

DRAFT

LIAISON PROGRAMME ANNUAL REPORT

MIT2021-01 (*2021-22 Fishing Year*)



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Glossary

BLL	- Bottom Longline	MPI	- Ministry for Primary Industries
CSP	- Conservation Services Programme	NPOA	- National Plan of Action
DOC	- Department of Conservation	PS	- Purse Seine
DS	- Danish Seine	PSI	- Protected Species Interaction
DWG	- Deepwater Group Ltd.	PSRMP	- Protected Species Risk Management Plan
FINZ	- Fisheries Inshore New Zealand	SLL	- Surface Longline
FMA	- Fisheries Management Area	SN	- Set Net
FNZ	- Fisheries New Zealand	TMP	- Threat Management Plan
HMS	- Highly Migratory Species	TR	- Trawl
LO	- Liaison Officer		

Purpose

This Liaison Programme Annual Report describes the progress that has been made towards delivering actions set out in the [2021-22 CSP Annual Plan](#) during the 2021-22 fishing year (01 October 2021 – 30 September 2022). It also provides a summary of the inshore and highly migratory species (HMS) fleets' adherence to Protected Species Risk Management Plans (PSRMPs) via observer audits and discusses how plans align with current best-practice mitigation advice. For more detail, please see the appendices for the Liaison Programme project description (Appendix 1), and Liaison Programme goals and objectives (Appendix 2).

Background

In order to effectively reduce the risk of interactions with protected species, it is important for vessels to be using best practice mitigation and to follow steps laid out by both regulatory and non-regulatory measures. With the support of Fisheries Inshore New Zealand (FINZ), the Conservation Services Programme (CSP) Protected Species Liaison Project aims to increase uptake of best practice mitigation for inshore and HMS commercial fishing vessels. This is achieved by building one-on-one relationships, providing advice, and educating fishers on protected species information.

The Liaison Programme began in 2014-15 (MIT2014-03) with a focus on surface and bottom longliners. Over the years the programme has expanded to include inshore trawl, set net, and purse seine fleets, with opportunistic engagement in dredging, jig and Danish seine (Table 1). Annual reports and research summaries for previous years can be found on the [DOC-CSP webpage](#).

Table 1: Progression of the Protected Species Liaison Programme and events influential to its operations.

2013-14	Liaison work trialled in the snapper longline fleet around the Hauraki Gulf.
2014-15	(MIT2014-03) Liaison work in SLL and snapper and bluenose BLL fleets (FMA1). Work focuses on the development of vessel-specific risk management plans. Team comprised of two Liaison Officers.
2015-16	(MIT2015-01) Liaison work expands to cover more SLL and BLL in FMA1 and SLL off East Coast North Island and West Coast South Island. Team comprised of two Liaison Officers and a Coordinator.
2016-17	(MIT2015-01) Liaison work continues for SLL and BLL fleets in FMA1 and SLL off East Coast North Island and West Coast South Island. Liaison database and Portal are created. Method-specific mitigation folders and SLL Operational Procedures are developed with FINZ. Team comprised of two Liaison Officers and a Coordinator.
2017-18	(MIT2017-01) Liaison work expands to other protected species in addition to seabirds. Liaison work also expands to cover nationwide SLL, more FMA1 BLL, and coastal trawl off Otago. The Liaison Programme starts receiving PSRMP audits from Observer Services. The Liaison database and Portal system is updated. Coastal trawl Operational Procedures are developed with FINZ. Team comprised of four Liaison Officers and a Coordinator.

2018-19	(MIT2017-01) Liaison work expands to cover coastal trawl and set net in the North Island and other parts of the South Island. SLL reaches 100% coverage. Regional approach to Liaison Officer roles begins. Programme manual is created to facilitate stakeholder and participant understanding of the scope and approach of the Liaison Programme. BLL and coastal Set Net Operational Procedures are developed with FINZ. Team comprised of five Liaison Officers and a Coordinator.
2019-20	(MIT2017-01) Liaison work expands to cover more BLL, coastal trawl and set net, however COVID-19 limits the number of new vessels engaged. A complete list of active inshore and HMS vessels is established. Team comprised of three Liaison Officers and a Coordinator. Observer PSI form amended to include whether a vessel was adhering to its PSRMP at the time of each protected species interaction.
<i>October 2019</i>	Electronic reporting becomes mandatory for the entire commercial fishing fleet and is rolled out in stages during 2019.
<i>May 2020</i>	National Plan of Action Seabirds 2020 released alongside a set of Mitigation Standards for SLL, BLL (autoline), BLL (hand-bait), trawl (<28m), trawl (>28m), and trawl (scampi)(published on the MPI webpage here).
2020-21	(MIT2020-02) Liaison work continues to expand and cover more BLL, coastal trawl and set net. LOs start to align PSRMPs to Mitigation Standards. FNZ starts to send the DOC Liaison Programme weekly trigger reports. Team comprised of five Liaison Officers and a Coordinator.
<i>October 2020</i>	Hector's and Māui dolphin Threat Management Plan 2020 measures take effect.
<i>December 2020</i>	FNZ quarterly reporting on commercial self-reported bycatch goes live.
<i>April 2021</i>	Seabird Mitigation Standards for set net finalised.
<i>September 2021</i>	Observer PSRMP Audit forms updated to align with NPOA – Seabirds 2020 Mitigation Standards
2021-22	(MIT2021-01) Liaison work expands to include purse seine and harbour netters. LOs continue to align PSRMPs to Mitigation Standards. Team comprised of five Liaison Officers and a Coordinator.
<i>December 2021</i>	Reporting PSRMP and mitigation use in electronic reporting becomes mandatory.
2022-23	(MIT2021-01)
<i>November 2022</i>	South Island Hector's Dolphin Bycatch Reduction Plan published.

A fundamental component of the Liaison Programme is the deployment of Liaison Officers. Their role (Figure 1) is to support and educate fishers on recommended mitigation strategies and develop vessel-specific Protected Species Risk Management Plans (PSRMPs). LOs also provide a vital interface between skippers, government, and researchers. The programme's Liaison Coordinator manages liaison activities, organises and provides mitigation materials, manages data from LO interactions with

fishers, and ensures there is follow-up with vessel operators, especially in regard to trigger point events and observer audits.

During this reporting period, the Liaison Programme had five Liaison Officers: N. Hollands (Northland, Leigh, Coromandel and Wellington), K. Jacob (set net vessels in Northland, Auckland and the Coromandel), B. Leslie (Auckland, Bay of Plenty, Napier and Gisborne), J. Cleal (top of South Island down to Lyttleton as well as Greymouth), and G. Parker (lower South Island from Timaru down to Bluff).

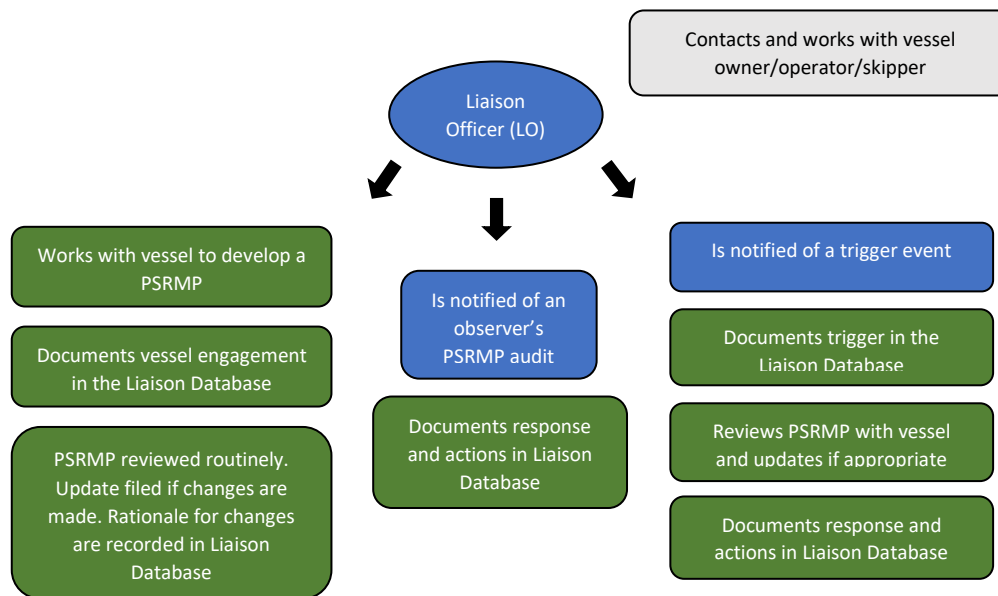


Figure 1: Workflow for Liaison Officers showing documentation completed. Green indicates a stored record.

Inter-agency collaboration is critical to the success of the Liaison Programme. Regulatory compliance checks by Fisheries Officers and non-regulatory auditing of PSRMPs by FNZ Fisheries Observers verify the steps that the vessel is taking to meet mitigation measures and serves to highlight areas for improvement. Additionally, the notification of trigger points (notable protected species captures) from fishers and MPI help the Liaison Programme and its LOs work through potential improvements in fishing practices. Inter-agency information flow and process maps will be updated for the coming year and reflected in the Liaison Programme manual.

The [National Plan of Action Seabirds 2020](#) (NPOA Seabirds) has a vision that *New Zealanders work towards zero fishing-related seabird mortalities*, and outlines a suite of Mitigation Standards that meet and go beyond the minimum regulatory requirements for seabird bycatch mitigation. The Mitigation Standards have been implemented for each relevant fishing method and are to be reviewed annually and presented to the Seabird Advisory Group (SAG). The Liaison Programme plays a central role in the implementation of these standards through the development of PSRMPs on each vessel. PSRMPs reflect how vessels demonstrate the use of vessel-specific best practice mitigation, and includes actions to reduce or eliminate captures of other protected species taxa (e.g. marine mammals, turtles, sharks and rays) as relevant to the fishery. Specific performance measures relevant to the Liaison Programme are outlined in Table 2. Progress on all the NPOA Seabirds 2020 performance measures is

detailed in the Seabird Annual Report. The NPOA implementation plan and organisational roles can be found in supporting documents on the [FNZ Seabirds webpage](#).

Table 2: NPOA Seabirds 2020 performance measures that the Liaison Programme directly contributes towards and reports on via the Seabird Annual Report. These fall under Goal 1, Objective 1: Ensure all New Zealand commercial fishers are using practices that best avoid the risk of seabird bycatch, enabled by appropriate regulations.

	Performance measure	Target
1	Proportion of each relevant fishing fleet with vessel-specific protected species risk management plans for seabird capture mitigation	100%
2	Proportion of vessel-specific protected species risk management plans that meet the Mitigation Standards and regulations for the relevant fishery	100%
3	Rate of adherence to vessel-specific protected species risk management plans (based on available monitoring data)	100%

The [South Island Bycatch Reduction Plan](#) (BRP) is a suite of regulatory and voluntary measures designed to achieve the fisheries objectives of the [Hector’s and Māui Dolphin Threat Management Plan \(TMP\)](#) and support fishers to reduce Hector’s dolphin bycatch towards zero. The Protected Species Liaison Programme is incorporated in the BRP’s escalation of Hector’s dolphin capture responses (Figure 2). Regular reporting on the progress of the BRP will be done through the South Island Hector’s Dolphin Forum. Further information on this work and the Liaison Programme’s role will be addressed in the 2022-23 Liaison Programme Annual Report.

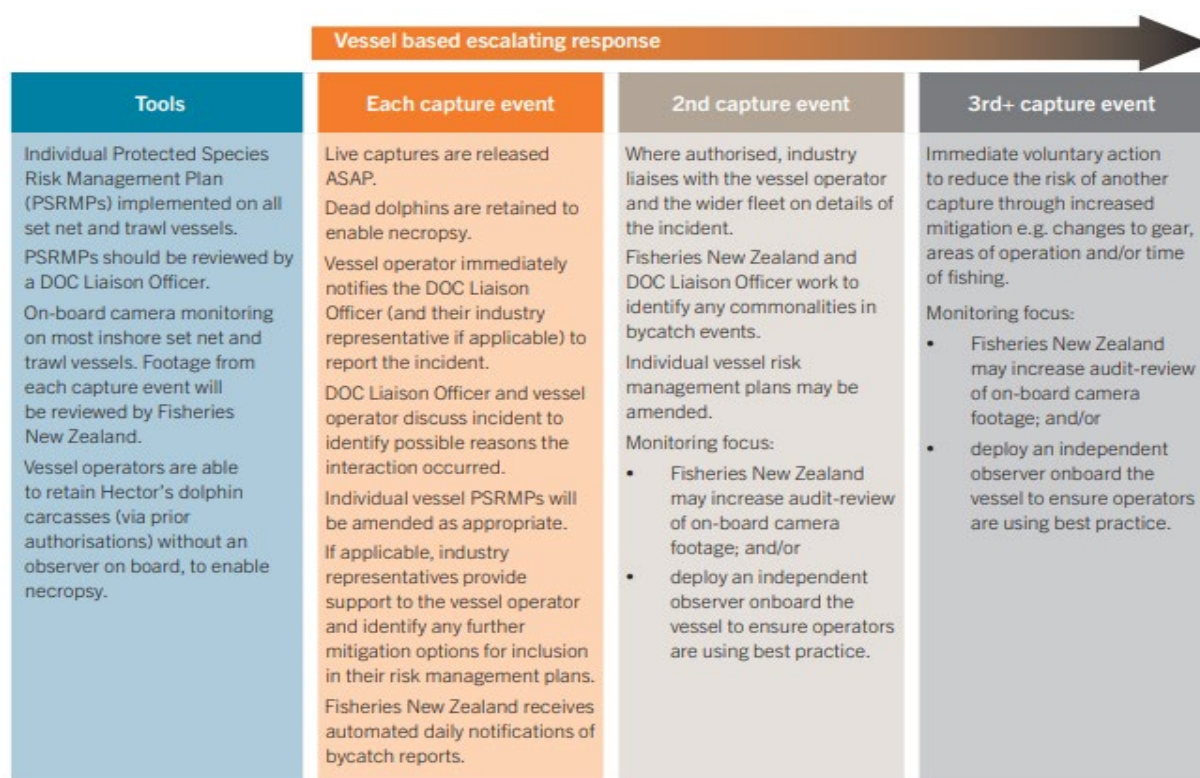


Figure 2: Summary of the standard and escalating responses (in a rolling 12-month period) that would apply to a vessel operator in the event of a Hector’s dolphin capture, as documented in the South Island Bycatch Reduction Plan.

Lastly, work is still underway to develop an improved database for the Liaison Programme. At the time of writing this report, work is currently sitting with the Solution's Architect at Fisheries New Zealand. The completion of the liaison database will enable detailed and automated reporting, allow for more efficient data processing, and will create the ability to measure the overall success of the Liaison Programme on a finer scale. The shared platform database will also improve cross-agency transparency and allow for better collaborative management.

Programme Summary: 2021-22 Fishing Year

1. Protected Species Risk Management Plans (PSRMPs)

In the 2021-22 fishing year (01 October 2021 - 30 September 2022) the Liaison Programme reviewed 190 PSRMPs and developed 26 new PSRMPs for inshore and HMS vessels (Table 3). Vessels within scope of the DOC Liaison Programme work were identified using parameters collaboratively established with the FNZ data management team (RDM). These criteria consider fishing method, fishing area (Appendix 3), target species and vessel length. For the 2021-22 fishing year, vessels were included in the DOC Liaison Programme if they fell within at least one of the following categories: (1) surface longline fishing effort; (2) bottom longline fishing effort, excluding autoliners and those targeting ling in FMA 2-8; (3) trawl fishing effort if 28m and under in length, and excluding those targeting scampi, or those targeting hoki in Statistical Areas 034, 035, 036, 016 and 017; (4) set net fishing effort; and (5) purse seine fishing effort. Danish Seine vessels are only contacted opportunistically at this stage.

Table 3: Number of Protected Species Risk Management Plans (PSRMPs) developed and level of coverage in terms of active fishing vessel numbers between 1 October 2021- 30 September 2022.

	PSRMPs Reviewed	PSRMPs Updated	PSRMPs New	Active vessels with PSRMPs	Active vessels in fleet	Percentage of fleet with PSRMPs
SLL	27	16	2	25	25	100%
BLL	75	47	9	74	80	93%
Trawl	74	54	3	108	111	97%
Set Net (≤7m)	0	0	5	5	124	4%
Set Net (>7m)	13	9	4	29	52	56%
Purse Seine	0	0	3	4	5	80%
Danish Seine*	1	1	0	5	13	38%
Total fleet						62%

**Danish Seine vessels are only contacted opportunistically at this stage.*

PSRMP coverage relative to inshore and HMS fishing effort over time is displayed in Figure 3, and a detailed breakdown of percentages is tabulated in Appendix 4. Occasionally, there are some vessels that have inshore effort, but tend to carry out the majority of their effort in deepwater; these vessels are covered by the Deepwater Group Liaison Programme.

Overall, the Liaison Programme has increased coverage in the inshore and HMS fleets despite COVID-19 travel restrictions in northern regions early in the fishing year. COVID continues to impact some vessel engagement due to crew being infected. The majority of the remaining vessels to be covered in the BLL and trawl fleets are small part-time vessels that only fish a handful of times throughout the year.

This year, the Liaison Programme allocated resources towards finalising PSRMPs in the purse seine fleet and made efforts to reach out to vessels fishing outside the standard Liaison Officer regions. Following delays from 2020-21, the Liaison Programme also began work engaging with the harbour set net fleet this year. These vessels are under 7m and tend to operate in relatively low risk areas. The majority of these vessels also tend to have low fishing activity and only operate part-time.

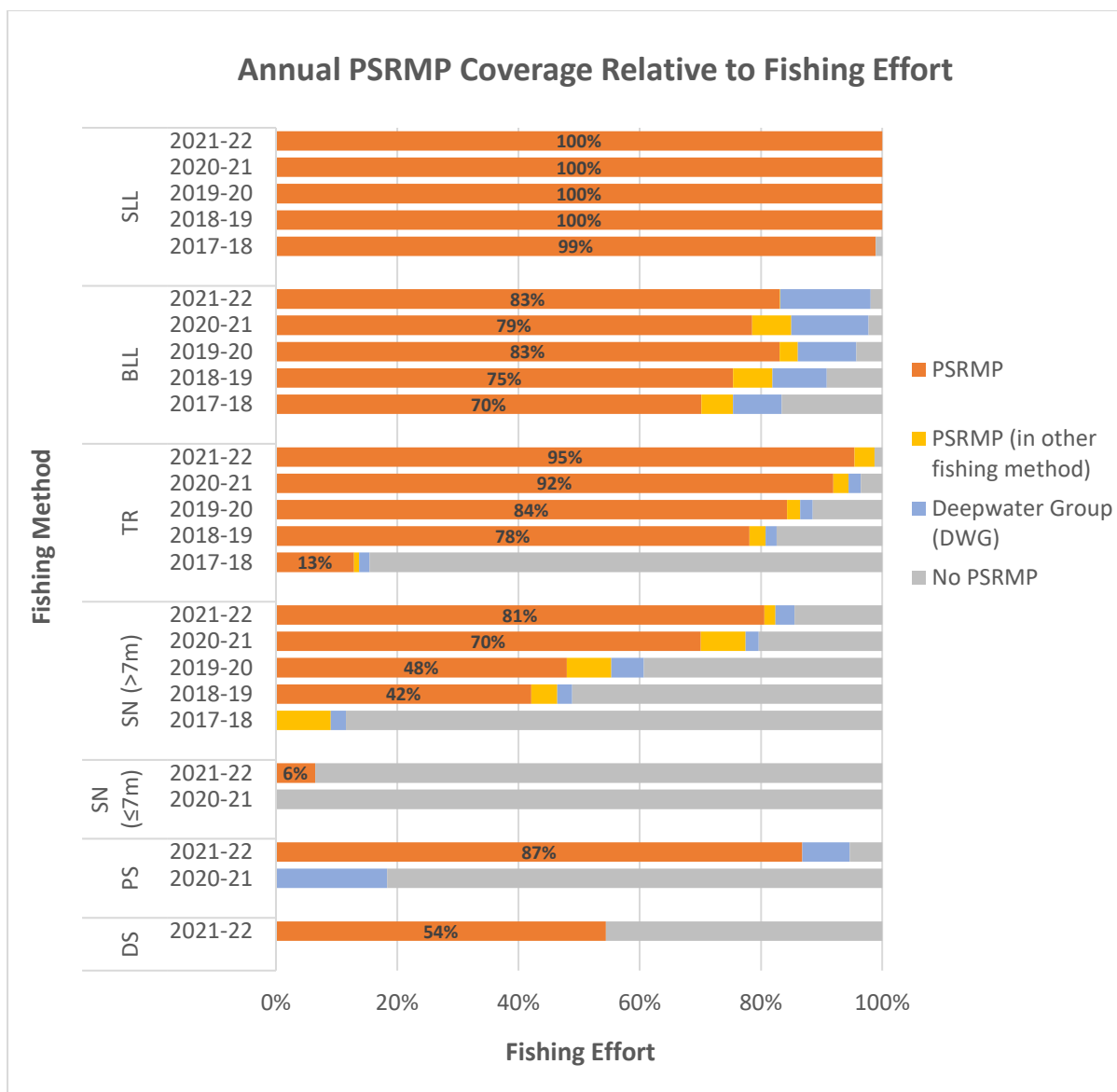


Figure 3: PSRMP coverage for inshore and HMS fishing effort (1 October 2017- 30 September 2022). Fishing effort is measured by net length for set net, and by fishing event for all other fishing methods. A detailed breakdown of PSRMP coverage is tabulated in Appendix 4. Data supplied by FNZ RDM.

2. Alignment with Seabird Mitigation Standards

In the 2021-22 fishing year, the Liaison Programme continued work with fishers to align PSRMPs to the NPOA - Seabirds Mitigation Standards. All PSRMPs are developed to be in line with regulations, but the Mitigation Standards go beyond the minimum regulatory requirements for seabird bycatch mitigation. Table 3 shows the number of new, reviewed and updated PSRMPs for the 2021-22 fishing year. At the end of the fishing year all of the most recent PSRMPs for active vessels were assessed for alignment against the Mitigation Standards (Table 4).

As with last year, regardless of fishing method, most PSRMPs could still be improved by clarifying procedures to minimise the presence of fish waste on deck (Mitigation Standard 4.2). Even though fish waste management in terms of discards is clearly explained in the plans, procedures to keep the decks clear of fish waste (to reduce the risk of deck landings or impacts) is not always addressed. This

is likely just an administrative issue that will be resolved with an update to the PSRMP templates, which will remind Liaison Officers to cover this Mitigation Standard with the operator during their vessel visit. Some plans also describe a stop-setting threshold for bird interactions (i.e. “when x happens we'll stop setting until y”) and it would be useful to explore a similar vessel-specific stop-setting threshold across all plans.

Table 4: Alignment of PSRMPs with the Mitigation Standards in the 2021-22 fishing year. Alignment trend shows the level of change since the previous fishing year. Mitigation Standards with a dash (-) indicate those that could not be assessed due to the nature of PSRMPs. Some Mitigation Standards in the table have had their wording paraphrased for simplicity.

	Yes (%)	No (%)	Unclear (%)	Alignment trend (%)
<u>Surface Longline Mitigation Standards</u> (n= 25)				
MS 1.1 Fish waste is not discharged from the vessel immediately before or during setting	100	0	0	(↑4)
MS 1.2 Bait and fish waste is held on board during hauling, when possible; any discharge must be batched and meet mandatory requirements	100	0	0	0
MS 2.1 Effective tori line throughout setting (unless hook-shielding devices used)	100	0	0	0
MS 2.2 Either hook-shielding devices used OR hooks set at night and weighted in accordance with ACAP minimum standards	12	72	16	(↓13)
MS 2.3 Bait is sufficiently thawed	80	0	20	(↑1)
MS 3.1 Hook surface time is minimised	64	16	20	(↑18)
MS 3.2 Seabirds are actively deterred from approaching hooks during hauling	52	44	4	(↑20)
MS 3.3 Seabirds caught and released alive are handled to maximise their chance of survival	68	0	32	(↑22)
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	100	0	0	0
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	20	0	80	(↑13)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	68	0	32	(↑22)
<u>Bottom Longline Mitigation Standards (hand-baiting)</u> (n= 54)				
MS 1.1 Fish waste is not discharged from the vessel immediately before or during setting	100	0	0	0
MS 1.2 Bait and fish waste is held on board during hauling, when possible; any discharge must be batched and meet mandatory requirements	100	0	0	(↑9)
MS 2.1 A tori line effective at deterring birds from hooks is deployed throughout setting	98	0	2*	0
MS 2.2 Hooks set during high-risk periods protected by the tori line until hooks 10m deep. Sink rate test records kept.	-	-	-	-
MS 2.3 Hooks set outside of high-risk periods protected by the tori line until hooks 5m deep. Sink rate test records kept.	-	-	-	-
MS 2.4 Bait is sufficiently thawed	94	0	6	(↑27)
MS 3.1 Hook surface time is minimised	100	0	0	(↑7)
MS 3.2 Seabirds are actively deterred from hooks during hauling	92	4	4	(↑16)
MS 3.3 Seabirds caught and released alive are handled to maximise their chance of survival	100	0	0	(↑4)
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	100	0	0	(↑2)

	Yes (%)	No (%)	Unclear (%)	Alignment trend (%)
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	17	0	83	(↓3)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	100	0	0	(↑4)
<u>Under 28m Trawl Mitigation Standards</u>				(n= 107)
MS 1.1 Fish waste is not discharged from the vessel immediately before or during shooting or hauling	99	1	0	(↑1)
MS 1.2 Fish waste discharged whilst the net is being towed is batch discharged	99	1	0	(↑3)
MS 2.1 Warp protection is located at the warp on the discharge side	79	21	0	(↑8)
MS 2.2 Condition of trawl warps does not increase the risk of seabird captures	73	14	13	(↑18)
MS 3.1 All practicable stickers are removed from the net before each shot	98	0	2	(↑3)
MS 3.2 Time gear is at the surface is minimised	97	0	3	(↑2)
MS 3.3 Gear maintenance and repairs is conducted in a way to minimise risk to seabirds	71	20	9	(↑9)
MS 3.4 Live birds caught in the net are handled in ways to maximise survival	96	0	4	(↑4)
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	80	4	16	(↑32)
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	8	0	92	(↑4)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	96	0	4	(↑4)
<u>Set Net Mitigation Standards</u>				(n= 29)
MS 1.1 Fish waste is not discharged from the vessel immediately before or during setting	100	0	0	0
MS 1.2 Any fish waste discharged during hauling must be batch discharged	100	0	0	0
MS 2.1 Nets are not set in the vicinity of known or observed bird colonies or known foraging areas	97	0	3	(↑8)
MS 2.2 Nets are not set in an area when there is active bird activity, such as feeding/diving	17	59	24	(↓4)
MS 3.1 All practicable stickers are removed from the net before each shot	100	0	0	0
MS 3.2 Time gear is at the surface is minimised	100	0	0	0
MS 3.3 Nets are not stalled ¹	86	0	14	(↓3)
MS 3.4 Gear maintenance and repairs is conducted in a way to minimise risk to seabirds	86	10	3	(↑2)
MS 3.5 Live birds caught in the net are handled in ways to maximise survival	93	7	0	(↓7)
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	90	3	7	(↑11)
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	17	0	83	(↑17)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	93	7	0	(↓7)

*Tori line is recommended but not required for this vessel as it is under 7m.

¹ As defined by the Fisheries (Commercial Fishing) Regulations 2001, stalling is the process of setting a net so that fish enclosed or entangled by the net are left stranded by the falling tide or are enclosed or entangled so that, at any stage of the tide, there is an insufficient depth of water at either end of the net to enable the fish to pass from the waters above the net to the waters below the net.

2.1 Surface Longline Alignment to Mitigation Standards

For surface longliners, PSRMPs increased in alignment for all but one Mitigation Standard (i.e. *“Hooks are either protected by a hook shielding device or are set at night and are weighted in accordance with ACAP minimum standards”*), which decreased by 13%.

Currently, SLL PSRMPs are well aligned with the Mitigation Standards in terms of fish waste management during hauling and setting, effective tori line usage, and light management. The majority of SLL plans (80%) also state the use of thawed bait. As indicated above, only some of the plans (12%) meet the Mitigation Standard of using hook-shielding devices or three out of three mitigation (i.e. tori line, night setting, and line weighting). This is largely due to line weighting that does not meet recommendations (above and beyond regulations), and periodic day setting. The majority of plans state that they ‘mostly’ night set. In general, improvements to SLL plans could include: (1) improved weighting regimes and clarification of how far the weight is from the hook, (2) clarification around appropriate protected species handling and release procedures, (3) implementation of hauling mitigation, (4) explicit ways for *how* a vessel plans to keep hooks below the surface during a haul break, and (5) clarification on if/when a vessel plans to hold and discharge after a haul *and* if/when they plan to discharge during a haul in batches.

There are a few opportunities to improve uptake of Mitigation Standard 2.2 (i.e. *Hooks are either protected by a hook shielding device or are set at night and are weighted in accordance with ACAP minimum standards*):

1. Most fishers are familiar with and are in support of line weighting. The only potential implementation barriers would be for cost, time, and consideration of safety. It would be beneficial to trial the practicability of different types of weighted hooks (e.g. heavy hooks or hooks with weighted swivels), which could help fishers meet the recommended weighting standards described by ACAP.
2. As per fisher feedback, new hook-shielding devices that have a 10m release depth are now available upon request as supplies allow. A key focus is now about supporting the uptake of these devices in the SLL fleet.

2.2 Bottom Longline Alignment to Mitigation Standards

For bottom longliners, PSRMPs increased in alignment for all but one Mitigation Standard (i.e. *Seabirds are not induced to land on the deck due to the presence of fish waste*), which decreased by 3%. Vessel alignment to Mitigation Standards 2.2 and 2.3, which describe the depth of the hook at the end of the tori line inside and outside high-risk periods, are more appropriately assessed through sink rate record sheets. The majority of PSRMPs (92%) state that sink rate tests will be conducted, and results will be kept on board.

Currently, BLL PSRMPs are well aligned with the Mitigation Standards in terms of fish waste management during hauling and setting, effective tori line usage, use of sufficiently thawed bait, keeping hooks at the surface for the least amount of time possible, hauling mitigation (device or behaviour), light management, and appropriate protected species handling and release procedures. In general, some improvements to BLL plans could include: (1) use of hauling mitigation devices in addition to hauling mitigation behaviours (2) explicit ways for *how* a vessel plans to keep hooks below

the surface during a haul break, (3) clarification on if/when a vessel plans to hold and discharge after a haul and if/when they plan to discharge during a haul in batches.

The start of the fishing year was spent getting fishers accustomed with sink rate tests and requirements set out in the Bottom Longline Circular (which came into force October 2021).

In addition to line weighting, set mainline tension, which can be reduced by decreasing setting speed, can influence hook sink rate during setting. Some plans describe reducing setting speed in high-risk periods, but it is not something that is currently captured by the Mitigation Standards.

2.3 Trawl Alignment to Mitigation Standards

For <28m trawlers, PSRMPs increased in alignment for all Mitigation Standards, particularly with regards to light management (which increased by 32%), and condition of trawl warps (which increased by 18%).

Currently, trawl PSRMPs are well aligned with the Mitigation Standards in terms of fish waste management during hauling and setting, sticker removal before shooting, keeping gear at the surface for the least amount of time possible, and appropriate protected species handling and release procedures. The majority of trawl plans also state the use of a seabird scaring device for the warp closest to the discharge side of the vessel (79%), that the condition of the trawl warp does not increase risk to seabirds (73%), that gear maintenance and repairs are conducted in a way to minimise risk to seabirds (71%), and that light is managed (80%), but there are several plans where this information is still needed. In general, some improvements to trawl plans could include: (1) clarification that the seabird scaring devices for the warps are deployed in a way that does not increase the risk to seabirds and that spare parts are on board, and (2) further plan updates are made against the most recent PSRMP template.

Most of the vessels that do not have a seabird scaring device on the warp is because they believe their discharge management does not attract birds to the warp-strike area. Currently, there are a variety of seabird scaring devices used to mitigate warp strike (e.g. bafflers and fish cases), but they can range in quality and effectiveness, which is currently not quantified. The deployment period is often variable as well, with some only being used during high-risk periods or if/when offal is batch discharged into the path of warps.

2.4 Set net Alignment to Mitigation Standards

For set netters, PSRMPs increased in alignment for Mitigation Standards 2.1, 3.4, 4.1, and 4.2, and decreased in alignment for Mitigation Standards 2.2, 3.3, 3.5, and 4.3. Most of these changes were slight with the exception of 4.2 (*i.e. Seabirds are not induced to land on the deck due to the presence of fish waste*), which increased by 17%.

Currently, set net PSRMPs are well aligned with the Mitigation Standards in terms of fish waste management before and during setting and hauling, nets not being set in the vicinity of known or observed bird colonies or known foraging areas, sticker removal before shooting, keeping gear at the surface for the least amount of time possible, light management, and appropriate protected species handling and release procedures. The majority of set net plans also state that nets are not stalled (86%), and that gear maintenance and repairs are conducted in a way to minimise risk to seabirds (86%), but there are a handful of plans where this information is still needed. The only improvement

noted for set net plans was clarification around the vessel not setting in an area when there is high bird activity (i.e. feeding and diving).

3. Fisheries Observer Audits

Fisheries Observer audits of vessel practices are essential for monitoring a vessel’s progress and determining adherence to their non-regulatory Protected Species Risk Management Plan. See the MPI website for the [2021-22 Observer sea days plan and delivery](#). Due to ongoing problems with health and safety and watchkeeping on inshore and HMS vessels, observer placement has been much lower than in previous years. In the 2021-22 fishing year, a total of 60 PSRMP audits were completed by Observer Services and forwarded on to the DOC Liaison Programme for follow-up. This is down from the 100 audits completed in the previous year. Of the audits completed, there were 3 surface longline audits, 8 bottom longline audits, 38 trawl audits, and 11 set net audits. Overall, 58% of observed vessels (up from 55% in 2020-21) were confirmed to be following every aspect of their PSRMP (Table 6). This is in spite of four audits that were returned to the Liaison Programme “Not Fully Assessed” (i.e. observer audits with “Unknown” fields that could not verify full adherence to the PSRMP).

Table 6: Summary of adherence to PSRMPs assessed via FNZ observer audits by fishing method.

	PSRMP Audits Received	Adherent	Non-adherent	Not Fully Assessed*	% of audits showing adherence to PSRMP
SLL					
2018-19	18	9	9	-	50%
2019-20	13	4	9	-	31%
2020-21	14	4	10	0	29%
2021-22	3	0	3	0	0%
BLL					
2018-19	10	2	8	-	20%
2019-20	27	10	17	-	37%
2020-21	19	10	4	5	53%
2021-22	8	1	7	0	13%
Trawl					
2018-19	3	2	1	-	67%
2019-20	38	23	15	-	61%
2020-21	46	29	13	4	63%
2021-22	38	30	6	2	79%
SN (>7m)					
2019-20	6	6	0	-	100%
2020-21	21	12	3	6	57%
2021-22	11	4	5	2	36%

* From the 2020-21 fishing year onwards, results will identify when an observer audit cannot be fully assessed due to “Unknown” fields. These audits cannot confirm if full adherence to a PSRMP has taken place.

Areas of adherence have been broken down into six categories:

- 1. Documentation** Includes keeping a copy of their PSRMP, Operational Procedures, or 10 Golden Rules on board and being familiar with their contents. Also includes keeping sink rate tests and information on exclusion areas is on hand, where applicable.
- 2. Discharge management** Includes used bait and fish waste discharge procedures. Also includes clearing the net of 'stickers', where applicable.
- 3. Bycatch mitigation devices** Includes proper management/maintenance of protected species bycatch mitigation devices (e.g. tori line, warp deflector, etc.) so they are fit for purpose.
- 4. Bycatch mitigation procedures** Includes action-based protected species bycatch mitigation procedures (e.g. light management, time net is at surface, avoiding areas/times with high protected species activity, etc.).
- 5. Reporting** Includes proper reporting of protected species captures to FNZ and the Liaison Programme.
- 6. Handling or release** Includes safe handling and release of live protected species captures.

Historically, primary adherence issues have revolved around offal management and bycatch mitigation devices (Table 5). Adherence trends in individual fishing methods have been variable due to low observer coverage/completed audits, and more time is needed to identify a clear pattern.

Table 5: Summary of non-adherence to PSRMPs identified by FNZ observer audits over time. Percentages are representative of total audits received for that fishing year.

	2018-19	2019-20	2020-21	2021-22
1. Documentation	3%	17%	4%	5%
2. Discharge management	29%	20%	14%	17%
3. Bycatch mitigation devices	42%	17%	18%	19%
4. Bycatch mitigation procedures	19%	12%	4%	10%
5. Reporting	0%	1%	2%	3%
6. Handling and release	0%	4%	0%	2%

In the 2021-22 fishing year there were various forms of non-adherence across the fishing methods (Figure 4). The following is a breakdown of successful adherence as well as issues of non-adherence within each fishing fleet. Additionally, there are some areas that were not able to be fully assessed because of observer uncertainty. This is fed back to Observer Services to improve observer training and ensure that forms are completely filled out in the future.

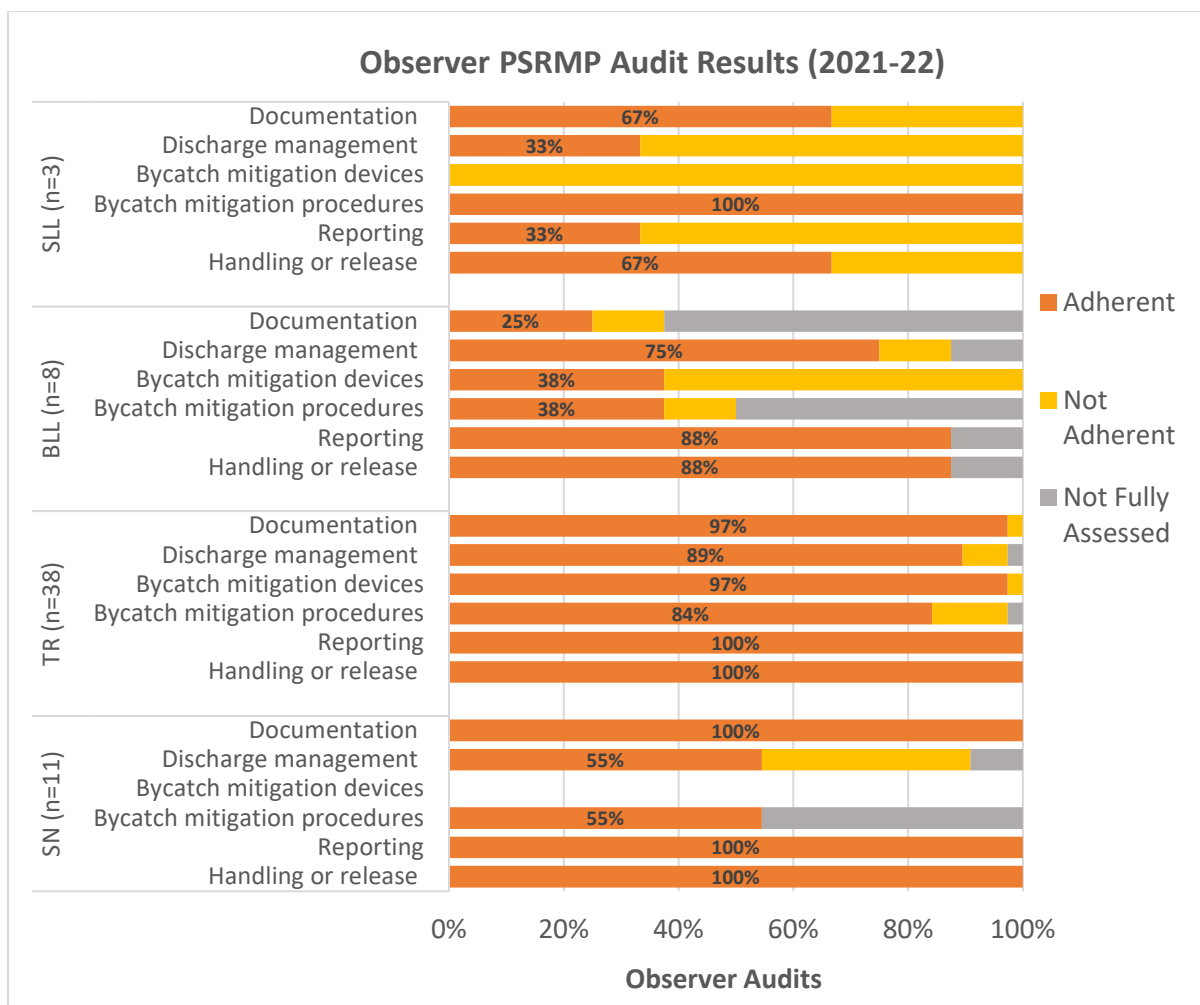


Figure 4: Results of Protected Species Risk Management Plan (PSRMP) observer audits in the 2021-22 fishing year. Caution should be expressed when drawing conclusions across the fleet, where sample sizes are low.

3.1 Surface Longline Audits

With a sample size of three observer audits, it is important to express caution when drawing far-reaching conclusions from the following results. Overall, SLL observer audits (n=3) were found to have 100% adherence in bycatch mitigation procedures. This means that vessels were confirmed to have managed lighting in a way that avoids attracting or disorientating seabirds, kept hooks below the surface if there were any breaks in hauling, and avoided using frozen bait.

There were ‘unknowns’ recorded for one audit regarding the observer not being able to identify whether the skipper and crew were familiar with the contents of the PSRMP, SLL Operational Procedures and 10 Golden Rules. However, this was due to the documents not being readily available and accessible. The skipper claimed the documents were in a drawer but did not assist the observer in trying to locate them.

In addition to non-adherence in the “Documentation” category, issues were also detected regarding discharge management, bycatch mitigation devices, reporting, and handling and release. Two audits recorded that used baits and fish waste were not held or batch discharged at intervals on the opposite side during hauling. One observer noted that although most bait was held during hauling, when

holding bins of bait became full or the vessel was busy with other things, some bait was discarded on the same side as hauling. In terms of bycatch mitigation devices, one audit recorded that a vessel continued to set the rest of their line despite having the tori line torn off after getting tangled in the mainline. Tori line specifications were also an issue with one audit recording that the tori line could not be adjusted over the hook-bearing line, and another audit recording that the aerial extent was estimated to be about 50m not the minimum 75m in regulations. Two audits had issues with reporting, one where the skipper told the observer he forgot and then reported, and another where there were apparent issues with the digital recording software. Any issues regarding non-compliance are passed on to Fisheries Compliance following the observer's trip debrief. Finally, there was one issue of handling and release, which was due to the vessel releasing a fur seal with 10-13m of mono still attached to the hook in its mouth. The DOC Handling and Release Guide specifies that if a hook cannot be removed, the line should be cut as close to the hook as possible.

Two of the three audits had large seabird capture events.

None of the surface longline vessels audited were using hook-shielding devices.

3.2 Bottom Longline Audits

Overall, BLL observer audits (n=8) weren't found to have 100% adherence in any of the broad subject categories. However, one of the observer audits was incomplete, and it is possible that 100% adherence in the reporting, and handling or release could have been verified. Excluding the 'Unknown', this means that all vessels were confirmed to electronically report all protected species captures to MPI, and handled and released any live protected species captures according to the DOC Handling and Release Guide.

Most observer 'unknowns' were recorded in the documentation and bycatch mitigation procedures categories. Regarding documentation, one audit could not confirm if the skipper and crew were familiar with the contents of the Operational Procedures, another three could not confirm if the skipper and crew were familiar with the 10 Golden Rules, and another two could not confirm if the vessel kept sink rate test records. Regarding bycatch mitigation procedures, four audits could not confirm whether sink rate tests were conducted or if hooks were kept below the surface during any breaks in hauling, and one audit could not confirm whether the use of frozen bait was avoided or light was managed in a way that avoided disorienting seabirds. Three of the eight PSRMP audits were incorrectly filled out on Deepwater forms, which explains a large proportion of these 'Unknown' fields. There have been discussions with Observer Services to make sure this mistake doesn't happen in the future. Outside of this, observer comments did not provide insight on why they could not confirm particular aspects of the audit.

Non-adherence was detected regarding documentation, discharge management, bycatch mitigation devices and bycatch mitigation procedures. One audit found that the vessel was not keeping sink rate test records. One audit found that fish waste management did not follow the PSRMP and that baits and fish waste/offal was not held or batch discharged at intervals opposite to the side the vessel was hauling. The observer noted that large amounts of offal sometimes entered the water next to the line hauling area when processing fish. Regarding bycatch mitigation devices, five audits found that tori

lines were not able to be adjusted to cover the hook-bearing line to suit varying conditions. Three of those same audits also recorded that the estimated aerial extent was under 50m (i.e. 25m, 45m and 45m). Although regulations now state that 50m aerial extent only needs to be achieved in high-risk periods, depending on the gear setup, it is unlikely that hooks will reach a 5m depth at the end of a tori line (as per regulations) if the aerial extent is less than 50m. Finally, there was only one audit with an issue regarding bycatch mitigation practices, and this was due to a lack of light management that avoided attracting or disorienting seabirds.

3.3 Trawl Audits

Overall, trawl observer audits (n=38) were found to have 100% adherence in reporting, and handling or release. This means that all vessels were confirmed to electronically report all protected species captures to MPI, and handled any live protected species captures according to the DOC Handling and Release Guide.

Only two audits contained 'unknowns' and these were regarding bycatch mitigation procedures. Both audits could not confirm if warp maintenance was adequate, and one could not confirm if lights (not required for operational safety purposes) were reduced. Additionally, one audit had conflicting information where it stated that fish waste management followed the PSRMP, but that fish waste wasn't batched at intervals if discharged during the tow. There were no observer comments that clarified the issue, and so adherence to planned discard management could not be confirmed for this audit.

Non-adherence was detected regarding documentation, discharge management, bycatch mitigation devices and bycatch mitigation procedures. One audit found that the vessel was not familiar with the contents of their PSRMP, 10 Golden Rules, or Operational Procedures. Regarding discharge management, two audits had issues where fish waste was not managed as per the PSRMP, fish waste was not held on board immediately before or during shooting or hauling and fish waste was not batch discharged at intervals if discharged during the tow. Two audits also detected issues with clearing the net of all practicable stickers prior to shooting. One observer noted that discard flaps were regularly left open with unwanted catch being regularly discarded before and during shooting and while hauling. The skipper claimed his crew was still green and only ever unwound the net enough to clear half of the stickers. On a different audit, the observer noted that small amounts of offal were occasionally discarded during setting, with the majority being skate carcasses. Regarding non-adherence for bycatch mitigation devices, this is due to an audit where the warp deflector was never deployed, despite the PSRMP saying that it would be deployed while towing when there is fish waste discharge. The observer noted that the device was kept on board, below deck. Regarding bycatch mitigation procedures, four audits identified that the net was kept at/near the surface for an unexpected or unnecessary amount of time, and one audit identified that all lights (not required for operational and safety purposes) were not reduced. Audits did not provide further comment on how or why this was.

3.4 Set net Audits

Overall, set net observer audits (n=11) were found to have 100% adherence in documentation, reporting, and handling and release. Furthermore, if observer audits didn't have 'unknowns' for some

of the fields, 100% adherence to bycatch mitigation procedures may have also been verified. This means that all vessels were confirmed to be carrying PSRMPs and were familiar with their contents, were electronically reporting all protected species captures to MPI, handled any live protected species captures according to the DOC Handling and Release Guide, and (excluding the unknowns) demonstrated awareness of high-risk areas in deciding where to fish (i.e. away from seabird colonies and foraging grounds), did not keep the net at the surface for an unexpected or unnecessary amount of time, and managed lighting in a way that avoided attracting or disorienting seabirds.

All observer 'unknowns' were recorded in the discharge management and bycatch mitigation procedures categories. Two audits could not confirm if vessels held fish waste on board immediately before and during setting, and held or batch discharged at intervals opposite to the side the vessel while hauling. These same audits could not confirm if lighting practices were managed in a way that avoided attracting or disorienting seabirds, but this is likely because they were filled out on an old version of the audit form. Four other audits could not confirm if the skipper demonstrated awareness of high-risk areas in deciding where to fish (i.e. away from seabird colonies and foraging grounds), but no observer comments clarified the reasons for this uncertainty.

Non-adherence was only identified for discharge management. One audit found that the vessel did not clear the net of all practicable stickers prior to shooting. Another audit found that during hauling, fish waste/offal was not held or batch discharged at intervals opposite the hauling side. The observer noted that small amounts of offal were discarded during hauling, but most of the processing was conducted after the net was hauled. Two other audits found that fish waste management did not follow the PSRMP and noted that small amounts of offal were sometimes discarded continuously.

4. Trigger Point Events

Trigger point events have been developed as a risk management tool to prompt vessel operators to re-evaluate their mitigation strategies if catching high-risk protected species. Specifics on what constitutes a trigger point are discussed and agreed to by government and stakeholder groups. The trigger points followed up by Liaison Officers in the 2021-22 fishing year are listed below.

Any 24-hour period

(Alive or Dead) Any great albatross, penguin, dolphin, sea lion or basking shark

(Alive or Dead) First turtle of the fishing year (Oct- Sept)

(Alive or Dead) 3 large (e.g. albatross/mollymawk, giant petrel, gannet), or 5 small (e.g. petrel/shearwater) seabirds, or 2 fur seals

(Dead) Any black petrel or flesh-footed shearwater

Any 7-day period

(Alive or Dead) 10 protected seabirds of any type, or 3 turtles, or 5 fur seals

The Liaison Programme is notified of trigger events by a combination of fisher self-reports via MPI, observer notifications via Observer Services and fishers directly contacting a LO. We have been receiving a weekly extract of all self-reported trigger points from FNZ since December 2020, and recently (November 2022) started receiving a daily report for all reported protected species captures.

Of the approximately 376 vessels active and within scope of the Liaison Programme in the 2021-22 fishing year, 76 (20%) submitted electronic NFPS Catch Reports. Of the 594 electronic NFPS Capture Reports by these vessels (and keeping in mind that 21% of those records were for benthic material), 18% were logged and responded to by Liaison Officers due to their categorisation as a trigger event.

This translates to 61 trigger events (104 NFPS Catch Reports) from 28 different vessels in the 2021-22 fishing year (Table 7). This is a substantial decrease from the 135 trigger events from 47 vessels last year. Overall, 50% of observed triggers were proactively reported to their LO (up from 47% last year), but only 36% of unobserved triggers were proactively reported to their LO (down from 43% last year).

Table 7: Number of trigger events by fishing method from 1 October 2021- 30 September 2022. Triggers can include seabirds, reptiles, mammals, and some protected fish species.

	Observed		Unobserved		Totals	
	Electronically reported	Fisher proactively reported to LO	Electronically reported	Fisher proactively reported to LO	Trigger events	Vessels with trigger events
SLL	9	67%	18	17%	27	8
BLL	2	50%	20	55%	22	10
TR	1	100%	4	25%	5	4
SN	4	0%	3	33%	7	5
Total	16	50%	45	36%	61	27

4.1 Species and Response Breakdown

For the 2021-22 fishing year, there were 61 trigger events reported and responded to: 39 for seabirds, five for marine turtles, 12 for pinnipeds and five for dolphins. Figure 5 shows the fluctuation in trigger events and species groups involved throughout the year.

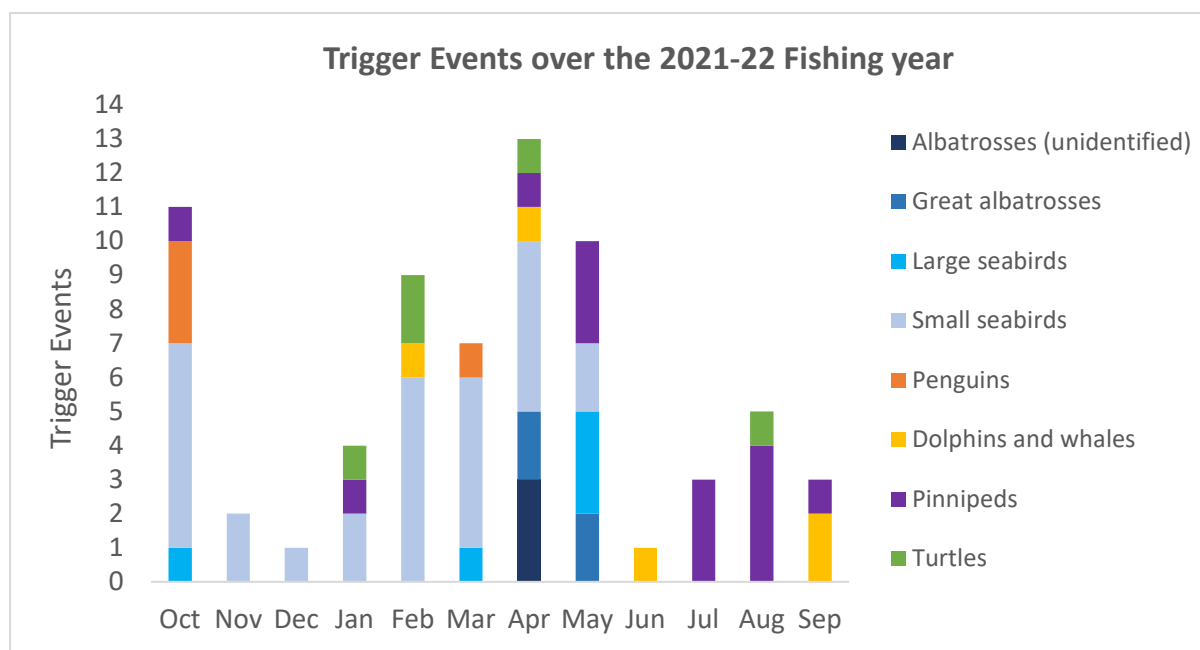


Figure 5: Number of trigger events 2021-22 fishing year, broken down by species groups involved.

Trigger events involved a range of different species, as described in Table 8. When discussing trigger events with vessel operators, LOs suggest potential ways bycatch mitigation could be improved. Suggested changes can include a range of things depending on the situation and ability of the vessel to undertake those improvements, including improving the quality and functionality of the tori line, adding additional weighting, shifting to night-setting, improving hauling mitigation and/or changing fishing locations.

Table 8: Number of individuals involved in trigger events from 1 October 2021- 30 September 2022.

	Species Code	Alive Uninjured	Alive injured	Dead	Total
Albatrosses (Unidentified)				3	3
Albatrosses (Unidentified)	XAL			3	3
Great Albatrosses		3		1	4
Wandering (Snowy) albatross	XAS	1			1
Wandering albatross (Unidentified)	XWA	2		1	3
Large Seabirds		7	5	10	22
Buller's and Pacific albatross	XPB			3	3
Salvin's albatross	XSA	6			6
Smaller albatrosses	XMA		2	2	4
White-capped albatross	XWM	1	3	5	9
Small Seabirds		3		63	66
Black (Parkinson's) petrel	XBP			1	1
Common diving petrel	XDP			6	6
Flesh-footed shearwater	XFS	2		28	30
Grey petrel	XGP			3	3
Sooty shearwater	XSH	1		2	3
Westland petrel	XWP			1	1
White-chinned petrel	XWC			22	22
Penguins			1	9	10
Crested penguins	XCR		1	6	7
Yellow-eyed penguin	XYP			3	3
Dolphins and whales		3		2	5
Common dolphin	CDD			2	2
Dolphin and Toothed whales (Unidentified)	WHT	1			1
Orca	ORC	2			2
Pinnipeds		11	8	9	29
New Zealand fur seal	FUR	11	8	9	29
Turtles		4	1		5
Green turtle	GNT	1			1
Leatherback turtle	LBT	2	1		3
Marine turtles (Unidentified)	TLE	1			1
Total		31	15	97	144

4.2 Significant Capture Events

A significant capture event is an event that initiates cross-agency discussions around management options and follow-up actions.

In late October 2021, there were several penguin captures reported dead in set nets. One vessel caught a microchipped juvenile hoiho (yellow-eyed penguin) in Foveaux Strait, and then six tawaki (Fiordland crested penguins) off Rakiura in separate events. A different vessel also caught a microchipped juvenile hoiho off Otago Peninsula around the same time. Both vessels had observers onboard and were observed to be operating in accordance with their PSRMP at the time of the captures. The Liaison Officer for these vessels followed up with the operators after each of these events to gather more information and provide advice. Unfortunately, penguin captures are difficult to mitigate, only spatial and temporal advice can be given to try and reduce the risk of future captures. Work was started to compile breeding site location information for hoiho and tawaki as a resource for fishers, and all South Island set net fishers have been given the most up to date tracking information from foraging adult hoiho.

In late April and May 2022, two surface longliners had large seabird capture events while targeting southern bluefin tuna off the coast of Dunedin.

One vessel caught a total of 16 white-chinned petrels (15 dead and one alive) and three Buller's albatross (dead) over a four-day period. The vessel had an observer onboard and was observed to be operating in accordance with their PSRMP at the time of the captures. The Liaison Officer for this vessel followed up with the operator to gather more information and provide advice. As per the Mitigation Standards, the vessel was using a tori line, setting gear at night, and using weighted snoods. The vessel chose to continue fishing in the same location after the first day of captures but moved 20 nautical miles after continuing to have captures on the second day. The vessel also tried to reduce the risk of seabird captures by reducing its speed during the setting of gear, adding extra weight to each of the floats, and adding blue dye to the bait being used. Further conversations suggest that the captures may have occurred during the soak period. Large tunas or sharks can bring a fishing line up from its setting depth to the surface during the soak, exposing baited hooks and increasing risk of seabird captures.

The other vessel, over the course of a trip, caught eight white-chinned petrels (dead), three grey petrels (dead), four Buller's albatross (three dead and one alive), one Westland petrel (dead), three white-capped albatross (two dead and one alive), one wandering albatross (dead), one storm petrel (alive), and one sooty shearwater (alive). The vessel had an observer onboard and although they recorded that the vessel was operating in accordance with their PSRMP at the time of the captures, some areas for improvement were detected during follow-up conversations. The observer noted that most of the captures seemed to occur close to floats (not many close to sharks), the tori line had variable performance and the waste management procedures could have been improved. The Liaison Officer for this vessel followed up with the operator to gather more information and provide advice. The vessel operator tried moving areas, slowing speed, had line weighting, was blue dyeing bait, and thought the tori line was effectively deterring seabirds. Most of the captures were taken on a big moon and the operator was convinced they were happening during the soak period when big fish could be raising the gear up near the surface.

Although not one specific capture event, it is important to note the level of turtle captures in the longlining fleets over the 2021-22 fishing year. These captures usually occur over the summer months. In the surface longline fleet there were three vessels that reported catching a total of ten live marine turtles (nine leatherback and one unknown), mostly while targeting swordfish. In the bottom longline fleet two vessels reported catching a total of five marine turtles (four green turtles and one unknown), while targeting snapper. Unfortunately, not all of these turtle captures were made apparent at the time of the incident and therefore not always responded to under standard trigger protocols. Adjustments have been made to ensure these captures are more easily detected and in addition to ensuring the vessels have turtle dehooking kits, Liaison Officers have been directed to collect information on how the animal is hooked or entangled (where on the body) and whether any gear remains attached upon live release. This is aimed to provide more insight on post-release survival.

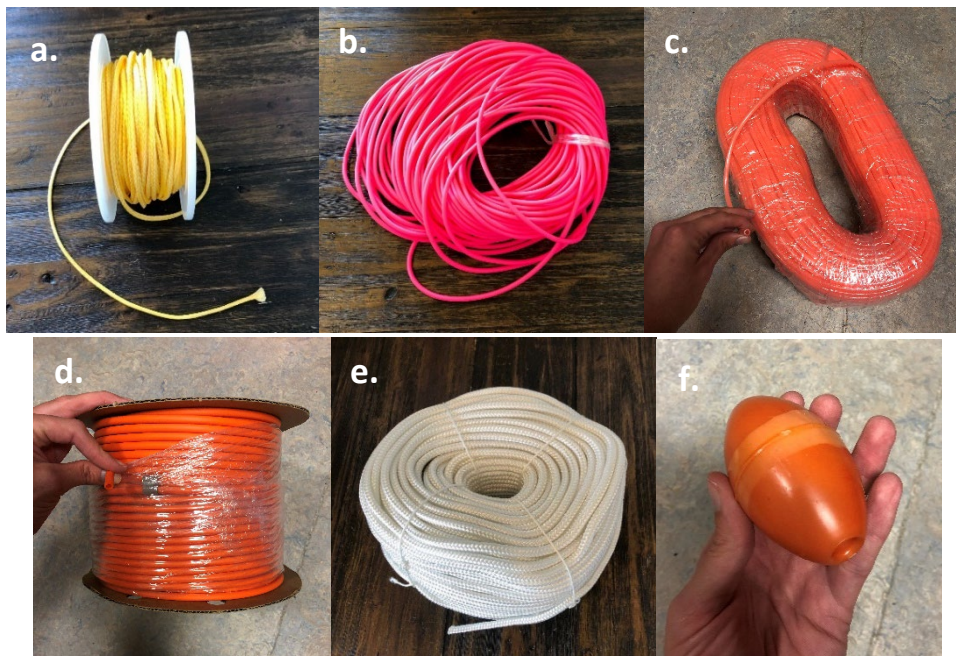
Further information on protected species captures can be found within the [CSP Annual Research Summaries](#), the [FNZ quarterly reports](#) and the [NZ protected species captures website](#).

5. Bycatch Mitigation Resources

In March 2021, due to feedback from industry, and as part of MIT2020-01, DOC ordered 10,000 more hook-shielding devices that release at 10m rather than the standard 20m. These devices are anticipated to be more suitable in fisheries that target shallower fishing depths. Unfortunately, due to shipping and testing delays, these devices were not made available to commercial fishers until August 2022. With that in mind, the Liaison Programme facilitated the deployment of 1,120 (20m-release) hook-shielding devices to one surface longline vessel in the 2021-22 fishing year, and will continue to support uptake in the coming years.

Over the past year, we have also ordered and distributed a large amount of quality tori line materials to support commercial fishers in ensuring vessel tori lines are properly maintained and remain effective for deterring seabirds. These materials have included:

1. Backbone
 - a. 3mm single braid Dyneema
 - b.
2. Streamers
 - c. 3.18mm Pink Kraton Tubing
 - d. 3mm Pink Fluorescent Tubing
 - e. 6mm x 4mm Orange Beatory Tubing
3. Drag
 - f. 9mm Trawl Braid (500L)
 - g. Egg floats (@10mm hole diameter)
 - h. 450mm Reflective Traffic Cones



Liaison Officers check that all surface longliners are equipped with a turtle kit before the start of the high-risk period when targeting bigeye and swordfish in the summer. This kit includes a de-hooker, a line-cutter and some bolt cutters.

In June 2022, the Liaison Programme also started distributing Procella heavy hooks for trial. Over the 2021-22 fishing year, there were 115 hooks distributed to four different vessels, with plans to distribute a further 800 to four other vessels. Unfortunately, several operators who initially expressed interest in the heavy hooks raised concerns around the design.

This included:

1. Design of the eye – There were concerns that the small diameter ring design would risk increased wear and chaffing on the snood. Operators would prefer to have a forged eye design to avoid this.
2. Hook gauge too thin – There were concerns that the hook gauge would risk hook straightening with large catch.
3. Hook size too small – Operators would prefer to use the same size hooks that they already use in operations. Procella is 15/0 rather than their standard 16/0.
4. Design of the weighted tab – There were concerns that the weighted tab was a wedge shape that was too bottom heavy and had edges that were too sharp, which could risk opening a hole and losing their catch when the fish thrashes around.

Finally, no resource documents were updated this year except to reflect the Bottom Longline Circular coming into force October 2021. Further educational resources were developed under a CSP project to assist with achieving good sink rates in the bottom longline fishery, and a PSRMP template for the purse seine fishery was also finalised.

Plans For the 2022-23 Fishing Year

This is the final year of this project before it goes up for renewal, and there is a limited amount of funding to grow much in capacity. The objectives of the 2022-23 fishing year (as per Appendix 2) are to gather up the rest of the active inshore vessels in bottom longline, trawl, and >8m set net, and to grow liaison programme coverage in the (<8m) harbour set net fleet. Considerations are being made to establish an additional Liaison Officer to support work in the South Island.

By the end of the 2021-22 fishing year there were 218 active vessels included in the Liaison Programme, and five Liaison Officers spread throughout the regions. About 376 vessels were active in our prioritised inshore and HMS fleets. More capacity is needed in order to bring the remaining inshore vessels into the Liaison Programme. In addition to this, as cameras roll out there will be an anticipated increase to workload. The Liaison Programme will need to find a balance between Liaison Officer capacity and adequate levels of response.

The Liaison Programme will continue to respond to and provide advice for mitigating against various protected species groups and will continue to assist with delivering current/future cross-agency plans (i.e. NPOA Sharks, Hector's and Māui TMP, etc.). Nevertheless, the role of the LO remains the same, supporting and educating fishers in best practice mitigation and providing a vital interface between skippers, government, and researchers.

As discussed last year, reporting capability continues to be a pain point for the implementation of this project. The collaboration between DOC and FNZ for a Protected Species Liaison Officer Database (PSLOD) is still ongoing and is currently sitting at the Solutions Architect stage. Once developed, an agreed solution will streamline reporting and help the Liaison Programme to operate more efficiently. It is anticipated that there will be substantial progress on the PSLOD throughout the 2022-23 fishing year.

Further Information

Appendix 1 describes the Liaison Programme project objectives and outputs cited from the [2021-22 CSP Annual Plan](#).

For more information on fleet-specific bycatch mitigation, see Appendix 8 for resources provided to fishers in Mitigation Folders, and visit the [FINZ website](#) for a downloadable version collaboratively developed between FINZ, MPI and DOC.

Further resources for fishers are available on the [DOC-CSP webpage](#).

Appendix 1: MIT2021-01 Liaison Programme Project Description

Conservation Services Programme Annual Plan 2021/22

4.2 Protected Species Liaison Project

Project Code: MIT2021-01

Start Date: 1 July 2021

Completion Date: 30 June 2024

Guiding Objectives: CSP Objective A; CSP Seabird plan; National Plan of Action – Seabirds, National Plan of Action – Sharks.

Project Objectives:

1. To grow liaison capacity across inshore fleets around the country including surface longline, bottom longline, trawl, set net and purse seine.
2. To coordinate Liaison Officer effort and target protected species bycatch reduction by encouraging vessel operators to meet best-practice bycatch mitigation.
3. To deliver on the vision and outcomes of relevant cross-government plans (NPOAs, TMPs, etc).

Rationale

To effectively reduce the risk of interactions with protected species, it is important for vessels to be using best practice mitigation and take all necessary steps both regulatory and non-regulatory measures to avoid interactions. To measure success of mitigation and identify areas where further development is needed across each fleet, there needs to be consistency in the mitigation measures used while still allowing for innovation. Through the NPOA-Seabirds a suite of best practice mitigation standards for each method have been developed, these mitigation standards will underpin the work that the Liaison Officers do and will be rolled out as part of the Liaison Programme through the Protected Species Risk Management Plans (PSRMPs).

The purpose of the PSRMPs is to outline the vessels' current practices and work towards achieving all the best practice mitigation standards and Liaison Officers will record where vessels are not able to achieve all standards and why. These notes will be shared with MPI for evaluation, where they will either reassess the mitigation standards or investigate how to better assist vessel operators to achieve the set standards. Auditing of PSRMPs by Fisheries Observers will then describe the steps the vessel is taking to meet the mitigation measures outlined in their plan and highlight areas for improvement.

Research Approach

Within the next three years the capacity of the programme is expected to grow substantially. The role of the Liaison Officers will largely remain the same, supporting and educating fishers in best practice mitigation and providing a vital interface between skippers, government, and researchers. The growth over the next three years will consist of additional Liaison Officers to expand into additional fisheries and areas, increased contact with high-risk vessels and fleets, development, and delivery of a training programme for crew on protected species and mitigation and the hiring of a full-time Liaison Coordinator to ensure the operational oversight of the programme.

Improvements in the next phase of the project are needed to measure the success of the Protected Species Liaison Programme and overcome constraints in reporting capability. This will be addressed through database development and standardised procedures. There will also be increased engagement with quota holders to support the uptake of PSRMPs and Mitigation Standards.

Conservation Services Programme Annual Plan 2021/22

Outputs

1. Database including PSRMPs installed and updated, vessels visited, trigger responses, mitigation materials and training provided.
2. Creation of an inter-agency Advisory Group and internal Project Executives Group to work through challenges within the programme and report progress.
3. Development of management protocols and responses to triggers.
4. Reports to relevant advisory groups detailing progress and any developments which have come from the fleet.
5. Annual written reporting will be provided as part of the NPOA-Seabirds - Annual Research Report.

Note: A three-year term is proposed

Indicative Research Cost: \$250,000 per annum

(Note: it is intended that additional Crown funds from the Biodiversity 2018 budget will also be used to grow liaison outreach into additional fisheries and provide more effort for high-risk vessels to work towards zero bycatch).

Cost Recovery: F(CR) Item 4 (100% Industry)

Fish stocks:

Objective/Species	Indicative Cost	Fish Stocks
1. Surface Longline	\$50,000	ALB1, BIG1, STN1, SWO1
2. Bottom Longline	\$50,000	BNS1, HPB1, SNA1
3. Inshore Trawl	\$50,000	BAR1, 7, FLA1, GUR1, JDO1, LIN1, 2, RCO3, SNA1, 2, TAR1, 2, 3, TRE1, 7
4. Setnet	\$50,000	SCH3, 5, SPO3, ELE3, 5, MOK3, SPD5
5. Purse seine	\$50,000	SKJ1, JMA1, EMA1, PIL1

Appendix 2: Liaison Programme Plan and Objectives

*Live document subject to review

Vision

Support fishers to work towards zero threatened and protected species bycatch by 2050 (thereby aligning with Te Mana o te Taiao– the Aotearoa New Zealand Biodiversity Strategy 2020).

Overarching Objective

To deliver on the vision and outcomes of departmental strategies and relevant cross-government plans (NPOAs, TMPs, etc).

5-year Objective

By 2025, all inshore & HMS fisheries at high risk of protected species captures use best available mitigation methods relevant to their operations.

Programme Performance Measures (Metrics to determine success against 5-year objective):

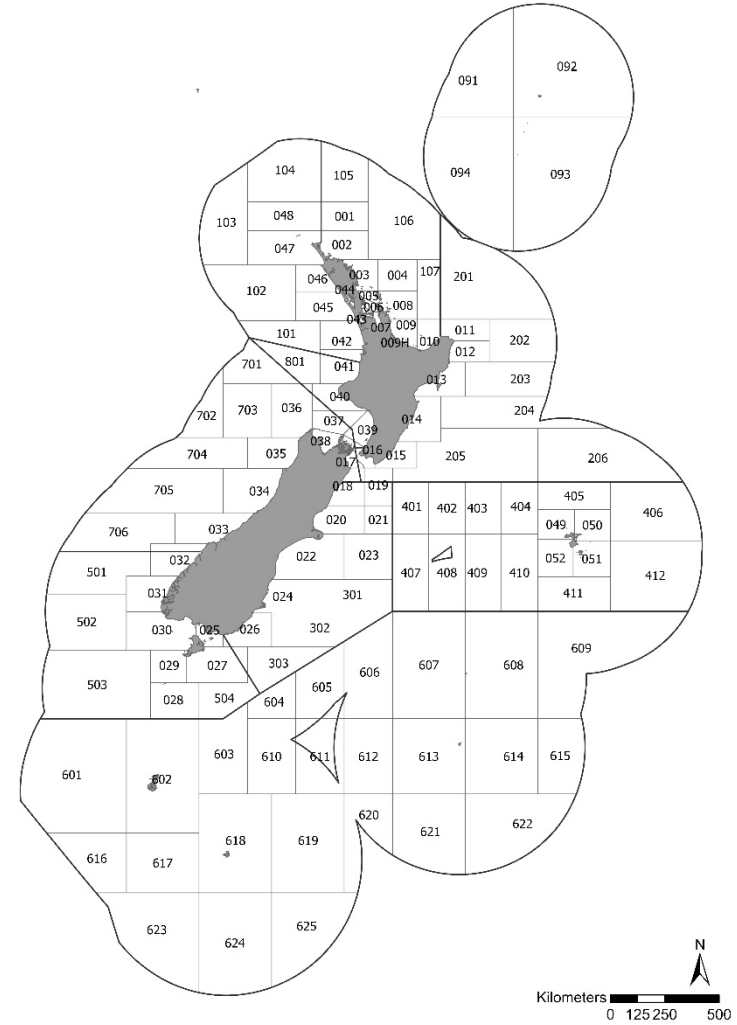
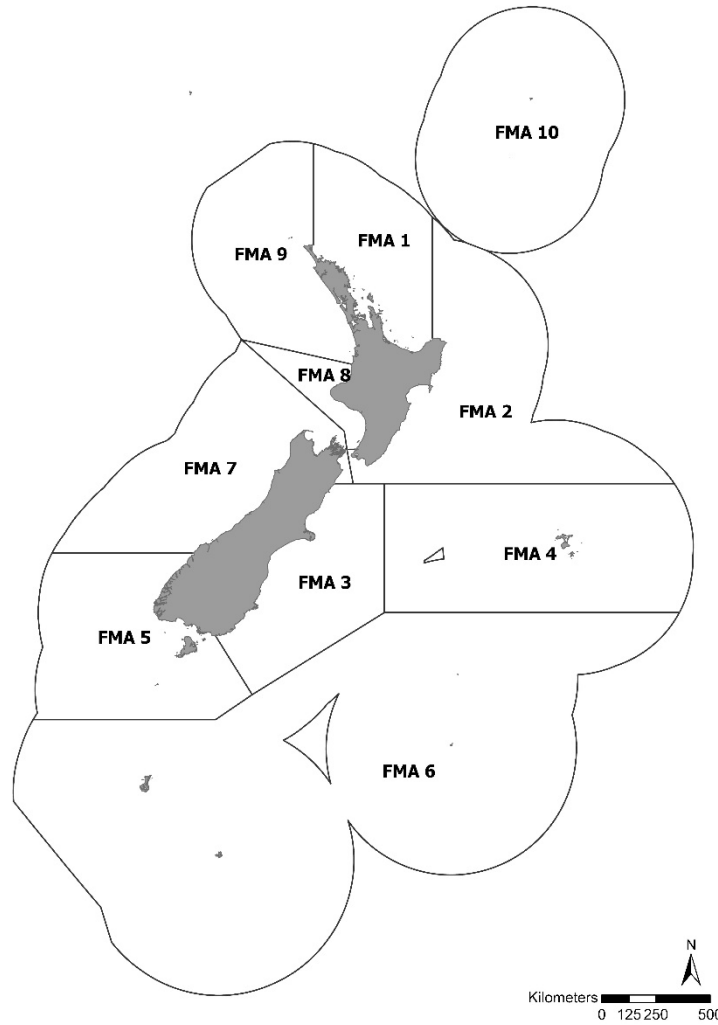
- Proportion of active vessels in each fleet that have PSRMPs
- Proportion of PSRMPs that meet Mitigation Standards in each fleet
- Percentage of fishing vessel adherence to their PSRMPs
- Number of threatened and protected species captured
- Proportion of fishers’ resources (i.e. included in mitigation folders) that are up-to-date
- Proportion of templates reviewed annually (i.e. PSRMP templates, etc.)
- Amount of mitigation material provided
- Proportion/number of vessels visited

Programme Objectives

Year 1- 2020/21 Fishing Year	Year 2- 2021/22 Fishing Year	Year 3- 2022/23 Fishing Year	Year 4- 2023/24 Fishing Year	Year 5- 2024/25 Fishing Year
<ul style="list-style-type: none"> - 100% of SLL vessels have PSRMPs - 100% of BLL FMA1 vessels have PSRMPs - 60% of BLL vessels (outside FMA1) have PSRMPs - 90% of Inshore Trawl vessels have PSRMPs - 15% of SN vessels have PSRMPs (focus on FMAs 2,3,5&7) - All relevant vessels visited at least once and PSRMPs and Mitigation folders are updated as needed - Provision of mitigation materials - All data is entered and checked - Develop Liaison Programme Plan and Objectives 	<ul style="list-style-type: none"> - Maintain PSRMP coverage for: <ul style="list-style-type: none"> o 100% of SLL vessels o 100% of BLL FMA1 - 100% of BLL vessels have PSRMPs - 100% of Inshore Trawl vessels have PSRMPs - 30% of SN vessels have PSRMPs - All relevant vessels visited at least once and PSRMPs and Mitigation folders are updated as needed - Provision of mitigation materials - All data is entered and checked - Liaison effort is prioritised - Review of performance measures to make sure they are fit for purpose 	<ul style="list-style-type: none"> - Maintain PSRMP coverage for: <ul style="list-style-type: none"> o 100% of SLL vessels o 100% of BLL vessels o 100% of Inshore Trawl vessels - 60% of SN vessels have PSRMPs - All relevant vessels visited at least once and PSRMPs and Mitigation folders are updated as needed - Provision of mitigation materials - All data is entered and checked - Liaison effort is prioritised with risk-based system - Review PSRMP templates (considering needs of NPOA-Sharks and the Hector’s Māui TMP) 	<ul style="list-style-type: none"> - Maintain PSRMP coverage for: <ul style="list-style-type: none"> o 100% of SLL vessels o 100% of BLL vessels o 100% of Inshore Trawl vessels - 80% of SN vessels have PSRMPs - All relevant vessels visited at least once and PSRMPs and Mitigation folders are updated as needed - Provision of mitigation materials - All data is entered and checked - Liaison effort continues to be prioritised with risk-based system - Liaison Officers trained in the use of the <u>new</u> Liaison Database - Review of performance measures to make sure they are fit for purpose 	<ul style="list-style-type: none"> - Maintain PSRMP coverage for: <ul style="list-style-type: none"> o 100% of SLL vessels o 100% of BLL vessels o 100% of Inshore Trawl vessels - 100% of SN vessels have PSRMPs - All relevant vessels visited at least once and PSRMPs and Mitigation folders are updated as needed - Provision of mitigation materials - All data is entered and checked - Liaison effort continues to be prioritised with risk-based system - Review PSRMP templates

Appendix 3: FMAs and Statistical Areas

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Appendix 4: PSRMP Coverage Table

PSRMP coverage for inshore and HMS relative to fishing effort (1 October 2017- 30 September 2022). Fishing effort is measured by net length for set net, and by fishing event for all other fishing methods. Data supplied by FNZ RDM.

Fishing Method	Fishing Year	Proportion of Fishing Effort			
		PSRMP	PSRMP (in other fishing method)	Deepwater Group (DWG)	No PSRMP
SLL	2021-22	1.00	0.00	0.00	0.00
	2020-21	1.00	0.00	0.00	0.00
	2019-20	1.00	0.00	0.00	0.00
	2018-19	1.00	0.00	0.00	0.00
	2017-18	0.99	0.00	0.00	0.01
BLL	2021-22	0.83	0.00	0.15	0.02
	2020-21	0.79	0.06	0.13	0.02
	2019-20	0.83	0.03	0.10	0.04
	2018-19	0.75	0.07	0.09	0.09
	2017-18	0.70	0.05	0.08	0.17
TR	2021-22	0.95	0.03	0.00	0.01
	2020-21	0.92	0.03	0.02	0.04
	2019-20	0.84	0.02	0.02	0.11
	2018-19	0.78	0.03	0.02	0.17
	2017-18	0.13	0.01	0.02	0.85
SN (>7m)	2021-22	0.81	0.02	0.03	0.14
	2020-21	0.70	0.07	0.02	0.20
	2019-20	0.48	0.07	0.05	0.39
	2018-19	0.42	0.04	0.02	0.51
	2017-18	0.00	0.09	0.03	0.88
SN (≤7m)	2021-22	0.06	0.00	0.00	0.94
	2020-21	0.00	0.00	0.00	1.00
Purse Seine	2021-22	0.87	0.00	0.08	0.05
	2020-21	0.00	0.00	0.18	0.82
Danish Seine	2021-22	0.54	0.00	0.00	0.46

Appendix 5: PSRMP Templates for the 2021-22 Fishing Year

With the exception of the purse seine form, PSRMP templates were unchanged from the 2020-21 version.

SLL - Protected Species Risk Management Plan

FV	Vessel ID	Home Port
Owner	Skipper/s	Date

Purpose of this RMP

This PSRMP documents agreed procedures and actions that skippers of this vessel will follow to reduce risk of protected species captures and includes implementation of best practice as outlined by the Mitigation Standards. **This document is to be prominently displayed onboard.** Skipper(s) and crew must also read and understand the supporting 10 Golden Rules & Operational Procedures.

Regulated measures for seabird risk reduction

Regulatory requirements can be found in the SLL circular (2019), which are included in your mitigation folder. All protected species captures must be reported using the electronic NFPS Catch Report.

Remember it is not illegal to catch a protected species however it is illegal to not report it!

Vessel's Practices	
1. Fish waste management <i>Describe equipment and procedures to hold or batch fish waste; contingency plan where required</i>	- No discharge immediately before or during setting. - While hauling, fish waste is held or batched opposite side to the hauling station. All used bait is retained till after haul. List discharge storage & batching procedures & discharge point (e.g. check open scuppers near processing point)
2a. Tori line	- Tori line meets regulations and is used for duration of all sets. - Can it be adjusted/repositioned to cover hooks to suit varying conditions? - (Describe attachment height x metres above waterline and drag) - Spare materials and/or second tori line are carried on board
2b. Hook-shielding device	-x% gear coverage (or No)
2c. Night-setting	Always/Sometimes/Never (+ during x target species)
High-risk periods/areas	Don't fish during these times? Increase setting gear sink rate?
2d. Weighting regime	Weighted snood (all/some/none); type? Weight and distance from hook (g/ m) Use bait that is sufficiently thawed (ie. not fully frozen)
3. Hauling protocols <i>Describe deterrent</i>	- If break during hauling, hooks must be below surface - (Describe how seabirds are actively deterred from approaching hooks, ie. hose, low pressure water sprayers, sound (such as banging a gaff against the superstructure), hauling mitigation devices and/or vessel manoeuvres)
4. Deck landing/impact	Reduce unnecessary deck lighting, while maintaining safe lighting practises
Training	Crew know and follow safe marine mammal & seabird-handling procedures and protocols Return live fish to the sea as soon as practicable after they were landed
Other- gear/mitigation	

Contact your Liaison Officer when a TRIGGER POINT is reached.

Any 24 hr period

(Alive or Dead) Any great albatross, penguin, dolphin, sea lion or basking shark

(Alive or Dead) First turtle of the fishing year (Oct- Sept)

(Alive or Dead) 3 large (e.g. albatross/mollymawk, giant petrel, gannet), or 5 small (e.g. petrel/shearwater) seabirds, or 2 fur seals

(Dead) Any black petrel or flesh-footed shearwater

Any 7-day period

(Alive or Dead) 10 protected seabirds of any type, or 3 turtles, or 5 fur seals

Contact:	Ph:	Email:
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Information in this plan will be provided to MPI and FINZ for reporting and management purposes

BLL - Protected Species Risk Management Plan

FV	Vessel ID	Home Port
Owner	Skipper/s	Date

Purpose of this PSRMP

This PSRMP documents agreed procedures and actions that skippers of this vessel will follow to reduce risk of protected species captures and includes implementation of best practice as outlined by the Mitigation Standards. **This document is to be prominently displayed onboard.** Skipper(s) and crew must also read and understand the supporting 10 Golden Rules & Operational Procedures.

Regulated measures for seabird risk reduction

Regulatory requirements can be found in the BLL circular (20xx), which are included in your mitigation folder. All protected species captures must be reported using the electronic NFPS Catch Report.

Remember it is not illegal to catch a protected species however it is illegal to not report it!

Vessel's Practices				
1. Fish waste management <i>Describe equipment and procedures to hold or batch fish waste; contingency plan where required</i>	- No discharge immediately before or during setting. - While hauling, fish waste is held or batched opposite side to the hauling station. All used bait is retained till after haul. List discharge storage & batching procedures & discharge point (e.g. check open scuppers near processing point)			
2a. Tori Line	- (Single or Double) Tori line meets regulations and is used for duration of all sets. - Can be adjusted/repositioned to cover hooks to suit varying conditions - Spare materials and/or second tori line is carried on board			
2b. Weighting	Regime 1	Regime 2	Regime 3	Comments
Target species				
Setting Speed	(Range)	(Range)	(Range)	
Low Risk weighting (Night)	kg/m (Hooks)	kg/m (Hooks)	kg/m (Hooks)	(material)
High Risk weighting (e.g. Day or moonlit night)	kg/m (Hooks)	kg/m (Hooks)	kg/m (Hooks)	(remove floats or change speed)
Float size and placement	m (Hooks)	m (Hooks)	m (Hooks)	(Flag variable configurations)
Rope length: weight -mainline				
2c. Sink rate/Hook depth	Bottle or TDR tests will be conducted (when/how often?) on slowest sinking hook for each setup (ie. every month and/or when changing regimes) Records to be kept onboard for x amount of time Use bait that is sufficiently thawed (ie. not fully frozen)			
3. Hauling protocols <i>Describe deterrent</i>	- If break during hauling, hooks must be below surface - (Describe how seabirds are actively deterred from approaching hooks, ie. hose, low pressure water sprayers, sound (such as banging a gaff against the superstructure), hauling mitigation devices and/or vessel manoeuvres)			
4. Deck landing/impact	Reduce unnecessary deck lighting, while maintaining safe lighting practises			
Training	Crew know and follow safe marine mammal & seabird-handling procedures and protocols Return live fish to the sea as soon as practicable after they were landed			
Other- gear/mitigation				

Contact your Liaison Officer when a TRIGGER POINT is reached.

Any 24 hr period

(Alive or Dead) Any great albatross, penguin, dolphin, sea lion or basking shark

(Alive or Dead) First turtle of the fishing year (Oct- Sept)

(Alive or Dead) 3 large (e.g. albatross/mollymawk, giant petrel, gannet), or 5 small (e.g. petrel/shearwater) seabirds, or 2 fur seals

(Dead) Any black petrel or flesh-footed shearwater

Any 7-day period

(Alive or Dead) 10 protected seabirds of any type, or 3 turtles, or 5 fur seals

Contact:	Ph:	Email:
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Information in this plan will be provided to MPI and FINZ for reporting and management purposes

DOC CSP Liaison Programme Risk Mitigation: Bottom Longline (2020.21)

Trawl - Protected Species Risk Management Plan

FV	Vessel ID	Home Port
Owner	Skipper/s	Date
Vessel photo	Mitigation photo- offal control equipment	Mitigation photo- warp device

Purpose of this PSRMP

This PSRMP documents agreed procedures and actions that skippers of this vessel will follow to reduce risk of protected species captures and includes implementation of best practice as outlined by the Mitigation Standards. **This document is to be prominently displayed onboard.** Skipper(s) and crew must also read and understand the supporting 10 Golden Rules & Operational Procedures.

Regulated measures for protected species reporting

All protected species captures should be reported using the electronic NFPS Catch Report.

Remember it is not illegal to catch a protected species however it is illegal not to report it!

Vessel's Practices	
1. Fish waste management <i>Describe equipment and procedures to hold or batch fish waste; contingency plan where required</i>	- <u>No continuous discharge when towing</u> ; no discharge immediately before/during setting or hauling. While towing, fish waste is held or batched. <u>Cut & offal discards:</u> <u>Whole and fish waste discards:</u> <u>List discharge storage & batching procedures & discharge point, (for the above, etc)</u>
2. Warp <i>Describe equipment and procedures, type of device. When is deployment required?</i>	-Warp (located closest to side where fish waste is discharged) protected by seabird scaring device <u>List Seabird device type- carried onboard (Baffler, warp-deflector, tori, other etc)</u> -Seabird scaring device deployed <u>(choose: at all times or when there is any potential risk to seabirds)</u> and in a way to not increase the risk to seabirds (ie. excessive trailing streamers) -Carry sufficient spares to effect repairs
Warp splice control	Warps are not overly greased; warp splices are wrapped; sprags are removed; warp splices are not near water's surface when towing
3. Net interaction	Haul as quickly as practicable to minimise time net is at/near surface
Stickers	All practicable stickers are removed from the net before each shot.
Gear maintenance/repair	Is conducted while net is onboard or during low risk periods (ie. night or low seabird abundance) Regularly inspect and maintain all fishing gear/equipment (eg. winches)
4. Deck landing/impact	Reduce unnecessary deck lighting, while maintaining safe lighting practises
Training	Crew know and follow safe marine mammal & seabird-handling procedures and protocols Return live fish to the sea as soon as practicable after they were landed
Other- gear/mitigation	

Contact your Liaison Officer when a TRIGGER POINT is reached.

Any 24 hr period

(Alive or Dead) Any great albatross, penguin, dolphin, sea lion or basking shark

(Alive or Dead) First turtle of the fishing year (Oct- Sept)

(Alive or Dead) 3 large (e.g. albatross/mollymawk, giant petrel, gannet), or 5 small (e.g. petrel/shearwater) seabirds, or 2 fur seals

(Dead) Any black petrel or flesh-footed shearwater

Any 7-day period

(Alive or Dead) 10 protected seabirds of any type, or 3 turtles, or 5 fur seals

Contact:	Ph:	Email:
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Information in this plan will be provided to MPI and FINZ for reporting and management purposes

DOC CSP Liaison Programme Risk Mitigation: Trawl (2020.21)

Set net - Protected Species Risk Management Plan

FV	Vessel ID	Home Port
Owner	Skipper/s	Date
Vessel photo	Mitigation photo	Mitigation photo

Purpose of this RMP

This PSRMP documents agreed procedures and actions that skippers of this vessel will follow to reduce risk of protected species captures and includes implementation of best practice as outlined by the Mitigation Standards. **This document is to be prominently displayed onboard.** Skipper(s) and crew must also read and understand the supporting 10 Golden Rules & Operational Procedures.

Regulated measures for protected species reporting

All protected species captures should be reported using the electronic NFPS Catch Report.

Remember it is not illegal to catch a protected species however it is illegal not to report it!

This vessel's measures used to manage the risk of non-fish protected species capture:

Vessel Practices	
1. Fish waste management	- No discharge immediately before or during setting. - While hauling, fish waste is held or batch discharged (minimum of x min intervals) opposite side to the hauling station. All used bait is retained till after haul. - Describe suitable equipment and setup- including storage methods and location of discharge - Describe methods to contain fish waste (e.g. check open scuppers near processing point) and any contingency plans
2. Placement	Spatial placement of set nets does not pose unnecessary risk to seabirds (i.e. near seabird colonies and foraging grounds)
3. Net interaction	Haul as quickly as practicable to minimise time net is at/near surface Nets are not stalled
Stickers	All practicable stickers are removed from the net before each shot.
Gear maintenance/repair	Is conducted while net is onboard or during low risk periods (i.e. night or low seabird abundance) Regularly inspect and maintain all fishing gear/equipment (e.g. winches)
4. Deck landing/impact	Reduce unnecessary deck lighting
Training	Crew know and follow safe seabird-handling procedures and protocols
Other	Any other gear/mitigation? (otherwise omit)

Contact your Liaison Officer when a TRIGGER POINT is reached.

<p>Any 24 hr period (Alive or Dead) Any great albatross, penguin, dolphin, sea lion or basking shark (Alive or Dead) First turtle of the fishing year (Oct- Sept) (Alive or Dead) 3 large (e.g. albatross/mollymawk, giant petrel, gannet), or 5 small (e.g. petrel/shearwater) seabirds, or 2 fur seals (Dead) Any black petrel or flesh-footed shearwater</p> <p>Any 7-day period (Alive or Dead) 10 protected seabirds of any type, or 3 turtles, or 5 fur seals</p>	<p>Contact:</p>	<p>Ph:</p>	<p>Email:</p>
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Information in this plan will be provided to MPI and FINZ for reporting and management purposes

Purse Seine - Protected Species Risk Management Plan

FV	Vessel ID	Home Port
Owner	Skipper/s	Date
Vessel Photo	Mitigation Photo	Mitigation Photo

Purpose of this PSRMP

This PSRMP documents agreed procedures and actions that this vessel will follow to reduce risk of protected species captures and includes implementation of best practice as outlined by the Mitigation Standards. **This document is to be prominently displayed onboard.** Skipper(s) and crew must also read and understand the supporting 10 Golden Rules & Operational Procedures.

Regulated measures for seabird risk reduction

Details of regulatory requirements can be found in Commercial Fishing Regulations. All protected species captures must be reported using the electronic NFPS Catch Report.

Remember it is not illegal to catch a protected species however it is illegal not to report it!

Vessel Practices	
1. Prior to setting gear on the target fish	<i>Describe process for the early detection of protected species and too reduce risk of setting on marine mammals , sharks and rays</i>
2. Pursing / hauling protocols	<i>What monitoring will be conducted to determine if protected species are present</i>
3. Sacking and brailing process	<i>Describe the handling protocols for how live protected species will be returned to the sea</i>
4. Live animal / mammal release	<i>Describe the preferred safe handling protocols for releasing live marine mammals, sharks and rays</i>
5. Performance reviews and training	<i>Company, training, feedback and improvements</i>
6. Other	<i>Any other gear/mitigation practices etc?</i>
<p>Contact your Liaison Officer when a TRIGGER POINT is reached.</p> <p>Triggers (alive or dead) include:</p> <ul style="list-style-type: none"> ● One great albatross, penguin, dolphin, toothed whale, white pointer shark, whale shark, sea lion, leopard seal, basking shark, turtle, black petrel or flesh-footed shearwater ● <u>Any 24-hr period</u> – 2 manta ray, 4 spinetail devil ray, 3 large (e.g. albatross/mollymawk, giant petrel) or 5 small (e.g. petrel/shearwater) seabirds, 2 turtles or 2 fur seals ● <u>Any 7-day period</u> – 10 seabirds of any type or 5 fur seals. 	
Contact: DOC Liaison Officer	Ph:
Email:	

Information in this plan will be provided to MPI and FINZ for reporting and management purposes

Appendix 6: Observer Audit Templates for the 2021-22 Fishing Year

All PSRMP Observer Audit templates were unchanged from the 2021 versions.

Inshore Surface Longline Vessel: Observer PSRMP Audit



Trip Number	Observer Code	Vessel Name		Trip start date	Trip end date
Target Species		FMA's fished		Number of sets	
Name of Skipper(s)					

Record Yes (Y), No (N), Not Applicable (N/A) or Unknown (U) in the boxes provided. If you answer N or U to any questions, please make detailed comments.

- Item 1 Did the vessel carry a copy of the appropriate Operational Procedures and 10 Golden Rules on board that was made available upon request?
- Item 2 Was a copy of the vessel's Protected Species Risk Management Plan (PSRMP) readily available and in a place accessible to all crew?
- Item 3 Were the skipper and crew familiar with the contents of the:
- (a) Operational Procedures?
- (b) 10 Golden Rules?
- (c) Protected Species Risk Management Plan?
- Item 4 Were any protected species capture trigger points reached during the trip? *(If yes, please describe in the comments)*
- Item 5 If a trigger point was reached, did the crew: *(If yes, please describe in the comments)*
- (a) Make changes to fishing operations (e.g. move to a different fishing area)?
- (b) Change the mitigation measures they implemented?
- Item 6 Did a gear or equipment failure contribute to the risk of protected species captures during the trip? *(If yes, please describe in the comments)*
- Item 7 Were all protected species captures reported on the Non-Fish Protected Species Catch Return, as required by fisheries reporting regulations?
- Item 8 Were protected species that were caught alive, handled and released according to the DOC Handling and Release Guide?

Fish waste and bait management

- Item 9 Was all fish waste/offal discharge managed as per the vessel's PSRMP?
- Item 10 Was all fish waste held on board immediately before and during setting?
- Item 11 During hauling, were used baits and fish waste/offal held or batch discharged at intervals opposite to the side the vessel was hauling?

Mitigation

- Item 12 Which of the following mitigation methods were in place?
- (a) Hook-shielding devices
- (b) A tori line deployed for the entirety of all sets?
- (c) Setting exclusively at night*?
- (d) Line weighting as per their PSRMP?
- (Please describe weight and distance from hook in the comments)*
- Item 13 If hook-shielding devices were in use, were they used on every hook?
- Item 14 When deployed, did the aerial extent** of the tori line appear to be at least 75m?
- Item 15 Were streamers brightly coloured and appear to be spaced at a maximum distance of 1 m apart and a minimum of 1 m in length, along the entire aerial extent of the tori line?
- Item 16 Did the tori line attachment point appear higher than 6 m above the water?

- Item 17 Could the tori line be adjusted or repositioned over the setting line to suit varying conditions?
- Item 18 Did the vessel carry a spare tori line or parts to construct a second tori line if required?
- Item 19 Was the use of totally frozen bait avoided?
- Item 20 Were any other mitigation methods or deterrents used? *(If yes, please describe in the comments)*

Hauling protocols

- Item 21 Were hooks kept below the surface during any breaks in hauling? Deck landing/impact

Deck landing/impact

- Item 22 Were lighting practices managed in a way that avoids attracting or disorienting seabirds?

* 'Night' is defined as between 0.5 hours after nautical dusk until 0.5 hours before nautical dawn.

** 'Aerial extent' is the distance from the stern to the place where the streamer line backbone enters the water.

Please make a detailed comment for each item when required.

Item No:

Item No:

Item No:

Any further comments/observations:

Inshore Bottom Longline Vessel: Observer PSRMP Audit



Trip Number	Observer Code	Vessel Name		Trip start date	Trip end date
Target Species		FMA's fished		Number of sets	
Name of Skipper(s)					

Record Yes (Y), No (N), Not Applicable (N/A) or Unknown (U) in the boxes provided. If you answer N or U to any questions, please make detailed comments on the reverse.

- Item 1 Did the vessel carry a copy of the appropriate Operational Procedures and 10 Golden Rules on board that was made available upon request? N/A
- Item 2 Was a copy of the vessel's Protected Species Risk Management Plan (PSRMP) readily available and in a place accessible to all crew? N/A
- Item 3 Were the skipper and crew familiar with the contents of the: N/A
- (a) Operational Procedures? N/A
- (b) 10 Golden Rules? N/A
- (c) Protected Species Risk Management Plan? N/A
- Item 4 Were any protected species capture trigger points reached during the trip? (If yes, please describe in the comments). N/A
- Item 5 After a trigger point was reached, did the crew: (If yes, please describe in the comments) N/A
- (a) Make changes to fishing operations? N/A
- (b) Change the mitigation measures they implemented? N/A
- Item 6 Did a gear or equipment failure contribute to the risk of protected species captures during the trip? (If yes, please describe in the comments) N/A
- Item 7 Were all protected species captures reported on the Non-Fish Protected Species Catch Return as required by fisheries reporting regulations? N/A
- Item 8 Were protected species that were caught alive, handled and released according to the DOC Handling and Release Guide? N/A

Fish waste and bait management

- Item 9 Was all fish waste/offal discharge managed as per the vessel's PSRMP? N/A
- Item 10 Was all fish waste held on board immediately before and during setting? N/A
- Item 11 During hauling, were used baits and fish waste/offal held or batch discharged at intervals opposite to the side the vessel was hauling? N/A

Mitigation

- Item 12 Was a tori line deployed for the entirety of all sets? N/A
- Item 13 When deployed, did the tori line aerial extent* appear to be at least 50m? N/A
- Item 14 Were streamers brightly coloured and appear to be spaced at a maximum distance of 5 m apart along the entire aerial extent of the tori line? N/A
- Item 15 Could the tori line be adjusted or repositioned over the setting line to suit varying conditions? N/A
- Item 16 Did the vessel carry a spare tori line or parts to construct a second tori line if required? N/A
- Item 17 Did the vessel set exclusively at night**? N/A
- Item 18 Were any sink rate tests conducted while onboard? (i.e. bottle tests or TDR) Did the vessel N/A
- Item 19 Keep records of any sink rate tests conducted? (i.e. bottle tests or TDR) N/A
- Item 20 Was the use of totally frozen bait avoided? N/A

Hauling Protocols

- Item 22 Were hooks kept below the surface during any breaks in hauling? N/A
- Item 23 Was there any mitigation used during hauling? (If yes, please describe in the comments) N/A

Deck landing/impact

- Item 24 Were lighting practices managed in a way that avoids attracting or disorienting seabirds? N/A

* 'Aerial extent' is the distance from the stern to the place where the streamer line backbone enters the water.

** 'Night' is defined as between 0.5 hours after nautical dusk until 0.5 hours before nautical dawn.

Please make a detailed comment for each item when required.

Item No:

Item No:

Item No:

Item No:

Any further comments/observations:

Under 28m trawl vessel: Observer PSRMP Audit



Trip Number	Observer Code	Vessel Name		Trip start date	Trip end date
Target Species		FMA's fished		Number of sets	
Name of Skipper(s)					

Record Yes (Y), No (N), Not Applicable (N/A) or Unknown (U) in the boxes provided. If you answer N or U to any questions, please make detailed comments on the reverse.

- Item 1 Did the vessel carry a copy of the appropriate Operational Procedures and 10 Golden Rules on board that was made available upon request?
- Item 2 Was a copy of the vessel's Protected Species Risk Management Plan (PSRMP) readily available and in a place accessible to all crew?
- Item 3 Were the skipper and crew familiar with the contents of the:
- (a) Operational Procedures?
 - (b) 10 Golden Rules?
 - (c) Protected Species Risk Management Plan?
- Item 4 Were any protected species capture trigger points reached during the trip? (If yes, please describe in the comments)
- Item 5 After a trigger point was reached, did the crew: (If yes, please describe in the comments)
- (a) Make changes to fishing operations?
 - (b) Change the mitigation measures they implemented?
- Item 6 Did a gear or equipment failure contribute to an increased risk of protected species captures during the trip? (If yes, please describe in the comments)
- Item 7 Were all protected species captures reported on the Non-Fish Protected Species Catch Return as required by fisheries reporting regulations?
- Item 8 Were protected species that were caught alive, handled and released according to the DOC Handling and Release Guide?

Fish waste management

- Item 9 Was all fish waste/offal discharge managed as per the vessel's PSRMP?
- Item 10 Was all fish waste held on board immediately before or during shooting or hauling?
- Item 11 Was fish waste batch discharged at intervals if discharged during the tow?

Warp strike mitigation

- Item 12 Was the warp maintenance adequate? (splices wrapped, sprags removed)
- Item 13 If present, was a warp strike mitigation device used in accordance with the Protected Species Risk Management Plan? (ie. time deployed and placement on vessel)
- Item 14 Were any other mitigation methods or deterrents used? (If yes, please describe in the comments)

Net interaction

- Item 15 Was the net kept at/near the surface for an unexpected or unnecessary amount of time? (If yes, please describe in the comments)
- Item 16 Was the net cleared of all practicable stickers prior to shooting?

Deck landing/impact

- Item 17 Were lighting practices managed in a way that avoids attracting or disorienting seabirds?

Please make a detailed comment for each item when required.

Item No:

Item No:

Item No:

Item No:

Item No:

Any further comments/observations:

Set Net Vessel: Observer PSRMP Audit



Trip Number	Observer Code	Vessel Name		Trip start date	Trip end date
Target Species		FMA's fished		Number of sets	
Name of Skipper(s)					

Record Yes (Y), No (N), Not Applicable (N/A) or Unknown (U) in the boxes provided. If you answer N or U to any questions, please make detailed comments on the reverse.

- Item 1 Did the vessel carry a copy of the appropriate Operational Procedures and 10 Golden Rules on board that was made available upon request?
- Item 2 Was a copy of the vessel's Protected Species Risk Management Plan (PSRMP) readily available and in a place accessible to all crew?
- Item 3 Were the skipper and crew familiar with the contents of the:
- (a) Operational Procedures?
 - (b) 10 Golden Rules?
 - (c) Protected Species Risk Management Plan?
- Item 4 Were any protected species capture trigger points reached during the trip? *(If yes, please describe in the comments)*
- Item 5 After a trigger point was reached, did the crew: *(If yes, please describe in the comments)*
- (a) Make changes to fishing operations?
 - (b) Change the mitigation measures they implemented?
- Item 6 Did a gear or equipment failure contribute to the risk of protected species captures during the trip? *(If yes, please describe in the comments)*
- Item 7 Were all protected species captures reported on the Non-Fish Protected Species Catch Return as required by fisheries reporting regulations?
- Item 8 Were protected species that were caught alive, handled and released according to the DOC Handling and Release Guide?

Fish waste management

- Item 9 Was all fish waste/offal discharge managed as per the vessel's PSRMP?
- Item 10 Was all fish waste held on board immediately before and during setting?
- Item 11 During hauling, was fish waste/offal held or batch discharged at intervals opposite to the side the vessel was hauling?

Placement

- Item 12 Did the skipper demonstrate awareness of high-risk areas in deciding where to fish? (i.e; away from seabird colonies and foraging grounds) *(If yes, please describe in the comments)*

Net interaction

- Item 13 Was the net kept at the surface for an unexpected or unnecessary amount of time? *(If yes, please describe in the comments)*
- Item 14 Was the net cleared of all practicable stickers prior to shooting?

Deck landing/impact

- Item 15 Were all lighting practices managed in a way that avoids attracting or disorienting seabirds?

Please make a detailed comment for each item when required.

Item No:

Item No:

Item No:

Item No:

Item No:

Any further comments/observations:

Appendix 7: Bycatch Mitigation Document Tracking

This is a comprehensive list of all the current mitigation documents handed out to fishers through the Protected Species Liaison Programme. PDF documents are available for download at the FINZ website:

(<https://www.inshore.co.nz/operational-procedures/>)

Surface Longline (SLL)

	Version
1. 10 Golden Rules – Small Vessel SLL	3.0
2. 10 Golden Rules for NFPSCR	Sept 2020
3. SLL Tori Line Design Guide	Mar 2021
4. Small Vessel SLL Operational Procedures	3.0 Dec 2021
5. Fisheries Seabird Mitigation Measures - SLL Circular (+Corrigendum)	2019
6. MPI Shark Factsheets 1-4	Feb 2020
7. Seabird Bycatch Mitigation Standards Guide- SLL	Aug 2021
8. ACAP Hook Removal from Seabirds Guide	-
9. Fur Seal Handling and Release and Crew Safety Guide	-
10. Turtle Handling and Release and Crew Safety Guide	-
11. Small Vessel Surface Longline Crew and Vessel Safety Guide	-
12. Takoketai/ Black Petrel Factsheet	Nov 2020
13. Toanui/ Flesh-footed Shearwater Factsheet	Nov 2020
14. Observer PSRMP Audit Form	2021

Bottom Longline (BLL)

	Version
1. 10 Golden Rules – BLL	2.0
2. 10 Golden Rules for NFPSCR	Sept 2020
3. MPI Bottle Sink Rate Test Protocol	Aug 2021
4. Sink Rate Test Record Sheet	-
5. MPI Bottle Test One-pager	Aug 2021
6. BLL Tori Line Design Guide (>7m)	Sept 2021
7. Inshore BLL Operational Procedures	2.0 Oct 2021
8. Fisheries Seabird Mitigation Measures - BLL Circular	2021
9. Seabird Bycatch Mitigation Standards Guide- BLL	Aug 2021
10. ACAP Hook Removal from Seabirds Guide	-
11. Takoketai/ Black Petrel Factsheet	Nov 2020
12. Toanui/ Flesh-footed Shearwater Factsheet	Nov 2020
13. Observer PSRMP Audit Form	2021

Purse Seine

	Version
1. 10 Golden Rules – Purse Seine	1.0
2. 10 Golden Rules for NFPSCR	Sept 2020
3. Purse Seine Operational Procedures	1.0 Nov 2020
4. MPI Advice on Purse Seine Fishing in New Zealand	Jan 2018
5. MPI Shark Factsheets 1-4	Feb 2020
6. Seabird Risk Policy Framework	-

Trawl

	Version
1. 10 Golden Rules – Coastal Trawl	Sept 2020
2. 10 Golden Rules for NFPSCR	Sept 2020
3. Seabird Bycatch Mitigation Standards Guide- under 28m trawl	Aug 2021
4. Seabird Risk Policy Framework	-
5. Observer PSRMP Audit Form	2021

North Island specific

1. NI Coastal Trawler Operational Procedures	2.1 Aug 2021
2. Hector's and Maui dolphins TMP Factsheet- North Island	June 2020
3. Tākaketai/ Black Petrel Factsheet	Nov 2020
4. Toanui/ Flesh-footed Shearwater Factsheet	Nov 2020

South Island specific

1. SI Coastal Trawler Operational Procedures	1.5 Oct 2020
2. Warp Mitigation Options- Design Guide	-
3. Warp Strike Risk and Mitigation + Tier Rating	-

Set Net

	Version
1. 10 Golden Rules – Coastal Setnet	3.0
2. 10 Golden Rules for NFPSCR	Sept 2020
3. Coastal & Harbour Setnet Operational Procedures	2.0 Dec 2021
4. MPI Shark Factsheets 1-4	Feb 2020
5. Seabird Bycatch Mitigation Standards Guide- Set Net	Aug 2021
6. Shag ID	March 2022
7. Acoustic Pinger Info	-
8. Observer Audit Form	-

North Island specific

1. Hector's and Maui dolphins TMP Factsheet - North Island	June 2020
2. Tākaketai/ Black Petrel Factsheet	Nov 2020
3. Toanui/ Flesh-footed Shearwater Factsheet	Nov 2020

South Island specific

1. Hector's and Maui dolphins TMP Factsheet - South Island	June 2020
2. YEP Factsheet	Nov 2020

North Island Harbour Set Net

	Version
1. 10 Golden Rules – Harbour Setnet	2.0
2. 10 Golden Rules for NFPSCR	Sept 2020
3. North Island Harbour Setnet Operational Procedures	1.2 Oct 2021
4. Seabird Bycatch Mitigation Standards Guide- Set Net	Aug 2021
5. Tākaketai/ Black Petrel Factsheet	Nov 2020
6. Toanui/ Flesh-footed Shearwater Factsheet	Nov 2020
7. Shag ID	March 2022
8. Observer Audit Form	-
9. Hector's and Maui dolphins TMP Factsheet - North Island	June 2020