

Understanding drivers and barriers to seabird bycatch mitigation uptake in small vessel bottom longline fisheries

MIT2022-02

Social research findings
Presentation to CSP TWG
August 2023

Today's presentation

Research background, objectives and approach

Acknowledgements

Overview of key findings

1. General drivers for undertaking mitigation behaviours
2. Fishers' views on the DOC liaison programme
3. General barriers to following the mitigation standards
4. Fishers' views on high-risk times for seabird captures
5. Fishers' views on effective mitigation practices
6. Fishers' views on engagement: current, ideals, frustrations

Recommendations

Note: This document has been prepared for the researcher to present the findings. Please refer to the Word report for the full findings.

Research Background

National Plan of Action — Seabirds

Commercial fishers are expected to meet the seabird mitigation standards under the National Plan of Action — Seabirds 2020 (NPOA 2020).

NPOA 2020 objective 1: “Ensure all New Zealand commercial fishers are using practices that best avoid the risk of seabird bycatch, enabled by appropriate regulations”.

Practices are outlined in:

- 2021 legislative requirements
- 2019 mitigation standards

and implementation is supported via government and industry outreach programmes.

DOC’s Protected Species Liaison Programme assists with implementation of the mitigation standards via:

- DOC liaison officers
- Vessel-specific Protected Species Risk Management Plan (PSRMP).



Research Objective

Need for a social science perspective

To date DOC has focused on technical solutions to help fishers mitigate seabird bycatch.

DOC identified the opportunity for social science (exploratory in nature) to help understand how to further engage with fishers:

- to drive the uptake of a range of the technical solutions already in place (e.g. via outreach)
- to understand if new solutions need to be explored.

While also providing insights for:

- future updates to the mitigation standards and regulations.

Research objective

To better understand the drivers and barriers to uptake and implementation of best practice seabird bycatch mitigation by small vessel bottom longline (BLL) vessel operators.

Where “best practice” = 2019 mitigation standards (which include 2021 regulations).



Research Approach

Population: 37 bottom longline vessels (owned by 28 operators)

The population was defined based on following vessel characteristics:

- **inshore** i.e. not managed by the Deepwater Group (this excluded ~36 hand-baiting bottom longline vessels targeting deepwater fish stocks)
- **hand baiting** i.e. excluding autoline baiting vessels (~4 vessels in the inshore fleet)
- **between 7–28 metres** (this excluded ~4 vessels in the fleet)
- **undertaken at least 5 trips** in the 2021/22 fishing calendar year (this excluded ~5 vessels in the fleet)
- **not dahn liners** given these vessels are not required to line weight or use a tori line (this excluded 13 vessels)
- fish in the following **quota management areas**:
 - Bluenose: BNS1, BNS2, BNS3, BNS7, BNS8
 - Hāpuku and Bass: HPB1
 - Gurnard: GUR1, GUR7, GUR8
 - Ling: LIN1
 - School shark: SCH3, SCH5
 - Snapper: SNA1
 - Tarakihi: TAR1, TAR2, TAR3

Research Approach

18 qualitative in-depth interviews with skippers, owner-operators and owners

Selection of interview participants

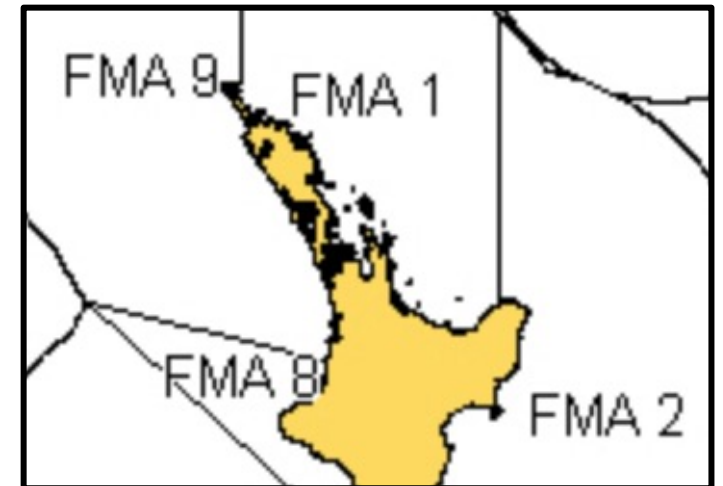
Based on gaining a mix of:

- fishing types (defined by target species)
- capture reporting
- known compliance with the standards
- fisher experience.

The final sample included:

- a range of fish targets:
 - 15 who target snapper, gurnard or terakihi
 - 11 who target bluenose
 - 9 who target Hāpuku, bass or ling
- 6 fishers from vessels who had not meet the mitigation standards in 2020–22
- 10 fishers from vessels who had, and 8 who hadn't reported seabird captures
- a mix of younger and older fishers
- fishers who had been in the industry from one to 30+ years
- fishers who fish in FMA1, FMA2, FMA8 and FMA9 (mid to upper north island)
- 6 skippers, 10 owner-operators and 2 owners.

Final sample represented 19 vessels, just over half of the currently operating fleet.



18 qualitative in-depth interviews with skippers, owner-operators and owners

Recruitment process

- DOC liaison officers contacted fishers to provide an overview of the research and ask if they were willing to take part in an interview.
- Fishers contacted by The Navigators to explain the research process in more detail and to schedule a one-hour interview.
- Fishers incentivised with \$80 to compensate for their time and expenses.

Stakeholder input

- Scoping workshop with government, industry and consulting representatives.
- Two nominated subject matter experts helped to refine the research approach and interview discussion guide, and are reviewing the report and recommendations.
- Workshop attendees provided with proposed research approach and interview guide.
- DOC liaison officers provided background, insights and project support.

Acknowledgements

Thank you to...

- **The fishers** who participated in this research for their time, and for sharing their thoughts and experiences.
 - We value and respect their views and descriptions of their first-hand experiences.
 - We acknowledge the findings have been collected from a subset of fishers from within the wider fleet.
- **DOC and industry** for funding the research through the Conservation Services Programme (CSP).
- **DOC** for their support and guidance throughout the project, including the support and assistance from the **DOC liaison officers**.
- **FINZ, Vita Maris, Southern Seabird Solutions Trust and Fisheries NZ** for support and guidance throughout the project.

Drivers

**of seabird bycatch
mitigation uptake**

Drivers of seabird bycatch mitigation uptake (5)

1.	Respect for seabirds	<ul style="list-style-type: none">• All had strong respect for seabirds: “bird lovers” to “non-killers”.• “Feeding the masses” in least harmful way.• No need for seabirds to get hurt.• Importance to environment and ecosystems.• Improved over time.• Drives active thinking. <p><i>“We don't want to catch seabirds; I think they're beautiful animals. It's as simple as that. You know, they've been here as long as us and we all have to share that space. They obviously get hungry, and they see an easy meal, so we want to be as proactive as we can.”</i></p>
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Drivers of seabird bycatch mitigation uptake

2.	Interventions
Outreach support	<ul style="list-style-type: none"> • Positive intervention – has helped drive change. • Support, advice, education, encouragement, assistance, supplies, changes. • From DOC liaison officers and consultants, some observers and Fisheries officers.
Seabird education sessions	<ul style="list-style-type: none"> • DOC seabird tagging programmes (Mt Hobson), Seabird smart courses. • Creates a sense of connection and respect for seabirds, which drives positive change in crew attitudes towards implementing mitigation behaviours. • Seabird handling skills. • Loss of one parent resonated. • Suggested: One compulsory session for all new crew. <p><i>“I remember years ago, we had that seabird smart meeting. That was good. I still remember the facts about birds from that. We haven’t had another one since then. I don’t know if they’re still doing them.”</i></p>
Compliance monitoring and enforcement	<ul style="list-style-type: none"> • Fines, surveillance flights, wharf checks, observers, and incoming cameras. • Cameras: welcomed for proof, pulling out of deepwater targets, double checks. <p><i>“I run a tori line in the dark, but I never used to. Because I had an Orion fly over me while I while shooting gear with no tori line.”</i></p>

Drivers of seabird bycatch mitigation uptake

3.	Protection of self, crew, co-fishers and fishery	<ul style="list-style-type: none">• Protection from:<ul style="list-style-type: none">○ others thinking badly of them or their crew, “bird catcher”, pet days○ being shown in a negative light in the media○ bad reputation for fishery: they help each other out if one fisher having issues○ further control measures being brought in○ the fishery being shut down.• Undertaking mitigation measures provides peace of mind, “out of harm’s way”.• Made to feel like criminals anyway (due to strong interventions, media, NGOs). <p><i>“Contrary to public opinion, we're not all rapists and pillagers of the ocean and bad guys. Some of us just use the ocean to make a living and we fully respect everything in it.”</i></p>
4.	Productivity and demand	<ul style="list-style-type: none">• Lost bait = no fish.• Higher demand for sustainably caught fish, especially restaurant and USA markets. <p><i>“Every bait a bird eats, doesn’t catch a fish.”</i></p>

DOC liaison programme

Fishers' views on the DOC liaison programme

DOC liaison programme seen as very valuable for the advancement of mitigation practices

- Fishers very appreciative of the support they received from the DOC liaison programme.
- DOC liaison officers a key asset and the main driver of seabird mitigation education, knowledge sharing, and maintaining good mitigation practices.
- Provide a valuable resource for younger or newer skippers.

“[Our DOC liaison officer is] great. He's good. And it's good to have support around that. Because if you're left on your own, it's just another thing. He pops up once a year. He's good for everyone. He's good for advice, everything. If you've got questions about your tori line, questions about birds or timing, where they are, just absolutely everything, he's crucial to just education and advice. Everything, yep, he's just good.”

Fishers have good working relationships with their DOC liaison officer

- LOs understand them (their struggles, their needs, their personalities).
- LOs have an understanding of fishing and first-hand experience e.g. from being a past observer and/or an interest in game fishing.
- LO visits were ideal, to communicate, understand things and find solutions for mitigation issues.

Fishers' views on the DOC liaison programme

Fishers feel supported by their liaison officer when they have a capture event

- Supportive while also offering good solutions for avoiding the same situation occurring in future.
- Plus help them dissipate potential conflicts with NGOs. With the LOs being able to “put a few people’s minds at ease”.

DOC liaison programme played a crucial role in improving tori lines

- Fishers really valued the advice and supplies.
- Very pleased with the road cones provided. The drag achieved has helped lift their tori line up and reduced hook ups with their floats.
- Tori lines constructed by the DOC liaison officers are the best they’ve used.
 - Plus ensures tori line meets the regulations.
 - Plus is a lot of work.
- The silicon tube streamers provided by DOC are working well and fit for purpose, especially given they break or unhook themselves instead of creating a hook up. Some fishers have been quite surprised at how well these streamers work!

“He’s made me two or three tori lines for me now. It’s good to get a regulation tori line, cause there’s actually a hell of a lot of work making one up to the legal requirement.”

Fishers' views on the DOC liaison programme

Fishers felt the level of contact with their DOC liaison officer was about right

“We see him just every so often. And it's about the right amount of time. He asks if we need anything and he's always got everything on him. And if he doesn't, he sends it straight out. We've got heaps of spare streamer stuff for our tori line. And even the other day, he rang up and said, ‘Oh, look, I've seeing you getting a few birds, what's going on?’ and we had a chat. Yeah, he's good. He's good at what he does.”

General barriers

to seabird bycatch mitigation uptake

(Specific barriers covered in
recommendations section)

General barriers of seabird bycatch mitigation uptake (3)

1.	We don't capture any/many seabirds	<ul style="list-style-type: none">• Varying degrees of frustration.• Why need to follow a range of mitigation practices when aren't catching seabirds (none or very few).• Legally required to address a problem that doesn't exist (in their fleet).• Observer reports clear evidence for some.• They hear there's a problem, but they don't experience it.• If they could see good reason, they would be less frustrated with having to undertake all the practices all the time.• Some not undertaking all mitigation standards all the time, due to safety reasons or because they didn't see it as necessary at certain times (e.g. in the dark, when the seabirds had migrated), and then because they don't catch seabirds. <p><i>"I haven't caught a bird for 25 years. Straight up."</i></p> <p><i>"Seriously, for bottom lining, we have not caught a bird ever. We just do not have a bird problem. In the far north it's not even a worry. We don't even worry about catching birds, cause it's just not a thing."</i></p> <p><i>"Why am I going to risk all of this, when we don't even have a bird problem."</i></p> <p><i>"I've had two seabirds this season and maybe one last season. That's not bad. I run on average 3–4,000 hooks a day and do that 200 times a year. That's a lot of hooks in the water for two birds. So yeah, if you're running 700,000 hooks a year and catch two seabirds, I think I need a medal just for that. And in some seasons, I haven't even caught one!"</i></p>
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General barriers of seabird bycatch mitigation uptake

2.	We don't need to mitigate when seabirds aren't around	<ul style="list-style-type: none">• “Pointless” mitigating against seabirds, when the seabirds are not in their fishing area.<ul style="list-style-type: none">○ Seabirds have migrated.○ Not fishing in an area with populations of seabirds (e.g. closer to shore, up north).• Some prefer a system where extra steps taken when/where seabirds around — more freedom when not (although some prefer habit).• Some “look out and judge”, some “safeguard”.
3.	It is difficult or impossible to follow the mitigation standards for bluenose and hāpuka — and less needed	<ul style="list-style-type: none">• Needed and relatively easy for snapper.• Not so for bluenose and hāpuka.• Significant capability barrier achieving tori line and line weighting regs.• Assistance/engagement need from government before cameras come on board.

**Fishers' views on
high-risk times for
seabird captures**

Fishers' views on high-risk times for seabird captures

The mitigation standards and regulations refer to a few practices that should be undertaken during “high-risk periods” in addition to the baseline practices. 2021 regulations state that “high-risk” period means during daylight hours (0.5 hours before nautical dawn and 0.5 hours after nautical dusk) or during a full moon and three days either side of a full moon”.

Fishers talk about high-risk for seabird captures being:

- in the summer months, and especially when the seabirds first return for the breeding season
- in the Hauraki Gulf up to Cape Brett, in particular the nesting islands in this area
- at dawn and dusk
- when active seabirds were around the vessel
- during a seabird feeding frenzy
- while line setting (more so than hauling)
- with gear issues: floating lines (due to a line break or large catch), line tangles, boat stops, baited hooks lost overboard
- when adding the end anchor
- with less experienced crew
- when setting faster, using lighter weights and/or smaller hooks (e.g. for snapper rather than deepwater)
- when it's windy.

Fishers' views on effective mitigation practices

Fishers' views on effective mitigation practices

- **Knowing** the risks and then reducing those risks — through **combined mitigation practices, effort, and the right attitude**
- **Night setting**
- **Tori lines** for day setting (but not always effective, achievable or safe)
- **Quick sink rate** — achieved via three different (combined) mechanisms:
 - Line weighting
 - Less line tension
 - Removing floats
- **Fast and efficient hauling**
- **Experienced setters/haulers**
- **Stop setting or hauling** when large numbers of seabirds are active
- **Low lighting**
- **throwing bait** for emergency situations

For some:

- **avoiding locations** with large numbers of seabirds
- **adding floats** behind the boat when seabirds are present
- **holding baits**
- **bird lasers** (when tori lines are not safe, effective or achievable)
- use of **bait types**.

**Fishers views on
engagement:
Key points**

Fishers views on engagement

Fishers learn about seabird mitigation from talking — not reading

- With DOC liaison officers
- But also with vessel owners, Fisheries Officers and other fishers (and observers in the past).
- Ideally the conversations with government officials are scheduled and in person, so the fishers are not busy/exhausted, and a hands-on approach may be undertaken.
- Fishers are less inclined to read documents given to them.
- Some fishers said the only documents they had been through, was when LO took them through it.
- To find out information about seabird mitigation, most would:
 - firstly contact their DOC liaison officer
 - some would talk to other fishers
 - one fisher (who had good relations) saying he would contact their local Fisheries Officer.
 - no fishers said that they would look up information in their provided documents or online.

“More of it is just conversations and practical stuff you know. You're not gonna find many fishermen that are just everyday popping through the paperwork and having a read over. You need to be more realistic with most of the guys in the fishing industry. They're hands on people, they're not like 'oh, this paperwork is making my life so much better'. You gotta go and talk to them and be practical about it.”

Fishers views on engagement

Fishers want to engage on realistic solutions — for realistic problems

Fishers noted good thinking had gone into the last revision of the regulations. Fishers also noted more work needed to ensure they were achievable for all in the fleet.

Fishers want to keep engaging with government and industry on:

- estimation of capture numbers
- improving seabird mitigation techniques
- what is required of the fleet.

“They've got to be realistic, we've still got a job to do. Everyone's got to be realistic. No one wants to kill seabirds, but we still want to catch fish. So we've got to find the best realistic way to do it. Which is hard I know. I am proactive and I'm willing to try and do stuff to make it better.”

Fishers views on engagement

Where is the problem?!

- Core question that needs addressing.
- Fishers want to work with government to understand the seabird capture problem within their fleet.
- Fishers frustrated and “slacked off” with so much focus on seabird mitigation when they aren’t experiencing seabird captures on their vessels.
- Because fishers are told there is a problem by government and NGOs, fishers assume that it must:
 - be a small number of fishers in their fleet capturing a lot of seabirds (which creates anger towards those other fishers without knowing who they are)
 - other fleets (e.g. in the South Island or surface liners) that are capturing large numbers of seabirds and then their fleet is being “blanketed” with the same conclusion.

Fishers welcome cameras to substantiate the problem

- Most fishers are looking forward to having cameras on their boat, so there is evidence of their mitigation practices and lack of (or very low) seabird captures.
- But also not happy they have to go to these lengths to prove things, given power to run them and invasion of privacy.
- *“The cameras will clear it up. Now with the cameras they can have some footage, which means they can go ‘Okay, these guys aren’t a problem. These guys aren’t a problem’. We need transparency, so that we can see where the problems are. They don’t even have a spreadsheet of who’s catching the birds or where, it’s just averaged out through the whole fleet, and everyone gets the same blanket approach.”*

Fishers views on engagement

Fishers want to evidence “the problem” before the cameras come onboard

- To prove they don't need certain mitigation measures, so regulations can be adjusted to reflect this.
- For example: so they don't need to:
 - a tori line at night when targeting hāpuka (given it is seen as unsafe, difficult and unnecessary)
 - to undertake certain mitigation practices when seabirds have migrated and/or presence is low
 - to undertake certain mitigation practices in low-risk areas.
- For example, by taking observers on trips e.g. to demonstrate they don't catch seabirds at night while targeting hāpuka without a tori line.

**Recommendations:
to improve
seabird mitigation**

A. To address significant achievability and safety issues

		Addressed through?		
		Outreach	Technical solutions	Standards/regulations
1	Engage with hāpuka and bluenose fishers on a way forward	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Consider solo fishers who are not able to meet the 50-metre aerial extent	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Engage with fishers on deploying a streamer line in a strong following tide	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Consider what fishers should do if they can't discharge from opposite side of hauling station			<input checked="" type="checkbox"/>
5	Consider the discharge of dangerous fish from hauling station without a mitigation device			<input checked="" type="checkbox"/>
6	Engage with fishers on safety risks with tori lines at night or in rough weather	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	Engage with fishers on how to have the streamer line protecting the baits at all times, even in a crosswind	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
8	Continue research into underwater bait setters and line suppressors		<input checked="" type="checkbox"/>	

B. To increase/address motivation (Some of these relate to fishers desire to “engage on realistic solutions — for realistic problems”)

		Addressed through?		
		Outreach	Technical solutions	Standards/regulations
9	Engage with fishers on the “seabird capture problem” — because fishers aren’t experiencing the problem themselves	<input checked="" type="checkbox"/>		
10	Consider fishers’ views on high-risk versus low-risk scenarios — and implications for the regulations	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
11	Engage with fishers on how to reduce tangles with mitigation gear	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
12	Engage with fishers on issues with heavier weights	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	Consider reason for monthly sink rate tests	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
14	Address difficulties with implementing bottle tests		<input checked="" type="checkbox"/>	
15	Consider whether official sink rate tests need to be recorded via other methods (rather than bottle tests by fishers)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	Consider provision of electronic documentation for bottle tests		<input checked="" type="checkbox"/>	

B. To increase/address motivation (Some of these relate to fishers desire to “engage on realistic solutions — for realistic problems”)

		Addressed through?		
		Outreach	Technical solutions	Standards/regulations
17	Continue engaging with fishers on workable hauling mitigation device solutions		<input checked="" type="checkbox"/>	
18	Explore and consider allowance for discharge of live fish from same side as hauling station			<input checked="" type="checkbox"/>
19	Maintain DOC liaison programme	<input checked="" type="checkbox"/>		
20	Maintain seabird education sessions	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
21	Maintain compliance monitoring (but consider approach taken by some Fisheries Officers)	<input checked="" type="checkbox"/>		

C. Provide information, clarity and direction

		Addressed through?		
		Outreach	Technical solutions	Standards/regulations
22	Advise fishers to ensure last weight and hooks are sunk low, before stopping to add end anchor	<input checked="" type="checkbox"/>		
23	Explore and consider the practice of having floats behind the boat while setting			<input checked="" type="checkbox"/>
24	Provide fishers with reports from electronic sink rate tests	<input checked="" type="checkbox"/>		
25	Clarify sink rate test legislation wording			<input checked="" type="checkbox"/>
26	Consider discharge and use of baits in the hauling regulations			<input checked="" type="checkbox"/>
27	Clarify wording of hauling regulations			<input checked="" type="checkbox"/>
28	Clarify “maintaining a secondary system to prevent fish waste being lost to the deck and through scuppers”			<input checked="" type="checkbox"/>
29	Consider relevance of “placing seabird gently back into the water”			<input checked="" type="checkbox"/>

C. Provide information, clarity and direction

		Addressed through?		
		Outreach	Technical solutions	Standards/ regulations
30	Consider suggesting that fishers can also snip the nylon to remove the hook			<input checked="" type="checkbox"/>
31	Explore and consider the use of red anchor lights to reduce seabird impacts	<input checked="" type="checkbox"/>		
32	Explore and consider any evidence on the use of bait types		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

D. To increase sense of fairness and robustness

		Addressed through?		
		Outreach	Technical solutions	Standards/ regulations
33	Consider capture definitions	<input checked="" type="checkbox"/>		
34	Consider spread of observer trips across the fleet	<input checked="" type="checkbox"/>		
35	Consider compensation for feeding and returning observers to shore each day	<input checked="" type="checkbox"/>		
36	Engage with NGOs on false claims and criticism	<input checked="" type="checkbox"/>		

Thank you

Any further questions or
comments?

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