatross

Thalassarche impavida



Head: White. Black eyebrows. Irises are honey-coloured.

Body: Medium-sized albatross with a white body.

Wings: Dark upperwings. Underwings white with black margins.

Feet: Bluish white.

Bill: Yellow with a red tip.

Juvenile features: Dark bill with blackish tip. Grey plumage on lower neck. Eye colour initially dark brown and therefore easily confused with juvenile black-browed albatross.

NZ Conservation Status:
Nationally Vulnerable

MPI Species Code: XCM
MPI Group Code: XAL

Feeding and range

Eats: Mainly fish, squid and crustaceans.

Range: The species disperses widely around the Southern Ocean and into the temperate seas of the South Atlantic, Indian, and South Pacific oceans.

Interesting facts


Long considered a New Zealand subspecies of the black-browed albatross, the two species are now known to breed in mixed colonies on Campbell Island. While some hybrids have been found, the birds appear to prefer to mate with their own species.



Triggers: 2017/18

Purpose: Prompt skippers to stop – think – act on reducing future bycatch risks, and contact Liaison Officer

FMA1 bottom longline	Surface longline	Otago coastal trawl
<ul style="list-style-type: none">• Any black petrel, flesh-footed shearwater, or turtle;• In a 24-hour period, 3 or more large seabirds, or, 5 or more small seabirds, or, 2 or more fur seals• In a 7-day period, 10 or more seabirds of any type• During the 2017/18 year, one great albatross was added as a trigger across all methods.		<ul style="list-style-type: none">• Any penguin, dolphin, sea lion, leopard seal, great white or basking shark;• In a 24-hour period, 3 or more large seabirds, or, 5 or more small seabirds, or, 2 or more fur seals;• In a 7-day period, 10 or more seabirds of any type, or, 5 or more fur seals.

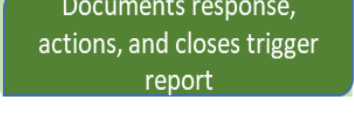
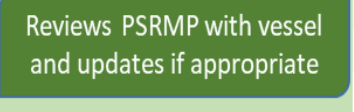
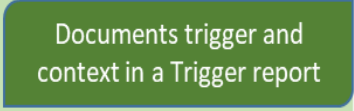
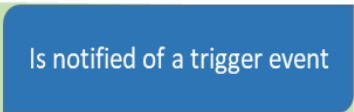
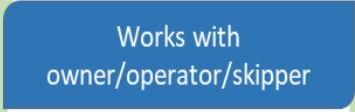
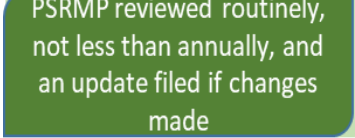
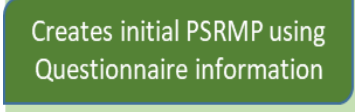
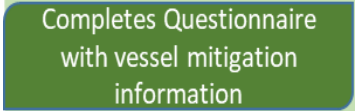
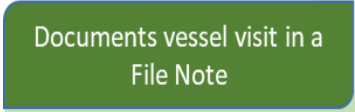
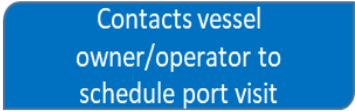
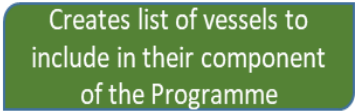


Triggers: 2018/19

One set of triggers for all methods nationwide:

All fishing methods and regions

- Any great albatross, penguin, dolphin, sea lion, leopard seal, basking shark, turtle, black petrel or flesh-footed shearwater
 - In any 24-hr period, 3 large or 5 small seabirds, or 2 fur seals
 - In any 7-day period, 10 seabirds of any type, or 5 fur seals
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Results: Surface longline



Photo: MPI/DOC



Results: Surface longline

	Number of PSRMPs created or updated	Single tori line in use	Tori line spares onboard	Night sets only	Day sets	Snood weighting	Thawed bait used for setting
2017/18	34	34	34	33	13	19	34
2018/19	26	26	26	17	8	15	26



Results: Surface longline

	Fish waste retained during setting	Old bait retained through out haul	Fish waste batch-discharged during hauling	Discharge during hauling based on perceived risk	Fish waste batch-discharged from off-side	Haul mitigation device	Laser	Side-shooting	Line shooter	Deck lights minimised during setting
2017/18	29	26	22	1	2	1	2	1	4	33
2018/19	21	14	20		3		1		4	24



Results: Surface longline

Year	Weight	Type	In use on # vessels	Weight distance (m) from hook when known (# vessels)	Comments
2017 /18	60 g	Lumo leads	7	3, 3.5 (2)	In place on 50% of snoods on one vessel.
		Swivels	2	3 (1)	
		Unknown	5	1.2 (1), 2 (2), 3 (1)	
	Mixed	40 g and 60 g	1		
Unknown mass		Swivel	1		
		Lumo	1		In place on 50% of snoods
		Lumo leads and hook pods	1		Each device in place on 50% of snoods



Results: Surface longline

Year	Weight	Type	In use on # vessels	Weight distance (m) from hook when known (# vessels)	Comments
2018 /19	60 g	Lumo leads	11	0 – 2 (2), 3.5 (1)	In place on 30% of snoods on one vessel. Lumos and swivels used on one vessel, with relative proportions unknown.
		Swivels	5	1.8 (2), 2 (1), 3 (1), 3.5 (1)	Lumos and swivels used on one vessel, with relative proportions unknown.
		Unknown	1	2 (1)	
	30 – 40 g	Lumo leads	3	0 – 2 (1)	
		Lead	1	0 (1)	In place on 30% of snoods on one vessel.
		Unknown	1	0 (1)	In place on 80% of snoods on one vessel.
Unknown mass		Lumo lead	1		In place on 50% of snoods on one vessel.



Results: Surface longline

	Single tori line in use on all sets	Tori line spares onboard	Night sets	Snood weighting	Thawed bait used for setting	Fish waste retained during setting	Old bait retained thru haul	Offal retained during hauling	Fish waste batch-discharged during hauling	Deck lights minimised during setting
2017/18	12/13	11/11	10/11	1/1	12/12	11/12	5/10	2/4	2/4	12/13
2018/19	6/7	6/6	5/6	3/3*	7/7	5/6	1/3	1/1	1/6	6/7

*Snood weighting was improved compared to measure stated in PSRMP



Results: Bottom longline





Results: Bottom longline

	Number of PSRMPs created or updated	Single tori line in use	Multiple tori lines may be used	Tori line spares onboard	Night sets only	Night and day sets	Discharge of fish waste (incl. during hauling) based on perceived risk	Fish waste retained 1 h + before and during setting	Fish waste retained thru haul	Fish waste batch-discharged during hauling	Fish waste discharged away from hauling bay during hauling
2017/18	37	37	6	1	2	13	37	26	25	6	9
2018/19	28	28	2	28	3	19	27	28	17	3	9



Results: Bottom longline

	Live fish discards released alive ASAP	Baited hooks not left at/near surface during haul breaks	Increased weighting carried/used during periods perceived as higher risk*	Haul mitigation device deployed at times deemed high risk	Stop setting (temporarily or abandon set) if measures in place have not addressed capture risk	Set weights and/or buoy lines and/or longlines slack	Deck lights managed/minimised during setting
2017/18		37	37	4	36	5	35
2018/19	4	25	15	3	15	1	27



Results: Bottom longline

Single tori line in use on all sets	Multiple tori lines may be used	Night sets only	Fish waste retained 1 h or more before setting	Fish waste retained during setting	Fish waste retained thru haul	Baited hooks not left at/near surface during haul breaks	Increased weighting carried/used during periods perceived as higher risk	Deck lights managed/ minimised during setting
8/10	1/1	1/1	8/8	6/6	6/8	3/3	3/3	1/1

Results: Trawl



Photo: J. Pierre, CC BY-SA 3.0



Results: Trawl

	Number of PSRMPs created or updated	Warp strike mitigation on approach	No fish waste discharged during shooting	No fish waste discharged during hauling	Fish waste batch-discharged during towing	Fish waste discharged when gear is on vessel	Fish waste retained or batch discharged during tow
2017/18	12	8	12	12	1	3	6
2018/19	67	44	55	54	41	7	4



Results: Trawl

	Surface time of gear minimised	Net cleaned prior to mending or shooting	No shooting around large numbers of marine mammals	No splices within 2 m of water surface when towing or splices are smooth	Live fish returned to the sea immediately / while still alive
2017/18					
2018/19	48	40	36	12	39



Results: Trawl

Device	In use on # vessels	
	2017/18	2018/19
Boom(s) or baffler arm(s) with or without a curtain or streamers	1	13
Float(s) or buoy(s) on one or both warps	2	17
Road cone		1
Road cone or net float	1	
Fish bins	1	2
Road cone or fish bin		1
Steel cone or two fish bins	1	
Modified float or other material (e.g. wood) attached to warp	1	
Steel cone or roller	1	1
Stabiliser arm(s)		3
Twin tori lines		1
Bright yellow warps	1	2
Unspecified device		3

Triggers reported



Results: Triggers

	Year	Trigger type								Obs. aboard?		
		Black petrel	Flesh-footed shearwater	Great albatross	Large seabirds	Small seabirds	Penguin	Turtle	Fur seals	Dolphin	Y	N
BLL	2017/18	4	8								7	5
	2018/19	3	5								5	3
SLL	2017/18	8	2		11			3	1		24	1
	2018/19	4	5	3	2			1	1		15	1
Trawl	2017/18											
	2018/19						1			1	1	1



Mitigation resources

- BLL: 2017
 - 12 tension releases
 - 3 tori line + pole setups
 - 2 tori lines
 - 1 tori line backbone
- 2018
 - Tori streamer line material
- SLL:
 - Tori line construction materials to all vessels
 - Turtle dehookers
- Trawl:
 - N/A given unknown efficacy of measures





Stakeholder engagement

- MPI, FNZ, FINZ, DOC
- Licensed Fish Receivers
- Fishing companies
- Commercial Stakeholder Organisations
- Southern Seabird Solutions
- Seabird Advisory Group
- Black Petrel Working Group
- FNZ Highly Migratory Species Workshop



Conclusions and Recommendations

Programme context and structure

- Maintain focus on continuous improvement
- Support with audits, policy, and collective momentum
- Streamline regional approach for cost-efficiency

Documentation

- Continue to grow consistency across programme
- Develop programme manual

Resources

- Continue to build resource base (e.g. guides, fact sheets)

Evaluation

- Evaluate annually, to ensure objectives are being met and opportunities for improvement are picked up



Acknowledgements

- CSP
- Liaison Officers
 - J. Cleal, D. Goad, G. Murman, G. Parker, B. Leslie
- FINZ
- FNZ
- Industry folks
 - LFRs, companies, CSOs
- Fishers

