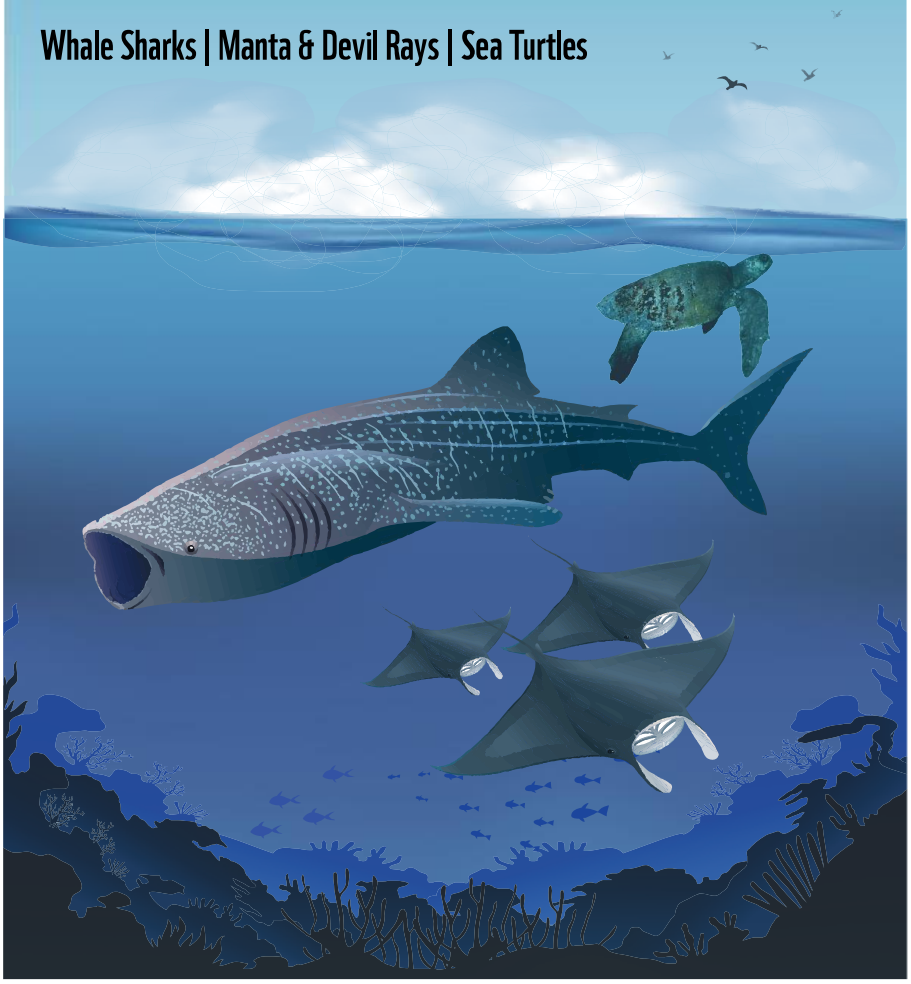
Guide for Handling & Safe Release in Gillnet Fisheries

Whale Sharks | Manta & Devil Rays | Sea Turtles



Index

Whale Shark



- Large whale shark (> 2m) – whole body entangled page # 3
- Large whale shark (> 2m) – half body entangled page # 5
- Large whale shark (> 2m) – only tail entangled page # 7
- Small whale shark (< 2 m) page # 9

Mobulids



- Partially entangled mobulid page # 14
- Large, fully entangled mobulid page # 16
- Small, fully entangled mobulid page # 18

Sea Turtle



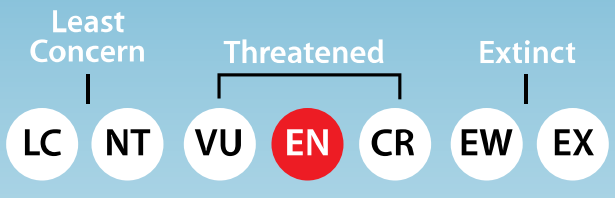
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- Small sea turtle that can be hauled on board safely page # 32

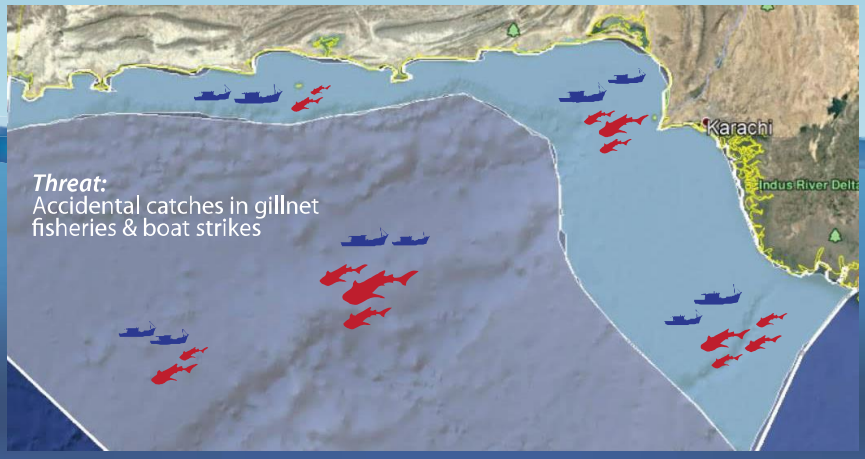
Guidelines for safe handling and release of whale sharks

Whale Shark (*Rhincodon Typus*)



Diet: Plankton
Population:Decline
Protection: CITES, Appendix-II
Pakistan: National Fisheries Laws





How to use this guide?

Use the following flowcharts to learn how you can safely release entangled whale sharks from gillnets. Depending on the degree of entanglement and animal's size, different steps need to be followed. Remember that safety of the crew is most important – all steps in this guide will ensure safety of the crew as a priority.

First Steps

Entangled whale shark found in gillnet.

Stop fishing operation.

Estimate the degree of entanglement, size of the whale shark, and position in the net. One crew member should film the release operation on his phone.

Large individual over 2 meters long.

Small, juvenile individual up to 2 meters long.

Whole body entangled.

Half of the body entangled.

Only tail entangled.

Go to Page - 3, Image - 1

Go to Page - 5, Image -2

Go to Page - 7, Image - 3

Go to Page - 9, Image - 4

Large whale shark (>2m) - whole body entangled

A fisherman shoud jump into the water to access the middle of the whale shark body, behind the head and near pectoral fins. It might be safe to hold on to the fishing gear between the winch / boat and the entangled whale shark.

Remember to avoid direct physical contact with the whale shark - stay at least 1 meter away from the whale shark.

Cut the fishing gear at the surface where the whale shark is entangled - start cutting near the pectoral fins and move towards the mouth. This would help to reduce the pressure on whale shark and minimize level of entanglement.

Keep pulling the net up and down to help the whale shark move forward and give it a chance to escape. This should help to release the whale shark especially if by now it's only partially entangled.

Whale shark is freed from the net and swims away safely.



Mark the GPS location



Note the size of the whale shark



Capture the process of release

Image-1
Large whale shark (>2m) – whole body entangled



Large whale shark (>2m) - half-body entangled

Maneuver the ropes and net to release the whale shark - this will loosen the net and should allow the whale shark to escape.

whale shark is freed from the net and swims away safely.

Lessening the rope / net is not helping and you cannot release the whale shark.

Go to Page 3, Image - 1 [same as whole body entangled].



Mark the GPS location

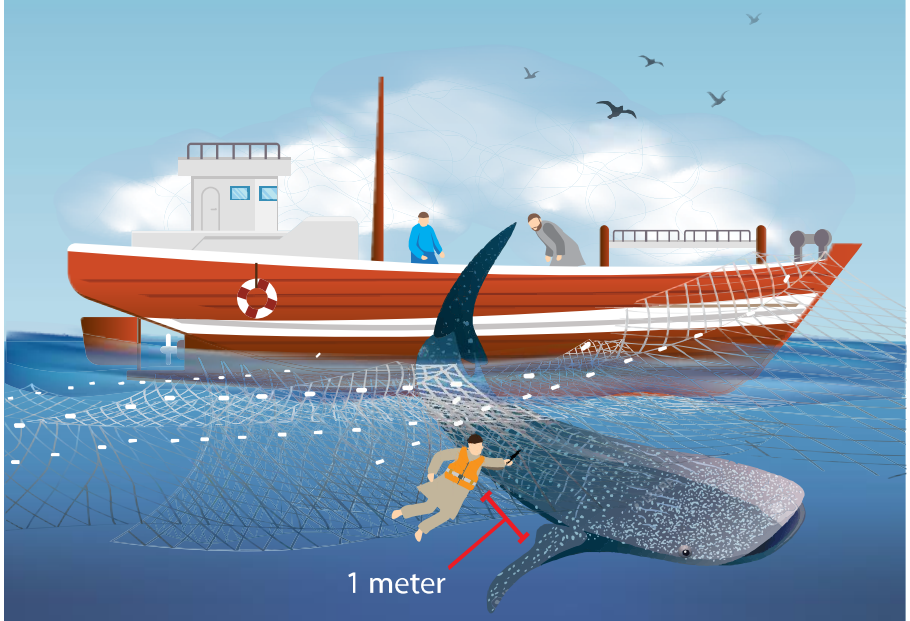


Note the size of the whale shark



Capture the process of release

Image-2
Large whale shark (>2m) – half-body entangled



Large whale shark (>2m)- only tail entangled

Carefully haul the whale shark partially with the help of net hauler.

Cut the rope / net and watch out for the tail - whale shark can flick its tail and accidentally cause injury to the crew trying to release the whale shark.

Whale shark is freed from the net and swims away safely.



Mark the GPS location



Note the size of the whale shark



Capture the process of release

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



Small whale shark (up to 2m)

Carefully haul the whale shark on-board to disentangle it on the deck. Make sure you don't heave / haul the whale shark through the net hauler and dont expose the animal to direct sunlight for long time.

Cut or maneuver the net / rope to disentangle the whale shark.

Carefully handle the disentangled whale shark - do not hold it by its tail, fins, or gill slits as that can injure the whale shark.

Bring the whale shark to the gunwale and lower it as much as you can over the edge to release it back into the sea.

Whale shark is freed from the net and swims away safely.



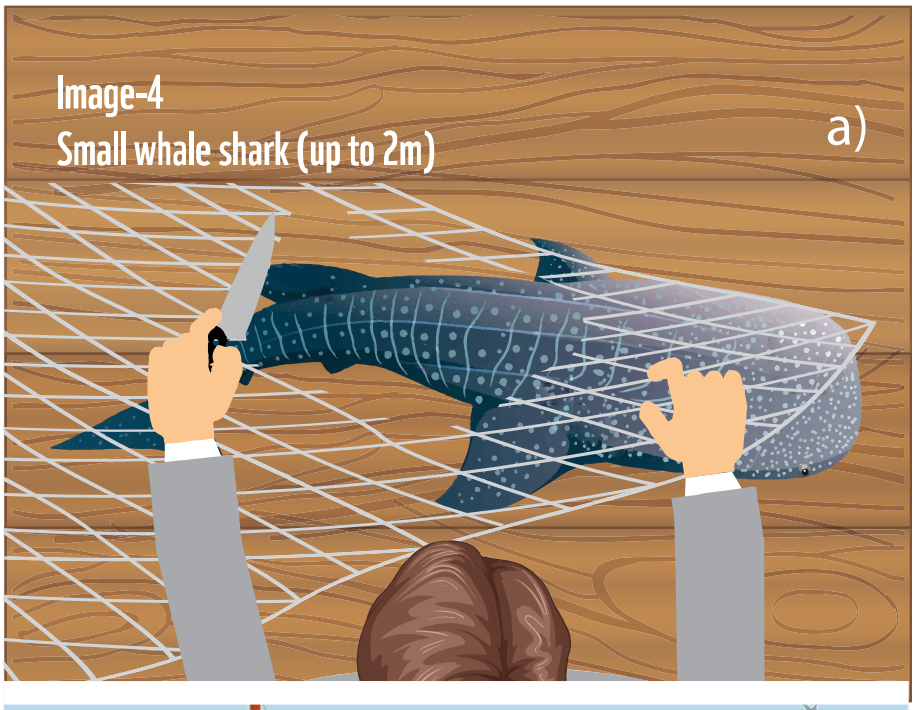
Mark the GPS location

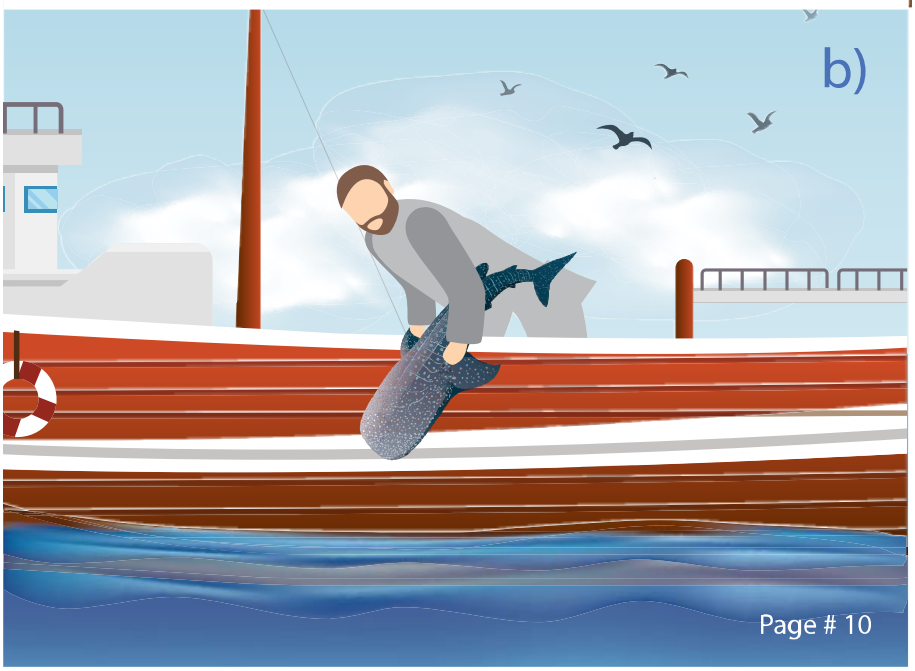


Note the size of the whale shark



Capture the process of release


Image-4
Small whale shark (up to 2m)
a)


b)

Don'ts



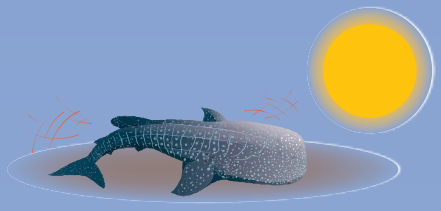
Do not handle the whale shark upside down vertically or by its tail.



Do not hold or handle the whale shark at or by inserting your hands in its gill slits.



Do not step on the small whale shark accidentally once it's on the deck. As juvenile whale sharks are very fragile, this could damage their internal organs and even lead to the whale shark death.



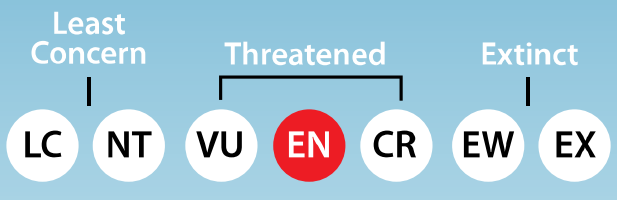
Do not leave the whale shark on the deck exposed to sun light for a long time. Release the animal as soon as possible.

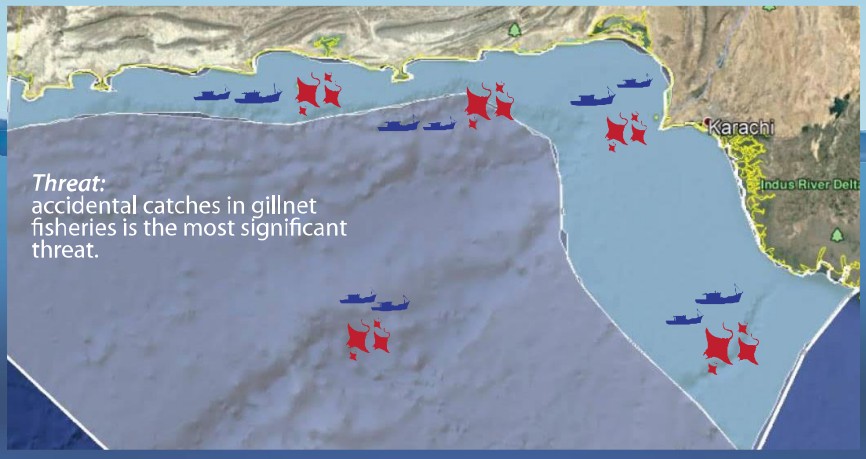
Guidelines for safe handling and release of Mobulids

Mobulids-Manta & Devil Rays (Mobulidae)



Diet: Plankton
Population:Decline
Protection: CITES & CMS-Appendix-II
Pakistan: National Fisheries Laws





How to use this guide?

Use the following flowcharts to learn how you can safely release entangled Mobulids from gillnets. Depending on the degree of entanglement and animal's size, different steps need to be followed. Remember that safety of the crew is most important – all steps in this guide will ensure safety of the crew as a priority.

First Steps

Entangled mobulid found in the net.

Stop fishing operation.

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

The mobulid is only partially entangled.

The mobulid is fully entangled with the whole body covered.

large individual that cannot be hauled on board safely.

Small individual that can be hauled on board safely.

Go to Page - 14, Image -1

Go to Page - 16, Image - 2

Go to Page - 18, Image - 3

Partially entangled mobulid

Lessen the rope / net from the boat to release the mobulid – this will loosen the fishing gear and allow space for the mobulid to escape.

Lessening the rope / net is not helping and you cannot release the mobulid.

Large individual that can not be hauled on-board safely.

Small individual that can be hauled on-board safely.

Go to page 16

Go to page 18

Mobulid manages to escape from the net and swims away safely.



Mark the GPS location



Note the size of the mobulid



Capture the process of release

Image-1
Partially entangled mobulid



Large, fully entangled mobulid

A fisherman shoud jump into the water to help free the mobulid – remember not to come into direct, physical contact with the mobulid. It might be safe to hold onto the area between the winch / boat and the mobulid.

Cut the fishing gear at the surface where the mobulid is entangled start cutting near the pectoral fins and move towards the mouth. This would help to reduce the pressure on mobulid and minimize the level of the entanglement. Remember to stay at least 1 meter away from the mobulid at all times.

Mobulid is freed by cutting the net/rope and manages to swims away safely.



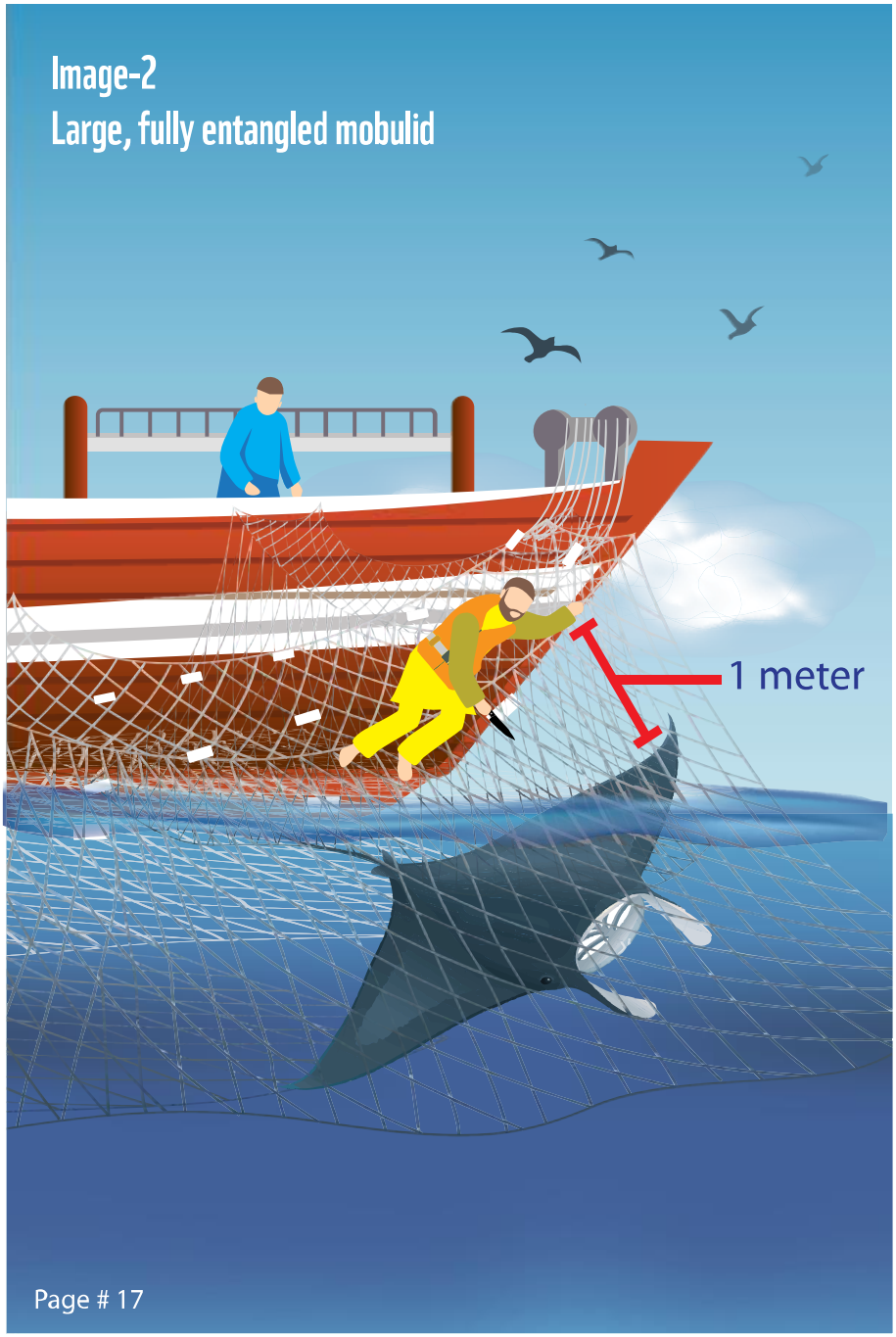
Mark the GPS location



Note the size of the mobulid



Capture the process of release


Image-2
Large, fully entangled mobulid
1 meter

Small, fully entangled mobulid

Manually haul the mobulid on-board carefully. Make sure the mobulid is not heaved through the net hauler. 2-3 fishermen should handle the mobulid grabbing it by its wings. Avoid pulling the mobulid by its tail and cephalic lobes.

Disentangle the mobulid by either cutting or manoeuvering the net / rope.

Place the disentangled mobulid on a large flat object (e.g. net, blanket, or tarpaulin). Remember not to grab the mobulid by its cephalic lobes, gills or tail – this can injure the mobulid and decrease its chances of survival after the release.

3 fishermen should grab the corners of the tarpaulin and carry the mobulid to the upper edge of the boat's side. Carefully lower the tarpaulin to release the mobulid.

Mobulidis released and swims away safely.



Mark the GPS location



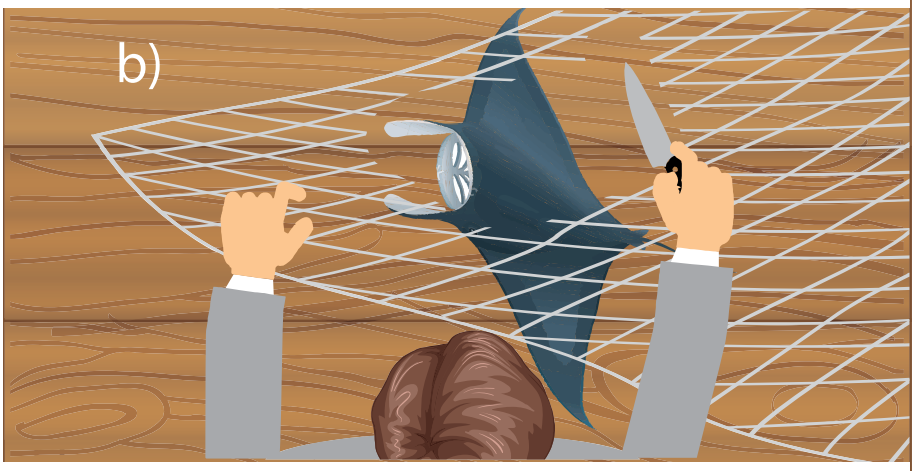
Note the size of the moublid



Capture the process of release



Image-3
Small, fully entangled mobulid

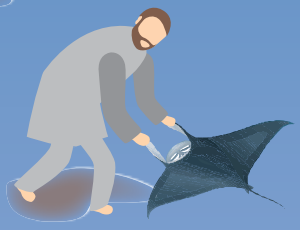




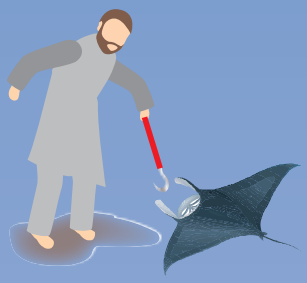
Don'ts



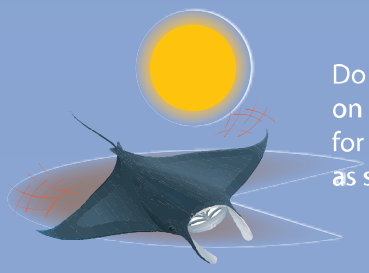
Do not handle / hold mobulid by its tail.



Do not handle / hold a mobulid by its cephalic lobes.This can cause internal injuries to the mobulid.



Do not use a gaff / rod / rope to handle / pull the mobulid. And do not insert your fingers / hook into spiracles and gill slits.



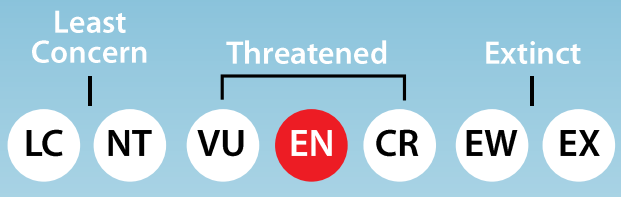
Do not leave the mobulid on the deck exposed to sun light for a long time. Release the mobulid as soon as possible.

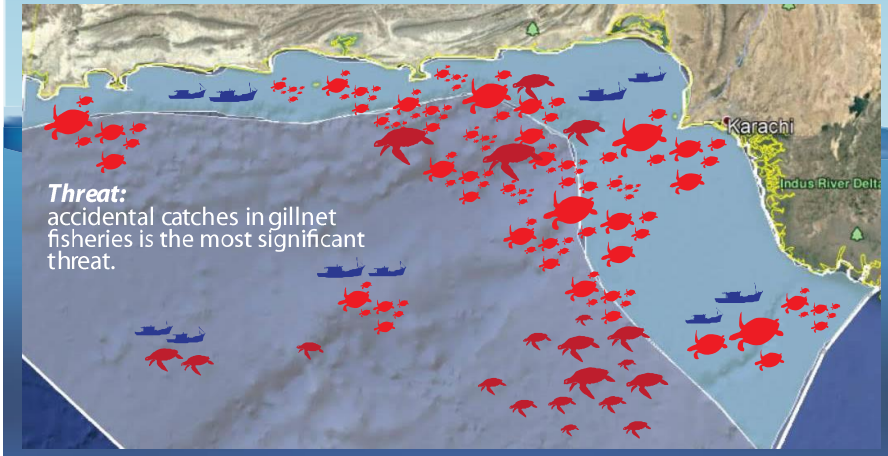
Guidelines for safe handling & release of Sea Turtles

Sea Turtles (Cheloniidae)



Diet: Seaweed, crustaceans, sponges, soft corals and jelly fish
Population: Dwindling
Protection: CITES –Appendix- I
CMS- Appendix-I
Pakistan: National Wildlife & Fisheries laws





How to use this guide?

Use the following flowcharts to learn how you can safely release entangled sea turtles from gillnets. Depending on the degree of entanglement and animal's size, different steps need to be followed. Remember the safety of the crew is most important- all steps in this guide will ensure safety of the crew as a pricrity.

First Steps

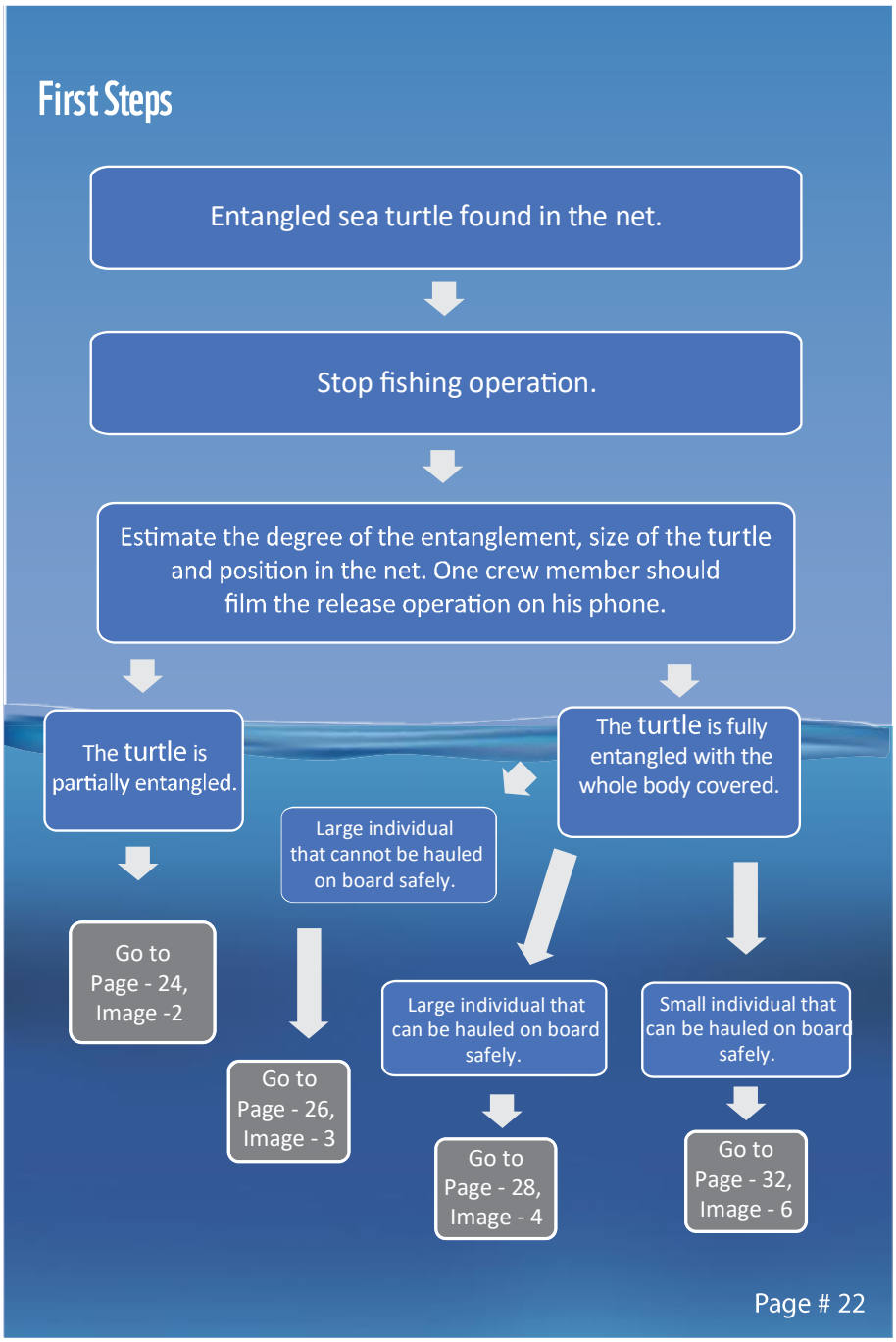

Entangled sea turtle found in the net.
Stop fishing operation.
Estimate the degree of the entanglement, size of the turtle and position in the net. One crew member should film the release operation on his phone.
The turtle is partially entangled.
The turtle is fully entangled with the whole body covered.
Go to Page - 24, Image -2
Large individual that cannot be hauled on board safely.
Go to Page - 26, Image - 3
Large individual that can be hauled on board safely.
Go to Page - 28, Image - 4
Small individual that can be hauled on board safely.
Go to Page - 32, Image - 6

Image- 1
Entangled sea turtle found in the gillnet



The sea turtle is partially entangled

Lessen the rope / net from on-board to release the sea turtle this will allow space for the sea turtle to disentangle.

Turtle manages to escape from the net and swims away safely.

Lessening the rope / net is not helping and you cannot release the turtle.



Mark the GPS location



Note the size of the animal



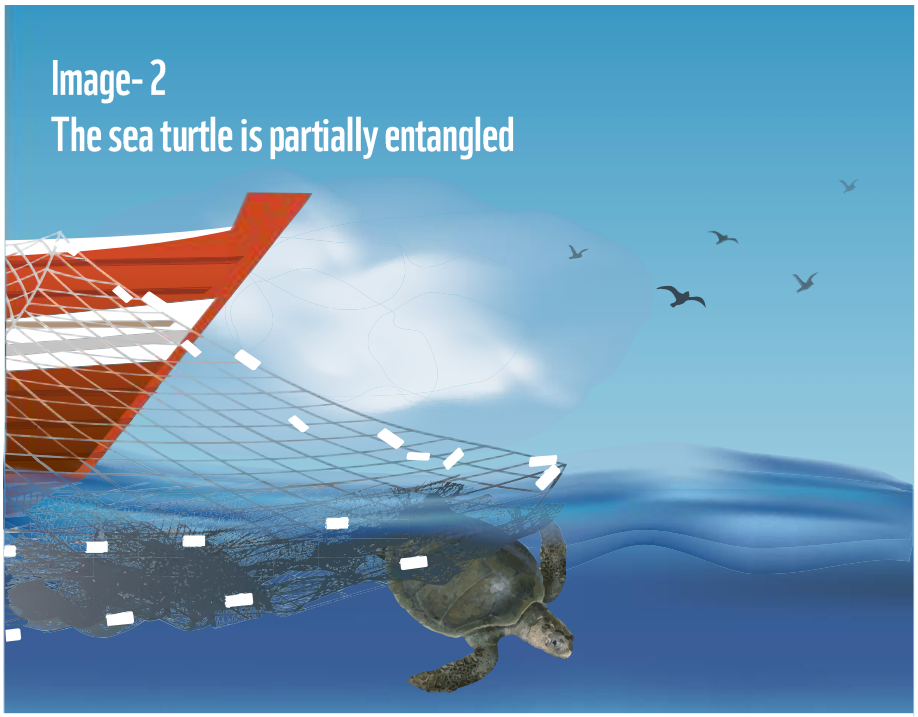
Capture the process of release

Large individual that cannot be hauled on board safely.

Small individual that can be hauled on board safely.

Go to Page - 26, Image - 3

Go to Page - 32, Image - 6


Image- 2
The sea turtle is partially entangled



Large sea turtle that cannot be hauled on board safely

One fisherman should jump into the water to help free the turtle. It might be safe to hold onto the area of the fishing net between the winch / boat and entangled turtle.

Cut the fishing gear / ropes from mid-part of the shell of the turtle towards its head. Make sure the flippers of the turtle are also free from the fishing net / ropes.

Turtle is freed by cutting the net / rope and manages to swim away and dive safely.



Mark the GPS location



Capture the process of release



Note the size of the animal



Record the flipper tag number (if any)

Image- 3
Large sea turtle that cannot be hauled on board safely



Large sea turtle that can be hauled on board safely

Manually haul the turtle and fishing net onto the boat carefully. Make sure the turtle is not heaved through the net hauler. 2-3 fishermen should handle the turtle grabbing by the edges of the shell.

Disentangle the turtle by cutting net / rope from the mid-part of the shell, n oving towards the head of turtle.

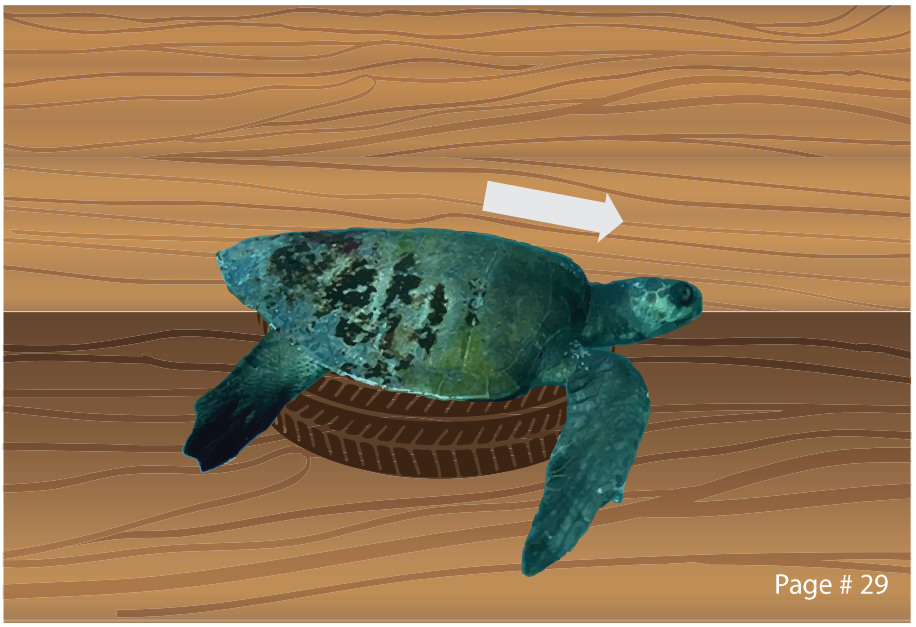
Place the disentangled turtle on a large object (ropes / tire) with its fins hanging down. The head of the turtle should be lower than the back of the turtle.

Place your fingers on the nostrils of the turtle to open its mouth. Check the turtle's mouth and remove the any plastic / pieces of ropes.



Image- 4

Large sea turtle that can be hauled on board safely



Large sea turtle that can be hauled on board safely

To calm the turtle, cover the head of the turtle gently with your hands or a wet blanket / tarpaulin over the turtle for a while (minimum 30 mins).

One fisherman should grab the turtle by the edges of its shell. Carefully lower the turtle from the gunwale at the angle of 45 degrees while its head is facing the water.

Turtle is released and swims away safely.



Mark the GPS location



Capture the process of release



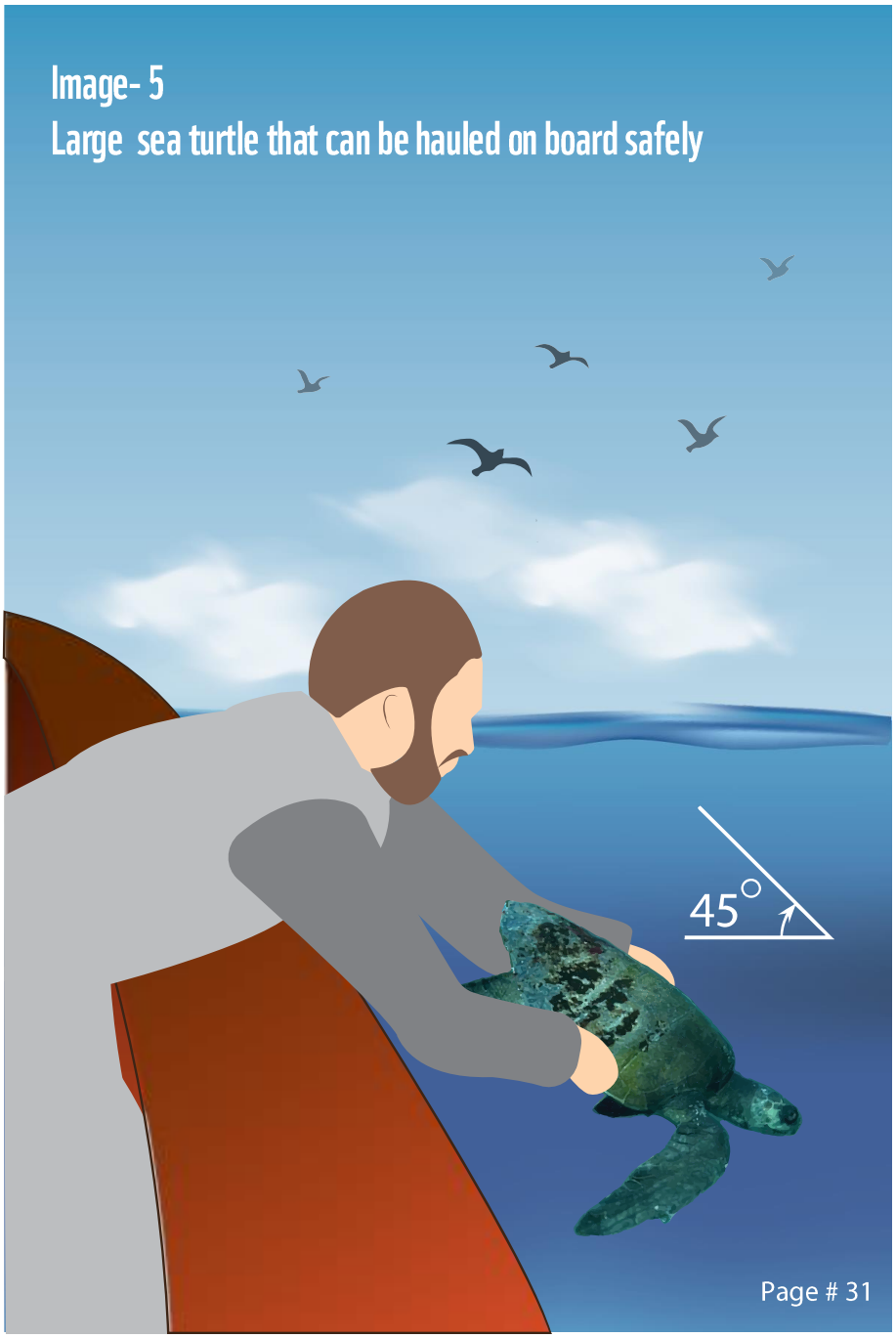
Note the size of the animal



Record the flipper tag number (if any)

Image- 5

Large sea turtle that can be hauled on board safely



Small sea turtle that can be hauled on board safely

If the turtle size is more than one feet.

Go to Page - 28, Image - 4

If the turtle size is less than one feet.

Stop fishing activities . Rescue the turtle with the help of a bucket from the deck.

After fishing activities lower the bucket with the turtle inside and then tilt the bucket at the surface of the water.

Turtle is released and swims away safely.



Mark the GPS location

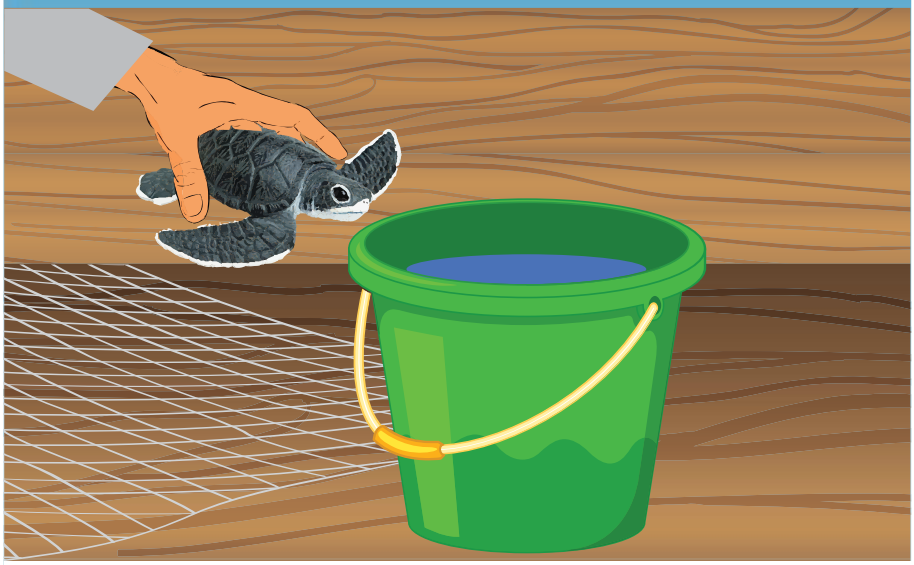


Note the size of the animal



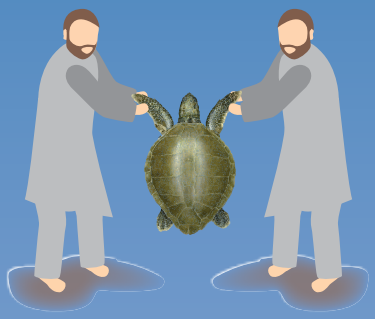
Capture the process of release

Image- 6
Small sea turtle that can be hauled on board safely





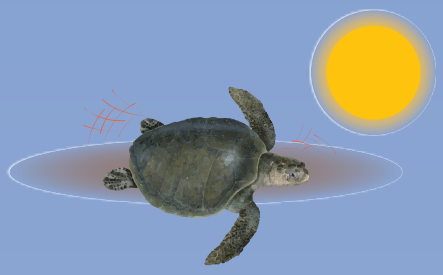
Don’ts



Do not handle the sea turtle by its flippers.



Do not release the sea turtle by throwing it overboard.



Do not leave the sea turtle on the deck exposed to sun light for a long time.



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Guide for Handling & Safe Release in Gillnet Fisheries

Whale Sharks | Manta & Devil Rays | Sea Turtles

Acknowledgement:

This "Safe Handling & Release Guide" has been produced with the support of Shark Conservation Fund (SCF) to guide fishermen and fisheries authorities on proper handling and safe release of entangled whale sharks, mobulids (manta and devil rays) & sea turtles accidentally caught in the gillnet fisheries. Through this guide, we urge its users to report on all safely released whale sharks, mobulids and sea turtles to marine team of WWF-Pakistan. For further details about the guidelines and safe release training opportunities, please contact WWF-Pakistan.

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