

# Inshore Bottom Longline

## Operational Procedures - Protected Species Risk Management

Version 2 October 2021

**FISHERIES**  
INSHORE NEW ZEALAND

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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 measures and reporting. Please contact your Liaison Officer for support if you need assistance.**

## 1. Background, Rationale and Purpose

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Inshore bottom longline (BLL) vessels operate in areas overlapping with marine protected species, particularly seabirds. In addition to seabirds, the BLL fleet occasionally captures other protected species including white pointer sharks, and less commonly, marine mammals and turtles. It is therefore important to use a structured approach to mitigate the risk of protected species captures in this fishery.

The protected species caught by the BLL 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 these species. It is in the best interests of the inshore BLL fleet to take all reasonable steps to acknowledge, understand and reduce as much as possible impacts on protected wildlife encountered.

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### 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. Of particular concern to the inshore BLL fleet are black petrels, flesh-footed shearwaters, white-chinned petrel, and Salvin's albatross.

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### Purpose

This Operational Procedure (OP) has 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 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.

No protected marine mammal species have been assessed as being at high risk from commercial inshore bottom longline fishing operations, therefore this document focuses on seabird capture mitigation methods and techniques.

The purpose of the inshore BLL Operational Procedures is to ensure:

- The risk of seabird mortalities from longlining is mitigated and seabird 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 required and as accurately as possible all capture events (FNZ reporting) as well as any event triggers required by the Protected Species 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.
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## 2. Main species at risk

Currently four seabird species observed captured by the BLL fleet are known to be high or very high-risk category and warrant immediate and ongoing reduction in captures and risk of capture. Captures occur in all areas frequently fished by the fleet.

Species at Risk	Species Code	Main Risk Area	Risk Profile, Place, Time
Black petrel	<b>XBP</b>	East Coast North Island (Particularly FMA 1)	<ul style="list-style-type: none"> <li>• Highest risk seabird in FNZ Risk Assessment</li> <li>• Nationally Critical Threat Status</li> <li>• Nests on Great and Little Barrier Islands, active in BOP, HG, Northland</li> <li>• Most common in Spring/Summer/Autumn.</li> <li>• Aggressive feeder in Summer near nest sites (strong divers)</li> </ul>
Flesh-footed shearwater	<b>XFS</b>	East Coast North Island (particularly FMA 1)	<ul style="list-style-type: none"> <li>• Third highest risk seabird in FNZ Risk Assessment</li> <li>• Nationally Vulnerable Threat Status</li> <li>• Nests on many out-lying islands around upper North Island</li> <li>• Most common during Autumn/Summer/Spring</li> <li>• Aggressive Feeder (strong diver) - feed during daylight hours</li> </ul>
Salvin's Albatross	<b>XPB</b>	All Areas	<ul style="list-style-type: none"> <li>• Second highest risk seabird in FNZ Risk Assessment</li> <li>• Nationally Critical Threat Status</li> <li>• North Island during Spring/Summer</li> <li>• Aggressive surface feeder (rarely plunge or dive)</li> </ul>
White-chinned petrel	<b>XPB</b>	All areas, particularly (FMA 2, 3, 5, 7)	<ul style="list-style-type: none"> <li>• Range restricted Threat Status</li> <li>• Nest on southern offshore Islands</li> <li>• Predominantly feed over continental shelf south and east of NZ during breeding season</li> <li>• Visit North Island coasts year-round south of East Cape, especially Spring/Summer</li> <li>• Aggressive surface feeders (rarely plunge or dive)</li> </ul>
Wandering albatross (Gibson's and Antipodean)	<b>XAG</b>	East Coast North Island (particularly FMA 1)	<ul style="list-style-type: none"> <li>• Nationally Critical Threat Status</li> <li>• Nest on Antipodean, Campbell and Auckland Islands, most common in Tasman Sea and over Chatham Rise</li> <li>• Pelagic foragers, focus on upwelling areas &amp; features - overlap where deepwater occurs close to land i.e. East Cape, Kaikoura, Cook Strait/Wairarapa, Three Kings and Fiordland</li> </ul>

### 3. Managing the main risks associated with the Inshore BLL Fishery

BLL vessels must use a combination of mitigation practices to best address the risks of their individual operations. As the BLL fleet is diverse with respect to vessel size and gear set-up, the particulars of mitigation practices may differ between vessels. Fishers are best placed to develop mitigation techniques, if fishers have innovative ideas about reducing the probability of protected species interactions contact your liaison officer. These risks are applicable to all seabirds (mostly petrels, shearwaters and albatross).

Risk Item	Ways to Manage Risk
<p><b>Food Attractant</b></p> <p>Offal, waste, discarded baits, whole fish returned to the sea, whole fish on the line</p> <p>The more food, the more birds around the vessel, increasing the risk of captures</p>	<ul style="list-style-type: none"> <li>Control (hold or batch) offal/waste discharge immediately before or during setting and hauling.</li> <li>If batching cannot occur, then discharge any attractant on the opposite side from which the hauling station is located (exceptions outlined in section 4: Mandatory Mitigation Requirements).</li> <li>If hauling over the stern, discard used baits, offal/waste and live fish in batches on the leeward side of the vessel.</li> </ul>
<p><b>Baited Hooks – Setting</b></p> <p>Predominantly beak hooked, foul hooked, or entangled in the line.</p> <p>Poorly designed or deployed tori line increases the risk.</p> <p>Poor sink rate (the longer the hook is on or near the surface) increases the risk.</p>	<ul style="list-style-type: none"> <li>Use a tori line(s) to deter seabirds from accessing baits.</li> <li>Use appropriate line weighting to ensure a sink rate that mitigates the risk to diving birds (placing weights closer to hooks can help).</li> <li>Slow the vessel or free spool the drum to let the line sink faster if possible.</li> <li>Set at night to reduce visibility of gear to seabirds (blue-dyed bait also reduces visibility to seabirds).</li> <li>Avoid setting the line when large numbers of birds or marine mammals are present.</li> <li>While ensuring vessel &amp; crew safety, reduce additional &amp; unnecessary lighting on the vessel to a minimum.</li> <li>Use thawed bait rather than frozen bait that floats (take out of freezer or ice several hours before setting).</li> </ul>
<p><b>Baited Hooks – Hauling</b></p> <p>Predominantly beak hooked, foul hooked or bird entangled in the line.</p> <p>Risk increases the longer the hook is on or near the surface, made worse by a slow retrieval rate</p>	<ul style="list-style-type: none"> <li>Use bird exclusion or scaring device at the hauling station (<i>i.e.</i> hose spray, mitigation device, and/or vessel manoeuvres)</li> <li>Haul as quickly as practicable.</li> <li>Towing a single terminal buoy 140-175m astern has proved effective at reducing seabird catches.</li> <li>Ensure line weighting is appropriate and floats are hauled in a timely manner.</li> <li>Ensure vessel is moving at an appropriate speed to keep the line underwater.</li> <li>Avoid hauling the line when large numbers of birds or mammals are present.</li> <li>While ensuring vessel &amp; crew safety, reduce additional &amp; unnecessary lighting on the vessel to a minimum.</li> </ul>
<p><b>High Risk Periods and Areas</b></p> <p>Increased seabird numbers and aggressive feeding during breeding season, migration periods and/or moon periods</p>	<ul style="list-style-type: none"> <li>Avoid setting on a full moon and three days either side when possible.</li> <li>Increase sink rate (<i>e.g.</i> increase weight and/or remove floats and/or reduce setting speed, noting reduced setting speed may mean adjusting tori line drag to maintain aerial extent).</li> <li>Add another streamer line.</li> <li>Move from the fishing area, particularly if fishing close to nesting areas.</li> <li>While ensuring vessel &amp; crew safety, reduce additional &amp; unnecessary lighting on the vessel to the minimum (particularly while at anchor).</li> </ul>

## 4. Mitigation Measures

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FNZ has implemented regulatory requirements for seabird risk mitigation. You should have a full copy of the regulations onboard and understand them. The regulations that apply are: *Fisheries (Seabird Mitigation Measures – Bottom Longlines) Circular 2021* - <https://gazette.govt.nz/notice/id/2021-go3770>

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### 4.a Mandatory Tori Line requirements

Tori lines are regarded as one of the most effective mitigation tools. **All longline vessels 7m or greater** in overall length must deploy a tori line during setting.

- The tori line must achieve a minimum aerial extent of 50m during high risk periods (0.5 hrs before nautical dawn and 0.5 hrs after nautical dusk, and three days either side of the full moon)
- During both high and low-risk periods, the tori line must cover hooks until they reach a depth of 5m.
- The tori line must be attached to the vessel at least 5m above the waterline and the streamers must reach the sea surface. Streamers will therefore vary in length along the line.
- The streamers must be brightly coloured, be spaced a maximum of 5m apart, and extend along the entire aerial extent of the line.
- Streamers along the first 15m may be shortened to a minimum length of 1m, but the first streamer must be no more than 5m astern.
- Vessels >20 LOA must have a tori line at least 150m in length.

#### Best operational design guide for tori lines:

Aim to achieve a 50m aerial extent using a 3-part system:

1. Vessel attachment: Tori line placed as high as possible and recommended 7-8m above waterline (every 1m of extra height past 5m will give you 8-10m more aerial extent).
  - Must be able to adjust or move the tori line or use a bridle to place the tori line in best spot relative to fishing gear.
  - Have a breakaway system fitted so tori line will break free before fishing gear breaks or tangles.
  - Have a lazy line back to deck so you can regain the vessel end of the tori line and retrieve it.
2. Streamer aerial section: Backbone of the tori line with minimum of 10-12 sets of streamers spaced at a maximum of 5m intervals.
  - Depending on height (off water) of each streamer line, reduce length of each streamer by approximately 30-50cm going down the backbone
  - Once deployed (without setting gear) the first time, trim streamers away to stay well above the water to reduce drag, tangling gear and birds (*i.e.* so streamers are in the air not the water)
3. Drag section: can be either a float(s) or rope or mono. If the vessel is over 20m length, the whole tori line must be at least 150m in length (including the drag section).
  - Maintain high separation between tori line and setting gear for as long as possible to reduce risk of tangle.
  - Increase drag by increasing size, length and weight of drag object.
  - For vessels <20m LOA it is recommended that in order to achieve at least 50m aerial extent the tori line should be deployed at a height of:
    - a) 5-6m (at 5kn) and requires 30-50m of 9mm braid (500L), with gill net floats placed every few metres on the drag rope and a small road cone or buoy at the end to act as a drogue.
    - b) 8-10m (at 3-4kn), requires 60+m of 9mm braid (500L) plus a short length of mooring rope or road cone or float etc at the end to act as a drogue.

**Talk to your local Liaison Officer. Trial and experiment to find what works best.**

\*Adjust tori line to best suit weather, gear and processing conditions to minimise risk during periods of high seabird interactions.

#### 4.b Mandatory line weighting requirements

During all sets the line must meet the following specifications:

- Bottom longlines must be weighted so that the slowest sinking hook can be demonstrated to reach a 5m depth within the aerial extent of the tori line (during high-risk periods the aerial extent must be at least 50m).
- You are required to conduct sink rates tests at least once per calendar month, or when gear significantly changes. These tests may be done using bottle tests or time-depth recorders (TDRs).
- Results of these sink rate tests must be documented and retained onboard for at least one year and made available to Fisheries Officers and Observers upon request.

#### Best operational guides for line weighting and good sink rate (around 0.3m per second)

- Weight line to achieve satisfactory sink rate so seabirds have less time to target the baited hooks.
- In times of heightened risk (*i.e.* if black petrels or other diving birds are present), add more weight and/or remove some floats.
- Slower setting speeds will help improve sink rate but will also reduce aerial extent of the tori line.
- Applying similar weights at regular intervals will help maintain a steady sink rate.
- Do not fit single large weights at wide intervals, this will pull down the backbone in one area while floating the rest of the line behind it.
- Mainline diameter and material as well as the distance between weights and numbers of floats all can affect the sink rate.

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#### 4.c Mandatory offal & fish discharge requirements

The following minimum specifications must be followed:

- **During setting**, offal or fish cannot be discharged from the vessel. The only exceptions are:
  - Fish that are legally undersize (sub-MLS) or
  - Fish that are listed in Schedule 6 of the Fisheries Act and that are likely to survive.
- **During hauling**, offal, used bait or live fish or fish may only be discharged from the side of the vessel opposite to the hauling station (or the leeward side of the vessel if hauling astern). The only exceptions are:
  - Any live fish or whole dead fish >30cm fork length can legally be discarded on the hauling side of the vessel, **only if** a hauling mitigation device is deployed.

#### Best operational guides for offal control and used bait

- No continuous or *ad hoc* discharge of fish waste or used bait. Particularly while hauling, all offal, fish waste and bait discharge is either held, batched, or discharged as per the legal requirements above.
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## 5. Risk Management Plan Responsibilities

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### Responsibilities of Operator and Skipper

- Display a copy of “The 10 Golden Rules for Inshore Bottom Longline Vessels” on the bridge.
  - Ensure all crew are briefed on the BLL OP, and the vessel’s PSRMP and fully understand their responsibilities.
  - Be aware of protected species (seabird and marine mammal) activity around the vessel and in the immediate 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.
  - Deploy mandatory mitigation measures and additional measures as considered appropriate to reduce the risk to seabirds.
  - Deploy and/or adjust mitigation measures to best suit weather, fishing and processing conditions to minimise risk of seabird interactions.
  - Ensure correct reporting (FNZ) and that Trigger reports are sent promptly to the Liaison Officer identified on your PSRMP.
  - Ensure crew are meeting their responsibilities listed below 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.
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### Responsibilities of Crew

- 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.
  - **Hauling:** *Period from when the marker buoy is taken on board until the last of the longline is on board.*
  - **Shooting:** *Period from when the marker buoy is off the deck until the last hook is at fishing depth.*
  - Haul the line as quickly as practicable and always minimise the time the line remains at or near the surface.
  - Maintain a watch of seabird and marine mammal activity around the vessel and advise the skipper when it is clear there is risk that requires action, including:
    - Not shooting in presence of significant seabird feeding activity.
    - Adjusting hauling speed and operation to reduce risk.
    - Advising if any animal is seen caught and ensuring its immediate release if alive.
    - Ensuring the tori line (and other bird scaring devices) remain ‘fit and proper’, using spare parts to rebuild/replace if they are damaged or lost.
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## 6. Reporting Protected Species Captures - Trigger Limits

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### Trigger Limits & Vessel Action

#### Trigger 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

### Action 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.

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## 7. Audit & Review

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Government fisheries observers on your vessel will audit the implementation of your PSRMP. Information they collect will be provided to DOC, Fisheries NZ 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.

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## 8. Fisheries NZ Reporting Requirements

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### 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 autopsy 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.**

- **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)*

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### NFPSCR Codes – Species ID and leg bands/ tags

#### Seabirds

- If you are 100% sure of the species identification use the species individual codes supplied by FNZ and listed on page 3 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 ID the protected species.
- If you still cannot identify the species you may use the **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, Sharks and Turtles

- If you are able to identify the protected species, report these captures at the species level as outlined on page 3 of this OP.
  - If you are unsure, take photos of the head, whole body, and any distinguishing marks on an animal, do this without any crew or vessel features in the picture.
  - Share these photos with your Liaison Officer, who may identify the species for you.
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## 9. Animal Handling/Release and Crew Safety

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### Release Alive

Every care should be taken to release animals alive and in the best condition possible. Handle with care to minimise any further stress, harm or injury to the animal, 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.**

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### 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 snood or hook. Remove the snood or hook while holding the bird firmly.
  - 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, until it has recovered.
  - 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 the longline 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/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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### Turtles

- Utilise the dehooker and line cutter in your turtle kit (if you don't have one on board, contact your Liaison Officer to supply you with one).
  - Release while in the water, do not pull onboard.
  - If hooked or swallowed, cut the snood as close to the animal as possible.
  - If tangled, cut the snood as required to remove the line.
  - 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, or they themselves keep it or the skipper has been advised otherwise by DOC or Fisheries NZ. Usually, they only keep seabirds.

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

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