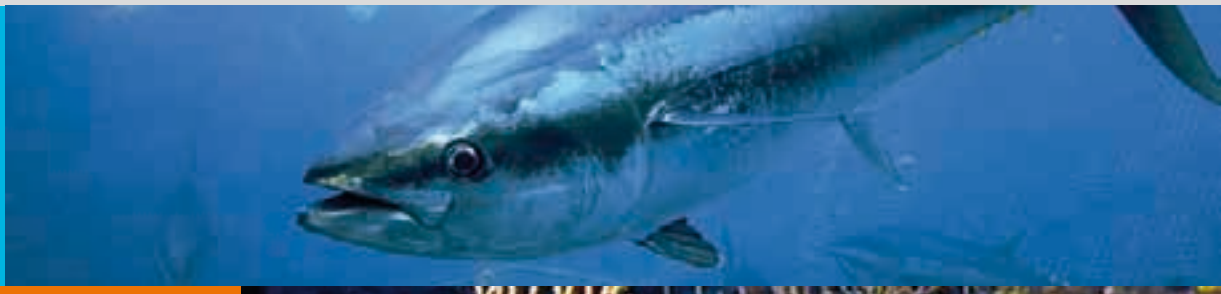
OCEANA MedNet



MPA Network Proposal for the Mediterranean Sea

100 REASONS TO REACH 10%

OCEANA

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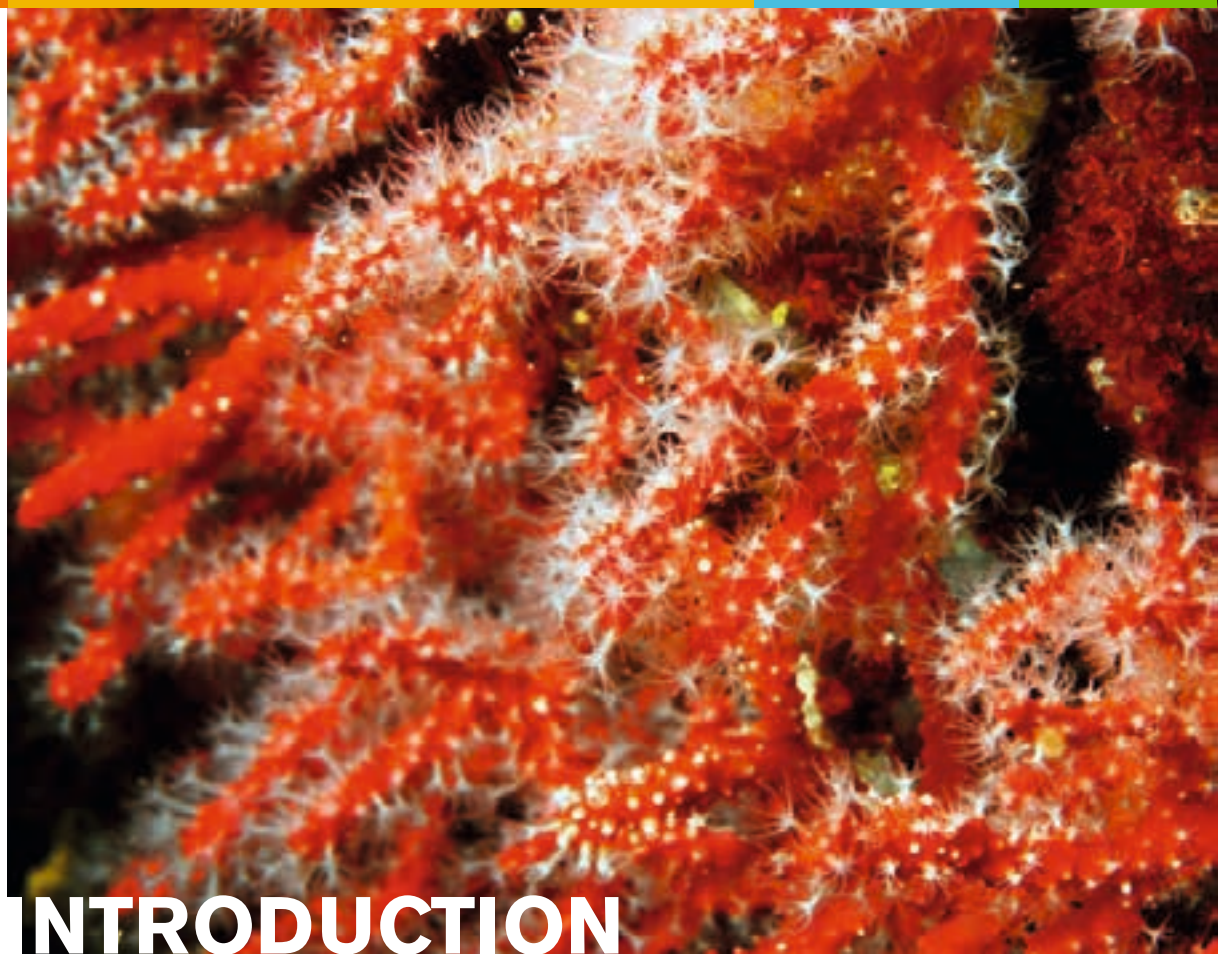


INTRODUCTION

Red coral (*Corallium rubrum*). © OCEANA / Juan Cuetos

In this document Oceana reviews the current state of regional protection initiatives in the Mediterranean Basin and presents a varied proposal for the protection of marine areas which it considers essential for maintaining a balance in the Mediterranean Basin and achieving good environmental status.

The objective of the aforementioned proposal is to contribute to the recommendation of the Convention on Biological Diversity to effectively protect at least 10% of the world's marine ecoregions.

Oceana MedNet is an example of how to prepare a proposal for a Mediterranean network of MPAs with a *precautionary approach* aimed at protecting areas of ecological importance when there is a general lack of biological knowledge.

OCEANA, August 2011

THE NEED FOR GLOBAL PROTECTION: A PENDING TASK

According to the Millennium Ecosystem Assessment (UNEP, 2006) marine and coastal ecosystems are amongst the most endangered on the planet. Fisheries are still in decline, the pressure on coastal ecosystems is increasing and climate change is adding further strain to the weakened environment, which translates into a diminished capacity to provide goods and services. We do not know in detail the scope of the effects that different human activities have had as a consequence of prolonged exploitation of resources (deforestation, pollution, overexploitation, fishing, etc.) and which have probably caused significant changes in the trophic relationships of food chains (Sala, 2004). Even now, in the 21st century there is a general lack of knowledge about the treasures which the oceans hold and the processes which govern them.

This lack of knowledge is especially acute when discussing deep waters. However, in the context of limited knowledge of ecosystems and resources (currently or potentially exploited), according to international recommendations it is necessary to adopt a precautionary approach (CBD COP 10 Decision X/29 - Marine and coastal biodiversity) considering a series of conservative (and/or conservation) measures amongst which the establishment of Marine Protected Areas (MPAs) can be included. This approach must in turn be supported by greater efforts in researching deep-water and open sea ecosystems with the help of new technologies (e.g. ROV - Remote Operated Vehicle) and by long-term monitoring of vulnerable ecosystems which are already known and have been located.

MPAs have been described as efficient tools for preserving biodiversity (Allison *et al*, 1998; Halpern, 2003), so efforts which have been made until now on a global scale to protect the sea and its resources have gradually increased. Data from recent years is summarised below (see Table 1), however MPAs scarcely represent 4% protection of coastal areas and 1% of high seas.

Table 1. Summary of the growth in numbers and areal extent of MPAs globally (IUCN, 2010)

	2003		2006		2008		2010	
Number of MPAs	**4,116**		**4,435**		**5,045**		**5,850**	
MPA Coverage	**Mill. Km²**	**%**	**Mill. Km²**	**%**	**Mill. Km²**	**%**	**Mill. Km²**	**%**
Global Total	1.64	0.45	2.35	0.65	2.59	0.72	4.21	1.17
Within EEZ	1.14	1.14	2.35	1.63	2.59	1.80	4.12	2.86
On continental shelf					1.20	4.09	1.27	4.32
Off-shelf					1.39	0.42	3.01	0.91

Recognising the importance of protected areas on an international scale, the VII Conference of the Parties to the Convention on Biological Diversity (CBD), in 2004 established the following objectives:

- "To establish a global network of MPAs through national and regional systems of protected areas which are efficiently managed and ecologically representative (Decision VII/28, CBD 2004)"
- "At least 10% of each of the marine ecoregions must be effectively conserved (Decision VII/30, CBD 2004)".

After setting these objectives, the CBD established a series of guiding criteria for selecting areas with the aim of establishing representative MPA networks, including open water and deep-water habitats [UNEP/CBD/EWS.MPA/1/2 (November 2007), UNEP/CBD/COP/DEC/IX/20 (October 2008) and UNEP/CBD/BCS&IMA/1/2 (December 2009)] (see Table 2).

Table 2. Scientific guidance for selecting areas to establish a representative network of MPAs, including in open ocean waters and deep-sea habitats

REQUIRED NETWORK PROPERTIES AND COMPONENTS	DEFINITION	APPLICABLE SITE SPECIFIC CONSIDERATIONS (INTER ALIA)
ECOLOGICALLY AND BIOLOGICALLY SIGNIFICANT AREAS	Ecologically and biologically significant areas are geographically or oceanographically discrete areas that provide important services to one or more species/populations of an ecosystem or to the ecosystem as a whole, compared to other surrounding areas or areas of similar ecological characteristics, or otherwise meet the criteria as identified in annex I to decision IX/20.	• Uniqueness or rarity • Special importance for life history stages of species • Importance for threatened, endangered or declining species and/or habitats • Vulnerability, fragility, sensitivity or slow recovery • Biological productivity • Biological diversity • Naturalness
REPRESENTATIVITY	Representativity is captured in a network when it consists of areas representing the different biogeographical subdivisions of the global oceans and regional seas that reasonably reflect the full range of ecosystems, including the biotic and habitat diversity of those marine ecosystems.	A full range of examples across a biogeographic habitat, or community classification; relative health of species and communities; relative intactness of habitat(s); naturalness
CONNECTIVITY	Connectivity in the design of a network allows for linkages whereby protected sites benefit from larval and/or species exchanges, and functional linkages from other network sites. In a connected network individual sites benefit one another.	Currents; gyres; physical bottlenecks; migration routes; species dispersal; detritus; functional linkages. Isolated sites, such as isolated seamount communities, may also be included.
REPLICATED ECOLOGICAL FEATURES	Replication of ecological features means that more than one site shall contain examples of a given feature in the given biogeographic area. The term "features" means "species, habitats and ecological processes" that naturally occur in the given biogeographic area.	Accounting for uncertainty, natural variation and the possibility of catastrophic events. Features that exhibit less natural variation or are precisely defined may require less replication than features that are inherently highly variable or are only very generally defined.
ADEQUATE AND VIABLE SITES	Adequate and viable sites indicate that all sites within a network should have size and protection sufficient to ensure the ecological viability and integrity of the feature(s) for which they were selected.	Adequacy and viability will depend on size; shape; buffers; persistence of features; threats; surrounding environment (context); physical constraints; scale of features/processes; spillover/compactness.

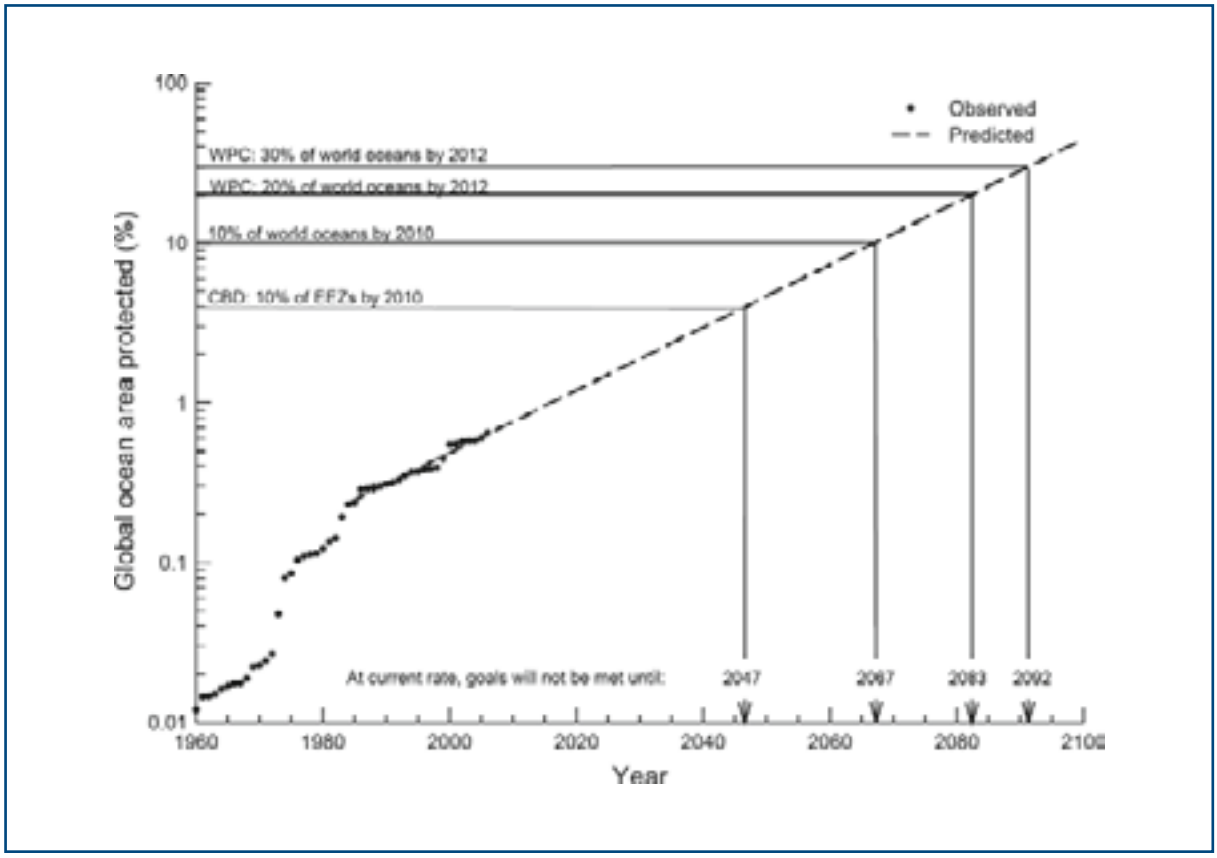
The CBD also supplied a set of examples which fulfil the scientific criteria to be identified as marine areas of special ecological or biological interest and which require protection (UNEP/CBD/EWS.MPA/1/2):

- Benthic features
  1. Seamount communities
  2. Cold water coral reefs
  3. Coral, sponge and bryozoan aggregations
  4. Hydrothermal vent ecosystems
  5. Gas hydrates
  6. Cold seeps
  7. Pseudo abyssal depressions (basin-like structure)
  8. Canyons
  9. Submerged atolls, bank and guyot communities
  10. Carbonate mounds
  11. Trenches
- Pelagic habitats
  1. Upwelling areas
  2. Fronts
  3. Gyres
  4. Recurrent or persistent polynyas
- Vulnerable and/or highly migratory species
  1. Whales and other cetaceans
  2. Seabirds
  3. Sea turtles
  4. Sharks
  5. Highly migratory fish
  6. Discrete deep-sea fish populations

Keeping in mind that the gradual increase in the declaration of MPAs over recent decades has resulted in considerable improvement from a conservation perspective, according to the latest UICN report about the protection of oceans, the data is far from achieving the short term objectives established by the CBD (see Figure 1). Moreover, the majority of the protected areas are connected to terrestrial areas and the percentage is much smaller when referring to waters outside of national jurisdiction. In short, the situation on a global scale is as follows (IUCN, 2010):

- The current number of MPAs worldwide is 5,878, covering approximately 4.2 million km^2 of the ocean surface area (1.17% of the overall surface of the oceans).
- The surface area by MPAs on the continental shelf is 4.32%.
- The greatest increase in the last five years has been provided by a small number of MPAs with large surface areas.
- Only 12 of the 190 countries and territories with marine jurisdiction protect over 10% of the waters under their jurisdiction.

Figure 1. Projection of the annual ratio of increase in protected marine area on a global scale between 1984 and 2006 and in the future in relation to achieving objectives for the protection of the sea adopted by the Convention on Biological Diversity (Wood *et al*, 2008)



Six years after establishing the commitment to protect 10% of marine ecoregions worldwide, and despite the most prominent conservation organisations recommending it be increased to 20%-30% in order for it to be truly significant, the delay in achieving the objective is glaring. For that reason, during the last Conference of the Parties to the CBD (COP X - October 2010, Nagoya) it was decided to postpone the objective to 2020, ignoring the fact that its short term conservation would mean avoiding the continuous degradation of the marine ecosystems.

One must also consider the large difference in levels of protection between different ecosystems, in other words, the high representation of mangrove, coral reefs and seagrasses in comparison, for example, to seamounts (Wood *et al,* 2008). Although their protection is completely justified, new challenges must point towards a more innovative direction. Lesser known ecosystems, such as the aforementioned seamounts, canyons, deep-water corals, cold seeps, pelagic habitats, etc. are equally important to achieve a coherent global network (Secretariat of the CBD, 2008).

According to IUCN (2010) the global set of MPAs cannot be considered an effective "network of networks" (national/regional/global). Furthermore, regional efforts (e.g. OSPAR, Barcelona Convention) are greater than those carried out on a national level. One must also emphasise the limited coverage in the high seas (off-shelf), which is probably linked more to political factors resulting from geographical limits than to environmental factors.

IS THE MEDITERRANEAN SEA ALREADY PROTECTED?

The Mediterranean is a biodiversity hot spot. Approximately 17,000 species have been catalogued in the Mediterranean basin, although it is estimated that the list may increase with species that have yet to be discovered (Coll *et al*, 2010). Generally speaking there is far less knowledge of marine biodiversity than its terrestrial counterpart, nevertheless, it is common knowledge that the Mediterranean is home to a high percentage of endemic species and contains endangered habitats and species, as well as threatened or vulnerable species. However, there are still significant gaps in information when it comes to the Mediterranean, particularly regarding deep water areas, along the southern coast, and the Levantine regions.

Moreover, the Mediterranean faces various threats linked to human activities including overfishing, the overexploitation of resources, the destruction of habitats, invasive species, pollution, etc. Despite its small size (less than 1% of the world marine surface area), the Mediterranean is one of world's priority areas for conservation because the high concentration of the population on its coasts intensifies the aforementioned threats at the regional level. According to IUCN (2010) these threats can be managed or channelled with the implementation of efficient management in MPAs, however, the protection data for the Mediterranean are the following:

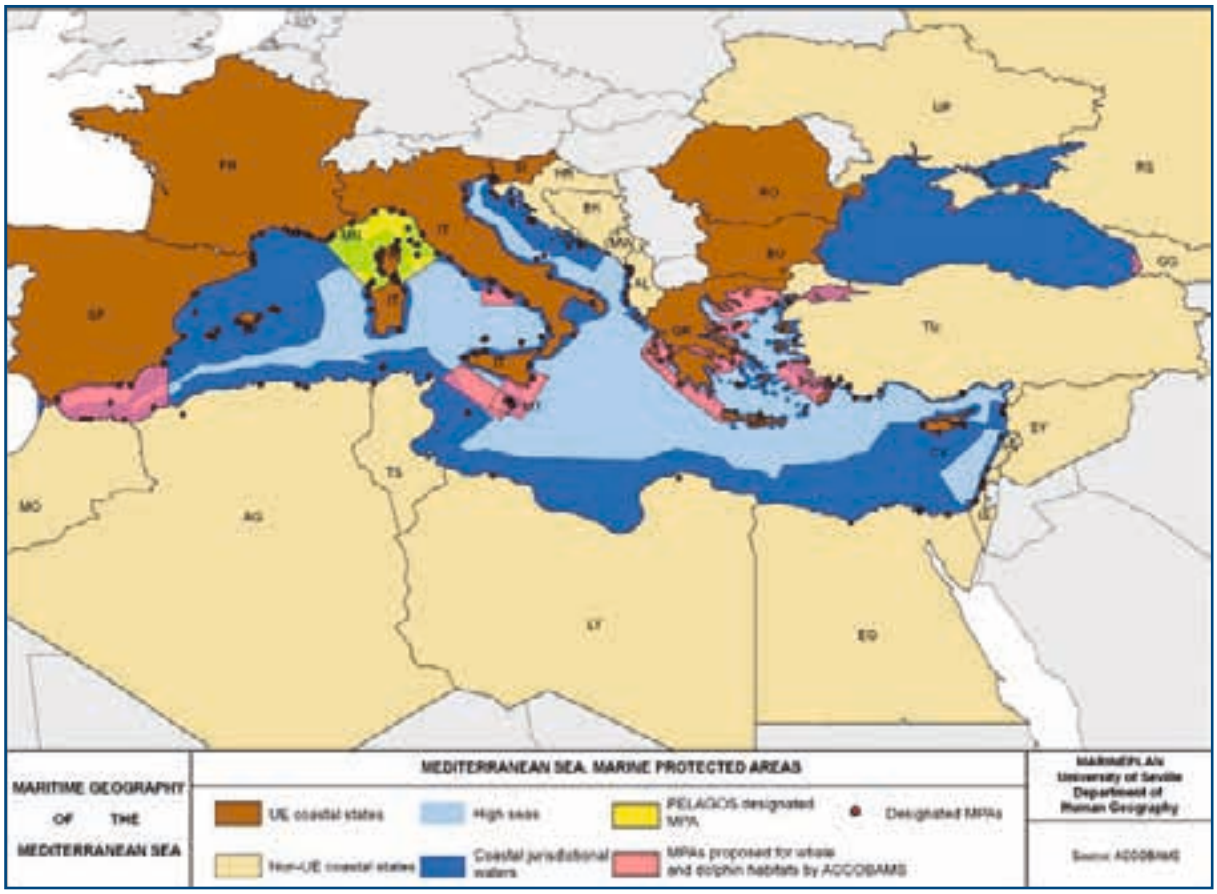
Table 3. MPA cover in the Mediterranean Sea (biogeographic province). Based on data from IUCN, 2010

	Total area (km²)	MPA area(km²)	Percentage protected (%)
Offshelf	1,840,859	4,382	0.24
Shelf	688,638	4,242	2.66
TOTAL	2,529,497	8,624	0.30

In 2008, Adbulla *et al* indicated that it would be difficult to achieve the objective of 10% by 2010 because at that time the MPAs in the Mediterranean constituted approximately 4% of its area (97,410 km²) including the Pelagos Sanctuary in the Ligurian Sea (87,500 km²). In 2010, this surface was increased, and according to data from UNEP-MAP-RAC/SPA it now covers approximately 144,800 km².

Similar to what has happened on a global scale, the Mediterranean network of MPAs is neither representative nor coherent. All of the protected areas are located in coastal waters under national jurisdiction (with the exception of the marine Sanctuary of the Ligurian Sea) and there is a significant difference in coverage between the coasts. The protected areas are mostly located on the northern coast, with the exception of specific locations in Algeria, Morocco, Tunisia, Israel, Lebanon and Syria (see Figure 2).

Figure 2. Protection in the Mediterranean Sea (Suárez de Vivero, 2010)



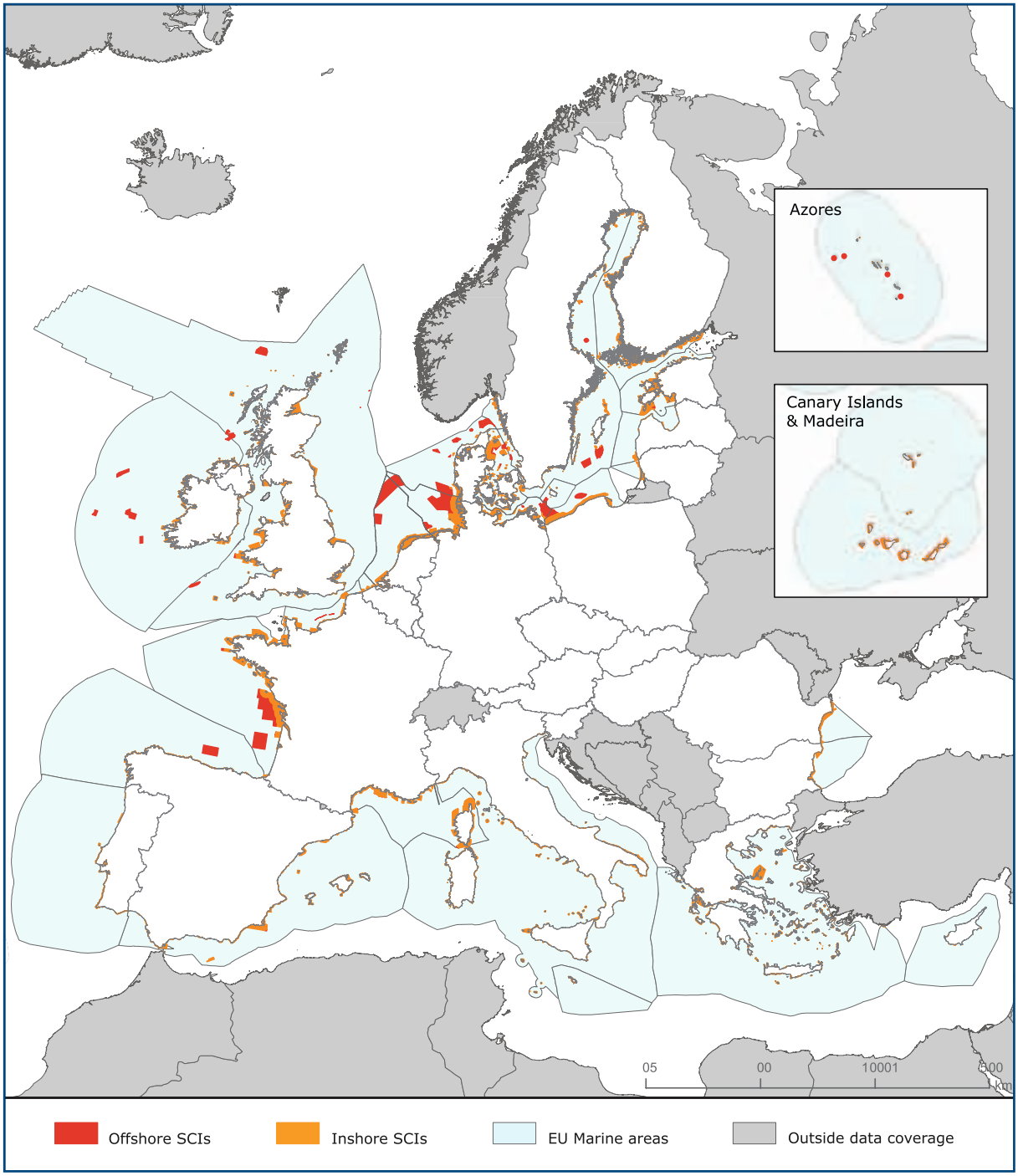
Based on the analysis of the current situation and in accordance with the regional commitments acquired through the CBD and the Barcelona Convention, Mediterranean countries must:

- Increase and accelerate the designation of MPAs
- Develop a coherent and viable network of MPAs through the regional network
- Improve the effectiveness of the management of existing MPAs and increase communication on a social level
- Work by crossing political lines to reduce/eliminate the most destructive fishing practices or pollution on a regional scale, and
- Include an ecosystem approach in the frameworks of national and multinational management.

According to the European Environment Agency (EEA, 2010) in December 2009, under European conservation Directives (Habitats and Birds), around 2,000 sites (exclusively marine and maritime-terrestrial) have been proposed or classified, which cover approximately 167,000 km^2. Much like at the regional level, there is a general shortfall in offshore areas as the majority of these sites are located in areas adjacent to the coast (see Figure 3).

Turkish authorities have expressed their disagreement with the jurisdictional maritime boundaries in the Eastern Mediterranean basin depicted in this map by Suárez de Vivero for the European Parliament, as it does not show claims by respective parties or overlapping claims (see general disclaimer text on the credits page). The delimitation of maritime boundaries between adjacent and opposite states in locations where maritime areas overlap or converge should be effected by agreement.

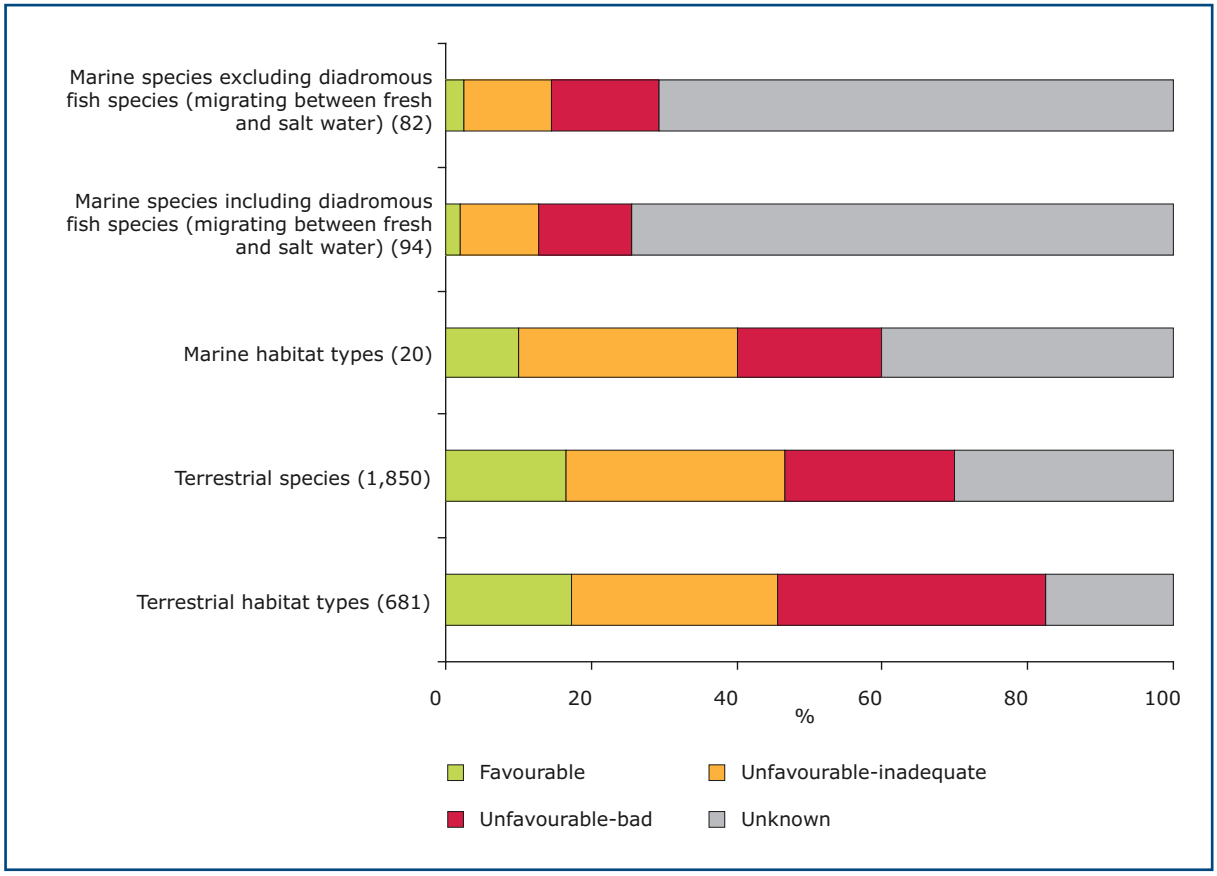
Figure 3. Sites of Community Importance (SCI) in the European Union in December 2009 (EEA 2010)



Within the framework of the Habitats Directive, countries must evaluate the conservation status of habitats and species every six years. It has thus been revealed that less than 5% of the marine species and less than 10% of marine habitats listed in Annex I of the Directive are considered to be at a "Favourable Conservation Status" as a result of the limited knowledge about them (see Figure 4). Furthermore, as a result of the evaluation of the biogeographic seminars in the Mediterranean region, it was concluded that the Natura 2000 Network insufficiently represents approximately 70% of the habitats and 83% of the marine species.

Turkish authorities have expressed their disagreement with the jurisdictional maritime boundaries in the eastern Mediterranean basin depicted in this map by the European Environment Agency, as it does not show claims by respective parties or overlapping claims (see general disclaimer text on the credits page). The delimitation of maritime boundaries between adjacent and opposite states in locations where maritime areas overlap or converge should be effected by agreement.

Figure 4. Conservation status of the marine habitats and species listed in Annex I of the Habitats Directive (EEA, 2010)



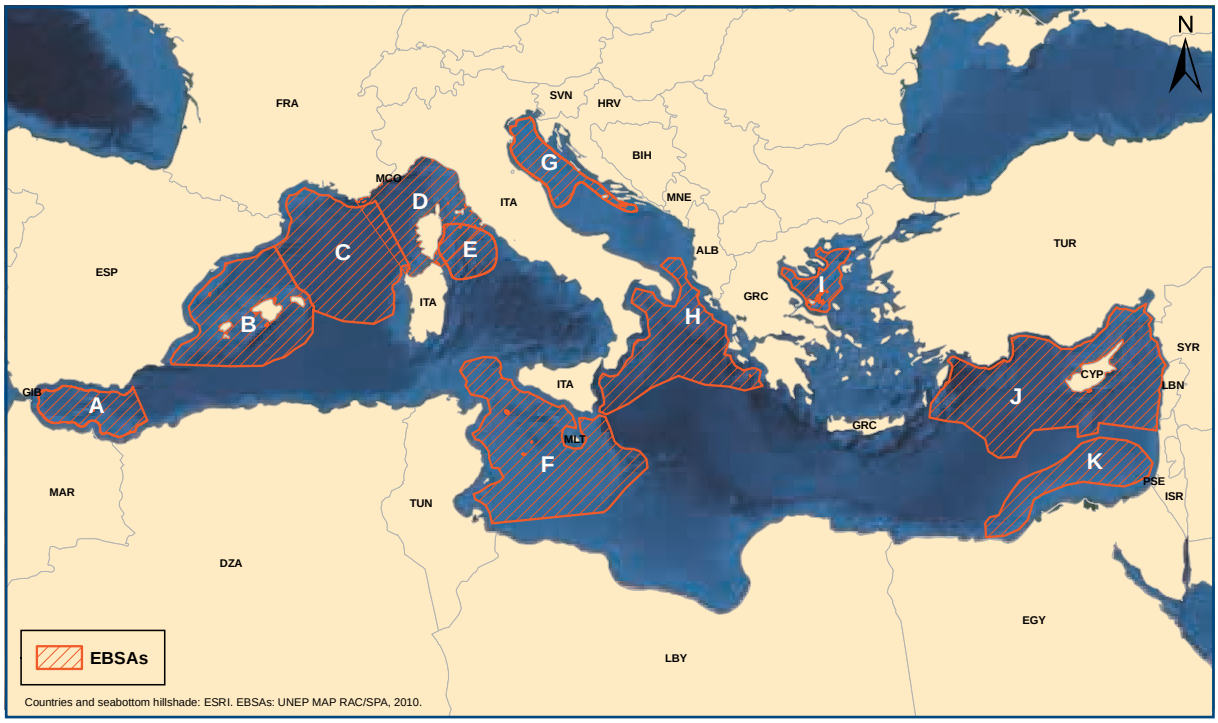
CURRENT PROTECTION INITIATIVES AT REGIONAL LEVEL

SPECIALLY PROTECTED AREAS OF MEDITERRANEAN IMPORTANCE

To date the most important initiative carried out to protect high seas areas in the Mediterranean basin was promoted by the Barcelona Convention and its Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol). Following the criteria defined by the CBD, Ecologically or Biologically Significant Areas (EBSAs) were identified based on this initial categorisation creating a list of priority areas where Specially Protected Areas of Mediterranean Importance (SPAMIs) can be designated (see Figure 5). This final list was approved at the Extraordinary Meeting of the Focal Points for Specially Protected Areas (UNEP(DEPI)/MED WG.348/5, June 2010) and contains the following open sea and deep-water areas (see Table 4): Alborán Sea, Balearic Islands area, Gulf of Lion area, Tyrrhenian Sea, Tunisian Plateau, Adriatic Sea, Ionian Sea, Aegean Sea, Levantine Sea and Nile Delta Region.

However, this proposal has a certain pelagic bias, since although oceanographical and geological features, as well as faunal assemblages were considered, information on benthic populations such as *Madrepora* and *Lophelia* reefs is still scarce.

Figure 5. Marine EBSAs identified on the basis of the available data which contain sites which can be designated SPAMI (**A** - Alboran Sea; **B** - Balearic Islands area; **C** - Gulf of Lions area; **D** - Pelagos Sanctuary; **E** - Tyrrhenian Sea; **F** - Tunisian Plateau; **G** - Adriatic Sea; **H** - Ionian Sea; **I** - Aegean Sea; **J** - Levantine Sea; **K** - Nile Delta Region). UNEP MAP RAC/SPA, 2010b (S. Requena)



Risso's dolphin (*Grampus griseus*). © OCEANA / Carlos Suárez

Table 4. List of priority conservation areas lying in the open seas, including the deep sea, likely to contain sites that could be candidates for the SPAMI list (Annex III. UNEP(DEPI)/ MED WG.348/5)

EBSA	PRIORITY CONSERVATION AREAS
ALBORAN SEA	**Alborán Seamounts** The seamounts in this portion of the Alborán Sea support a wide array of marine biodiversity, and the site contains sea bird and cetacean critical habitat. The southwestern portion of the Alborán Sea is highly productive and is also a transit corridor for bird, mammal and fish species travelling between the eastern Atlantic and Mediterranean Sea.
BALEARIC ISLANDS AREA	**Southern Balearic** This area of the Western Mediterranean contains seamounts and provides critical spawning habitats for bluefin tuna and critical sea bird and cetacean habitats as well.
GULF OF LIONS AREA	**Gulf of Lions shelf and slope** This highly productive shelf region of the greater Gulf of Lions also contains deep sea canyons that have a high biodiversity significance. The area also shares important cetacean habitats with the contiguous Pelagos Sanctuary, and is probably inhabited by the same cetacean populations that occur in the Sanctuary. It thus represents the natural continuation westward, involving waters off France and Spain, of cetacean conservation measures foreseen in the Pelagos Sanctuary. It is also an important sea bird area.
TYRRHENIAN SEA	**Central Tyrrhenian** This portion of the Tyrrhenian Sea, adjacent to the Pelagos Sanctuary, is highly productive, supporting sea bird, marine mammal and shark species.
TUNISIAN PLATEAU	**Northern Strait of Sicily** (including Adventure and nearby Banks) This portion of the south-central Mediterranean contains critical sea bird and cetacean habitats, deep sea corals, seamounts, and highly productive, very shallow offshore banks.
	Southern Strait of Sicily The Tunisian Plateau region of the Sicily Strait supports a high productivity and nursery areas for several shark species as well as critical sea bird habitats.
ADRIATIC SEA	**Northern and Central Adriatic** This portion of the Adriatic has a high natural productivity that supports an extensive food web, including sea birds, loggerhead sea turtles and several shark species. Considering the high level of degradation of the north-western Adriatic Sea, establishing a protected area in this site would require significant marine restoration effort.
IONIAN SEA	**Santa Maria di Leuca** In addition to supporting a broad array of Mediterranean diversity, this northern extent of the Ionian has significant deep sea coral habitats.
	Northeastern Ionian The northestern Ionian Sea includes cetacean critical habitats and important nursery areas for several shark species.
AEGEAN SEA	**Thracian Sea** This portion of the Aegean Sea is highly productive and includes key habitats for sea birds, the Mediterranean monk seal and other marine mammals, as well as deep sea coral habitats. The corresponding EBSA encompasses the Greek National Marine Park of Alonissos and the northern Sporades.
LEVANTINE SEA	**Northeastern Levantine Sea and Rhodes Gyre** This area encompasses important bluefin tuna spawning grounds as well as key marine mammal habitats. This oceanographic feature is the most productive in eastern Mediterranean pelagic waters and is likely to provide critical habitats for both fishery species and marine mammals.
NILE DELTA REGION	**Nile Delta Region** This southern portion of the Levantine Sea includes recently discovered cold seeps, as well as important sea turtle - and possibly cetacean - habitats.

VULNERABLE HABITATS

This initiative emerged in the framework of the Mediterranean Group of the Scientific, Technical and Economic Committee for Fisheries (STEFCF) of the European Commission and as a result of the working document on "Sensitive and Essential Habitats for fish in the Mediterranean Sea" (2006, unpublished) whose main aim was to identify those marine habitats crucial for the conservation of fish and shellfish of commercial interest. Similar initiatives have taken place in the waters of the USA and in the ICES region; but this type of approach is relatively new in the Mediterranean.

In the Mediterranean countries the scientific interest in identifying vulnerable habitats has grown over recent years due to the gradual degradation of the fisheries resources and in light of the impossibility of maintaining sustainable fishing. The approach, which is based on protecting fisheries resource sustainability, can be found in various legal documents (e.g. Council Regulation EC 1967/2006, 21st December 2006, with regard management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea, Marine Strategy Framework Directive [Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy]...) and through the establishment of recovery and management plans, limits to fishing efforts, areas and periods of season closure, etc.

On the basis of these considerations, two levels of vulnerable habitats were defined to be considered for protection with regards to the management of Mediterranean fisheries resources (see also Table 5):

- **Essential Fish Habitats** (EFH) refers to those waters and substrates necessary to fish for spawning, feeding or growth to maturity; to protect a specific organism it is necessary to protect those habitat that maintain the species at any life stage. Ardizzone (2006) stated that an EFH is a habitat identified as essential for the biological and ecological requirements for critical life history stages of exploited species, and which may require special protection to improve stock status and long-term sustainability. Therefore, the habitat must be identified as the physical space where individuals of a critical phase of species are concentrated [e.g. spawning or feeding areas, nursery grounds].
- **Sensitive Habitats** (SH) are habitats that are highly vulnerable or support organisms that are of interest because of their rarity. A SH consists of complex ecosystems with endemic species, high biodiversity or high productivity. This definition includes fragile habitats that are recognised internationally as ecologically important and which support key assemblages of commercial and non-commercial fish species and which may require special protection [e.g. the gorgonian *Isidella elongata* constitutes a habitat for *Aristeus antennatus* and *Aristaeomorpha foliacea* or those represented by sea beds with *Leptometra phalangium* crinoid facies can act as a sensitive habitat for commercial species such as European hake (*Merluccius merluccius*), blue whiting (*Micromesistius poutassou*) and poor cod (*Trisopterus minutus capelanus*)].

Table 5. EFH or SH relevant for fisheries in the Mediterranean (UNEP MAP RAC/SPA, 2010a)

FAUNAL ASSEMBLAGES	**Continental shelf/slope**	Coralligenous (maërl) *Funiculina quadrangularis* *Isidella elongata* *Leptometra phalangium*
	Deep sea	Deep sea sponges Cold coral reefs
	Chondrichthyans	Demersal/pelagic
	Pelagic fauna	Large migratory species (bluefin tuna, swordfish, albacore) Turtles Cetaceans
GEOLOGICAL FEATURES	Abyssal plains Cold seeps Mud bottoms/banks Seamounts	Brine pools Hydrothermal vents Mud volcanoes Submarine canyons
OCEANOGRAPHIC FEATURES	Cascades Fronts Upwellings	Eddies Gyres

In accordance with these definitions, De Juan and Lleonart (UNEP MAP RAC/SPA, 2010a) identified a set of 12 locations which are vulnerable to fishing activity and are considered a priority for protection. The locations have been taken into account to define aforementioned initiative (EBSAs) and based on the criteria of the CBD (see Figure 6 and Table 6).

Figure 6. Vulnerable areas of the Mediterranean according to De Juan and Lleonart (UNEP MAP RAC/SPA, 2010a)

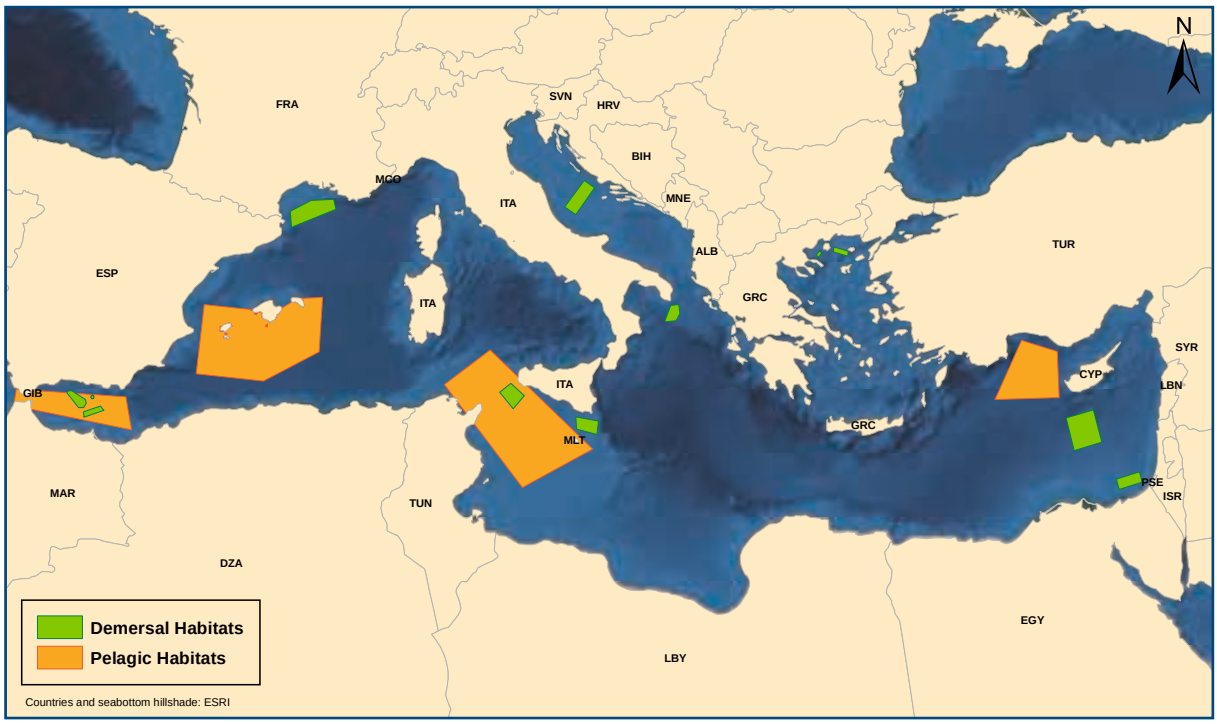


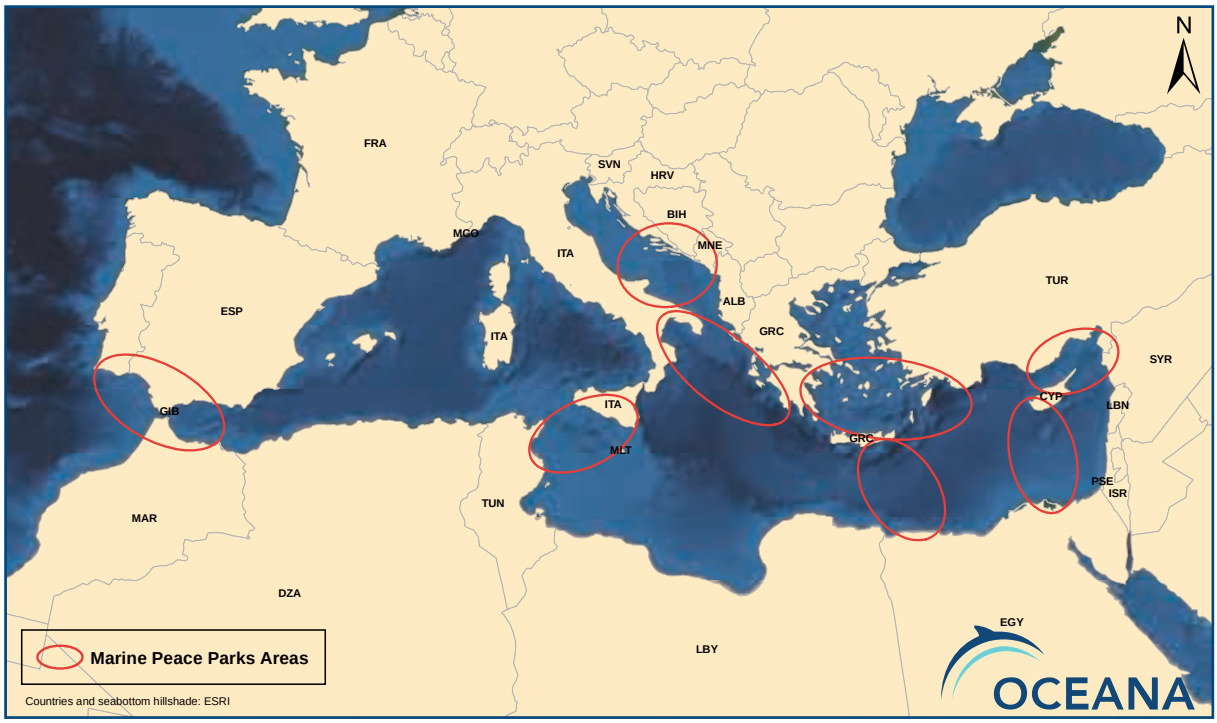
Table 6. Vulnerable places in open seas in the Mediterranean Basin, indicating potential impacts of fishing (De Juan and Lleonart, 2010)

TYPE OF HABITAT		AREA	IMPACTS
Demersal Habitats	EFH	**Adventure and Malta banks** Spawning and nursery area for demersal species of commercial interest	Habitat degradation Overexploitation of juveniles
		Samothraki Plateau/Strymonikos Gulf Nursery area for demersal species	Habitat degradation Overexploitation of juveniles
		Gulf of Lions slope Spawning area of various species of commercial interest. It also contains canyons with cold upwellings and deep-water corals	Habitat degradation Catch of large females
		Jabuka Pit Important nursery area for commercial species. European hake spawning area	Overexploitation of juveniles
	SH	**Santa Maria di Leuca** Massive concentration of deep-water corals dominating live colonies of *Lophelia pertusa* and *Madrepora oculata*. It is an important fishery of *Aristeus antennatus* and *A. foliacea* and secondarily of European hake and other commercial species	Habitat degradation
		Nile Cold Seeps High concentration of cold hydrocarbon seeps	Prevent future impacts
		Eratosthenes seamount Rare species of coral such as *Caryophyllia calveri* and *Desmophyllum cristagalli*. Probably the most pristine area of the Mediterranean	Prevent future impacts
		Alboran Sea seamounts High density of seamounts and canyons with deep-water corals. European hake fishery	Habitat degradation
Pelagic Habitats	EFH	**South of Balearic Islands** Important spawning area of bluefin tuna and for sperm whales and white sharks	Cetaceans' by-catch
		North of Levantine Sea It is the main spawning area of bluefin tuna and albacore in the eastern Mediterranean	Fishing for tuna
	SH	**Strait of Gibraltar and Alboran** Acts as a migratory route for many species of tuna, whales, dolphins and turtles. Resident population of *Delphinus delphis*. In this area there is also an anticyclonic gyre and the Almeria-Oran front which creates conditions of optimal high productivity for large pelagic fish	High by-catch
		Strait of Sicily Important in the migratory route of large pelagic fish and it represents a biodiversity hot spot in the Mediterranean. Spawning area for the white shark and bluefin tuna. Important fishery of large pelagic fish	Fishing for tuna High by-catch

MEDITERRANEAN MARINE PEACE PARKS

This initiative emerged out of the aim of preserving the marine diversity of the Mediterranean through cross-border parks. In November 2010, the Commission Internationale pour l'Exploration Scientifique de la mer Mediterranée (CIESM) invited 30 researchers who are experts in the Mediterranean region to identify priority areas of conservation containing unique characteristics from different perspectives (geological, ecological and oceanographic): seamounts, deep-water formations, spawning and feeding areas for endangered species, brine pools, etc. Based on these criteria eight areas were selected (see Figure 7) in a broad sense: the Strait of Gibraltar, areas of the Ionian Sea and the Levantine Sea and the south of the Aegean. The idea is that the "parks" located in these zones would allow harmonised protection measures as a result of the cooperation between the countries involved. This initiative would help to improve the relations between the neighbouring states with disputes over the jurisdiction of their waters for the benefit of the sustainable conservation of the Mediterranean Sea.

Figure 7. Areas for Mediterranean Peace Parks (CIESM Workshop 41, 2010)



Furthermore, with the growing self-declaration of Exclusive Economic Zones (EEZ) by various countries, the Mediterranean is now in a critical legal situation and therefore the political will to carry out conservation initiatives is required. The intention of this initiative is to protect more than 10% of the Mediterranean before 2020.

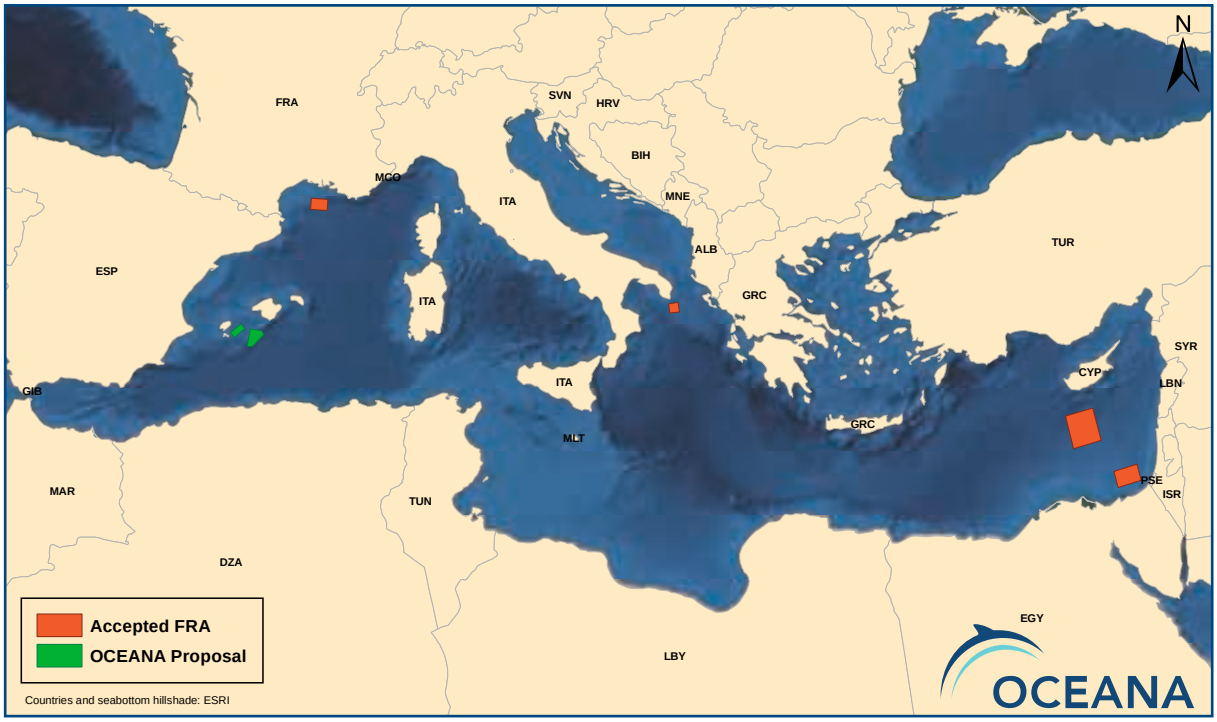
FISHERIES RESTRICTED AREAS

Based on conservation and the rational management of fishery resources, the General Fisheries Commission for the Mediterranean (GFCM) proposes through several Recommendations the restriction of specific fishing gears in different areas of the Mediterranean:

- Recommendation GFCM/2006/3 on the establishment of fisheries restrictive areas in order to protect deep sea sensitive habitats in the following places:
  1. The *Lophelia* Reefs of Santa Maria di Leuca.
  2. The area of cold seeps of the Nile Delta.
  3. The Eratosthenes Seamount.
- Recommendation GFCM/33/2009/1 on the establishment of a fisheries restricted area in the Gulf of Lions to protect spawning aggregations and deep sea sensitive habitats.

These areas are known as Fisheries Restricted Areas (FRA) and Oceana recently presented a new proposal to apply this ban to the seamounts of the south of the Balearic Islands (see Figure 8).

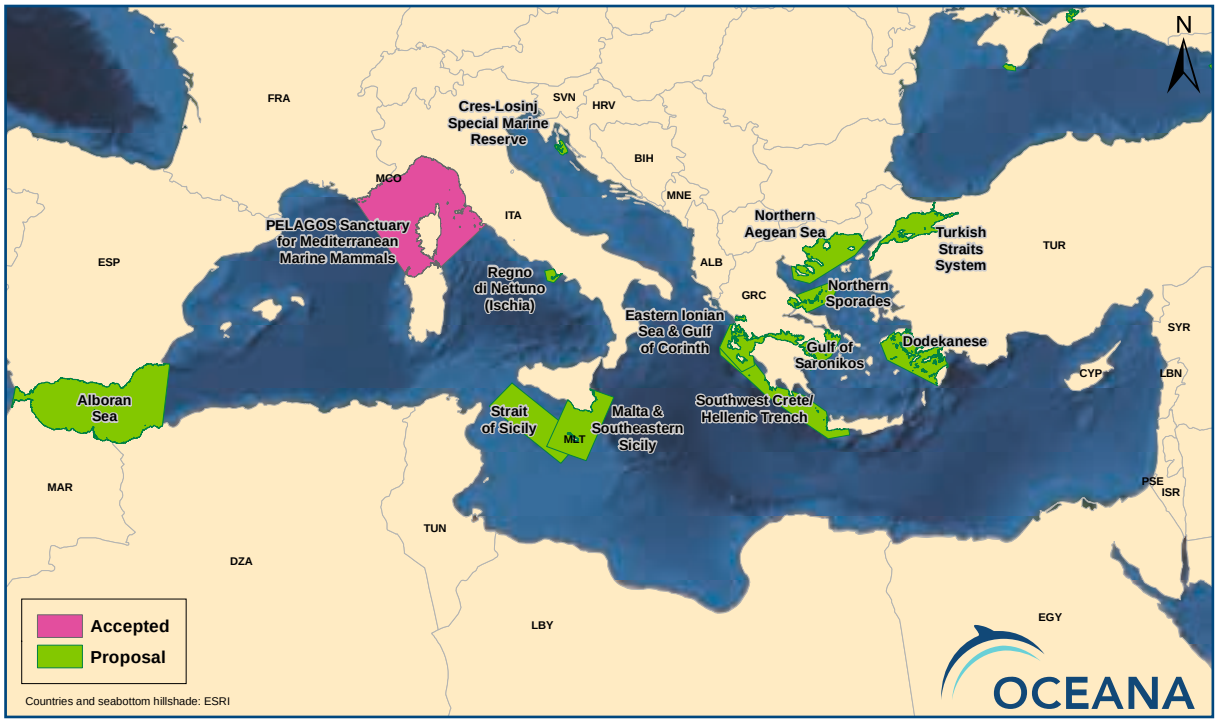
Figure 8. Fisheries Restricted Areas



ACCOBAMS

During the Third Meeting of the Parties in 2007, in the framework of the Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), Resolution 3.22 on MPAs was adopted (see Figure 9). The resolution was based on the general consensus that establishing MPAs can contribute to achieving and maintaining a favourable conservation status for cetaceans. One of the main motivations for carrying out this initiative was the population decline of many species of cetaceans as a result of the degradation of the habitat.

Figure 9. ACCOBAMS proposal for whales and dolphins in the Mediterranean and Black Seas (www.accobams.org)



GREENPEACE

In 2006, Greenpeace prepared the report "Marine Reserves for the Mediterranean", which discusses the urgent need to establish a network of Marine Reserves. As a result, a total of 32 large-scale areas were proposed (see Table 7) in high seas and in the coastal area, which also requires protection, but without going into much detail (see Figure 10).

Figure 10. Greenpeace protection proposal (based on data from Greenpeace, 2006)

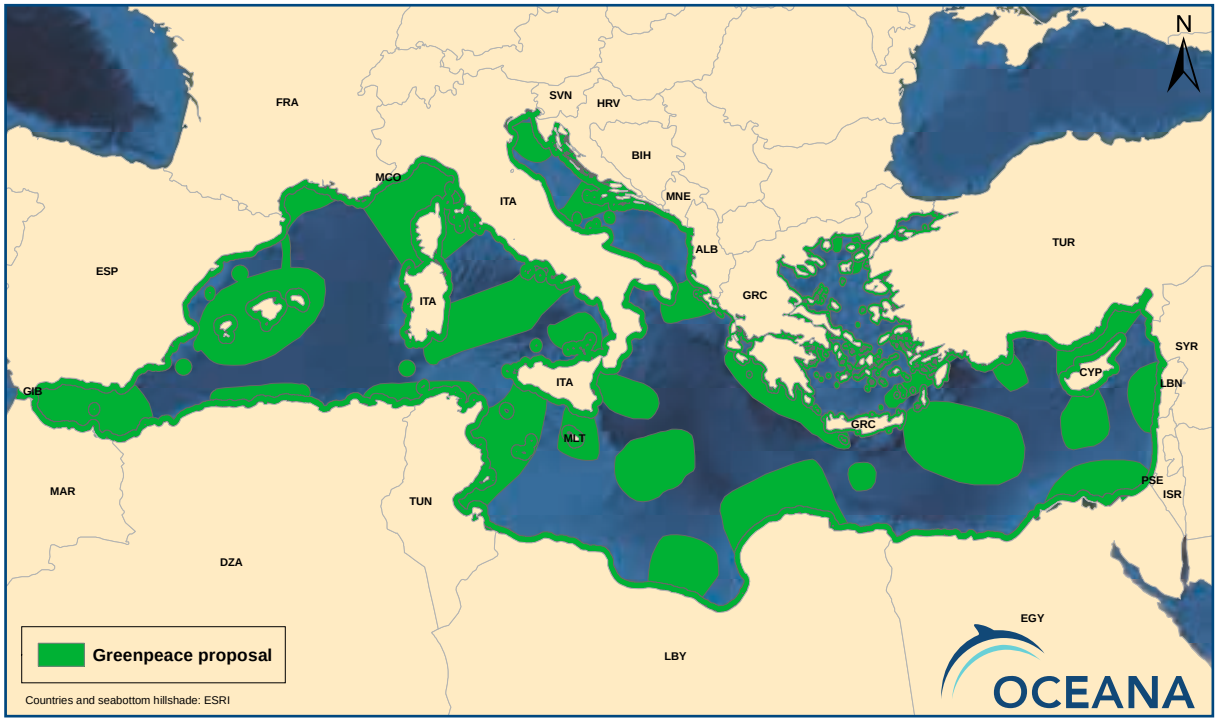


Table 7. Greenpeace protection proposal (Greenpeace, 2006)

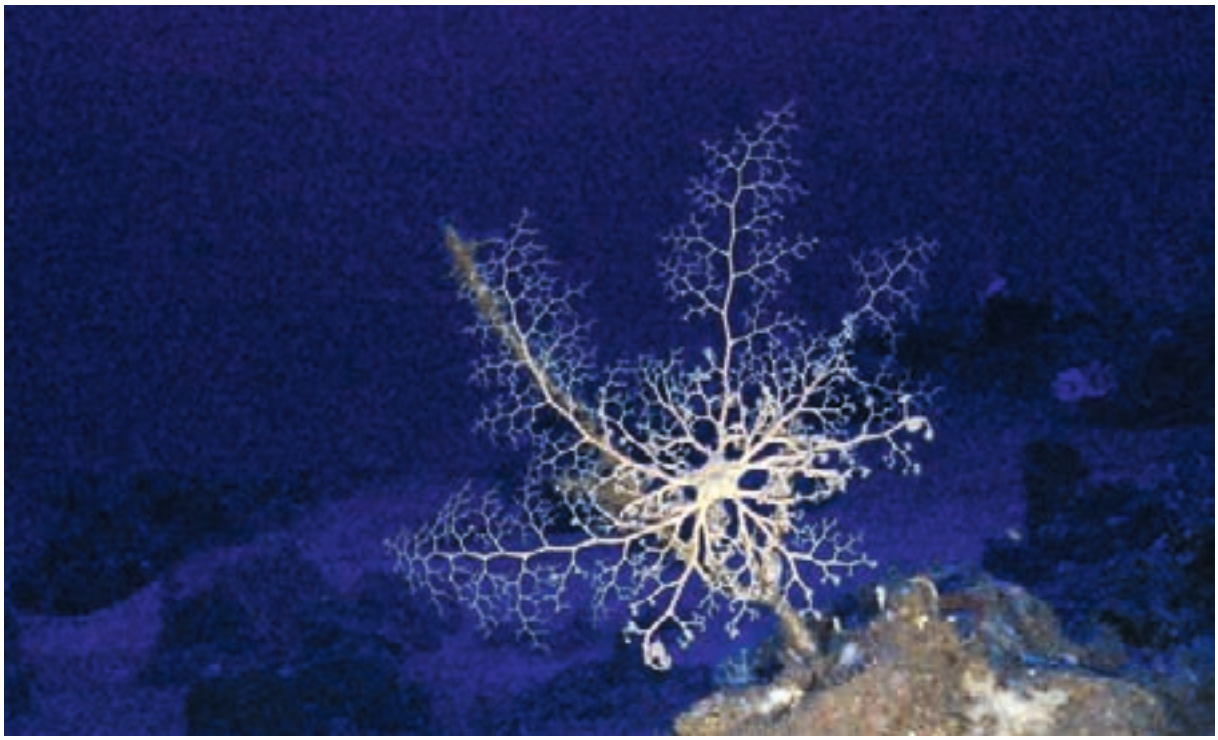
AREA	DESCRIPTION
1. Alboran Sea	The Alboran Sea is the meeting point for the cold waters of the Atlantic Ocean and the warmer waters of the Mediterranean Sea, and a migratory route for many species of fish, whales, dolphins and turtles. The Alboran contains regions of upwelling, where marine life thrives. 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 specie, 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.
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 (*Balaenoptera 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.

Table 7. Greenpeace protection proposal (Greenpeace, 2006)

AREA	DESCRIPTION
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 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.

Table 7. Greenpeace protection proposal (Greenpeace, 2006)

AREA	DESCRIPTION
26. Crete to Turkey	This area contains seamounts, and is an important area for common dolphin (part of a proposed MPA for common dolphin 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 alleteratus*). 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 turtle (*Caretta caretta*), green turtle (*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.



Basket star (*Astrospartus mediterraneus*). © OCEANA

OCEANA MEDNET: PROPOSAL FOR A NETWORK OF MPAS IN THE MEDITERRANEAN

ORIGIN AND JUSTIFICATION OF THE PROPOSAL

Being aware of the current situation and given the shortcomings observed, Oceana believes there is an urgent need to present a complete protection proposal for the Mediterranean Sea. This would result in significant progress towards achieving the 10% target recommended by the CBD. Oceana's proposal for the Mediterranean, henceforth **Oceana MedNet**, is essentially based on a precautionary approach, mainly because of the lack of knowledge, and on the guidelines which set out the latest conservation strategies at a regional level.

Unlike the aforementioned initiatives, Oceana proposes a network of defined sites rather than large priority areas for conservation. **Oceana MedNet** approach is a presentation of geographically localised proposals, and would also have the backing of a group of social agents (NGOs) and institutional and scientific organisations which are directly linked to the protection of the Mediterranean Sea and which can participate in the process of creating and developing the network.

The main objective of **Oceana MedNet** is:

> *"To establish a joint Mediterranean initiative to create a network of MPAs with the aim of protecting vulnerable and high ecological value areas within a context of limited knowledge and with the support of the precautionary approach under the recommendations established by the CBD"*

Until now, *de facto* protection in the Mediterranean has been concentrated in the coastal zone with a significant difference between the northern and southern coasts, as well as the eastern and western basins as previously mentioned. Most MPAs in the Mediterranean basin are located along the north coast (European countries), probably because of the obligation resulting from compliance with the inclusion of priority habitats and species (e.g. *Posidonia oceanica* seagrasses associated with shallow waters near to the coast) under the Habitats Directive 92/43/EEC. The exception is the marine sanctuary of the Ligurian Sea, the sole MPA in high seas beyond national jurisdiction. Does this mean that we should only protect those areas that are easily visible? We do not know if we still have time to prevent irreversible damage; why only protect what we know best? Why, when it comes to conservation, do humans not have the same economic ambitions as in other fields, even though the short and long-term benefits of biodiversity protection are so much greater? Why do we not try it in high seas, when the benefits of MPAs are globally proven?

So far the lack of scientific knowledge has greatly limited the capacity for developing appropriate criteria for the selection of sites and their size, in order to develop a high seas network of Mediterranean MPAs. In addition, there exists an "invisible barrier" of maritime jurisdictions and conflicts due to claims over marine area. Nevertheless, it is urgent to take protective measures for areas which are currently known to be vulnerable.

PROPOSAL DEVELOPMENT

At the request of the CBD (Conference of the Parties, 2008) amongst the decisions adopted for biological marine and coastal Diversity (UNEP/CBD/COP/DEC/IX/20), the first stage to consider in the development of representative networks of MPAs is:

> *"The scientific identification of an initial set of areas of ecological and biological importance. The criteria which figures in Annex 1 of the Decision should be applied, taking into consideration the best scientific information available and applying the precautionary approach. This identification must be centred on preparing an initial set of sites as more information becomes available".*

Following Oceana's line of research during the latest Mediterranean campaigns, and considering that underwater elevations are hot spots of biodiversity (Morato *et al*, 2010), **Oceana MedNet** is above all geared towards protecting this type of enclave. According to Kitchingman (2007), 50% of the world's potential underwater elevations are in an Exclusive Economic Zone (in high seas in the Mediterranean, due to its special jurisdictional situation) and locating them, will help to identify potentially vulnerable regions and improvement of ecological processes understanding.

According to the methods used for identifying potential underwater elevations, there are more than 14,000 seamounts worldwide with a height greater than 1000 metres. Fifty nine of these formations are located in the Mediterranean and Black Sea, which is less than 1% of the world's total (see Table 8), thus their importance.

Table 8. Potential underwater elevations in FAO Areas (Kitchingman *et al*, 2007)

OCEANIC AREAS	UNDERWATER ELEVATIONS	Percentage (%)
Pacific	8,955	63%
Atlantic	2,704	19%
Indian	1,658	12%
Mediterranean and Black Sea	59	<1%
Southern Ocean	898	6%
Arctic	13	<1%
TOTAL	**14,287**	

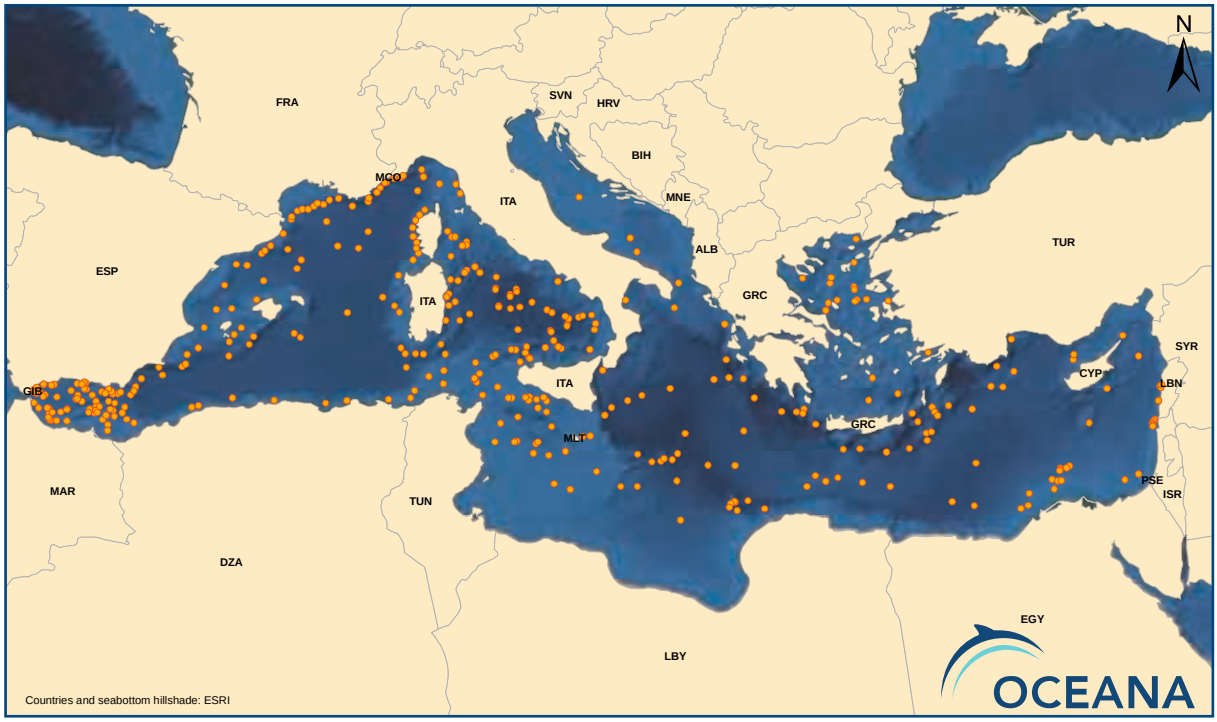
However, it is evident that it is not possible to fulfil the CBD objectives solely with a proposal based on underwater elevations. Therefore, the development of **Oceana MedNet** focused on offering a varied proposal, where not only underwater elevations are considered, but also another series of oceanographic (e.g. eddies) or geological formations (e.g. mud volcanoes) in compliance with the initial requirements of the CBD.

Mainly due to the lack of biological and ecological knowledge, the systematic selection of a series of sites which could potentially become part of the network of MPAs in offshore areas "all at once" will first depend on geomorphological criteria (Rachor and Günther, 2001). This in turn means that in the mid-long term this proposal supported by a precautionary principle, should be complemented by the necessary research to document the richness of this type of figures.

METHODOLOGY

Documentation compiled by Oceana over years of research was used as background data. Other sources used included information about underwater relief from GEBCO (General Bathymetric Chart of the Oceans) and the potential locations of seamounts published by Morato and Pauly (Kitchingman and Lai, 2004. *Seamounts: Biodiversity and Fisheries. Interferences on potential seamount locations from mid-resolution bathymetric data*). All of these locations were compiled in a Geographic Information System (GIS) and after a process of homogenisation and standardisation, 385 sites emerged which could have been included in **Oceana MedNet** (see Figure 11).

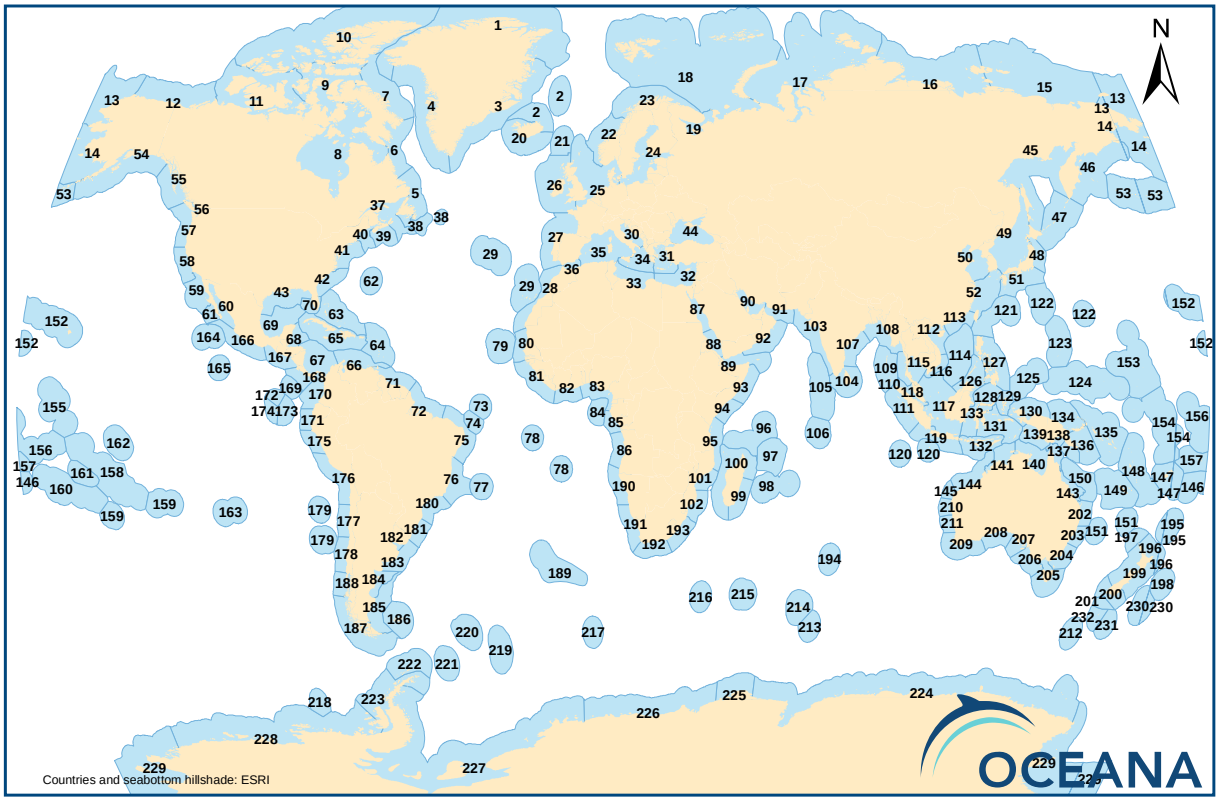
Figure 11. Location of the 385 initial sites which could potentially be included in MedNet



Although the Mediterranean Sea is relatively small in size in comparison to the rest of the world's seas and oceans (approximately 2,530,000 km^2) it is not easy planning a proposal for the entire area. It was therefore necessary to use subdivisions (planning units) in order to complete the proposal based on a detailed analysis and as homogenously as possible.

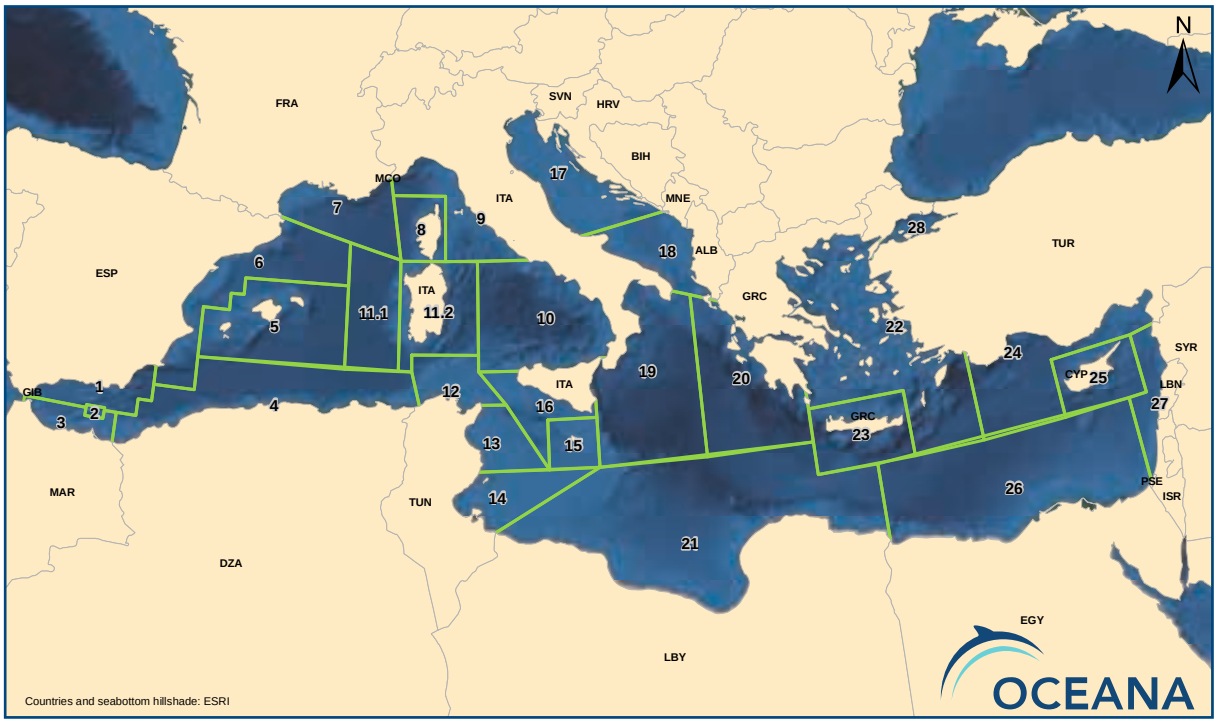
Theoretically, in order to plan a regional network of MPAs, a tool for biogeographical classification by marine ecoregions (Marine Ecoregions of the World, MEOW) would be necessary. These regions reflect the different biological units and work as an instrument for managing the oceans, since they host a composition of relatively homogenous species which are clearly distinguished from the adjacent systems. The composition of species is probably determined by the predominance of specific ecosystems and/or a combination of oceanographic or topographic characteristics (Spalding *et al*, 2007). The Mediterranean is divided into seven marine ecoregions (see Figure 12): Adriatic Sea (30), Aegean Sea (31), Levantine Sea (32), Tunisian Plateau/Gulf of Sidra (33), Ionian Sea (34), West Mediterranean (35), Alboran Sea (36), which are useful for carrying out evaluations within a global framework. However, they were far too broad to develop the type of detailed proposal that Oceana intended to create.

Figure 12. Marine Ecoregions of the World (Spalding *et al*, 2007)



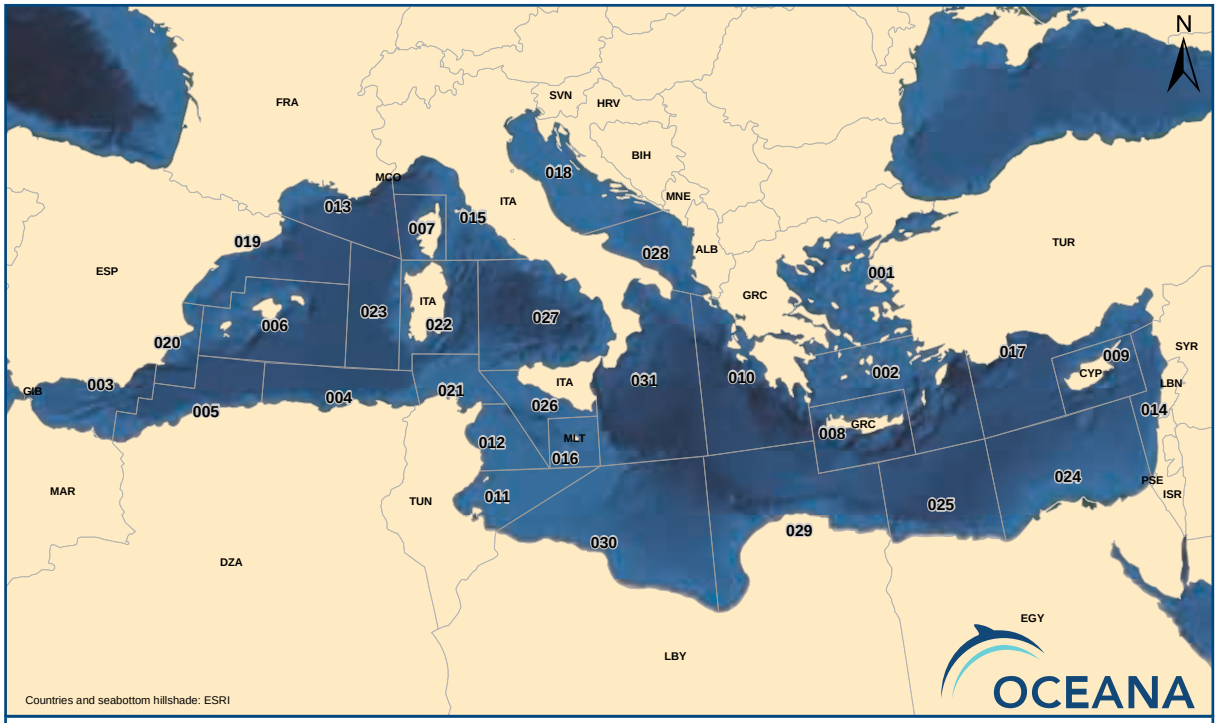
For practical purposes, the most useful classification for our objective is the division used by the General Fisheries Commission for the Mediterranean (GFCM). This organisation uses geographical division into 30 sub areas called Geographical Sub Areas (GSAs) to manage fisheries statistics, and which include the Mediterranean Sea and the Black Sea (see Figure 13).

Figure 13. Geographical subdivision used by GFCM (www.gfcm.org)



After a brief analysis it was decided to modify the division slightly because there were still large areas (e.g. area 21 - Southern Ionian Sea) and others which needed to be considered as one single unit (e.g. Alboran Sea - areas 1, 2 and 3). The final planning units used to design the network are the following:

Figure 14. Geographical division by zones used to plan MedNet proposal



001. Aegean Sea (North)	008. Crete Island	015. Ligurian and North Tyrrhenian Sea	022. Sardinia (east)	029. Southern Ionian Sea (East)
002. Aegean Sea (South)	009. Cyprus Island	016. Malta Island	023. Sardinia (west)	030. Southern Ionian Sea (West)
003. Alboran Sea	010. Eastern Ionian Sea	017. North Levant (South of Turkey)	024. South Levant (East)	031. Western Ionian Sea
004. Algeria (East)	011. Gulf of Gabes	018. Northern Adriatic	025. South Levant (West)	
005. Algeria (West)	012. Gulf of Hammamet	019. Northern Spain (North)	026. South of Sicily	
006. Balearic Island	013. Gulf of Lions	020. Northern Spain (South)	027. South Tyrrhenian Sea	
007. Corsica Island	014. Levant	021. Northern Tunisia	028. Southern Adriatic Sea	

Shrimp (*Periclimenes amethysteus*) and anemone (*Aiptasia mutabilis*). © OCEANA / Carlos Minguell

Once all of the locations were obtained, an in-depth analysis of each of the areas was undertaken, gathering all of the information possible in a continuous process of documentation which took into account the initiatives that have already begun on a regional scale and which reinforce **Oceana MedNet**. The tool used for storing all of this information was an Access database created exclusively for that purpose. A total 159 locations were finally selected according to different criteria:

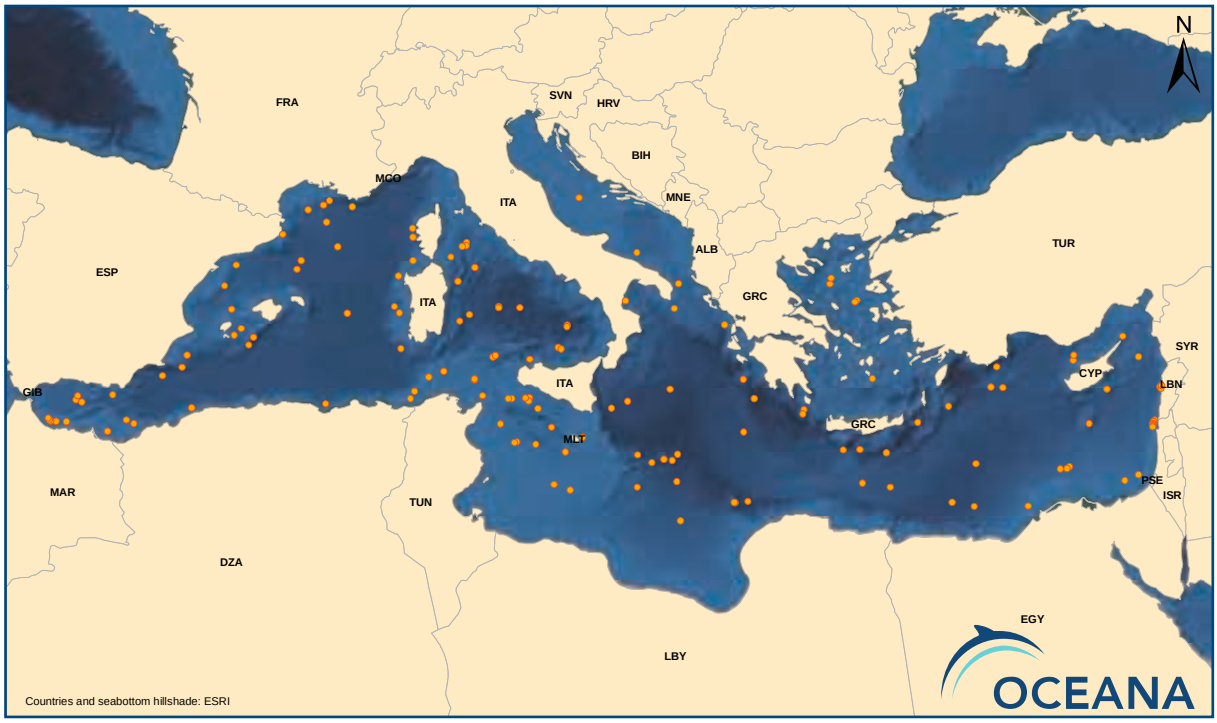
- Biological:
  1. Key species (commercial or biological/ecological interest)
  2. CBD criteria
- Geological:
  1. Type of elevation or geological formation (escarpments, seamounts, canyons, trenches, etc.)
- Administrative:
  1. Affected by waters of national jurisdiction
  2. Jurisdictional conflicts
- Oceanographic:
  1. Connection by currents, gyres
  2. Fronts
- Detected or potential threats
  1. Illegal, Unregulated and Unreported Fishing
  2. Potential oil and gas prospecting
  3. Pollution
  4. Maritime traffic
  5. By-catch
- Available scientific documentation (biological, geological, oceanographic, etc.)
- Existing proposals:
  1. ACCOBAMS
  2. Barcelona Convention - SPA/BD Protocol
  3. Vulnerable habitats impacted by fishing activities (EFH/SH)
  4. GFCM (FRAs)
  5. Greenpeace

This information gave us an idea of the ecological importance of each of the locations and made it possible to select 159 sites to be included in the proposal (see Figure 15).

After an analysis of each site, the different locations were put into groups based on proximity. The final result is 100 areas constituting Oceana´s proposal for a network of Mediterranean MPAs, **MedNet** (complete list in Table 9 and Figure 16; also information for MedNet sites by planning unit in Annex II).

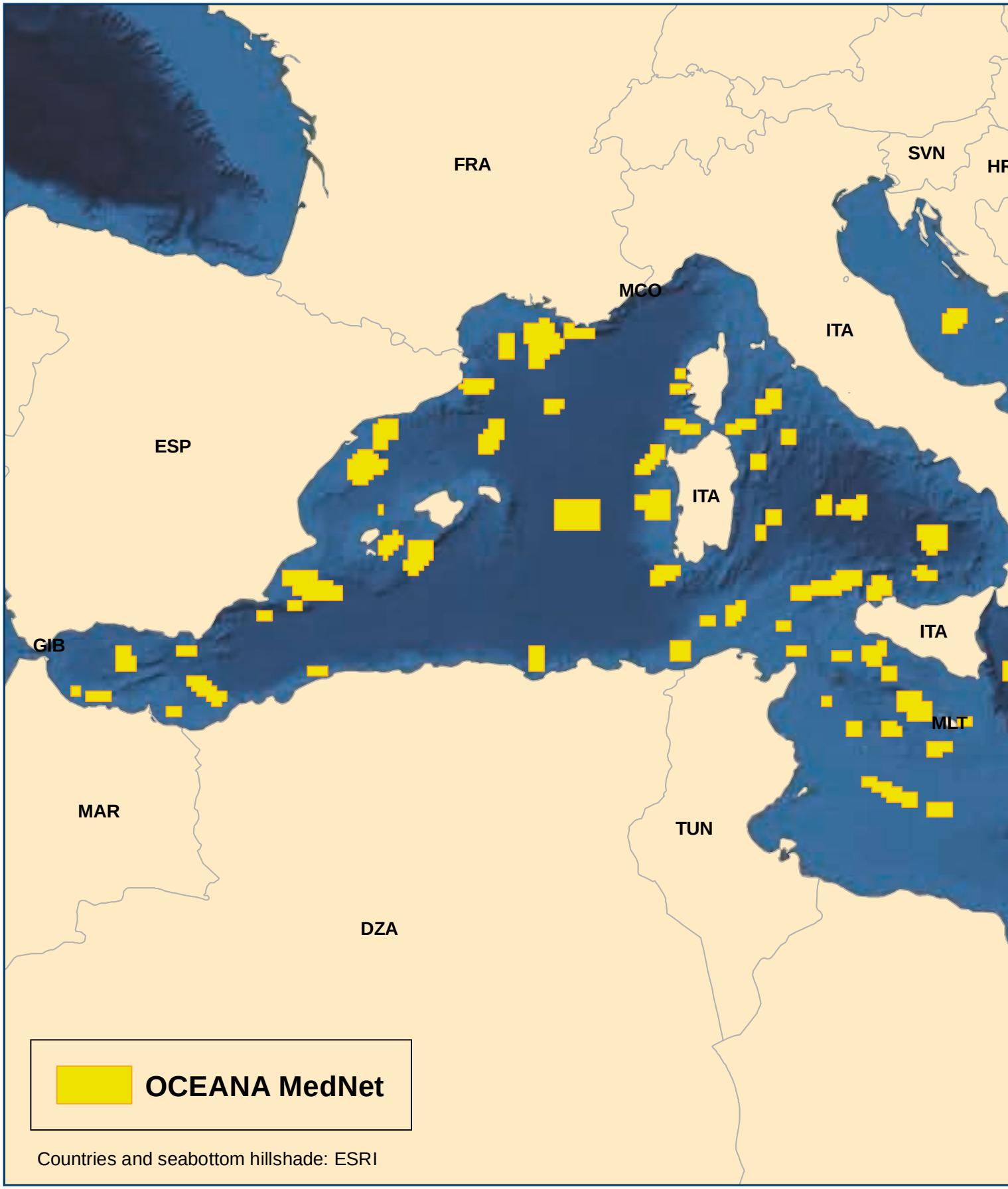
To determine the area of each of these, an adjustment was made according to the morphology of the seabed on which a 10x10 km grid was superimposed with the ETRS89 LAEA (Lambert Azimuthal Equal Area) reference system. This is the grid recommended by the INSPIRE Directive (Infrastructure for Spatial Information in Europe - Directive 2007/2/EC of the European Parliament and Council of 14th March 2007 in which a spatial information infrastructure is established in the European Community) and the EEA (European Environmental Agency) since it makes it possible to carry out a spatial analysis using grids with regular cells, conserving the area of the elements which are represented. The reason for using a grid of this size is to guarantee some protection for benthic communities. The surface area required to achieve this objective must be no less than 100 km^2 (Rachor and Günther, 2001).

Figure 15. Locations of the 159 sites of MedNet



An initiative with these characteristics must be supported by social and institutional actors involved in the declaration, study and management of future MPAs. Therefore, Oceana has also worked on a compilation of national administrations, marine research institutes and Mediterranean NGOs associated with the protection of the Mediterranean Sea and its species.

Figure 16. Oceana MedNet MPAs



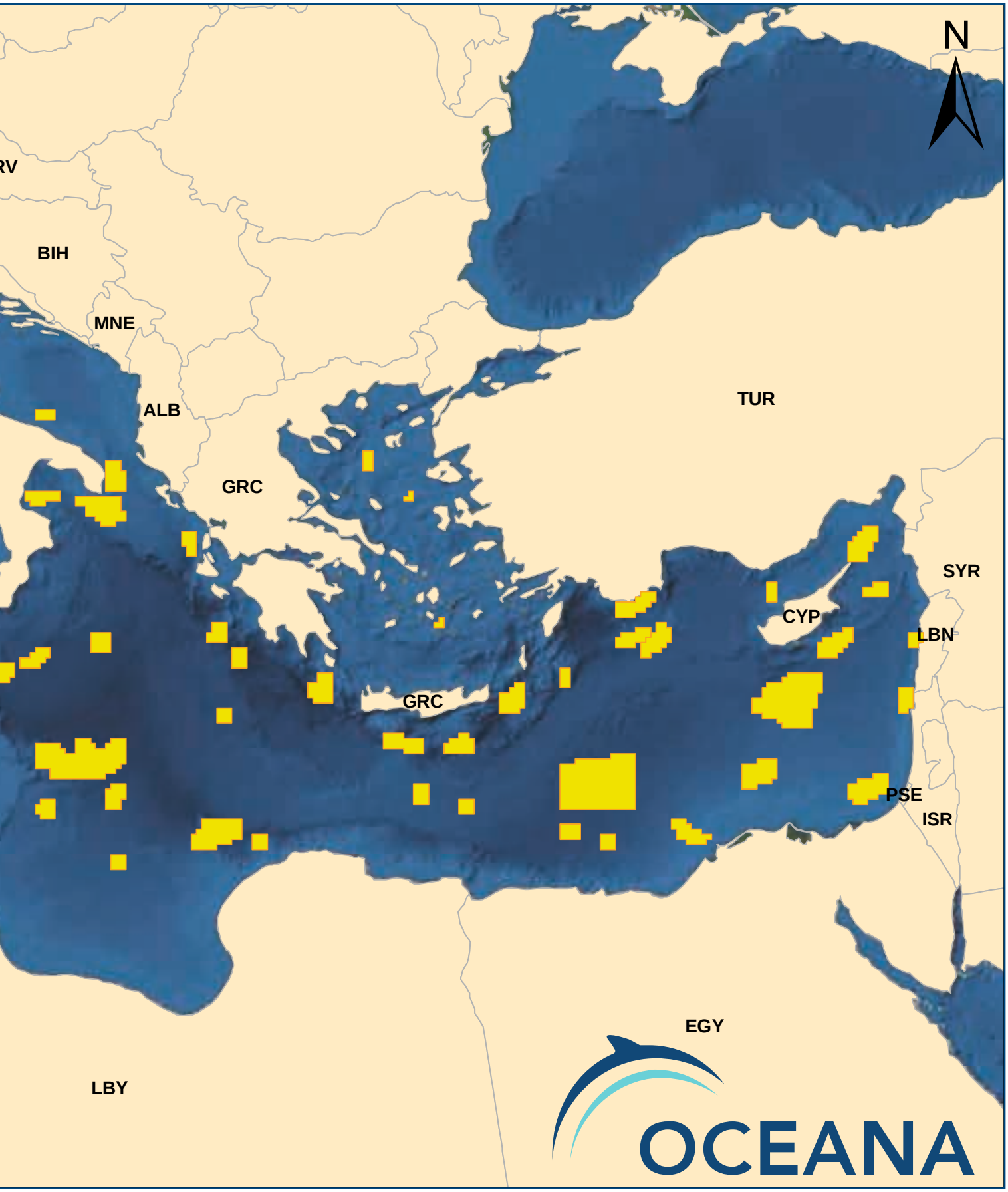

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Table 9. Oceana MedNet. The 100 reasons to reach 10% target

PLANNING UNITS	Oceana MedNet 100	Area (km²)	Sites (159)
001. AEGEAN SEA (NORTH)	1. Glavki and Venus Banks	800	Venus Bank
			Glavki Bank
	2. Stokes and Brooker Banks	300	Brooker Bank
			Stokes Bank
002. AEGEAN SEA (SOUTH)	3. Columbo Seamount	300	Columbo Seamount
	4. Southern Aegean Seamount I	800	NO NAME Seamount
	5. Southern Aegean Seamount II	2,400	NO NAME Seamount
003. ALBORAN SEA	6. Southern Almeria Banks	800	Avenzoar/Sabinar Bank
			Pollux Bank
	7. Northern Alborán Banks	1,800	Djibouti Bank
			Djibouti Spur
			El Idrissi Bank
	8. Xauen and Tofiño Banks	1,000	Tofiño Bank
			Xauen Bank
	9. Southern Alboran Volcanoes	400	Maya Mud volcano
			Dhaka Mud volcano
			Mulhacen Mud volcano
	10. Melilla Carbonate Mound Field	600	Melilla Carbonate Mound Field
004. ALGERIA (EAST)	11. Bejaia Canyon	1,500	Bejaia Canyon
	12. Le Sec Bank / Les Sorelles Reef	1,600	Les Sorelles Reef
			Le Sec Bank
005. ALGERIA (WEST)	13. Khadra Canyon	800	Khadra Canyon
			Guelta Canyon
	14. Alidade Bank / Habibbas Escarpment	2,600	Habibbas Escarpment
			Yusuf Ridge
			Alidade Bank
006. BALEARIC ISLAND	15. Balearic Seamounts	4,900	Bell Guyot Seamount
			Ausias March Bank
			Emile Baudot Seamount
			Ses Olives Bank
	16. Morrot de Sa Dragonera	200	Morrot de Sa Dragonera Seamount
007. CORSICA ISLAND	17. Sagone Canyon	700	Sagone Canyon
	18. Castelsardo Canyon	1,500	Castelsardo Canyon
	19. Porto Canyon	400	Porto Canyon
008. CRETE ISLAND	20. Ptolemy mountains	2,400	Ptolemy mountains Mountains
			Ptolemy Trench
	21. Pliny Trench	1,900	Pliny Trench
009. CYPRUS ISLAND	22. Hecataeus Ridge	2,700	Hecataeus Ridge
	23. Northern Cyprus	800	Adana Trench
			G'zelyurt Knoll

Table 9. Oceana MedNet. The 100 reasons to reach 10% target

PLANNING UNITS	Oceana MedNet 100	Area (km²)	Sites (159)
010. EASTERN IONIAN SEA	24. Ionian Volcanic Arch	1,300	Ionian Volcanic Arch Mountains
	25. Cobblestone Mud Volcano	900	Cobblestone Mud Volcano
	26. Northern Ionian Seamount	1,400	NO NAME Seamount
	27. Vavilov Hole	1,200	Vavilov Hole
	28. Pelopónnisos-Cretan Ridge	2,500	Pelopónnisos-Cretan Ridge
			NO NAME Seamount
011. GULF OF GABES	29. Jarrafa Trough	3,100	Jarrafa Trough
012. GULF OF HAMMAMET	30. Sicily Channel Banks	900	El Babouch Bank
			Alfil Bank
	31. Birsa Bank	400	Birsa Bank
013. GULF OF LIONS	32. Gulf of Lion Canyons	5,200	Grand Rhône Canyon
			Marseille Canyon
			Rhône Fan
	33. Maures Escarpment	1,400	Maures Escarpment
	34. Sète Canyon	1,500	Sète Canyon
014. LEVANT	35. Lebanon Canyons	800	Beirut Escarpment
			Saint Georges Canyon
			Junieh Canyon
	36. Israel Canyons	1,400	Shomrat Canyon
			Nahariya Canyon
			Saar Canyon
			Akhziv Canyon
			Hilazon Canyon
			Qishon Canyon
	37. Sour Canyon	1,300	Sour Canyon
015. LIGURIAN AND NORTH TYRRHENIAN SEA	38. Caprera Canyon	1,300	Caprera Canyon
	39. Southern Ligurian Seamounts	1,900	Giglio Ridge
			Cialdi Seamount
			Jadul Ridge
016. MALTA ISLAND	40. Southern area of Malta Island	1,300	South of Malta
	41. Malta Trench	3,400	Malta Trench
	42. Hurd Bank	600	Hurd Bank
017. NORTH LEVANT (SOUTH OF TURKEY)	43. Anaximander ridge	1,900	Anaximander (Mud Volcanoes Amsterdam, Kazan, Kula, Athina and Thessaloniki) Ridge
	44. Finike Trench	2,400	Finike Trench
	45. Karpas Ridge	3,000	Karpas Ridge
	46. Anaximenes Ridge	2,500	Anaximenes Ridge
018. NORTHERN ADRIATIC	47. Northern Adriatic	2,100	NO NAME Deep
019. NORTHERN SPAIN (NORTH)	48. Northern Spain Seamounts	2,600	Brutus Hill
			Spartacus Seamount
	49. La Renaixença Hill	1,100	La Renaixença Hill
	50. Ebro Escarpment	3,900	Ebro Escarpment
	51. Tortosa Canyon	2,500	Tortosa Canyon
	52. Palamós Canyon	1,800	Fonera/Palamós Canyon

Table 9. Oceana MedNet. The 100 reasons to reach 10% target

PLANNING UNITS	Oceana MedNet 100	Area (km²)	Sites (159)
020. NORTHERN SPAIN (SOUTH)	53. Alicante Canyon	5,200	Alicante Canyon
	54. Seco de Palos Bank	600	Seco de Palos Bank
	55. Aguilas Seamount	600	Aguilas Seamount
021. NORTHERN TUNISIA	56. Sentinelle Bank	1,500	Sentinelle Bank
	57. El Haouaria Bank	800	El Haouaria Bank
	58. Spiss Bank	600	Spiss Bank
	59. Skerki and Hecate Banks	600	Hecate Patch
			Skerki Bank
022. SARDINIA (EAST)	60. Vercelli Seamount	900	Vercelli Seamount
	61. Cornaglia Seamount	900	Cornaglia Seamount
	62. Baronie Mountains	900	Baronie Mountains
	63. Quirra Mountains	600	Quirra Mountains
	64. San Antioco Canyon	1,900	San Antioco Canyon
023. SARDINIA (WEST)	65. Nurra Escarpment	2,100	Nurra Escarpment
	66. Western Sardinia Canyons	3,500	Il Catalano Canyon
			Oristano Canyon
	67. Balearic Abyssal Plain	5,400	NO NAME Abyssal Plain
024. SOUTH LEVANT (EAST)	68. Eratosthenes Seamount	11,000	Eratosthenes Seamount
	69. Alexandria Canyon	2,300	Alexandria Canyon
	70. Nile Cold Hydrocarbon Seeps	3,400	Nile Cold Hydrocarbon Seeps II Cold Seeps
			Nile Cold Hydrocarbon Seeps I Cold Seeps
	71. Egyptian Mud Volcanoes	3,400	NO NAME Mud volcano
			Isis Mud Volcano
			Amon Mud Volcano
			Osiris Mud Volcano
			NO NAME Mud volcano
025. SOUTH LEVANT (WEST)	72. Irving Seamount	1,200	Irving Seamount
	73. Cheffren Mud Volcano	900	Cheffren Mud volcano
	74. United Nations Mud Volcano	900	United Nations Mud volcano
	75. Mersa-Matruth Eddy	15,200	Mersa-Matruth Eddy Gyre
026. SOUTH OF SICILY	76. Adventure Bank	800	Adventure Bank
			Pantelleria Shoal
	77. Southern Sicily Seamounts	1,900	Nerita Patch
			Graham (Volcanoes Ferdinandea and Isla Graham) Shoal
			Terrible Bank
			Empedocles Seamount
	78. Urania Bank	900	Urania Bank
	79. Linosa Bank	1,100	Linosa Bank
			Linosa Trench

Table 9. Oceana MedNet. The 100 reasons to reach 10% target

PLANNING UNITS	Oceana MedNet 100	Area (km²)	Sites (159)
027. SOUTH TYRRHENIAN SEA	80. Vavilov Seamount	2,100	Vavilov Seamount
			D'Ancora Ridge
	81. Marsili and Plinio Seamounts	3,000	Marsili Seamount
			Plinio Seamount
	82. Magnaghi and Vittorio Emmanuel Seamounts	1,100	Vittorio Emmanuel Seamount
			Magnaghi Seamount
	83. Northern Sicilian Seamounts	4,700	Drepano Seamount
			Ustica Ridge
			Aceste Seamount
			Ustica Escarpment
	84. Eolian Seamounts	1,100	Eolo Seamount
			Enareta Seamount
	85. San Vito Canyon	2,000	San Vito Canyon
028. SOUTHERN ADRIATIC SEA	86. Bari Canyon	800	Bari Canyon
	87. Otranto Channel Escarpment	2,200	Elevations and Escarpments os southern Adriatic
029. SOUTHERN IONIAN SEA (EAST)	88. Akhdar Seamount	900	Akhdar Seamount
	89. Olimpi Mud Volcano	1,200	Olimpi (Napoli and Milano mud volcanoes) Mud volcano
	90. Southern Ionian Seamounts	4,800	Herodotus Seamount
			Battos Seamount
			NO NAME Seamount
			Herodotus Trench
			NO NAME Seamount
			Cyrene Seamount
030. SOUTHERN IONIAN SEA (WEST)	91. Epicharmos Seamount	1,400	Epicharmos Seamount
	92. Melita Bank	1,500	Melita Bank
	93. Sirte Rise	900	Sirte Rise
	94. Archimedes Seamount	1,700	Archimedes Seamount
031. WESTERN IONIAN SEA	95. Malta Ridge	11,200	NO NAME Seamount
			NO NAME Seamount
			NO NAME Seamount
			NO NAME Seamount
			NO NAME Seamount
	96. Victor Hensen Hill	1,600	Victor Hensen Hill
	97. Alfeo Seamount	1,500	Alfeo Seamount
	98. Anteo Hill	1,600	Anteo Hill
	99. Amendolara Seamount	1,700	Amendolara Seamount
	100. Santa María di Leuca	4,200	Santa Mª di Leuca

ANALYSIS

According to De Juan and Lleonart (2010), a network of MPAs should be representative of the diversity of habitats, permit connectivity between areas and each area should be large enough to enable a structured habitat and to eliminate (or mitigate) the negative influences of human activity (e.g. fishing) in surrounding areas. Furthermore, to guarantee a national/international network of MPAs in the long term, it must include pelagic and demersal areas. Moreover, the results of Hasting and Bostford (2003) in which the designs of MPAs with different objectives are compared, state that the size of the MPAs will directly depend on their purpose (biodiversity *vs* fisheries aims). When the objective is conservation, the MPAs must have as large a surface area as possible. In this analysis we will look into each aspect in detail.

Protected surface

The main goal of this document is to push towards achieving the objective set by the CBD to protect 10% of the seas before the new deadline (2020). **Oceana MedNet** would cover a surface of 207,100 km², which is equivalent to 8.2% of the total surface of the Mediterranean. If this proposed coverage is added to existing MPAs, the protected area in the Mediterranean would reach 12% of the total surface, exceeding the 10% target (see Table 10).

Table 10. Results of the application of MedNet proposal

	Coverage (km²)	Percentage
MedNet Proposal	207,100	8.2%
Ligurian Sea Sanctuary Area	87,500	3.5%
Protected Area (Ligurian Sea not included)	8,624	0.3%
Total Protected	303,224	**12.0%**
Mediterranean Sea	2,529,497	

The main characteristics of **Oceana MedNet** are (see Figure 17 and Figure 18):

- MPAs would have a minimum surface area of 200 km² (Morrot de Sa Dragonera) and a maximum of 15,200 km² (Mersa-Matruth Eddy).
- 50% of the MPAs would reach 1,500 km² in size.
- The largest MPAs are located in the Eastern basin, which is considered the most "unprotected" and least known area.
- The network is mostly comprised of MPAs between 200-2,300 km² (see Table 11), and there are three notable MPAs which are larger than 10,000 km² (Mersa-Matruth Eddy, Malta Ridge and Eratosthenes Seamount).

Table 11. Natural area ranges in MedNet

Area ranges (km²)	Number of OCEANA MedNet MPAs
200 - 2,300	73
2,301 - 5,400	24
5,401 - 15,200	3

Figure 17. Distribution of surface areas of MedNet

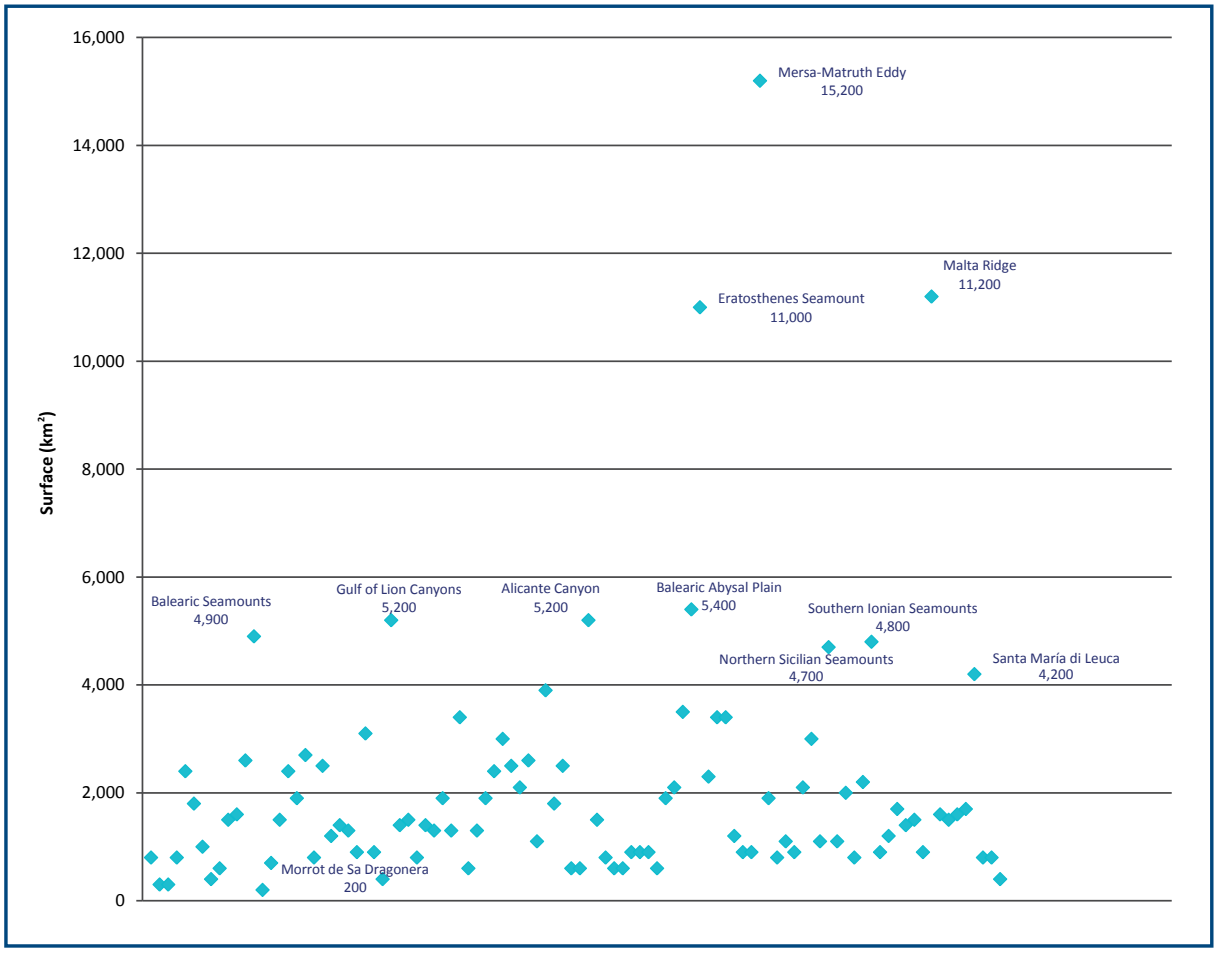
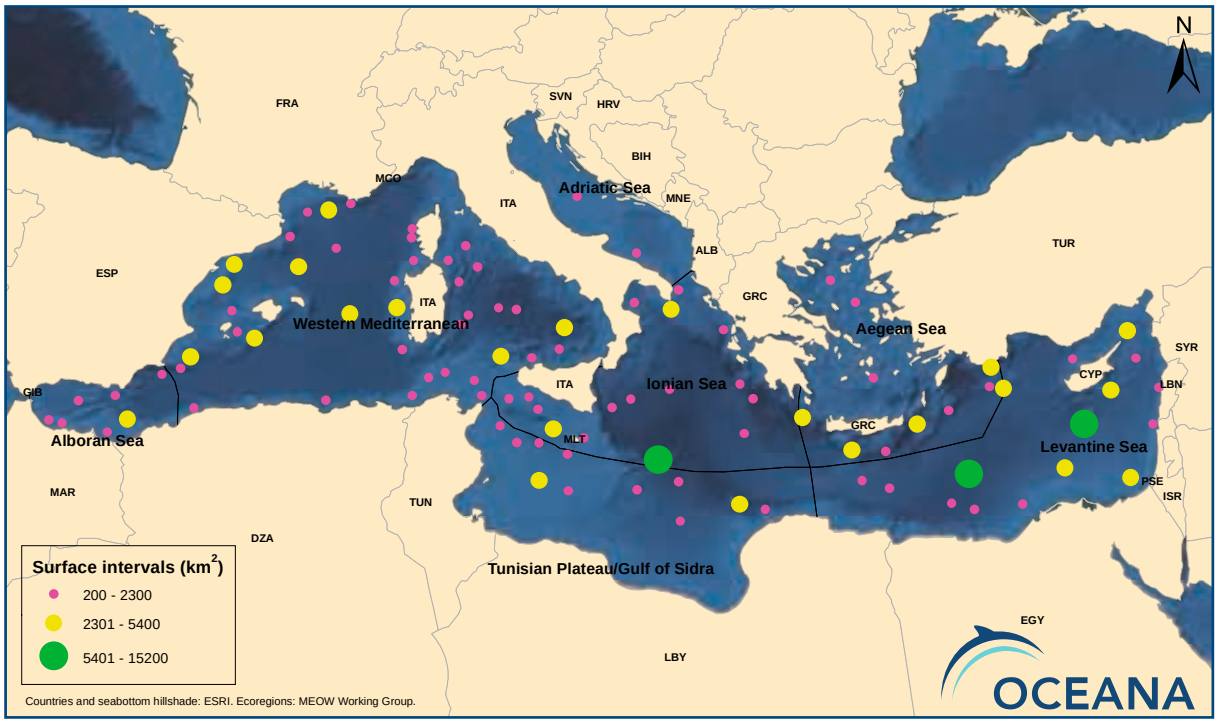


Figure 18. MedNet distribution of sizes and Marine Ecoregions. The size is proportional to the proposed area and the colour corresponds to the range of the size



Connectivity. The connection between Oceana MedNet MPAs

In recent years various experiments have been carried out with regards to connectivity in MPA networks. The majority of these studies are based on larval dispersal, although there is not yet a standardised methodology for determining the minimum distance between areas to ensure their effectiveness. The main reason for this is that it is not realistic to extrapolate to different biological communities, even less so when dealing with large-scale planning. These studies all have very different results and have mostly been carried out in tropical areas (see Table 12).

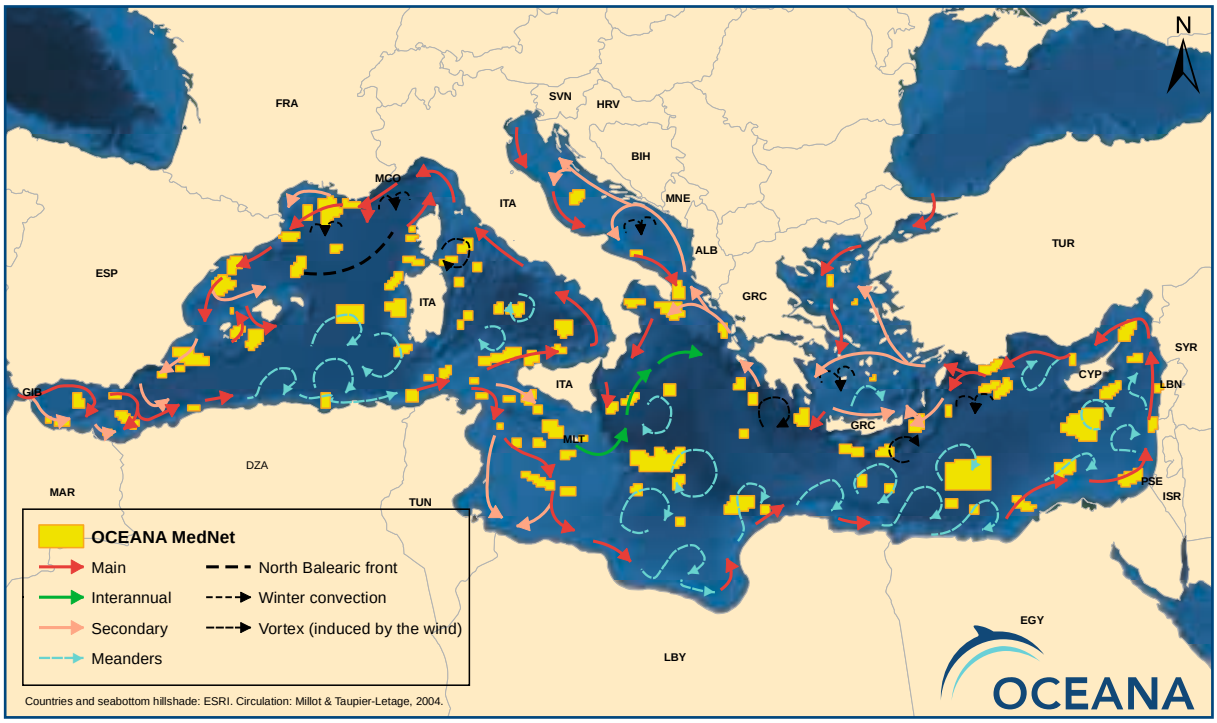
Table 12. Studies on connectivity in MPA networks

AUTHOR (Year)	LARVAL DISPERSAL DISTANCE (km)	LOCATION
Rachor and Günther (2001)	Up to 100	North Sea
Treml *et al* (2008)	50-100	Pacific
Planes, Jones and Thorrold (2009)	35	Papua New Guinea
Christie *et al* (2010)	15-184	Hawaii

According to these authors, the effectiveness of the network is determined by the larval dispersal patterns and therefore by their connection to local oceanic or mesoscale currents.

The selection of **Oceana MedNet** sites took into consideration how they are affected by currents, eddies and areas of dense water formation, using Millot and Taupier-Letage's pattern of circulation in the Mediterranean (2004) as a source (see Figure 19), in addition to other sources (Elhmaidi *et al*, 2010; Lastras *et al*, 2010; Millot and Gerin, 2010; Domzig *et al*, 2009; Gerin *et al*, 2009; Tesi *et al*, 2008; Bignami *et al*, 2008; Van Haren *et al*, 2006; Millot and Taupier-Letage, 2005; Testor and Gascard, 2005; Petrenko, 2003; Salas *et al*, 2002; L'Helguen *et al* 2002; Ruiz *et al*, 2002; Robinson *et al* 2001).

Figure 19. Pattern of surface circulation in the Mediterranean (Millot and Taupier-Letage, 2004) and Oceana MedNet



A simple statistical analysis of the minimum distances between MPAs resulted in a mean of 95 km for the entire basin. The data was calculated in a statistical analysis always based on the data produced by the GIS calculating the distance between the centroids of each MPA within **Oceana MedNet**.

However, it is not realistic to try to establish connectivity along the entire basin when we know that there are regions which are clearly biogeographically different. Therefore, the same proximity analysis was carried out for each of the ecoregions of the Mediterranean (see Table 13).

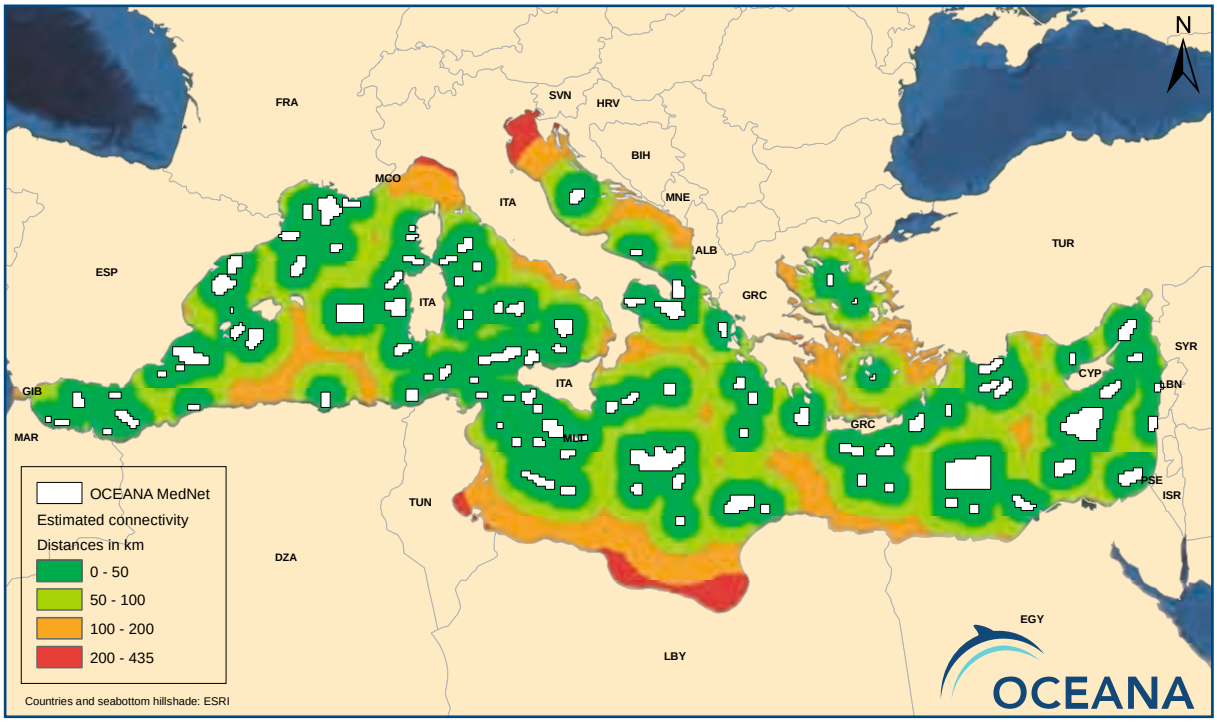
Table 13. Proximity analysis between MPAs of MedNet by biogeographic region (The Aegean Sea includes the Sea of Marmara -11,530 km²- which has not been taken into account in MedNet)

Biogeographic Region	Number of MPAs OCEANA MedNet	Surface (km²)	Mean of the minimum distances (km)
30. Adriatic Sea	2	131.667	271
31. Aegean Sea	10	314.234	121
32. Levantine Sea	15	475.238	122
33. Tunisian Plateau/Gulf of Sidra	11	392.773	100
34. Ionian Sea	16	368.702	96
35. Western Mediterranean	39	757.529	81
36. Alboran Sea	7	84.176	85

The region with the greatest number of MPAs, which is in the Western Basin would contain a total of 39 MPAs. On the other hand, in the Adriatic there are only two MPAs since it is characterised by a relatively homogenous underwater relief (see Annex I Figure 26). This is a result of having made an initial selection of sites based on the bathymetry/morphology of the basin.

Based on the aforementioned studies on MPA connectivity, and using a value of 100 km as reference for the minimum distance which would permit a connection between areas, we obtained an estimated connectivity of **Oceana MedNet** (see Figure 20). By analysing these distances we revealed that the areas furthest away from **MedNet** would be the most unprotected. These are: the Gulf of Venice and the Gulf of Genoa on the north coast, and the Gulfs of Gabes and Sirte on the south coast Bearing in mind that existing MPAs and the areas included in the Natura 2000 Network or the Ligurian Sea Sanctuary have not been considered, it can be said that the north shore has an acceptable level of protection. However, in Lebanese waters and the Gulf of Gabes (Tunisia) it would be necessary to carry out more in-depth research to determine which areas can be included in the network.

Figure 20. Distances to the outer limits of MPAs: estimated connectivity



FINAL DISCUSSION

According to the Convention on Biological Diversity (Annex III UNEP/CBD/EWS.MPA/1/2), the objective of a global network of MPAs is:

> *"To maintain, protect and conserve the global marine biodiversity through the protection of its components in a biogeographically representative network of ecologically coherent sites"*

Oceana MedNet is therefore put forward as a minimum proposal in order to meet the objectives set by the CBD. This is a varied proposal which considers the following features: banks, canyons, carbonate mounds, cold seeps, escarpments, gyres, abyssal plains, various kinds of underwater elevations, channel, trenches, etc. each with a series of biological/ecological peculiarities which make them unique areas. Some have already been documented (e.g. Vercelli, Santa María di Leuca), however there is barely any information about the majority of them (see Annex II).

Having arrived at this point we could say that **Oceana MedNet** is a combination of diverse areas which are representative of the biological and geological wealth of the Mediterranean and which are fundamental to maintaining, conserving and recovering a unique marine space.

FUTURE CHALLENGES

Oceana recommends the following challenges in the short-medium term:

- To broaden the research on vulnerable habitats in the Mediterranean Basin.
- Research on EFHs, chiefly for cartilaginous fish (Ardizzone *et al*, 2006).
- Possible work with spatial software technology (e.g. Marxan) to study the spatial congruence of the Mediterranean network of MPAs.
- To improve international cooperation at administrative, scientific and social levels.
- To improve the information available in those areas most unprotected.
- To strengthen the creation of a Mediterranean network of MPAs with studies on connectivity between areas.
- To assess the suitability and viability of the selected sites (size, boundaries, management system, etc.).
- To continue increasing the protected surface area as the network discussed in this document is a minimum proposal.

OCEANA MedNet *is an example of how to propose an MPA network to protect high value areas in a context of a general lack of biological knowledge, under a* ***Precautionary Approach***

ANNEX I. OCEANA MEDNET IN DETAIL

In the following figures (from 21 to 28) location of Oceana MedNet sites can be observed in detail.

Figure 21. MedNet in the biogeographic region of the Alboran Sea

Figure 22. MedNet in the biogeographic region of the Western Mediterranean I

Figure 23. MedNet in the biogeographic region of the Western Mediterranean II

Figure 24. MedNet in the biogeographic region of the Gulf of Sidra

Figure 25. MedNet in the biogeographic region of the Ionian Sea

Figure 26. MedNet in the biogeographic region of the Adriatic Sea

Figure 27. MedNet in the biogeographic region of the Aegean Sea

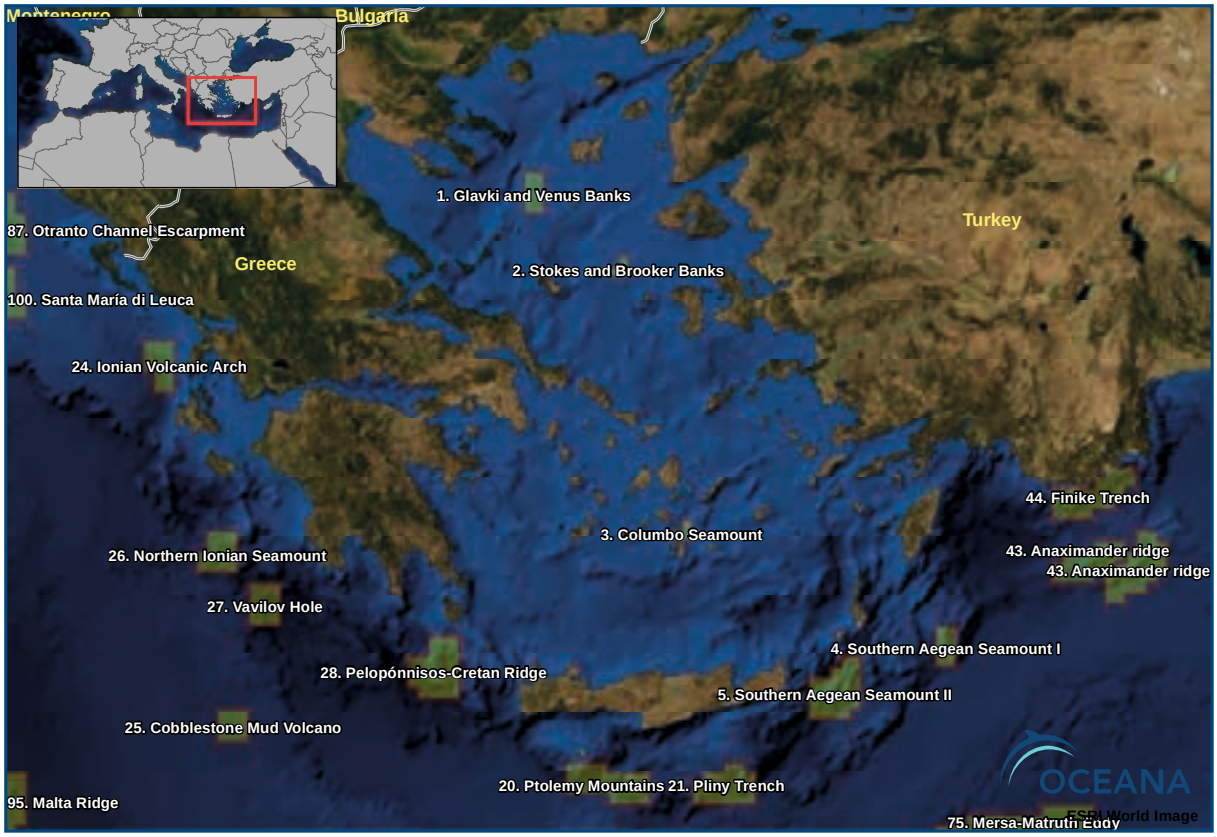


Figure 28. MedNet in the biogeographic region of the Levantine Sea

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
001. Aegean Sea (North)			
Glavki Bank	☐	Fisheries targeting large pelagic species *Prionace glauca* (Blue Shark) - Near Threatened *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered *Lophelia* and *Madrepora* reefs off Thasos	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. The endangered Mediterranean monk seal *Monachus monachus* in the Ionian sea, Greece 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Venus Bank	☐	Fisheries targeting large pelagic species *Prionace glauca* (Blue Shark) - Near Threatened *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered *Lophelia* and *Madrepora* reefs off Thasos	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. The endangered Mediterranean monk seal *Monachus monachus* in the Ionian sea, Greece 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Stokes Bank	☐	*Prionace glauca* (Blue Shark) - Near Threatened *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. The endangered Mediterranean monk seal *Monachus monachus* in the Ionian sea, Greece 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea
Brooker Bank	☐	*Prionace glauca* (Blue Shark) - Near Threatened *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. The endangered Mediterranean monk seal *Monachus monachus* in the Ionian sea, Greece 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea
002. Aegean Sea (South)			
Columbo Seamount	■	*Prionace glauca* (Blue Shark) - Near Threatened *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. The endangered Mediterranean monk seal *Monachus monachus* in the Ionian sea, Greece 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2010. First Observations of Parturition and Postpartum Behavior in the Mediterranean Monk Seal (*Monachus monachus*) in the Eastern Mediterranean
NO NAME Seamount	☐	*Prionace glauca* (Blue Shark) - Near Threatened *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. The endangered Mediterranean monk seal *Monachus monachus* in the Ionian sea, Greece 2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Seamount	☐	*Prionace glauca* (Blue Shark) - Near Threatened *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered Hellenic Trench sperm whale and beaked whale habitat	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. The endangered Mediterranean monk seal *Monachus monachus* in the Ionian sea, Greece 2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview

BFT. Illegal fishing of bluefin tuna; **SWD.** Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Cold water coral reefs Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		It is located in the outflow of the north current of the Aegean which comes from the Marmara Sea. The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*). *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats).	ACCOBAMS
Sharks Cold water coral reefs Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		It is located in the outflow of the north current of the Aegean which comes from the Marmara Sea. The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*). *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats).	
Sharks Seamount communities	Threatened/Endangered/Declining spp.	BFT	Located in the current that recirculates the water of the Aegean Sea. The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*).	
Sharks Seamount communities	Threatened/Endangered/Declining spp.	BFT	Located in the current that recirculates the water of the Aegean Sea. The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*).	
Seamount communities Sharks	Threatened/Endangered/Declining spp Biological diversity	Maritime traffic	Located very close to Santorini. Probably significantly affected by maritime traffic. The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*).	GREENPEACE
Upwelling areas Sharks Gyres	Threatened/Endangered/Declining spp. Biological diversity		In an area where dense waters form. Under the influence of the Rhodes cyclonic gyre and the Asia Minor Current (AMC). The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*). High primary productivity of pelagic waters.	BARCONV GREENPEACE
Upwelling areas Sharks Whales and other cetaceans Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*).	GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
003. Alboran Sea			
Djibouti Bank	☐	Fisheries targeting large pelagic species *Caretta caretta* (Loggerhead turtle) - Endangered *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient *Leptometra phalangium*	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Use of geochemical features to identify changes in recent sedimentation on Seamounts of the Djibouti Banks Area (NW Alboran Basin)
El Idrissi Bank	☐	Fisheries targeting large pelagic species Deep-sea oysters (*Neopycnodonte zibrowii*) massive fossil *Dendrophyllia* *Madrepora oculata* *Lophelia pertusa* *Dendrophyllia cornigera* *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	2007. The tectonic structure of the Alboran margin of Morocco 2008. Al Idrissi Active Fracture Zone
Pollux Bank	■		2006. The tributary valley systems of the Almeria Canyon (Alboran Sea, SW Mediterranean): Sedimentary architecture
Avenzoar/Sabinar Bank	☐	*Leptometra phalangium*	
Tofiño Bank	■	Fisheries targeting large pelagic species Important suitable habitat for small pelagics Important feeding area for locally-breeding bird populations *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	WEB. Deep Sea drilling project 2008. Al Idrissi Active Fracture Zone 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. Recent submarine slides in the Alboran Ridge (Alboran Sea)

BFT. Illegal fishing of bluefin tuna; **SWD**. Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sea turtles Whales and other cetaceans Seamount communities	Threatened/Endangered/Declining spp.	SWD OTB	Significantly important in the geological formation of the Alboran Sea. In recent years, it has suffered changes and is becoming unstable. During recent oceanographic campaigns on board the Francisco de Paula Navarro, a variety of destabilization phenomena have been documented on the bank's surface.	OCEANA EU CIESM BARCONV ACCOBAMS SH GREENPEACE
Whales and other cetaceans Cold water coral reefs Seamount communities	Vulnerable/Fragil/Sensitive/Slow recover	SWD OTB	On El Idrissi Bank (535 m water depth), even an extended area with massive fossil Dendrophyllia framework was observed. The corals there seemed to have an in situ position, which is quite surprising as Dendrophyllia reefs have never been observed here before. Moreover, live colonies of the cold-water coral species *Madrepora oculata*, *Lophelia pertusa*, *Dendrophyllia cornigera* as well as various solitary corals are far more abundant in the Alboran Sea compared to the Gulf of Cádiz, which constitutes rather a "coral graveyard". Another sensational finding was the occurrence of living deep-sea oysters (*Neopycnodonte zibrowii*) colonising steep cliffs at the southern and eastern flank of El Idrissi Bank (390-490 water depth). This is the first time that live deep-sea oysters have been observed and sampled in the Mediterranean Sea.	OCEANA EU CIESM BARCONV ACCOBAMS SH GREENPEACE
Seamount communities	Biological diversity			BARCONV ACCOBAMS GREENPEACE
Seamount communities	Vulnerable/Fragil/Sensitive/Slow recover Biological diversity		Field of *Leptometra* (Sensitive Habitat) documented on video by OCEANA.	BARCONV ACCOBAMS SH GREENPEACE
Seabirds Whales and other cetaceans Seamount communities	Biological diversity	Bottom trawling Oil/gas drilling	Area of Atlantic influence with sharp increase in depth from the coast. Lack of research by Morocco. This is an area of seismic activity. The Tofiño Bank is 30 km offset relative to the Alboran Ridge.	CIESM ACCOBAMS GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Xauen Bank	☐	Fisheries targeting large pelagic species *Scyliorhinus canicula* nursery area Important suitable habitat for small pelagics Important feeding area for locally-breeding bird populations *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	WEB. Deep Sea drilling project 2008. Al Idrissi Active Fracture Zone 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. Recent submarine slides in the Alboran Ridge (Alboran Sea)
Djibouti Spur	☐	*Caretta caretta* (Loggerhead turtle) - Endangered *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient *Leptometra phalangium*	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Use of geochemical features to identify changes in recent sedimentation on Seamounts of the Djibouti Banks Area (NW Alboran Basin)
Dhaka Mud volcano	■	Fisheries targeting large pelagic species *Scyliorhinus canicula* (Small Spotted Catshark) nursery area - Least Concern Important suitable habitat for small pelagics Important feeding area for locally-breeding bird populations *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	2002. Mud volcanoes—the most important pathway for degassing deeply buried sediments 2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Mulhacen Mud volcano	☐	Fisheries targeting large pelagic species *Scyliorhinus canicula* (Small Spotted Catshark) nursery area - Least Concern Important suitable habitat for small pelagics Important feeding area for locally-breeding bird populations	2002. Mud volcanoes—the most important pathway for degassing deeply buried sediments 2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Seabirds Whales and other cetaceans Seamount communities	Threatened/Endangered/Declining spp. Biological diversity	Bottom trawling Oil/gas drilling		CIESM ACCOBAMS GREENPEACE
Sea turtles Whales and other cetaceans	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover	OTB	It is an extension of Djibouti.	CIESM BARCONV ACCOBAMS SH GREENPEACE
Sharks Seabirds Whales and other cetaceans	Threatened/Endangered/Declining spp. Uniqueness/rarity			CIESM ACCOBAMS GREENPEACE
Sharks Seabirds	Threatened/Endangered/Declining spp. Uniqueness/rarity	Bottom trawling		CIESM ACCOBAMS GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Maya Mud volcano	☐	*Scyliorhinus canicula* (Small Spotted Catshark) nursery area - Least Concern Important suitable habitat for small pelagics Important feeding area for locally-breeding bird populations *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	2002. Mud volcanoes–the most important pathway for degassing deeply buried sediments 2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2003. Mud volcanoes in the Alboran Sea: evidence from micropaleontological and geophysical data 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Melilla Carbonate Mound Field	■	Fisheries targeting large pelagic species Important feeding area for locally-breeding bird populations *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
004. Algeria (East)			
Bejaia Canyon	■	*Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of Monachus monachus, the Mediterranean monk seal 1990. The Algerian eddies 2002. Analysis of mesoscale phenomena in the Algerian basin observed with drifting buoys and infrared images 2005. Large scale flow separation and mesoscale eddy formation in the Algerian Basin 2006. Fast deep sinking in Mediterranean eddies
Les Sorelles Reef	☐	Fisheries targeting large pelagic species *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of Monachus monachus, the Mediterranean monk seal 1990. The Algerian eddies 2002. Analysis of mesoscale phenomena in the Algerian basin observed with drifting buoys and infrared images 2005. Large scale flow separation and mesoscale eddy formation in the Algerian Basin 2006. Fast deep sinking in Mediterranean eddies
Le Sec Bank	☐	Fisheries targeting small pelagic species *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of Monachus monachus, the Mediterranean monk seal 1990. The Algerian eddies 2002. Analysis of mesoscale phenomena in the Algerian basin observed with drifting buoys and infrared images 2005. Large scale flow separation and mesoscale eddy formation in the Algerian Basin 2006. Fast deep sinking in Mediterranean eddies

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Seabirds Whales and other cetaceans	Threatened/Endangered/Declining spp. Uniqueness/rarity	Bottom trawling		CIESM ACCOBAMS GREENPEACE
Carbonate mounds Seabirds Fronts Gyres Whales and other cetaceans	Biological diversity	Bottom trawling	It is the only area outside the CIESM (Mediterranean Peace Parks) of Alboran. It is located on the border of Atlantic influence (a frontier for many Mediterranean species i.e. Posidonia oceanica) and in the east gyre of the Alboran (EAG: East Alboran Gyre). Deep-water carbonate mounds, comparable to those of the Melilla Mound Field, have not been documented before in the Alboran Sea.	ACCOBAMS GREENPEACE
Canyons	Threatened/Endangered/Declining spp.	Bottom trawling	This canyon coincides with the area where eddies are formed by the Algerian current. In national jurisdictional area	
	Threatened/Endangered/Declining spp.	Bottom trawling	Very close to Zalita Island (Tunisia) and Galiton Natural Reserve	GREENPEACE
Seamount communities	Threatened/Endangered/Declining spp. Biological diversity	Bottom trawling		GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
005. Algeria (West)			
Yusuf Ridge	☐	*Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of Monachus monachus, the Mediterranean monk seal
Alidade Bank	☐	Fisheries targeting large pelagic species *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered *Caretta caretta* (Loggerhead Turtle) - Endangered Important feeding area for locally breeding bird populations *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	1978. The recent status of Monachus monachus, the Mediterranean monk seal 2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Habibbas Escarpment	☐	*Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered Important feeding area for locally-breeding bird populations *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Globicephala melas* (Long-finned Pilot Whale) - Data Deficient	1978. The recent status of Monachus monachus, the Mediterranean monk seal 2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Guelta Canyon	■	*Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of Monachus monachus, the Mediterranean monk seal 2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2010. Particle Dispersion in the Western Mediterranean Basin
Khadra Canyon	■	*Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of Monachus monachus, the Mediterranean monk seal 2002. New and regenerated production in the Almeria-Oran front area, eastern Alboran Sea 2009. Deposition processes from echo-character mapping along the western Algerian margin (Oran-Tenes), Western Mediterranean 2010. Particle Dispersion in the Western Mediterranean Basin

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
	Threatened/Endangered/Declining spp.			BARCONV ACCOBAMS SH GREENPEACE
Seabirds Sea turtles Gyres Whales and other cetaceans Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		In the area under the influence of the East Alboran Gyre (EAG)	BARCONV ACCOBAMS GREENPEACE
Seabirds Whales and other cetaceans Gyres	Threatened/Endangered/Declining spp.		In the area under the influence of the East Alboran Gyre (EAG)	BARCONV ACCOBAMS SH GREENPEACE
Canyons	Threatened/Endangered/Declining spp.	Bottom trawling	Located in the path of the Algerian current (AC: Algerian Current)	GREENPEACE
Canyons	Threatened/Endangered/Declining spp.	Bottom trawling Oil/gas drilling	Located in the path of the Algerian current (AC: Algerian Current). It is the deepest canyon in the area. Place of interest for gas/oil drilling	GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
006. Balearic Island			
Ses Olives Bank	☐	Fisheries targeting large pelagic species *Thunnus thynnus* (Bluefin Tuna) - Data Deficient *Aristeus antennatus* Sharks (*Galeus melastomus*, *Centroscymnus coelolepis*, *Dalatias licha*, *Etmopterus spinax*, *Chimaera monstrosa*) *Caretta caretta* (Loggerhead Turtle) - Endangered Various odontocete	1999. The red shrimp Aristeus antennatus (Risso, 1816) fishery and biology in the Balearic Islands, Western Mediterranean 2004. Chondrichthyes species in deep waters of the Mediterranean Sea 2004. Deep-sea distribution, biological and ecological aspects of Aristeus antennatus (Risso, 1816) in the western and central Mediterranean Sea 2008. Population dynamics of the red shrimp Aristeus antennatus in the Balearic Islands (western Mediterranean): Short spatio-temporal differences and influence of environmental factors 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Ausias March Bank	■	Fisheries targeting large pelagic species *Thunnus thynnus* (Bluefin Tuna) - Data Deficient *Aristeus antennatus* *Galeus melastomus* (Blackmouth Catshark) - Least Concern *Centroscymnus coelolepis* (Portuguese Dogfish) - Near Threatened *Dalatias licha* (Kitefin Shark) - Near Threatened *Etmopterus spinax* (Velvet Belly Lanternshark) - Least Concern *Chimaera monstrosa* (Rabbitfish) - Near Threatened *Caretta caretta* (Loggerhead Turtle) - Endangered Various odontocete	1999. The red shrimp *Aristeus antennatus* (Risso, 1816) fishery and biology in the Balearic Islands, Western Mediterranean 2004. Chondrichthyes species in deep waters of the Mediterranean Sea 2004. Deep-sea distribution, biological and ecological aspects of Aristeus antennatus (Risso, 1816) in the western and central Mediterranean Sea 2008. Population dynamics of the red shrimp *Aristeus antennatus* in the Balearic Islands (western Mediterranean): Short spatio-temporal differences and influence of environmental factors 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Morrot de Sa Dragonera Seamount	☐	*Aristeus antennatus* *Thunnus thynnus* (Bluefin Tuna) spawning ground - Data Deficient *Caretta caretta* (Loggerhead Turtle) - Endangered Various odontocete	1999. The red shrimp *Aristeus antennatus* (Risso, 1816) fishery and biology in the Balearic Islands, Western Mediterranean 2008. Population dynamics of the red shrimp *Aristeus antennatus* in the Balearic Islands (western Mediterranean): Short spatio-temporal differences and influence of environmental factors 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Bell Guyot Seamount	☐	Fisheries targeting large pelagic species *Thunnus thynnus* (Bluefin Tuna) - Data Deficient *Aristeus antennatus* Sharks (*Galeus melastomus*, *Centroscymnus coelolepis*, *Dalatias licha*, *Etmopterus spinax*, *Chimaera monstrosa*) *Caretta caretta* (Loggerhead Turtle) - Endangered Various odontocete *Physeter macrocephalus* (Sperm Whale) habitat - Vulnerable	1999. The red shrimp *Aristeus antennatus* (Risso, 1816) fishery and biology in the Balearic Islands, Western Mediterranean 2004. Chondrichthyes species in deep waters of the Mediterranean Sea 2004. Deep-sea distribution, biological and ecological aspects of *Aristeus antennatus* (Risso, 1816) in the western and central Mediterranean Sea 2008. Population dynamics of the red shrimp *Aristeus antennatus* in the Balearic Islands (western Mediterranean): Short spatio-temporal differences and influence of environmental factors 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
007. Corsica Island			
Castelsardo Canyon	☐	*Cetorhinus maximus* (Basking Shark) - Vulnerable	2002. Sandy submarine canyon-mouth lobes on the western margin of Corsica and Sardinia, Mediterranean Sea 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea
Porto Canyon	■		2002. Sandy submarine canyon-mouth lobes on the western margin of Corsica and Sardinia, Mediterranean Sea
Sagone Canyon	■		2002. Sandy submarine canyon-mouth lobes on the western margin of Corsica and Sardinia, Mediterranean Sea

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Highly migratory fish Sharks Whales and other cetaceans Sea turtles Seamount communities	Importance for life stage spp. Threatened/Endangered/Declining spp. Biological diversity		Spawning area for bluefin tuna	OCEANA EU GFCM BARCONV EFH GREENPEACE
Highly migratory fish Sharks Sea turtles Whales and other cetaceans Seamount communities	Importance for life stage spp. Threatened/Endangered/Declining spp. Biological diversity	Bottom trawling	Spawning area for bluefin tuna	OCEANA EU GFCM BARCONV EFH GREENPEACE
Seamount communities Highly migratory fish Whales and other cetaceans Sea turtles	Importance for life stage spp. Threatened/Endangered/Declining spp. Biological diversity	Bottom trawling	Spawning area for bluefin tuna	BARCONV EFH GREENPEACE
Seamount communities Highly migratory fish Sharks Sea turtles Whales and other cetaceans	Threatened/Endangered/Declining spp. Biological diversity Importance for life stage spp Vulnerable/Fragil/Sensitive/Slow recover		Spawning area for bluefin tuna	OCEANA EU GFCM BARCONV EFH GREENPEACE
Canyons Sharks	Threatened/Endangered/Declining spp.			ACCOBAMS GREENPEACE
Canyons				ACCOBAMS GREENPEACE
Canyons				ACCOBAMS GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
008. Crete Island			
Ptolemy Mountains	☐	*Prionace glauca* (Blue Shark) - Near Threatened	1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Geomorphological study of an area with mud diapirs south of Crete (Mediterranean Ridge) 2001. Mediterranean Sea Circulation 2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2005. Red List of Threatened Species 2008. On the dynamics of surface cold filaments in the Mediterranean Sea 2009. Surface circulation in the Eastern Mediterranean using drifters (2005-2007) 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Pliny Trench	☐	*Prionace glauca* (Blue Shark) - Near Threatened	1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Geomorphological study of an area with mud diapirs south of Crete (Mediterranean Ridge) 2001. Mediterranean Sea Circulation 2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2008. On the dynamics of surface cold filaments in the Mediterranean Sea 2009. Surface circulation in the Eastern Mediterranean using drifters (2005-2007) 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Ptolemy Trench	☐	*Prionace glauca* (Blue Shark) - Near Threatened	1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Geomorphological study of an area with mud diapirs south of Crete (Mediterranean Ridge) 2001. Mediterranean Sea Circulation 2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2008. On the dynamics of surface cold filaments in the Mediterranean Sea 2009. Surface circulation in the Eastern Mediterranean using drifters (2005-2007) 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
009. Cyprus Island			
Hecataeus Ridge	☐	Fisheries targeting large pelagic species *Caretta caretta* (Loggerhead turtle) - Endangered *Chelonia mydas* (Green Turtle) - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1993. Nutrient distributions during an annual cycle across a warmcore eddy from the E. Mediterranean Sea 2001. SYNOPTIC, SEASONAL AND INTERANNUAL VARIABILITYOF THE WARM CORE EDDY SOUTH OF CYPRUS, SE LEVANTINE BASIN 2005. Satellite-derived spatial and temporal biological variability in the Cyprus Eddy 2005. Structural evolution of the Latakia Ridge and Cyprus Basin at the front of the Cyprus Arc, Eastern Mediterranean Sea 2005. Variability of the Cyprus warm core Eddy during the CYCLOPS project 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. THE CYPRUS WARM EDDY AND THE ATLANTIC WATER DURING THE CYBO CRUISES (1995-2009)

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Seamount communities Upwelling areas Gyres Sharks	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover Biological productivity		Affected by the Cretan Cyclone (CC.) Cretan Cyclone). The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*)	CIESM
Upwelling areas Sharks Gyres	Threatened/Endangered/Declining spp. Biological productivity		The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*). In an area where eddies form (IE-Ierapetra Eddy)	CIESM
Upwelling areas Sharks	Threatened/Endangered/Declining spp. Biological productivity		Affected by the Cretan Cyclone and the Levantine surface water current (LSW). The Aegean Sea is one of the areas with the highest relative abundance of sharks (mainly *Prionace glauca*)	
Sea turtles	Threatened/Endangered/Declining spp.			

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
G'zelyurt Knoll	☐	Fisheries targeting large pelagic species *Caretta caretta* (Loggerhead Turtle) habitat - Endangered *Chelonia mydas* (Green Turtle) habitat - Endangered *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered *Thunnus thynnus* (Bluefin Tuna) spawning ground - Data Deficient	1991. The eastern Mediterranean general circulation: features, structure and variability 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Adana Trench	☐	Fisheries targeting large pelagic species *Thunnus thynnus* (Bluefin Tuna) spawning ground - Data Deficient *Chelonia mydas* (Green Turtle) - Endangered *Caretta caretta* (Loggerhead Turtle) - Endangered *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 2005. The Cilicia-Adana basin complex, Eastern Mediterranean: Neogene evolution of an active fore-arc basin in an obliquely convergent margin 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
010. Eastern Ionian Sea			
Pelopónnisos-Cretan Ridge	☐		
Vavilov Hole	☐		
NO NAME Seamount	☐	*Physeter macrocephalus* (Sperm Whale) habitat - Vulnerable *Ziphius cavirostris* (Cuvier's Beaked Whale) habitat - Least Concern *Balaenoptera physalus* (Fin Whale) habitat - Endangered *Tursiops truncatus* (Common Bottlenose Dolphin) habitat - Least Concern *Delphinus delphis* (Short-beaked Common Dolphin) habitat - Least Concern	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
NO NAME Seamount	☐		
Ionian Volcanic Arch Mountains	☐	Fisheries targeting large pelagic species *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern *Tursiops truncatus* (Common Bottlenose Dolphin) - Least Concern *Ziphius cavirostris* (Cuvier's Beaked Whale) - Least Concern *Balaenoptera physalus* (Fin Whale) - Endangered *Physeter macrocephalus* (Sperm Whale) - Vulnerable	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Cobblestone Mud volcano	☐		1997. Mud Volcanoes and Dome-Like Structures at the Eastern Mediterranean Ridge 2002. Mud volcanoes–the most important pathway for degassing deeply buried sediments 2004. Structural setting and tectonic control of mud volcanoes from the Central Mediterranean Ridge (Eastern Mediterranean) 2005. Western Mediterranean Ridge mud belt correlates with active shear strain at the prism-backstop geological contac

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Highly migratory fish Sea turtles Whales and other cetaceans	Importance for life stage spp. Threatened/Endangered/Declining spp.		Spawning area for bluefin tuna	CIESM BARCONV GREENPEACE
Highly migratory fish Sea turtles Whales and other cetaceans	Importance for life stage spp. Threatened/Endangered/Declining spp.		Influenced by the Shikmona eddy. Spawning area for bluefin tuna	CIESM BARCONV GREENPEACE
Gyres	Biological productivity		It can join the Southern Ionian arch. It is under the influence of the Pelops anticyclonic gyre (Pelops Eddy) and the Cretan cyclonic gyre (Cretan Eddy)	OCEANA EU ACCOBAMS GREENPEACE
Gyres	Biological productivity		Unique because it is located in the deepest area of the Mediterranean basin. n the area of the formation of the gyre in the central Tyrrhenian	GREENPEACE
Whales and other cetaceans Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		Ionian Arch I. It is the only important elevation in the center of area 010	CIESM OCEANA EU BARCONV GREENPEACE
Gyres Seamount communities	Biological diversity		Ionian Arch III. It is under the influence of the Peplos anticyclonic gyre (Pelops Eddy) and the Cretan cyclonic gyre (Cretan Eddy)	OCEANA EU ACCOBAMS GREENPEACE
Whales and other cetaceans	Threatened/Endangered/Declining spp.			CIESM BARCONV
	Uniqueness/rarity	Oil/gas drilling		

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
011. Gulf of Gabes			
Jarrafa Trough	☐	Fisheries targeting large pelagic species *Thunnus thynnus* (Bluefin Tuna) - Data Deficient *Caretta caretta* (Loggerhead turtle) - Endangered Marine mammals (*Balaenoptera physalus*) Important feeding area for endemic marine birds	1983. The Jarrafa Trough (Pelagian Sea): Structural evolution and tectonic significance 1999. Interaction of Marine Turtles with Fisheries in the Mediterranean 2003. The fin whale *Balaenoptera physalus* (L. 1758) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Effect of type of bait on pelagic longline fishery–loggerhead turtle interactions in the Gulf of Gabes (Tunisia) 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
012. Gulf of Hammamet			
Alfil Bank	☐	*Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Winter feeding grounds for fin whales *Caretta caretta* (Loggerhead Turtle) - Endangered	2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2006. The first identified winter feeding ground of fin whales (*Balaenoptera physalus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
El Babouch Bank	☐	*Thunnus thynnus* (Bluefin Tuna) breeding area - Data Deficient Winter feeding grounds for *Balaenoptera physalus* (Fin Whale) - Endangered *Caretta caretta* (Loggerhead Turtle) - Endangered	2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2006. The first identified winter feeding ground of fin whales (*Balaenoptera physalus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Birsa Bank	☐	*Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient *Carcharodon carcharias* (Great White Shark) nursery area - Vulnerable	2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
013. Gulf of Lions			
Maures Escarpment	☐	High primary productivity of pelagic waters High productivity area, important for globally-threatened and other seabird populations *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2003. Variability of circulation features in the Gulf of Lion NW Mediterranean Sea. Importance of inertial currents 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Grand Rhône Canyon	☐	*Cetorhinus maximus* (Basking Shark) - Vulnerable High primary productivity of pelagic waters High productivity area, important for globally-threatened and other seabird populations *Madrepora* reefs in Lacaze-Duthiers and Cassidaigne Canyons, and possibly beyond *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	1994. Hydrography and nepheloid structures in the Grand-Rhône canyon 2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2003. Variability of circulation features in the Gulf of Lion NW Mediterranean Sea. Importance of inertial currents 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2008. Evidence for pre-Messinian submarine canyons on the Gulf of Lions slope (Western Mediterranean) 2008. Live foraminifera from the open slope between Grand Rhône and Petit Rhône Canyons (Gulf of Lions, NW Mediterranean) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview

BFT. Illegal fishing of bluefin tuna; **SWD.** Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Whales and other cetaceans Sea turtles Highly migratory fish Seabirds	Importance for life stage spp. Threatened/Endangered/Declining spp.	Bycatch	At the exit of the Strait of Sicily and the permanent Algerian current. The Gulf of Gabes is one of the most important areas in the Mediterranean for sea turtle feeding and hibernation (*Caretta caretta* and *Chelonia mydas*). Spawning area for bluefin tuna	
Highly migratory fish Whales and other cetaceans Sea turtles Seamount communities	Importance for life stage spp. Threatened/Endangered/Declining spp.	Bottom trawling	Spawning area for bluefin tuna. In the path of the Atlantic Tunisian Current (ATC)	BARCONV SH GREENPEACE
Highly migratory fish Whales and other cetaceans Sea turtles Seamount communities	Importance for life stage spp. Threatened/Endangered/Declining spp.	Bottom trawling	Spawning area for bluefin tuna. In the path of the Atlantic Tunisian Current (ATC)	BARCONV SH GREENPEACE
Highly migratory fish Sharks Seamount communities	Importance for life stage spp. Threatened/Endangered/Declining spp.	SWD	Spawning area for bluefin tuna	BARCONV SH GREENPEACE
Upwelling areas Seabirds Whales and other cetaceans	Threatened/Endangered/Declining spp. Biological productivity	Bottom trawling	On the border of the Marine Sanctuary of the Ligurian Sea	BARCONV
Canyons Upwelling areas Sharks Seabirds Coral, sponge and bryozoan aggregations Whales and other cetaceans	Biological productivity Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling		GFCM BARCONV EFH GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Marseille Canyon	☐	*Cetorhinus maximus* (Basking Shark) - Vulnerable High productivity area, important for globally-threatened and other seabird populations *Madrepora* reefs in Lacaze-Duthiers and Cassidaigne Canyons, and possibly beyond	2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2003. Variability of circulation features in the Gulf of Lion NW Mediterranean Sea. Importance of inertial currents 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2008. Evidence for pre-Messinian submarine canyons on the Gulf of Lions slope (Western Mediterranean) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Rhône Fan	☐	High primary productivity of pelagic waters *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2003. Variability of circulation features in the Gulf of Lion NW Mediterranean Sea. Importance of inertial currents 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Sète Canyon	☐	*Cetorhinus maximus* (Basking Shark) - Vulnerable High primary productivity of pelagic waters High productivity area, important for globally-threatened and other seabird populations *Madrepora* reefs in Lacaze-Duthiers and Cassidaigne Canyons, and possibly beyond *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	2001. Seasonal patterns of wind-induced upwelling/ downwelling in the Mediterranean Sea 2003. Variability of circulation features in the Gulf of Lion NW Mediterranean Sea. Importance of inertial currents 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2008. Evidence for pre-Messinian submarine canyons on the Gulf of Lions slope (Western Mediterranean) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
014. Levant			
Akhziv Canyon	■	Fisheries targeting large pelagic species	1989. Sediment distribution in Akhziv Canyon off northern Israel 1991. The eastern Mediterranean general circulation: features, structure and variability
Beirut Escarpment	■	Fisheries targeting large pelagic species *Rhinobatos rhinobatos* (Common Guitarfish) nursery area - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Saint Georges Canyon	■	Fisheries targeting large pelagic species *Rhinobatos rhinobatos* (Common Guitarfish) nursery area - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Junieh Canyon	■	Fisheries targeting large pelagic species *Rhinobatos rhinobatos* (Common Guitarfish) nursery area - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Sour Canyon	☐	*Thunnus thynnus* (Bluefin Tuna) spawning area - Data Deficient *Caretta caretta* (Loggerhead Turtle) habitat - Endangered *Chelonia mydas* (Green Turtle) habitat - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Sediment transport over the continental slope offshore nothern Israel: an analysis by means of electron microscopy 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Saar Canyon	■		1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Sediment transport over the continental slope offshore nothern Israel: an analysis by means of electron microscopy

BFT. Illegal fishing of bluefin tuna; **SWD.** Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Canyons Upwelling areas Sharks Seabirds Coral, sponge and bryozoan aggregations	Vulnerable/Fragil/Sensitive/Slow recover Threatened/Endangered/Declining spp.	Bottom trawling		BARCONV EFH GREENPEACE
Upwelling areas Whales and other cetaceans	Threatened/Endangered/Declining spp. Biological productivity	Bottom trawling		BARCONV
Canyons Upwelling areas Sharks Seabirds Coral, sponge and bryozoan aggregations Whales and other cetaceans	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover Biological productivity	Bottom trawling		BARCONV EFH GREENPEACE
Canyons				GREENPEACE
Sharks	Threatened/Endangered/Declining spp.			GREENPEACE
Canyons Sharks	Threatened/Endangered/Declining spp.			GREENPEACE
Canyons Sharks	Threatened/Endangered/Declining spp.			GREENPEACE
Canyons Highly migratory fish Sea turtles	Threatened/Endangered/Declining spp.		Spawning area for bluefin tuna	
Canyons				GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Nahariya Canyon	■		1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Sediment transport over the continental slope offshore nothern Israel: an analysis by means of electron microscopy
Shomrat Canyon	■		1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Sediment transport over the continental slope offshore nothern Israel: an analysis by means of electron microscopy
Hilazon Canyon	■		1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Sediment transport over the continental slope offshore nothern Israel: an analysis by means of electron microscopy
Qishon Canyon	■		1991. The eastern Mediterranean general circulation: features, structure and variability 1996. Sediment transport over the continental slope offshore nothern Israel: an analysis by means of electron microscopy
015. Ligurian and North Tyrrhenian Sea			
Cialdi Seamount	□	*Cetorhinus maximus* (Basking Shark) - Vulnerable *Scyliorhinus canicula*, *Raja clavata*, *R. asterias*, *Carcharhinus brachyurus*, *Galeus melastomus*, *Etmopterus spinax* nursery areas Important area for feeding of endemic and other seabird species of conservation concern that concentrate for breeding in Corsica-Sardinia-Tuscan archipelagos	2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Giglio Ridge	□	*Cetorhinus maximus* (Basking Shark) - Vulnerable *Scyliorhinus canicula*, *Raja clavata*, *R. asterias*, *Carcharhinus brachyurus*, *Galeus melastomus*, *Etmopterus spinax* nursery areas Important area for feeding of endemic and other seabird species of conservation concern that concentrate for breeding in Corsica-Sardinia-Tuscan archipelagos	2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Jadul Ridge	□	*Cetorhinus maximus* (Basking Shark) - Vulnerable *Scyliorhinus canicula*, *Raja clavata*, *R. asterias*, *Carcharhinus brachyurus*, *Galeus melastomus*, *Etmopterus spinax* nursery areas Important area for feeding of endemic and other seabird species of conservation concern that concentrate for breeding in Corsica-Sardinia-Tuscan archipelagos	2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Caprera Canyon	□	*Cetorhinus maximus* (Basking Shark) - Vulnerable *Scyliorhinus canicula* (Small Spotted Catshark) nursery area - Least Concern *Raja clavata* (Thornback Skate) nursery area - Near Threatened *Raja asterias* (Starry Ray) nursery area - Least Concern *Carcharhinus brachyurus* (Bronze Whaler) nursery area - Near Threatened *Galeus melastomus* (Blackmouth Catshark) nursery area - Least Concern *Etmopterus spinax* (Velvet Belly Lanternshark) nursery areas - Least Concern Important area for feeding of endemic and other seabird species of conservation concern that concentrate for breeding in Corsica-Sardinia-Tuscan archipelagos	2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction

BFT. Illegal fishing of bluefin tuna; **SWD**. Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Canyons				GREENPEACE
Canyons				GREENPEACE
Canyons				GREENPEACE
Canyons				GREENPEACE
Seamount communities Sharks Upwelling areas Seabirds	Threatened/Endangered/Declining spp. Biological diversity		Bordering the Ligurian Sea Sanctuary (SPAMI) and in area of upwelling. High primary productivity of pelagic waters	BARCONV
Sharks Upwelling areas Seabirds	Threatened/Endangered/Declining spp.		Bordering the Ligurian Sea Sanctuary (SPAMI) and in area of upwelling. High primary productivity of pelagic waters	BARCONV
Sharks Seabirds	Threatened/Endangered/Declining spp.		Bordering the Ligurian Sea Sanctuary (SPAMI) and in area of upwelling. High primary productivity of pelagic waters	BARCONV
Canyons Sharks Seabirds	Threatened/Endangered/Declining spp.		Bordering the Ligurian Sea Sanctuary (SPAMI) and in area of upwelling. High primary productivity of pelagic waters	BARCONV

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
016. Malta Island			
Malta Trench	☐	*Thunnus thynnus* (Bluefin Tuna) - Data Deficient *Carcharodon carcharias* (Great White Shark) - Vulnerable *Cetorhinus maximus* (Basking Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for endemic marine birds *Caretta caretta* (Loggerhead Turtle) - Endangered *Lophelia* and *Madrepora* reefs	2003. The "white coral community", canyon and seamount faunas of the deep Mediterranean Sea 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Coralliophilinae (Gastropoda: Muricidae) associated with deep-water coral banks in the Mediterranean 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Hurd Bank	■	Fisheries targeting large pelagic species *Carcharodon carcharias* (Great White Shark) - Vulnerable *Cetorhinus maximus* (Basking Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for endemic marine birds *Caretta caretta* (Loggerhead Turtle) - Endangered *Delphinus delphi* (Short-beaked common dolphin) - Least Concern	2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
South of Malta	☐	*Corallium rubrum* (Red coral) *Carcharodon carcharias* (Great White Shark) - Vulnerable *Cetorhinus maximus* (Basking Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient *Caretta caretta* (Loggerhead Turtle) - Endangered	2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Coralliophilinae (Gastropoda: Muricidae) associated with deep-water coral banks in the Mediterranean 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Deep-water *Corallium rubrum* (L., 1758) from the Mediterranean Sea: preliminary genetic characterisation 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
017. North Levant (South of Turkey)			
Anaximander Ridge (Mud Volcanoes Amsterdam, Kazan, Kula, Athina ans Thessaloniki)	☐	*Thunnus thynnus* spawning area - (Bluefin Tuna) - Data Deficient Significant oceanographic feature driven by strong upwelling, rich in cephalopods, clupeid and scombriform eggs and larvae, possibly cetaceans	1991. The eastern Mediterranean general circulation: features, structure and variability 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Gas hydrates in shallow deposits of the Amsterdam mud volcano, Anaximander Mountains, Northeastern Mediterranean Sea 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Finike Trench	☐	*Thunnus thynnus* (Bluefin Tuna) - Data Deficient	1991. The eastern Mediterranean general circulation: features, structure and variability 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Karpas Ridge	■	*Thunnus thynnus* (Bluefin Tuna) - Data Deficient Fisheries targeting large pelagic species *Caretta caretta* (Loggerhead Turtle) habitat - Endangered *Chelonia mydas* (Green Turtle) habitat - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Anaximenes Ridge	☐	Significant oceanographic feature driven by strong upwelling, rich in cephalopods, clupeid and scombriform eggs and larvae, possibly cetaceans	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction

BFT. Illegal fishing of bluefin tuna; **SWD.** Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Highly migratory fish Sea turtles Cold water coral reefs	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling	Spawning area for bluefin tuna. In the area with the highest relative abundance of the white sharks *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats)	BARCONV ACCOBAMS SH
Highly migratory fish Sharks Gyres Seabirds Sea turtles Whales and other cetaceans Seamount communities	Importance for life stage spp. Threatened/Endangered/Declining spp. Biological diversity		Spawning area for bluefin tuna. In an area with the largest relative abundance of white sharks. Located in the ISV gyre (Ionian Shelf break Vortex)	BARCONV ACCOBAMS GREENPEACE
Coral, sponge and bryozoan aggregations Highly migratory fish Sharks Sea turtles	Importance for life stage spp. Threatened/Endangered/Declining spp.	BFT	In the area with the highest relative abundance of white sharks. Area pending research. Red coral in deeper areas than identified up to now. "The bathymetric distribution of live colonies of red coral has long been considered to range between 15 and 200 m depth (Lacaze-Duthiers 1864; Carpine & Grasshof 1975; Weinberg 1978). This range has been extended down to 300 m by Zibrowius *et al.* (1984) and Rossi *et al.* (2008). In 2006 and 2007 (Freiwald *et al.* 2009 and this paper) live red coral colonies have been observed and subsequently collected down to 800 m depth, representing a major extension of the habitat of this species." Costantini *et al.* 2010. Marine ecology 31 (2010) 261-269	BARCONV ACCOBAMS SH GREENPEACE
Carbonate mounds Gas hydrates Cold seeps Seamount communities Highly migratory fish Whales and other cetaceans	Importance for life stage spp. Biological productivity		The Anaximander mountains are in important area of mud volcanoes and gas seeps. 5 mud volcanoes have been located in the Anaximander ridge: Amsterdam, Kazan, Kula, Athina and Thessaloniki (see article for location). It is located in the outflow path of the "Asian Minor Current"	CIESM BARCONV
Highly migratory fish	Importance for life stage spp. Threatened/Endangered/Declining spp.		Spawning area for bluefin tuna. Located in the outflow path of the "Asia Minor Current"	BARCONV GREENPEACE
Highly migratory fish Gyres Sea turtles	Threatened/Endangered/Declining spp. Importance for life stage spp.		One of the most important spawning areas for bluefin tuna in the Mediterranean. Under the influence of the Latakia eddy (LKE)	CIESM BARCONV GREENPEACE
Gas hydrates Whales and other cetaceans	Biological productivity			BARCONV EFH

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
018. Northern Adriatic			
NO NAME Deep	☐	Fisheries targeting large pelagic species *Carcharodon carcharias* (Great White Shark) - Vulnerable *Prionace glauca* (Blue Shark) - Near Threatened *Cetorhinus maximus* (Basking Shark) - Vulnerable Coral (Actiniaria and Scleractinia) *Caretta caretta* (Loggerhead Turtle) feeding habitat - Endangered	1997. The Adriatic Sea General Circulation. Part II: Baroclinic Circulation Structure 1999. Interaction of Marine Turtles with Fisheries in the Mediterranean 2000. Historical and contemporary presence of the Great White Shark, *Carcharodon carcharias* (Linnaeus, 1758), in the Nothern and Central Adriatic Sea 2002. Actiniaria and Scleractinia (Cnidaria, Anthozoa) from the Adriatic Sea (Croatia): First records, confirmed occurrences and significant range extensions of certain species 2004. Incidental capture of marine turtles by the Italian trawl fishery in the north Adriatic Sea 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview 2011. Accumulation of organochlorine contaminants in loggerhead sea turtles, *Caretta caretta*, from the eastern Adriatic Sea
019. Northern Spain (North)			
Brutus Hill	☐	*Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Spartacus Seamount	☐	*Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
La Renaixença Hill	☐	*Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Ebro Escarpment	☐	*Thunnus thynnus* (Bluefin Tuna) - Data Deficient Anglerfish Dolphins Large pelagic fishes Adult hake *Caretta caretta* (Loggerhead Turtle) - Endangered Various odontocete *Leptometra phalangium* *Merluccius merluccius* nursery area Anchovy and Sardine spawning area	2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2006. Trophic flows, ecosystem structure and fishing impacts in the South Catalan Sea, Northwestern Mediterranean 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting

BFT. Illegal fishing of bluefin tuna; **SWD.** Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Coral, sponge and bryozoan aggregations Sea turtles	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling Pollution	The north of the Adriatic is one of the most important areas in the Mediterranean for sea turtle feeding and hibernation (*Caretta caretta* and *Chelonia mydas*). The Adriatic is one of the areas with the highest relative abundance of sharks	CIESM BARCONV EFH GREENPEACE
Whales and other cetaceans	Threatened/Endangered/Declining spp.			
Whales and other cetaceans Seamount communities	Biological diversity Threatened/Endangered/Declining spp.			GREENPEACE
Whales and other cetaceans	Threatened/Endangered/Declining spp.			BARCONV
Highly migratory fish Whales and other cetaceans Sea turtles	Importance for life stage spp. Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling IUU	Spawning area for bluefin tuna. High productivity area. The functional groups were organized into four trophic levels with the highest levels corresponding to anglerfish, dolphins, large pelagic fishes and adult hake	EFH SH

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Tortosa Canyon	☐	*Aristeus antennatus* Anglerfish, dolphins, large pelagic fishes and adult hake *Caretta caretta* (Loggerhead Turtle) - Endangered Various odontocete *Isidella elongata*	2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2006. Trophic flows, ecosystem structure and fishing impacts in the South Catalan Sea, Northwestern Mediterranean 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Fonera/Palamós Canyon	■	*Aristeus antennatus* Important suitable habitat for small pelagics High primary productivity of pelagic waters *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable *Merluccius merluccius* (hake) nursery	2005. General patterns of circulation, sediment fluxes and ecology of the Palamós (La Fonera) submarine canyon, northwestern Mediterranean 2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2008. Environmental causes of the fluctuations of red shrimp (*Aristeus antennatus*) landings in the Catalan Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Understanding sediment dynamics of two large submarine valleys from seafloor data: Blanes and La Fonera canyons, northwestern Mediterranean Sea
020. Northern Spain (South)			
Seco de Palos Bank	☐	Corals Gorgonian gardens Sponges Marine turtles Cetaceans Elasmobranches Commercial species	
Aguilas Seamount	☐		
Alicante Canyon	☐	*Thunnus thynnus* (Bluefin Tuna) - Data Deficient *Caretta caretta* (Loggerhead Turtle) - Endangered Various odontocete *Merluccius merluccius* (hake) nursery	2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
021. Northern Tunisia			
Sentinelle Bank	☐	*Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of *Monachus monachus*, the Mediterranean monk seal 2003. Action Plan for the managemente of the Mediterranean monk seal (*Monachus monachus*) 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2011. Assessment of Mediterranean monk seal (*Monachus monachus*) habitat at La Galite, Tunisia: towards a monk seal conservation strategy in northern Tunisia and nearby waters
Skerki Bank	☐	Important feeding area for Procellariiforms	2000. The discovery of ancient history in the deep sea using advanced deep submergence technology 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Hecate Patch	☐	Important feeding area for Procellariiforms	2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction

BFT. Illegal fishing of bluefin tuna; **SWD.** Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Highly migratory fish Whales and other cetaceans Sea turtles	Importance for life stage spp. Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling IUU	Spawning area for bluefin tuna. High productivity area. The functional groups were organized into four trophic levels with the highest levels corresponding to anglerfish, dolphins, large pelagic fishes and adult hake	SH
Canyons Whales and other cetaceans	Biological productivity Threatened/Endangered/Declining spp.		Using Google Earth relief analysis, this seems to be the most important canyon. Production area of red shrimp, whose distribution is directly related to underwater canyons	GREENPEACE EFH
Seamount communities	Uniqueness/rarity Importance for life stage spp. Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover Biological productivity Biological diversity Naturalness	Bottom trawling	Identified by OCEANA using EBSA criteria (2009)	OCEANA EU GREENPEACE
Seamount communities	Vulnerable/Fragil/Sensitive/Slow recover Biological diversity	Bottom trawling		ACCOBAMS
Highly migratory fish Sea turtles Whales and other cetaceans	Importance for life stage spp. Threatened/Endangered/Declining spp.	Bottom trawling	Spawning area for bluefin tuna	EFH
Seamount communities	Threatened/Endangered/Declining spp.			
Seabirds Seamount communities		Bottom trawling	This area harbors archaeological remnants from shipwrecks from the Middle Ages. In the path of the Algerian current (AC)	BARCONV SH
Seabirds		Bottom trawling	In the path of the Algerian current (AC)	BARCONV SH

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
El Haouaria Bank	☐	*Cetorhinus maximus* (Basking Shark) - Vulnerable Important feeding area for Procellariiforms *Caretta caretta* (Loggerhead Turtle) - Endangered	2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Spiss Bank	☐	*Monachus monachus* (Mediterranean Monk Seal) - Critically Endangered	1978. The recent status of *Monachus monachus*, the Mediterranean monk seal 2003. Action Plan for the managemente of the Mediterranean monk seal (*Monachus monachus*) 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2011. Assessment of Mediterranean monk seal (*Monachus monachus*) habitat at La Galite, Tunisia: towards a monk seal conservation strategy in northern Tunisia and nearby waters
022. Sardinia (east)			
Vercelli Seamount	☐	Important area for feeding of endemic and other seabird species of conservation concern that concentrate for breeding in Corsica-Sardinia-Tuscan archipelagos. *Laminaria rodriguezii* (Appendix I (Med) - Bern Convention; Annex II Barcelona Convention) *Paramuricea clavata* *Eunicella cavolinii*	2003. Hidden granitoids from boreholes and seamount 2003. The "white coral community", canyon and seamount faunas of the deep Mediterranean Sea 2009. Glider measurements around the Vercelli seamount (Thyrrenian Sea) in May 2009 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2011. Characteristics of the Mesophotic Megabenthic assemblages of the Vercelli Seamount (North Tyrrhenian Sea)
Cornaglia Seamount	☐		
Baronie Mountains	☐	Important area for feeding of endemic and other seabird species of conservation concern that concentrate for breeding in Corsica-Sardinia-Tuscan archipelagos. *Galeus melastomus* (Blackmouth Catshark) nursery area - Least Concern	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Quirra Mountains	☐		
San Antioco Canyon	☐	Fisheries targeting large pelagic species	
023. Sardinia (west)			
Nurra Escarpment	■	*Cetorhinus maximus* (Basking Shark) - Vulnerable *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	1990. The Algerian eddies 2002. Sandy submarine canyon-mouth lobes on the western margin of Corsica and Sardinia, Mediterranean Sea 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2008. Shallow water sea-floor morphologies around Asinara Island (NW Sardinia, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Il Catalano Canyon	☐	Fisheries targeting large pelagic species *Cetorhinus maximus* (Basking Shark) - Vulnerable *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	1990. The Algerian eddies 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction

BFT. Illegal fishing of bluefin tuna; **SWD**. Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Seabirds Sea turtles Seamount communities	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling	In the path of the Algerian current (AC)	BARCONV SH GREENPEACE
Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		In the path of the Algerian current (AC)	
Seamount communities Seabirds	Biological diversity		Area of archaeological importance? High primary productivity of pelagic waters	BARCONV
Seamount communities	Biological diversity			GREENPEACE
Seabirds Sharks	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		High primary productivity of pelagic waters	OCEANA EU
Seamount communities				GREENPEACE
Canyons				
Sharks Whales and other cetaceans	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		The escarpment borders the Castelsardo canyon in zone 007. The southern area of the Sardinian Sea is affected by the formation of eddies from the Algerian current	
Canyons Sharks Whales and other cetaceans Gyres	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		The southern area of the Sardinian Sea is affected by the formation of eddies from the Algerian current	

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Oristano Canyon	☐	Fisheries targeting large pelagic species *Cetorhinus maximus* (Basking Shark) - Vulnerable	1990. The Algerian eddies 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea
NO NAME Abyssal Plain	☐	*Cetorhinus maximus* (Basking Shark) - Vulnerable *Balaenoptera physalus* (Fin Whale) - Endangered *Stenella coeruleoalba* (Striped Dolphin) - Least Concern *Grampus griseus* (Risso's Dolphin) - Least Concern *Physeter macrocephalus* (Sperm Whale) - Vulnerable	1990. The Algerian eddies 2005. On the presence of basking shark (*Cetorhinus maximus*) in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
024. South Levant (East)			
Eratosthenes Seamount	☐	*Caretta caretta* (Loggerhead turtle) - Endangered *Chelonia mydas* (Green Turtle) - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1999. Interaction of Marine Turtles with Fisheries in the Mediterranean 2006. Recommendation GFCM/2006/3 on the establishment of fisheries restrictive areas in order to protect the deep sea sensitive habitats
Alexandria Canyon	☐	*Caretta caretta* (Loggerhead Turtle) habitat - Endangered *Chelonia mydas* (Green Turtle) habitat - Endangered	1991. The eastern Mediterranean general circulation: features, structure and variability 1999. Interaction of Marine Turtles with Fisheries in the Mediterranean 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Nile Cold Hydrocarbon Seeps I	☐	*Thunnus thynnus* (Bluefin Tuna) spawning area - Data Deficient *Caretta caretta* (Loggerhead Turtle) - Endangered *Chelonia mydas* (Green Turtle) - Endangered Possible common dolphin habitat	1991. The eastern Mediterranean general circulation: features, structure and variability 1999. Interaction of Marine Turtles with Fisheries in the Mediterranean 2001. A highly concentrated region of cold hydrocarbon seeps in the southeastern Mediterranean Sea 2006. Recommendation GFCM/2006/3 on the establishment of fisheries restrictive areas in order to protect the deep sea sensitive habitats 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Nile Cold Hydrocarbon Seeps II	☐	*Thunnus thynnus* (Bluefin Tuna) spawning area - Data Deficient *Caretta caretta* (Loggerhead Turtle) habitat - Endangered *Chelonia mydas* (Green Turtle) habitat - Endangered Possible common dolphin habitat	1991. The eastern Mediterranean general circulation: features, structure and variability 1999. Interaction of Marine Turtles with Fisheries in the Mediterranean 2001. A highly concentrated region of cold hydrocarbon seeps in the southeastern Mediterranean Sea 2006. Recommendation GFCM/2006/3 on the establishment of fisheries restrictive areas in order to protect the deep sea sensitive habitats 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Isis Mud Volcano	☐		2008. High-resolution mapping of large gas emitting mud volcanoes on the Egyptian continental margin (Nile Deep Sea Fan) by AUV surveys
Amon Mud Volcano	☐		2008. High-resolution mapping of large gas emitting mud volcanoes on the Egyptian continental margin (Nile Deep Sea Fan) by AUV surveys
Osiris Mud Volcano	☐		2008. High-resolution mapping of large gas emitting mud volcanoes on the Egyptian continental margin (Nile Deep Sea Fan) by AUV surveys

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Canyons Sharks	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		The southern area of the Sardinian Sea is affected by the formation of eddies from the Algerian current	
Sharks Whales and other cetaceans	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		The southern area of the Sardinian Sea is affected by the formation of eddies from the Algerian current	
Seamount communities Sea turtles Gyres	Vulnerable/Fragil/Sensitive/Slow recover Threatened/Endangered/Declining spp. Biological diversity	Oil/gas drilling	The most important seamount in the Mediterranean in terms of size and also declared FRA. The Nile delta is one of the most important areas in the Mediterranean for sea turtle feeding and hibernation (*Caretta caretta* and *Chelonia mydas*). Located in the area of the anticyclonic gyre of Shikmona (Shikmona anticyclonic eddy) and the Eratosthenes Seamount Eddy (ESE). Recent discoveries have significantly increased industry interest in eastern Mediterranean waters and particularly in the Levantine Basin.	GFCM CIESM OCEANA EU SH GREENPEACE
Canyons Sea turtles	Threatened/Endangered/Declining spp.		The Nile delta is one of the most important areas in the Mediterranean for sea turtle feeding and hibernation (*Caretta caretta* and *Chelonia mydas*). Egyptian shelf loggerhead and green turtle habitat	
Cold seeps Highly migratory fish Sea turtles Whales and other cetaceans	Uniqueness/rarity Vulnerable/Fragil/Sensitive/Slow recover Threatened/Endangered/Declining spp.		The Nile delta is one of the most important areas in the Mediterranean for sea turtle feeding and hibernation (*Caretta caretta* and *Chelonia mydas*). Spawning area for bluefin tuna In the path of the main superficial current coming from Egyptian coasts (Libyo-Egyptian current). Egyptian shelf loggerhead and green turtle habitat	GFCM BARCONV SH GREENPEACE
Cold seeps Highly migratory fish Sea turtles Whales and other cetaceans	Uniqueness/rarity Vulnerable/Fragil/Sensitive/Slow recover Threatened/Endangered/Declining spp.		The Nile delta is one of the most important areas in the Mediterranean for sea turtle feeding and hibernation (*Caretta caretta* and *Chelonia mydas*). Spawning area for bluefin tuna. In the path of the main superficial current coming from Egyptian coasts (Libyo-Egyptian current). Egyptian shelf loggerhead and green turtle habitat	GFCM BARCONV SH GREENPEACE
Gas hydrates	Uniqueness/rarity		The Isis mud volcano covers an area of 10.1 km^2 and is located in more than 990 m of water. The associated seep area corresponds to a hot spot in terms of mud eruption, gas concentrations, temperatures and microbial activity.	
Gas hydrates	Uniqueness/rarity		The associated seep area corresponds to a hot spot in terms of mud eruption, gas concentrations, temperatures and microbial activity.	
Gas hydrates	Uniqueness/rarity		The associated seep area corresponds to a hot spot in terms of mud eruption, gas concentrations, temperatures and microbial activity.	

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
NO NAME Mud volcano	☐		2008. High-resolution mapping of large gas emitting mud volcanoes on the Egyptian continental margin (Nile Deep Sea Fan) by AUV surveys
NO NAME Mud volcano	☐		2008. High-resolution mapping of large gas emitting mud volcanoes on the Egyptian continental margin (Nile Deep Sea Fan) by AUV surveys
025. South Levant (West)			
Irving Seamount	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 1995. A seasonal model of the Mediterranean Sea general circulation
Cheffren Mud volcano	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 1995. A seasonal model of the Mediterranean Sea general circulation 2002. Mud volcanoes-the most important pathway for degassing deeply buried sediments
United Nations Mud volcano	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 1995. A seasonal model of the Mediterranean Sea general circulation 1997. Mud Volcanoes and Dome-Like Structures at the Eastern Mediterranean Ridge 2002. Mud volcanoes-the most important pathway for degassing deeply buried sediments 2004. Structural setting and tectonic control of mud volcanoes from the Central Mediterranean Ridge (Eastern Mediterranean) 2005. Western Mediterranean Ridge mud belt correlates with active shear strain at the prism-backstop geological contac 2010. The Mid-Mediterranean Jet Artefact
Mersa-Matruth Eddy Gyre	☐	Swordfish (*Xiphias gladius*) migration and spawning periods - Data Deficient	2008. Distribution of swordfish in the Eastern Mediterranean, in relation to environmental factors and the species biology
026. South of Sicily			
Empedocles Seamount	☐	*Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin tuna) - Data Deficient Important feeding area for Procellariiforms *Caretta caretta* (Loggerhead turtle) - Endangered *Lophelia* and *Madrepora* reefs *Merluccius merluccius* (hake) nursery	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Adventure Bank	☐	*Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for Procellariiforms *Caretta caretta* (Loggerhead Turtle) - Endangered	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview

BFT. Illegal fishing of bluefin tuna; **SWD**. Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Gas hydrates	Uniqueness/rarity		The associated seep area corresponds to a hot spot in terms of mud eruption, gas concentrations, temperatures and microbial activity.	
Gas hydrates	Uniqueness/rarity		The associated seep area corresponds to a hot spot in terms of mud eruption, gas concentrations, temperatures and microbial activity.	
Gyres Seamount communities	Biological diversity		In area where eddies form (Mersa-Matruth anticyclonic eddy) and close to the Mid-Mediterranean Jet whose path is located toward the north	CIESM
Gyres	Uniqueness/rarity		In area where eddies form (Mersa-Matruth anticyclonic eddy) and close to the Mid-Mediterranean Jet whose path is located toward the north	
Gyres	Uniqueness/rarity	Oil/gas drilling	In an area where eddies form and close to the Mid-Mediterranean Jet current path located in the south. In an area where eddies form (IE - Ierapetra Eddy)	
Gyres Highly migratory fish	Biological productivity Importance for life stage spp.		Area affected by the Mersa-Matruth eddy and the Mid-Mediterranean Jet current (Mid-Mediterranean Jet - MMJ)	GREENPEACE
Sharks Gyres Highly migratory fish Seabirds Sea turtles Cold water coral reefs Seamount communities	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover		In the area with the highest relative abundance of white sharks. Located in the Adventure Bank gyre (ABV: Adventure Bank Vortex) *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats)	BARCONV ACCOBAMS EFH GREENPEACE
Sharks Highly migratory fish Seabirds Sea turtles Seamount communities	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		In the area with the highest relative abundance of white sharks.	BARCONV ACCOBAMS SH EFH GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Terrible Bank	☐	Fisheries targeting small pelagic species *Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for Procellariiforms Important suitable habitat for small pelagics *Caretta caretta* (Loggerhead Turtle) - Endangered *Lophelia* and *Madrepora* reefs	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2003. The "white coral community", canyon and seamount faunas of the deep Mediterranean Sea 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Nerita Patch	☐	*Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for Procellariiforms *Caretta caretta* (Loggerhead Turtle) - Endangered *Lophelia* and *Madrepora* reefs	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Graham Shoal (Volcanoes Ferdinandea and Isla Graham)	☐	Fisheries targeting small pelagic species *Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for Procellariiforms *Caretta caretta* (Loggerhead Turtle) - Endangered *Lophelia* and *Madrepora* reefs *Merluccius merluccius* nursery	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Pantelleria Shoal	☐	*Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for Procellariiforms *Caretta caretta* (Loggerhead Turtle) - Endangered	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Linosa Bank	■	*Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for endemic marine birds Winter feeding grounds for *Balaenoptera physalus* (Fin Whale) - Endangered *Lophelia* and *Madrepora* reefs	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2006. The first identified winter feeding ground of fin whales (*Balaenoptera physalus*) in the Mediterranean Sea 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview

BFT. Illegal fishing of bluefin tuna; **SWD.** Illegal fishing of swordfish with driftnets; **OTB.** Illegal fishing with otter bottom trawl; **IUU.** Illegal, Unregulated and Unreported fishing;
EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Gyres Highly migratory fish Seabirds Sea turtles Cold water coral reefs Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		In the area with the highest relative abundance of white sharks. Located in the Adventure Bank gyre (ABV: Adventure Bank Vortex) *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats)	BARCONV ACCOBAMS SH GREENPEACE
Sharks Gyres Highly migratory fish Sea turtles Cold water coral reefs	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover		In the area with the highest relative abundance of white sharks. Located in the Adventure Bank gyre (ABV: Adventure Bank Vortex) *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats)	BARCONV ACCOBAMS SH GREENPEACE
Sharks Gyres Highly migratory fish Seabirds Sea turtles Cold water coral reefs	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling	In the area with the highest relative abundance of white sharks. Located in the Adventure Bank gyre (ABV: Adventure Bank Vortex) *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats)	BARCONV ACCOBAMS SH EFH GREENPEACE
Sharks Highly migratory fish Seabirds Sea turtles	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		In the area with the highest relative abundance of white sharks.	BARCONV ACCOBAMS SH EFH GREENPEACE
Sharks Highly migratory fish Seabirds Whales and other cetaceans Cold water coral reefs Seamount communities	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover		In the area with the highest relative abundance of white sharks. Spawning area for bluefin tuna *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats)	OCEANA EU BARCONV SH GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Urania Bank	☐	*Carcharodon carcharias* (Great White Shark) - Vulnerable *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for Procellariiforms *Caretta caretta* (Loggerhead Turtle) - Endangered	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
Linosa Trench	☐	*Carcharodon carcharias* (Great White Shark) - Vulnerable	1989. The Strait of Sicily continental rift systems: Physiography and petrochemistry of the submarine volcanic centres 2004. The dynamics of the Sicily Strait: a comprehensive study from observations and models 2008. Relationships between magmatism and tectonics in a continental rift: The Pantelleria Island region (Sicily Channel, Italy) 2010. Mediterranean pelagic habitat: oceanographic and biological processes, an overview
027. South Tyrrhenian Sea			
Vavilov Seamount	☐		
Marsili Seamount	☐	*Thunnus thynnus* (Bluefin Tuna) - Data Deficient Fisheries targeting large pelagic species	2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Magnaghi Seamount	☐		
Aceste Seamount	☐	Black corals Elasmobranches (specially high quantity of sharks) Commercial species Important feeding area for Procellariiforms	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Vittorio Emmanuel Seamount	☐		
Ustica Ridge	☐		
Ustica Escarpment	☐	Important feeding area for Procellariiforms	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Drepano Seamount	☐		
Enareta Seamount	☐	Corals Sponges Sharks *Thunnus thynnus* (Bluefin Tuna) - Data Deficient Fisheries targeting large pelagic species	2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Eolo Seamount	☐	*Thunnus thynnus* (Bluefin Tuna) - Data Deficient Fisheries targeting large pelagic species	2007. Hydrothermal nontronite formation at Eolo Seamount (Aeolian volcanic arc, Tyrrhenian Sea) 2010. Report of the 2010 ICCAT bluefin data preparatory meeting
Plinio Seamount	☐	*Thunnus thynnus* (Bluefin Tuna) spawning ground - Data Deficient Fisheries targeting large pelagic species	2010. Report of the 2010 ICCAT bluefin data preparatory meeting

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Gyres Highly migratory fish Seabirds Sea turtles Seamount communities	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover		In the area with the highest relative abundance of white sharks. Located in the Adventure Bank gyre (ABV: Adventure Bank Vortex)	OCEANA EU BARCONV ACCOBAMS SH GREENPEACE
Sharks	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover	Bottom trawling	In the area with the highest relative abundance of white sharks.	OCEANA EU BARCONV ACCOBAMS SH GREENPEACE
Gyres Seamount communities	Biological diversity		In the area of the formation of the gyre in the central Tyrrhenian	GREENPEACE
Highly migratory fish	Threatened/Endangered/Declining spp. Biological diversity		Spawning area for bluefin tuna	GREENPEACE
Seamount communities	Biological diversity			GREENPEACE
Seamount communities Gyres Seabirds Coral, sponge and bryozoan aggregations	Uniqueness/rarity Importance for life stage spp. Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover Biological productivity Biological diversity Naturalness		Identified by OCEANA using EBSA criteria (2009). In the area of the formation of the gyre in the central Tyrrhenian	OCEANA EU BARCONV SH
Seamount communities	Biological diversity			GREENPEACE
Gyres			In the area of the formation of the gyre in the central Tyrrhenian	
Seabirds				BARCONV SH
Seamount communities	Biological diversity			
Seamount communities Highly migratory fish	Uniqueness/rarity Importance for life stage spp. Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover Biological productivity Biological diversity Naturalness		Identified by OCEANA using EBSA criteria (2009). Spawning area for bluefin tuna	OCEANA EU GREENPEACE
Hydrothermal vent ecosystems Highly migratory fish Seamount communities	Threatened/Endangered/Declining spp. Biological diversity		Spawning area for bluefin tuna	OCEANA EU GREENPEACE
Highly migratory fish Seamount communities	Threatened/Endangered/Declining spp. Biological diversity	SWD	Spawning area for bluefin tuna	GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
D'Ancora Ridge	☐		
San Vito Canyon	■	Fisheries targeting large pelagic species	
028. Southern Adriatic Sea (part)			
Bari Canyon	☐	*Lophelia* *Madrepora* *Dendrophyllia*	1997. The Adriatic Sea General Circulation. Part II: Baroclinic Circulation Structure 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2007. Cambio climático en el Mediterráneo español 2007. Particle transport in the Bari Canyon (Southern Adriatic Sea) 2007. The impact of cascading currents on the Bari Canyon System, SW-Adriatic Margin (Central Mediterranean) 2008. Source and composition of organic matter in the Bari canyon (Italy): Dense water cascading versus particulate export from the upper ocean 2008. Trophic conditions and meiofaunal assemblages in the Bari Canyon and the adjacent open slope (Adriatic Sea) 2009. Cascades in Mediterranean submarine grand canyons 2009. The White Coral Community in the Central Mediterranean Sea Revealed by ROV Surveys 2010. On the descent of dense water on a complex canyon system in the southern Adriatic basin
Elevations and Escarpments of southern Adriatic	☐	*Caretta caretta* (Loggerhead Turtle) feeding habitat - Endangered	1997. The Adriatic Sea General Circulation. Part II: Baroclinic Circulation Structure 2005. Incidental catch and estimated discards of pelagic sharks from the swordfish and tuna fisheries in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
029. Southern Ionian Sea (East)			
Herodotus Seamount	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea
Battos Seamount	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea 2009. Bannock Basin, Sirte Abyssal Plain and Conrad Spur: structural relationships between Mediterranean Ridge and its western foreland and implications on the character of the accretionary complex (Eastern Mediterranean)
Akhdar Seamount	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea 2009. Bannock Basin, Sirte Abyssal Plain and Conrad Spur: structural relationships between Mediterranean Ridge and its western foreland and implications on the character of the accretionary complex (Eastern Mediterranean)
Cyrene Seamount	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea 2009. Bannock Basin, Sirte Abyssal Plain and Conrad Spur: structural relationships between Mediterranean Ridge and its western foreland and implications on the character of the accretionary complex (Eastern Mediterranean)
Herodotus Trench	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Seamount communities	Biological diversity			GREENPEACE
Canyons				
Cold water coral reefs	Vulnerable/Fragil/Sensitive/Slow recover Biological diversity	Bottom trawling	The discovery is located at less than 200 meters depth off the coast of Pescara. HERMES project *Lophelia pertusa* reefs (OSPAR list of Threatened and/or Declining species and habitats)	CIESM
Sea turtles	Threatened/Endangered/Declining spp.		Visible on Google earth. Located in the outflow current of the Adriatic To date, deep water *Lophelia* has only been identified in the Norwegian fjords	CIESM GREENPEACE
Gyres Gas hydrates Seamount communities	Uniqueness/rarity Biological diversity	Oil/gas drilling	In area where eddies form	OCEANA EU GREENPEACE
Gyres Seamount communities	Biological diversity	Oil/gas drilling	The recent deepwater, sub-salt gas discoveries offshore Israel have significantly increased industry interest in the eastern Mediterranean and particularly the Levantine Basin. In area where eddies form (Libyan Eddy - LE2). Battos Seamount rises to 1,790 m.	GREENPEACE
Gyres Seamount communities	Biological diversity	Oil/gas drilling	The recent deepwater, sub-salt gas discoveries offshore Israel have significantly increased industry interest in the eastern Mediterranean and particularly the Levantine Basin. In an area where eddies form (Libyan Eddy - LE1)	GREENPEACE
Gyres Seamount communities	Biological diversity	Oil/gas drilling	The recent deepwater, sub-salt gas discoveries offshore Israel have significantly increased industry interest in the eastern Mediterranean and particularly the Levantine Basin. In an area where eddies form (Libyan Eddy - LE2) Cyrene Seamount has a positive relief of over 2,700 m above the foreland.	GREENPEACE
Gas hydrates	Uniqueness/rarity	Oil/gas drilling	The recent deepwater, sub-salt gas discoveries offshore Israel have significantly increased industry interest in the eastern Mediterranean and particularly the Levantine Basin. In an area where eddies form (Libyan Eddy - LE1)	OCEANA EU GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
NO NAME Seamount	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea
NO NAME Seamount	☐		1991. The eastern Mediterranean general circulation: features, structure and variability 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea
Olimpi (Napoli and Milano mud volcanoes) Mud volcano	☐		WEB. New information concerning clay mineral provenance in mud volcanoes 1991. The eastern Mediterranean general circulation: features, structure and variability 1997. Mud Volcanoes and Dome-Like Structures at the Eastern Mediterranean Ridge 2002. Mud volcanoes-the most important pathway for degassing deeply buried sediments 2004. Structural setting and tectonic control of mud volcanoes from the Central Mediterranean Ridge (Eastern Mediterranean) 2005. A new hypothesis about the surface circulation in the eastern basin of the Mediterranean sea 2005. Western Mediterranean Ridge mud belt correlates with active shear strain at the prism-backstop geological contact
030. Southern Ionian Sea (West)			
Archimedes Seamount	☐		
Epicharmos Seamount	☐	*Thunnus thynnus* (Bluefin Tuna) breeding area - Data Deficient	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Melita Bank	☐	Fisheries targeting large pelagic species *Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient Important feeding area for endemic marine birds *Caretta caretta* (Loggerhead Turtle) - Endangered	2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Sirte Rise	☐		
NO NAME Seamount	☐		1987. The Medina Wrench: a key to the kinematics of the central and eastern Mediterranean over the past 5 Ma
NO NAME Seamount	☐	*Thunnus thynnus* breeding area (Bluefin Tuna) - Data Deficient *Caretta caretta* (Loggerhead Turtle) - Endangered	1987. The Medina Wrench: a key to the kinematics of the central and eastern Mediterranean over the past 5 Ma 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
031. Western Ionian Sea			
Victor Hensen Hill	☐	Sharks (*Galeus melastomus*, *Oxynotus centrina*, *Dalatias licha*, *Etmopterus spinax*)	1985. The Victor Hensen Seahill (central Ionian Sea) - Morphology and structural aspects 2004. Chondrichthyes species in deep waters of the Mediterranean Sea 2006. Geology of the Victor Hensen Seahill (Ionian Sea, Eastern Mediterranean): Insights from the study of cored sediment sequences 2009. Bannock Basin, Sirte Abyssal Plain and Conrad Spur: structural relationships between Mediterranean Ridge and its western foreland and implications on the character of the accretionary complex (Eastern Mediterranean)
Alfeo Seamount	☐	Fisheries targeting large pelagic species Sharks (*Galeus melastomus*, *Oxynotus centrina*, *Dalatias licha*, *Etmopterus spinax*) *Caretta caretta* (Loggerhead Turtle) feeding habitat - Endangered	2004. Chondrichthyes species in deep waters of the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction

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EFH. Essential Fish Habitat; **SH.** Sensitive Habitat; **BARCONV.** Barcelona Convention

CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Gyres Seamount communities	Biological diversity	Oil/gas drilling	The recent deepwater, sub-salt gas discoveries offshore Israel have significantly increased industry interest in the eastern Mediterranean and particularly the Levantine Basin. In area where eddies form (Libyan Eddy - LE2)	GREENPEACE
Gyres Seamount communities	Biological diversity	Oil/gas drilling	The recent deepwater, sub-salt gas discoveries offshore Israel have significantly increased industry interest in the eastern Mediterranean and particularly the Levantine Basin. In area where eddies form (Libyan Eddy - LE2)	GREENPEACE
Gyres	Uniqueness/rarity	Oil/gas drilling	The recent deepwater, sub-salt gas discoveries offshore Israel have significantly increased industry interest in the eastern Mediterranean and particularly the Levantine Basin. In area where eddies form. HERMES Project	GREENPEACE
Gyres Seamount communities	Biological diversity		It is an isolated mount in the Ionian. In the area of the central Ionian gyre	GREENPEACE
Seamount communities Highly migratory fish	Threatened/Endangered/Declining spp. Biological diversity			GREENPEACE
Highly migratory fish Seabirds Sea turtles Seamount communities	Threatened/Endangered/Declining spp.		Located in areas where large pelagic species are targeted. It is an isolated mount in the Ionian. Spawning area for bluefin tuna	
			The southernmost of the Ionian and an isolated mount	
Gyres Seamount communities	Biological diversity		In the area of the central Ionian gyre	GREENPEACE
Gyres Seamount communities Highly migratory fish Sea turtles	Threatened/Endangered/Declining spp. Biological diversity		In the area of the central Ionian gyre	GREENPEACE
Sharks	Vulnerable/Fragil/Sensitive/Slow recover		Approximately 1,000 meters drop	
Seamount communities Sharks Sea turtles	Threatened/Endangered/Declining spp. Biological diversity Vulnerable/Fragil/Sensitive/Slow recover		In an area where large pelagic species are targeted	GREENPEACE

ANNEX II. ECOLOGICAL IMPORTANCE OF OCEANA MEDNET SITES

NAME	National Jurisdiction	Key species - Red List status	References
Anteo Hill	☐	Fisheries targeting large pelagic species Sharks (*Galeus melastomus*, *Oxynotus centrina*, *Dalatias licha*, *Etmopterus spinax*) *Caretta caretta* (Loggerhead Turtle) feeding habitat - Endangered	2004. Chondrichthyes species in deep waters of the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Amendolara Seamount	■	Coralligenous (at the top) Facies of "maërl" High diversity of fish, crustaceans and cephalopods	2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea
NO NAME Seamount	☐	*Thunnus thynnus* (Bluefin Tuna) breeding area - Data Deficient Important feeding area for endemic marine birds	1987. The Medina Wrench: a key to the kinematics of the central and eastern Mediterranean over the past 5 Ma 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
NO NAME Seamount	☐	*Physeter macrocephalus* (Sperm Whale)habitat - Vulnerable *Ziphius cavirostris* (Cuvier's Beaked Whale) habita - Least Concern Significant oceanographic feature driven by strong upwelling, rich in cephalopods, clupeid and scombriform eggs and larvae, possibly cetaceans	1987. The Medina Wrench: a key to the kinematics of the central and eastern Mediterranean over the past 5 Ma 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction
Seamount	☐		1987. The Medina Wrench: a key to the kinematics of the central and eastern Mediterranean over the past 5 Ma
Santa Mª di Leuca	☐	*Desmophyllum dianthus* *Madrepora oculata* *Lophelia pertusa* reefs Gorgonian *Paramuricea* cf. *macrospina* Antipatharian *Leiopathes glaberrima* Important feeding area for endemic marine birds *Delphinus delphis* (Short-beaked Common Dolphin) - Least Concern	2006. Sensitive and Essential Fish Habitats in the Mediterranean Sea 2009. Identification of Potential SPAMIs in Mediterranean Areas Beyond National Jurisdiction 2009. Trophic relationships in a deep Mediterranean cold-water coral bank (Santa Maria di Leuca, Ionian Sea) 2010. Biodiversity of the white coral bank off Cape Santa Maria di Leuca (Mediterranean Sea): An update 2010. Deep-sea survey for the detection of methane at the "Santa Maria di Leuca" cold-water coral mounds (Ionian Sea, South Italy) 2010. Spatiotemporal bioerosion patterns in deep-water scleractinians from off Santa Maria di Leuca (Apulia, Ionian Sea)

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CBD FEATURE	EBSA CRITERIA	THREATS	REMARKS	Proposal by
Sharks Sea turtles	Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover	SWD	In an area where large pelagic species are targeted. IUU fishing has been detected here	GREENPEACE
Seamount communities	Vulnerable/Fragil/Sensitive/Slow recover Biological diversity	Bottom trawling	In national jurisdictional waters. The seamount is almost round in shape covering an area of about 31 km^2. Vessels from the Taranto and Schiavonea fisheries targeting mostly hake and deep-water rose shrimp.	GREENPEACE
Seamount communities Highly migratory fish Seabirds	Threatened/Endangered/Declining spp. Biological diversity		Isolated mountain	BARCONV GREENPEACE
Seamount communities Whales and other cetaceans	Threatened/Endangered/Declining spp. Biological diversity		Isolated mountain Hellenic Trench sperm whale and beaked whale habitat	GREENPEACE
Seamount communities	Biological diversity			GREENPEACE
Coral, sponge and bryozoan aggregations Seabirds Whales and other cetaceans Sea turtles	Biological diversity Threatened/Endangered/Declining spp. Vulnerable/Fragil/Sensitive/Slow recover		In the outflow current of the Adriatic. HERMES Project. Classified as Sensitive Habitat (D'Onghia *et al* in Work Document for the Commission). Living and dead colonies of *Lophelia pertusa* and *Madrepora oculata* are widespread within an area of about 900 km^2	OCEANA EU GFCM CIESM BARCONV SH GREENPEACE

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