

Handling and Release Guide

For protected species interactions within New Zealand fisheries.



Department of
Conservation
Te Papa Atawhai

Purpose of this guide

This guide has been designed for fishers to easily access information on the Conservation Services Programme's best practice methods of protected species bycatch handling and treatment.

Fishers are responsible for handling all protected species appropriately in order to maximise the chance of their survival. Mishandling protected species can significantly reduce their chances of survival and have long term impacts on the sustainability of the species.

Proper handling practices also reduce the risk of injury to crew. This guide provides information on:

- The correct and incorrect handling methods.
- The main protected species groups caught in New Zealand fisheries.
- Measures to increase crew safety.



Department of
Conservation
Te Papa Atawhai

Handling principles

Recording all protected species interactions is a legal requirement in New Zealand fisheries, it is not illegal to accidentally capture protected species while commercially fishing, but it is illegal to fail to report a protected species capture.

Principle 1

Safety of the boat and its crew are paramount.

Crew should always put their personal safety first when handling protected species. Ensure appropriate personal protective equipment (PPE) is used to protect against things such as cuts, bites and stings.

Principle 2

All reasonable steps should be taken.

Every care should be taken to release protected species alive. Take steps to reduce stress to the animal and handle with care to minimise further harm or injury.

Principle 3

Return protected species to sea.

Operators are expected to take all reasonable steps to ensure that bycatch is returned to the water as quickly as practicable and in a manner that does not reduce the chance of survival.

Principle 4

Retaining protected species.

With-holding any part of a dead protected species is an offence under the Wildlife Act 1953. Unless a fisheries observer requires it, the entire animal must be returned to sea.

Principle 5

Record all protected species interactions.

Record all protected species interactions including vessel impacts (seabirds that impact upon the vessel and are unable to leave of their own accord). Fisheries observers file their own reports on protected species interactions and this does not revoke the vessels obligation to report captures.

Principle 6

Know your trigger limits.

Notify your liaison officer within 24 hours if a trigger breach occurs.

Best Practice Handling

This section outlines the best practice handling procedures for protected species fishers may encounter.

It is important to handle non-retained species carefully to ensure that they have the best chance of survival post capture. Proper handling practices also reduce the potential risk of injury to crew members.

Contents

Seabirds	1
Seals and Sealions	4
Dolphins and Whales	6
Sharks	8
Rays	10
Turtles	12
Sea Snakes	14



Department of
Conservation
Te Papa Atawhai

THINK FIRST: Safety Around Seabirds

Large birds can inflict a serious bite, it is recommended to wear gloves and eye protection if handling seabirds.

Immobilise the beak and feet with a firm hold to avoid bites and cuts.

Hold birds at waist-height, well away from your face.



immobilise the feet and beak

All seabirds in New Zealand are protected except the black backed gull. The risks to seabirds are highest where there is overlap between fishing operations and large numbers of foraging seabirds.

If a seabird is noticed on a line, stop the vessel to reduce drag on the line. When the bird is within reach, gently bring it on board by hand or using a net. Do not pull the bird up on the line as this may cause further injury. Do not handle birds by wingtips as it can break the wing.

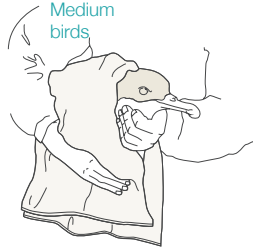
With one crew member holding the bird, another crew member can carefully detach the fishing gear from the animal.

Small birds: e.g. storm petrels, diving petrels. Bird can be held in one hand with its back in the palm of the hand and the neck between index and middle fingers.

Small birds



Medium birds



Large birds



Penguins



Medium sized birds: e.g. petrels, shearwaters. Hold the body of the bird with both hands with wings folded. If the head also needs to be restrained hold the bird by the neck or bill without covering nostrils.

Large birds: e.g. albatross. Hold the body and folded wings in your arms or crouch over the bird holding it in place with your legs. Restrain head by holding the neck or bill without covering nostrils.

Penguins: Hold the penguin firmly by the neck. Put the penguin under your arm to hold the flippers in.

Gannets and shags: Hold back of head firmly and maintain grip to avoid bites. Hold the bird, with wings folded, against body. Do not hold the bill shut.

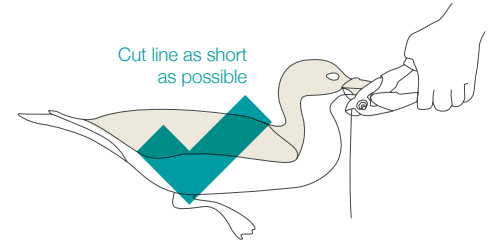
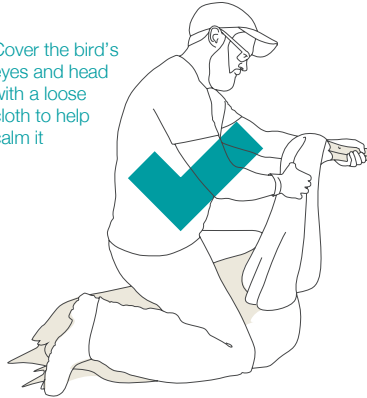
If a live seabird is landed on the vessel

- Once a seabird is on board, move slowly and quietly around it.
- Keep the bird's bill away from your face to avoid injury.
- Cover the bird's eyes and head with a loose cloth to help calm it, making sure to keep nostrils exposed. For gannets, which do not have nostrils, allow the bill to stay slightly open.
- Fold wings into resting position and hold gently but firmly to the bird's body. Avoid applying pressure to the breast as this may cause damage. Never restrict the bill or legs with tape or bands.

How to remove a hook

- With one crew member holding the bird, another crew member can detach the fishing gear from the animal.

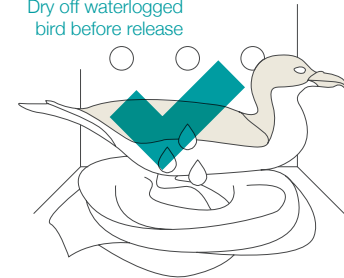
Cover the bird's eyes and head with a loose cloth to help calm it



- **Waterlogged birds** will need to be dried off before release. Dry any excess water off carefully with cloth. Place the bird in a box with air holes in a sheltered area away from sunlight and wind. A towel in the base of the box will aid in absorbing excess water from the bird. Do not place the box in a heated wheelhouse or galley. The animal is safe to release once feathers are dry and it appears alert.

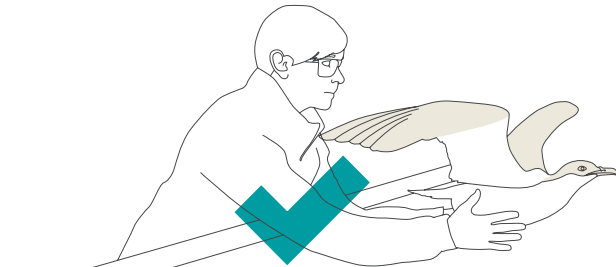
- **Exposed hooks in bills or neck** can be snipped off. Flatten the barbs with pliers or cut off barbs with snips if pulling hook back through the tissue.
- **If the hook is swallowed**, cut the line as close to the mouth as possible. Do not try and pull hook out from inside the bird. Untangle and cut away any line caught around the bird's wings, body or legs.

Dry off waterlogged bird before release



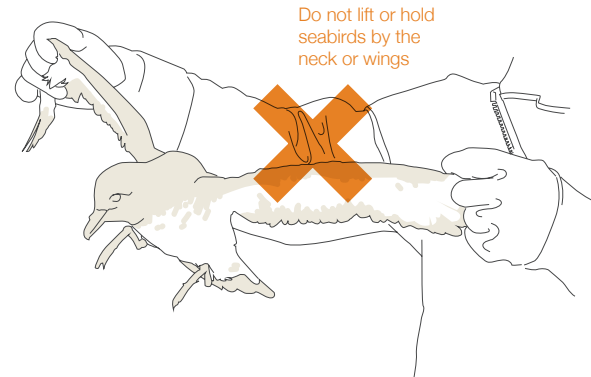
Returning live seabirds to the water

- To **release a bird**, slow or stop vessel, sit it on the deck railing and when wings open allow it to fly off. If it does not fly off on its own, gently lower it over the side of the vessel with a hand net.
- **Record all captures**, noting any leg band numbers present on the animal. If the animal is deceased and is not being returned ashore for necropsy, the leg band should be noted and/or photographed prior to returning the bird to sea.



Slow or stop vessel, sit it on the deck railing and when wings open allow it to fly off

Incorrect handling



Do not lift or hold seabirds by the neck or wings

- Do not use **gaffs or sharp objects** in direct contact with the seabird.
- Do not **pull the bird on board by a snood**.
- Do not **kick, hit, throw or push the seabird harshly**, or expose it to other physical trauma.
- **Avoid sudden actions and movements** that may scare the seabird.
- Do not **throw seabirds into the air** when releasing.
- Do not **lift or hold seabirds by the neck or wings**.

THINK FIRST: Safety Around Seals and Sea lions

Seals are fast on slippery surfaces. When cornered they may attack and can bite.

Seal bites can cause severe lacerations and infection. Bites need to be treated thoroughly and medical advice or attention is required.



Seals and sea lions can carry a number of infections diseases which can infect humans. Handling marine mammals should always be kept to a minimum.

Any dead marine mammal returned to the sea must be marked with twine around the upper or lower jaw to avoid double counting if recaptured.

If live animals are landed on deck

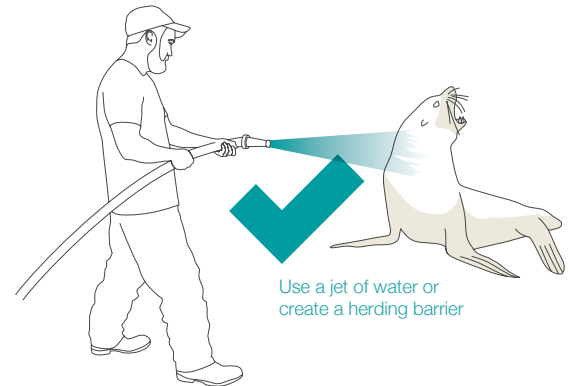
- Seals should be released as soon as they arrive on deck.
- Seals on deck should be restricted to an area close to where they are most likely to escape, and prevented from gaining access to other parts of the vessel.

If live animals are hooked/entangled alongside the vessel

- Seals should be brought as close to the vessel as possible.
- While maintaining a safe distance, if dehooking not possible, cut the line as close to the animal as possible to minimise trailing gear which can be hazardous.

Returning live seals to the water

- A jet from a high pressure hose can force an animal to move. Sheets of timber or pallets can also be used as a moving barrier to herd a seal.
- If the seal is injured it should be returned to the water as caring for injured seals requires specialist skills and keeping it on board may add stress to the animal.



Use a jet of water or create a herding barrier

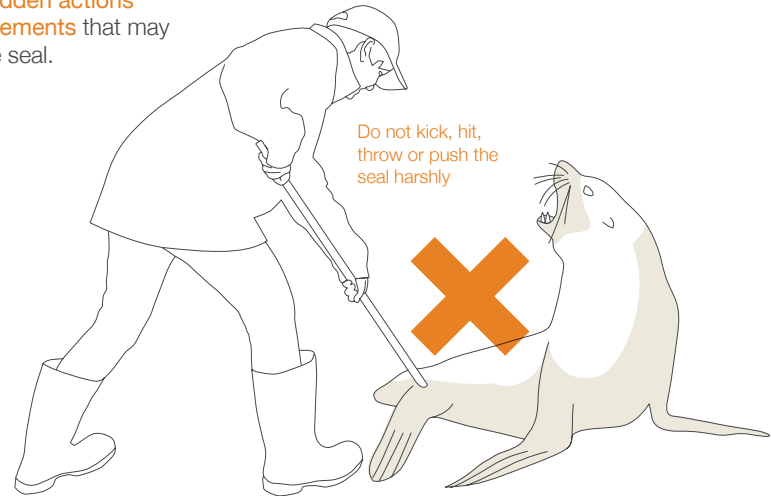
Handling very small animals



- Small seals can be lifted by holding the tail in one hand and a front flipper in the other while supporting the belly of the seal across your arm as depicted in the diagram. If using this method be extremely cautious of bites.

Incorrect handling

- Do not use gaffs or sharp objects in direct contact with the seal.
- Do not kick, hit, throw or push the seal harshly, or expose it to other physical trauma.
- Avoid sudden actions and movements that may scare the seal.



**THINK FIRST:
Safety Around
Dolphins and Whales**

Potential injuries include being struck, tripped or bitten by dolphins.

Do not sit on/straddle a dolphin behind the dorsal fin as it has a strong tail and may kick.



There are a range of protected dolphins and whales in New Zealand waters, they can be accidentally captured in a range of fisheries, though predominantly in trawl or set net fisheries.

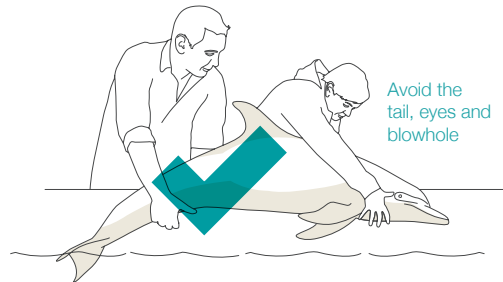
Where possible, release the dolphin or whale from fishing gear without bringing it on deck.

If live animals are landed on deck

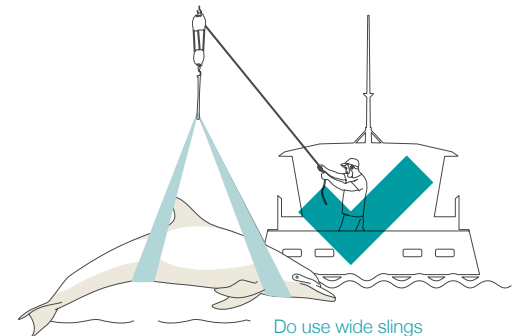
- Dolphins should be released as soon as they arrive on deck.

Returning live dolphins to the water

- Once the animal is untangled from fishing gear, it can be released carefully in to the water.
- Two or more crew members may need to lift the dolphin; hold the dolphin in front of the dorsal fin while pinning the pectoral fins close to your body. Be cautious of the tail, and avoid the eyes and blowhole.



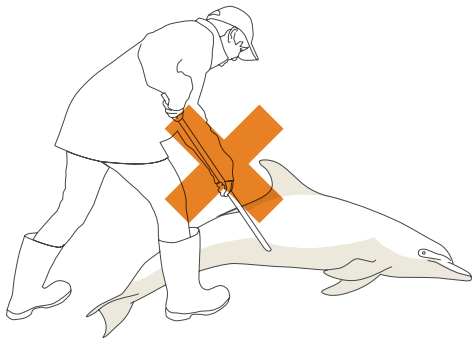
- Alternatively, the animal can be returned to sea using wide slings. Do not use thin cables.
- If the dolphin is injured it should be returned to the water as caring for injured marine mammals requires specialist skills and keeping it on board may add stress to the animal.



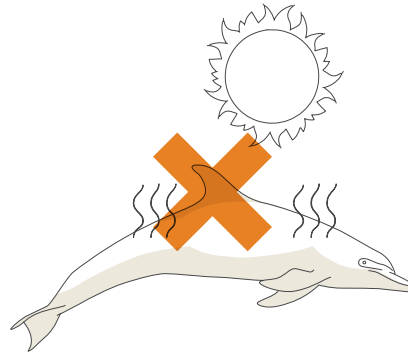
If live animals are hooked/entangled alongside the vessel

- Dolphin or whale should be brought as close to the vessel as possible.
- While maintaining a safe distance, if dehooking is not possible, cut the line as close to the animal as possible to minimise trailing gear which can be hazardous.

Incorrect handling:



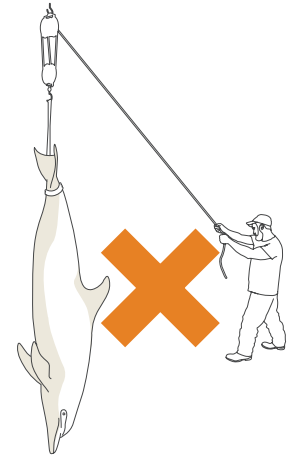
Do not kick, hit, throw, push, use gaffs or other sharp objects to move the dolphin.



Do not cover or pour water in to the blowhole.

Do not leave the dolphin exposed to sunlight for extended periods of time.

Avoid sudden actions and movements that may scare the dolphin.

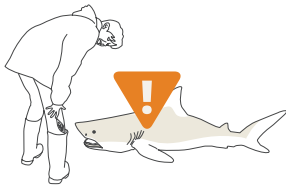


Do not pick up or drag the dolphin by the tail as this can damage spinal vertebrae.

THINK FIRST: Safety Around Sharks

Treat all sharks as if they are alive, as even sharks which appear to be dead may suddenly lash out and cause injury.

Potential injuries from sharks include being struck, tripped or bitten.



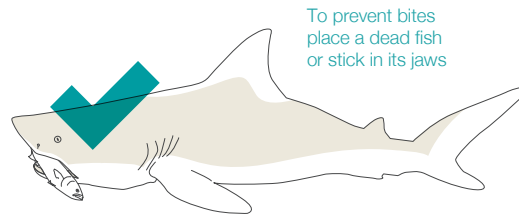
Where possible, avoid working around the jaws of sharks. Put a solid object between a shark's jaws to prevent bites.

There are five protected species of shark in New Zealand waters, they can be accidentally captured in a range of fisheries.

When possible, release the shark from fishing gear without bringing it on deck. This minimises the risk of internal organ damage for the animal.

If sharks are landed on deck

- If it is large and active, let it tire before approaching.
- Treat all sharks as if they are alive.
- Once it is safe to do so, try to return the shark to sea head first and the right way up.
- 1-2 people may be required to handle a shark depending on the size.
- Always attempt to keep the shark in a horizontal position and on their side to reduce the risk of internal damage.



Treating sharks on deck

For line fisheries:

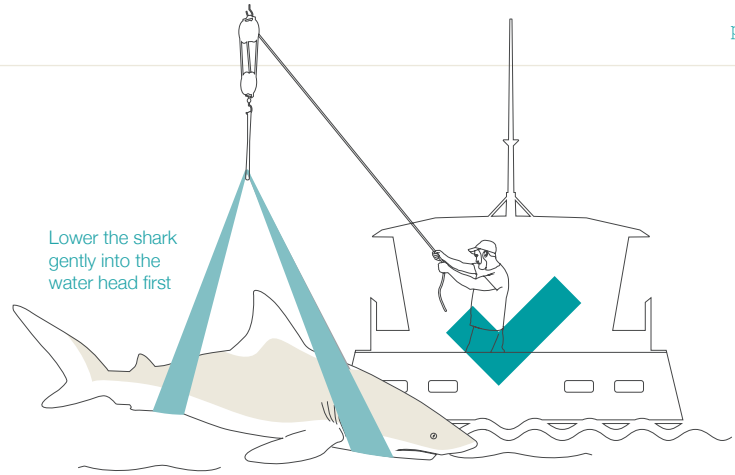
- Hold the shark firmly behind the head and around the tail using gloves and/or a wet towel, and then try to remove the hook.
- If the hook cannot be removed easily the line should be cut as close to the mouth as possible.
- To calm a shark down turn it over onto its back or place a wet towel over its eyes.
- If release needs to be delayed, place a deck hose in the shark's mouth so that water flows through the shark's gills.

If live animals are hooked/entangled alongside the vessel

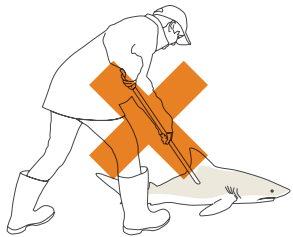
- Leave the shark in the water where possible
- While maintaining a safe distance, if dehooking is not possible, cut the line as close to the hook as possible to minimise trailing gear which can be hazardous.

Returning sharks to the water

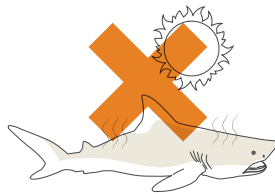
- Lower the shark gently into the water head first and release it. **Do not throw it.**
- It may be necessary to face the shark into the current and swim it for a few minutes to aid in recovery before it swims away.
- Small sharks can be released by one person.
- Large sharks may require two people to lift and hold the shark.
- Very large sharks may need to be lifted with the use of wide slings.
- Do not use thin wires or cables.
- Do not release sharks with ropes still attached.



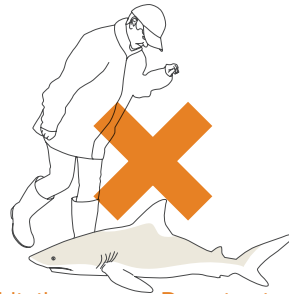
Incorrect handling



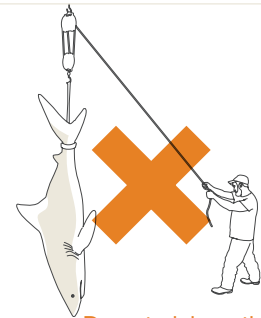
Do not use gaffs or sharp objects in direct contact with the shark. A gaff should be used only to control the line.



Do not leave the shark exposed to sunlight for extended periods of time.



Do not kick, hit, throw or push the shark harshly, or expose it to other physical trauma.



Do not cut off fins or other body parts to remove sharks entangled in gear.

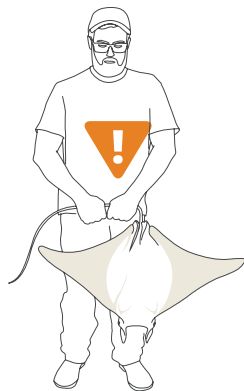
Do not pick up the shark by the tail, head or the gill slits.

THINK FIRST: Safety Around Rays

Potential injuries include being tripped, stings and cuts, and allergic reaction to protective mucous.

Where possible, avoid working around the tail as rays can strike in any direction.

Do not carry rays by the tail.

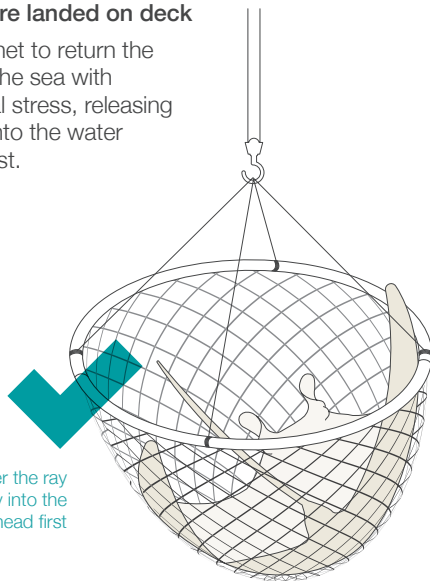


There are two protected ray species in New Zealand waters. Rays are caught in a range of fisheries, though they are most commonly bycaught in purse seine and surface longline fisheries.

Protected rays should if possible be released while the net is still in the water to avoid damage and stress.

If rays are landed on deck

- Use a net to return the ray to the sea with minimal stress, releasing them into the water headfirst.



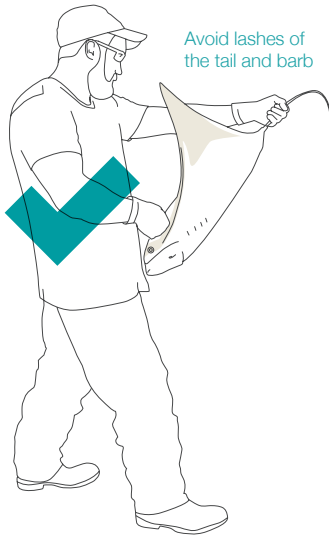
Lower the ray gently into the water head first

Treating live rays on deck

- Keep your fingers away from the mouth and hold the ray away from your body to avoid lashes of the tail and barb.
- For small rays isolate tail and lift by spiracle or snout.
- For medium size rays, isolate the tail and pick up by the snout or the spiracles (the openings behind the eyes).
- For large rays it is best to slide the animal along the deck to a discard chute or scupper. Always watch the tail as rays have the ability to strike in any direction.

Returning rays to the water

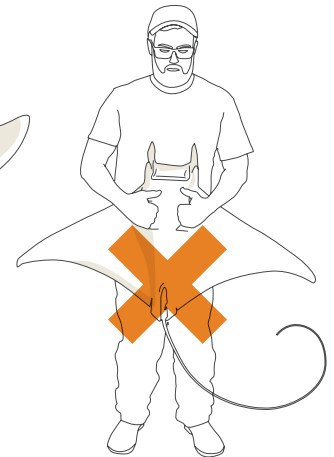
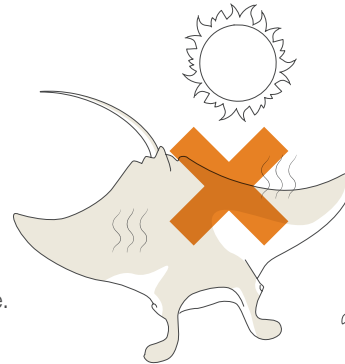
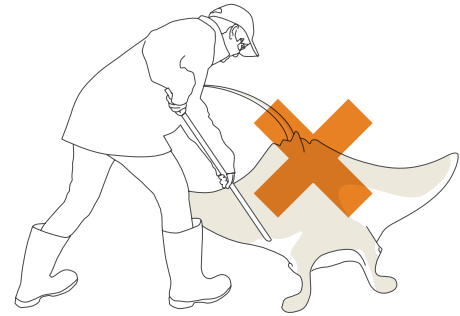
- Lower a small to mid size ray gently into the water head first and release it. **Do not throw it.**
- Large rays can be released by placing them on a piece of net, plastic, or canvas that can be lifted and lowered into the water.



Avoid lashes of the tail and barb

Incorrect handling

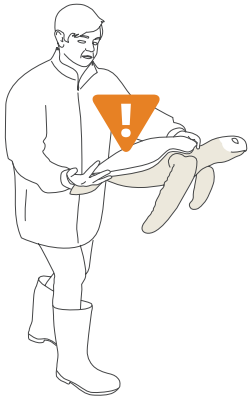
- **Do not use gaffs or sharp objects** in direct contact with the ray.
- **Do not kick, hit, throw or push** the ray harshly, or expose it to other physical trauma.
- **Do not leave the ray exposed to sunlight** for extended periods of time.
- **Do not carry the ray by the tail** to avoid being stung.
- **Do not carry or move the ray by the gill slits.**
- **Do not cut off rays' tail or stings.**
- **Do not cut holes in rays' wings** to put ropes or straps through for release.



THINK FIRST: Safety Around Turtles

Make sure your hands are not where the flippers can crush them against the shell.

Turtles have strong jaws, so keep all fingers, hands and toes away from the turtle's mouth to avoid being bitten.



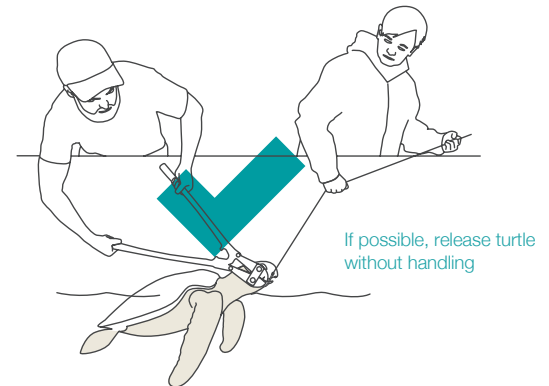
There are five protected species of sea turtles in New Zealand waters, they can be accidentally captured in a range of fisheries, but they are most commonly caught in surface longline fisheries.

If a turtle is too big to be brought on board

- If a turtle is noticed on the line, slow down to reduce trauma to the animal. Carefully bring the animal as close to the vessel as possible without putting strain on the line.
- Use a de-hooker to remove externally embedded hooks. Do not use de-hooker to remove hooks from the mouth, throat or flippers.
- If the hook is visible the shank should be cut with bolt cutters, and if possible the barb should also be cut off.
- If the hook is not visible, cut the line as close as possible to the animal as trailing gear is likely to be fatal.

If a turtle has to be brought onboard

- Use a dip net to bring onboard.
- Take extreme care when handling turtles, they have strong jaws so keep fingers, hands and toes well away from the turtles mouth. Do not position hands where the flippers could crush them against the shell. Lift turtle with one hand at the front of the shell (above head) and the other at the back (near tail). Two crew members may be required to lift large animals.

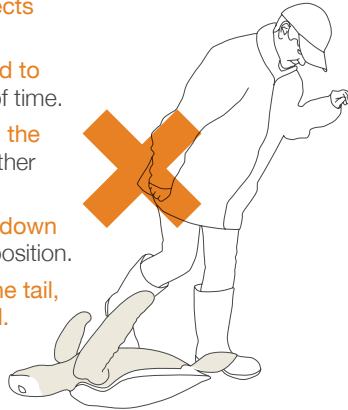


Treating live turtles on deck

- If the turtle appears exhausted or lifeless it will need to be brought on board to be rehabilitated.
- If the animal is inactive it may have water in its lungs. Raise the rear flippers by 20cm for a minimum of 4 hours. A tyre makes a good platform for this.
- Place the turtle in a shaded location and cover in towels wet with saltwater, keeping the nostrils exposed. Keep wet by spraying with saltwater.
- Assess its recovery intermittently using the reflex test: gently pinch the tail of the turtle to gauge reaction.

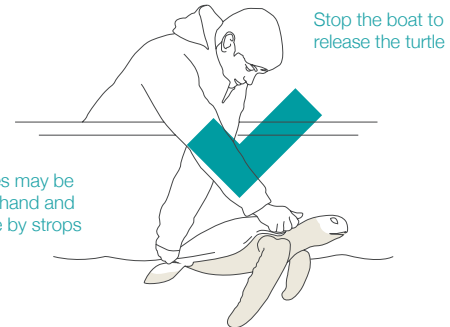
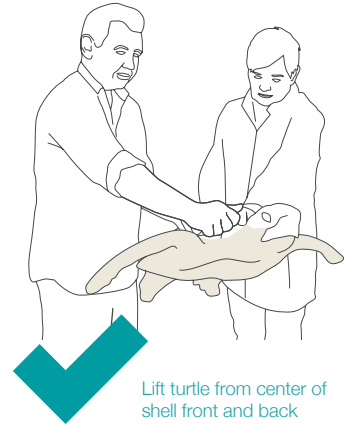
Incorrect handling

- Do not use gaffs or sharp objects in direct contact with the turtle.
- Do not leave the turtle exposed to sunlight for extended periods of time.
- Do not kick, hit, throw or push the turtle harshly, or expose it to other physical trauma.
- Do not leave the turtle upside down as they cannot breathe in this position.
- Do not hold or lift a turtle by the tail, flippers or the sides of its shell.



Returning turtles to the water

- Avoid using equipment or carrying them in a way which is likely to inflict cuts, as this can lead to infection and mortality post-release.
- When it has recovered, carefully return the turtle to the water from the lowest point on the vessel releasing the animal head first while the boat is stationary and propeller is not operating. Ensure the turtle is well clear of the vessel before making way again.



 **THINK FIRST:
Safety Around Sea Snakes**

Sea snakes are highly venomous and should not be handled, to return a snake to the sea, gently hose it off the deck with water.

