

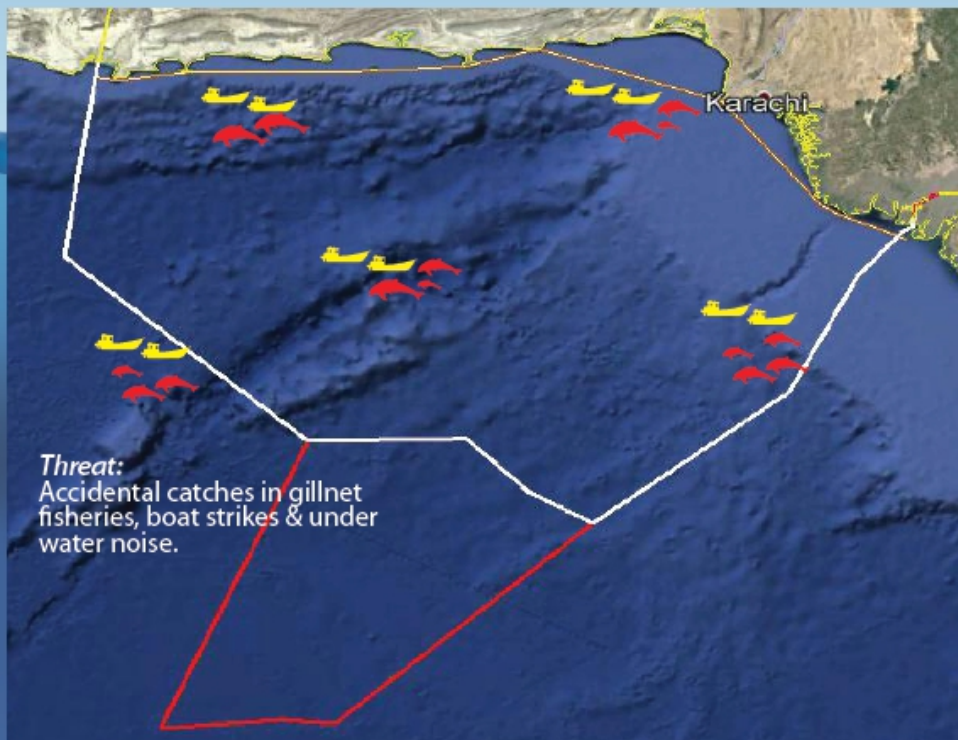
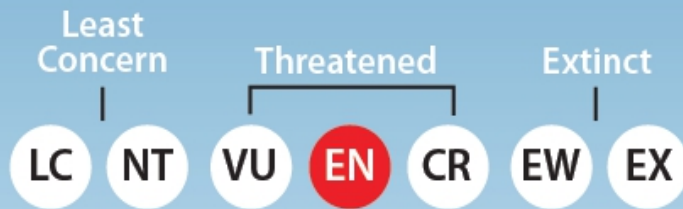
Part two: Safe Handling & release for Gill net Fisheries for Cetaceans, Sunfish , Sawfish, Seabirds and Sea snakes

Guidelines for safe handling and release of Cetaceans

Cetaceans – dolphins, porpoise and whales (Mammalia)



Diet: fish, crustaceans, squids & octopus
 Population: Decreasing & unknown
 Protection: CITES, Appendix- II, CMS
 Local protection: Pakistan Fisheries & CITES Laws



Threat:
 Accidental catches in gillnet fisheries, boat strikes & under water noise.

First steps

Entangled cetacean found in the gillnet.



Stop fishing operations.



Estimate the degree of entanglement, size of the cetacean, and position in the net.



One crew member should film the rescue and release operations on his phone.



Large individual over 2 meters long.

Whole-body entangled. > go to page - xx, image - 1

Half body entangled. > go to page - xx, image - 2

Only tail entangled. > go to page - xx, image - 3



Small, juvenile individual less than 2 meters long.

> go to page - xx, image - 4

Large cetacean (> 2m) - whole body entangled

Manoeuvre net from the net hauler for 5 to 10 minutes. Allow the animal in the water to minimise stress on the animal within the water.



Start pulling the free end of the net on the gunwale to bring the entangled animal closer to the boat and surface water.



Start cutting off either end of the net according to the animal's size at a distance of 1 meter from the entangled animal. Manoeuvre the cut area of the net slowly into the water.



Start pulling the other end of the net up and down through net hauler. It allows the animal to move and escape from the cut area of the net. This should help release the animal, especially if, by now, it is only partially entangled.



Animal is freed from the net and swims away safely.



Mark the GPS location



Note the size of the cetacean



Capture the process of release



Note the code and take a picture of the tag (if any)

Image-1
Large cetacean (>2m) - whole body entangled



Large cetacean (>2m) - half body entangled

Manoeuvre net from the net hauler for 5 to 10 minutes. Allow the animal in the water to minimise stress on the animal within the water.



Pull the net behind the net hauler and stretched the net on the gunwale. Start pulling the net up and down slowly from gunwale. It allows the animal to escape from the net within the water.



Condition 1: The animal is freed from the net and swims away safely



Mark the GPS location



Note the size of the cetacean



Capture the process of release



Note the code and take a picture of the tag (if any)

Condition 2:

lessening the rope/net is not helping, and you cannot release the animal.
Go to Page xx, Image -1 [same as whole body entangled].

Image-2

Large cetacean (>2m) - half body entangled



Large cetacean (>2m) - only tail entangled

Carefully haul the net up where the tail is entangled to bring the animal closer to the boat with the help of net hauler. Make sure the blowhole of the animal remains submerged in the water.



Start cutting the rope/net with the help of gaff/ long-rope cutter from the net hauler end at the distance of at least 1 meter from the animal's tail. It is important to make sure more than half the animal's body remains submerged in the water. Watch out for the flicks of the tail. It can cause injury to the crew and itself while trying to release the animal.



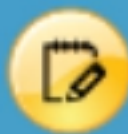
Start pulling the net up and down to allow the animal to move/escape from the free end of the net.



Animal is freed from the net and swims away safely.



Mark the GPS location



Note the size of the cetacean



Capture the process of release



Note the code and take a picture of the tag (if any)

Image-3
Large cetacean (>2m)- only tail entangled



Small cetacean (< 2m) -full body entangled

Carefully haul the net from both ends of the entangled animal to take it on-board over the gunwale. Make sure you do not heave/haul the animal through the net hauler.



Place the animal on a tarpaulin. Start cutting/release the net/rope to disentangle the animal. Carefully handle the disentangled animal – do not hold it by its dorsal fins, tail or block its blowhole.



Three fishermen should grab the three corners of the tarpaulin and bring the animal to the gunwale. Lower it from the free-end of the tarpaulin as much as you can over the edge. Slowly release it back to the sea.



Animal is freed from the net and swims away safely.



Mark the GPS location



Note the size of the cetacean



Capture the process of release

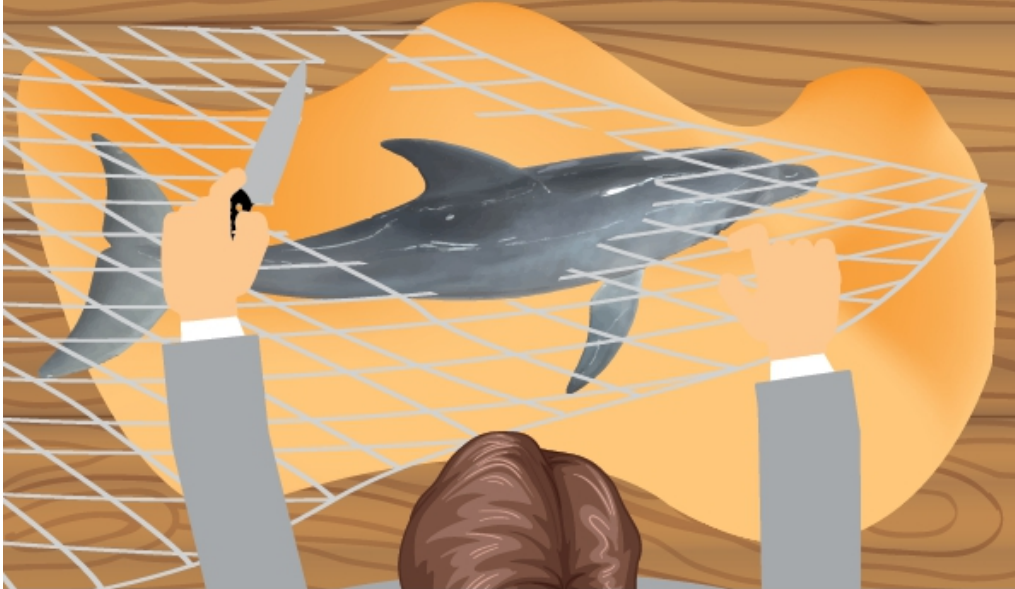


Note the code and take a picture of the tag (if any)

Image-4

Small cetacean (< 2m) - full body entangled

a)



b)



 **Don'ts**

Do not handle the animal upside down vertically or by its fluke or by exerting pressure on its belly



Do not cover/ block the blowhole of the animal while handling it.



Do not hit the large or small cetaceans on its head to numb it.



Do not step on the small cetacean accidentally once it is on the deck. As juvenile cetaceans are very fragile, this could damage their internal organs and even lead to death.



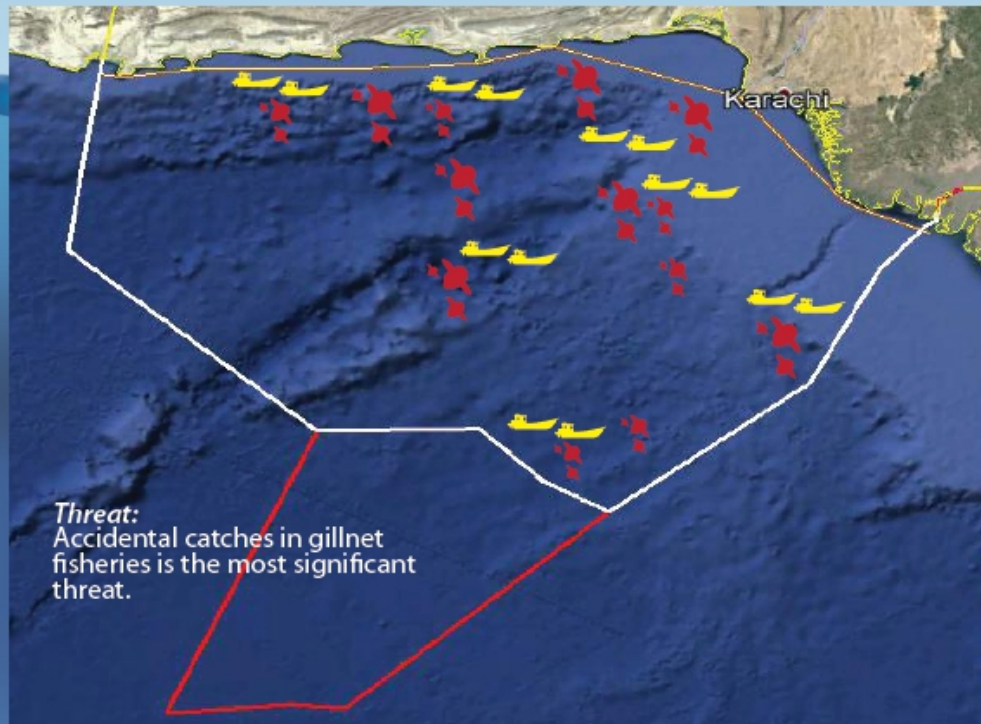
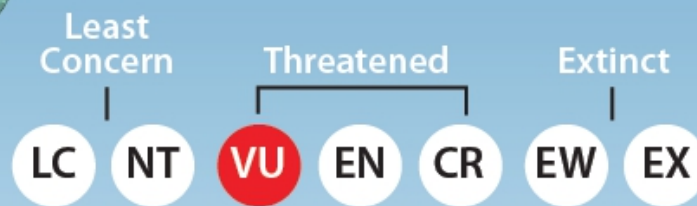
Do not leave the animal on the deck exposed to sunlight for a long time. Release the animal as soon as possible.

Guidelines for safe handling and release of Sunfish

Sunfish (Molidae)



Diet: Plankton, jellyfish & crustaceans
Population: Decreasing
Protection: unknown
Local Protection: Pakistan Fisheries & CITES Laws



First steps

Entangled sunfish found in the net.



Stop fishing operations.



Estimate the degree of entanglement, size of the sunfish & position in the net.



One crew member should film the rescue and release operation on his phone.



Large individual is over 3 meters long.

Whole-body entangled. > go to page - xx, image - 1

Half of the body entangled. > go to page - xx, image - 2



Small, juvenile individual less than 1 meters long.

> go to page - xx, image - 3

Large sunfish (> 2m) - whole body entangled

Manoeuvre net from the net hauler for 5 to 10 minutes. Allow the animal in the water to minimise stress on the animal within the water.



Start pulling the free end of the net on the gunwale to bring the entangled animal closer to the boat and surface water.



Start cutting off either end of the net according to the animal's size at a distance of 1 meter from the entangled sunfish. Manoeuvre the cut area of the net into the water.



Start pulling the other end of the net up and down through the net hauler. It should allow the animal to move and escape from the cut area of the net. It should help release the animal, especially if, by now, it is only partially entangled.



Sunfish is freed from the net and swims away safely.



Mark the GPS location



Note the size of the sunfish



Capture the process of release

Image-1

Large sunfish (>2m) – whole body entangled



Z

Large sunfish (>2m) - half body entangled

Manoeuvre net from the net hauler for 5 to 10 minutes. Allow the animal in the water to minimise stress on the animal within the water.



Pull the net behind the net hauler and stretched the net on the gunwale, perpendicular to the boat.



Start pulling the net up and down from gunwale, it allows the sunfish to escape from the net within the water.



Condition 1: Sunfish is freed from the net and swims away safely.



Mark the GPS location



Note the size of the sunfish



Capture the process of release

Condition 2:

lessening the rope/net is not helping, and you cannot release the sunfish.

- Go to Page - xx, Image -1 [same as whole body entangled].

Image – 2

Large sunfish (>2m) – half body entangled



Small sunfish (< 2m) - fully entangled

Carefully haul the net from both ends of the entangled animal to take it on-board over the gunwale. Make sure you do not heave/haul the sunfish through the net hauler.



Place the sunfish on a flat area/tarpaulin. Start cutting/release the net/rope to disentangle the sunfish. Carefully handle the disentangled sunfish.



Three fishermen should grab the three corners of the tarpaulin. Bring the sunfish to the gunwale and lower it from the free-end of the tarpaulin as much as you can over the edge. Carefully release it back into the sea.



Sunfish is freed from the net and swims away safely.



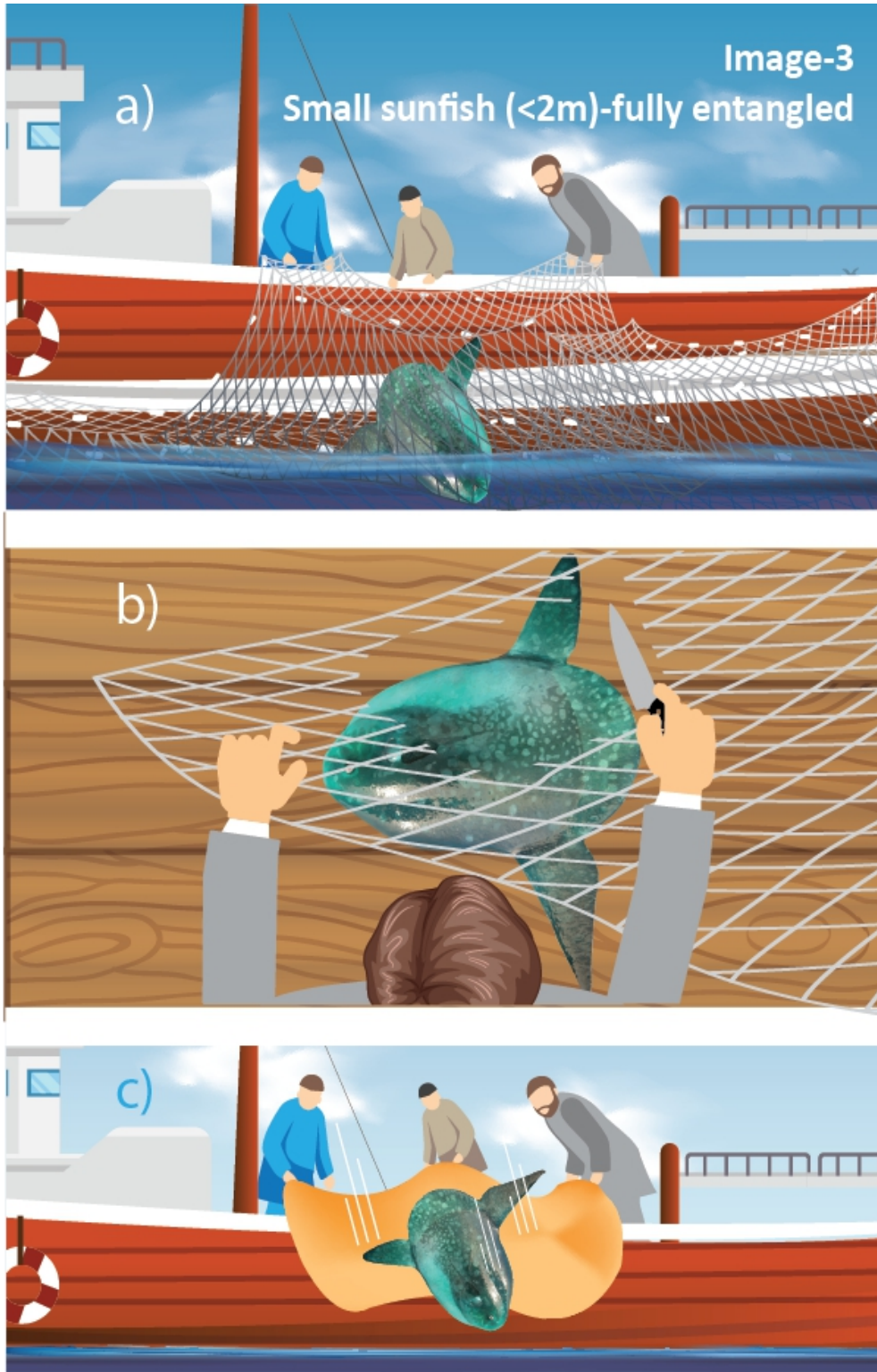
Mark the GPS location



Note the size of the sunfish



Capture the process of release



Don'ts



Do not handle the sunfish upside-down vertically or by its dorsal or pelvic fins.



Do not hold or handle the sunfish at or by inserting your hands in its gill silts/ operculum.



Do not step on the small/ juvenile sunfish once it's on the deck. Do not handle the sunfish with gaff.



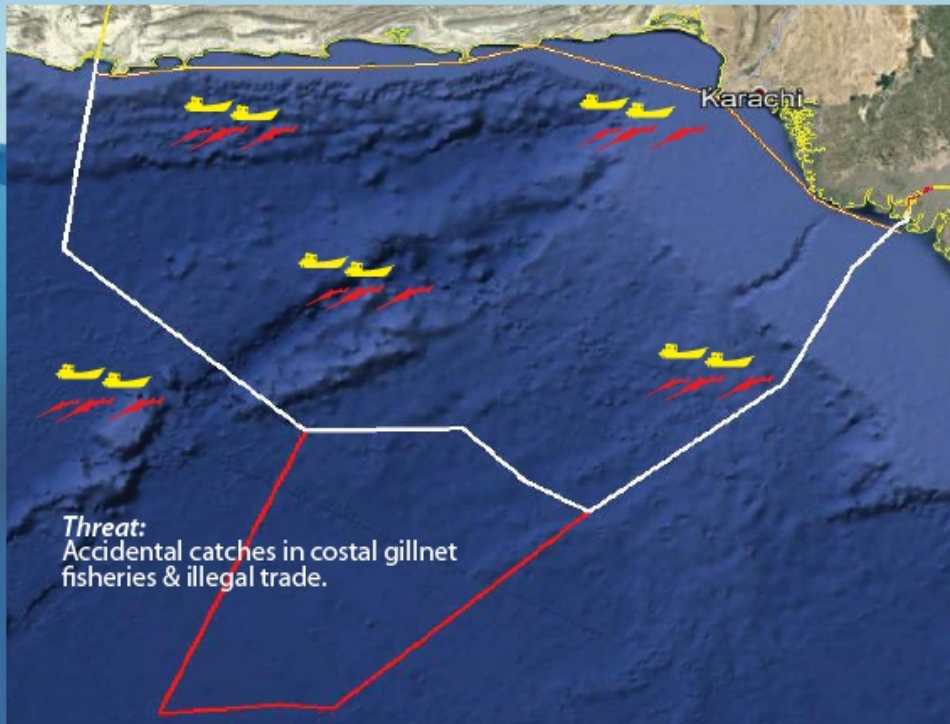
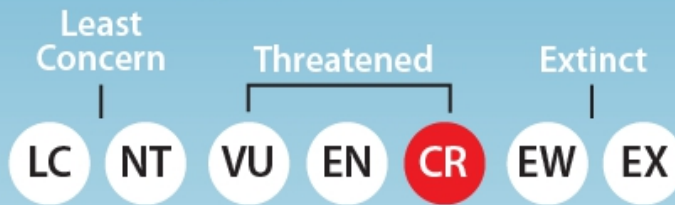
Do not leave the sunfish on the deck exposed to sunlight for a long time. Release the animal as soon as possible.

Guidelines for safe handling and release of Saw fish

Saw fish (*Pristidae*)



Diet: Bony fishes and invertebrate
Population: Decreasing
Protection: CITES, Appendix- II, CMS
Local protection: Pakistan Fisheries & CITES Laws



First steps

Entangled sawfish found in the gillnet.



Stop fishing operations.



Estimate the degree of entanglement, size of the sawfish, and position in the net. One crew member should film the rescue and release operations on his phone.



Large individual over 2 meters long.

Whole-body entangled. > go to page - xx, image - 1

Half body entangled. > go to page - xx, image - 2



Small, juvenile individual less than 2 meters long.

> go to page - xx, image - 3

Large sawfish (> 2m) - whole body entangled

Manoeuvre net from the net hauler for 5 to 10 minutes. Allow the animal in the water to minimise stress on the animal within the water



Start pulling the free end of the net on the gunwale to bring the entangled animal closer to the boat and near-surface water.



Start cutting off the free end of the net according to the animal's size at a distance of 1 meter from the entangled animal. Manoeuvre the cut area of the net into the water.



Start cutting the net around the saw to its length accordingly.



Start pulling both ends of the net up and down through the net hauler and gunwale. It allows the animal to move and escape from the cut area of the net. This should help release the animal, especially if, by now, it is only partially entangled.



• Animal is freed from the net and swims away safely.



Mark the GPS location



Note the size of the sawfish



Capture the process of release



Collect water samples in a clean jar/ bottle

Image-1
Large Sawfish (>2m) - whole body entangled



Large sawfish (> 2m) - half body entangled

Manoeuvre net from the net hauler for 5 to 10 minutes. Allow the animal to minimise stress on the animal within the water.



Pull the net behind the net hauler and stretched the net on the gunwale. Start pulling the net up and down carefully from the gunwale perpendicular to the boat.



Start cutting the net around the saw at the distance of 1 meter by using gaff/ goose-blade and keep pulling the net carefully against the animal.



Animal is freed from the net and swims away safely.



Mark the GPS location



Note the size of the sawfish



Capture the process of release



Collect water samples in a clean jar/ bottle

Image-2
Large Sawfish (>2m) - half body entangled



Small Sawfish (< 2m) -full body entangled

Carefully haul the net from both ends of the entangled animal to take it on-board over the gunwale. Make sure you don't heave/haul the animal through the net hauler.



Place the animal on a tarpaulin. Start cutting/release the net/rope around the saw to disentangle the animal. Carefully handle the disentangled animal – do not hold it by its saw.



Three fishermen should grab the three corners of the tarpaulin and bring the animal to the gunwale and lower it from the free-end of the tarpaulin as much as you can over the edge to release it back into the sea.



Animal is freed from the net and swims away safely.



Mark the GPS location



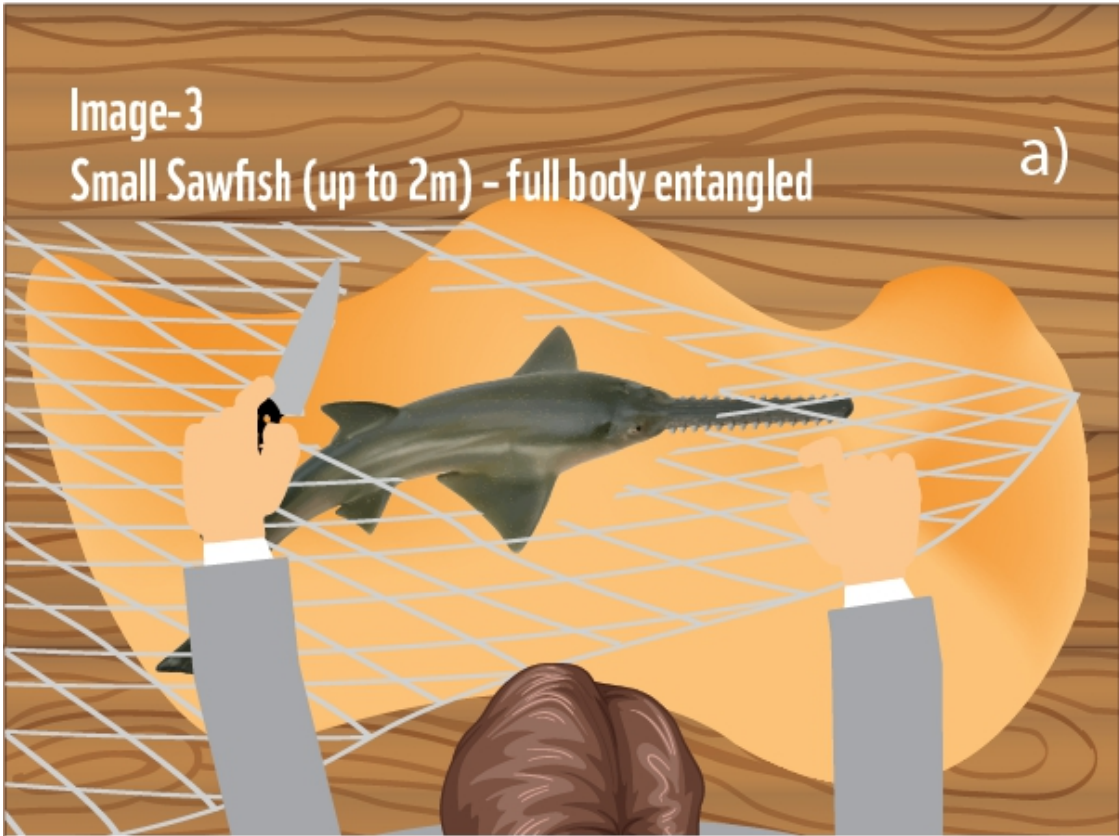
Note the size of the sawfish



Capture the process of release



Collect water samples in a clean jar/ bottle



 Don'ts

Do not handle the animal upside down vertically or by its tail. The saw of fish can cause injuries.



Do not handle the animal by its spiracles/saw and do not break the saw.



Do not step on the small animal accidentally once it is on the deck. As sawfish are very fragile, this could damage their internal organs and even lead to death.



Do not leave the animal on the deck exposed to sunlight for a long time. Release the animal as soon as possible.

Guidelines for safe handling and release of Sea Birds

(Order Procellariiforme, Plecaniformes, Charadriiformes)

Masked booby (*Sula dactylatra*)

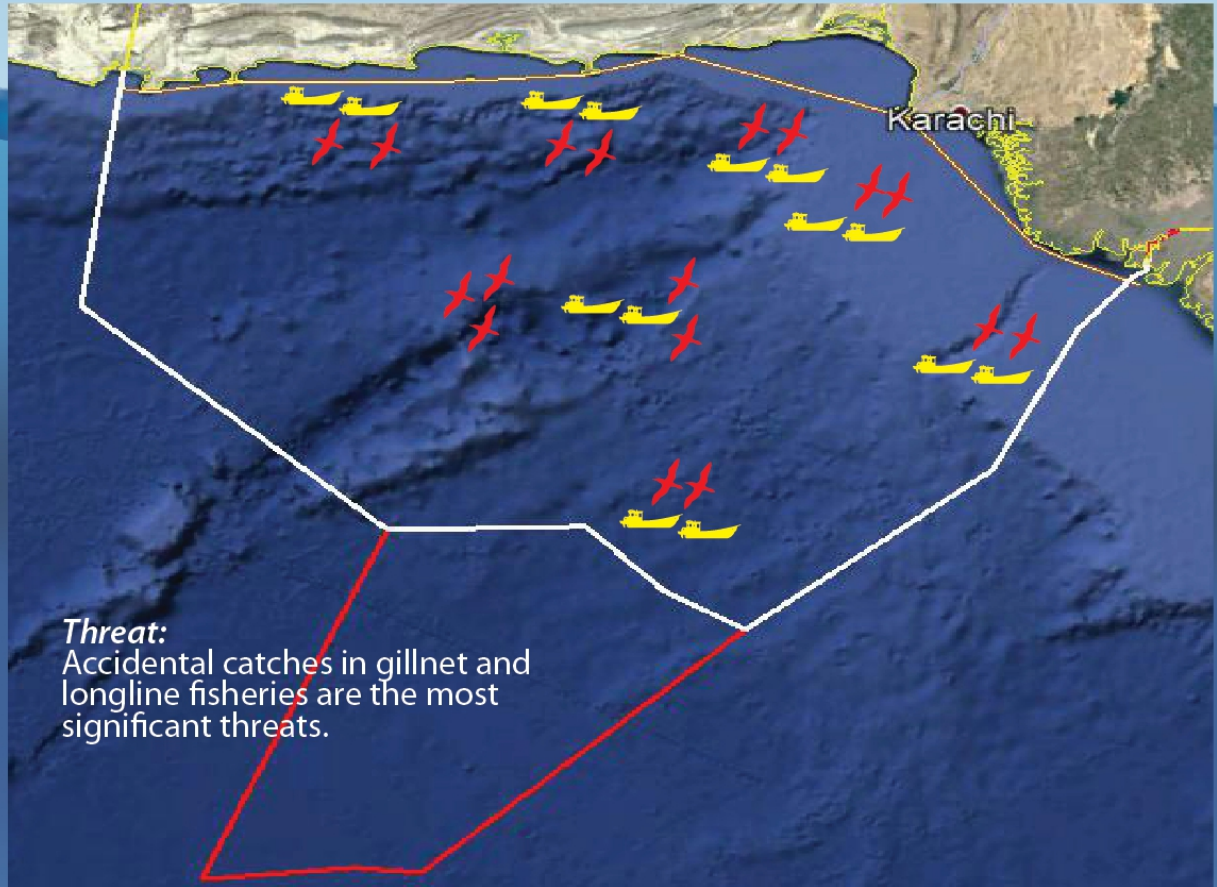
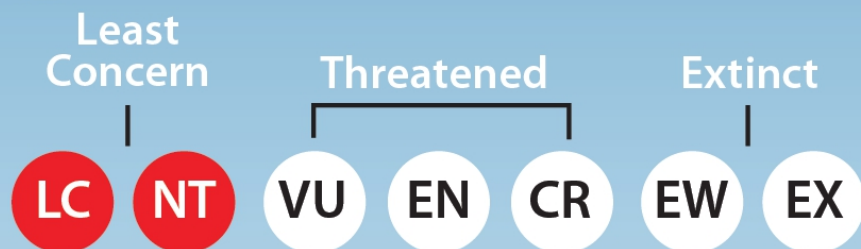


Diet: zooplankton, pelagic and discarded fishes and invertebrates

Population: Decreasing

Protection: Unknown

Local Protection: None



First steps

Entangled sunfish found in the net.



Stop fishing operations.



Estimate the degree of entanglement, size of the sunfish & position in the net.



One crew member should film the rescue and release operation on his phone.



Large individual is over 3 meters long.

Whole-body entangled. > go to page - xx, image – 1

Half of the body entangled. > go to page - xx, image – 2



Small, juvenile individual less than 1 meters long.

> go to page – xx, image – 3

Adult Seabird (> 0.5m) - whole body entangled

Start pulling the net through net hauler to bring the entangled seabird closer to the boat.



Start pulling the free end of the net with the help of a gaff from the gunwale to bring the seabird on board.



A fisherman should carefully hold the fully-entangled seabird to avoid any damage to the bird.



Hold the bird with a help of a towel/ cloth over its head and wings to calm it for at least 2 to 5 minutes.



Another fisherman should start cutting the net/ rope/ floaters carefully to disentangle the beak, neck, wings and whole of the bird.



Carefully hold the bird by its wings and the beak gently. One fisherman should measure the bird between the tip of the bill and the tip of the tail.



If the bird is exhausted or waterlogged, place it in a ventilated box/ fish basket in a dry and shaded place for at least one hour. The wings/ feathers of the seabird may be dried by dabbing with a dry cloth/ towel.



After finishing fishing activities, bring the seabird to the gunwale of the



boat and allow it to fly. The vent? Must be stripped because instead of flying immediately, the bird sometimes may like to rest on the water before it flies away.



Seabird flies away safely.



Mark the GPS location



Note the size of the sunfish



Capture the process of release

Image-1
Adult seabird (>0.5m) - whole body entangled



Adult sea bird (> 0.5 m) - half-body entangled

Start pulling the net gently through net hauler to bring the entangled seabird closer to the boat.



Start pulling the free end of the net slowly with the help of a gaff from the gunwale to bring the seabird on board.



A fisherman should carefully hold and control the wings and beak of the half-entangled seabird to avoid any damage to the bird or attack to the fisherman.



Place a towel/ cloth over its head and wings to calm it for at least 2 to 5 minutes.



Another fisherman should start cutting the net/ rope/ floaters carefully to disentangle the beak, neck, wings and whole of the bird.



Carefully hold the bird by its wings and the beak gently. One fisherman should measure the bird between the tip of the bill and the tip of the tail.



If the bird is exhausted or waterlogged, place it in a ventilated box/ fish basket in a dry and shaded place for at least one hour. The wings/ feathers of the seabird may be dried by dabbing with a dry cloth/ towel.



After finishing fishing activities, bring the seabird to the gunwale of the boat and allow it to fly. The vent? Must be stripped because instead of flying immediately, the bird sometimes may like to rest on the water before it flies away.



Seabird flies away safely.



Mark the GPS location



Note the size of the sunfish



Capture the process of release

Image - 2

Adult seabird (> 0.5m) - half-body entangled



Small/ juvenile Seabird (< 0.5m) -full/ half-body entangled

Start pulling the net gently through net hauler to bring the entangled seabird closer to the boat.



Start pulling the free end of the net slowly with the help of a gaff from the gunwale to bring the seabird on board.



A fisherman should carefully hold the entangled seabird to avoid any damage to the bird.



Place a towel/ cloth over its head and wings to calm it for at least 2 to 5 minutes.



Another fisherman should start cutting the net/ rope/ floaters carefully to disentangle the beak, neck, wings and whole of the bird.



Carefully hold the bird by its wings and the beak gently. One fisherman should measure the bird between the tip of the bill and the tip of the tail.



If the bird is exhausted or waterlogged, place it in a ventilated box/ fish basket in a dry and shaded place for at least one hour. The wings/ feathers of the seabird may be dried by dabbing with a dry cloth/ towel.



After finishing fishing activities, bring the seabird to the gunwale of the boat and allow it to fly. The vent? Must be stripped because instead of flying immediately, the bird sometimes may like to rest on the water before it flies away.



Seabird flies away safely.



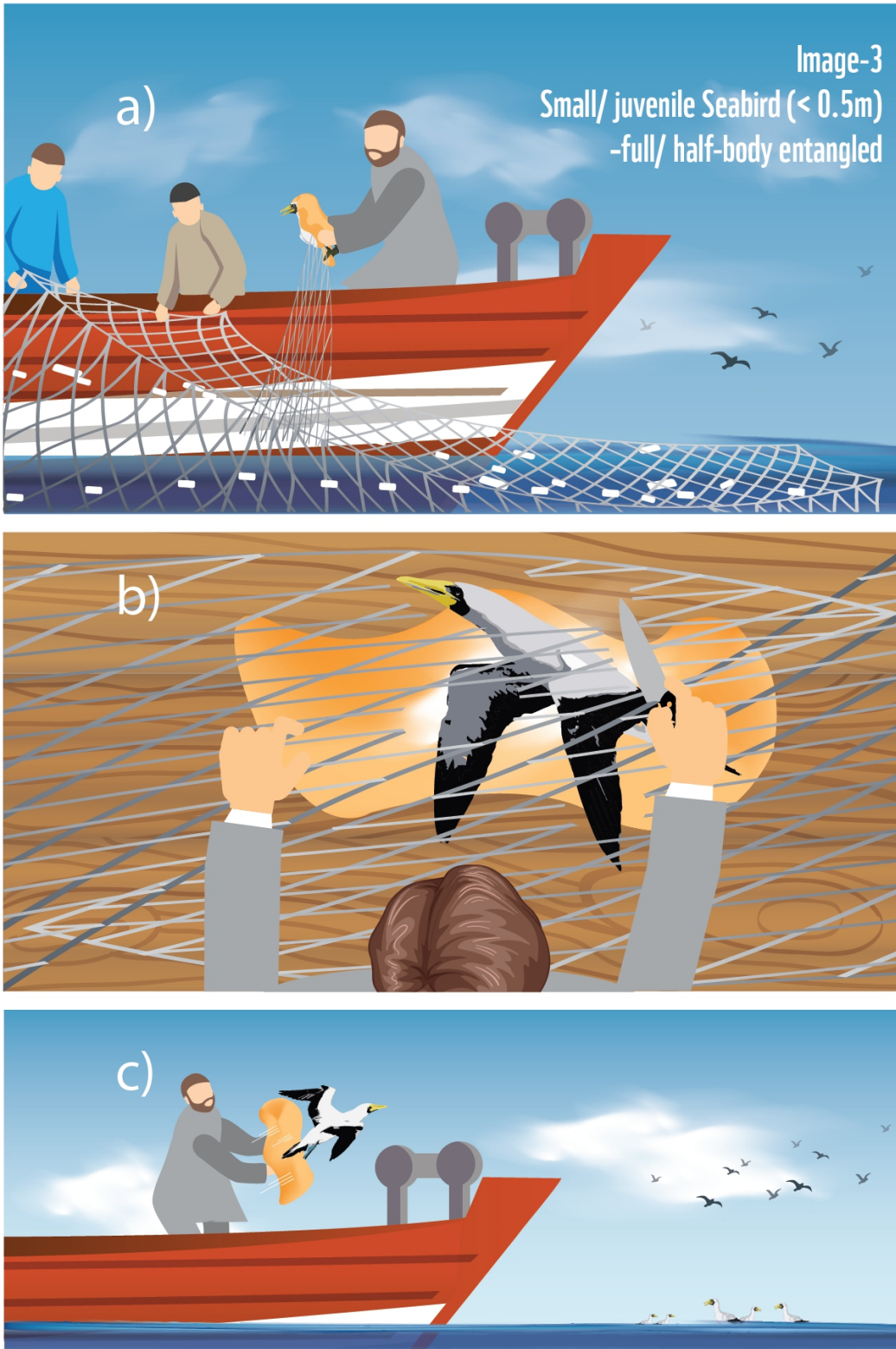
Mark the GPS location



Note the size of the sunfish



Capture the process of release





Don'ts



Do not handle the birds upside down vertically neither by its neck or legs.



Do not manoeuvre the mainline of the net strongly from the boat.



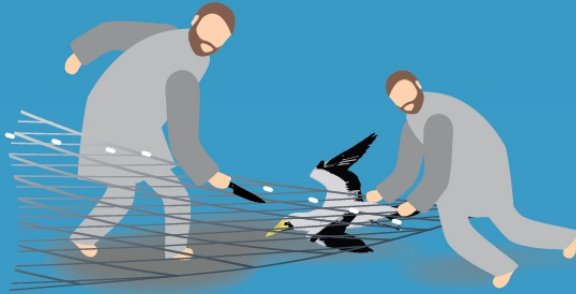
Do not retrieve the entangled sea from the net hauler.



Do not squeeze the bird while handing it either from the net or when disentangling it from the net.



Don'ts



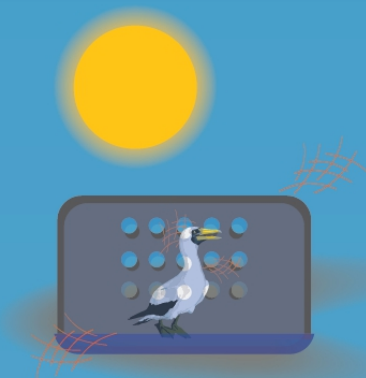
Do not disentangle/ cut/ manoeuvre net/ ropes from the bird without holding its neck, wings and legs. Otherwise, this could damage its organs.



Do not cover the nostrils of the bird when a cloth/ towel is placed over the seabird.



Do not shut the beak of the bird if it vomits to avoid suffocation.



Do not leave the animal on the deck exposed to sunlight for a long time in open space. Before the release of the seabird, make sure the seabird is dried with a cloth under a shed/ ventilated box.

Guidelines for safe handling and release of Sea snakes

Sea Snakes (*Elapidae: Hydrophiinae*)



Diet: Fish (eels), Fish eggs, & crustaceans
Population: Unknown
Protection: Unknown
Local Protection: None

Least Concern

Threatened

Extinct

LC

NT

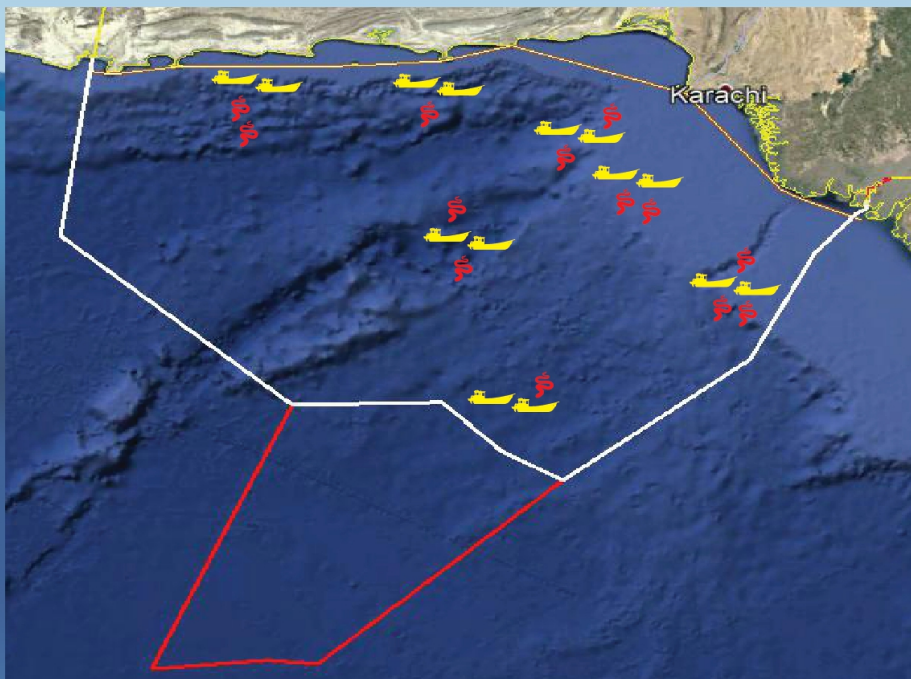
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First steps

Entangled sunfish found in the net.



Stop fishing operations.



Estimate the degree of entanglement, size of the sunfish & position in the net.



One crew member should film the rescue and release operation on his phone.



Make sure all the operation of handling and release should be done from the gunwale and away from the boat.



Adult individual is over a half meter long.

Whole-body entangled. > go to page - xx, image - 1

Half of the body entangled. > go to page - xx, image - 2



Small, juvenile individual less than a half meter long.

> go to page - xx, image - 3

Adult Sea Snake (> 0.5m) - whole body entangled

Start pulling the free end of the net up with the help of a gaff from the gunwale.



Slowly stretch the twisted part of the net over the gunwale and net hauler area.



Keep shaking the stretched net to allow animal disentangle and released in water.



Snake manages to swims away.



An experienced fisherman should carefully hold the fully-entangled sea snake by its neck with the help of tongs. Make sure to avoid any direct contact with the sea snake.



Hold the snake with the tong into the fish basket on the gunwale while placing a thick towel/ cloth over its head. Another fisherman equipped with gloves (xx) start cutting the net carefully to disentangle the snake.



Take picture of the snake while holding it with tong inside the basket.



Take snake out of the basket with the help of tong holding its neck and release it in the water.



Snake swims away safely.



Mark the GPS location



Note the size of the sunfish



Capture the process of release

Image-1

Adult Sea Snake (>0.5m) - whole body entangled



Adult sea snake (> 0.5 m) - half-body entangled

Start pulling the free end of the net up with the help of a gaff from the gunwale.



Slowly stretch the twisted part of the net over the gunwale and net hauler area.



Keep shaking the stretched net to allow animal disentangle and released in water.



Snake manages to swim away.



An experienced fisherman should carefully hold the fully-entangled sea snake by its neck with the help of DocSeward snake hooks/tongs. Make sure to avoid any direct contact with the sea snake.



Carefully disentangle the snake from the net with the DocSeward snake hooks/tong and another fisherman gently keep manoeuvring one end of the net from the gunwale to release snake in the water.



Snake flies away safely.



Mark the GPS location



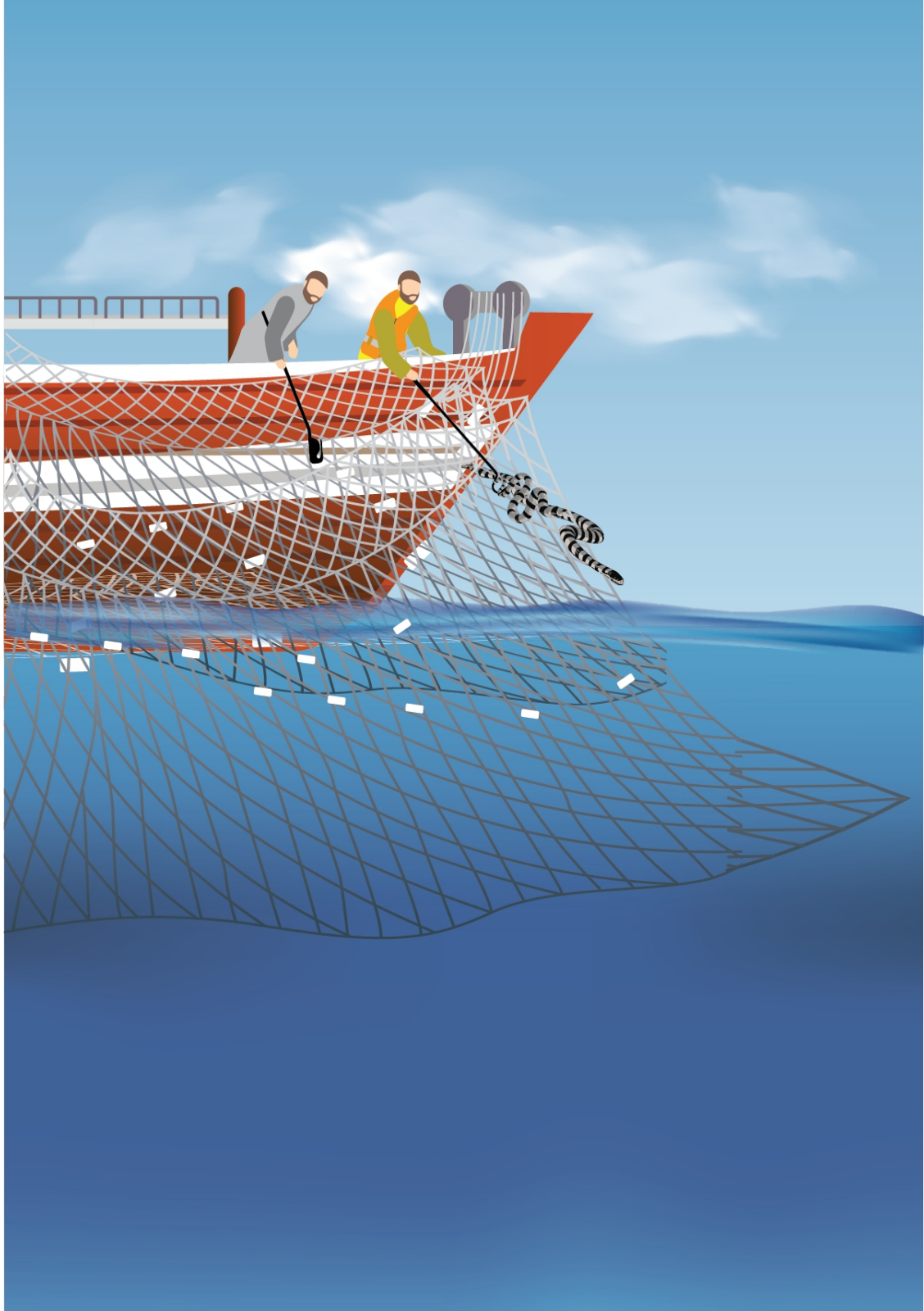
Note the size of the sunfish



Capture the process of release

Image - 2

Adult sea snake (> 0.5 m) - half-body entangled



Small/ juvenile Sea Snake (< 0.5m) -full/ half-body entangled

Start pulling the free end of the net up with the help of a gaff from the gunwale.



Slowly stretch the twisted part of the net over the gunwale and net hauler area.



Keep shaking the stretched net to allow animal disentangle and released in water until Snake manages to swim away.



An experienced fisherman should carefully hold the fully-entangled sea snake by its neck with the help of tongs. Make sure to avoid any direct contact with the sea snake.



Hold the snake with the tong into the fish basket on the gunwale while placing a thick towel/ cloth over its head. Another fisherman equipped with gloves (xx) start cutting the net carefully to disentangle the snake.



Take picture of the snake while holding it with tong inside the basket.



Take snake out of the basket with the help of tong holding its neck and release it in the water.



Sea snake swims away safely.



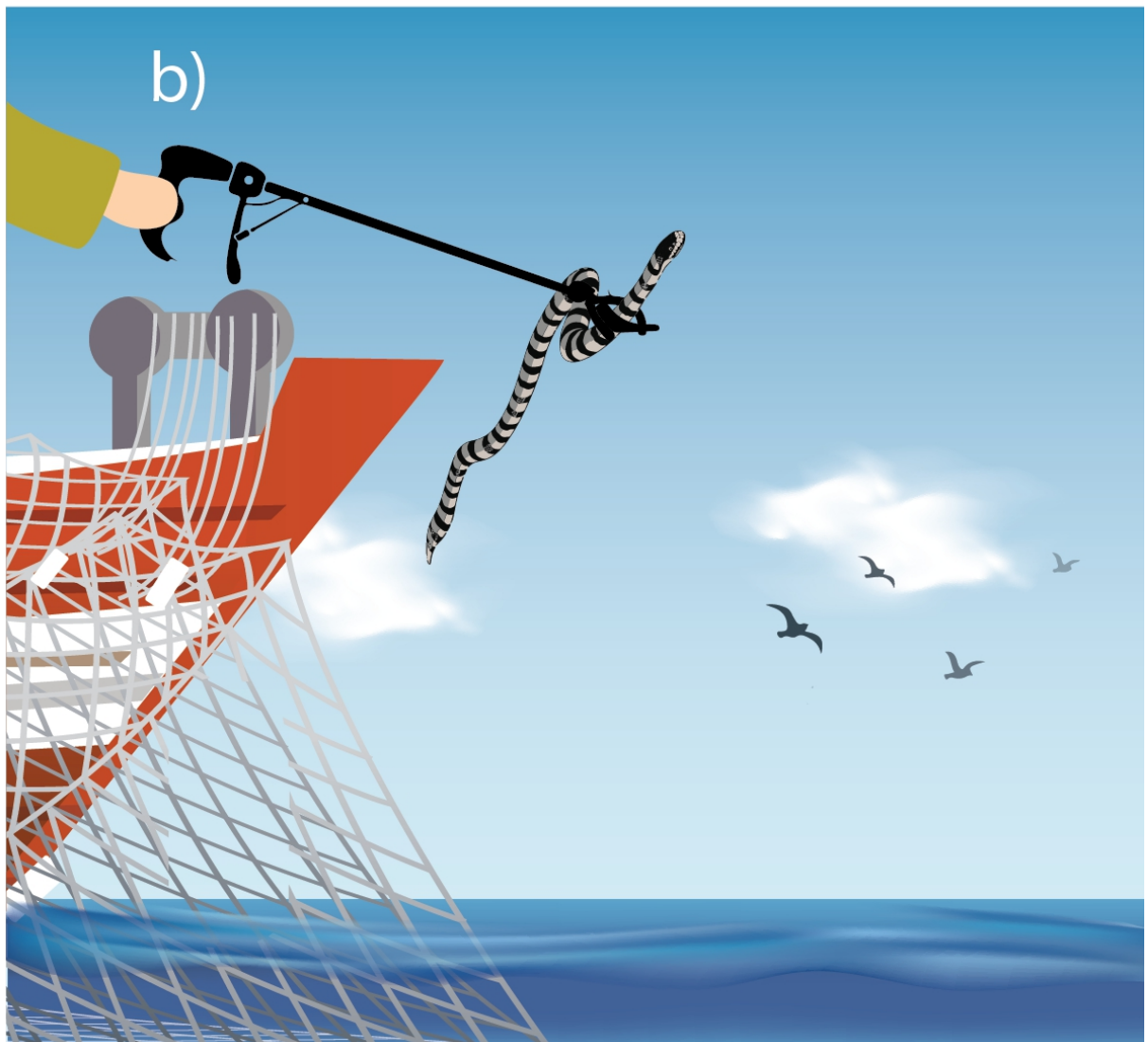
Mark the GPS location



Note the size of the sunfish



Capture the process of release

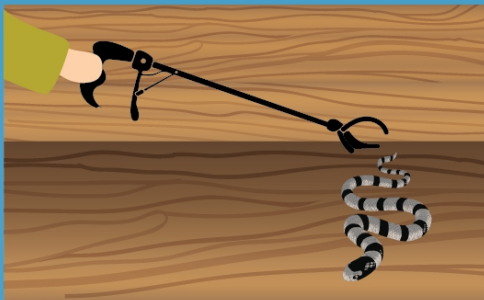


 Don'ts

Do not handle any sea snake by hand..



Do not stand in front of the sea snake while handling it.



Do not handle/ disentangle any sea snake from the net onboard.