

# SCAMPI FISHERIES

## **OPERATIONAL PROCEDURES**

FOR MITIGATING RISK OF SEABIRD AND  
MARINE MAMMAL CAPTURES

VERSION 3.0



deepwater  
group

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## PART 1: INTRODUCTION

The following Operational Procedures (OPs) stipulate the management measures agreed between Deepwater Group Ltd (DWG) shareholders owning scampi (SCI) quota and Fisheries New Zealand (FNZ). They are implemented and administered by DWG.

These procedures apply to all vessels targeting scampi.

**Disclaimer:** *These OPs do not replace or override any fisheries legislation or any other regulations including H&S and Maritime Safety. Vessel operators should ensure that officers and crew understand all regulations that are in place for the fisheries, areas and environment that they are operating in.*

### Background to these procedures

The scampi fishery has had observed and estimated incidental capture rates of seabirds, New Zealand fur seals and New Zealand sea lions which are sufficient to require a structured approach to understanding and mitigating that risk. The characteristics of scampi fishing which can increase the risk of incidental captures are:

- Multi-rig trawls (two or three nets)
- Operations requiring extended periods during which the gear is on or near the surface
- Attractants from high levels of offal and discards due to bycatch
- Fishing grounds and seasons in some areas well-known for high seabird or marine mammal numbers.

These OPs provide the standards and supporting information for the vessel operator to use along with the vessel's specific Vessel Management Plan (VMP) to reduce risks to protected species, especially seabirds and marine mammals.

### Seabirds National Plan of Action (NPOA)

The National Plan of Action to reduce risk to seabirds in New Zealand fisheries (NPOA-Seabirds) sets the management approach. It is drafted in accordance with the requirements of the Agreement on the Conservation of Albatrosses and Petrels (ACAP), to which New Zealand is a signatory.

The NPOA-Seabirds seeks to ensure that effective mitigation methods are applied in New Zealand fisheries, acknowledged risk reduction methods are applied as appropriate, and actions to manage risk to seabirds are prioritised based on the level of risk faced by particular seabird species and posed by the various fishery sectors.

Through FNZ a spatially explicit risk assessment is used to assess the risk to seabird species from particular fisheries. Currently about 10 species are assessed to be in a high-risk category and therefore need continued attention. Three of these species with high risk scores have been observed captured in the scampi fishery: white-capped albatross, Salvin's albatross and flesh-footed shearwater. White-chinned petrels and sooty shearwaters are also of particular concern due to the relatively high numbers of captures.

## Marine mammals

Fur seals are found around the South Island coast line and observed captures are recorded in areas overlapping with scampi fishing areas (particularly East Coast South Island, Chatham Rise, and Auckland Island scampi fisheries).

New Zealand sea lions have been observed captured in the SCI 6A fishery. The sea lions' "nationally critical" threat status means risk in this area needs to be managed closely.

It can be difficult to identify between fur seals, sea lions and other pinnipeds such as leopard seals.

**Vessels operating in SCI 6A must report all seal-type captures** to DWG within 24 hours. If the animal is dead, two photos (one of head and one of full body) must be taken before it is returned to the sea. These photos are to be sent to DWG so the species can be accurately identified.

## Objectives of these procedures and associated VMP

The objectives of these OPs are to ensure that:

- Risks to seabirds and marine mammals from scampi fishing are understood and mitigated
- Every vessel has robust, documented and easy-to-follow vessel-specific seabird and marine mammal mitigation procedures in place, including:
  - One Seabird Mitigation Device deployed at all times and a tori line on board. For vessels >28 m LOA, this must meet the FNZ mandatory design and specification
  - Fish waste control
  - Operators, skipper and crew understand the particular risks of seabird net captures associated with the centre net during use of a triple rig
  - Operators, skipper and crew understand the particular risks of New Zealand sea lion captures in SCI 6A (Auckland Islands scampi fishery).
- Through implementing these OPs and their VMP, the crew are actively involved in seabird and marine mammal mitigation measures and improvements
- Information regarding significant seabird or marine mammal interactions is provided and reported in real-time to DWG to help incident management.

## Legislative Framework

The key legislation that underpins the management and protection of marine mammals and seabirds in New Zealand includes:

- **Marine Mammals Protection Act 1978:** the accidental capture of any marine mammal is permitted provided that the capture is reported to the appropriate authority without delay. **It is an offence to accidentally capture a marine mammal and fail to report it.**
- **Fisheries Act 1996:** requires that measures are taken to avoid, remedy or mitigate any adverse effects of fishing related mortality on any protected species. **This Act also includes requirements to report captures of protected species.**
- Other relevant statutes include the **Wildlife Act 1953** and **Animal Welfare Act 1999**

Other relevant legislation includes:

- Department of Conservation Regional Coastal Plan for sub-Antarctic Islands

## PART 2: RISK

Seabirds and marine mammals are attracted to offal and discards from the vessel or whole fish in the trawl net. Once attracted, they are at risk of injury from the gear or drowning within it.

Risk to seabirds and marine mammals is driven by two factors:

1. **Food** (offal, waste, discards, fish in the trawl) attracts animal to vessel
2. **Fishing gear** may come into contact with the animal
  - **The warps (seabirds):** in particular where the warps enter the water and birds collide with or are struck by them.
  - **The trawl net (seabirds and mammals):** in particular when gear is on or near the surface as this increases the risk of interactions with marine mammals and seabirds that may easily enter into the trawl mouth and become trapped and drown.

Managing the risks associated with these two factors at a vessel level will help minimise interactions and reduce the incidental captures of seabirds and marine mammals.

For seabirds there is also a risk of significant deck-strikes when at anchor. This is exacerbated by poor weather (e.g. storms, low cloud or fog) and bright deck lighting.

**Table 1 Main species at risk from scampi fisheries**

RISK	MAIN SPECIES AT RISK DUE TO OBSERVED SCAMPI FISHERY INTERACTIONS, PLACE, TIME AND RISK PROFILE
Seabirds	<p><b>Salvin's albatross</b></p> <ul style="list-style-type: none"> <li>• Chatham Rise year-round</li> <li>• Second highest risk in NPOA Risk Assessment and threat classification 'Nationally Critical'</li> <li>• Aggressive feeder around vessels</li> </ul> <p><b>White-capped albatross</b></p> <ul style="list-style-type: none"> <li>• Auckland Islands year-round but especially spring/summer</li> <li>• Most frequently caught albatross across all fisheries; in top five of NPOA Risk Assessment</li> </ul> <p><b>Buller's albatross</b></p> <ul style="list-style-type: none"> <li>• Chatham Rise year-round</li> <li>• Aggressive feeder around vessels; small population; in top ten of NPOA Risk Assessment</li> </ul> <p><b>White-chinned petrel</b></p> <ul style="list-style-type: none"> <li>• Chatham Rise and Auckland Islands, spring/summer</li> <li>• Strong diver and aggressive feeder around vessels; most frequently caught species</li> </ul> <p><b>Flesh-footed shearwater</b></p> <ul style="list-style-type: none"> <li>• Bay of Plenty, spring/summer</li> </ul>

RISK	MAIN SPECIES AT RISK DUE TO OBSERVED SCAMPI FISHERY INTERACTIONS, PLACE, TIME AND RISK PROFILE
	<ul style="list-style-type: none"> <li>• Strong diver; in top five of NPOA Risk Assessment</li> </ul> <p><b>Sooty shearwater</b></p> <ul style="list-style-type: none"> <li>• Auckland Islands/Chatham Rise, spring/summer/autumn</li> <li>• High number of captures, risk indicator</li> </ul> <p><b>Black petrel</b></p> <ul style="list-style-type: none"> <li>• Upper North Island, spring/summer/autumn</li> <li>• Highest risk seabird in NPOA Risk Assessment</li> </ul>
Marine Mammals	<p><b>NZ fur seal</b></p> <ul style="list-style-type: none"> <li>• Chatham Rise year-round</li> </ul> <p><b>NZ sea lion</b></p> <ul style="list-style-type: none"> <li>• Auckland Islands year-round</li> <li>• 'Nationally Critical' and observed population decline</li> </ul>

## PART 3: MANAGING RISK

The following outlines how to implement these OPs and your VMP and what is expected of you.

**Remember: Look – Think – Act to situations occurring around you.**

### Responsibilities of vessel owner, operator or manager

All vessel owners, operators and managers must:

- Ensure key crew are briefed on these Scampi Fisheries Operational Procedures and their VMP and fully understand the actions required
- Ensure the current OPs and VMP are on board and easily available
- Advise DWG of need to any review, refresher or briefing of new skippers or managers
- Ensure handover to new managers or skippers includes refresher on DWG OPs and VMP requirements
- Have oversight of protected species reports
- Respond to Observer audit reports via DWG
- Promptly pass on trigger reports to DWG.

### Responsibilities of skipper and crew

The vessel's skipper and crew must:

- Have full knowledge of the requirements of the OPs and VMP and ensure that the documents are on board and accessible
- Post the 10 Commandments in a visible space in the wheelhouse

- Undertake to adhere to the requirements of these OPs and their VMP
- Respond to emerging events based on the principles and actions set out in these OPs
- Manage fish waste and mitigation devices in adherence with their VMP
- Report correctly and always advise trigger events promptly to DWG
- Advise changes to operations that mean the VMP needs reviewed
- Seek support from shore management or DWG when needed
- Captain, senior crew and vessel manager maintain and participate with the DWG environmental risk management information and training programmes as required.

## Identified risks and summary of actions to mitigate risk

RISK	ACTIONS TO MITIGATE RISK
Warp Capture	<ul style="list-style-type: none"> <li>• Reduce numbers of seabirds attracted to the vessel by stopping continuous discharge of fish waste</li> <li>• Stop or limit the amount of time fish waste is in the path of the warp/s by               <ul style="list-style-type: none"> <li>• Holding waste on board for as long as practicable or until maximum capacity is reached</li> <li>• Prevent or control (batch) fish waste discharge while warps are in the water</li> <li>• Mince fish waste and discharge away from the path of warp</li> </ul> </li> <li>• Turn the vessel to move warp away from the path of the fish waste discharge</li> <li>• Ensure warp splices are wrapped, any sprags removed or whipped, and that warp splices are not near the water surface during fishing</li> <li>• Deploy suitable, effective, well-made and maintained mitigation devices</li> </ul>
Net Captures	<ul style="list-style-type: none"> <li>• Eliminate fish waste discharge immediately before and during hauling and shooting periods</li> <li>• Where practicable clear the net of stickers before shooting</li> <li>• Minimise the amount of time the net is on the surface with mouth open and posing risk of entry</li> <li>• Use net restrictor on centre net of triple rig or remove this net at times of high-risk</li> </ul>
Vessel Deck Lighting	<ul style="list-style-type: none"> <li>• While on anchor, keep deck lighting to absolute minimal level whilst ensuring vessel and crew safety</li> </ul>

## Seabird mitigation devices

**Warp Mitigation:** DWG requires all scampi vessels to have a suitable and effective warp mitigation device/s deployed when fishing. It is also mandatory for all vessels over 28 m to deploy an FNZ-approved seabird mitigation device whilst fishing. This needs to be deployed and managed in compliance with FNZ regulations and gazette notices and recommended best practice.

**Tori Line/Baffler:** All vessels to deploy a suitable warp mitigation device that can reduce the risk of seabirds gaining access into two areas:

1. From discharge chute or batch tank discharge area down side of vessel into the path of the warp
2. General area where the warp enters water.

**Additional Mitigation:** As a minimum, all vessels must carry on board a tori line, even if another device (e.g. baffler) is deployed as the primary device. When required, deploy your tori line and/or other 'secondary' device after a warp capture and/or during periods of heightened risk.

**Net Restrictors:** Only required if vessel uses triple rig trawls and if centre net is left in water when hauling. Skippers on all vessels with three trawls must either carry or have materials on board to build net restrictors, if and when required.

## Fish waste control procedures and equipment

No continuous or uncontrolled discharge of fish waste when towing. Hold, batch, and/or mince.

**Batching:** Have a dedicated storage/holding/batching bin/tank/conveyor with the capacity to hold all offal, fish waste and discards. Hold for a minimum of 30 minutes and batch discharge in less than 5 minutes when towing. **Do not continuously discharge fish waste when towing.**

**Mincing:** Mincer or hasher must be able to cut/mince fish waste into small particles that are thumbnail size to discharge/pump. Minced offal and fish waste requires large volumes of water, so pumping is generally continuous. The discharge of fish waste must be able to be stopped for hauling and shooting periods (e.g. often pump/water discharge is left running but the in-feed of fish waste into mincer is stopped for hauling/shooting).

**Chutes and Conveyors:** Reduce accidental spillage to the deck floor from chutes and conveyors by maintaining them in good condition.

**Fish Discards:** Non-Quota Species Schedule 6 and MLS Discards (sub-MLS\*). Any non-quota fish (or Fisheries Act 1996 Schedule 6 species) quantified then discarded from deck will be discarded in a manner that minimises creating risk around warp(s) or net. This is best discharged when the nets are on deck.

\*During hauling & shooting, return those fish required to be returned to the sea while still alive. **Ensure you are aware of all regulations regarding discarding of fish.**

**Scuppers / Sumps:** Open deck scuppers or factory deck sumps with pumps used to clear water from the deck, require a grating or trap system around the area to prevent fish waste or offal accidentally lost to the floor/deck being discharged overboard. Using grates or stoppers to prevent fish waste leaving the vessel is best practice, provided it can be done while always allowing the required discharge of water to keep the vessel safe.

## Contingency procedures & equipment

**Batching / Holding / Conveyors:** Carry spare parts in the event of equipment failure. All repairs to be made ASAP if the holding/batching/mincing equipment or procedures fail. If unable to repair, use other equipment that can be used to batch fish waste (e.g. fish bins/Dolab/conveyors) until repairs or changes made.



**Fish Waste System Failure:** Notify vessel manager ASAP. Manager to notify DWG ASAP.

**Mitigation Devices:** Carry spare parts in the event of equipment failure. All repairs to be made ASAP.

**Fish Waste Discharge:** In the event of gear failure, the fish waste control system must still be able to stop discharging fish waste during hauling and shooting periods.

**Night Time Repairs Fish Waste Control System:** Repairs to fish waste equipment should be carried out at night if possible, as fish waste discharge will then present less risk to seabirds.

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## **PART 4: ANIMAL HANDLING / RELEASE AND CREW SAFETY**

### **Release alive**

Every care should be taken to release animals alive. Reduce stress and handle with care to minimise any further harm or injury to the animal and to increase survivability when it is being returned to the sea alive.

**It is an offence to deliberately harass or harm any marine protected species. This includes wilful damage, mutilation or removal of parts of dead animals.**

### **Birds**

- Keep the bird calm by covering the head with a cloth. Use two crew: one to support the bird while the other frees the gear from the bird. Use gloves and eye protection, especially as large birds can inflict a nasty bite.
- Carefully isolate the tangled meshes. Peel the netting back over the tail, feet, and then the wings, while holding the bird firmly. Remove the head from meshes last.
- When 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.

### **Marine mammals**

- If possible, give animals time and space to leave the vessel. Do not take actions that will antagonise the animal. Watch carefully for signs of aggression in the animal.
- Do not allow crew to be in its path or escape route. Use netting as a moving barrier or a deck hose to guide the animal back to the sea.

### **Marking dead marine mammals returned to the sea**

The entire body of any dead mammal must be returned to the sea, unless a FNZ Observer on board the vessel directs the captain to keep it.

Any dead fur seal or sea lion returned to the sea must be 'marked' to avoid the same animal being counted twice should the body be caught again.

When marking a dead animal:

- Be sure you have made the correct identification between fur seal and sea lion.

- Only use either a cable tie or twine fixed firmly behind the lower or upper jaw canine teeth.

## Take two pictures of all dead seal/sea lion captures in SCI 6A

Vessels operating in the SCI 6A area must report each and every seal capture to DWG (within 24 hours) and, if the animal is dead, take two pictures (head and full body photo) before it's returned to the sea. The two pictures are to be sent to DWG so a positive identification between the species can be made.

## Seal handling and crew safety issues

Seals and sea lions can carry a number of infectious diseases which can infect humans. Live marine mammals can also be potentially dangerous to humans particularly when they are in stressful situations. Handling marine mammals should always be kept to a minimum and should only occur when needed.

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

- Whenever handling bodies of drowned sea lions, fur seals, or any other marine mammals, wear waterproof gloves and waterproof protective clothing
- Where possible, avoid direct contact with blood, urine, faeces and other bodily fluids. It is particularly important to avoid the mouth of the marine mammal as this is a major source of disease. Take special care when marking an animal
- 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
- After handling any marine mammal, crew should wash their hands and forearms with antibacterial soap and hose down their protective clothing.

## Animal welfare

- All practical care should be taken to release animals alive while maintaining the safety of the crew
- Handle all captures with care to minimise harm to the animal and to increase survivability
- **Deliberately harassing or harming the captured animal is an offence**
- **Taking any part and keeping it or cutting or mutilating the body of a protected species is an offence.**

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## PART 5: REPORTING

### DWG reporting requirements

#### Trigger points and vessel action

Trigger Points are the DWG real-time reporting 'threshold' system. Once a 'trigger' is reached, the situation is monitored closely by DWG, the vessel manager and the captain. When appropriate, the crew take additional steps to mitigate risk of further captures by actively reassessing measures and taking additional steps as required.

#### DWG trigger points

If in any **24-hour period** you capture and land on deck:

- 3 or more large dead seabirds (albatross and mollymawks)
- 5 or more small dead seabirds (petrels and shearwaters)
- 2 or more dead or alive fur seals
- 1 or more dead or alive sea lion
- 1 or more dead or alive basking shark or dolphin.

Or if in any **7-day period** you capture:

- 10 or more dead or alive seabirds (all types of seabird)
- 5 or more dead or alive fur seals.

#### DWG 24-hour reporting requirements

Your onshore Vessel Manager or Vessel Captain must notify the DWG Environmental Liaison Officer **within 24 hours of a trigger** so that any follow-up deemed necessary can be discussed and carried out. Email all trigger reports to [admin@deepwatergroup.org](mailto:admin@deepwatergroup.org).

When fishing in SCI 6A, take two photos (head and whole body) of all seal / sea lion type animal captures and send to DWG for identification.

DWG CONTACTS (AVAILABLE 24/7)	PHONE	EMAIL
DWG (email auto-forwards to John & Richard)		<a href="mailto:admin@deepwatergroup.org">admin@deepwatergroup.org</a>
John Cleal (ELO)	021 305 825	<a href="mailto:admin@deepwatergroup.org">admin@deepwatergroup.org</a>
Richard Wells	021 457 123	<a href="mailto:admin@deepwatergroup.org">admin@deepwatergroup.org</a>

### FNZ Mandatory Reporting Requirements

The following outlines how to report to FNZ.

It is not illegal to accidentally capture protected species while commercially 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 landed dead or alive (then returned to the sea) must be recorded either via Electronic Reporting System (ERS) or on the Non-fish / Protected Species Catch Return paper form (NFPSCR).

## Filling out FNZ protected species ERS or paper forms

Always know and meet your legal requirements.

### Protected Species Codes

- Use the **XAL** (unidentified albatross/mollymawk) and **XXP** (unidentified petrels, shearwaters and prions)
- **SEA** for (unidentified seals) and **WHT** (unidentified dolphins and toothed-whales)
  - Take pictures of all seal/dolphin captures so that at a later date they can be positively identified
- If you are 100% sure of the correct species ID use the species individual codes supplied by FNZ (frequent species listed in Appendix 1)
- Record any leg band numbers on the form (ERS has a field for this).

**Capture:** An animal (dead or alive) which is brought on board by the fishing gear and requires help off the vessel.

**Deck-Strikes:** Birds that collide with the vessel/deck/superstructure and are dead or injured (i.e. unable to leave vessel on its own) are to be reported as deck-strikes. Do not report the bird if it is alive and leaves the vessel unassisted.

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## PART 6: AUDIT AND REVIEW

- It is the vessel operator's responsibility to ensure that the relevance of and adherence to the vessel-specific components of each VMP are reviewed annually (the Operator Audit Form can be found in Appendix 4)
- If modifications are made to the mitigation or offal control systems on board, the VMP is to be reviewed. Any changes required to the VMP must first be confirmed by the DWG Environmental Liaison Officer
- The DWG Environmental Liaison Officer will review each VMP during any vessel visits and crew briefings
- FNZ Observers audit each vessel's at-sea performance against this VMP and a review form is completed by them. Performance is also discussed at the observer debrief
- The FNZ review form and observer's comments are sent to the DWG Environmental Liaison Officer (FNZ review form in Appendix 3). Any issues (positive and negative) are discussed with the vessel operator and/or FNZ as required
- DWG produces a summary of each trip VMP audit report. This is logged with FNZ and the review forms are sent to the vessel operator. Any issues raised should be discussed with the captain.

## APPENDIX 1: FNZ NON-FISH / PROTECTED SPECIES CODES

Unless you can positively identify the seabird species, use the generic/unidentified codes listed here:

**XAL** - Albatrosses (unidentified)

**XXP** - Petrels, prions and shearwaters (unidentified).

STANDARD FNZ NON-FISH SPECIES CODES		
ITEM	COMMON NAME	SPECIES CODE
Birds	Antarctic fulmar	XAF
	Antarctic petrel	XAP
	Antarctic prion	XPR
	Antipodean and Gibson's albatross	XAG
	Black petrel	XBP
	Buller's albatross	XBM
	Campbell albatross	XCM
	Flesh-footed shearwater	XFS
	Grey-backed storm petrel	XGB
	Northern royal albatross	XNR
	Salvin's albatross	XSA
	Sooty shearwater	XSH
	Southern giant petrel	XSP
	Southern royal albatross	XRA
	White-capped albatross	XWM
White-chinned petrel	XWC	
Mammals	Unidentified seal or sea lion	SEA
	Unidentified whale or dolphin	WHT
	New Zealand fur seal	FUR
	New Zealand sea lion	HSL
	Leopard seal	LEO
Shark	Basking shark	BSK

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## APPENDIX 2: MARINE MAMMAL IDENTIFICATION FOR REPORTING

**Remember:** Take 2 pictures (close-up of head and whole animal) and send to DWG so a positive identification of the species can be made.

### New Zealand fur seal (FUR)



#### Characteristics

- Sharp pointed nose
- Very long whiskers reaching back to ears
- Dense brown fur
- Ears on side of head
- Length of males = 1.8 m, length of females = 1.2 m

*Note: Long whiskers in photos contrast with the short whiskers found on New Zealand sea lions (see below).*

### Female New Zealand sea lion (HSL)



#### Characteristics

- Light colouring
- Blunt nose
- Short whiskers – don't reach to or past the ears

*Note: Tag on flipper, always record any numbers on these and report*

## Mature male New Zealand sea lion (HSL)



### Characteristics

- Very large in size (twice that of fur seal)
- Blunt nose
- Short whiskers
- Dark colouring
- Mane of hair – not fur

## Young male New Zealand sea lion



### Characteristics

- Blunt, square nose
- Short whiskers
- Darker colour than a female sea lion
- No mane like a mature male New Zealand sea lion

## Leopard seal (LEO)



### Characteristics

- Can be very aggressive
- Large head, massive jaws, long slim body, large fore-flippers
- Long and sleek light grey fur dappled with darker spots
- No external ears

*Very unlikely to be taken in trawl fisheries but are found in New Zealand waters*

# APPENDIX 3: VMP / MMOP – FNZ OBSERVER REVIEW FORM

## Deepwater Trawl VMP & MMOP Fisheries New Zealand observer review form



Fisheries New Zealand

Tini a Tangaroa

Trip Number	Vessel Name	FMA's fished	Trip start date	Trip end date
□ □ □ □ □			□ □ / □ □ / □ □	□ □ / □ □ / □ □
Target species	Observer name	Tows observed		

Record Yes (Y), No (N), Unknown (U) or Not Applicable (N/A) in the box provided. If you answer N or U to any questions, or Y for items 3, 4 or 19, then please make detailed comments on the reverse.

- Item 1. Were copies of the DWG vessel specific *Vessel Management Plan (VMP)* and *Marine Mammal Operating Procedures (MMOP)* carried on board and made available upon request?
- Item 2. Were the senior crew familiar with and have access to the above documents?
- Item 3. Were any seabird, marine mammal or protected shark 'trigger-points' activated during the trip? (if Y record details of the triggers and the action taken by the vessel)
- Item 4. Did a gear or equipment failure event occur that increased the risk of seabird or marine mammal captures? (if Y detail the event and the action taken by the vessel)
- Item 5. Were there any changes in crew behaviour, fishing activity, mitigation devices or gear used following 'trigger-point' events or during high risk periods?

### Seabird/Marine Mammal Mitigation Devices

Item 6. Record what mitigation devices were carried by the vessel and when they were utilised

	Carried on board	Deployed all tows	Deployed some tows	Not deployed
Bird Baffler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tori line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SLED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (describe on reverse)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Item 7. Was an additional seabird mitigation device deployed when required by the VMP?
- Item 8. Was a Dolphin Dissuasive Device deployed on every JMA7 night tow (JMA7 only)?
- Item 9. Were net restrictors fitted into the centre net of a triple-rig configuration when required? (SCI only) (i.e. once a 'trigger point' was reached)

### Fish Waste Management:

- Item 10. Was the discharge of fish waste from the vessel managed as per the VMP?
- Item 11. Were there any periods of continuous fish waste discharge during the tow (apart from minced offal)
- Item 12. Was all fish waste (including offal and whole fish) held on board during shooting and hauling?
- Item 13. Was the net cleared, as practicable, of all stickers prior to shooting?
- Item 14. Was a grating or trap system used to prevent fish or offal accidentally lost to the factory floor or deck from being discharged overboard via scuppers or sump-pumps (whilst still allowing the free egress of water)

### General Procedures:

- Item 15. Were all plastics and netting retained on board?
- Item 16. Was shooting fishing gear near congregations of marine mammals avoided?
- Item 17. Was the amount of time the net spent on the surface minimised as much as practicable?
- Item 18. Were any turns conducted with the doors fully submerged and a headline depth of less than 50 m?
- Item 19. Were all seabird, marine mammal or protected shark captures reported by the vessel?
- Item 20. Were all seabirds, marine mammals or protected sharks released alive handled with due care?
- Item 21. Was gear shot between 02:30 and 04:30 (NZST) when targeting JMA North of 40.30° S? (JMA7 only)



# APPENDIX 4: VMP VESSEL OPERATOR AUDIT FORM

VMP Internal Audit Form				
Name of Vessel		Auditor's Name	Review Date	Conforms
				Yes / No
Item		Location / Subject		OK
Report Non-Fish Protected Species Catch	Bridge	Completed and being furnished to FNZ as required		<input type="checkbox"/>
Trigger Points (report within 24hrs)	Bridge	Was a trigger point reached? If so, did the captain report this to shore management and or DWG? Did shore management contact DWG?		<input type="checkbox"/>
FNZ Observer Audit/Review	FNZ	FNZ Vessel Management Plan Review audit form(s) received from DWG & feedback given to crew.		<input type="checkbox"/>
Mitigation Methods	Procedure	Check recorded equipment matches equipment being used and on board; check all mitigation gear is being maintained to the correct specification.		<input type="checkbox"/>
	Personnel	Check contingency plans are properly recorded.		<input type="checkbox"/>
Fish Waste Control Methods	Procedure	Check recorded equipment matches equipment being used on board; check VMP procedures are being followed.		<input type="checkbox"/>
	Personnel	Check contingency plans are properly recorded.		<input type="checkbox"/>
Onboard Management	Bridge	Are officers and crew monitoring changing conditions (trigger points reached etc) and assessing the risk and/or making changes to mitigation devices and/or procedures when the risk to seabirds increases		<input type="checkbox"/>
Training	Personnel	Check crew in key positions are well aware of the VMP, its procedures and are maintaining equipment and management systems to meet the VMP requirements.		<input type="checkbox"/>
Document Control	Bridge	Are the DWG Operational Procedures on board, and are the OP versions current		<input type="checkbox"/>
	Personnel	Is the VMP current, available and displayed.		<input type="checkbox"/>
Corrective Actions taken	Previous Review Form	Check that previous corrective actions have been carried out.		<input type="checkbox"/>
<b>Details of non-conformance and/or recommended changes. Does the vessel-specific VMP need updating? Contact DWG for advice.</b>				
Auditor's Signature			Date Results Advised	
<b>DWG VMP Internal Audit Form - admin@deepwatergroup.org</b>				

Version 18.0

/Volumes/deepwater group/Operational Procedures/OP Manual 2018-19/SEABIRDS draft[VMP Internal Review Form 250918.xlsx]VM

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# APPENDIX 5: SEABIRD NET RESTRICTOR FOR TRIPLE RIG

## Background

As part of the DOC/CSP project in 2011, it was shown that a very high percentage of net captures occurred in known high-risk seabird foraging areas on vessels with triple rig trawl gear, and that the centre trawl had by far the highest rate of seabird captures. Seabirds have the opportunity of diving into this trawl, which was held partially open by the width of the trawl blocks whilst the other two outside trawls are closed during hauling.

Vessel operators suggested trialling the use of net restrictors to limit the opening of the centre trawl by tying individual lengths of rope from the headline to the ground-rope (length determined by the nets optimum opening) so that during hauling the trawl mouth can't open, the ropes restrict the distance.

Underwater footage showed the headline folds/lays back-down just behind the ground rope, greatly reducing the trawl mouth opening and restricting birds' access in the later stages of hauling. Restrictors were fitted to three vessels, and sea trials with observer observations, feedback from skippers, and underwater footage taken over 6 months were completed with positive results.

Most vessels still use these on a regular basis, others deploy when in high seabird capture risk areas.

- Cheap and easy to make and fit to the centre trawl
- No issues with deployment or use
- Greatly reduces seabird captures in the centre trawl.

## Restrictor specifications

- Varied specifications depending on individual vessel trawl and vessel gear with rope fitted between the headline and ground rope of the centre trawling triple rig gear.
- 4 to 6 restrictors (2-3 per side) fitted to the centre trawl when required
- Spacing:
  - First restrictor should be placed few metres to each side of the headline centre, then approximately every two/three metres (2/3 m) apart on either side
- Each restrictor should comprise 6 to 10 mm rope or braid, attached onto the headline and ground-rope (as shown in the photos below)
- The height of the restrictor matches the trawl design headline height. So, the vertical length of restrictor ropes will vary, generally slightly longer than the trawl design opening (so as not to restrict optimal opening)



**Restrictor fitted with 'clove hitch'**



**Trawl with restrictors**



**Nylon braid restrictor fitted**

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## APPENDIX 6: TEN COMMANDMENTS FOR SCAMPI VESSELS

1. Ensure your vessel has a current version of the Scampi Fisheries Operational Procedures on board
2. Ensure the crew understand and follow the OPs and their VMP
3. Have a well-managed fish waste control system that ensures no continuous or ad-hoc discharge occurs when towing
4. Ensure all fish waste, discards and offal are held during shooting and hauling
5. Always deploy fit-for-purpose seabird mitigation devices as risk dictates
6. For triple rig trawlers, if there's a risk of multiple captures or the DWG Trigger Point has been reached (by net captures), fit net restrictors. If captures continue, remove centre net until risk reduces
7. Minimise the time that gear is on or near the surface (shoot and haul the trawls as quickly as practicable)
8. Mark any dead marine mammals with a cable tie or twine and take two photos of all seals captured in SCI 6A before returning to the sea
9. Record all captures of protected species as legally required by FNZ by ERS or on the Non-fish / Protected Species Catch Return
10. Report (same day) Trigger Point captures to DWG. You must know the Trigger Points, report and take any relevant further action to reduce the risk of it reoccurring.