



Proposed marine reserve sites

Figure 1. shows a proposed marine reserve network that fits the criteria outlined in this report. The proposed network is based on available information on species and habitats of the Mediterranean Sea. The coastal area also requires protection through a network of marine reserves.



Figure 1.

 Greenpeace proposed marine reserve network
 Coastal area, requiring a marine reserve network

1. Alboran Sea

The Alboran Sea is the meeting point for the cold waters of the Atlantic Ocean and the warmer waters of the Mediterranean Sea, and a migratory route for many species of fish, whales, dolphins and turtles. The Alboran contains regions of upwelling, where marine life thrives. The area is a spawning area for pilchards and anchovy and an important area for a number of whale and dolphin species, including the striped, common, bottlenose and Risso's dolphins, and the long-finned pilot whale. Vulnerable deep-sea features are found in the Alboran Sea, including seamounts and deep-sea corals.

2. (& 6) Seamounts

These areas represent individual seamounts in the Mediterranean Sea (seamounts are also included in many of the other proposed marine reserve areas). Seamounts are home to many unique and vulnerable species. In addition to the important seabed communities found on seamounts, they also provide important breeding and feeding grounds for species in the waters above.

3. Balearic Islands

The waters surrounding the Balearic Islands are an important spawning area for tuna and swordfish, two over-exploited migratory species, as well as many other species including pilchards, round sardinella and anchovies. The area contains deep-sea corals and cold seeps, and is an important area for sperm whales. The great white shark, a vulnerable species, is recorded in the area.

4. Gulf of Lions

The Gulf of Lions is influenced by the Rhône Delta, which is designated a UNESCO Biosphere Reserve and Ramsar site. This marine area is an important spawning ground for pilchards, anchovy, round sardinella and shrimps. It is also an important sperm whale area, and contains cold seeps and deep-sea corals.

5. Algerian stretch

This area is a spawning ground for anchovy, and an important area for sperm whales. Deep-sea corals are found here.

Aegean sea



7. Carthagian stretch

This area is important for sperm whales, and is a spawning ground for anchovy. Pilchards, round sardinella, blue whiting, and blue and red shrimps, and bottlenose dolphins are found here. The coastline is a nesting and migratory route for sea turtles.

8. Ligurian Sea

The Ligurian Sea contains a frontal system, pushing up deep waters rich in nutrients. This makes the area highly productive, with a diversity of species present. It is an important feeding area for whales and dolphins, with around 13 cetacean species found there. The Mediterranean population of fin whales (*Balenoptera physalus*) may be becoming a separate “new” species. Seamounts and deep-sea corals are also present in the area. The Ligurian Sea was designated as a sanctuary under the SPAMI system due to its importance for whales and dolphins, however a marine reserve is required to fully protect the diversity of marine life and habitats there.

9. Central Tyrrhenian Sea

The central Tyrrhenian Sea, between Sardinia and mainland Italy, is an important area for cetacean species including fin and sperm whales and common dolphins. The area has been proposed as an MPA for whales and dolphins. The central Tyrrhenian is a spawning ground for anchovy, and an important area for pelagic fish, such as blue whiting and round sardinella. It is a migratory route for tuna, and an important area for seabirds. The area has a significant concentration of seamounts including the Vavilov Seamount.

10/11. Messina Strait (north and south)

This is an important area both for the huge upwelling system present here, and because it is a migratory route for pelagic fish, whales and dolphins. The area contains a large number of seamounts, including the Marsili Seamount - one of the largest volcanic structures in the Mediterranean, rising 3,000 meters from the seabed. The area is important for sperm whales and fin whales, and is a spawning area for tuna and swordfish.

12. Sicilian Channel

The Sicilian channel between Sicily and Tunisia joins the west and east Mediterranean basins, and hosts many species from both areas. It is a highly productive area and represents a biodiversity hotspot within the Mediterranean. The area is important for sperm whales and fin whales, and the great white shark. Seamounts and deep-sea corals are found close to Sicily, and the Tunisian coastline has turtle nesting beaches, seagrass meadows and sponge communities.

13. Maltese slope

This area, extending from the south of Sicily to include the waters surrounding Malta, is an area of high biodiversity within the Mediterranean. It contains an important area for juvenile anchovy. It is important for common dolphins, and was proposed as a marine protected area by ACCOBAMS. The waters around Malta are also thought to be a breeding area for great white sharks.

14. Medina Ridge

This is an important area containing deep-sea habitats as well as the Medina (Malta) Ridge and a number of seamounts, including the Epicharmos and Archimedes Seamounts.

15. Gulf of Sirte

This area is an important feeding ground for the northern bluefin tuna. The adjacent coastline hosts turtle nesting beaches and seagrass meadows.

16. Libyan head

The coastal and marine area of East Libya has been described as one of the “last ten paradises” of the Mediterranean. The coastal area contains seagrass meadows, making it an important fish nursery area. Turtles nest on the adjacent beaches, and further offshore are seamounts, including the Herodotus Seamount, and cold seeps.

17. Upper Adriatic

The upper Adriatic is an important spawning area for pilchards and anchovy. An adjacent Croatian coastal area has been proposed as a bottlenose dolphin reserve by Tethys Research Institute. The area also hosts a high diversity of fish species including tuna, swordfish and sharks, and seagrass meadows are present along the Croatian and Italian coasts.

18. Pomo/Jabuca Trench

This area is an important spawning area for Mediterranean hake, anchovy and other species, and is vital for many Adriatic fish populations. Due to its importance, trawling was banned from part of this area in 1998. There is also a cold seep area found here.

19. Otranto channel

The marine area off the 'heel' of Italy contains an important site of deep-sea corals, including the rare white coral, Lophelia. The area was recommended for protection by WWF and IUCN, and partially protected in 2006 by a GFCM ban on trawling.

20. Hellenic trench

The Hellenic Trench is an important area for sperm whales, as well as Cuvier's beaked whale, and was recommended for protection by Pelagos, a marine NGO. The area south-west of Crete was recommended as a marine protected area for sperm whales by ACCOBAMS. The area contains deep-sea features including the Calypso Deep, the deepest part of the Mediterranean Sea, and important habitats such as cold seeps and seamounts. The adjacent Greek coastline contains turtle nesting beaches, and a number of coastal protected areas.

21. Olimpi

This area south of Crete contains important deep-sea features in the Olimpi mud field. This includes mud volcanoes, cold seeps and brine pools, and hosts microbial communities.

22. Saronikos Gulf

This is an important area for common dolphins, and is part of a larger proposed MPA for common dolphins (recommended by ACCOBAMS). It is a nursery ground for hake (*Merluccius merluccius*), one of the most commercially important species in the Mediterranean.

23. Sporades Islands

This area is an important area for Mediterranean monk seals, and is designated as an IUCN protected area, and Greek Natura 2000 site. It is part of a larger proposed MPA for common dolphins, recommended by ACCOBAMS.

24. Thrakiko Pelagos

This area is considered an important nursery ground for many species, including hake, prawn and anchovy. The north Aegean is the last remaining area in the Mediterranean where harbour porpoise are still found. Mediterranean monk seals and Common dolphins are also present. The adjacent coastline is included in the Greek Natura 2000 network.

25. Limnos - Gökçeada

The north Aegean is the last remaining area in the Mediterranean where harbour porpoise are still found. The proposed reserve in the north-east Aegean is an important area for common dolphins, and is part of a larger proposed MPA for common dolphins, recommended by ACCOBAMS. Adjacent coastline is included in the Greek Natura 2000 network.

26. Crete to Turkey

This area contains seamounts, and is an important area for common dolphins (part of a proposed MPA for common dolphins recommended by ACCOBAMS). Adjacent coastal areas are included in the Greek Natura 2000 network, and turtles nest along the adjacent Turkish coastline.

27. Central Levantine Sea

An important deep-sea area containing numerous seamounts and cold seeps. This area is a spawning ground for swordfish, a commercially important species in the Mediterranean.

28. Anaximander Mountains

This area south of Turkey contains the Anaximander Mountains, with seamounts, mud volcanoes and methane cold seeps. The adjacent coastline has a number of sea turtle nesting beaches.

29. Cypriot Channel

The waters between Cyprus and southern Turkey are a spawning ground for bluefin tuna (*Thunnus thynnus*), frigate tuna (*Auxis rochei*) and Atlantic black skipjack (*Euthynnus alletteratus*). The adjacent coastlines of Cyprus and Turkey have nesting beaches of the endangered loggerhead turtle (*Caretta caretta*) and green turtle (*Chelonia mydas*).

30. Eratosthenes Seamount

The Eratosthenes seamount is located south of Cyprus and north of the Nile delta, and it rises up from the seafloor to 800m below sea-level. Here rare coral species can be found, such as *Caryophyllia calveri* and *Desmophyllum cristagalli*. The area is also important for whales and dolphins, including sperm whales, fin whales, striped and bottlenose dolphins. The coastline of Cyprus has a high concentration of turtle nesting beaches.

31. Phoenician coast

This area is an important migratory route for tuna, and breeding area for loggerhead turtles (*Caretta caretta*), green turtles (*Chelonia mydas*) and sharks. The threatened sandtiger shark (*Carcharias taurus*), gulper shark (*Centrophorus granulosus*) and angelshark (*Squatina squatina*) are present in the area. Adjacent coastal waters contain hydrothermal vents, and their associated communities.

32. Nile fan

The deep waters of the Nile fan, with their associated submarine canyons and cold seeps, are areas of high biodiversity. Cold seeps emit mud, gas and fluids and support high microbial diversity. These important and vulnerable seabed features have prompted the GFCM to create a protected area where trawling is banned. The area is also an important feeding ground for fish, including tuna.