

# How to protect and help rare marine animals during fishing



How to protect and help rare marine animals during fishing.

For fishing vessels / Fishing / Targeted aquatic animals ..... Surrounding Nets/Trawl Nets/ Crab gillnets/ Crab

Trap

1. Fishing Information
2. Number of vessels/classified by vessel size, types of fishing gears, fishing area.
3. Types of rare marine animals found in Thai waters.
4. How to protect and help rare marine animals during fishing.
  - a. Sea Turtle
  - b. Whales and dolphins
  - c. Whale Shark
5. Recording and reporting rare marine animals.

## Commercial fishing information is classified by type of fishing gear.

### 1. Fishing gears, trawl nets

There are 3 types of fishing vessels that use trawl nets: Bottom Otter Trawls Vessel or Bottom Single Trawls, Bottom Pair Trawls Vessel, Beam Trawls Vessel. In 2022, there was a total catch of saltwater animals of 504,761 tons, accounting for 50.12 % of the total quantity of saltwater animals. The number of saltwater animals caught from Bottom Pair Trawls was 309,307 tons (61.28 %), followed by the number of saltwater animals caught from Bottom Otter Trawls or bottom single trawls, 183,196 tons (36.29 %). And the number of saltwater animals caught from beam trawls was 12,258 tons (2.43 %).

When considering the amount of catch of saltwater animals classified by fishing source, it was found that the number of saltwater animals caught in the Gulf of Thailand was 373,762 tons (74.05 %) and the number of saltwater animals caught in the Indian Ocean was 130,999 tons (25.95 %). And if we consider the amount of catching saltwater animals classified by group of aquatic animals, it is found that most were duck fish, 253,320 tons (50.19 %), followed by aquatic animals such as fish, 196,706 tons (38.97 %) that most of which are ground fish such as sea bream, sharp-lipped fish, big-eyed fish, white sand fish, etc. Aquatic animals such as squid, 37,343 tons (7.40 %), Shrimp 12,405 tons (2.46 %), Crabs 3,312 tons (0.65 %), Shellfish 1,592 tons (0.31 %), and Other aquatic animals 83 tons (0.02 %).

### Quantity of saltwater animals caught from Trawl Nets in 2022

Quantity : Tons

Fishing Gear	Total		Gulf of Thailand		Andaman	
	Quantity	%	Quantity	%	Quantity	%
<b>Total of Trawl Nets</b>	<b>504,761</b>	<b>100.00</b>	<b>373,762</b>	<b>74.05</b>	<b>130,999</b>	<b>25.95</b>
Bottom Otter Trawls	183,196	36.30	122,074	24.19	61,122	12.11
Bottom Pair Trawls	309,307	61.27	239,430	47.43	69,877	13.84
Beam Trawls	12,258	2.43	12,258	2.43	-	-

### 2. Fishing gears, Surrounding Nets

Fishing vessels that fish with Surrounding Nets consist of 2 types: Surrounding nets fishing vessel and Anchovy Surrounding nets fishing vessel. In 2022, there was a total catch of saltwater animals of 347,999 tons, accounting for 34.55 % of the total quantity of saltwater animals. The number of saltwater animals

caught from surrounding nets fishing gear was 286,061 tons (82.20 %), followed by the number of saltwater animals caught from Anchovy surrounding nets fishing gear, which was 61,938 tons (17.80 %).

When considering the amount of catch of saltwater animals classified by fishing source, it was found that the number of saltwater animals caught in the Gulf of Thailand was 244,670 tons (70.31 %) and the number of saltwater animals caught in the Indian Ocean was 103,329 tons (29.69 %). And if we consider the amount of catching saltwater animals classified by group of aquatic animals, it is found that most of them are fish, 287,810 tons (82.70 percent), which are mostly surface fish such as anchovies, greenback fish, mackerel, black pomfret, indian mackerel, etc. Followed by duck fish, 55,530 tons (15.96 %), aquatic animals such as squid, 4,649 tons (1.34 %). The rest is shrimp and other aquatic animals, 10 tons (0.002 %).

### Quantity of saltwater animals caught from Surrounding Nets in 2022

Quantity : Tons

Fishing Gear	Total		Gulf of Thailand		Andaman	
	Quantity	%	Quantity	%	Quantity	%
<b>Total of Trawl Nets</b>	<b>347,999</b>	<b>100.00</b>	<b>244,670</b>	<b>70.31</b>	<b>103,329</b>	<b>29.69</b>
Surrounding nets	286,061	82.20	186,419	53.57	99,642	28.63
Anchovy Surrounding nets	61,938	17.80	58,251	16.74	3,687	1.06

### 3. Fishing gears, Trap

There are 4 types of fishing vessels that use trap fishing gear: Squid trap vessel, Octopus trap vessel, Fish trap vessel, and Crab trap vessel. In 2022, there was a total catch of saltwater animals of 11,368 tons, accounting for 1.13 % of the total amount of saltwater animals. It is the amount of catch of saltwater animals from fish trap, 4,465 tons (39.28 %), followed by the number of saltwater animals caught from octopus trap, 3,823 tons (33.63 %). The number of saltwater animals caught from crab trap was 2,497 tons (21.97 %), and the number of saltwater animals caught from squid trap was 583 tons (5.13 %).

When considering the amount of catch of saltwater animals classified by fishing source, it was found that the number of saltwater animals caught in the Gulf of Thailand was 10,569 tons (92.97 %), and the number of saltwater animals caught in the Indian Ocean was 799 tons (7.03 %). And if we consider the amount of catching saltwater animals by group of aquatic animals, it is found that most were aquatic animals such as squid, 4,406 tons (38.75 %), followed by fish with 4,293 tons (37.77 %), most of which are

ground fish such as sea bream, grouper, red snapper, white sea bream, etc. Aquatic animals such as crabs 2,497 tons (21.97 %) and duck fish 172 tons (1.51 %).

#### Quantity of saltwater animals caught from Trap in 2022

Quantity : Tons

Fishing Gear	Total		Gulf of Thailand		Andaman	
	Quantity	%	Quantity	%	Quantity	%
<b>Total of Traps</b>	<b>11,368</b>	<b>100.00</b>	<b>10,569</b>	<b>92.97</b>	<b>799</b>	<b>7.03</b>
Squid Trap	583	5.13	336	2.96	247	2.17
Octopus Trap	3,823	33.63	3,820	33.60	3	0.03
Fish Trap	4,465	39.28	3,973	34.95	492	4.33
Crab Trap	2,497	21.96	2,440	21.46	57	0.50

#### 4. Fishing gear, Gillnets/ Trammel nets and Entangling nets

Amount of catch of saltwater animals by fishing vessels using fishing gear of the following types: Gillnets/Trammel nets/Entangling nets. In 2022, there will be a total of 25,579 tons, accounting for 2.54 % of the total amount of saltwater animals. When considering the catch of saltwater animals classified by fishing source, it was found that the number of saltwater animals caught in the Gulf of Thailand was 25,493 tons (99.66 %), and the number of saltwater animals caught in the Indian Ocean was 86 tons (0.34 %). And if we consider the amount of catching saltwater animals by group of aquatic animals, it is found that most of them are fish, 23,677 tons (92.56 %), followed by duck fish, 929 tons (3.63 %), crabs 894 tons (3.50 %), Shrimp 51 tons (0.20 %), shellfish 21 tons (0.08 %), and squid 7 tons (0.03 %).

#### Quantity of saltwater animals caught from Gillnets/ Trammel nets and Entangling nets in 2022

Quantity : Tons

Fishing Gear	Total		Gulf of Thailand		Andaman	
	Quantity	%	Quantity	%	Quantity	%
<b>Gillnets/ Trammel nets and Entangling nets</b>	<b>25,579</b>	<b>100.00</b>	<b>25,493</b>	<b>99.66</b>	<b>86</b>	<b>0.34</b>

## Data on sightings of rare marine animals by trawl fishing vessels in 2023

Information on sightings of rare marine animals is collected from logbooks recorded in the Department of Fisheries' electronic reporting system database (Thai Flagged Catch Certification System: TFCC). In 2022, there were 24,280 fishing trips by trawl vessels, indicating rare marine animals were seen on 42 trips from a total of 17 trawlers. The information can be summarized as follows:

Fishing Gear	Rare marine animals				Total (Times)
	Turtles	Dolphin	Whale Shark	Whale	
Bottom Pair Trawls	1	29	1	2	33
Bottom Otter Trawls	1	10	-	1	12
<b>Total</b>	<b>2</b>	<b>39</b>	<b>1</b>	<b>3</b>	<b>45</b>

Number of vessels/classified by vessel size, type of fishing gear, fishing area

## Types of Rare marine animals found in Thai waters

Wild Animal Preservation and Protection Act 2019 on 29 May 2019, it has been announced that 3 types of marine mammals include: Dugong or water pig (*Dugong dugon*), Bryde's Whale (*Balaenoptera edeni*), and Omura's whale (*Balaenoptera omurai*). They are a protected wild animal in the group of wild mammals. Another 21 species of whales and dolphins have been declared protected species in the mammalian wildlife category. According to the Ministerial Regulation, certain types of wild animals are protected wild animals, B.E. 2003. There are another 5 species of marine mammals that are not yet listed as protected or protected wildlife under Thai law: blue whales, humpback whales, Blainville whales, minke whales, and Risso's dolphins.

### List of marine mammals found in Thai waters

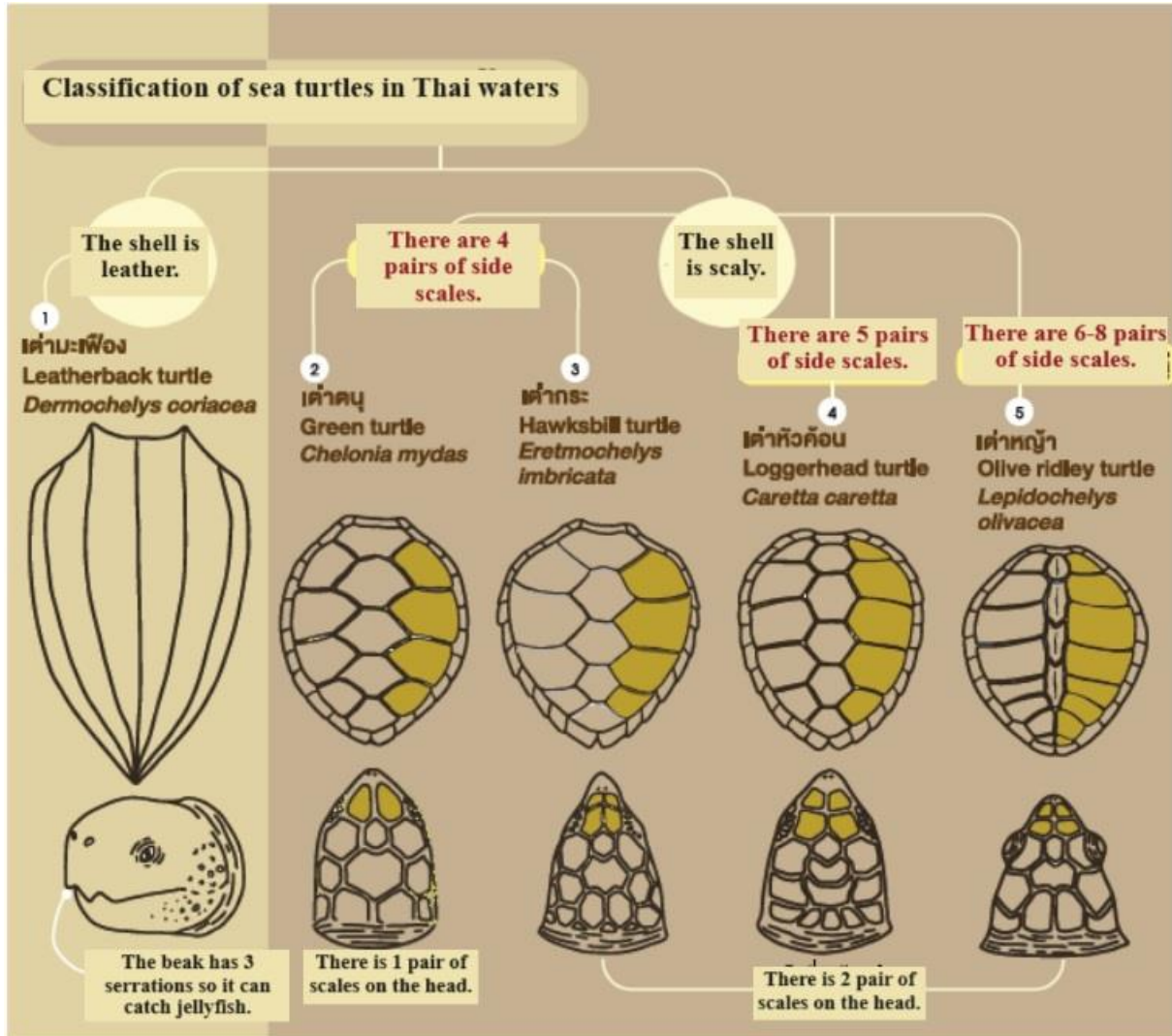
The Department of Marine and Coastal Resources (2014) has prepared a manual for classifying marine mammals and sea turtles in Thailand which found a total of 29 types of marine mammals. There are 28 types of dolphins and whales and 1 type of dugong found as follows:

1. Dugong, (*Dugong dugon*)
2. Bryde's whale (*Balaenoptera edeni*)
3. Omura's whale (*Balaenoptera omurai*)
4. Blue whale (*Balaenoptera musculus*)
5. Fin whale (*Balaenoptera physalus*)
6. Humpback Whale (*Megaptera novaeangliae*)
7. Sperm whale (*Physeter macrocephalus*)
8. Pygmy Sperm whale (*Kogia breviceps*)
9. Dwarf Sperm whale (*Kogia sima*)
10. Cuvier's Beaked whale (*Ziphius cavirostris*)
11. Blainville's Beaked whale (*Mesoplodon densirostris*)
12. Ginkgo-toothed beaked whale (*Mesoplodon ginkgodens*)
13. Killer whale (*Orcinus orca*)
14. False killer whale (*Pseudorca crassidens*)
15. Pygmy killer whale (*Feresa attenuata*)
16. Short-finned pilot whale (*Globicephala macrorhynchus*)
17. Melon-headed whale (*Peponocephala electra*)
18. Indo-Pacific humpback dolphin (*Sousa chinensis*)
19. Indo-Pacific bottlenose dolphin (*Tursiops aduncus*)
20. Rough-toothed dolphin (*Steno bredanensis*)
21. Long-beaked common dolphin (*Delphinus capensis*)
22. Spinner dolphin (*Stenella longirostris*)
23. Striped dolphin (*Stenella coeruleoalba*)
24. Pantropical spotted dolphin (*Stenella attenuata*)
25. Fraser's dolphin (*Lagenodelphis hosei*)
26. Risso's dolphin (*Grampus griseus*)
27. Irrawaddy dolphin (*Orcaella brevirostris*)
28. Finless porpoise (*Neophocaena phocaenoides*)
29. Common Minke whale (*Balaenoptera acutorostrata*)

## List of sea turtles found in Thai waters

There are 5 types of sea turtles found in Thai waters as follows:

1. Green turtle (*Chelonia mydas*)
2. Hawksbill turtle (*Eretmochelys imbricata*)
3. Olive Ridley Turtle (*Lepidochelys olivacea*)
4. Loggerhead Turtle (*Caretta caretta*)
5. Leatherback Turtle (*Dermochelys coriacea*)





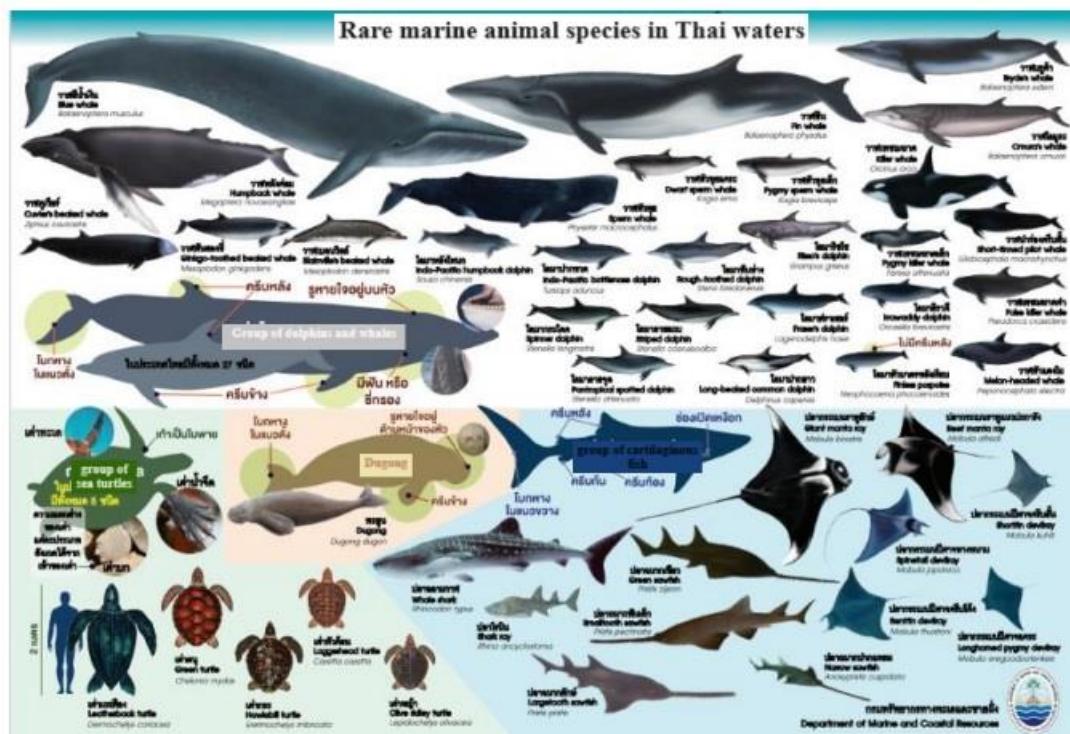
## List of rare and endangered marine animals, some types of cartilaginous fish

Cartilaginous fish that have been declared as Wildlife conservation, Protected wildlife and are being proposed to be listed as protected wildlife include 14 species as follows:

1. Whale shark\*1 (*Rhincodon typus*)
2. Giant manta ray\*2 (*Mobula birostris*)
3. Reef manta ray\*2 (*Mobula alfredi*)
4. Longhorned pygmy devil ray\*2 (*Mobula eregoodoo*)
5. Shortfin devil ray\*2 (*Mobula kuhlii*)
6. Giant devil ray\*2 (*Mobula mobular*)
7. Bentfin deveil ray\*2 (*Mobula thurstoni*)
8. Chilean devil ray\*3 (*Mobula tarapacana*)
9. Bowmouth guitarfish\*2 (*Rhina ancylostoma*)
10. Largetooth sawfish\*2 (*Pristis pristis*)
11. Green sawfish\*2 (*Pristis zijsron*)
12. Narrow sawfish\*2 (*Anoxypristis cuspidata*)
13. Smalltooth sawfish\*2, Not found in Thai waters (*Pristis pectinata*)
14. Leopard shark / Zebra shark\*3 (*Stegostoma tigrinum*)

\*Notes:

- 1 Wildlife conservation
- 2 Protected wildlife
- 3 Currently in the process of proposing to be listed as protected wildlife.

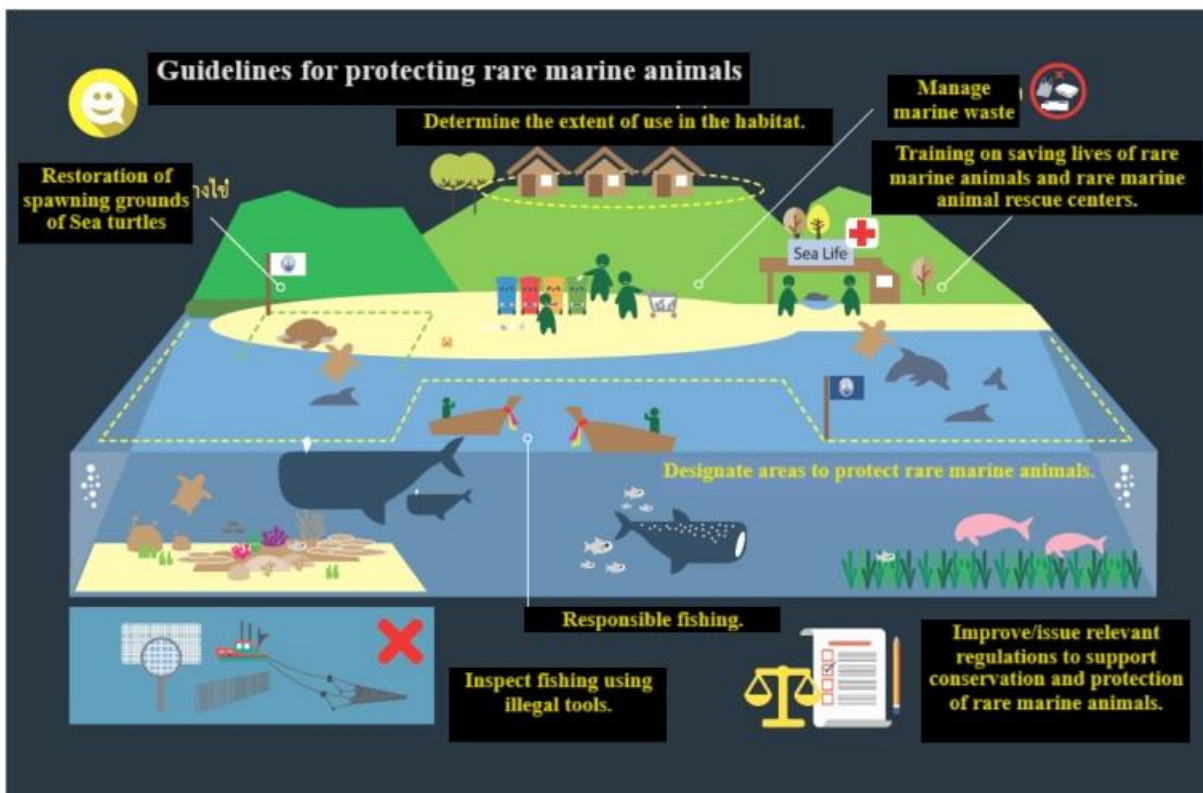


## How to protect and help rare marine animals during fishing

Rare marine animals found in the Gulf of Thailand fishing areas consist of 3 groups of marine animals. There are Sea turtles, whales and dolphins, and whale sharks, all of which are classified as Wildlife conservation and Protected wildlife.

### Guidelines for prevention

- Determine the extent of use in the habitat.
- Manage marine waste.
- Restoration of spawning grounds.
- Designate areas to protect rare marine animals.
- Responsible fishing.
- Training on saving lives of rare marine animals and rare marine animal rescue centers.



Reference: Department of Marine and Coastal Resources

## Helping sea animals

### 1.(Sea turtles)

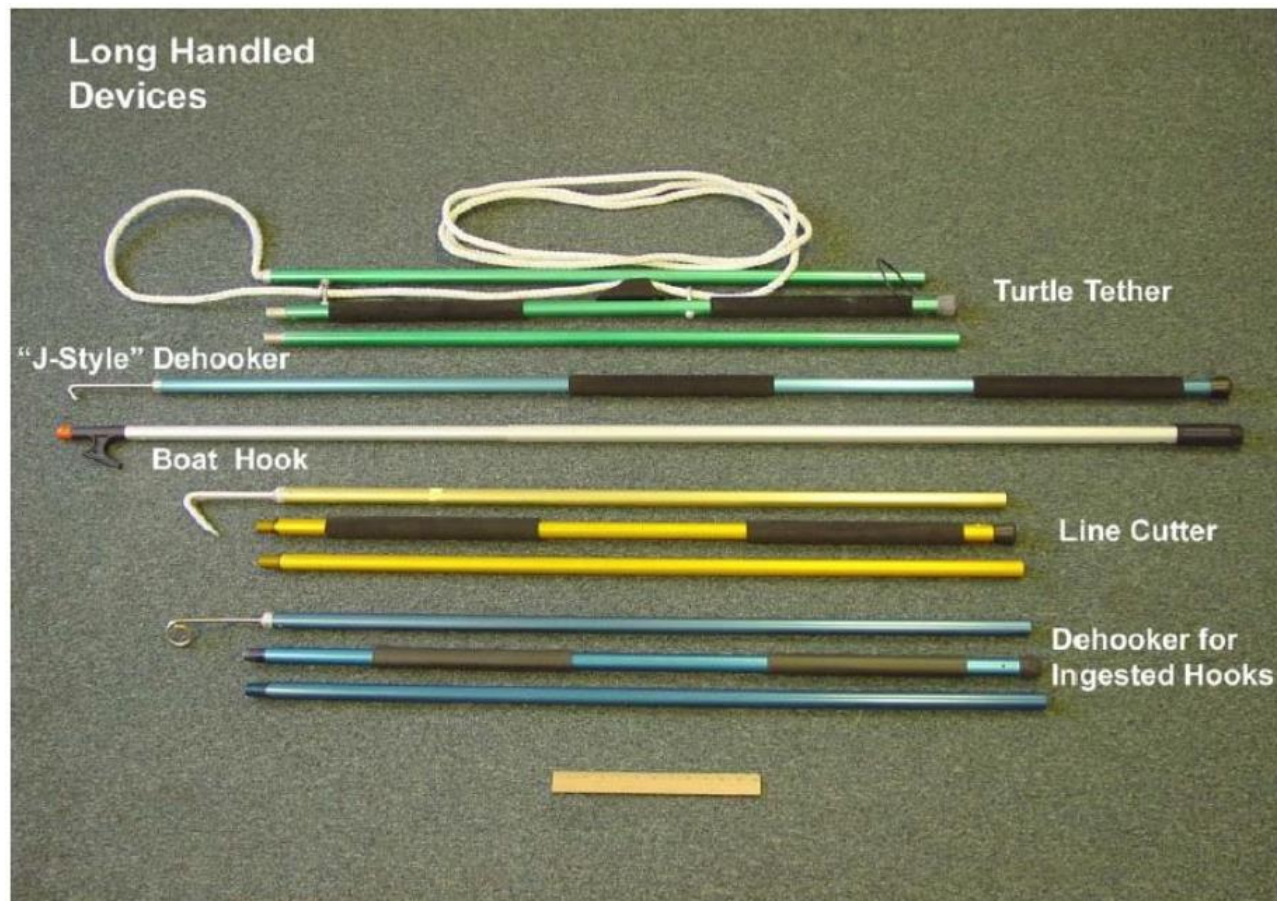
Basic methods for rescuing sea turtles in the case that they are found inside the nets of a fishing vessel or if a sea turtle is found stuck in a net in the middle of the sea, do the following:

1. Reduce vessel speed, specify speed (normal - stop), notify the vessel operator to record the date and coordinates found and inform other vessels nearby to avoid fishing in that area.
2. Navigate the vessel so that the position of the vessel is next to the turtle.
3. Recover the net slowly, avoiding dragging or pulling hard or using hooks or other blunt instruments to pull the turtle closer to the vessel.
4. Evaluate the turtle's size to determine how to help as follows:
  - If the turtle is enough size to be lifted into a vessel, use a large swing or pulley. Avoid tugging at the net, which can injure the turtle. When retrieving the turtle, place it on a cushioned material on the floor of the vessel, such as a car tire.



Bringing small sea turtles on board

- If the turtle is too large to carry on the vessel, use a leash to tether the turtle near the vessel. (if it can be done)



Equipment for controlling sea turtles in the water



How to restrain a large sea turtle



Lifting large sea turtles onto boats

5. Evaluate symptoms and check for external wounds.

- The turtle is normal, healthy, and has no injuries. Remove the turtle from the net or cut off the pieces of the net. Quickly release it into the sea in the area.
- If the nets are entangled in your turtle, carefully cut the nets off using a knife or scissors. Be careful not to let the turtle be cut by a knife or scissors.
- If a hook is found, Use wire cutters. Cut off the tip of the hook. If you cannot cut it, cut it to a length of at least 30 centimeters and inform the staff. while waiting or being delivered to officials Keep the turtle in the shade. Cover the shell with a damp cloth to always keep it moist. Be careful not to cover head. and do not expose to the sun
- A turtle that is weak or unconscious Place the turtle on the backing plate and raise the backing plate so that the back of the turtle is 15-30 degrees to allow the water the turtle choked to flow out and place the turtle in the shade. Maintain a cool body temperature,

avoid exposure to the sun, and keep the face and eyes moisturized. After that, check for response every three hours by touching the eyelids and corners of the eyes. The turtle is revived, within 24 hours, the turtle should be released only at the back of the boat.



Positioning the turtle



Monitoring the turtle's response

Currently, the stranding rate of sea turtles is very high, 80 percent of which are caused by pieces of rope and nets floating in the sea. If we encounter it, we can help save lives as follows:

# how to help sea turtles

## วิธีช่วยเหลือเต่าทะเลเบื้องต้น

For the general public and tourists

If you find a turtle stranded on the beach



ในประเทศไทยพบเต่าทะเลได้ 5 ชนิด ได้แก่ เต่ามะเฟือง เต่าตนุ เต่ากระ เต่าหญ้า และเต่าหัวข้อน ทุกชนิดถูกจัดเป็นสัตว์ทะเลหายากและใกล้สูญพันธุ์ทั้งสิ้น

Use your fingers to gently touch the eyelids. To see if the turtle is still alive.



Check to see if there are any wounds.

If no wounds are found and the turtle still has strength, release the area found.



If there are severe injuries or the turtle shows signs of weakness, please notify the relevant agencies for treatment.



วิธีการจับ ให้จับตรงสันกระดองข้างลำตัว



If found caught in a net or fishing line

Either on the beach or in the sea



Do not use your hands to remove rope or scraps of the net because it takes a long time and causes the turtle to stay out of the water for too long.



The tangled line should be cut before releasing it back into the sea.



Throw away scraps of rope and nets in the trash.

If the turtle's condition is not good, while waiting for the staff to come pick it up and take it for treatment.



Put the turtle under the shade. Do not expose to direct sunlight.



Cover the head or shell with a damp cloth to maintain humidity.



First aid involves using medicine that people use for wounds.

Fresh wounds use betadine. Canker sores use purple medicine

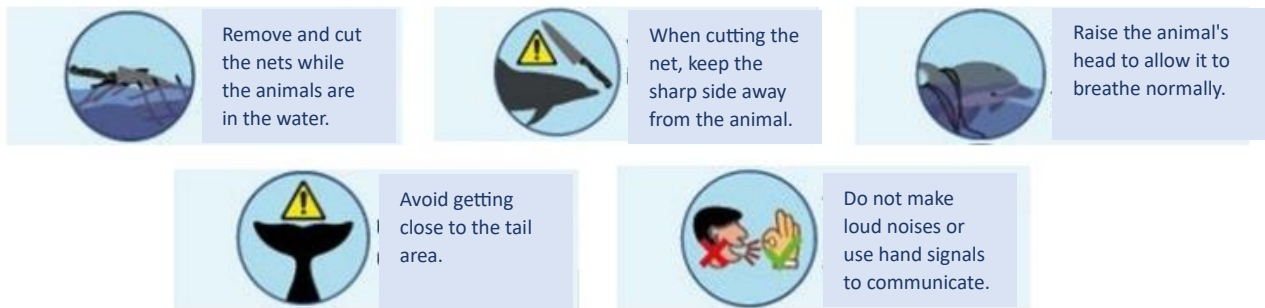


อ้างอิง กรมทรัพยากรทางทะเลและชายฝั่ง

## 2. Whales and Dolphins

Basic methods for helping whales and dolphins in cases where they are found inside the nets of fishing boats are as follows:

1. When seen while sailing, notify the ship's operator to note the date and coordinates and report it to other ships nearby to avoid fishing in that area.
2. If whales and dolphins are found inside the net.
  - Stop the boat and observe the behavior of dolphins or whales in the nets.
  - Open the front of the net and pull it up to create a gap large enough for the dolphin or whale to swim out or press the buoy at the head underwater to create a gap that allows the dolphin or whale to swim out. But if it is found that a dolphin or whale that has been tangled in the net is still alive, remove or cut the net while the animal is in the water, trying to raise its head so the animal can breathe. Use a sharp tool to cut the net rope as soon as possible. and avoid using loud noises While cutting, keep the sharp part away from the animal. After that, examine the external wound.



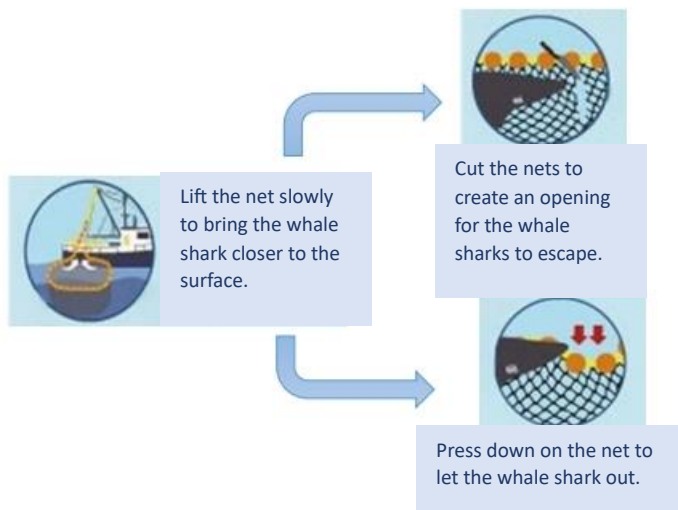
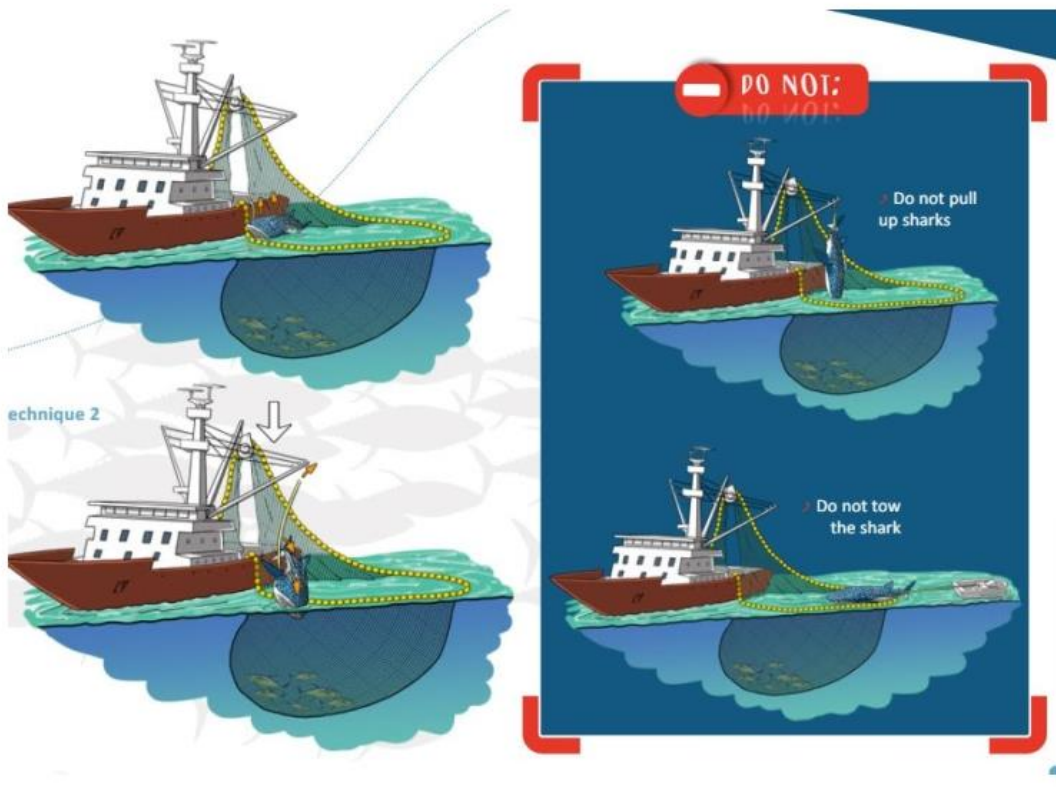
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## 3. Whale shark

How to help whale sharks In the case of seeing something inside a fishing boat's net, do the following:

1. When seen while sailing, notify the ship's operator to note the date and coordinates and report it to other ships nearby to avoid fishing in that area.
2. If a whale shark is found stuck in the net.
  - If the whale shark is near the surface of the water, lift the net. The weight of the animals may cause the nets to break. The animal can swim out on its own or the crew can help by cutting the net about 1 - 2 meters and pushing the head of the fish out of the net.
  - Lift the net slowly to bring the whale shark closer to the surface, close to the boat and push the fish over the net. Do not use a rope to tie the fish's tail and lift it up.





อ้างอิง กรมทรัพยากรทางทะเลและชายฝั่ง

## Recording and reporting rare marine animals.

Recording rare marine animal species, time and location where they were found. (According to the fishing logbook form).

Classification of rare marine animals, recording details to describe rare marine animals found as much as possible. Especially the physical characteristics that can be seen outside or photographed, such as size, length, distinctive characteristics of each species such as color, dorsal fin, head shape, fishing tools or things attached to rare marine animals, and recording of injuries observed such as Cracked shells, weakened, or damaged positions on the legs or tail.

## Methods for collecting data on sightings of rare marine animals.

The Department of Fisheries records information from the fishing diary into the TFCC system on the website.

<https://tfcc.fisheries.go.th/tds/>

## Example of data recording.

The screenshot displays the Thai Flagged Catch Certification System (TFCC) interface. The main section shows a list of fishing trips with columns for trip number, vessel number, vessel name, captain, catch weight, date, and location. A specific trip is highlighted with a green checkmark.

#	เลขที่	เรือ	ชื่อเรือ	น้ำหนักสัตว์น้ำ (กก.)	แจ้งออก	แจ้งเข้า	ชนิดเครื่องมือ	วันที่บันทึกข้อมูล
1	DLB-6511-212001747-02	เลขทะเบียน	ซิดจือ	26,820.00	15/11/65 15:00	28/11/65 11:00	6525201175 อวนลาก	28/11/65

The interface also includes a sidebar with navigation options and a detailed view of the selected trip, showing vessel details, catch information, and a table of species caught.

#	ชนิดสัตว์น้ำ	น้ำหนัก (กก.)	ปริมาณสัตว์น้ำ (กก.)	ผล
1	ปลาหมึก	1,000.00	0.00	
2	ปลา	400.00	0.00	
3	ปลา	540.00	0.00	
4	ปลา	250.00	0.00	
5	ปลา	80.00	0.00	
6	ปลา	290.00	0.00	
7	ปลา	230.00	0.00	
8	ปลา	80.00	0.00	
9	ปลา	130.00	0.00	
10	ปลา	...	...	...



**Report incidents in the case of injured or stranded marine animals.**

Phetchaburi province to Chachoengsao province

034-497074

089-6358264

093-9935616

Chonburi Province to Trat Province area

038-661693

063-4034555

090-9595402

Area of Prachuap Khiri Khan Province to Surat Thani Province

077-510213-4

081-6857329

081-0856284

Ranong Province to Satun Province area

076-391128

086-6721448

Nakhon Si Thammarat Province to Narathiwat Province area

074-307079

094-4493514

081-8326225