

LIAISON PROGRAMME ANNUAL REPORT

MIT2021-01 (2022-23 Fishing Year)



May 2024

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Glossary

ACAP	- Agreement on the Conservation of Albatrosses and Petrels	LO	- Liaison Officer
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

Purpose

This Liaison Programme Annual Report describes the progress that has been made towards delivering actions set out in the [2022-23 CSP Annual Plan](#) during the 2022-23 fishing year (01 October 2022 – 30 September 2023). It also provides a summary of the Inshore and Highly Migratory and Pacific 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 Seafood New Zealand (SNZ), 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. Weekly trigger report from FNZ to DOC established.
<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) Liaison work maintains size, slowly gaining remaining vessels in target fleets. Team comprised of five Liaison Officers and a Coordinator.
<i>November 2022</i>	South Island Hector's Dolphin Bycatch Reduction Plan published. Also started receiving a daily report for all reported protected species captures.

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 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 (harbour 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). In July 2023 K. Jacob left the Liaison Officer role for harbour netters up North and we gained a Liaison Officer, B. McCambridge, to take on the central South Island region (Kaikoura down to Timaru).

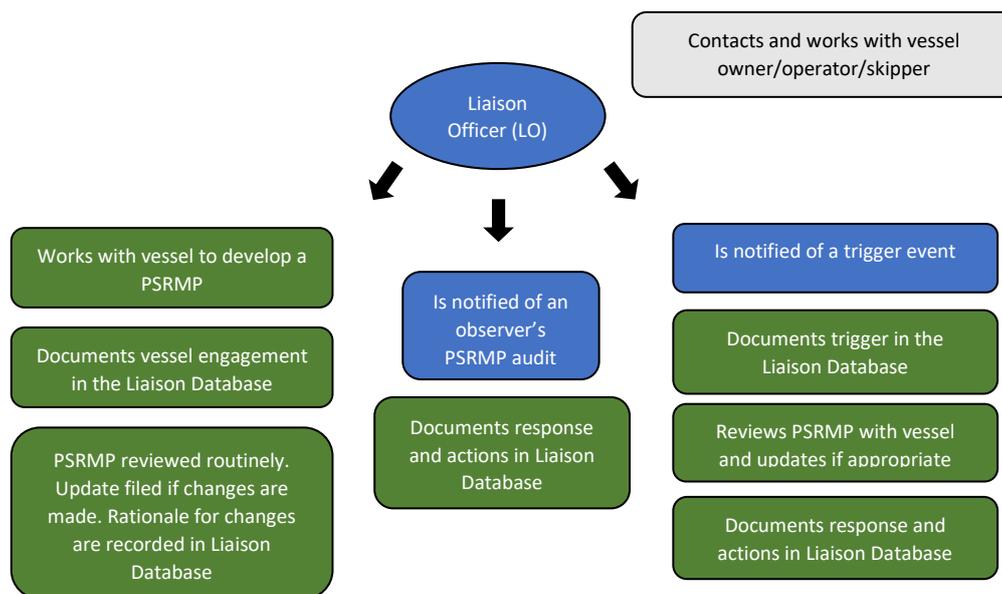


Figure 1: Workflow for Liaison Officers showing documentation completed. Green indicates a stored record.

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.

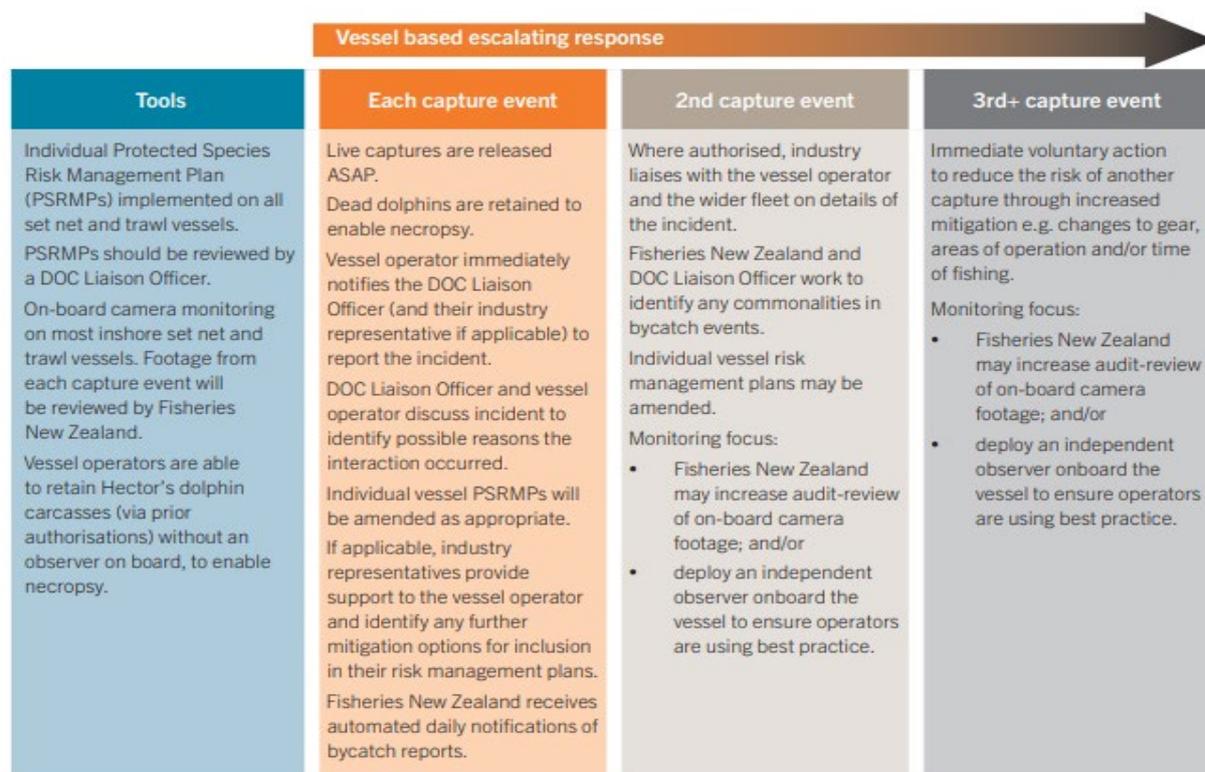


Figure 2: Summary of the standard and escalating responses (in a rolling 12-month period) that would apply to a vessel operator in the event of a Hector’s dolphin capture, as documented in the South Island Bycatch Reduction Plan.

Lastly, work is still underway to develop an improved database for the Liaison Programme. At the time of writing this report, work has gone into progressing an interim solution and is currently sitting with a new 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: 2022-23 Fishing Year

1. Protected Species Risk Management Plans (PSRMPs)

In the 2022-23 fishing year (01 October 2022 - 30 September 2023) the Liaison Programme reviewed 150 PSRMPs at least once and developed 28 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 2022-23 fishing year, vessels were included in the DOC Liaison Programme if they fell within at least one of the following categories: (1) had surface longline fishing effort; (2) had bottom longline fishing effort, excluding autoliners and those targeting ling in FMA 2-8; (3) had 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) had set net fishing effort; and/or (5) had 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 2022- 30 September 2023.

	Vessels with PSRMPs Reviewed	Vessels with PSRMPs Updated	Vessels with PSRMPs New	Active vessels with PSRMPs	Active vessels in fleet	Percentage of fleet with PSRMPs
SLL	18	16	1	20	20	100%
BLL	32	17	3	67	74	91%
Trawl	76	62	1	99	102	97%
Set Net (≤7m)	1	0	9	22	129	17%
Set Net (>7m)	18	17	13	36	50	72%
Purse Seine	3	0	1	4	4	100%
Danish Seine*	2	1	0	5	14	36%
Total fleet						65%

**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.

For the South Island Bycatch Reduction Plan, there is an objective to equip all set net and trawl vessels with a PSRMP. Of the 106 trawl and set net vessels identified as being active in FMAs 3, 5, and 7 during the 2022-23 fishing year, 83% (n=88) had a PSRMP, 3% (n=3) were covered by the DWG Liaison Programme, and 14% (n=15) did not have a PSRMP. Of the 15 vessels without a PSRMP, the majority look to operate out of Nelson or Picton and eight were identified as under 7m harbour net vessels. Liaison work will be prioritised to engage with these remaining vessels in the 2023-24 fishing year.

Overall, this year the Liaison Programme has increased coverage in the inshore and HMS fleets, particularly with set net. 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. For example,

six of the seven BLL vessels and one of the three trawl vessels without plans had under 15 fishing events in the entire fishing year.

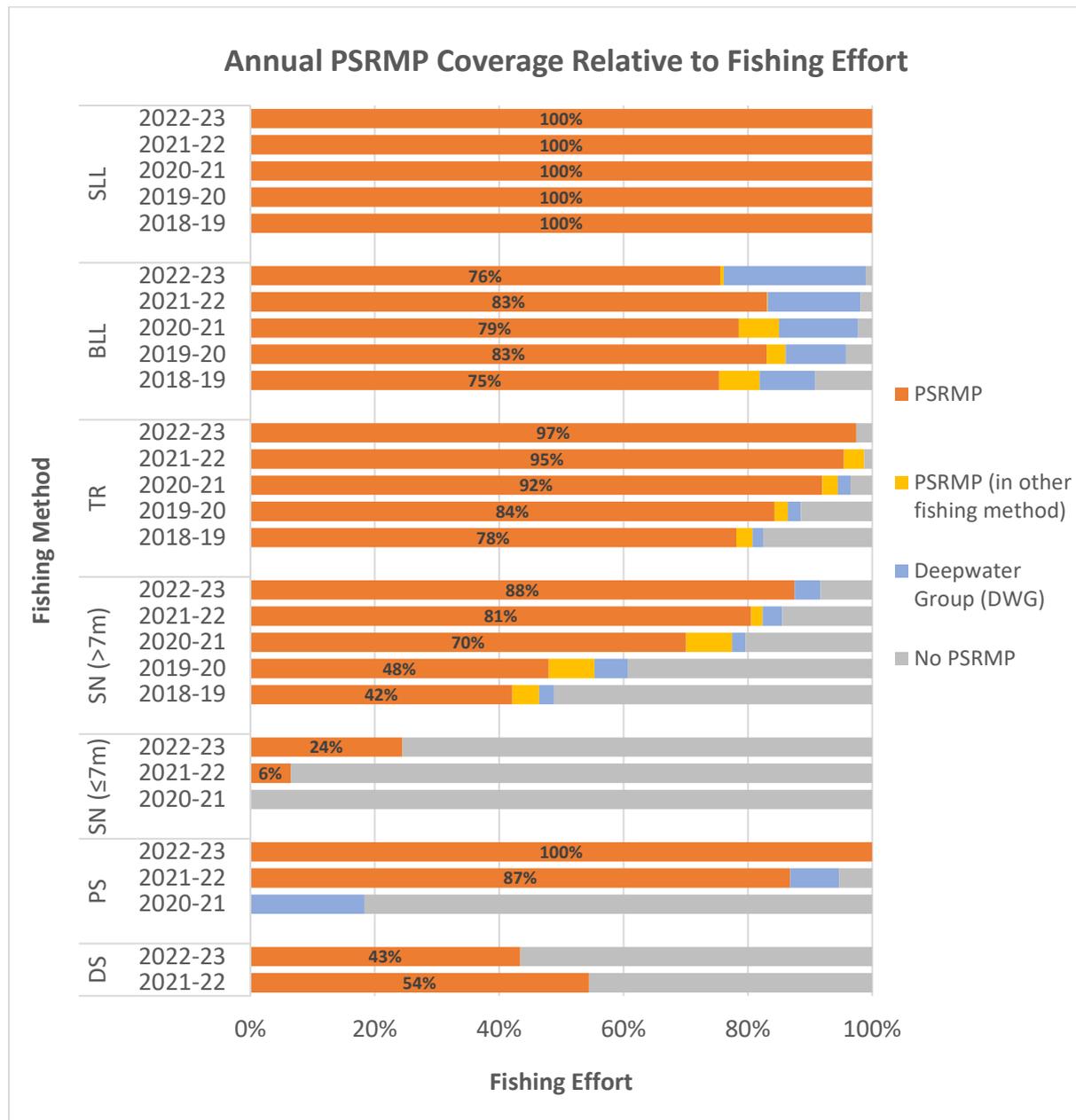


Figure 3: PSRMP coverage for inshore and HMS fishing effort (1 October 2018- 30 September 2023). Fishing effort is measured by net length for set net, and by fishing event for all other fishing methods. A detailed breakdown is tabulated in Appendix 4. Data supplied by FNZ RDM.

2. Alignment with Seabird Mitigation Standards

In the 2022-23 fishing year, the Liaison Programme continued work with fishers to align PSRMPs to the NPOA - Seabirds Mitigation Standards (Table 3). All PSRMPs are developed to be in line with regulations, but the Mitigation Standards go beyond the minimum regulatory requirements for seabird bycatch mitigation. At the end of the fishing year all of the most recent PSRMPs for active vessels were assessed for alignment against Mitigation Standards that were in place at the start of the year (Table 4). As the [Mitigation Standards to Reduce Light-induced Vessel Strikes of Seabirds](#) were

only published half way through the 2022-23 fishing year (March 2023) and updates to the surface longline mitigation standards were published in April 2023, PSRMP alignment will not be assessed until there is a complete year of data to be considered.

As with last year, 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 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. LOs are working on addressing this Mitigation Standard in future iterations of respective PSRMPs. PSRMP templates used in the 2022-23 fishing year can be found in Appendix 5.

Table 4: Alignment of PSRMPs with the Mitigation Standards in the 2022-23 fishing year. Alignment trend shows the level of change since the previous fishing year. 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= 20)				
MS 1.1 Fish waste is not discharged from the vessel immediately before or during setting	100	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	-
MS 2.1 Effective tori line throughout setting (unless hook-shielding devices used)	100	0	0	-
MS 2.2 Either hook-shielding devices used OR hooks set at night and weighted in accordance with ACAP minimum standards	35	65	0	(↑23)
MS 2.3 Bait is sufficiently thawed	85	0	15	(↑5)
MS 3.1 Hook surface time is minimised	100	0	0	(↑36)
MS 3.2 Seabirds are actively deterred from approaching hooks during hauling	95	5	0	(↑43)
MS 3.3 Seabirds caught and released alive are handled to maximise their chance of survival	100	0	0	(↑32)
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	100	0	0	-
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	40	0	60	(↑20)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	100	0	0	(↑32)
<u>Bottom Longline Mitigation Standards (hand-baiting)</u> (n= 49)				
MS 1.1 Fish waste is not discharged from the vessel immediately before or during setting	100	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	-
MS 2.1 A tori line effective at deterring birds from hooks is deployed throughout setting	98	0	2*	-
MS 2.2 Hooks set during high-risk periods protected by the tori line until hooks 10m deep. Sink rate test records kept.	0	0	100	-
MS 2.3 Hooks set outside of high-risk periods protected by the tori line until hooks 5m deep. Sink rate test records kept.	0	0	100	-
MS 2.4 Bait is sufficiently thawed	94	0	6	-
MS 3.1 Hook surface time is minimised	100	0	0	-

	Yes (%)	No (%)	Unclear (%)	Alignment trend (%)
MS 3.2 Seabirds are actively deterred from hooks during hauling	98	2	0	(↑6)
MS 3.3 Seabirds caught and released alive are handled to maximise their chance of survival	100	0	0	-
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	100	0	0	-
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	41	0	59	(↑24)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	100	0	0	-
<u>Under 28m Trawl Mitigation Standards</u>				(n= 98)
MS 1.1 Fish waste is not discharged from the vessel immediately before or during shooting or hauling	100	0	0	(↑1)
MS 1.2 Fish waste discharged whilst the net is being towed is batch discharged	100	0	0	(↑1)
MS 2.1 Warp protection is located at the warp on the discharge side	77	23	0	(↓2)
MS 2.2 Condition of trawl warps does not increase the risk of seabird captures	80	16	4	(↑6)
MS 3.1 All practicable stickers are removed from the net before each shot	100	0	0	(↑2)
MS 3.2 Time gear is at the surface is minimised	98	1	1	(↑1)
MS 3.3 Gear maintenance and repairs is conducted in a way to minimise risk to seabirds	72	22	5	(↑2)
MS 3.4 Live birds caught in the net are handled in ways to maximise survival	96	2	2	-
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	93	1	6	(↑12)
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	23	0	77	(↑15)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	96	2	2	-
<u>Set Net Mitigation Standards</u>				(n= 56)
MS 1.1 Fish waste is not discharged from the vessel immediately before or during setting	100	0	0	-
MS 1.2 Any fish waste discharged during hauling must be batch discharged	100	0	0	-
MS 2.1 Nets are not set in the vicinity of known or observed bird colonies or known foraging areas	100	0	0	(↑3)
MS 2.2 Nets are not set in an area when there is active bird activity, such as feeding/diving	80	18	2	(↑63)
MS 3.1 All practicable stickers are removed from the net before each shot	98	2	0	(↓2)
MS 3.2 Time gear is at the surface is minimised	100	0	0	-
MS 3.3 Nets are not stalled ¹	95	4	2	(↑8)
MS 3.4 Gear maintenance and repairs is conducted in a way to minimise risk to seabirds	96	4	0	(↑10)
MS 3.5 Live birds caught in the net are handled in ways to maximise survival	66	34	0	(↓27)
MS 4.1 Deck lighting does not unnecessarily attract or disorientate seabirds	98	2	0	(↑9)

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.

	Yes (%)	No (%)	Unclear (%)	Alignment trend (%)
MS 4.2 Seabirds are not induced to land on the deck due to the presence of fish waste	27	0	73	(↑10)
MS 4.3 Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	66	34	0	(↓27)

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

Further to the alignment for each individual Standard, it can also be useful to look how closely each of the vessel’s PSRMPs align to the Mitigation Standards as a whole. This informs planned LO engagement for the 2023-24 fishing year. Figure 4 shows the proportion of plans sitting in each of the alignment level categories.

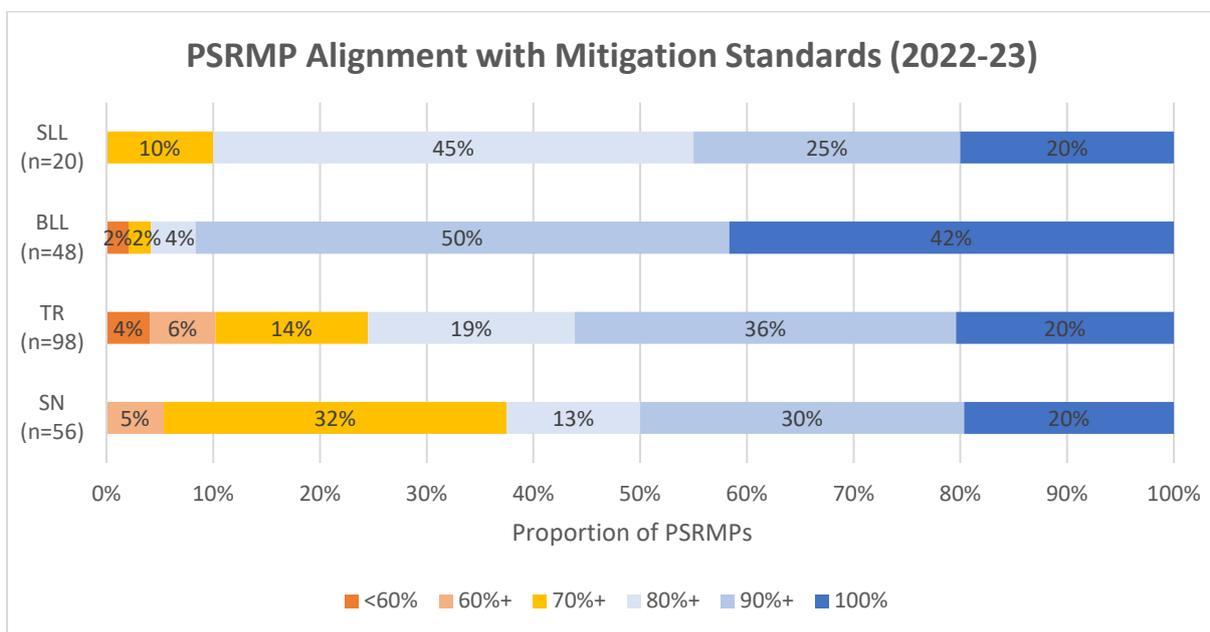


Figure 4: Categorized levels of PSRMP alignment with the Mitigation Standards in the 2022-23 fishing year.

2.1 Surface Longline Alignment to Mitigation Standards

For surface longliners, an audit of PSRMPs showed an increase in alignment for all Mitigation Standards not already at 100%.

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 (85%) also state the use of thawed bait. As indicated above, only some of the plans (35%) 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. Half of the plans state that they ‘mostly’ night set. Additionally, it should be noted that only nine vessels state the use of a haul mitigation “device”, while the rest of PSRMPs state behaviours like spraying a deck hose or banging a gaff as a form of haul mitigation. The focus on haul mitigation devices in addition to

mitigation behaviours, was one of the main changes to the updated surface longline Mitigation Standards in April 2023. In general, improvements to SLL plans could include: (1) improved weighting regimes and clarification of how far the weight is from the hook, and (2) explicit ways for *how* a vessel plans to keep hooks below the surface during a haul break.

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, hook-shielding devices that have a 10m release depth are available upon request as supplies allow. A key focus is to now support the uptake of these devices in the SLL fleet.

Further review of the surface longline Mitigation Standards should include the consideration of haul breaks, where some vessels may stop to clean up halfway through the haul and discard both bait and fish waste.

2.2 Bottom Longline Alignment to Mitigation Standards

For bottom longliners, an audit of PSRMPs showed an increase in alignment for two Mitigation Standards (MS 3.2 and MS 4.2), with the remaining Standards not changing from the already high alignment last year. 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 (94%) state that sink rate tests will be conducted, and that 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. Alignment to MS 4.2 (i.e. *Seabirds are not induced to land on the deck due to the presence of fish waste*) increased, but still remains relatively low (41%). In general, some improvements to BLL plans could include: (1) use of hauling mitigation devices in addition to hauling mitigation behaviours, where appropriate (2) explicit ways for *how* a vessel plans to keep hooks below the surface during a haul break, and (3) further 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.

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, an audit of PSRMPs showed an increase in alignment for all but MS 2.1, which had a 2% decrease (i.e. *“The trawl warp located closest to the side of the vessel from which fish waste is discharged is protected by a visible and physical barrier which deters birds from approaching the warp (unless the vessel is operating at a time and place where there is no risk to seabirds)”*).

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, appropriate protected species handling and release procedures, and light management. 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 (77%), that the condition of the trawl warp does not increase risk to seabirds (80%), and that gear maintenance and repairs are conducted in a way to minimise risk to seabirds (72%). 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) clarification on circumstances if there is a time and place LOs agree there is no risk to seabirds for MS2.1, and (3) further plan updates are made against the most recent PSRMP template so that lingering Standards are addressed.

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, they fish in a low-risk area, or they fish single-handedly and consider it unsafe to deploy a warp deflector. Currently, there are a variety of seabird scaring devices used to mitigate warp strike (e.g. bafflers and fish cases), but these 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 most Mitigation Standards, except MS 3.1 (i.e. *All practicable stickers (fish caught in mesh) are removed from the net before each shot*), which decreased by 2% and MS 3.5 and MS 4.3, which revolve around the handling of seabirds to maximise the chance of survival and decreased by 27%.

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, not stalling nets, ensuring gear maintenance and repairs are conducted in a way to minimise risk to seabirds, and light management. The majority of set net plans address not setting in an area where there is active bird activity, such as feeding/diving (80%), as well as appropriate protected species handling and release procedures (66%). The only improvement noted for set net plans was clarification around areas/times identified to be high risk. Supporting resources referenced in MS 2.2 still need to be developed under the NPOA Seabirds and provided to LOs.

2.5 Future Mitigation Standards alignment reporting

Due to the establishment of electronic monitoring and the ability to better verify protected species captures in the inshore and HMS fleets, future Liaison Programme Annual reports will start shifting away from input reporting (mitigation in PSRMPs) and start focusing on output reporting (protected species captures). However, since cameras only started going live for some fleets in August 2023, continued input reporting is included above for completeness.

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 PSRMP. See the MPI website for the [2022-23 Observer seadays 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. However, onboard camera rollout started going live from August 2023.

In the 2022-23 fishing year, a total of 31 PSRMP audits were completed by Observer Services and forwarded on to the DOC Liaison Programme for follow-up. This is down from the 60 audits completed in the previous year. Of the audits completed, there were 5 surface longline audits, 3 bottom longline audits, 12 trawl audits, and 11 set net audits. Three inshore observer trips did not complete PSRMP audits, which included one bottom longline and two trawl trips. Observer audit forms used in the 2022-23 fishing year can be found in Appendix 6.

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.

Overall, 71% (n=22) of observed vessels were confirmed to be following every aspect of their PSRMP, which is up from 58% (n=35) in 2021-22. 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 assessed via FNZ observer audits by fishing method over time. Dashes (-) indicate where information is not available.

	PSRMP Audits Received	Non-adherence					
		Documentation	Discharge management	Bycatch mitigation devices	Bycatch mitigation procedures	Reporting	Handling or release
SLL							
2018-19	18	1 (6%)	7 (39%)	6 (33%)	4 (22%)		
2019-20	13		5 (38%)	4 (31%)	2 (15%)	2 (15%)	
2020-21	14		8 (57%)	4 (29%)			
2021-22	3	1 (33%)	2 (67%)	3 (100%)		2 (67%)	1 (33%)
2022-23	5		2 (40%)	1 (20%)		1 (20%)	
BLL							
2018-19	10		2 (20%)	7 (70%)	1 (10%)		
2019-20	27	4 (15%)	5 (19%)	9 (33%)	7 (26%)		
2020-21	19		2 (11%)	3 (16%)			
2021-22	8	1 (13%)	1 (13%)	5 (63%)	1 (13%)		
2022-23	3	1 (33%)		1 (33%)			1 (33%)
Trawl							
2018-19	3				1 (33%)		
2019-20	38	10 (26%)	7 (18%)	1 (3%)	1 (3%)	1 (3%)	1 (3%)
2020-21	46	1 (2%)	4 (9%)	7 (15%)	3 (7%)		
2021-22	38	1 (3%)	3 (8%)	1 (3%)	5 (13%)		
2022-23	12		3 (25%)		1 (8%)		
SN (>7m)							
2018-19	-	-	-	-	-	-	-
2019-20	6						
2020-21	21	2 (10%)			1 (5%)	2 (10%)	
2021-22	11		4 (36%)				
2022-23	11		2 (18%)				

In the 2022-23 fishing year there were various forms of non-adherence across the fishing methods (Figure 5). 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.

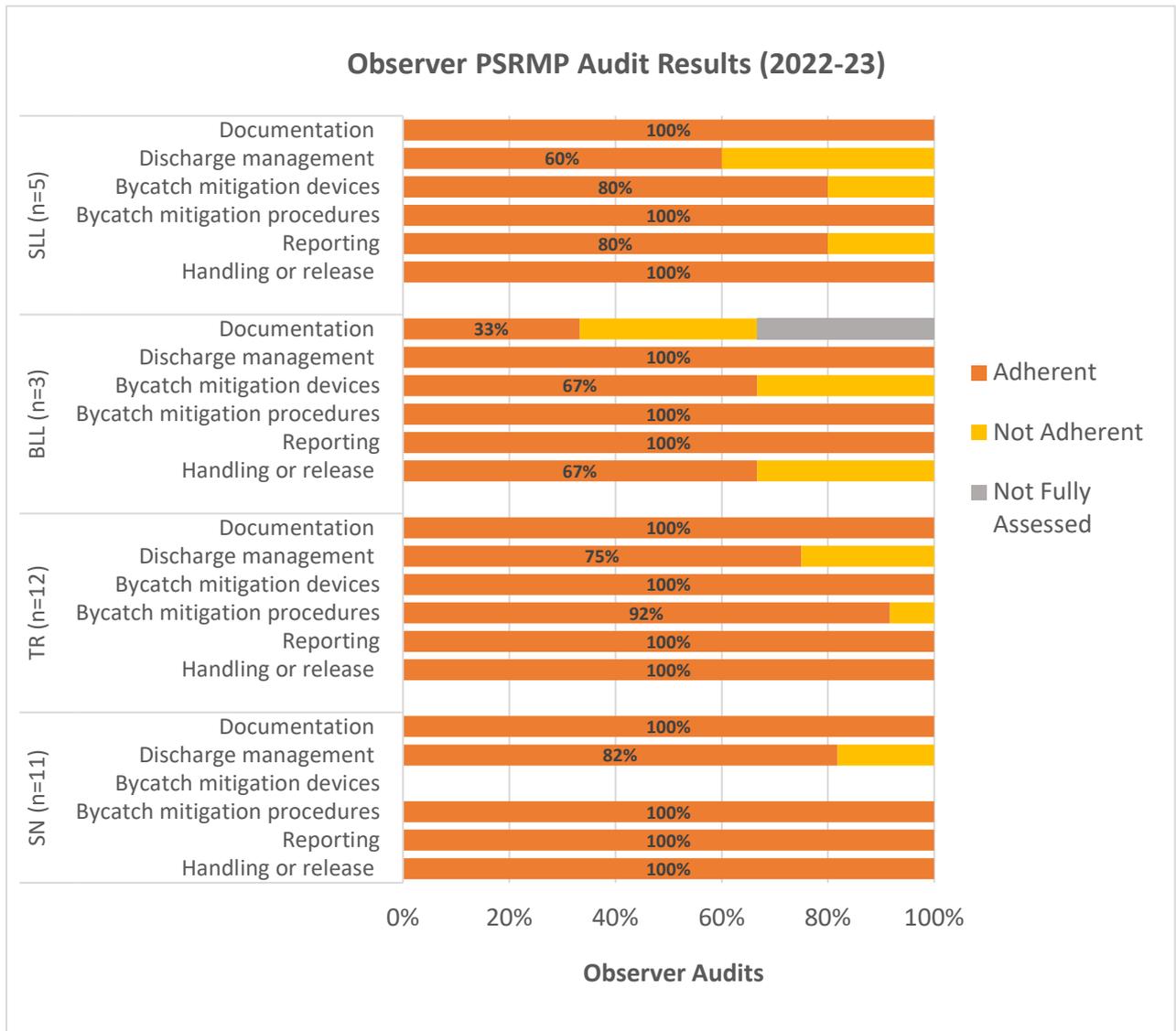


Figure 5: Results of Protected Species Risk Management Plan (PSRMP) observer audits in the 2022-23 fishing year. Caution should be expressed when drawing conclusions across the fleet where sample sizes are low.

3.1 Surface Longline Audits

With a sample size of five observer audits, it is important to express caution when drawing far-reaching conclusions. Overall, SLL observer audits were found to have 100% adherence in documentation and handling and release. This means that all vessels were confirmed to be carrying PSRMPs and were familiar with their contents, and handled any live protected species captures according to the DOC Handling and Release Guide.

Non-adherence was detected regarding discharge management, bycatch mitigation devices, and reporting. 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 bait and offal were intermittently discarded on the same side as hauling, and another observer noted that weather screens made it difficult for the vessel to discard on the non-hauling side. In terms of bycatch

mitigation devices, one audit recorded that a vessel was not line weighting as per the PSRMP and instead had the weight at the shark clip 12m from the hook. The adjusted line weighting regime was reportedly changed to reduce gear loss due to shark bite offs. This audit also found that the tori line was not adjustable and was suspected to have an aerial extent of about 50m, not the minimum 75m in regulations. One audit had issues with reporting, where a seabird vessel strike was not reported. Any issues regarding non-compliance are passed on to Fisheries Compliance following the observer's trip debrief.

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

3.2 Bottom Longline Audits

With a sample size of three observer audits, it is important to express caution when drawing far-reaching conclusions. Overall, BLL observer audits were found to have 100% adherence in discharge management bycatch mitigation procedures, and reporting. This means that all vessels were confirmed to have fish waste held immediately before and during setting, used baits and fish waste either held or batch discharged to the side opposite the hauling station, lighting managed in a way that avoided attracting or disorientating seabirds, hooks kept below the surface if there were any breaks in hauling, the use of frozen bait avoided, and all protected species captures electronically reported to MPI.

There was one 'unknown' recorded in the documentation category, which was because one audit could not confirm if the skipper and crew were familiar with the contents of the PSRMP. One of the three total audits was also recorded on an old version of the form.

Non-adherence was detected regarding documentation, bycatch mitigation devices, and handling and release. One audit found that sink rate test records were not kept onboard. Regarding bycatch mitigation devices, one audit found the tori line was not able to be adjusted to cover the hook-bearing line to suit varying conditions and no spare tori line parts were carried. One audit also found that the handling and release of seabirds was rougher than the guidelines and recommendations for gentle handling were disregarded.

3.3 Trawl Audits

Overall, trawl observer audits (n=12) were found to have 100% adherence in documentation, bycatch mitigation devices, reporting, and handling or release. This means that all vessels were confirmed to be carrying PSRMPs and were familiar with their contents, if present a warp mitigation device was used in accordance with the PSRMP, all protected species captures were electronically reported to MPI, and any live protected species captures were handled according to the DOC Handling and Release Guide.

Non-adherence was detected regarding discharge management and bycatch mitigation procedures. Three audits found that the vessel was not batch discharging at intervals when discharging during the tow, and one audit noted that fish waste was negligible and discharged as it was created over the stern which did not align with the PSRMP. Regarding bycatch mitigation procedures, one audit

identified that the net was kept at/near the surface for an unexpected or unnecessary amount of time but 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, bycatch mitigation procedures, reporting, and handling and release. This means that all vessels were confirmed to be carrying PSRMPs and were familiar with their contents, did not keep the net at the surface for an unexpected or unnecessary amount of time, managed lighting in a way that avoided attracting or disorienting seabirds, were electronically reporting all protected species captures to MPI, and handled any live protected species captures according to the DOC Handling and Release Guide.

Non-adherence was only identified for discharge management. One audit found that fish waste was discarded continuously as fish were processed as they came onboard during hauling. Another audit also found that not all offal was batch discarded. All large offal and heads (from sharks, skates and ling) were retained in fish bins and batch discarded. However, small offal and innards were sometimes discarded during processing on the port side away from the net.

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 2022-23 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. Of the approximately 388 vessels active and within scope of the Liaison Programme in the 2022-23 fishing year, 21% (n=81) submitted electronic Non-fish or protected fish species (NFPS) Catch Reports, which is up from 20% (n=76) last year. Of the 562 non-benthic electronic NFPS Capture Reports by these vessels, 126 (which equates to 27% of individuals), were logged and responded to by LOs (Table 7).

This translates to 88 trigger events and 18 non-trigger follow-ups from 44 different vessels in the 2022-23 fishing year (Table 8). This is an increase from the 61 trigger events from 28 different vessels last year. Overall, 50% of observed triggers were proactively reported to their LO (same as last year), but only 24% of unobserved triggers were proactively reported to their LO (down from 36% last year).

Table 7: Number of protected species reported through fisher electronic reporting and proportion that were followed up by Liaison Officers from 1 October 2022- 30 September 2023.

	Alive		Dead		Total		Grand Total	Total Response (%)
	LO Response	No LO Response	LO Response	No LO Response	LO Response	No LO Response		
Surface longline	43	90	61	214	104	304	408	25%
Birds	6	33	50	200	56	233	289	19%
Albatrosses (Unidentified)	3	3	11	20	14	23	37	38%
Great albatrosses	1		7		8		8	100%
Smaller albatrosses	2	13	17	62	19	75	94	20%
Other seabirds		17	15	118	15	135	150	10%
Other	37	57	11	14	48	71	119	40%
Pinnipeds	14	51	10	13	24	64	88	27%
Cetaceans	6	1			6	1	7	86%
Sharks and rays		2		1		3	3	-
Turtles	17	3	1		18	3	21	86%
Bottom longline	8	10	36	9	44	19	63	70%
Birds	5	7	34	9	39	16	55	71%
Great albatrosses		1				1	1	-
Other seabirds	5	6	34	9	39	15	54	72%
Other	3	3	2		5	3	8	63%
Cetaceans	1		1		2		2	100%
Sharks and rays		3	1		1	3	4	25%
Turtles	2				2		2	100%
Trawl	2	51	10	61	12	112	124	10%
Birds	1	44	2	51	3	95	98	3%
Albatrosses (Unidentified)		2	1	15	1	17	18	6%
Great albatrosses	1		1	1	2	1	3	67%
Smaller albatrosses		5		17		22	22	-
Other seabirds		37		17		54	54	-
Shags and penguins				1		1	1	-
Other	1	7	8	10	9	17	26	35%
Pinnipeds		3	2	9	2	12	14	14%
Cetaceans			6		6		6	100%
Sharks and rays		4		1		5	5	-
Turtles	1				1		1	100%
Set Net	5	13	9	40	15	53	67	22%
Birds		8	4	23	4	31	35	11%
Smaller albatrosses		1				1	1	-
Other seabirds		5		3		8	8	-
Shags and penguins		2	4	20	4	22	26	15%
Other	5	5	5	17	11	22	32	34%
Pinnipeds		2	3	17	3	19	22	18%
Cetaceans			2		2		2	100%
Sharks and rays	5	3			5	3	8	63%
Purse Seine		6		9		15	15	0%
Birds		5		9		14	14	-
Other seabirds		5		9		14	14	-
Other		1				1	1	-
Sharks and rays		1				1	1	-
Non-fishing Vessel Strike	16	4			16	4	20	80%
Birds	16	4			16	4	20	80%
Smaller albatrosses		2				2	2	-
Other seabirds	16	2			16	2	18	89%
Grand Total	74	174	116	333	191	507	697	27%

Table 8: Number of trigger events by fishing method from 1 October 2022- 30 September 2023. 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	8	40%	36	22%	44	15
BLL	1	0%	24	29%	25	15
TR	2	100%	8	25%	10	8
SN	7	57%	2	0%	9	5
Total	18	50%	70	24%	88	43

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.

As per the South Island Hector’s Dolphin Bycatch Reduction Plan, for each Hector’s dolphin capture event, the LO was notified, the operator and LO discussed the event and an amendment to the vessel’s PSRMP was made if appropriate.

In August 2023, the Liaison Programme also started collecting more information on turtle bycatch to get a clearer idea about post-release survival of turtles in New Zealand fisheries. This came in the form of an in-depth questionnaire (Appendix 7) that LOs fill out with skippers following a turtle bycatch event. The information will also be used to inform the FNZ project PRO2023-15: *Post-release survivability, cryptic mortality, and catchability for leatherback turtles caught in New Zealand waters*.

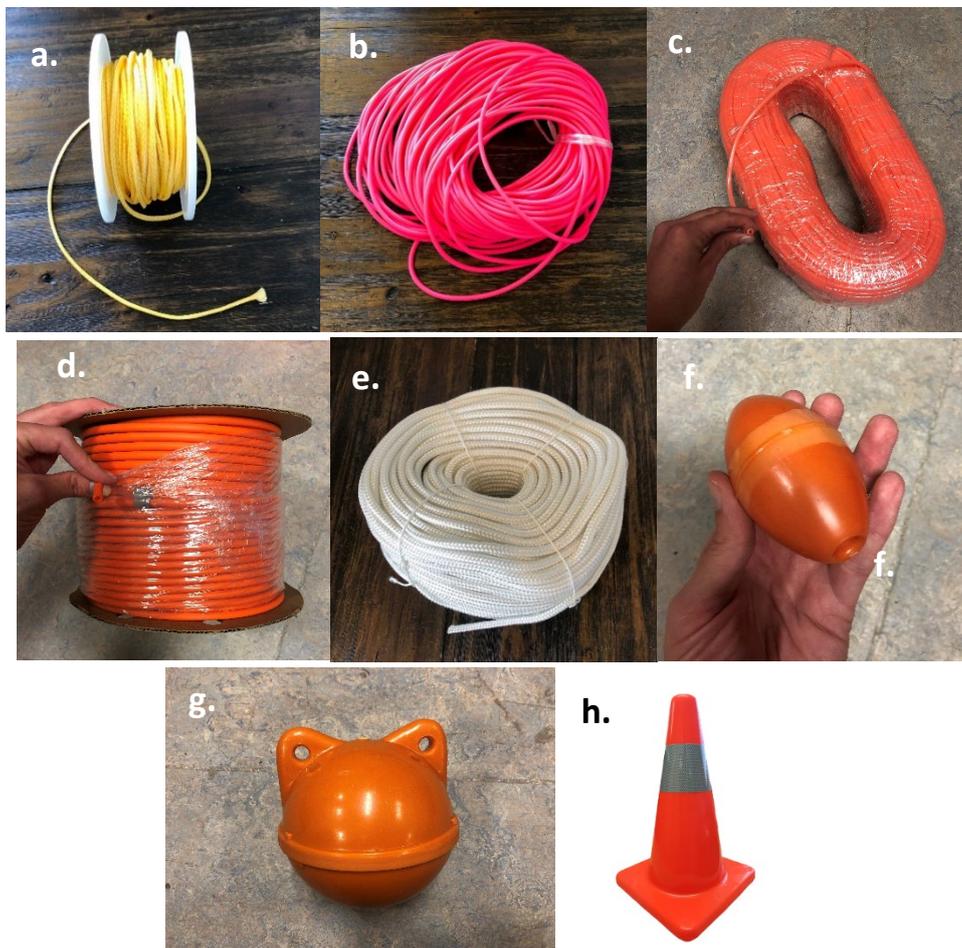
Further information on protected species captures can be found within the [CSP Annual Research Summaries](#), the [FNZ quarterly reports](#) and the [NZ protected species captures website](#).

5. Bycatch Mitigation Resources

DOC did not order any further hook-shielding devices in the 2022-23 fishing year, but the Liaison Programme facilitated equipping ten different vessels with devices ordered in previous years. Due to this spike in uptake, DOC proceeded with another order of 4000 10m-release Hookpods in January 2024. Since 2019, Government has ordered a total of 20,000 20m-release Hookpods and 14,000 10m-release Hookpods to enable mitigation use within the NZ domestic surface longline fleet.

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
2. Streamers
 - b) 3.18mm Pink Kraton Tubing
 - c) 3mm Pink Fluorescent Snood Tubing
 - d) 6mm x 4mm Orange Beauty Tubing
3. Drag
 - e) 9mm Trawl Braid (500L)
 - f) Egg floats (@10mm hole diameter)
 - g) Egg floats (@ 150mm hole diameter)
 - h) 450mm Reflective Traffic Cones



Liaison Officers also 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.



Finally, no resource documents were updated this year but there were a few new resources developed to explain the South Island Hector’s Dolphin Bycatch Reduction Plan. Further educational resources were also developed in early 2024 to assist with the identification and improved species resolution of fisher reports for smaller albatrosses (mollymawks).

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

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

Plans and Progress in the 2023-24 Fishing Year

The objectives of the 2023-24 fishing year (as per Appendix 2) are to gather up any remaining active inshore vessels in bottom longline, trawl, and >8m set net. Work is still underway to grow Liaison Programme coverage in the (<8m) harbour set net fleet, but recent discussions may lead to Seafood New Zealand Inshore Council picking up this fleet in the future. We established an additional LO role to support work in the South Island, which has proven to be very helpful with the increased reports and carcass recovery for Hector's dolphins.

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 Seabirds, NPOA Sharks, Hector's and Māui TMP, etc.). The role of the LO will continue to function in supporting and educating fishers in best practice mitigation and providing a vital interface between skippers, government, and researchers.

By the end of the 2022-23 fishing year there were 240 active vessels included in the Liaison Programme, and five LOs spread throughout the regions. About 388 vessels were active in scope of the Liaison Programme's prioritised inshore and HMS fleets. With the continued rollout of onboard cameras there will be an anticipated increase to workload and we will need to find a balance between LO capacity and adequate levels of response.

In February 2024, a Liaison Programme workshop was held with Parties from the Department of Conservation, Fisheries New Zealand and Seafood New Zealand Inshore Council in order to identify areas in need of improvement for the future of the Inshore Liaison Programme. This was a timely workshop to have due to the upcoming renewal of the project but might become an annual occurrence in future years. Participants discussed the future vision for the Liaison Programme as well as worked through operational barriers, fleet prioritisation, electronic monitoring, and roles, responsibilities and functions of those contributing to the Programme. Many actions were identified over the course of the one-day workshop and will be progressed over the coming year.

The 2023-24 fishing year also marks significant progress in the Bycatch Response Protocols and collaboration between agencies and industry around priority high-risk fisheries. Over the summer, with the support of LOs and an industry Code of Practice, a particular focus was given to the East Coast South Island surface longline fleet as a pilot to manage seabird bycatch levels. There were many learnings here and more is anticipated to be presented at a future CSP Technical Working Group.

As discussed in previous years, 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 2023-24 fishing year.

Appendix 1: MIT2021-01 Liaison Programme Project Description

Conservation Services Programme Annual Plan 2022/23

4. Mitigation Projects

NOTE: This multi-year project was consulted on in 2021/22 and is included here for completeness.

4.1 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

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increased engagement with quota holders to support the uptake of PSRMPs and Mitigation Standards.

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

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 connect fishers to the right tools in order to deliver on the vision and outcomes of departmental strategies and relevant cross-government plans.

5-year Objective

By 2025, the inshore & HMS core fleet 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):

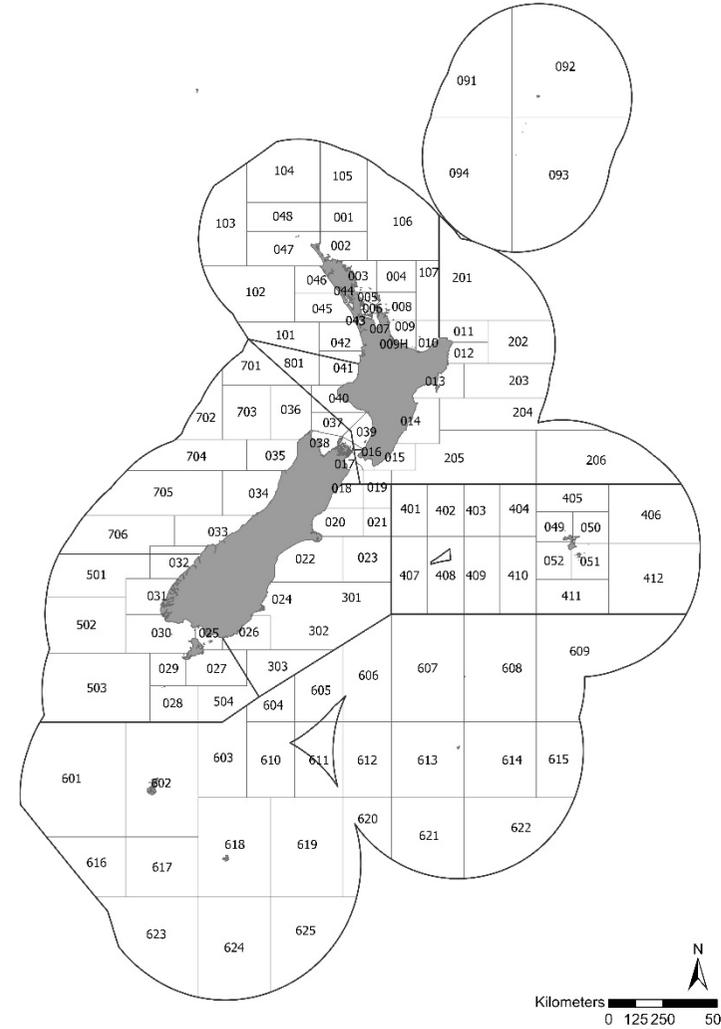
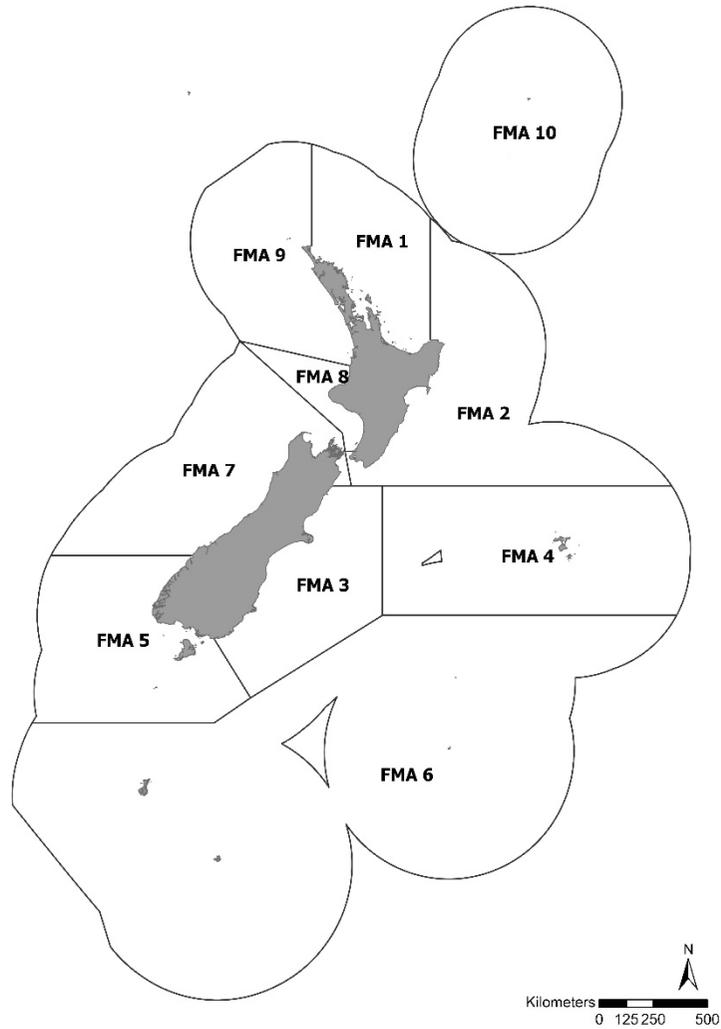
- Proportion of active vessels in each fleet that have PSRMPs
- Proportion of PSRMPs that meet Mitigation Standards in each fleet
- Percentage of fishing vessel adherence to their PSRMPs
- Number of threatened and protected species captured
- Proportion of the fleet with a high rating for LO confidence in the operator’s ability to implement the toolbox (1 - not interested, 5 – really engaged)
- Proportion of templates reviewed annually (i.e. PSRMP templates, etc.)
- Proportion of fleet with good quality mitigation
- 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, the Hector’s Māui TMP and BRP) 	<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 2018- 30 September 2023). 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	2022-23	1.00			
	2021-22	1.00			
	2020-21	1.00			
	2019-20	1.00			
	2018-19	1.00			
BLL	2022-23	0.74	0.01	0.23	0.02
	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
TR	2022-23	0.97			0.03
	2021-22	0.95	0.03		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
SN (>7m)	2022-23	0.88		0.04	0.08
	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
SN (≤7m)	2022-23	0.24			0.76
	2021-22	0.06			0.94
	2020-21				1.00
Purse Seine	2022-23	1.00			
	2021-22	0.87		0.08	0.05
	2020-21			0.18	0.82
Danish Seine	2022-23	0.43			0.57
	2021-22	0.54			0.46

Appendix 5: PSRMP Templates for the 2022-23 Fishing Year

PSRMP templates were unchanged from the 2020-21 version for surface longline, bottom longline, trawl and set net, and the 2021-22 version for purse seine. Templates have since been updated for the 2023-24 fishing year and will be presented in the next iteration of this report.

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:

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

Appendix 6: Observer Audit Templates for the 2022-23 Fishing Year

All PSRMP Observer Audit templates were unchanged from the 2021 versions, with the exception of the purse seine audit form that was established in June 2023.

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:

Purse Seine Vessel: Observer PSRMP Audit



Fisheries New Zealand

Tini a Tangaroa

Trip number	Observer code	Vessel name	Trip start date	Trip end date
□ □ □ □	□ □ □ □		□ □ / □ □ / □ □	□ □ / □ □ / □ □
Target species		FMA(s) fished	Number of sets observed	
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.

Documentation

- Item 1 Was a copy of the vessel's Protected Species Risk Management Plan (PSRMP) readily available and in a place accessible to all crew and observer?
- Item 2 Did the vessel carry a copy of the appropriate 10 Golden Rules and Operational Procedures on board that was made available upon request?
- Item 3 Were the skipper and crew familiar with the contents of the:
- (a) Protected Species Risk Management Plan?
 - (b) 10 Golden Rules?
 - (c) Operational Procedures?

Protected Species Interactions

- 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 alter any fishing practices or operations (e.g. move to a different fishing area)? *(If yes, please describe in the comments.)*
- 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 caught alive, handled and released according to the DOC Handling and Release Guide?
- Item 9 Where applicable, was a sling or brailer used for large bycaught protected species (e.g. spine-tailed devil rays)?

Fish waste management

- Item 10 Was all fish waste/offal discharge managed as per the vessel's PSRMP?

Placement

- Item 11 Was a crew member made responsible for determining the presence/absence of protected species throughout fishing operations and reporting that information to the skipper?
- Item 12 Did the vessel avoid setting gear on any observed protected species (i.e. marine mammals, or protected sharks and rays)?

Other Mitigation

- Item 13 Were any other mitigation methods or deterrents used? (If yes, please describe in the comments)

Deck landing/impact

- Item 14 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:

Appendix 7: Turtle Questionnaire to Inform Post-release Survival

Questions for skippers related to turtle interactions

Vessel:	Capture Date:	Questionnaire Date:
<p>1. High priority questions</p> <p>General What species of turtle (leatherback or hard shell if species uncertain)? _____ How big was the turtle? Carapace (top shell) length? _____</p> <p>How the turtle was caught (tick where applicable)</p> <p><input type="checkbox"/> Just holding the bait/hook in its mouth?</p> <p><input type="checkbox"/> Hooked</p> <ul style="list-style-type: none"> <input type="checkbox"/> Externally or on the hard beak? <input type="checkbox"/> In the upper or lower jaw or corner of mouth? <input type="checkbox"/> Hook visible inside the mouth attached to soft tissue/jaw joint? <input type="checkbox"/> Suspected to be swallowed (hook not visible)? <p><input type="checkbox"/> Entangled</p> <ul style="list-style-type: none"> <input type="checkbox"/> in the main line <input type="checkbox"/> in a branch line <input type="checkbox"/> Other: _____ <p>Was the animal comatose/resuscitated (Y/N)? _____</p> <p>Release condition If comatose or lethargic, was turtle allowed to recover on deck before being released (Y/N/NA)? _____ Was the turtle released (choose one):</p> <ul style="list-style-type: none"> <input type="checkbox"/> With all gear removed? <input type="checkbox"/> With hook and trailing line \geq half the length of the carapace but not entangled? <input type="checkbox"/> With hook and trailing line $<$ half the length of the carapace but not entangled? <input type="checkbox"/> Entangled in line? 		
<p>2. Medium priority questions</p> <p>Animal behaviour when caught?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Dead/unconscious <input type="checkbox"/> Alive – occasional voluntary movement of limbs <input type="checkbox"/> Alive - lethargic <input type="checkbox"/> Alive – active (rapid/strong swimming or movement on the deck) <p>Injuries</p> <ul style="list-style-type: none"> <input type="checkbox"/> No injuries <input type="checkbox"/> Superficial abrasions/scratches/ligature/line marks – what part of the body? _____ <input type="checkbox"/> Bruising – what part of the body? _____ <input type="checkbox"/> Deep cuts, fractures to shell, fractured limbs <input type="checkbox"/> Damage to eyes <input type="checkbox"/> Partial or complete amputation of limb <input type="checkbox"/> Water or froth discharging from mouth or nose <input type="checkbox"/> Bleeding – from where? _____ <p>Animal behaviour upon release?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sunk without moving <input type="checkbox"/> Remained at the surface without moving <input type="checkbox"/> Did not deliberately swim away from the vessel for more than 1 minute <input type="checkbox"/> Swam/dived deliberately away from the vessel <input type="checkbox"/> Other, e.g., swam in circles, did not use both front flippers, could not right itself. _____ 		

3. Any additional information/observations in comments box

- Other turtles in the vicinity?
- Were there sea jellies in the area (e.g., jellyfish)?
- What hook type and size (including offset angle of the barbs) was used?
- Bait type?
- Set or haul?
- Depth of fishing gear/number of hooks between floats?
- Number of hooks from sea turtle to the nearest float?
- Species caught either side of the turtle?
- The duration of the fishing event?
- Weather/sea conditions at the time?
- Sea surface temperature?
- Did the animal have a tag? Any information on the tag?

Comments

Appendix 8: Bycatch Mitigation Document Tracking

This table is, at the time of this report, a comprehensive list of all the current mitigation documents handed out to fishers through the Liaison Programme. PDFs are available for download on the [DOC Liaison Programme webpage](#).

Surface Longline (SLL)

	Version
1. FINZ 10 Golden Rules – Small Vessel SLL	3.0 (2022)
2. FINZ 10 Golden Rules for NFPSCR	2022
3. SLL Tori Line Design Guide	2021
4. Small Vessel SLL Operational Procedures	3.0 (2021)
5. Turtle Handling and Release Fact Sheet	2022
6. Fur Seal Handling and Release and Crew Safety Guide	-
7. ACAP Hook Removal from Seabirds Guide	-
8. FINZ International and National Seabird Risk Frameworks	-
9. Fisheries Seabird Mitigation Measures - SLL Circular (+Corrigendum)	2019
10. MPI Shark Factsheets 1-4	2020
11. Seabird Bycatch Mitigation Standards Guide - SLL	2021
12. Managing Artificial Lights to Reduce Seabird Vessel Strikes	2022
13. Small Vessel Surface Longline Crew and Vessel Safety Guide	-
14. Tākaketai/ Black Petrel Factsheet	2020
15. Toanui/ Flesh-footed Shearwater Factsheet	2020
16. Observer PSRMP Audit Form	2021

Bottom Longline (BLL)

	Version
1. FINZ 10 Golden Rules – BLL	2.0
2. FINZ 10 Golden Rules for NFPSCR	2022
3. MPI BLL Circular One-pager	2021
4. Streamer Line and Bottle Tests – The Basics	2021
5. Sink Rate Test Protocol	2021
6. Sink Rate Test Record Sheet	2021
7. Guiding Principles for Improved Aerial Extent and Sink Rate	2021
8. BLL Tori Line Design Guide (>7m)	2021
9. Inshore BLL Operational Procedures	2.0 (2021)
10. ACAP Hook Removal from Seabirds Guide	-
11. Fisheries Seabird Mitigation Measures - BLL Circular	2021
12. FINZ International and National Seabird Risk Frameworks	-
13. Seabird Bycatch Mitigation Standards Guide - BLL	2021
14. Managing Artificial Lights to Reduce Seabird Vessel Strikes	2022
15. Tākaketai/ Black Petrel Factsheet	2020
16. Toanui/ Flesh-footed Shearwater Factsheet	2020
17. Observer PSRMP Audit Form	2021

Purse Seine

	Version
1. FINZ 10 Golden Rules – Purse Seine	1.0
2. FINZ 10 Golden Rules for NFPSCR	2022
3. Purse Seine Operational Procedures	1.0 (2020)
4. Managing Artificial Lights to Reduce Seabird Vessel Strikes	2022
5. MPI Shark Factsheets 1-4	2020
6. DOC Handling and Release Guidelines for Sharks and Rays	2022
7. Observer PSRMP Audit Form	2023

Trawl

	Version
1. FINZ 10 Golden Rules – Coastal Trawl	3.0 (2024)
2. FINZ 10 Golden Rules for NFPSCR	2022
3. Seabird Bycatch Mitigation Standards Guide - under 28m trawl	2021
4. Managing Artificial Lights to Reduce Seabird Vessel Strikes	2022
5. FINZ International and National Seabird Risk Frameworks	-
6. Identifying New Zealand Mollymawks	2024
7. Toanui/ Flesh-footed Shearwater Factsheet	2020
8. Observer PSRMP Audit Form	2021

North Island specific

1. NI Coastal Trawler Operational Procedures	2.1 (2021)
2. MPI Factsheet - Hector's and Maui dolphins TMP (North Island)	2020
3. Takoketai/ Black Petrel Factsheet	2020

South Island specific

1. SI Coastal Trawler Operational Procedures	1.5 (2020)
2. Warp Mitigation Options - Design Guide for Large Coastal Trawlers	-
3. Warp Strike Risk and Mitigation for Inshore and Coastal SI Trawlers	-
4. MPI Factsheet - South Island Hector's Dolphin BRP	2022
5. Hector's TMP South Island Trawl Restrictions	2020

Set Net

	Version
1. FINZ 10 Golden Rules – Coastal Setnet	3.0
2. FINZ 10 Golden Rules for NFPSCR	2022
3. MPI Shark Factsheets 1-4	2020
4. Seabird Bycatch Mitigation Standards Guide - Set Net	2021
5. Managing Artificial Lights to Reduce Seabird Vessel Strikes	2022
6. Identifying New Zealand Mollymawks	2024
7. Shag ID	2022
8. Acoustic Pinger Info Sheet	-
9. Observer Audit Form	2021

North Island specific

1. NI Coastal Setnet Operational Procedures	3.0 (2021)
2. Takoketai/ Black Petrel Factsheet	2020
3. Toanui/ Flesh-footed Shearwater Factsheet	2020
4. MPI Factsheet - Hector's and Maui dolphins TMP (North Island)	2020

South Island specific

1. SI Coastal Setnet Operational Procedures	3.0 (2021)
2. FINZ YEP Factsheet	2022
3. FINZ SI Hector's Dolphin Factsheet	2022
4. MPI Factsheet - Hector's and Maui dolphins TMP (South Island)	2020
5. MPI Factsheet - South Island Hector's Dolphin BRP	2022

North Island Harbour Net

	Version
1. FINZ 10 Golden Rules – Harbour Net	2.0
2. FINZ 10 Golden Rules for NFPSCR	2022
3. NI Harbour Netting Operational Procedures	2.0 (2022)
4. Seabird Bycatch Mitigation Standards Guide - Set Net	2021
5. Managing Artificial Lights to Reduce Seabird Vessel Strikes	2022
6. Takoketai/ Black Petrel Factsheet	2020
7. Toanui/ Flesh-footed Shearwater Factsheet	2020
8. Shag ID	2022
9. MPI Factsheet - Hector's and Maui dolphins TMP (North Island)	2020