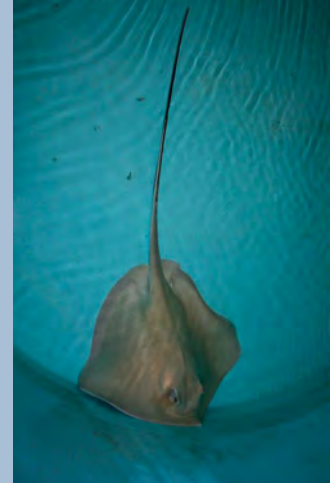




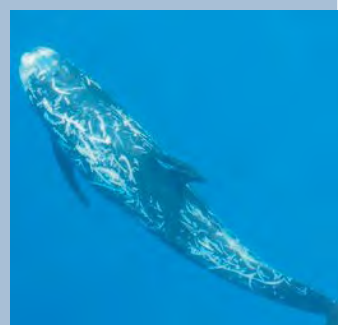
MINISTARSTVO
POLJOPRIVREDE



GUIDE FOR IDENTIFYING AND DEALING WITH THE SENSITIVE SPECIES IN SEA FISHING



Operativni program
**ZA POMORSTVO
I RIBARSTVO**



European Union

The creation of this brochure was co-financed by the European Union from the European Maritime and Fisheries Fund.

The content of this brochure is the sole responsibility of the Ministry of Agriculture.

Contact:

Ministry of Agriculture
Directorate of Fisheries
Alexandera von Humboldta 4b
10000 Zagreb
tel: (01) 6443 185
fax: (01) 6443 200
e-mail: uprava.ribarstva@mps.hr

Authors:

Valentina Andrić, mag. ing. of sea fisheries
Ivana Petrina, dipl. ing. biol.

Publisher:

Ministry of Agriculture
Ulica grada Vukovara 78, 10000 Zagreb
www.poljoprivreda.gov.hr
Zagreb, November 2023

These educational materials were created in cooperation with national authorities responsible for nature and environment protection, scientific institutions and civil society organizations whose goals are nature and environment protection.

The materials were published by the Ministry of Agriculture and are used as such for the purpose of educating all persons about the protection and handling of sensitive marine species.

The following persons participated in the preparation of the material:

- Ivana Vukov, dipl.ing.biol., Ministry of Agriculture
- Mirta Novak, dipl.iur., Ministry of Agriculture
- Josipa Runjak, dipl. ing. of sea fisheries, Ministry of Agriculture
- univ. spec. Marijana Kapa, prof. biol. and chem., Ministry of Agriculture
- Tihana Šundov, dipl. ing. pom-rib.teh., Ministry of Agriculture
- Josip Furčić, dipl. ing., Ministry of Agriculture
- Zrinka Domazetović, dipl. ing. biol., Ministry of Economy and Sustainable Development
- Ida Partl, dipl. ing. biol., Ministry of Economy and Sustainable Development
- Prof.dr.sc Martina Đuras, Faculty of Veterinary Medicine, University of Zagreb
- Katja Jelić, dipl. ing. biol. et oecol. mar., Ministry of Economy and Sustainable Development
- Jasna Jeremić, dr.vet.med., Ministry of Economy and Sustainable Development
- dr. sc. Martina Marić, Ministry of Economy and Sustainable Development
- dr. sc. Igor Isajlović, Institute of Oceanography and Fisheries
- Patrik Krstinić, prof. biol., WWF Adria
- Hrvoje Čeprija, mag. ing. of fishing and hunting, WWF Adria
- Ana Miletić, mag. oecol., Association for Nature, Environment and Sustainable Development Sunce
- Doc. dr. sc. Draško Holcer, Croatian Natural History Museum / Blue World Institute
- Dubravko Dender, dipl.biol., Association BIOM
- Sven Kapelj, dipl.biol., Association BIOM

Content

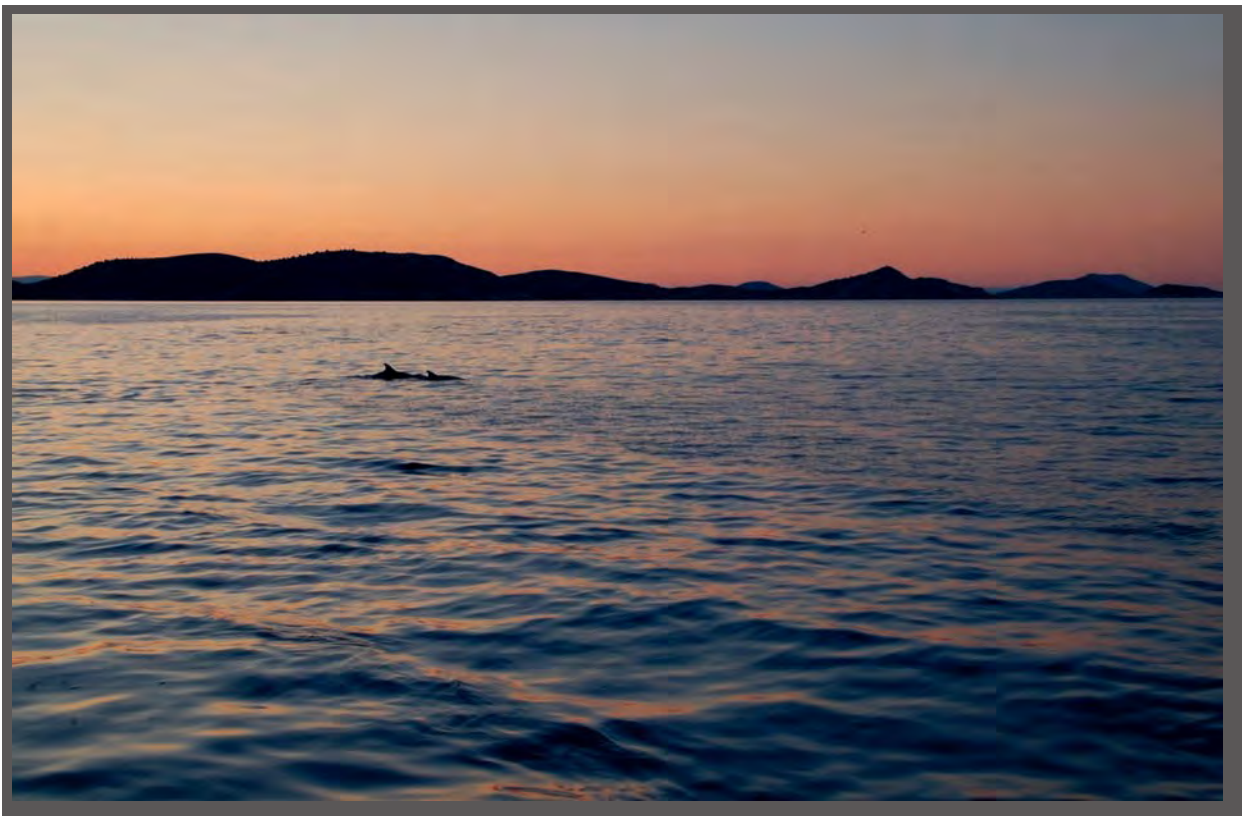
- 1. INTRODUCTION5
- 2. LEGAL FRAMEWORK6
- 3. SENSITIVE SPECIES7
 - 3.1. CARTILAGINOUS FISH (SHARKS, RAYS AND EAGLE RAYS)8
 - 3.2. SEA TURTLES 22
 - 3.3. SEABIRDS25
 - 3.4. MARINE MAMMALS (SEALS AND WHALES)31
- 4. REPORTING AND HANDLING OF INCIDENTAL CATCHES OF SENSITIVE SPECIES 35
- 5. INTERACTIONS OF SENSITIVE SPECIES WITH FISHING GEAR.....37
 - Fishermen and cartilaginous fish interactions37
 - Fishermen and turtle interactions38
 - Fishermen and seabirds interactions40
 - Fishermen and marine mammals interactions41
- 6. DELIVERY OF DATA ON INCIDENTAL CATCH OF SENSITIVE SPECIES42
- 7. DATA COLLECTION AND COOPERATION WITH SCIENTISTS47
- 8. PENAL PROVISIONS48
- 9. LITERATURE49
- 10. ADDITIONAL INFORMATION AND USEFUL LINKS50

1. INTRODUCTION

This Guide is primarily intended for holders of licenses for commercial fishing at sea, as well as holders of licenses for small-scale coastal fishing and fishermen who practice sport or recreational fishing at sea.

The Guide was created for the purpose of educating and familiarizing fishermen with the list of sensitive species, as well as with the obligation to report and record incidentally caught and/or killed, or injured or sick individuals of a sensitive species. It also includes a description of the procedures that must be carried out in the case of incidental catches of strictly protected marine animals.

The goal of this guide is to raise awareness of the importance of preserving sensitive species, facilitate their identification, and improve the application of regulations protecting sensitive species.



Source: *Valentina Andrić*

2. LEGAL FRAMEWORK

As a member of the European Union, the Republic of Croatia implements the acquis of the European Union in the part of the Common Fisheries Policy. The Common Fisheries Policy consists of a number of regulations whose provisions are directly applicable in the member states. At the national level, the umbrella regulation that further elaborates the provisions of the EU acquis and governs issues of management and protection of renewable biological resources of the sea, as well as the manner and conditions of fishing, is the Marine Fisheries Act¹. The regulations at the level of the European Union define the species for which there is a ban on catching, retention on board, transshipment, landing and storage, sale and display for sale. Retention on board, transshipment or landing of incidentally caught sensitive species is allowed to the extent that this activity is necessary to provide assistance for the recovery of the individuals and to enable scientific research of incidentally killed specimens, provided that the competent authorities are notified, as described in Chapter 4. Reporting and handling of incidental catches of sensitive species. All holders of licenses for conducting commercial fishing at sea and licenses for small-scale coastal fishing must keep data on the catch of species of marine organisms that are commercially exploited, as well as on the incidental catch of sensitive species, and submit them to the Ministry of Agriculture.

At the national level, species are protected on the basis of the Nature Protection Act² and the list of strictly protected species in the Republic of Croatia can be found in the Ordinance on Strictly Protected Species.

Incidental catch of sensitive species during fishing activities implies unintentional catching of individuals of sensitive species.

THE INCIDENTAL CATCH OF SENSITIVE SPECIES WHILE FISHING DOES NOT REPRESENT A VIOLATION OF THE NATURE PROTECTION ACT AND OTHER REGULATIONS AND IS NOT PUNISHABLE REGARDLESS OF THE CONDITION OF THE ANIMAL AT THE TIME OF CATCHING OR RELEASE!

In addition to data on incidental catches of sensitive species collected by the Ministry of Agriculture in the manner prescribed by the Regulation on the form, content and method of keeping and delivering the data on catch in commercial fishing at sea³ (hereinafter: Regulation), the Institute of Oceanography and Fisheries also collects biological data through scientific monitoring within the framework of the National Plan for data collection in fisheries in the Republic of Croatia. The persons in charge of observing fishing activities in the context of data collection for scientific purposes are authorized scientific observers who are obliged to be accepted on fishing vessels by vessel captains.

¹ Marine Fisheries Act ("Official Gazette" no. 62/2017, 130/17, 14/2019 and 30/23)

² Nature Protection Act ("Official Gazette" no. 80/13, 15/18, 14/19 and 127/19)

³ Regulation on the form, content and method of keeping and delivering registers, landing declarations and catch reports in commercial fishing at sea ("Official Gazette" no. 114/2023.)

3. SENSITIVE SPECIES

A sensitive species is one whose conservation status, including its habitat, distribution, population size or population status, is adversely affected by pressures resulting from human activities, including fishing activities. Sensitive vertebrate species covered by this Guide include species of cartilaginous fish, sea turtles, seabirds and marine mammals, which are included in the following legal framework and whose occurrence has been recorded in the Adriatic Sea:

1. Strictly protected species from the Regulation on Strictly Protected Species ("Official Gazette" no. 144/13 and 73/16)⁴
2. Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, Annex II.⁵

All four groups of sensitive species - cartilaginous fish, sea turtles, seabirds and marine mammals - share common characteristics that make them vulnerable to various threats in the marine environment. Most of them are located at the top of the food webs of marine ecosystems, which is why they are exposed to increased concentrations of toxins and bioaccumulation of harmful substances. In addition, they have a relatively low reproductive potential, which means that they have a small number of offspring during their lifetime. This makes their populations more vulnerable to the loss of individuals. Moreover, most of these species are long-lived and reach sexual maturity relatively late, so the loss of sexually mature individuals significantly affects the reproductive capacity of their populations.

Various human activities pose a threat to sensitive species, and fishing is certainly one of them. Incidental catch, lack of prey due to overfishing, and the use of certain fishing techniques and gear in areas where sensitive species breed and/or feed can have a significant negative impact on their populations. In addition to fishing, climate change, sea pollution, habitat degradation and loss, and intensive maritime traffic also pose a serious threat. Sensitive species play a key role in maintaining marine health and their disappearance can have serious consequences for the entire ecosystem. This is precisely why these organisms require legal protection and the implementation of conservation measures that will ensure the recovery and survival of their populations.

⁴ Regulation on Strictly Protected Species ("Official Gazette" 144/13 and 73/16)

⁵ Barcelona Convention for the protection of the Mediterranean, Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean – SPA-BD Protocol

3.1. CARTILAGINOUS FISH (SHARKS, RAYS AND EAGLE RAYS)

Great white shark (*Carcharodon carcharias*)



Source: Podvodni.hr.

Length: up to 650 cm

Head: wide mouth

Body: long longitudinal ridge; long gill openings; high dorsal fin

Blue shark (*Prionace glauca*)



Source: Podvodni.hr.

Length: up to 400 cm

Body: long and slender body; long and narrow pectoral fins

Color: dark blue back and white belly

Thresher shark (*Alopias vulpinus*)



Source: Podvodni.hr.

Length: up to 600 cm

Head: cone-shaped nose; small eyes

Body: A long upper lobe of the caudal fin that is about the same length or about the same length as the rest of the body

Color: white belly; brown to dark gray back; dark blue sides

Bigeye thresher (*Alopias superciliosus*)



Source: *A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries*

Length: up to 480 cm

Head: deep frontal furrow; big eyes

Color: purple gray back; white belly

Shortfin mako shark (*Isurus oxyrinchus*)



Source: Podvodni.hr.

Length: up to 450 cm

Head: longer than pectoral fins; wide mouth

Body: the dorsal fin is located further than the pectoral fin

Porbeagle (*Lamna nasus*)



Source: Podvodni.hr.

Length: up to 350 cm

Head: pointed nose

Body: dorsal fin in level with pectoral fins

Color: white spot on back of dorsal fin

Sandbar shark (*Carcharhinus plumbeus*)



Source: Podvodni.hr.

Length: up to 300 cm

Body: the beginning of the first dorsal fin above the base of the pectoral fin; first dorsal fin is high and half sickle-shaped; spine between the dorsal fins

Basking shark (*Cetorhinus maximus*)



Source: Podvodni.hr.

Length: up to 10 m

Head: very long muzzle; small, curved teeth

Body: long gill openings, almost around the entire head; strong tail crest

Bluntnose sixgill shark (*Hexanchus griseus*)



Source: A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries

Head: small fluorescent green eyes

Body: six gill openings; the dorsal fin begins above the free posterior tip of the ventral fin

Sharpnose sevengill shark (*Heptranchias perlo*)



Source: A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries

Head: elongated head; eyes very large and, in live specimens, extremely fluorescent in color

Body: slim; 7 gill openings; one dorsal fin, moved far back

Color: white belly

Angular roughshark (*Oxynotus centrina*)



Source: *Podvodni.hr*.

Length: up to 150 cm

Body: curved belly; spine inclined forward; dorsal fins in the shape of a sail

School shark (*Galeorhinus galeus*)



Source: *Podvodni.hr*.

Length: up to 160 cm

Head: muzzle relatively long and conical

Body: second dorsal fin noticeably smaller than the first; long lower lobe

Smalltooth sawfish (*Pristis pectinata*)



Source: Podvodni.hr.

Length: up to 550 cm

Head: 20 – 30 pairs of teeth on the saw

Body: beginning of the first dorsal fin above or slightly behind the beginning of the pelvic fin

Sand tiger shark (*Carcharias taurus*)



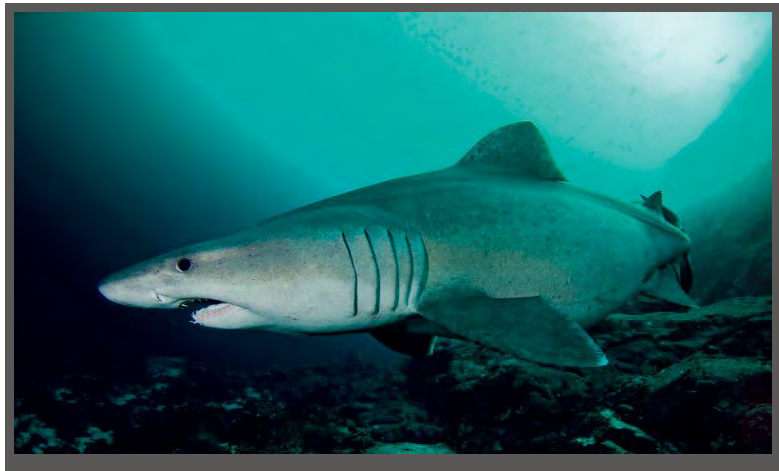
Source: Podvodni.hr.

Length: up to 320 cm

Head: Conical to slightly flattened snout

Body: no caudal crest

Smalltooth sand tiger (*Odontaspis ferox*)



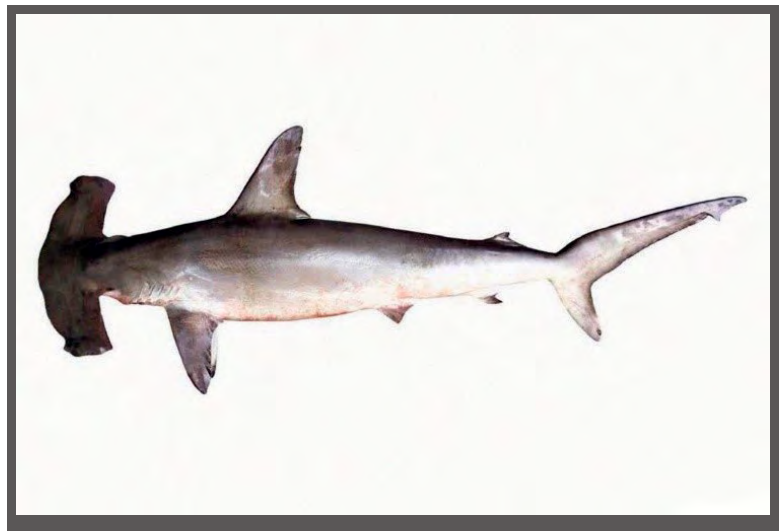
Source: *Podvodni.hr*.

Length: up to 450 cm

Head: very pointed snout; teeth with serrated edge, sunken

Body: very large gill openings, not extending along the entire side of the head; small second dorsal fin; strong tail crest

Smooth hammerhead (*Sphyrna zygaena*)



Source: *A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries*

Head: in the form of a hammer or flail, a bump in the middle of the head; eyes located at the very ends of the flail; mouth opening wide and entirely on the lower side of the mouth

Body: first dorsal fin large with a rounded tip

Color: brown-grey to dark olive

Smoothback angelshark (*Squatina oculata*)



Source: Podvodni.hr

Length: up to 160 cm

Body: beginning of the first dorsal fin well behind the posterior tip of the pelvic fin

Color: body gray-brown or blackish, dark round spots on the tail and sometimes on the pectoral fins; white symmetrically distributed spots on the pectoral fins and body

Angelshark (*Squatina squatina*)



Source: A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries

Length: up to 250 cm

Body: the beginning of the first dorsal fin aligned with the posterior tip of the pelvic fin

Common skate (*Dipturus cf batis*)



Source: Podvodni.hr.

Length: up to 285 cm

Head: long snout

Body: rounded shape; 12 – 31 spines in the middle of the back and tail

Color: dorsal surface olive gray or brown with light spots, dark spots and sometimes an eye-like spot on the pectoral fins

Bottlenose skate (*Rostroraja alba*)



Source: Podvodni.hr.

Length: up to 240 cm

Head: long and pointed snout

Body: dorsal surface covered with small sharp spines; nape and part above spine without spines; angular pectoral fins; three rows of large spines on the tail

Common stingray (*Dasyatis pastinaca*)



Source: Podvodni.hr.

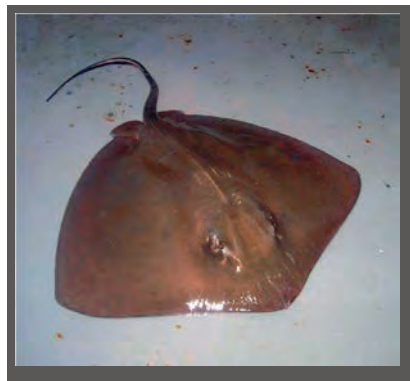
Size: disc width up to 68 cm

Head: blunt snout

Body: tail with a spine at the base

Color: back surface is greyish, olive or brown, edges of nostrils and mouth are white

Broad stingray (*Bathytoshia lata*)



Source: A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries

Size: disc width up to 210 cm

Head: blunt snout

Body: rhomboid disk, anterior and posterior edges more or less straight; tail is twice as long as disc length. Large bumps on the surface of the back, large spines on the tip and on both sides of the tail.

Color: Olive brown back, belly almost white. Dorsal surface reddish brown to grayish blue with visible light spots; ventral side is white with dark edges around pectoral and pelvic fins, darker tail.

Longnose skate (*Dipturus oxyrinchus*)



Source: Podvodni.hr.

Head: rostrum is long and pointed

Body: rhomboid body; front edge of pectoral fins is concave; 4-11 spines along the tail; stronger spines are in front of the eyes (1), laterally on the wings (3-4 rows) and between the dorsal fins (0-1); two small dorsal fins at the end of the thin tail; ventral fins are bilobed

Spiny butterfly ray (*Gymnura altavela*)



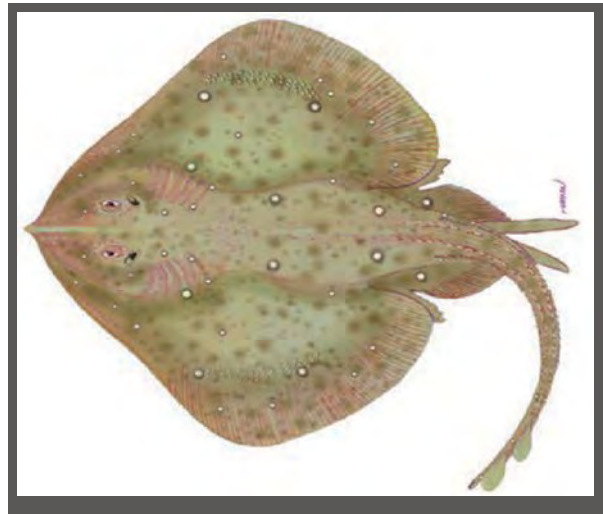
Source: Podvodni.hr.

Size: disc width up to 400 cm

Head: not separated from the disc, does not form a rostrum

Body: the disc is very wide; serrated spines; very short tail

Sandy ray (*Leucoraja circularis*)



Source: *Podvodni.hr*.

Length: up to 120 cm

Head: short muzzle, visible tip

Body: dorsal fins joined or separated by a small space without spines

Color: several often symmetrical pairs of small, cream-colored circular dots with a dark border

Common guitarfish (*Rhinobatos rhinobatos*)



Source: *A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries*

Length: up to 150 cm

Head: large posterior nasal valve

Body: distance between dorsal fins is about equal to distance between beginning of first dorsal fin and axil of pectoral fin, ridges on apex of snout are widely separated; breathing holes with 2 pleats

Devil fish (*Mobula mobular*)



Source: Podvodni.hr.

Size: disc width up to 520 cm

Head: the markings on the head and disc clearly separate one from the other

Body: the disc is 2-3 times wider than long; fins look like horns

Color: dark blue, usually with a whitish ring around the head; white dorsal fin tip

Bull ray (*Aetomylaeus bovinus*)



Source: Podvodni.hr.

Size: disc width up to 220 cm.

Body: the front lobe of the pectoral fin below the snout is quite long and slightly pointed forward, like a duck's beak. The beginning of the dorsal fin is located in front of the tips of the pelvic fins.

Color: dorsal surface in adults is brown without pattern, with several (7 – 8) pale blue-gray stripes in young individuals, whitish belly.

3.2. SEA TURTLES

Loggerhead sea turtle (*Caretta caretta*)



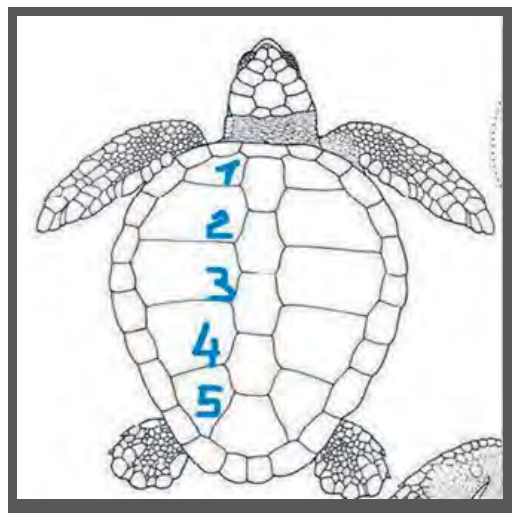
Source: Podvodni.hr.

The most common species in the Adriatic Sea

Shell size: moderately wide shell up to 105 cm long (average 90 cm in the Mediterranean)

Head: robust and large; strong beak

Body: 2 claws on the front flippers, and 5 lateral keratin plates on the shell



Source: Tom McFarland, *Research and Management Techniques for the Conservation of Sea Turtles*, IUCN

Green sea turtle (*Chelonia mydas*)



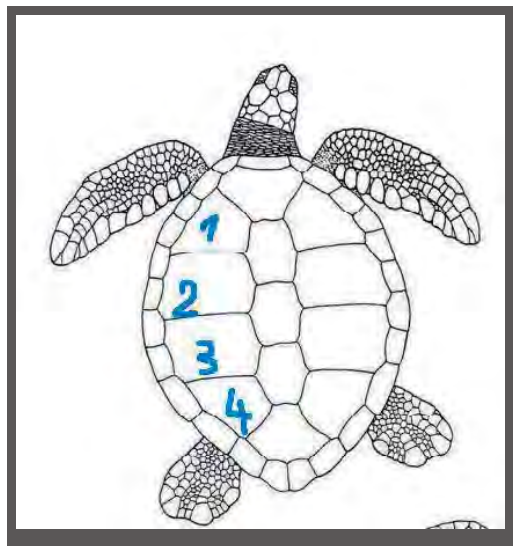
Source: *Podvodni.hr*.

Rare in the Adriatic Sea

Shell size: oval shell about 120 cm long

Head: round, more delicate looking

Body: they have one claw on the front flippers, and 4 lateral keratin plates on the shell



Source: Tom McFarland, *Research and Management Techniques for the Conservation of Sea Turtles*, IUCN

Leatherback sea turtle (*Dermochelys coriacea*)



Source: *Podvodni.hr*.

Occasionally found in the Adriatic Sea

Shell size: up to 180 cm

Body: leathery and flexible elongated shell with 7 longitudinal ridges

Color: dark, almost black with various shades of lighter colored spots

3.3. SEABIRDS

Yelkouan shearwater (*Puffinus yelkouan*)



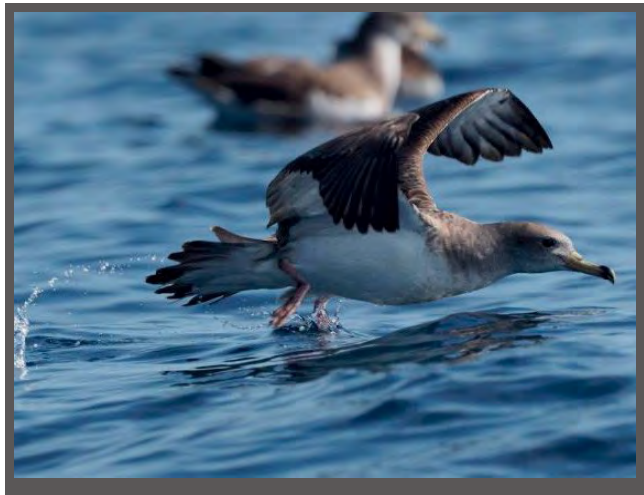
Source: BIOM

Size: like a common pigeon

Head: tubular nostrils on the beak; thin beak

Color: dark head and eye, dark wings, back and tail, gray beak

Scopoli's shearwater (*Calonectris diomedea*)



Source: BIOM

Size: like yellow-legged gull

Head: large beak with a dark ring at the tip and tubular nostrils.

Color: yellow legs, pale yellow beak, dark brown upper wings, black tail; head and back are gray; belly and throat white; the underside of the wing has a dark border with a white center

Audouin's gull (*Larus audouinii*)



Source: BIOM

Color: greenish black legs, white head, tail and body; dark red beak with a yellow tip

Color in adults: light gray wings; dark eye

Juvenile color: predominantly brown mottled with a white stripe at the base of the tail on the upper side

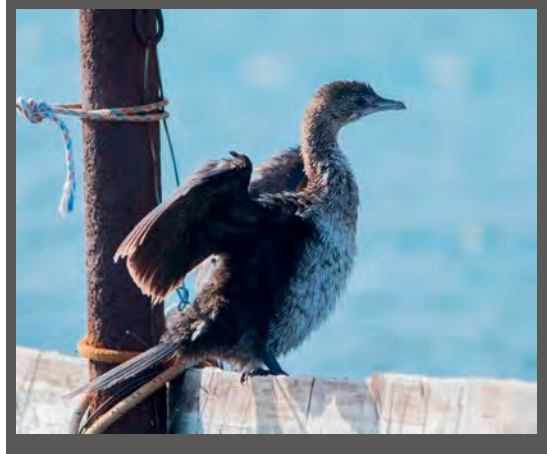
Mediterranean gull (*Larus melanocephalus*)



Source: Stefan Berndtsson (Flickr; CC BY 2.0)

Color: white body; wings and back light gray; the tips of the wings are white; head black at nesting time, and light with dark spots the rest of the year; dull-tipped dark red beak with black band and yellow tip; young individuals are mottled with brown-grey

Pygmy cormorant (*Phalacrocorax pygmaeus*)



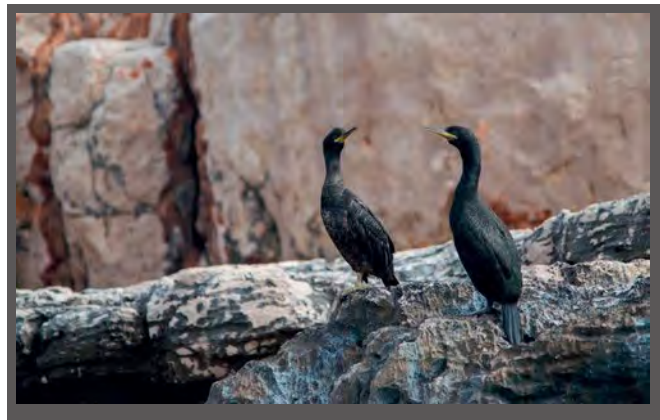
Source: BIOM

Head: the tip of the beak is curved downwards

Body: long tail and neck; webbed feet connect all four toes

Color: plumage dark black-brown in adults; young individuals have lighter lower parts of the body

European shag (*Phalacrocorax aristotelis*)



Source: BIOM

Head: short crest on the head; curved beak tip

Body: webbed feet connect all four toes

Color: adults have black feathers with a green metallic sheen and a long neck and tail; black beak with yellow edges at the base of the beak; young individuals are lighter on top

Osprey (*Pandion haliaetus*)



Source: BIOM

Size: like yellow-legged gull

Body: claws are hooked, adapted to catch fish

Head: white with a black stripe over the eyes

Color: dark brown on top, whitish-yellow below with a dark stripe across the chest

European storm petrel (*Hydrobates pelagicus*)



Source: BIOM

Size: very small; slightly larger than a swallow

Head: tubular nostrils on the beak

Color: black with a white tail and a white stripe on the underside of the wings

Little tern (*Sterna albifrons*)



Source: BIOM

Size: a small bird, the size of a blackbird

Body: narrow with long pointed wings; deeply forked tail

Color: yellow beak and legs; black "cap" on the head

Sandwich tern (*Sterna sandvicensis*)



Source: BIOM

Size: body length from 37 to 43 cm; wingspan from 85 to 97 cm

Color: the back and upper part of the wings are gray; belly and neck white; black beak with a yellow tip; black color on the head in the winter period limited to the nape of the neck and the area behind the eyes

The only species of tern that winters in Croatia

Caspian tern (*Sterna caspia*)



Source: BIOM

Color: back and upper part of wings gray; belly and neck white; wing tips black; red beak with yellow tip; the upper part of the head is black

3.4. MARINE MAMMALS (SEALS AND WHALES)

Fin whale (*Balaenoptera physalus*)



Source: *A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries*

Head: triangular from above with a narrow and pointed snout (20-25% of the body); the right side of the jaw is light and the left side is dark

Body: slender and spindly; a characteristic sharp ridge on the tail part of the body and behind the dorsal fin

Color: dark gray back, sometimes brownish, and white on the ventral side

Tail: relatively wide (about ¼ of the body length)

It differs from similar species in that, when emerging on the surface of the sea, the nasal opening appears first and it is followed by the dorsal fin

Sperm whale (*Physeter macrocephalus*)



Source: *A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries*

Head: square; characteristic narrow and thin lower jaw

Body: stocky

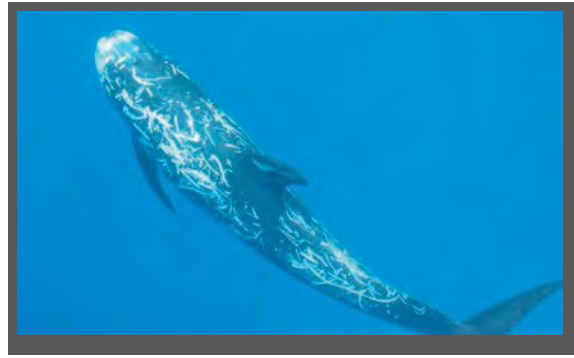
Color: dark gray to brown with light spots on the belly and a white border around the mouth

Blowhole: on the front of the head on the left

Characteristics: the skin is wrinkled, especially on the back two-thirds of the body

Tail: triangular with a deep central notch

Risso's dolphin (*Grampus griseus*)



Source: Blue World Institute

Head: no beak, the round melon descends sharply towards the mouth; it has 3-7 pairs of cone-shaped teeth in the lower jaw, and no teeth in the upper jaw

Body: robust and strong

Color: dark gray body; the young animals are light gray and turn almost black with time

Characteristics: over time, whitish striped scars appear on the body caused by interactions with other individuals, there can be so many scars that older animals can be almost white

Dorsal fin: high and pointed, sickle-shaped, clearly recognizable mostly by whitish scars

Pectoral fins: long and pointed, sickle-shaped

Tail: broad and serrated

Common bottlenose dolphin (*Tursiops truncatus*)



Source: Blue World Institute

Head: the beak is rather short and thick, and the melon is rounded

Body: stocky and massive

Dorsal fin: prominent, sickle-shaped; located in the middle of the body

Pectoral fins: medium-sized, dark and thin, base is broad, tips are pointed

Tail: concave, with a well-marked central notch

Striped dolphin (*Stenella coeruleoalba*)



Source: Blue World Institute

Head: long beak clearly separated from the melon

Body: slender and spindly

Color: ventral side and sides are white, dorsal side is dark gray or black with blue shades

Dorsal fin: high and curved, located in the middle of the body

Pectoral fin: short and sickle-shaped, pointed tips

Characteristics: diagonal lines from the eyes to the dorsal fin

Tail: distinctly recessed with a well-defined central notch

Short-beaked common dolphin (*Delphinus delphis*)



Source: Blue World Institute

Head: the beak is clearly separated from the melon

Body: slender and spindly

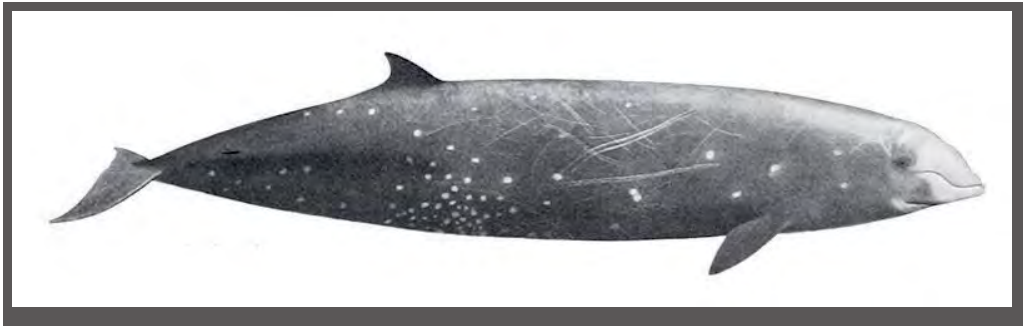
Color: the dorsal side is dark gray or black with blue shades, the ventral side and sides are white

Dorsal fin: high and curved

Pectoral fins: short and sickle-shaped, pointed tips

Tail: distinctly concave, with a well-marked central notch

Cuvier's beaked whale (*Ziphius cavirostris*)



Source: *A Guide to Identifying Mediterranean Species*

Head: short beak, globular melon that descends steeply towards the beak

Body: round, often covered with scars caused by interactions with each other and/or prey

Color: dark gray to reddish-brown, and the coloring varies depending on the sex and age of the animal; the head can be lighter in color

Fins: low dorsal fin, small and narrow pectoral fins

Teeth: in adult males, two teeth that point upwards emerge from the tip of the lower jaw, and are visible even with closed jaws

Mediterranean monk seal (*Monachus monachus*)



Source: Blue World Institute

Head: round, on a short and thick neck, no visible ears

Body: compact, round and covered with short hair

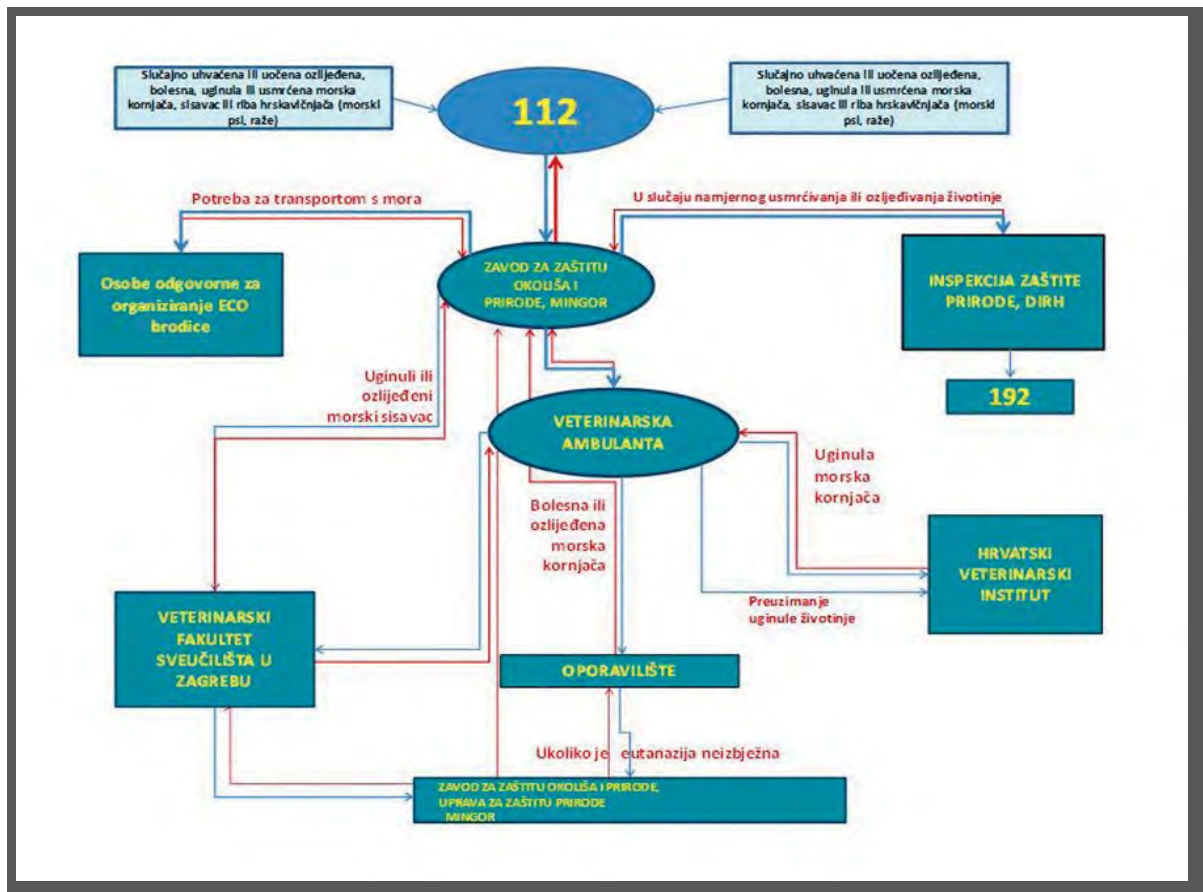
Color: varies according to age and sex, but in general it is dark brown or grayish on the upper side, much lighter on the lower side, and can be completely white

Flippers: covered with hair; the hind flippers point backwards and cannot be used for walking

4. REPORTING AND HANDLING OF INCIDENTAL CATCHES OF SENSITIVE SPECIES

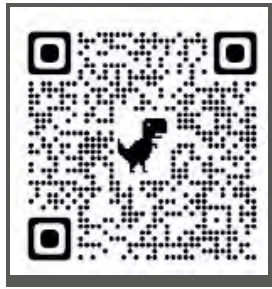
In addition to the submission of data on the catch in fisheries, which also includes data on the incidental catch of sensitive species, it is necessary to report the incidental catch of sensitive species to the competent authority in order to record and properly deal with the caught individuals.

Incidentally caught and/or killed, or injured or sick individuals of sensitive species are reported via QR code (below in the text) or by telephone within 24 hours, as provided for in the System for reporting and monitoring caught, killed, injured and sick strictly protected animals⁶ and record maintained by the Institute for Environmental and Nature Protection. One of the key parts of the System, which refers to strictly protected marine mammals, sea turtles and cartilaginous fish, is *Protocol* which is shown in the picture below.



Schematic representation of the Procedure Protocol

⁶ <https://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ukljucite-se-u-zastitu/sustav-za-dojavu-i>



QR code for accessing the web reporting form

The Civil Protection Directorate of the Ministry of Interior of the Republic of Croatia is responsible for receiving finder reports and acting according to the Protocol.



Information about finding dead, sick or injured individuals of marine mammals, sea turtles or cartilaginous fish, the finder should report on the number 112.

The duty officer of the county center (ŽC) 112 forwards the information to the on-call veterinarian of the nearest contracted veterinary clinic (UVA). If the on-call veterinarian at the nearest UVA does not answer the call, ŽC 112 within 30 minutes or refuses to act, then ŽC 112 acts according to the protocol and informs the competent authorities.

The procedure from finding an animal to its treatment and/or return to nature depends on the type of animal and its condition, as well as on the location in which it was found.

In the case of an incidental catch of a sensitive species, it is necessary to proceed as follows:

1. The animal must be released from the fishing gear according to the instructions
2. Incidental catch of a sensitive species must be recorded in the register/report
3. In the case of injured, sick or dead marine mammals, sea turtles and cartilaginous fish, it is necessary to proceed according to the Protocol - call 112

When handling incidentally caught sensitive species, first of all it is necessary to take care of your own safety and adequately protect yourself from possible injuries, blows, bites or stings.

5. INTERACTIONS OF SENSITIVE SPECIES WITH FISHING GEAR

Fishermen and cartilaginous fish interactions

The most common interactions between fishermen and cartilaginous fish include:

- incidental catch with a bottom trawl
- incidental catch with a seine net
- incidental catch with gillnets
- incidental catch with fishing tools

In case of incidental catch of shark or ray:

- make sure that the animal does not bite, hit or sting you
- prepare the appropriate equipment (gloves, pliers...)

If a shark or ray is in the sea:

- cut the hook as close to the mouth as possible
- it is best not to lift it on board

If a shark or ray is on board:

- if possible free the animal from the hook, cut the hook or cut the nylon as close to the eye of the hook as possible without putting yourself at risk of being bitten, stung or struck

Releasing a shark or ray into the sea:

- hold the animal by the pectoral fin with one hand and the tail with the other hand
- return the animal to the sea, head first, do not throw it; let the animal slide

Cutting off the head and fins and skinning of sharks and rays is prohibited on the vessel, and it is forbidden to put sharks and rays whose heads and skin have been cut off on the market (first sale) after landing.

Fishermen and sea turtle interactions

The most common interactions between fishermen and turtles include:

- incidental catch with gillnets
- incidental catch with a bottom trawl
- incidental catch with fishing tools

Dealing with injured or sick sea turtles, providing first aid:

Fishing vessels that carry out fishing with longlines and gill nets must have equipment on board for the safe handling and release of animals from fishing gear, which is designed to ensure the maximum probability of their survival.

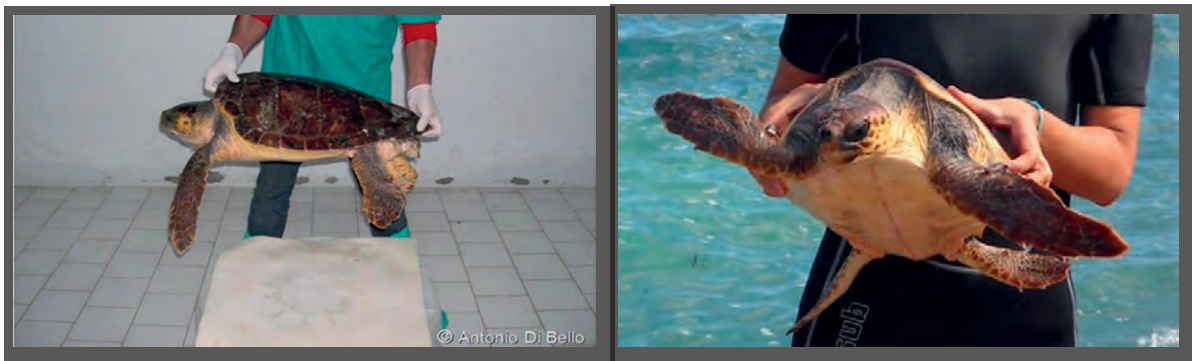
Retrieving a sea turtle from the sea:

- in the case of an incidental catch with fishing tools, use a net to pull the animal onto the deck and, if possible, free it from the hook
- do not pull on a string, nylon or bag sticking out of the mouth or any other part of the body, nor pull the turtle by its flippers, head or tail
- in the event of an incidental catch in the net, use a rope to avoid contact between the turtle and the vessel when lifting, and free the turtle from the mesh using a knife or scissors
- pay special attention to the claws on the front flippers, as well as head movements due to possible bites.

Sea turtle handling and sea turtle placement:

Lifting or lowering a sea turtle on the deck or shore is done in such a way that the animal is held by the shell.

Smaller individuals should be held by the edge in the middle of the shell, between the front and back flippers, or by the edge of the shell above the head and above the tail (rear end), facing sideways.



Source: Institute for Environmental and Nature Protection, MINGOR within the framework of the IPA Adriatic NET - CET project

Sea turtles should be placed in a quiet place where the animal will be the least disturbed.

If it is a larger animal, it needs to be held by two people on each side of the shell, i.e., by the edge of the shell above the head and by the edge above the tail (back end) of the shell. Larger individuals are also heavier, so when lifting them, behave as if you were lifting a heavier load and watch your spine.

The animal should always be kept in a horizontal position! The animal must NOT be turned, held vertically or with its back facing down!

They should NOT be kept in water containers because the animals can drown!

NEVER cover the nostrils!

It is best to place the animal in a plastic container or similar container that has rounded edges. If it does not have rounded edges, the sides of the container should be covered so that the animal is not further injured. You should always put a soft surface under the shell (old rags, t-shirts or a towel).

IN SUMMER - especially when it's hot, the animal should be in the shade and covered with a wet towel (cloth) over the shell, making sure that it is kept moist (wet the head from time to time).

IN WINTER – the animal should be placed leeward if possible in a warmer place and use dry towels, cloths or blankets.

Seemingly dead animal - comatose state:

Sea turtles very often resemble a dead animal, with drooping limbs and head. Such an animal should be placed in a slightly inclined position, in such a way that the animal's head is extended and at a lower level than the rear end of the body. Depending on the size of the animal, it is necessary to adjust the height of raising the back part of the body (up to 30 cm) and leave it in that position until it becomes active. Recovery can take up to 4 hours, often longer. It is also necessary to ensure that it is regularly moistened or covered with a dry towel depending on the season.

A turtle should NOT be put back into the sea when it is seemingly dead!

Wounds on the shell or flippers, foreign bodies on the body or in the digestive tract:

- visible wounds or injuries that are bleeding can be wrapped with a sterile bandage or covered with a clean towel
- the animal should be left to rest until taken over by an authorized veterinarian

Fishermen and seabird interactions

The most common interactions between fishermen and seabirds:

- incidental catch with a gillnet
- incidental catch with a longline

For reporting the incidental catch of seabirds, no protocol has been developed for the time being, as for the incidental catch of injured, sick or dead individuals of marine mammals, sea turtles and cartilaginous fish.

If the bird is not injured:

- With the engine in neutral, use the net to lift the bird onto the boat or grab the bird with both hands keeping the wings pressed against the body to avoid damaging the feathers. Do not pull the nylon with the bird on the hook to the boat! Do not hold the bird by the neck!
- Slowly lift the bird onto the boat and fold its wings against its body. Wrap it in a towel/blanket (not too tight) and, if possible, cover its eyes. Hold the beak, but do not cover its nostrils. Make sure it does not come into contact with oil or fuel
- Hold the bird firmly between your legs, but do not squeeze. Hold its wings close to its body so it doesn't dislocate or break them.
- If the bird is caught on a hook and the hook is visible and can be removed: cut the hook with pliers (or if it is thicker with wire cutters) and remove the hook parts separately. Do not pull the hook in the opposite direction because the barb can injure the bird even more! If the barb is visible, straighten it first with pliers.
- If it is impossible to remove the hook (hook is swallowed): cut the nylon as close to the beak as possible and leave the hook in the bird.
- Lower the bird into the sea or lift and release the bird while standing on the deck.

Fishermen and marine mammal interactions

The most common interactions between fishermen and marine mammals include:

- incidental catch with a seine net
- incidental catch with gillnets

In case of incidental catch of dolphins in nets:

- put the engine in neutral
- prepare the appropriate equipment (ropes, lifting net...)
- release the animal from the fishing gear

If a dolphin is incidentally caught with a gillnet:

- lift the net with the dolphin using the rope onto the boat
- if the dolphin is too big to lift, make an opening in the net

If a dolphin is incidentally caught in a seine net:

- wait for the dolphin to go opposite the ship
- tie the rope at the two ends and release the net to create an opening for its passage

In case the animal is injured:

- if you must lift the animal onto the deck, do so by lifting its entire body at once (don't lift it by its tail or fins!)
- calm the animal down, but be careful because a frightened animal can injure you
- don't approach it from behind because it can hit you with its tail fin
- keep the noise down and never cover its eyes or blowhole
- protect it from the sun and keep the skin moist
- be careful when handling the animal, as marine mammals can transmit infectious diseases

In case the animal died:

- if you have the possibility, lift the animal onto the deck and call the 112 service and wait for the instructions of the authorized veterinarian and/or specialist on taking over the animal

Information about sightings, incidental catches or interactions with marine mammals can be additionally reported via other applications such as Marine Ranger⁷.

⁷ The application contains information about all types of marine mammals that live or have been recorded in the Mediterranean and Adriatic Seas, as well as other information. The link is in chapter 10. Additional information and useful links

6. DELIVERY OF DATA ON INCIDENTAL CATCH OF SENSITIVE SPECIES

The data collected by the Directorate of Fisheries of the Ministry of Agriculture represent official data of the Republic of Croatia and come from two sources: data collected through the National Data Collection Plan, which collects data on biological, environmental, technical and socioeconomic indicators in the fisheries and aquaculture sectors and data provided by fishermen on catches in commercial and small-scale coastal fisheries. Delivery of data in fisheries is prescribed for accurate recording of caught and landed quantities by species and, in this connection, the need to adopt adequate management measures. The collected data are used for statistical and administrative purposes and are used in the management of living marine resources, scientific research and monitoring the traceability of fish and other marine organisms, and for the purpose of submitting data to various national and international institutions. Legal and natural persons who carry out commercial fishing at sea (license holders) and natural persons who carry out small-scale coastal fishing are obliged to record prescribed data for each fishing trip of a fishing vessel.

The data that is recorded and submitted in the prescribed manner includes data on the fishing vessel, the person responsible for commercial fishing at sea, fishing trip, fishing activity, catch, discarded catch, landing and sale from the vessel. In addition to the listed, it is also mandatory to record incidentally caught and released sensitive species.

In accordance with the list of sensitive species which is published and updated on the website of the Ministry of Agriculture - <https://ribarstvo.mps.hr/>, holders of licenses for commercial fishing at sea and holders of licenses for small-scale coastal fishing are obliged to record and submit data on the incidental catch of an individual of a sensitive species. Data on incidental catches of sensitive species are recorded in the prescribed manner and include information on:

- name of the sensitive species (Croatian name or FAO three-letter code if available) or the name of the group of sensitive species,
- quantity of caught individuals in number and/or kilograms,
- status of caught sensitive species at the time of release (alive-uninjured, alive-injured, dead or unknown),
- release position (location) of sensitive species.

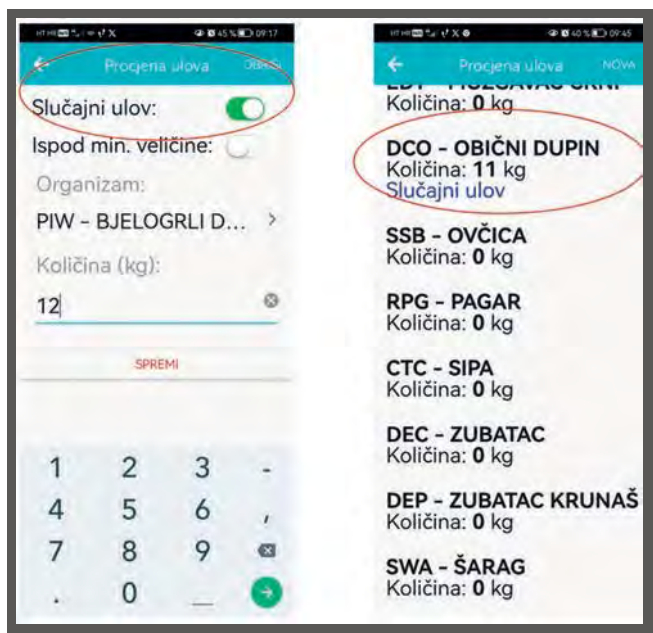
Data on economic fishing is entered by the person responsible for managing the commercial fishing at sea, while data on small-scale coastal fishing is entered by the holder of the license for small-scale coastal fishing.

The form, content, method of keeping and delivering data on the catch is prescribed depending on the length of the vessel, the fishing gear used, the type of catch and the special obligations to which each category of fishing is subject. Data can be submitted in one of the following ways:

⁸ <https://podaci.ribarstvo.hr/zakonski-okvir/>

- electronically through the electronic register application - eOčevidnik,
- electronically via the mOčevidnik mobile application,
- electronically via the mobile application mlzvješće,
- by manually entering data into the printed forms of the Report on catch for commercial fishing at sea or the Report on catch for small-scale coastal fishing and delivery by electronic mail, regular mail or personal delivery to the competent Branch/Regional Unit of the Directorate of Fisheries of the Ministry of Agriculture.

Data submitted via eOčevidnik, mOčevidnik and mlzvješće are entered and submitted in the manner prescribed in the Rules for filling in certain data on commercial fishing at sea in Annex IV of the Rulebook and as stated in the instructions on the website of the Geographic Information System in Fisheries - GISR.



Entry of a sensitive species in the eOčevidnik, mOčevidnik or mlzvješće

Data submitted via printed catch report forms are entered in the manner described in the Rules for filling out the report in Annex III of the Rulebook.

NO HRVCR2018 118682		CFR HRV000001591		POVLASTICA BR. 1636		REG. OZNAKA PLOVILA 12-PL		MJESEC 3		GODINA 2021											
RIBOLOVNI NAPOR																					
RIBOLOVNI ALAT	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN	trostruke dvopodne mreže stajačice - GTN										
POLAZAK (DATUM I SAT)	1.3 u 16.0 sati	4.3 u 18.0 sati	6.3 u 10.0 sati	9.3 u 10.0 sati	12.3 u 10.0 sati	17.3 u 10.0 sati	17.3 u 10.0 sati	17.3 u 10.0 sati	17.3 u 10.0 sati	17.3 u 10.0 sati	17.3 u 10.0 sati										
POVRATAK (DATUM I SAT)	1.3 u 17.0 sati	4.3 u 21.0 sati	6.3 u 13.0 sati	12.3 u 17.0 sati	12.3 u 13.0 sati	17.3 u 13.0 sati	17.3 u 13.0 sati	17.3 u 13.0 sati	17.3 u 13.0 sati	17.3 u 13.0 sati	17.3 u 13.0 sati										
POLAZAK (2) (DATUM I SAT)*	3.3 u 10.0 sati	5.3 u 14.0 sati	7.3 u 9.0 sati	14.3 u 10.0 sati	14.3 u 10.0 sati	18.3 u 9.0 sati	18.3 u 9.0 sati	18.3 u 9.0 sati	18.3 u 9.0 sati	18.3 u 9.0 sati	18.3 u 9.0 sati										
POVRATAK (2) (DATUM I SAT)*	3.3 u 12.0 sati	5.3 u 15.0 sati	7.3 u 10.0 sati	14.3 u 13.0 sati	14.3 u 13.0 sati	18.3 u 12.0 sati	18.3 u 12.0 sati	18.3 u 12.0 sati	18.3 u 12.0 sati	18.3 u 12.0 sati	18.3 u 12.0 sati										
VRJEME RIBOLOVA	42	18	23	39	48	23	23	23	23	23	23										
KOLIČINA ALATA	1500,00	400,00	400,00	500,00	400,00	1200,00	500,00	500,00	500,00	500,00	500,00										
VELIČINA OKA	40	40	40	64	40	64	40	40	40	40	40										
BROJ RIBARA	1	1	1	1	1	1	1	1	1	1	2										
RIBOLOVNA ZONA	G	G	G	G	G	G	G	G	G	G	G										
RIBOLOVNA PODZONA	G5	G5	G5	G5	G5	G5	G5	G5	G5	G5	G5										
ZAŠTIČENO PODRUČJE																					
*upisuje se ako se plovlom vraća u luku nakon ostavljanja ribolovnog alata u moru te se ponovno isplivljava radi podizanja istog ribolovnog alata iz mora																					
ULOV, ODBAČENI ULUV I ISKRCAJ RIBE I DRUGIH MORSKIH ORGANIZAMA																					
VRSTE RIBA ILI DRUGIH MORSKIH ORGANIZAMA	Ulov	Odbačeni ulov	Iskrcaj	Ulov	Odbačeni ulov	Iskrcaj	Ulov	Odbačeni ulov	Iskrcaj	Ulov	Odbačeni ulov	Iskrcaj	Ulov	Odbačeni ulov	Iskrcaj	Ulov	Odbačeni ulov	Iskrcaj	Ulov	Odbačeni ulov	Iskrcaj
VOLCI - MUE	1,00	0,00	1,00	1,00	0,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	2,00	0,00	0,00	0,00	1,00	0,00	1,00
ŽUTUGA - JDP	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	5,00	5,00	0,00	0,00	0,00	0,00
GOLUB UHAN - RMM	0,00	0,00	0,00	0,00	0,00	0,00	3,00	3,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
DRHTULJA MRKULJA - TTO	2,00	2,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
DATUM ISKRCAJA	3.3.2021.			5.3.2021.			7.3.2021.			14.3.2021.			14.3.2021.			18.3.2021.			18.3.2021.		
MJESTO ISKRCAJA	Ploče			Ploče			Ploče			Ploče			Ploče			Ploče			Ploče		
Mjesto i datum:	8.4.2021.						ime i prezime odgovorne osobe: VLATKO PEKO						OI odgovorne osobe:								

Since there is no separate field for entering data on the number of incidentally caught and released individuals (number and/or kg) and the status of the marine organism (released uninjured, injured, dead or unknown) in the printed report form, the above must be entered under the species entry field.

The list of sensitive species is subject to changes depending on the upgrading of the legal framework at the national and international level and it is regularly updated on the website of the Ministry of Agriculture.

In case of incidental catch, species prioritized for monitoring casualties due to incidental catch (common bottlenose dolphin, striped dolphin, short-beaked common dolphin, Audouin's gull, European shag, Yelkouan shearwater, Scopoli's shearwater, little tern, loggerhead sea turtle, green sea turtle) that incidental catch should be entered at the level of the species, not the group.

List of sensitive species

LIST OF SENSITIVE SPECIES			
CROATIAN NAME		SCIENTIFIC NAME	FAO CODE
CARTILAGINOUS FISH			
SHARKS	School shark	<i>Galeorhinus galeus</i>	GAG
	Smooth hammerhead	<i>Sphyrna zygaena</i>	SPZ
	Shortfin mako shark	<i>Isurus oxyrinchus</i>	SMA
	Porbeagle	<i>Lamna nasus</i>	POR
	Blue shark	<i>Prionace glauca</i>	BSH
	Thresher shark	<i>Alopias vulpinus</i>	ALV
	Sandbar shark	<i>Carcharhinus plumbeus</i>	CCP
	Smalltooth sawfish	<i>Pristis pectinata</i>	RPP
	Angular roughshark	<i>Oxynotus centrina</i>	OXY
	Basking shark	<i>Cetorhinus maximus</i>	BSK
	Smalltooth sand tiger	<i>Odontaspis ferox</i>	LOO
	Sand tiger shark	<i>Carcharias taurus</i>	CCT
	Angelshark	<i>Squatina squatina</i>	AGN
	Smoothback angelshark	<i>Squatina oculata</i>	SUT
	Great white shark	<i>Carcharodon carcharias</i>	WSH
	Bigeye thresher	<i>Alopias superciliosus</i>	BTH
	Bluntnose sixgill shark	<i>Hexanchus griseus</i>	SBL
	Sharptnose sevengill shark	<i>Heptranchias perlo</i>	HXT
GUITARFISH	Common guitarfish	<i>Rhinobatos rhinobatos</i>	RBX
RAYS	Longnose skate	<i>Dipturus oxyrinchus</i>	RJO
	Sandy ray	<i>Leucoraja circularis</i>	RJI
	Common skate	<i>Dipturus cf. batis</i>	RJB
	Bottlenose skate	<i>Rostroraja alba</i>	RJA
EAGLE RAYS	Devil fish	<i>Mobula mobular</i>	RMM
	Bull ray	<i>Aetomylaeus bovinus</i>	MPO
	Spiny butterfly ray	<i>Gymnura altavela</i>	RGL
	Common stingray	<i>Dasyatis pastinaca</i>	JDP
	Broad stingray	<i>Bathytoshia lata</i>	RDC
REPTILES			
SEA TURTLES	loggerhead sea turtle*	<i>Caretta caretta*</i>	TTL
	Leatherback sea turtle	<i>Dermochelys coriacea</i>	DKK
	Green sea turtle*	<i>Chelonia mydas</i>	TUG

LIST OF SENSITIVE SPECIES			
CROATIAN NAME		SCIENTIFIC NAME	FAO CODE
BIRDS			
SEABIRDS	Osprey	<i>Pandion haliaetus</i>	
	European storm petrel	<i>Hydrobates pelagicus</i>	DAZ
	Mediterranean gull	<i>Larus melanocephalus</i>	
	Sandwich tern	<i>Sterna sandvicensis</i>	
	Yelkouan shearwater*	<i>Puffinus yelkouan*</i>	
	Scopoli's shearwater*	<i>Calonectris diomedea*</i>	CDI
	little tern *	<i>Sterna albifrons*</i>	
	Pygmy cormorant	<i>Phalacrocorax pygmaeus</i>	
	European shag*	<i>Phalacrocorax aristotelis*</i>	ISW
	Audouin's gull*	<i>Larus audouinii*</i>	LVH
Caspian tern	<i>Sterna caspia</i>		
MAMMALS			
WHALES	Long-finned pilot whale	<i>Globicephala melas</i>	PIW
	False killer whale	<i>Pseudorca crassidens</i>	FAW
	Cuvier's beaked whale	<i>Ziphius cavirostris</i>	BCW
	Common bottlenose dolphin*	<i>Tursiops truncatus*</i>	DBO
	Risso's dolphin	<i>Grampus griseus</i>	DRR
	Short-beaked common dolphin*	<i>Delphinus delphis</i>	DCO
	Striped dolphin*	<i>Stenella coeruleoalba*</i>	DST
	Sperm whale	<i>Physeter macrocephalus</i>	SPW
	Fin whale	<i>Balaenoptera physalus</i>	FIW
		and all other types of whales (Cetacea) that occur naturally in the Adriatic Sea	
SEALS	Mediterranean monk seal	<i>Monachus monachus</i>	SMM
Note: Species marked with an asterisk (*) are prioritized for monitoring casualties due to incidental catch, and it is preferable to enter them at the level of the species, not the group.			

7. DATA COLLECTION AND COOPERATION WITH SCIENTISTS

Collection of biological data

The collection and use of biological and environmental data in the fisheries sector is regulated by EU and national legislation.

In the Republic of Croatia, the Institute of Oceanography and Fisheries (IOR) collects biological data as part of the National Data Collection Plan. Collection of biological data is performed by authorized scientific observers who were appointed by the decision of the Ministry of Agriculture and are employees of IOR.

The scientific observer performs sampling, i.e., collects data on fishing vessels, landing sites and other sampling sites within the framework of scientific monitoring in fisheries in accordance with the prescribed methodology and protocols and the annual sampling plan. The scientific observer is obliged to organize their work on a fishing vessel or other sampling site in such a way as to interfere with the crew of the vessel or employees at the sampling site in the performance of their duties as little as possible.

Master of a fishing vessel is obliged to cooperate with the authorized observer during the organization of embarkation and allow the authorized observer access to the vessel, stay on the vessel and conditions for the unhindered performance of duties, and provide him with access to the necessary data and communication devices, as well as the entire catch. The master of a fishing vessel can refuse an authorized observer to board the vessel if the conditions are not met in accordance with the regulations in the area governing the safety of navigation at sea. Without questioning the provisions of the regulations governing the safety and protection of human life at sea, in the event that the authorized observer, while performing their duties on the vessel, dies, disappears, suffers a serious physical injury or illness, or his safety and well-being are threatened, the master of the fishing vessel is obliged to immediately stop the fishing operation and notify the competent emergency services and subsequently the Fishery Monitoring Center (RMC).

8. PENAL PROVISIONS

Obligation of the master of the vessel to receive an authorized observer on the fishing vessel is prescribed by the article 48, paragraph 2 of the Marine Fisheries Act. The law stipulates that a legal person, a legal person's responsible person, a natural person-craftsman and a responsible person in commercial fishing at sea will be fined for a misdemeanor if the master of the fishing vessel does not receive and does not cooperate with the persons in charge of sampling - Article 85, paragraph 1, point 48 and paragraphs 2, 3 and 4. In the event that the master of the fishing vessel does not receive **authorized** scientific observer on a fishing vessel without proper justification or in any other way prevents the work of the observer, the authorized observer is obliged to inform the Ministry of Agriculture about it.

The Marine Fisheries Act, Article 42 prescribes that all holders of licenses for commercial fishing at sea and licenses for small-scale coastal fishing must keep data on the catch and submit it to the ministry. The Act prescribes that a legal person, a legal person's responsible person, a natural person-craftsman and a responsible person in commercial fishing will be fined for a misdemeanor if they do not fulfill the obligations of recording and submitting data on the catch and data related to the catch - Article 78 of the Act, paragraph 1 point 1 and paragraph 2. In case of repeating the offense a second time within two years, offense points are also awarded.

The Regulation prescribes the form, content and method of keeping and submitting data on catches in commercial fishing at sea, as well as electronic recording and method of submitting data on catches. If the recorded data is not complete and accurate as stated in the provisions of the Regulation and in the related Rules for filling in or if the data is not submitted in the prescribed manner or within the prescribed deadlines, it will be considered that the obligation to record and submit data on the catch and data related to catch is not fulfilled.

9. LITERATURE

<https://mingor.gov.hr/o-ministarstvu-1065/djelokrug/uprava-za-zastituprirode-1180/strogo-zasticene-vrste/oporavilista-za-divlje-zivotinje/1247>, 13.10.2023.

Illustration credits: Food and Agriculture Organization of the United Nations (FAO), Archive of Original Scientific Illustrations. Reproduced with permission.

Jakl, Bitunjac et al.: Handbook for the Inventarisation of Adriatic Marine Species, Association Sunce, Split, 2008

Providing first aid - sea turtles, ZZOP, MINGOR, IPA-ADRIATIC NET-CET project 2012 – 2015.

Rulebook on the form, content and method of management and delivery of catch data in commercial fishing at sea ("Official Gazette" 114/23)

Rulebook on Strictly Protected Species ("Official Gazette" 144/13 and 73/16)

Regulation on conditions and working methods of authorized observers ("Official Gazette" 52/23)

Eckert, K. L., K. A. Bjørndal, F.A. Abreu-Grobois, and M. Do "Narodne novine" elly (Editors). 1999. Research and Management Techniques for the Conservation of Sea Turtles. IUCN/SSC Marine Turtle Specialist Group Publication No 4

Prvan, Jakl et al.: Handbook for the protection of the sea and recognition of the living world of the Adriatic, Association Sunce, Split, 2016

Good practice guide for the handling of cetaceans caught incidentally in Mediterranean pelagic longline fisheries

Good practice guide for the handling of sea turtles caught incidentally in Mediterranean fisheries

Good practice guide for the handling of sharks and rays caught incidentally in Mediterranean pelagic longline fisheries

Good practice guide for the handling of seabirds caught incidentally in Mediterranean pelagic longline fisheries

A Guide to Identifying Incidentally Caught Sensitive Species in Mediterranean Fisheries, IUCN, 2020.

Marine Fisheries Act ("Official Gazette" 62/17, 130/17, 14/19 and 30/23)

Nature Protection Act ("Official Gazette" 80/13, 15/18, 14/19 and 127/19)

10. ADDITIONAL INFORMATION AND USEFUL LINKS

MINISTRY OF AGRICULTURE

Contact

Tel: 01/6443-185

E-pošta: uprava.ribarstva@mps.hr

MINISTRY OF ECONOMY AND SUSTAINABLE DEVELOPMENT

Contact

Tel: 091/6060-281

E-pošta: zavod@mingor.hr

INSTITUTE OF OCEANOGRAPHY AND FISHERIES

Contact

Tel: 021/408-000

E-pošta: [promatraci@izor](mailto:promatraci@izor.hr)

WWF ADRIA

Contact

Tel: 01/5509- 623

E-pošta: info@wwfadria.org

ASSOCIATION BIOM

Contact

Tel: 01/5515-324

E-pošta: info@biom.hr

ASSOCIATION for nature, environment and sustainable development SUNCE

Contact

Tel: 021/360-779

E-pošta: info@sunce-st.org

BLUE WORLD INSTITUTE

Sea turtle rescue center Contact

Tel: 051 604666

E-pošta: info@plavi-svijet.org

Additional information for dealing with incidental catches of sensitive species of mammals, cartilaginous fish, reptiles and birds:

Sharks and rays (longlines): <https://www.fao.org/3/i9152hr/i9152hr.pdf>

Sea turtles: <https://www.fao.org/3/i8951hr/i8951hr.pdf>

Seabirds: <https://www.fao.org/3/i8937hr/i8937hr.pdf>

Marine mammals: <https://www.fao.org/3/ca0015hr/ca0015hr.pdf>

LIFE Euroturtles infographics

Threats to sea turtles

http://www.euroturtles.eu/wp-content/themes/euroturtles/assets/how-you-can-help/HR_Euroturtle_Stickers.pdf

How to recover a turtle caught in a trawl/net

http://www.euroturtles.eu/wp-content/themes/euroturtles/assets/how-you-can-help/HR_Euroturtle_Fisheries_Infographic.pdf

How to release a turtle caught on a longline hook

http://www.euroturtles.eu/wp-content/themes/euroturtles/assets/how-you-can-help/HR_Euroturtle_Fisheries_Infographic.pdf

Application for reporting sightings, findings of injured and incidentally caught marine mammals:

Marine ranger

Application CroDolphins gives the possibility of reporting the sighting of a Mediterranean monk seal and other marine mammals

