

South Island Coastal Setnet

Operational Procedures - Protected Species Risk Management

Version 3 November 2021

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Disclaimer: *These OPs do not replace or override any fisheries legislation or other regulations including Health & Safety, Maritime Safety, Fisheries, Animal Welfare or the Wildlife Act. Vessel operators are required to ensure that both they and their crew understand all regulations that are relevant to the fisheries and environment that they are operating in, and that crew and vessel safety must always be considered.*

MPI has stated that at-sea inspections will become more directed as a result of the availability of GPR data. Make sure you know what you need to meet legal requirements on protected species mitigation reporting. Please contact your Liaison Officer for support if you need assistance.

1. Background, Rationale and Purpose

The Coastal Setnet (SN) fishery operates overlapping with areas frequented by marine protected species such as seabirds and marine mammals and sharks. It is therefore important to use a structured approach to mitigate the risk of protected species captures. The protected species caught by the SN fleet are of significant importance to the community and some have very small and/or threatened populations. The Government will be responsive in ensuring that undue impacts are not occurring on protected species. It is in the best interests of the coastal SN fleet to take all reasonable steps to acknowledge, understand and reduce as much as possible impacts on protected wildlife encountered.

National Plan of Action - Seabirds and Risk Assessment

The National Plan of Action (NPOA) Seabirds focuses on education, partnering to find innovative solutions to bycatch mitigation, and ensuring that all fishers know how, and are taking all practicable steps, to avoid seabird bycatch. The NPOA sets out objectives for the next five years to guide management of risk to by-caught seabirds in New Zealand fisheries. This management comes mostly from Fisheries New Zealand (FNZ) with support from the Department of Conservation (DOC) and industry bodies such as Fisheries Inshore NZ (FINZ), Southern Inshore Fisheries Management Co. (SIFMC) and the DeepWater Group (DWG).

The New Zealand seabird risk assessment is the main way FNZ evaluates the impact of commercial fisheries on New Zealand seabirds. The assessment incorporates spatial overlap of seabird populations and fishing effort, as well as population size and productivity to determine each species' risk category. A key part of the NPOA Seabirds is the objective to decrease the number of fishing-related seabird mortalities and show a reduction in their risk ratios, so that populations can recover and stabilise. Currently 13 seabirds are assessed to be in a risk category that warrants prompt and considered attention. The seabirds relevant to coastal SN operations include penguins, shags, and petrels.

National Plan of Action - Sharks and Risk Assessment

Similarly to seabirds, NZ's shark species are included under a 'NPOA – Sharks' that documents NZ's planned actions for conservation and management of those species. Several sharks and rays are also protected under NZ legislation and some of those may be encountered when setnetting in your region. Specifically, for coastal SN fishing, great whites are most likely to be encountered in FMA 5.

Threat Management Plans – Hector's dolphin and NZ Sea Lion

NZ fur seals are occasionally caught in setnets. NZ Sealions have not been reported in setnets however are known to be vulnerable to setnets used overseas (e.g. Australia), therefore the risk of capture exists for both species as their numbers continue to increase around mainland NZ, particularly in FMA 5.

Purpose

These Operational Procedures (OP) have been established so that agreed and required management measures are clearly communicated to and understood by vessel skippers, managers and annual catch entitlement (ACE) providers/Licensed Fish Receivers (LFRs). This OP is relevant to vessels setnet fishing any species in South Island harbour, nearshore, and coastal regions.

This OP aligns with the 'Mitigation Standards to Reduce the Incidental Captures of Seabirds in New Zealand Commercial Fisheries (Toolbox of Measures)' developed by DOC and FNZ. The Mitigation Standards builds on existing statutory requirements to show bycatch mitigation options that are above and beyond minimum regulations. The fishing industry focuses on ensuring our fleets are meeting statutory requirements and encourages vessels to further reduce their risk of seabird captures, as appropriate to their vessel operations.

The purpose of the Coastal Setnet Operational Procedures is to ensure:

- The risk of seabird, marine mammal and protected shark species mortalities from the SN fishery is mitigated and protected species captures are reduced.
- All mandatory measures are understood and adhered to.
- Vessel skipper and crews are aware of additional, voluntary measures that go above and beyond statutory requirements.
- Vessels report as accurately as possible all capture events (FNZ reporting) as well as any Trigger Points required by the Seabird Liaison Programme.
- Vessel crews actively implement protected species mitigation measures i.e. **Look – Think – Act**
- Vessel skippers and crew are aware of systems to manage protected species risk and can stand up to audit or review by vessel owners, skippers or Government.

2. Main seabird species at risk

Seabirds at Risk	Species Code	Main Risk Area	Threat Classification, Place, Time, Risk Profile
Yellow-eyed Penguin (Hoiho)	XYP	Otago, Catlins, Stewart Island	<ul style="list-style-type: none"> Nationally Endangered Typically found within 25km of the coast, but may travel up to 50km offshore Mostly feed on the seabed during the day at depths up to 150m Juveniles migrate north after they fledge in February towards Kaikoura and are often sighted around the Canterbury Bight (a small population off Banks Peninsula) The mainland population is small and declining due to a number of threats and impacts (including, but not just, fishing). Little population data for sub-Antarctic populations.
Fiordland Crested Penguin (Tawaki)	XFC	Fiordland, Stewart Island, Foveaux Strait	<ul style="list-style-type: none"> Nationally Vulnerable Most frequently caught nearshore e.g. overlapping with butterfish fisheries Intensive feeding period post chick-rearing (late Nov-early Feb) and post-moult (late Feb- early July) Multiple threats including ocean change (food issues) and land-based predators; fishing impacts add to these threats
Little Blue Penguin (Korora)	XLB	All Areas	<ul style="list-style-type: none"> At Risk - Declining Strongly impacted by adverse climate and oceanic events Present year-round on entire NZ Coastline Most frequently caught nearshore but may range up to 25km Daylight forager, often rafts, return to land at night
Foveaux Shag and Otago Shag (<i>until recently known as Stewart Island Shag</i>)	XHG	Foveaux Strait, Stewart Island, Otago	<ul style="list-style-type: none"> Nationally Vulnerable and At Risk Present in Oamaru south to Stewart Island, have been identified as far north as Banks Peninsula Fly in flocks to or from feeding grounds and forage up to 10km offshore Seabed forager (down to 30m), also forage in murky water e.g. Otago Harbour
King Shag	XHG	Marlborough Sounds & WC D'Urville Island	<ul style="list-style-type: none"> Nationally Endangered About 85% of all existing birds are located at five colonies: Rahuinui Island, Duffers Reef, Trio Islands, Sentinel Rock, and White Rocks Forage up to 25km from their colony Seabed forager (down to 50m) during daylight hours
Black, pied, little, and spotted shags	XPS (pied) XPP (spotted) XHG (black and little)	All Areas	<ul style="list-style-type: none"> Pied Shag (<i>Nationally Vulnerable – Recovering</i>), solitary shallow water forager (<10m) in daylight hours Spotted shag (<i>Not Threatened</i>), one of only two species of yellow-foot shags in NZ, caught near and offshore, solitary seabed foragers (down to 50 m) in daylight hours Little Shag (<i>Not Threatened</i>), widespread in coastal and freshwater environments. Solitary shallow water forager. Black Shag (<i>Naturally Uncommon</i>), Widespread across NZ, solitary forager in shallow murky water.

3. Marine mammal and shark species at risk

Marine Mammals and Sharks at Risk	Species Code	Main Risk Area	Threat Classification, Place, Time, Risk Profile
Hector's dolphin	HDO	ECSI, WCSI	<ul style="list-style-type: none"> Nationally Vulnerable Most abundant off the ECSI and WCSI but also found on the North Coast (Golden/Tasman Bay and Marlborough Sounds) and South Coast (Te Waewae Bay) Patchy distribution, often in shallow water and off river mouths but can extend range 20nm offshore Not known to feed from nets Use sonar to detect prey, but not 100% of the time – making them susceptible to captures NCSI, ECSI and SCSI: New closures in place as of June 2020. See supplemental material for maps. WCSI: No commercial setnet closures in place.
Dusky Dolphin	DDO	All Areas, particularly EC	<ul style="list-style-type: none"> Not Threatened Found all around the coastline of New Zealand, but more so on the East Coast
Common Dolphin	CDO	All Areas	<ul style="list-style-type: none"> Not Threatened Commonly found in large groups offshore but also found year-round in some inshore areas
Bottlenose Dolphin	BDO	All Areas	<ul style="list-style-type: none"> Range Restricted due to having three main coastal populations: Doubtful Sound, Marlborough Sound to Westport and Bay of Islands. However, are seen elsewhere e.g. Stewart Island, Otago
Orca/Killer Whale	ORC	All Areas	<ul style="list-style-type: none"> Nationally Critical Present year-round on entire NZ Coastline Typically in small family groups Their numbers are small and believed to be declining
Southern Right Whale	SRW	ECSI, Stewart Island, Otago	<ul style="list-style-type: none"> At Risk – Recovering Re-establishing around Mainland NZ, usually seen coastally (including harbours) in small numbers, mostly during winter but may be seen year-round.
NZ Sea Lion	HSL	Otago to Stewart Island	<ul style="list-style-type: none"> Nationally Vulnerable Re-establishing on Mainland NZ Present year-round in southern coastal waters
NZ Fur Seal	FUR	All Areas	<ul style="list-style-type: none"> Not Threatened Present year-round on entire NZ Coastline, mainly rocky shores Main SI Colonies in Kaikoura, D'Urville Island (Marlborough Sounds), Separation Point (Golden Bay), Cape Foulwind (Westport), Banks Peninsula, Otago, Ruapuke, the Solanders and Stewart Island, Fiordland Forage both nearshore and offshore (down to 200m deep)
Great White Shark	WPS	Particularly Stewart Island and Foveaux Strait	<ul style="list-style-type: none"> Nationally Endangered Most common over summer, particularly Nov-Mar Trans-Tasman population (range between NZ, Australia and the south Pacific Islands - a highly migratory species.

4. Managing the Main Risks Associated with the Coastal Setnet Fishery

It is recognised in New Zealand and globally that mitigating protected species interactions with setnets can be challenging, however there are options available to reduce risk. Coastal SN vessels must use a combination of mitigation practices to best address the risks of their individual operations. Fishers are best placed to develop mitigation techniques, if you have innovative ideas about reducing the probability of protected species interactions contact your liaison officer.

Risk Item	Ways to Manage Risk
<p>Food Attractant</p> <p>Discharging fish waste</p> <p>Species captured in the setnet during soak attracting protected species</p> <p>The longer the soak time, the higher the risk of captures</p>	<ul style="list-style-type: none"> Control (hold or batch) offal/waste discharge immediately before or during setting and hauling. If batching cannot occur, then discharge any attractant on the opposite side from which the hauling station is located. If hauling over the stern, discard offal/waste and live fish in batches on the leeward side of the vessel. Minimise net soak time. Use acoustic or other devices to deter the presence of at-risk marine mammal species near the gear (e.g. dolphin pingers).
<p>Setting</p> <p>Poor sink rate (the longer the net is on or near the surface) increases the risk</p>	<ul style="list-style-type: none"> Avoid discharging of fish waste immediately before or during setting. Ensure that the net is clean of any meshed fish or other potential food attractant when being set. Shoot the net at a lower vessel speed may achieve a faster sink rate. Avoid setting in the vicinity of known or observed seabird and marine mammal colonies/rookeries or known foraging areas. Avoid setting when large numbers of seabirds or marine mammals are present. While ensuring vessel & crew safety, reduce additional & unnecessary lighting on the vessel to a minimum.
<p>Hauling</p> <p>Predominantly entangled in the mesh</p>	<ul style="list-style-type: none"> Manage and minimise lofting of the net above the sea surface in high wind or wave conditions when seabirds and marine mammals are present. Ensure the vessel is moving at an appropriate speed to keep the net underwater while hauling. Use acoustic or other devices to deter the presence of at-risk species near the gear. Avoid hauling the net when large numbers of birds or mammals are present. While ensuring vessel & crew safety, reduce additional & unnecessary lighting on the vessel to a minimum.
<p>High Risk Periods and Areas</p> <p>Increased seabird numbers and aggressive feeding during breeding season, migration periods and/or moon periods</p>	<ul style="list-style-type: none"> Avoid known areas of high activity of protected species. Discuss these with your Liaison Officer so you are clear about where, what and when. Avoid setting gear near (where possible) rookeries, colonies and foraging areas (generally the closer you are the higher the risk) (see appendices for maps of areas to avoid). Avoid setting gear within any known consistent foraging or transit patterns of penguins (see appendices for maps of areas to avoid). While ensuring vessel & crew safety, reduce additional & unnecessary lighting on the vessel to a minimum (particularly while at anchor).

5. Mandatory Setnet Measures

MPI has implemented regulatory requirements for seabird risk mitigation. The regulations that apply are: *Fisheries (Commercial Fishing) Regulations 2001* - <https://www.legislation.govt.nz/regulation/public/2001/0253/latest/whole.html>

5a. South Island setnet closures for Hector's Dolphin

- **Additional SN closures came into effect on 1 October 2020, please refer to the MPI Dolphin TMP Fact Sheet in your folder for new measures introduced on the north, east and south coasts of the South Island.**

5b. Restrictions on setnets in channels

- Setnets must not extend more than one-quarter of the way across the width of a channel, river or stream (measured as distance between the bank of the channel, river, or stream, at right angles at that place at that time).
- Setnets must not extend more than one-quarter of the width of an arm of the sea, including an estuary, inlet, bay or sound (distance measured between a point on the water's edge and a point on the opposing water's edge that at the same point intersect with net, or a wing, leader or other item attached to the net).

5c. Length requirements for setnets

- Fishers must not use setnets if the total length of a net or combination of nets, whether attached together or otherwise is more than 1000m.
- However, if the upper edge of each net is more than 2m below the surface, the set net may be a maximum of 3000m in length or combination of total lengths whether attached together or otherwise.
- Fishers must not use or possess set nets with a total length of more than 500 m if, when the nets are set, they have part of their upper edge more than 2 m from the surface of the water – unless the nets have surface floats attached at intervals of 500 m or less.
- Fishers must not, in rivers, lakes, lagoons or estuaries, -
 - a) Use set nets or a combination of set nets if the total length of a net or a combination of nets, whether attached or otherwise, exceeds 1000 m, or
 - b) Set a set net within 60m of another set net.

5d. Soak time requirements for setnets

- Nets must not be left set in the water for more than 18 hours without underrunning the net and removing fish that have been caught.

5e. Stalling is prohibited

- Fishers must not set nets so that stalling occurs and must ensure stalling does not occur while the nets are set.

5f. Mesh size requirements for setnets

- Fishers must not use or possess nets whose mesh size is smaller than that specified in the table below, as per the regulations. Find mesh sizes for other species in the web page provided above.

Species of fish	Minimum net mesh size (mm)	Minimum fish length (cm)
Blue cod	-	33
Blue and Red moki	115	40
Butterfish	108	35
Elephant fish	150	-
Flatfishes (except sand flounder)	100	25
Red cod	100	25
Rig	150	-
Sand flounder	100	23
Tarakihi	100	25

6. Risk Management Plan Responsibilities

Responsibilities of Operator and Skipper

- Display a copy of the “Ten Golden Rules for Setnet Vessels” on the bridge.
- Ensure all crew are briefed on the Coastal SN OP and the vessel’s PSRMP and fully understand their responsibilities.
- Manage fishing operations in time and place based on their experience and the information provided in this OP to minimise overlap-with protected species.
- Be aware of protected species (seabird and marine mammal) activity around the vessel and in the area; assess risks and take actions needed to minimise risk.
- Ensure offal/fish waste is not discharged immediately before or during shooting, and if discharge during hauling is unavoidable, batch discharge from the side opposite the hauling station.
- Ensure correct reporting to FNZ and that trigger reports are sent promptly to your local Liaison Officer (see section 7).
- Ensure crew meet their responsibilities as listed below.
- Address any deficiencies in implementation of the PSRMP as noted by any observer
- Address the effectiveness and content of the PSRMP if seabird captures exceed the trigger points.

Responsibilities of Crew

- Manage offal and fish waste as outlined in this OP to reduce attraction of protected species to the vessel during times of shooting and hauling.
 - Haul the net as quickly as practicable and always seek to minimise the time the net remains at or near the surface.
 - Maintain a watch of seabird and marine mammal activity around the vessel and advise the skipper when there is risk that requires action, including:
 - Not shooting in presence of significant feeding activity.
 - Adjusting hauling speed and operation to reduce risk.
 - Advising if any animal is seen caught and ensuring its immediate release if alive.
 - Check and maintain any mitigation equipment (e.g. acoustic pingers).
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7. Reporting Protected Species Captures - Trigger Limits

Trigger Limits & Vessel Action

Triggers Points include:

Any 24 hr period:

- (Alive or Dead) Any great albatross, penguin, dolphin, sea lion or basking shark
- (Alive or Dead) First turtle capture of fishing year
- (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

Actions Required

Report all trigger points to your local Liaison Officer within 24 hours so that any follow-up can be discussed and carried out. Emails from Sat-C or texts are OK.

Your local Liaison Officer's contact details are on your Protected Species Risk Management Plan.

8. Audit & Review

Government fisheries observers on your vessel will audit the implementation of your PSRMP. **You own the plan, and it should reflect what you will do. Do not write anything into the PSRMP that you do not intend doing.** Information they collect will be provided to DOC, FNZ and the Liaison Officer.

If your PSRMP is not being implemented effectively, it means that either the Plan needs updating or practices onboard need to be improved. Your Liaison Officer can work this through with you and update your Plan if necessary.

Your PSRMP may also need updating at other times. For example, if you change gear or target species, or there are changes in any element of your fishing operations that relate to the risk of protected species captures. At these times, please contact your Liaison Officer.

9. Fisheries NZ Reporting Requirements

All protected species captures

It is not illegal to accidentally capture protected species while commercial fishing, **but it is illegal to fail to report the capture**. It is important that all captures and mortalities are reported accurately. All protected species (captures or deck strikes, see below) dead or alive (then returned to the sea) must be recorded on the Electronic Logbook.

Fisheries NZ observers may decide to keep some protected species caught for necropsy and identification. They are permitted to do so. The vessel may only do so if it holds a DOC permit.

Always meet your legal requirements.

Definitions:

- **Captures:** *An animal (dead or alive) which is brought onboard on/by the fishing gear and requires assistance/help off the vessel.*
- **Deck-Strikes:** *Birds that 'collide' with the vessel/deck/superstructure and are dead or injured and are unable to leave vessel of their own accord; report as 'deck-strikes'.*
- *Not reported if alive and leaves the vessel unassisted, (i.e. landed on vessel).*

NFPSCR Codes – Species ID and leg bands/tags

Seabirds

- If you are 100% sure, use the species individual codes supplied by FNZ and listed on pages 3 and 4 of this OP.
- **If you are not 100% sure of the species identification, take a photo and send it to your Liaison Officer who may help you identify the protected species.**
- If you still cannot ID the species you may use the **XPG** (unidentified penguin), **XHG** (unidentified shag), **XAL** (unidentified albatross/mollymawk) and **XXP** (unidentified petrels & shearwaters) species codes.
- Record any leg band numbers on the form, these are really important and FINZ urges skippers to record any leg bands.

Marine mammals

- If you are able to identify marine mammals, report these captures at the species level as outlined on pages 3 and 4 of this OP.
 - **If you are unsure, take photos of the head, whole body and any distinguishing marks on the marine mammal, do this without any crew or vessel features in the picture and send these photos with your Liaison Officer, who may help you identify the marine mammal.**
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10. Animal Handling/Release and Crew Safety

Release Alive

Every care should be taken to release animals alive and in the best condition possible. Handle animals with care to minimise any further stress, harm or injury, and to increase its survivability back at sea. Refer to the [DOC Handling and Release Guide](#) for further diagrams and instructions. **Deliberately harassing or harming these animals after an incidental capture is an offence.**

Seabirds

- Keep the bird calm by covering the head with a cloth. Use two crew if possible; one to support the bird, while the other frees the gear from the bird. Use gloves and eye protection (some birds can inflict a nasty bite).
 - Carefully isolate the tangled meshes. Peeling the netting back over the tail, feet, and then the wings, while holding the bird firmly. Remove the head from meshes last.
 - Once freed, place the bird gently back into the water. If the bird is waterlogged keep it in a safe place, such as an empty fish case with a clean and dry towel lining the case floor. Cover the case also. Do not put the case in the wheelhouse as the bird will get too warm. Leave it on deck in the quietest location with the least draft possible, until it has recovered. Do not throw bird in the air, place back on water surface.
 - Refer to the [DOC Handling and Release Guide](#) for further diagrams and instructions.
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Marine Mammals and Sharks

- If possible, remove animal from net without bringing aboard. This is especially important for sharks as their body structure does not protect their internal organs when hauled on deck or over rails.
- If possible, give seals time and space to leave the vessel. Do not take actions that will antagonise the animal and watch carefully for signs of aggression.
- Do not allow crew to be in the animal's path or escape route. Use netting as a moving barrier or a deck hose to persuade/guide the animal back to the sea.
- Seals can carry a number of diseases infectious to humans. Handling marine mammals should always be kept to a minimum and should only occur if absolutely needed.

When attending to animals landed on deck, the following steps should be followed to ensure crew safety:

- Whenever handling bodies of drowned fur seals, or any other marine mammals, wear waterproof gloves and waterproof protective clothing
 - Avoid direct contact with blood, urine, faeces and other body fluids. It is also important to avoid the mouth of the marine mammal as this is a major source of disease.
 - If bitten or grazed by a marine mammal, wash and disinfect the wound immediately, apply betadine/foban/antiseptic ointment and cover the wound. This minimises the risk of 'seal finger', a chronic and very painful infection caused by bacteria carried by some marine mammals. Visit a doctor once ashore as infection is very common with seal and sea lion bites.
 - After handling any marine mammal, crew should wash their hands and forearms with antibacterial soap and hose down their protective clothing.
 - Refer to the [DOC Handling and Release Guide](#) for further diagrams and instructions.
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Returning Dead Protected Species to the Sea

The entire body of any dead protected species must be returned to the sea, unless a MPI observer onboard the vessel directs the skipper to keep it (or they themselves keep it) or the skipper has been advised otherwise by DOC or FNZ. Usually, they only keep seabirds, but may take parts of marine mammals or sharks.

Taking any part and keeping it or cutting or mutilating the body of a protected species is an offence.
