

# LIFE Conceptu Maris

2022-2026

The negative effects of human activities on cetaceans and sea turtles are increasingly evident and require new conservation strategies. These effects include abandoned fishing gear, marine traffic and floating plastics. The LIFE Conceptu Maris project (CONservation of Cetaceans and Pelagic Sea Turtles in the Mediterranean: Managing Actions for their Recovery and Sustainability) integrates traditional techniques with cutting-edge technologies to collect new data, particularly in the open sea, on the distribution of these charismatic species and their ecological preferences. Assessing the impact of **risk factors** enables the identification of the **most important sites** in the Mediterranean for their long-term conservation.

The project is initially being conducted across a large area of the southern **Tyrrhenian Sea**. These procedure will then be replicated in the Adriatic and eastern Ionian Seas, the Pelagos Sanctuary and the Spanish cetacean migration corridor north of the **Balearic Islands**.

## The actions

The project aims to increase knowledge about the marine environment by using ferries as research vessels and combining traditional research methods with new technologies.

Analysis of carbon and nitrogen isotopes is used to clarify the structure of the underwater food chain

Detection of environmental DNA (eDNA) dispersed in water by animals

Use of hull sensors installed on ferries to collect environmental data

Monitoring of wildlife, marine litter and maritime traffic from ferries

Citizen science campaigns to encourage public participation in monitoring activities

Training courses for on-board personnel, to reduce the risk of collision with large cetaceans

Estimating areas with the highest concentration of floating waste and assessing the entanglement risk



Photo: Canva



We would like to thank the shipping companies for their cooperation **Grimaldi Lines e Minoan, Grandi Navi Veloci, Tirrenia CIN, Corsica-Sardinia Ferries, Balearia.**

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Photo: CIMA Research Foundation



# Understanding and protecting cetaceans and sea turtles in the Mediterranean open sea

With the financial contribution of LIFE programme of the European Union



LIFE20 NAT/IT/001371 CONCEPTU MARIS

## The species

The project primarily focuses on the eight most common species of cetacean and the three sea turtles species inhabiting the Mediterranean Sea.

 Common species that is often encountered

  Uncommon species that is occasionally encountered

   Rare species that is difficult to spot

Photo: Canva



### Fin Whale (*Balaenoptera physalus*)



It is the largest animal species in the Mediterranean. It has a large, dark back and a small dorsal fin. It rarely shows its caudal fin before diving.

It is an open sea species distributed throughout the Mediterranean. When it breathes, it produces two jets of vertical water spray that can be seen from far away.



### Sperm Whale (*Physeter macrocephalus*)

It has a robust, dark grey body and an enormous, square head. Its dorsal fin is rounded. Before diving deep, it lifts its caudal fin out of the water.

It inhabits deep waters and is most often seen in the Pelagos Sanctuary. It also visits the Ionian Sea, and less frequently the Tyrrhenian and Adriatic Seas. Its blow remains low and inclined.



### Long-finned Pilot Whale (*Globicephala melas*)



It has an elongated body and an unmistakable globular head. It is ebony black in colour (the young are lighter) and has a distinctive grey-white patch on its chest.

It prefers the open sea and is fairly regularly spotted in the western Mediterranean. It regularly visits the Ligurian Sea and mainly frequents the Pontine Archipelago and the Campania coast in the Tyrrhenian Sea.



### Cuvier's beaked Whale (*Ziphius cavirostris*)



It has a tapered head, a very small dorsal fin set back towards the tail, and it swims rather slowly. As it ages, its body accumulates scars from clashes with other males.

It is difficult to observe because it rarely emerges from the water. It is more prevalent in the north-western Ligurian Sea and the central Tyrrhenian Sea, favouring open seas and underwater canyons.



### Risso's Dolphin (*Grampus griseus*)

Its unmistakable white-grey colouring due to numerous scars from fights with other members of its species and squid it feeds on. It has a globular head and lacks a rostrum.

It is found in the Ligurian Sea, southern Tyrrhenian Sea and Ionian Sea. In Sicily, it has been sighted around Egadi Islands, Strait of Messina, and along Ionian coast. It mainly frequents deep waters.



### Striped Dolphin (*Stenella coeruleoalba*)



Its dark grey back is clearly distinct from its sides, which are adorned with striking light stripes. It has a falcate dorsal fin and an elongated rostrum with a long, dark beak.

This species is most commonly encountered in the open sea. It is often found in groups of up to 100 individuals, sometimes alongside other species.



### Common Dolphin (*Delphinus delphis*)

It has a streamlined body with ochre-yellow sides bearing a distinctive hourglass pattern. At the base of the dorsal fin, there is a dark grey triangular marking.

It is declining in the Mediterranean. Two subpopulations live in Italy, (Ischia and Lampedusa). Rare sightings in the Ligurian-Provençal basin. It can be spotted in mixed groups with *Stenella* species.



### Bottlenose Dolphin (*Tursiops truncatus*)



Its colouring, smoky grey on the back and light grey on the sides and belly, turns brown depending on the light. It has a sickle-shaped dorsal fin and a short, stumpy snout.

It is mainly found in coastal waters, even in highly anthropised areas. It is also occasionally observed in the deep sea's pelagic zones. Very agile and fast, it performs acrobatic manoeuvres.



### Loggerhead Sea Turtle (*Caretta caretta*)

It has a red-brown carapace and a large, proportionally larger head than other species, with powerful jaws. Males have a more developed tail and longer front claws.

It is the most common turtle in the Mediterranean. It nests in various areas of Italy, especially in Ionian Calabria and Sicily. It spends its early years in open sea, then moves closer to the coast.



### Green Sea Turtle (*Chelonia mydas*)



Olive-brown carapace with yellow or marbled streaks and spots. The plastron (underside) is light in colour. It has a tapered head that is proportionally smaller than that of the loggerhead turtle.

It does not nest in Italy. Young individuals are occasionally sighted, especially along the coast of Puglia and Calabria. Being a tropical species, it has low tolerance for low temperatures.



### Leatherback Sea Turtle (*Dermochelys coriacea*)

It is bluish-black with small light spots. The carapace has seven longitudinal ridges, with bony plates covered by a layer of leathery skin. The beak has no horny covering.

It is the largest existing sea turtle, lives in the open sea and does not nest in Italy. The few sightings in Mediterranean are of Atlantic individuals passing through the Strait of Gibraltar.

