LIAISON PROGRAMME ANNUAL REPORT

MIT2020-02 (*2020-21 Fishing Year*)

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Glossary

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

Purpose

This Liaison Programme Annual Report describes the progress that has been made towards delivering actions set out in the 2020-21 CSP Annual Plan during the 2020-21 fishing year (01 October 2020 – 30 September 2021). It also provides a summary of the inshore and Highly Migratory Species (HMS) fleets' adherence to Protected Species Risk Management Plans (PSRMPs) via observer audits and discusses how plans align with current best-practice mitigation advice. For more detail, please see the appendices for the Liaison Programme project description (Appendix 1), and Liaison Programme goals and objectives (Appendix 2).

Background

In order to effectively reduce the risk of interactions with protected species, it is important for vessels to be using best practice mitigation and to follow steps laid out by both regulatory and non-regulatory measures. With the support of Fisheries Inshore New Zealand (FINZ), the Conservation Services Programme (CSP) Protected Species Liaison Project aims to increase uptake of best practice mitigation for inshore and Highly Migratory Species 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 and set net 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.
October 2019	Electronic reporting becomes mandatory for the entire commercial fishing fleet and is rolled out in stages during 2019.
January 2020	Fisheries (Seabird Mitigation Measures—Surface Longlines) Circular 2019 comes into force.
May 2020	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).
October 2020	Hector's and Māui dolphin Threat Management Plan 2020 measures take effect.
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.
December 2020	FNZ quarterly report on commercial self-reported bycatch goes live.
April 2021	Mitigation Standards for set net finalised.
2021-22	**(MIT2021-01)**
October 2021	Fisheries (Seabird Mitigation Measures—Bottom Longlines) Circular (No. 2) 2021 comes into force.
December 2021	Reporting PSRMP and mitigation use in electronic reporting becomes mandatory.

A fundamental component of the Liaison Programme is the deployment of Liaison Officers. Their role (Figure 1) is to support and educate fishers on recommended mitigation strategies and develop vessel-specific Protected Species Risk Management Plans (PSRMPs). LOs also provide a vital interface between skippers, government, and researchers. The programme's Liaison Coordinator manages liaison activities, organises and provides 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 and the Coromandel), K. Jacob (set net vessels in Northland, Auckland and the Coromandel), B.

Leslie (Auckland, Bay of Plenty, Napier and Gisborne), J. Cleal (Wellington, top of South Island down to Lyttleton as well as Greymouth), and G. Parker (lower South Island from Timaru down to Bluff).

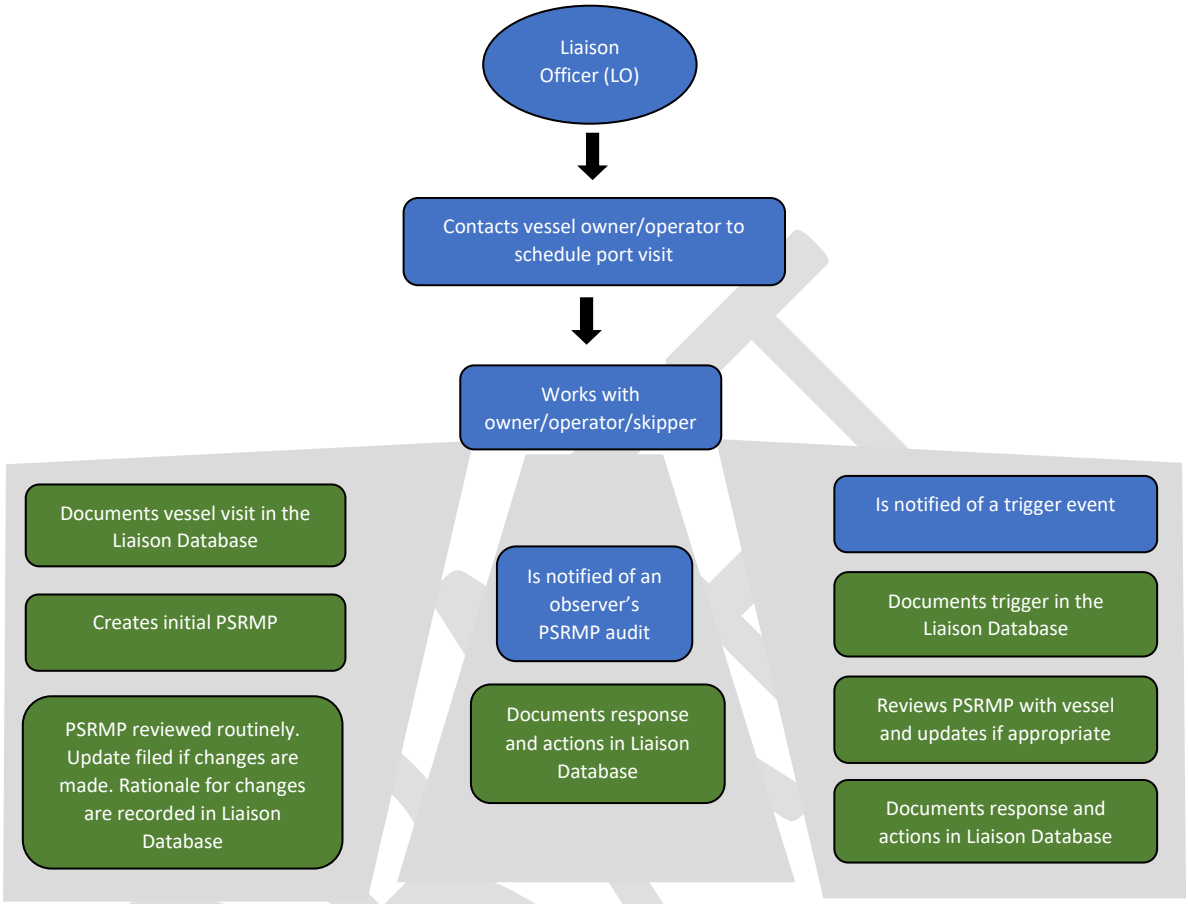


Figure 1: Workflow for Liaison Officers showing documentation completed. Green indicates a stored record.

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

The National Plan of Action Seabirds 2020 outlines a suite of Mitigation Standards that meet and go beyond the minimum regulatory requirements for seabird bycatch mitigation. The Mitigation Standards will be implemented for each relevant fishing method and are to be reviewed annually by 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. 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%

Progress on all the NPOA Seabirds 2020 performance measures is detailed in the Seabird Annual Report.

Lastly, work is still underway to develop an improved database for the Liaison Programme. The completion of this 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: 2020-21 Fishing Year

1. Protected Species Risk Management Plans (PSRMPs)

In the 2020-21 fishing year (01 October 2020- 30 September 2021) the Liaison Programme reviewed 157 PSRMPs and developed a total of 34 new PSRMPs for inshore and HMS vessels (Table 3). Relevant DOC Liaison Programme vessels and their associated fishing effort were identified using parameters established by the FNZ data management team. This included the consideration of fishing method, fishing area (Appendix 3), target species and vessel length. For the 2020-21 fishing year, vessels included in the DOC Liaison Programme fit into at least one of the following categories: (1) surface longline vessels; (2) bottom longline vessels, excluding autoliners and those targeting ling in FMA 2-8; (3) trawl vessels 28m and under, excluding those targeting scampi, or those targeting hoki in Statistical Areas 034, 035, 036, 016 and 017; and (4) set net vessels. Additionally, two Danish Seine vessels were contacted opportunistically, however, because this fishing method has not been a priority for the Liaison Programme data on Danish Seine effort was not requested at the time of this report.

Table 3: Number of Protected Species Risk Management Plans (PSRMPs) by fishing method developed between 1 October 2020- 30 September 2021. Dashes (-) indicate metrics that could not be assessed due to the absence of fishing effort data.

	PSRMP Reviews	PSRMP Updates	New PSRMPs	Active vessels with PSRMPs	Active vessels without PSRMPs
SLL	24	22	3	28	0
BLL	46	42	7	78	16
Trawl	76	66	15	114	6
Set Net (≤7m)	0	0	0	0	134
Set Net (>7m)	10	10	8	26	25
Danish Seine	1	1	1	-	-
Total	157	141	34	222	179

PSRMP coverage for inshore and HMS fishing effort over the last four fishing years is displayed in Figure 2, and a detailed breakdown of percentages is tabulated in Appendix 4. Despite challenges with COVID-19 and despite a significant amount of time being dedicated towards updating and aligning existing plans to the NPOA - Seabirds Mitigation Standards (updated PSRMP Templates can be found in Appendix 5), the Liaison Programme has managed to consistently increase coverage in the overall inshore and HMS fleets. 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. A few of these also operate in remote locations that are out of range of the existing Liaison Officer regions. At the end of the 2020-21 fishing year, the Liaison Programme began preparations to include the Tauranga purse seine fleet into the programme.

This year, COVID-19 and variable travel restrictions slowed down plans to begin engaging with the harbour set net fleet in the Northland and Auckland regions. For this reason, engagement with the harbour set net fleet was delayed till the 2021-22 fishing year. Unfortunately, other vessels in these regions which had already been brought into the Liaison Programme in previous years, were also subjected to prolonged periods of limited engagement.

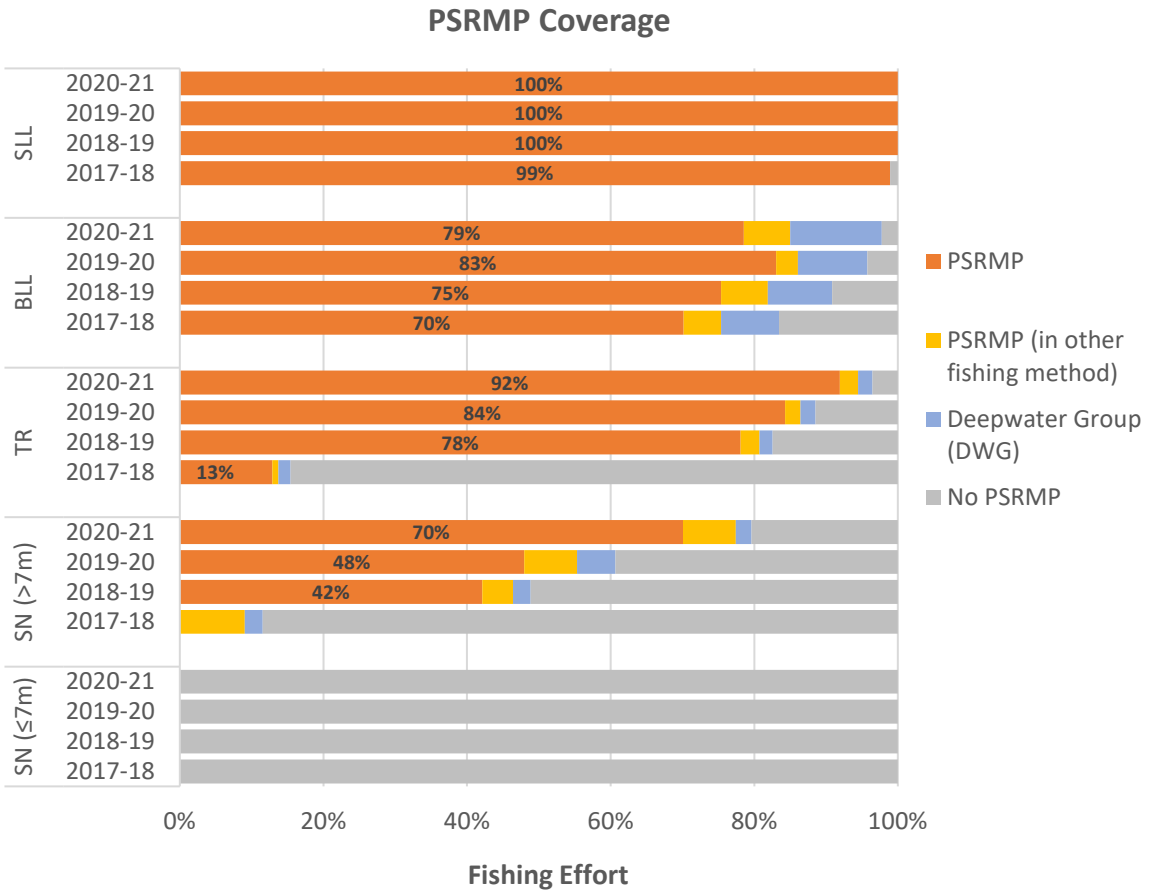


Figure 2: PSRMP coverage for inshore and HMS fishing effort (1 October 2017- 30 September 2021). Fishing effort data supplied by FNZ RDM. A detailed breakdown of PSRMP coverage is tabulated in Appendix 4.

For the 2021-22 fishing year, the Liaison Programme has allocated resources towards finalising PSRMPs for the purse seine fleet and plans to reach out to "out of range" vessels and bring them into the programme.

2. Alignment with Mitigation Standards

In the 2020-21 fishing year, the Liaison Programme worked to align PSRMPs to the Mitigation Standards that were released alongside the NPOA - Seabirds 2020 (Table 4). All PSRMPs are developed to be in line with regulations, but the Mitigation Standards go beyond the minimum regulatory requirements for seabird bycatch mitigation. In total, 20 vessels updated their SLL plan, 33 vessels updated their BLL plan, 67 vessels updated their trawl plan, and 16 vessels updated their set net plan. At the end of the 2020-21 fishing year all of the most recent PSRMPs for active vessels were assessed for alignment against the Mitigation Standards. Across the board, all PSRMPs could still be improved by clarifying procedures to minimise the presence of fish waste on deck. Even though fish waste management in terms of discards is clearly explained in the plans, procedures to keep the decks clear of fish waste (to reduce the risk of deck landings or impacts) is not. Some plans also describe a stop-setting threshold for bird interactions (i.e. "when x happens we'll stop setting until y") and it would be useful to implement a similar vessel-specific stop-setting threshold across all plans.

Table 4: Alignment of PSRMPs with the Mitigation Standards. Year 2019-20 is a baseline and includes an assessment of all PSRMPs on file, while 2020-21 is only an assessment of PSRMPs for vessels that were active within that fishing year. Mitigation Standards with a dash (-) indicate those that could not be assessed due to the absence of specific criteria within the plan.

		2019-20 baseline			2020-21		
		Yes (%)	No (%)	Unclear (%)	Yes (%)	No (%)	Unclear (%)
Surface Longline Mitigation Standards		(n= 42)			(n= 28)		
MS 1.1	Fish waste is not discharged from the vessel immediately before or during setting	86	14	0	96	0	4
MS 1.2	Bait and fish waste is held on board during hauling, when possible; any discharge must be batched and meet mandatory requirements	90	10	0	100	0	0
MS 2.1	Effective tori line throughout setting (unless hook-shielding devices used)	100	0	0	100	0	0
MS 2.2	Either hook-shielding devices used OR hooks set at night and weighted	55	45	0	68	32	0
MS 2.3	Bait defrosted	100	0	0	79	0	21
MS 3.1	Hauled hooks at or near the surface for the least time possible	-	-	-	46	54	0
MS 3.2	Seabirds actively deterred from approaching hooks during hauling	10	90	0	32	68	0
MS 3.3	Seabirds caught and released alive are handled to maximise their chance of survival	-	-	-	46	0	54
MS 4.1	Deck lighting does not unnecessarily attract or disorientate seabirds	95	5	0	100	0	0
MS 4.2	Seabirds are not induced to land on the deck due to the presence of fish waste	-	-	-	7	0	93
MS 4.3	Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	-	-	-	46	0	54
Bottom Longline Mitigation Standards (hand-baiting)		(n= 55)			(n= 54)		
MS 1.1	Fish waste is not discharged from the vessel immediately before or during setting	98	2	0	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	80	20	0	91	0	9
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.	-	-	-	-	-	-
MS 2.3	Hooks set outside of high-risk periods protected by the tori line until hooks 5m deep. Sink rate test records kept.	-	-	-	-	-	-
MS 2.4	Bait defrosted to improve sink rate	9	91	0	67	0	33
MS 3.1	Hook surface time minimised	82	18	0	93	7	0
MS 3.2	Seabirds are actively deterred from hooks during hauling	85	15	0	76	7	17
MS 3.3	Seabirds caught and released are handled to maximise chance of survival	96	4	0	96	0	4
MS 4.1	Deck lighting does not unnecessarily attract or disorientate seabirds	93	7	0	98	0	2
MS 4.2	Seabirds are not induced to land on the deck due to the presence of fish waste	-	-	-	20	0	80
MS 4.3	Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	96	4	0	96	0	4

		2019-20 baseline			2020-21		
		Yes (%)	No (%)	Unclear (%)	Yes (%)	No (%)	Unclear (%)
Under 28m Trawl Mitigation Standards		(n= 105)			(n= 111)		
MS 1.1	Fish waste is not discharged from the vessel immediately before or during shooting or hauling	97	1	2	98	1	1
MS 1.2	Fish waste discharged whilst the net is being towed is batch discharged	89	9	3	96	3	1
MS 2.1	Warp protection is located at the warp on the discharge side	54	44	2	71	28	1
MS 2.2	Condition of trawl warps does not increase the risk of seabird captures	-	-	-	55	0	45
MS 3.1	All practicable stickers are removed from the net before each shot	84	1	15	95	0	5
MS 3.2	Time gear is at the surface is minimised	77	0	23	95	0	5
MS 3.3	Gear maintenance and repairs is conducted in a way to minimise risk to seabirds	-	-	-	62	0	38
MS 3.4	Live birds caught in the net are handled in ways to maximise survival	72	0	28	92	0	8
MS 4.1	Deck lighting does not unnecessarily attract or disorientate seabirds	-	-	-	48	0	52
MS 4.2	Seabirds are not induced to land on the deck due to the presence of fish waste	-	-	-	4	0	96
MS 4.3	Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	71	0	29	92	0	8
Set Net Mitigation Standards		n/a			(n= 19)		
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	-	-	-	89	0	11
MS 2.2	Nets are not set in an area when there is active bird activity, such as feeding/diving	-	-	-	21	0	79
MS 3.1	All practicable stickers are removed from the net before each shot	-	-	-	100	0	0
MS 3.2	Time gear is at the surface is minimised	-	-	-	100	0	0
MS 3.3	Nets are not stalled	-	-	-	89	0	11
MS 3.4	Gear maintenance and repairs is conducted in a way to minimise risk to seabirds	-	-	-	84	0	16
MS 3.5	Live birds caught in the net are handled in ways to maximise survival	-	-	-	100	0	0
MS 4.1	Deck lighting does not unnecessarily attract or disorientate seabirds	-	-	-	79	0	21
MS 4.2	Seabirds are not induced to land on the deck due to the presence of fish waste	-	-	-	-	-	-
MS 4.3	Live birds that land on deck or impact with the vessel are handled in ways to maximise survival	-	-	-	100	0	0

Surface Longline

For surface longliners, 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 also state the use of thawed bait, but there are still a few where this information is needed.

About a third of the plans (32%) do not yet meet the Mitigation Standard of using hook-shielding devices or three out of three mitigation (i.e. tori line, night setting, and line weighting). In general, improvements to SLL plans could include: (1) clarification around appropriate protected species handling and release procedures for both deck strikes and those caught in the gear, (2) implementation of hauling mitigation, (3) explicit ways for *how* a vessel plans to keep hooks below the surface during a haul break, and (4) 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.

This year a social research project (BCBC2020-11d) examined the drivers and barriers for implementation of the Mitigation Standards within the surface longline fleet. Overall, interviewed fishers are still not very clear on the Mitigation Standards and had trouble differentiating them from regulations. However, fishers do seem motivated to improve their mitigation practices with solutions that are effective, safe, affordable, easy and practical. Unfortunately there is a lack of agreement on what constitutes the 'best' mitigation options available, based on their personal fishing operations and experiences. On numerous occasions fishers have raised lasers and line shooters as effective bycatch mitigation tools, but Government is not supportive of these options due to current research which raises concerns towards animal welfare and the potential to increase risk to seabirds.

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 barriers would be for cost and time. Heavy hooks (e.g. Procella) could also be an innovative solution to help fishers meet the minimum weighting standards described by ACAP.
2. Most fishers are also in support of setting at night to mitigate seabird bycatch. The only potential barrier is for some fishers that prefer day setting when targeting swordfish.
3. Hook-shielding devices currently have mixed reviews, however, those who use them swear by them. To improve uptake, suggested improvements were to enable device use at shallower fishing depths, provide advice on how to avoid tangles in storage bins, and to provide certainty about future costs. In consideration of this, DOC ordered new hook-shielding devices that have a 10m release depth and has arranged for better user-support upon the next deployment of devices.

Bottom Longline

For bottom longliners, PSRMPs are well aligned with the Mitigation Standards in terms of fish waste management during hauling and setting, effective tori line usage, keeping hooks at the surface for the least amount of time possible, light management, and appropriate protected species handling and release procedures for both deck strikes and those caught in the gear. The majority of BLL plans also state the use of thawed bait and hauling mitigation, but there are still a few where this information is needed. In general, some improvements to BLL plans could include: (1) explicit ways for *how* a vessel plans to keep hooks below the surface during a haul break, (2) 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, (3) expected depth of hooks achieved at the end of the tori line during high and low risk periods, and (4) specifying that sink rate test records are kept on board.

The majority of the 2020-21 fishing year was spent getting fishers accustomed with sink rate tests and preparing them for requirements set out in the Bottom Longline Circular (which came into force October 2021). PSRMPs document what operators actually plan to implement on their vessel, therefore, more work still needs to be done before details regarding depth at the end of a tori line can be reliably added to a PSRMP with confidence.

In addition to line weighting regimes, baited hook sink rate during setting is influenced by bait state (i.e. thawed bait), and also set mainline tension, which can be reduced by decreasing setting speed. Some plans describe reducing setting speed, but it is not something that is captured by the current Mitigation Standards.

Trawl

For <28m trawlers, PSRMPs are well aligned with the Mitigation Standards in terms of fish waste management during hauling and setting, sticker removal before shooting, keeping gear at the surface for the least amount of time possible, and appropriate protected species handling and release procedures for both deck strikes and those caught in the gear. 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, and that gear maintenance and repairs are conducted in a way to minimise risk to seabirds, but there are several plans where this information is still needed. In general, some improvements to trawl plans could include: (1) clarification on how the vessel ensures the warp condition will not increase the risk of seabird captures, and (2) light management protocols.

In terms of barriers to achieving trawl Mitigation Standards, some skippers are not keen to follow the voluntary batch discharging measures due to their belief that the reduction in fishing vessels (and therefore the availability of fish waste to seabirds) is the cause of population declines in albatross species. Additionally, most of the vessels that do not follow the voluntary mitigation measure of a seabird scaring device on the warp is because they believe their discharge management does not attract birds to the warp-strike area (which thereby makes a warp scaring device unnecessary). Currently, there are a variety of seabird scaring devices used to mitigate warp strike (e.g. bafflers and fish cases), but they can range in quality and effectiveness, which is currently not quantified.

Set net

For coastal set netters, PSRMPs are well aligned with the Mitigation Standards in terms of fish waste management during hauling and before and after setting, sticker removal before shooting, keeping gear at the surface for the least amount of time possible, and appropriate protected species handling and release procedures for both deck strikes and those caught in the gear. The majority of set net plans also state that nets are not stalled[1] or set in the vicinity of known bird colonies or foraging areas, that gear maintenance and repairs are conducted in a way to minimise risk to seabirds, and that lighting is managed, but there are still a handful of plans where this information is still needed. The only improvement noted for set net plans was clarification around the vessel not setting in an area when there is high bird activity (i.e. feeding and diving).

[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.

3. Fisheries Observer Audits

Fisheries Observer audits of vessel practices are essential for monitoring a vessel's progress and determining adherence to their non-regulatory Protected Species Risk Management Plan. See the MPI webpage for the 2020-21 Observer sea days plan and delivery. In the 2020-21 fishing year, a total of 100 PSRMP audits were completed by Observer Services and forwarded on to the DOC Liaison Programme for follow-up. These were comprised of 14 surface longline audits, 19 bottom longline audits, 46 trawl audits, and 21 set net audits. Overall, 55% of observed vessels were confirmed to be following every aspect of their PSRMP. This is in spite of 15 audits that were returned to the Liaison Programme "Not Fully Assessed" (i.e. observer audits with "Unknown" fields that could not verify full adherence to the PSRMP).

Areas of adherence have been broken down into six categories:

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

Historically, primary adherence issues have revolved around offal management and bycatch mitigation devices (Table 5). In general, overall adherence has improved from 42% in 2018-19 to 55% in 2020-21 (Table 6). Adherence trends in individual fishing methods have been variable due to observer coverage/completed audits, and more time is needed to identify a clear pattern.

Table 5: Summary of PSRMP adherence issues identified by FNZ observer audits over time. Percentages are representative of the total audits received for that fishing year.

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

Table 6: Summary of PSRMP adherence from FNZ observer audits by fishing year. (*) From the 2020-21 fishing year onwards, results will identify when an observer audit cannot be fully assessed due to "Unknown" fields. These audits cannot confirm if full adherence to PSRMPs has taken place.

	PSRMP Audits Received	Adherent	Non-adherent	Not Fully Assessed*	% of audits showing adherence to PSRMP
2018-19 Total	**31**	**13**	**18**	**-**	**42%**
SLL	*18*	*9*	*9*	*-*	*50%*
BLL	*10*	*2*	*8*	*-*	*20%*
TR	*3*	*2*	*1*	*-*	*67%*
2019-20 Total	**84**	**43**	**41**	**-**	**51%**
SLL	*13*	*4*	*9*	*-*	*31%*
BLL	*27*	*10*	*17*	*-*	*37%*
TR	*38*	*23*	*15*	*-*	*61%*
SN	*6*	*6*	*0*	*-*	*100%*
2020-21 Total	**100**	**55**	**30**	**15**	**55%**
SLL	*14*	*4*	*10*	*0*	*29%*
BLL	*19*	*10*	*4*	*5*	*53%*
TR	*46*	*29*	*13*	*4*	*63%*
SN	*21*	*12*	*3*	*6*	*57%*

In the 2020-21 fishing year there were various forms of non-adherence across the fishing methods (Figure 3). Below is a breakdown of successful adherence as well as issues of non-adherence within each fishing fleet.

Surface Longline

Overall, observed SLL vessels had 100% adherence in categories: Bycatch mitigation procedures, Reporting, and Handling or release. This means that vessels were confirmed to have controlled/dimmed spotlights that were shining astern during night setting, avoided using frozen bait, electronically reported all protected species captures to MPI, and handled any live protected species captures with due care. Additionally, this year all observed vessels only set at night, which can be incredibly helpful towards reducing the risk of seabird captures.

There was only one observer 'unknown' recorded and that was in the "Documentation" category, where the observer could not identify whether a copy of the SLL Operational Procedures was onboard and if the crew were familiar with the contents. All other observed vessels were confirmed to be adherent in this category.

The biggest issues of non-adherence were in the categories "Discharge management" and "Bycatch mitigation devices". A large part of this was due to the continuous discharge of used bait and/or fish waste. During hauling used bait was often tossed back in as it came on board, and there were a few audits where fish waste was continuously discarded as crew processed fish on deck. Additionally, not all tori lines were fit for purpose. Several audits had tori lines that could not be adjusted to protect

the hook-bearing line, one audit where the vessel didn't carry spare tori line materials and another audit where streamers were not appropriately spaced.

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

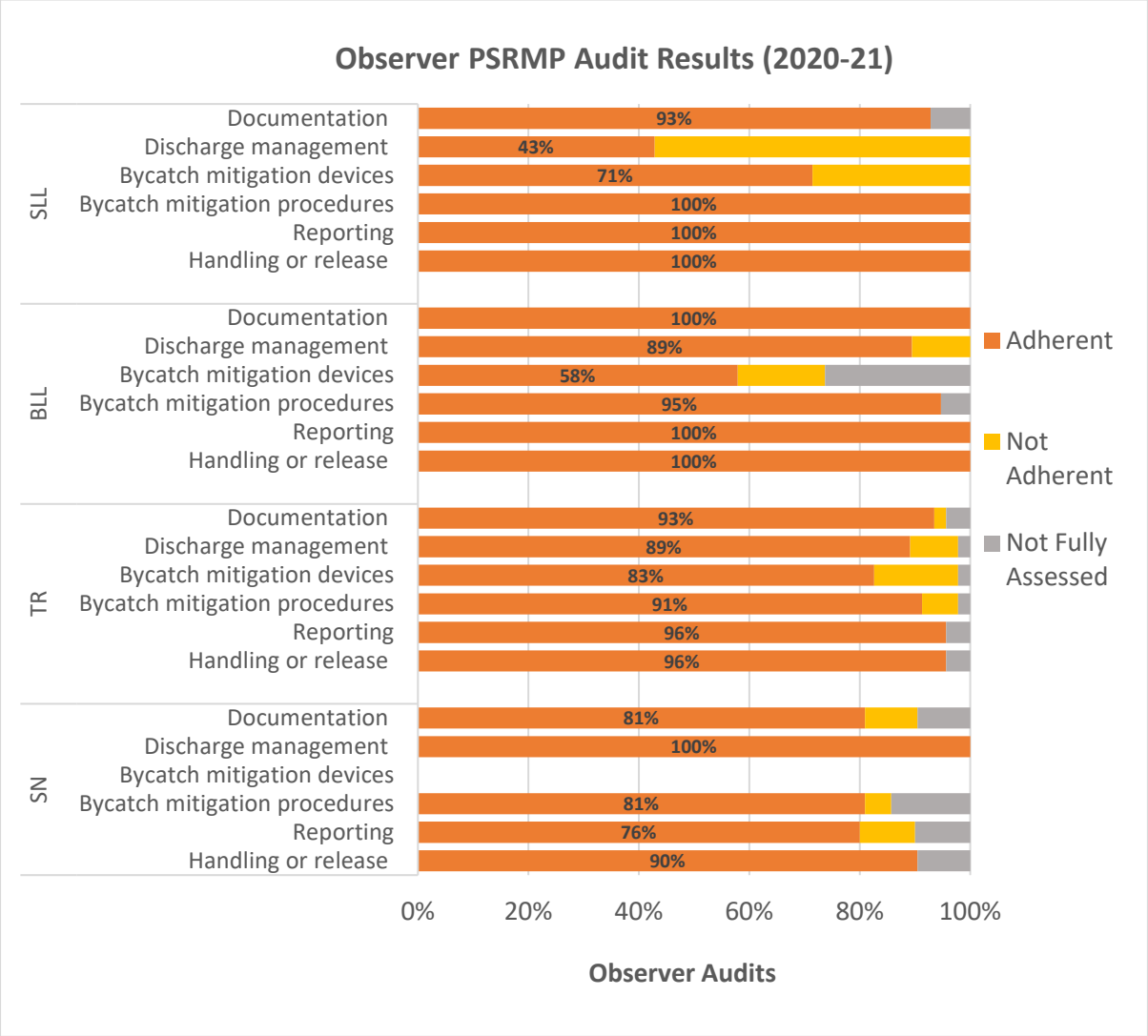


Figure 3: Results of Protected Species Risk Management Plan (PSRMP) observer audits in the 2020-21 fishing year. In total, observers conducted 14 surface longline audits, 19 bottom longline audits, 46 trawl audits, and 21 set net audits.

Bottom Longline

Overall, observed BLL vessels had 100% adherence in categories: Documentation, Reporting, and Handling or release. This means that all vessels were confirmed to be carrying PSRMPs and were familiar with their contents, they electronically reported all protected species captures to MPI, and handled any live protected species captures with due care. Additionally, all audits confirmed that vessels were following the line weighting regimes described in their plans.

Most observer 'unknowns' were recorded in the "Bycatch mitigation devices" category. There were three audits where observers could not confirm if aerial extent was adequate to reduce bird access to the baited hook line, two audits where observers could not confirm if spare tori line parts were on board, and one audit where the observer could not confirm if the tori line attachment height was higher than 5m above the waterline. There was also one unknown recorded in the "Bycatch mitigation procedures" category, where the observer could not identify if spotlights were controlled/dimmed during night setting. All other observed vessels were confirmed to be appropriately managing their lighting and were therefore adherent in this category.

Non-adherence was identified in the categories "Discharge management" and "Bycatch mitigation devices". There were two audits where discharge of fish waste during hauling was not per the PSRMP. Both audits explained that this was due to new and inexperienced crew, and one skipper quickly stepped in to educate and improve crew behaviour. There were also two audits where a tori line was not deployed and a few audits where tori lines were not fit for purpose. The two sets where a tori line was not deployed were due to either foul weather (one set) or forgetting (one set). Two audits had tori lines that could not be adjusted to protect the hook-bearing line and one audit found streamers were not appropriately spaced.

Trawl

Overall, there were no categories that had 100% adherence for observed trawl vessels, however there was 96% adherence in the categories "Reporting", and "Handling or release" with the remaining 4% being audits that were not fully assessed. This means that, apart from two audits where the observer did not fully assess adherence, all vessels were confirmed to have electronically reported all protected species captures to MPI, and handled any live protected species captures with due care.

In addition to the two audits that reported 'unknowns' for "Reporting", and "Handling or release", there were also two audits that couldn't confirm if the 10GRs and PSRMP was accessible and fully understood by the crew, one audit where the observer couldn't confirm if the discharge of fish waste was managed as per the PSRMP, one audit where the observer couldn't confirm if the primary warp strike mitigation was used in accordance with the PSRMP, and one audit where the observer couldn't confirm if light was appropriately managed or if the amount of time the net spent at the surface was minimised.

There was a large amount of non-adherence in the category "Bycatch mitigation devices", where seven audits found that the primary warp strike mitigation wasn't used in accordance with the PSRMP. However, many vessels use Dyneema, which is perceived to reduce risk to seabirds and there are few vessels that have incorporated additional warp strike mitigation to their PSRMP. Since there are almost no observer comments around this issue, this spike in non-adherence here could be due to observers misinterpreting the question. Updates to the observer audit forms for the 2021-22 fishing year should help to clarify this.

Additional non-adherence was identified in the categories: Documentation, Discharge management, and Bycatch mitigation procedures. One audit found that the vessel was not carrying a PSRMP, 10GRs, or Operational Procedures and that they were not fully understood by the crew, four audits found

that the discharge of fish waste during hauling was not as per the PSRMP (however two of these seemed to be either small or one-off events), and two audits found that spotlights shining directly astern were not controlled/dimmed during night setting.

Set net

Overall, observed set net vessels only had 100% adherence in the category "Discharge management". This means all vessels were confirmed to have managed offal and fish waste to reduce attraction of protected species to the vessel during times of setting and hauling and had ensured the net was clean of any practicable stickers before setting.

There were several 'unknowns' for set net audits, across all the categories except for "Discharge management". Two audits could not confirm if vessels had information (copy of rules and exclusion areas marked on navigation systems) on where setnet fishing is prohibited or restricted, three audits could not confirm if known areas of high activity of protected species (season, area, time of day or night etc.) were avoided, two audits could not confirm if there was correct reporting of protected species captures to FNZ and local Liaison Officers, and the same two audits could not confirm if the handling of protected species followed the handling guide.

Non-adherence was identified in the categories: Documentation, Bycatch mitigation procedures and Reporting. One audit found that the vessel was not carrying a PSRMP, 10GRs, or Operational Procedures and two audits found that these documents were not fully understood by the crew. One audit found that known areas of high activity of protected species were not avoided (i.e. high fishing effort around a white pointer shark feeding ground), and two audits had trouble ensuring the correct reporting of protected species captures to FNZ and local Liaison Officers. In the cases of non-adherence towards reporting, one skipper didn't seem confident about who he needed to report a white pointer shark to, and the other skipper said he forgot to log the captures and (due to technical challenges) had to have the vessel owner adjust the electronic report when they got to shore.

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 2020-21 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 MPI Observer Services and/or fishers directly contacting a LO. Furthermore, as of December 2020, FNZ began sending a weekly extract to the Liaison Programme for all trigger points self-reported via mandatory electronic NFPS reports. This new information has hugely improved the ability of Liaison Officers to respond quickly and efficiently to trigger point events.

Between 01 October 2020 and 30 September 2021, we received 135 triggers from 47 different vessels (Table 7). This is a substantial increase from 2019-20, as this includes the new weekly trigger reports from FNZ. Of the 135 trigger events, 103 were for seabirds. These were largely comprised of black petrels and flesh-footed shearwaters caught in the SLL and BLL fleets. Unsurprisingly, most captures seemed to be influenced by high-risk periods; either setting in the daytime, at full moon, or during high bird activity.

When contacting vessels, LOs suggest potential ways bycatch mitigation can be improved. The vast majority of these suggested changes have been in relation to the quality and functionality of the tori line, however, suggestions have also included adding additional weighting to the line, shifting to night-setting, improving hauling mitigation and changing fishing locations.

Table 7: Number of trigger events by fishing method from 1 October 2020- 30 September 2021 (as notified to the Liaison Programme via FNZ and self-reporting to LOs). Triggers include seabirds, reptiles, mammals, and protected fish species.

	Observed Trigger Events		Unobserved Trigger Events		Totals	
	FNZ reported to LP	Fisher proactively reported to LO (voluntary)	FNZ reported to LP	Fisher proactively reported to LO (voluntary)	Trigger events	Vessels with trigger events
SLL	16	50%	31	39%	47	12
BLL	12	58%	55	53%	67	19
TR	4	25%	6	17%	10	10
SN	6	33%	5	0%	11	7
Total	38	47%	97	43%	135	47

Within the 2020-21 fishing year and in the time since the last Progress Report (data up through February 2021), the Liaison Programme has noted one large capture event. In late February/ early March, a total of 19 black petrels were reported captured dead by a single commercial fishing vessel over a four-day period. This included eight black petrels which were captured one fishing event and 11 which were caught in another fishing event a few days later. The vessel took steps to reduce the risk of further captures by moving between sets, increasing weighting (from 4kg/card to 4kg every ¾ card), running multiple tori lines, slowing vessel speed, and setting early. They stopped fishing to move to another area after the second incident.

In addition to the mandatory NFPS reporting, the vessel also contacted their Liaison Officer and Fisheries Compliance to inform them of the captures. The Liaison Officer was confident the vessel and

its crew were closely following their PSRMP and made further suggestions to hold all used bait during the haul and potentially move areas. There were no gear malfunctions, but the fishing activity did take place around a full moon and there was aggressive feeding activity during the day (when hauling).

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. Future Liaison Programme Annual reports will look to incorporate some of this information and tailor parameters to identify trends in fleets and fisheries relevant to the DOC Liaison Programme.

5. Bycatch Mitigation Materials

Since the start of the fishing year, the Liaison Programme has deployed 4,500 hook-shielding devices to four different surface longline vessels. This was comprised of two full sets, one batch for top up and another small batch for a vessel to trial.

Although interest and requests for hook-shielding devices was relatively high, actual implementation has still been quite low. Due to feedback from industry, DOC ordered 10,000 new hook-shielding devices that release at 10 metres as opposed to the standard 20 metres. These will function much better in fisheries that target shallower fishing depths and will hopefully encourage further uptake in the surface longline fleet. Furthermore, we have established a stronger support system for fishers who decide to try out the hook-shielding devices. In addition to the instruction guides, there is now a Hookpod representative who will work with fishers to ensure their gear runs as smoothly as possible with the incorporated devices. Liaison Officers are also on call for these types of issues.

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

1. Backbone
    - 3mm single braid Dyneema
2. Streamers
    - 3.18mm Pink Kraton Tubing
    - 3mm Pink Fluorescent Tubing
    - 6mm x 4mm Orange Beautory Tubing
3. Drag
    - 9mm Trawl Braid (500L)
    - Egg floats (@10mm hole diameter)
    - 450mm Reflective Traffic Cones

Plans For the 2021-22 Fishing Year

1. Liaison Programme Growth

Within the coming years the capacity of the programme is expected to grow to provide full outreach to all relevant inshore and HMS fleets. By the end of the 2020-21 fishing year there were 222 active vessels included in the Liaison Programme, and five Liaison Officers spread throughout the regions. With upwards of 400 vessels active in our prioritised inshore and HMS fleets, additional LOs will be needed to provide sufficient coverage. Two new fleets to be included in the 2021-22 fishing year are purse seine and harbour set net. Despite COVID-19 delays, there has already been work to develop PSRMPs and include both these fleets in the Liaison Programme.

Historically, the programme has primarily focussed on seabird bycatch. Moving forward there will be an increased effort to include more protected species mitigation and deliver on any current/future cross-agency plans (i.e. NPOA Sharks, Hector's and Māui TMP, etc.). Nevertheless, the role of the LO will largely remain the same, supporting and educating fishers in best practice mitigation and providing a vital interface between skippers, government, and researchers.

Reporting capability has continuously been identified as an area in need of improvement for the implementation of this project. Recently, there was a breakthrough in the collaboration between DOC and FNZ for a Protected Species Liaison Officer Database (PSLOD), which will streamline reporting and help the programme to operate more efficiently. It is anticipated that there will be substantial progress on the PSLOD throughout the 2021-22 fishing year.

The Liaison Programme prioritises engagement with fleets known to have significant captures and a high spatial overlap with protected species and incorporates inshore and HMS fishing effort to inform areas of focus for the LOs. However, there is still a need to include protected species capture information and other metrics in this risk rating. In the future, the programme will look to tailor a risk matrix that can better direct engagement with higher-risk vessels.

2. Document Updates

At the end of the 2020-21 fishing year the Observer PSRMP Audit templates were revised for SLL, BLL, Inshore Trawl and Set Net. These were updated to align with the NPOA Seabirds Mitigation Standards and better identify adherence towards PSRMPs, which will be reflected in future reports.

Further Information

Appendix 1 describes the Liaison Programme project objectives and outputs cited from the 2020-21 CSP Annual Plan.

For more information on fleet-specific bycatch mitigation, see Appendix 6 for resources provided to fishers in Mitigation Folders, and visit the Fisheries Inshore New Zealand (FINZ) website for a downloadable version collaboratively developed between FINZ, FNZ and DOC.

The purpose of this annual report is to provide an update on progress and developments within the programme over the 2020-21 fishing year. DOC welcomes any feedback to Liaison@doc.govt.nz.

Appendix 1: MIT2020-02 Liaison Programme Project Description

4.3 Protected Species Liaison Project

Project Code: MIT2020-02

Start Date: 1 July 2020

Completion Date: 30 June 2021

Guiding Objectives: CSP Objective A; CSP seabird plan 2017; National Plan of Action – Seabirds, National Plan of Action – Sharks.

Project Objective:

Grow liaison capacity across inshore fleets around the country including trawl, set net, bottom longline and surface longline fisheries.

Rationale

In order to effectively reduce the risk of interactions with protected species, it is important for vessel operators to use best practice mitigation and take all necessary steps, whether they are regulatory or non-regulatory, to avoid interactions. To achieve ongoing reductions in bycatch towards zero, there needs to be consistent use of the most effective mitigation measures currently available, while still encouraging continual improvement through innovation.

It is proposed through the Draft National Plan of Action – Seabirds 2020 that a suite of best practice mitigation standards will be implemented for each fishing method and will be reviewed annually by the Seabird Advisory Group. It is envisaged that the Liaison Project will play a central role in the implementation of these standards through the development of Protected Species Risk Management Plans (PSRMPs) on each vessel.

The purpose of the PSRMPs will change within this next phase, using best practice mitigation measures that the vessel will be implementing to demonstrate their achievement of the relevant mitigation standard, rather than just outlining the vessel's current practices. Auditing of these plans by MPI Fisheries Observers and compliance checks will then verify the steps that the vessel is taking to meet the mitigation measures outlined in the plan and highlight where there is still work to be done. PSRMPs will also cover mitigation actions to reduce or eliminate other protected species taxa (e.g. marine mammals), as relevant to the fishery.

Within the coming years the capacity of the program is expected to grow substantially in size to provide full outreach to all relevant inshore fisheries. 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 of the program will consist of additional Liaison Officers to expand into more fisheries and areas, increased contact with high risk vessels and fleets and development of training plans for crew on protected species and bycatch mitigation. The project will also expand the role of the liaison coordinator to ensure the operational oversight of the program and improve reporting.

Measuring success and constraints in reporting capability have been identified as improvements required in the rollout of this next phase of the project. This will be addressed through database development and standardisation of processes. There will also be increased engagement with quota holders to support the uptake of the plans and mitigation measures.

Outputs

1. Database of liaison activity, including PSRMPs developed and updated, vessels visited, trigger responses and mitigation materials and training provided.
2. Creation of a government working group involving DOC and multiple aspects of FNZ

(Fisheries Management, Compliance and The Observer Programme) to ensure feedback loops and work through challenges within the Liaison Programme.
3. Development of management responses to triggers.
4. Training plans for fishers on mitigation and handling procedures.
5. Quarterly reports back to relevant stakeholders (including industry and eNGO's) detailing progress and any developments which have come from each fleet.
6. Annual reporting will be provided as part of the proposed Seabirds – Annual Research Report.
7. Yearly review of progress and implementation will be conducted through both DOC's CSP Technical Working Group and the Seabird Advisory Group as part of the NPOA – Seabirds.

Note: A one-year term is proposed

Indicative Research Cost: $240,000 (Note: it is intended that additional Crown funds from the Biodiversity 2018 budget will also be used to grow liaison outreach into additional fisheries and provide more effort for high risk vessels in order to work towards zero bycatch).

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

Fish stocks:

Objective/Species	Indicative Cost	Fish Stocks
1. Surface Longline	$60,000	ALB1, BIG1, STN1, SWO1
2. Bottom Longline	$60,000	BIG1, BNS1, HPB1, SNA1
3. Inshore Trawl	$60,000	BAR1, 7, FLA1, GUR1, JDO1, LIN1, 2, RCO3, SNA1, 2, TAR1, 2, 3, TRE1, 7
4. Setnet	$60,000	SCH3, 5, SPO3, ELE3, 5, MOK3, SPD5

Appendix 2: Liaison Programme Plan and Objectives

**Live document subject to review*

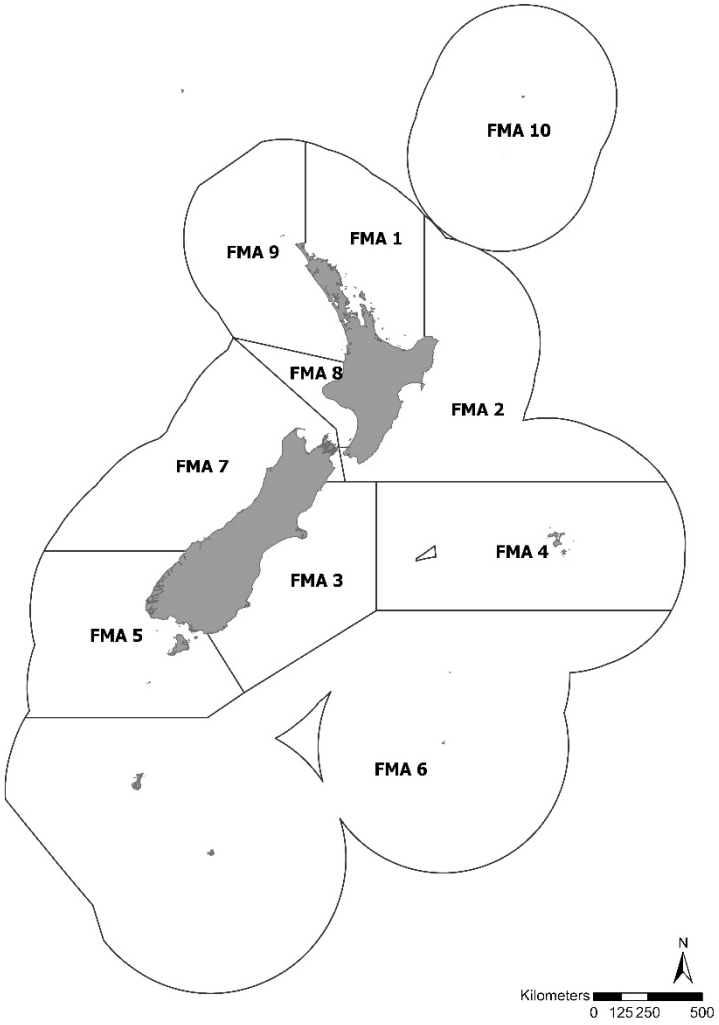
Vision	Overarching Objective	5-year Objective
Support fishers to work towards zero threatened and protected species bycatch by 2050 (thereby aligning with Te Mana o te Taiao– the Aotearoa New Zealand Biodiversity Strategy 2020).	To deliver on the vision and outcomes of departmental strategies and relevant cross-government plans (NPOAs, TMPs, etc).	By 2025, all inshore & HMS fisheries at high risk of protected species captures use best available mitigation methods relevant to their operations.

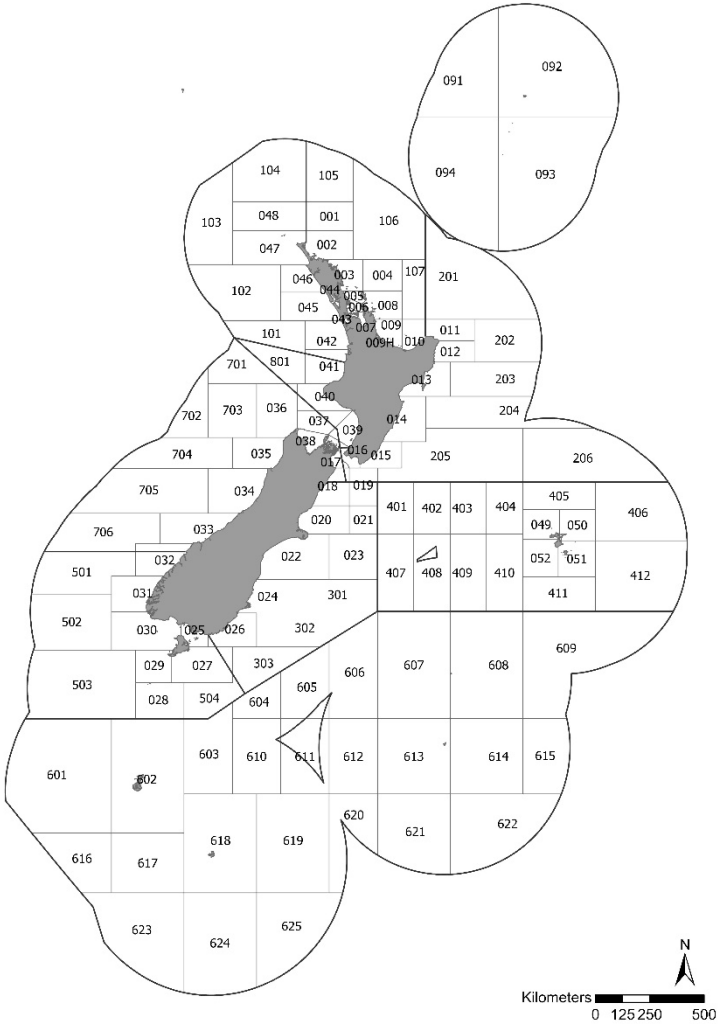
Programme Performance Measures (Metrics to determine success against 5-year objective):

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

Programme Objectives				
Year 1- 2020/21 Fishing Year	**Year 2- 2021/22 Fishing Year**	**Year 3- 2022/23 Fishing Year**	**Year 4- 2023/24 Fishing Year**	**Year 5- 2024/25 Fishing Year**
- 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	- Maintain PSRMP coverage for: ○ 100% of SLL vessels ○ 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 with development of risk-based system - Review of performance measures to make sure they are fit for purpose	- Maintain PSRMP coverage for: ○ 100% of SLL vessels ○ 100% of BLL vessels ○ 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 continues to be prioritised with risk-based system - Liaison Officers trained in the use of the <u>new</u> Liaison Database - Review PSRMP templates (considering needs of NPOA-Sharks and the Hector's Māui TMP)	- Maintain PSRMP coverage for: ○ 100% of SLL vessels ○ 100% of BLL vessels ○ 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 - Review of performance measures to make sure they are fit for purpose	- Maintain PSRMP coverage for: ○ 100% of SLL vessels ○ 100% of BLL vessels ○ 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





Appendix 4: PSRMP Coverage

PSRMP coverage for inshore and HMS fishing effort (1 October 2017- 30 September 2021). Fishing effort 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	2020-21	1.00	0.00	0.00	0.00
	2019-20	1.00	0.00	0.00	0.00
	2018-19	1.00	0.00	0.00	0.00
	2017-18	0.99	0.00	0.00	0.01
BLL	2020-21	0.79	0.06	0.13	0.02
	2019-20	0.83	0.03	0.10	0.04
	2018-19	0.75	0.07	0.09	0.09
	2017-18	0.70	0.05	0.08	0.17
TR	2020-21	0.92	0.03	0.02	0.04
	2019-20	0.84	0.02	0.02	0.11
	2018-19	0.78	0.03	0.02	0.17
	2017-18	0.13	0.01	0.02	0.85
SN (>7m)	2020-21	0.70	0.07	0.02	0.20
	2019-20	0.48	0.07	0.05	0.39
	2018-19	0.42	0.04	0.02	0.51
	2017-18	0.00	0.09	0.03	0.88
SN (≤7m)	2020-21	0.00	0.00	0.00	1.00
	2019-20	0.00	0.00	0.00	1.00
	2018-19	0.00	0.00	0.00	1.00
	2017-18	0.00	0.00	0.00	1.00

Appendix 5: PSRMP Templates for the 2020-21 Fishing Year

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 *Describe equipment and procedures to hold or batch fish waste; contingency plan where required*	- 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 *Describe deterrent*	- 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:**

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 *Describe equipment and procedures to hold or batch fish waste; contingency plan where required*	- 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 *Describe deterrent*	- 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:**

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

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 *Describe equipment and procedures to hold or batch fish waste; contingency plan where required*	- No continuous discharge when towing; no discharge immediately before/during setting or hauling. While towing, fish waste is held or batched. Cut & offal discards: Whole and fish waste discards: List discharge storage & batching procedures & discharge point, (for the above, etc)
2. Warp *Describe equipment and procedures, type of device. When is deployment required?*	-Warp (located closest to side where fish waste is discharged) protected by seabird scaring device *List Seabird device type- carried onboard (Baffler, warp-deflector, tori, other etc)* -Seabird scaring device deployed *(choose: at all times or when there is any potential risk to seabirds)* 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

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.

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

Appendix 6: Bycatch Mitigation Document Tracking

This is a comprehensive list of all the current mitigation documents handed out to fishers through the Protected Species Liaison Programme. PDF documents are available for download at the FINZ website: (https://www.inshore.co.nz/operational-procedures/)

Surface Longline (SLL)

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

Bottom Longline (BLL)

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

Purse Seine

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

Trawl

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

North Island specific

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

South Island specific

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

Set Net

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

North Island specific

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

South Island specific

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

North Island Harbour Set Net

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