



Handling and release guidelines for manta and devil rays (mobulids)

Mobulids (manta and devil rays) are large pelagic filter-feeding elasmobranchs that are found in tropical and subtropical waters in areas where tuna fishing takes place. They are particularly vulnerable to overfishing due to their extremely slow growth and reproduction and so the Indian Ocean Tuna Commission has banned their retention.

Mobulid rays are fragile and highly susceptible to internal damage when out of the water as they lack protection by a rigid skeleton. These rays are obligate ventilators, which means they must continue swimming to 'breathe' and therefore may die through suffocation if they remain motionless for long. Mobulid rays should therefore be kept in the water wherever feasible or, if they must be taken aboard, released as quickly as possible.

It is prohibited to retain mobulids in the IOTC Area of Competence in any fishery (other than those for subsistence).

Following best practice handling and release guidance will increase the survival of mobulids caught incidentally during fishing operations.

Safety:

Safety of fishing crew is the priority in all fishing, handling and release operations. There is no danger of a sting from mobulids, though care should be taken to avoid knocks or blows from the wings of medium and large rays. Note that rays entangled in nets or lines may appear dead and thrash when released.



**Food and Agriculture
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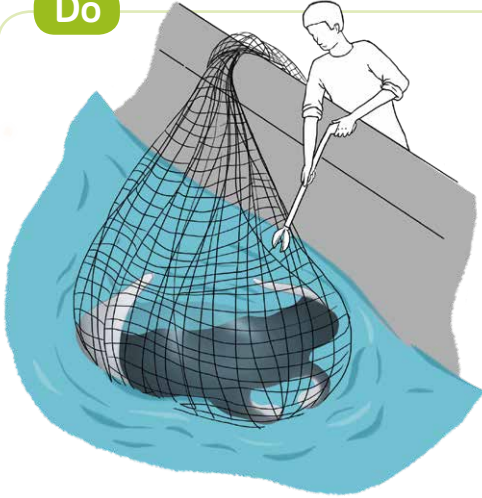


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Gillnet fisheries

Items to have onboard: long-handled net cutters, stiff filament dipnet/lift net

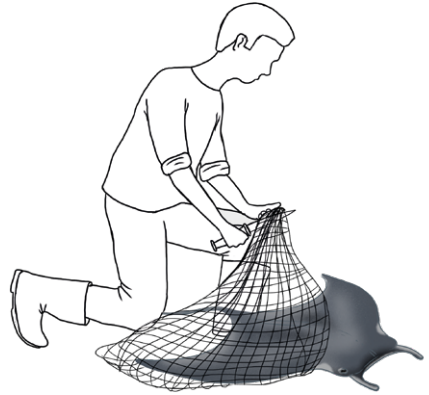
Do



Medium-to-large rays

Leave the animal in the water.

- Partial entanglement: slacken the net sufficiently to allow the ray to escape and carefully manoeuvre the net away.
- Full entanglement: carefully cut the net away in the water while avoiding contact with the animal.



Small rays

If it cannot be disentangled in the water, gently bwn board and cut away the net.

Small rays: (up to 30 kg or 1 m width)

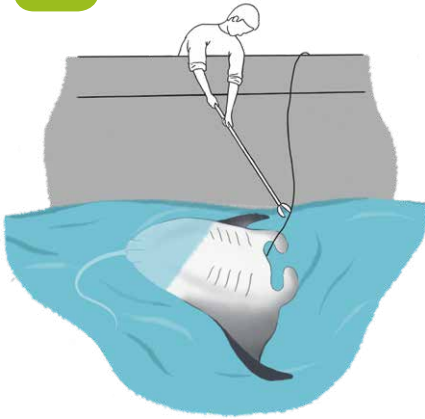
Medium rays: (30 - 60 kg or 1 - 2 m width)

Large rays: (over 60 kg or 2 m width)

Longline fisheries

Items to have onboard: long-handled line cutters and de-hookers, bolt-cutters, stiff filament dipnet/lift net

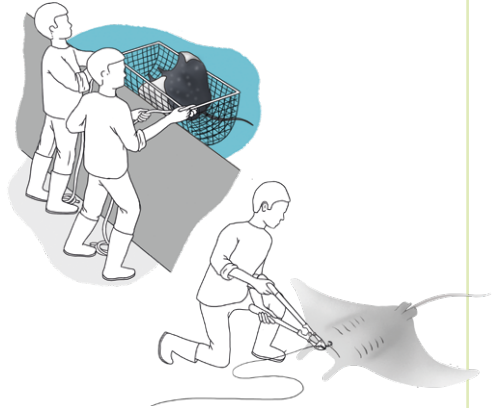
Do



Medium-to-large rays

Leave the animal in the water and use a dehooker to remove the hook or a long-handled line cutter to cut the line as close to the hook as possible (ideally leaving < 0.5 m of line attached to the ray).

Do

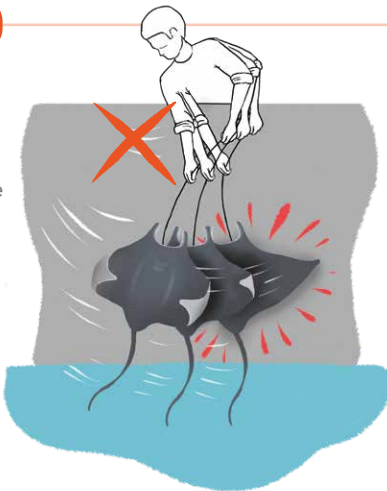


Small rays

If the gear cannot be removed in the water, carefully bring on board and remove by backing the hook out. If the hook is embedded, either cut the hook with bolt cutters or cut the line at the hook.

Do not

Do not hit or slam a ray against the side of the vessel in an attempt to remove a ray from the line.



Do not attempt to dislodge a deeply hooked or ingested hook by pulling on the line or using a dehooker.

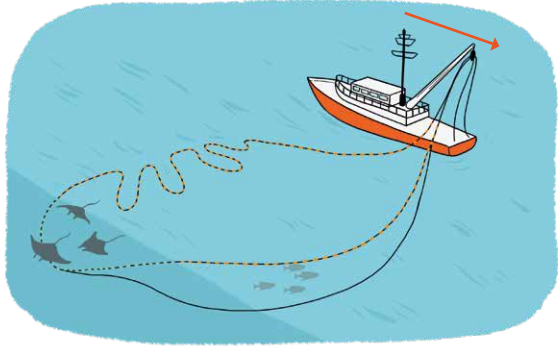


Purse seine fisheries

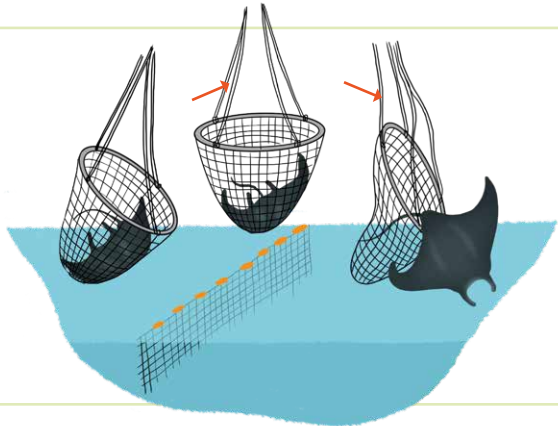
Items to have onboard: canvas or net slings and or stretchers

Do

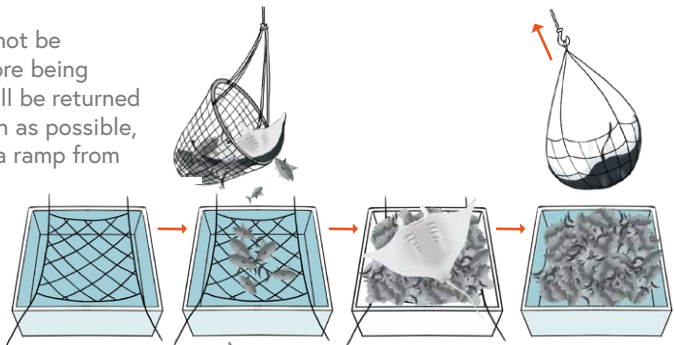
- 1 If possible release rays from the net while they are still free-swimming (e.g. back down procedure, dropping corks).



- 2 To the extent possible, brail out of the net directly.



- 3 Large rays that cannot be released safely before being landed on deck, shall be returned to the water as soon as possible, preferably utilizing a ramp from the deck or net that is gently placed under the animal to 'sieve' it from the tuna.



(Images adapted from François Poisson, IFREMER, based on an idea of the skipper and crew of the San Nanumea (Sanford Ltd, New Zealand).

Guidelines applicable to ALL fisheries

Do

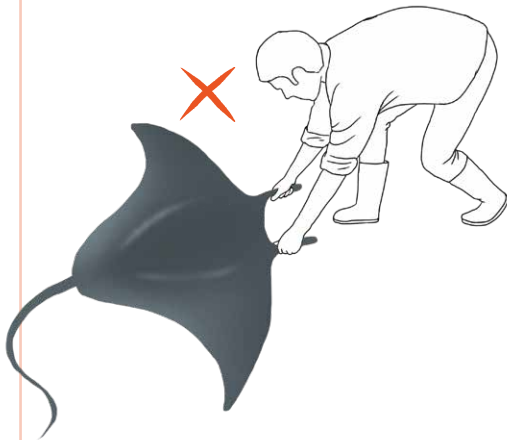
Leave rays in the water wherever possible.

Small-to-medium rays

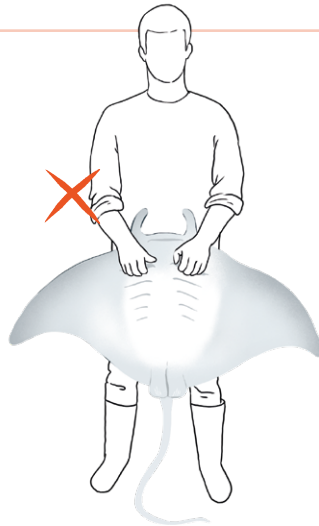
The ray be handled by 2 or 3 people and carried by the sides of its wings or using a purpose built cradle/ stretcher, and gently released over the side of the vessel.



Do Not



Do not drag, pull or carry a ray by its cephalic lobes ("horns") or tail.

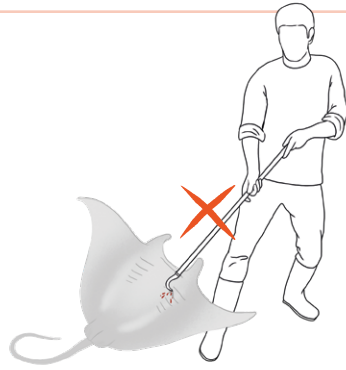


Do not drag, pull or carry a ray by inserting your hands into the gill slits or spiracles.

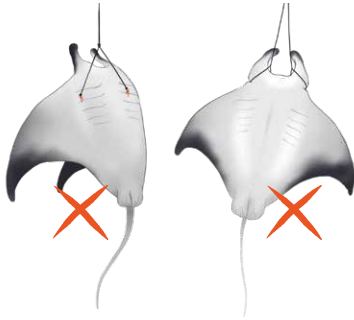
Do Not



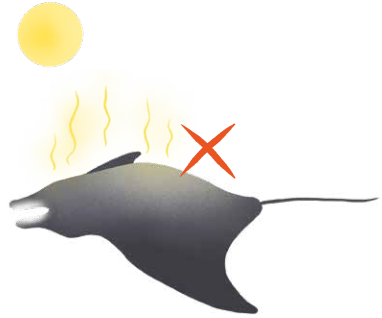
Do not cut the tail or the spine.



Do not gaff, hook or spear.



Do not punch holes in the body to insert any wire/cable/rope or bind a ray in order to move or lift it.



Do not leave onboard until hauling is finished before returning it to the sea or leave in the sun on deck.

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