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THREATENED SPECIES

Proposal for their protection in Europe and Spain

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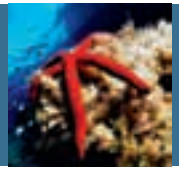

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Common sea urchin (*Echinus esculentus*), documented in the Atlantic Islands National Park in Galicia, Spain.
© OCEANA/ Carlos Suárez

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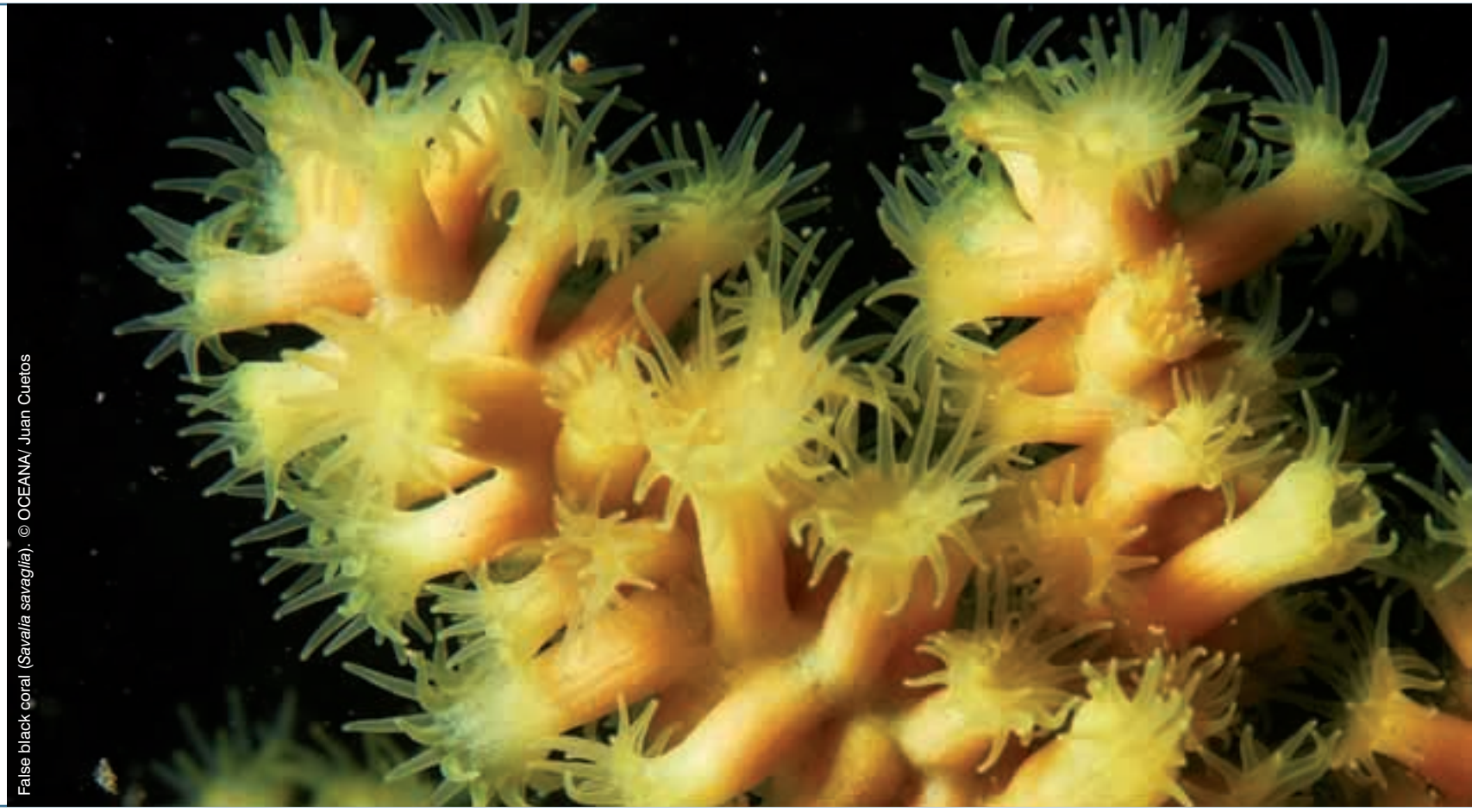
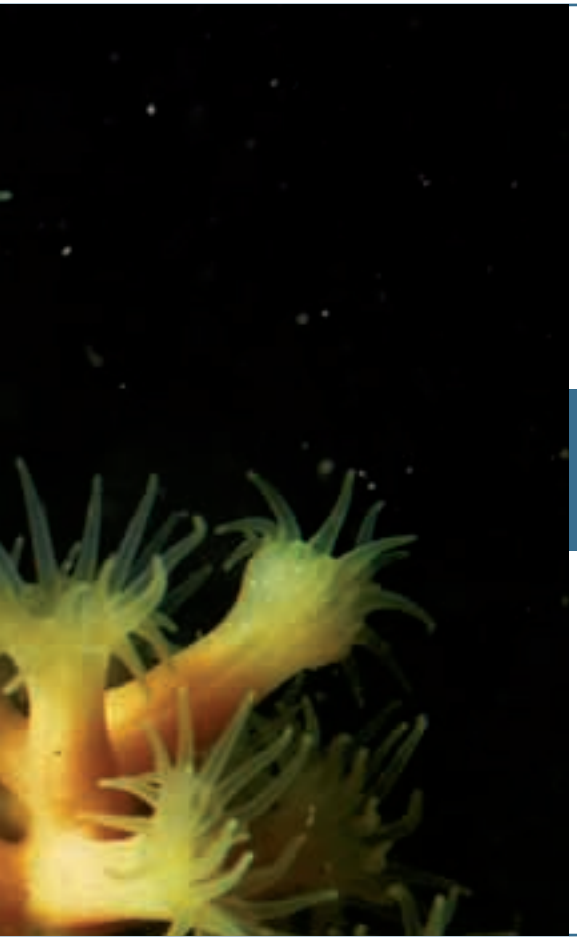


False black coral (*Savalia savaglia*). © OCEANA/ Juan Cuetos



INTRODUCTION

Bluefin tuna (*Thunnus thynnus*) in the Mediterranean Sea.
© OCEANA/ Keith Ellenbogen

Protecting marine species worldwide is difficult and requires specific actions to be developed or adapted. Countries are authorised to protect only an extremely small proportion of the habitats in which these species live. As such, the development of isolated policies or policies based on geographic limitations makes measures less effective. In addition, agreements or legislation on management of the marine environment have listed marine species or habitats without adequately considering their situation and ignoring aspects that are important for their protection. Many of these obstacles are the result of a lack of knowledge in marine biology, so it is essential to develop studies that shed light on the oceans, its habitats, species and interactions.

In fact, only 5% of the world's seabeds have been explored. Various studies estimate that between 10 and 40 million species live in the oceans[1,2], although efforts have only been concentrated on the commercially important ones. Hence, research on all marine habitats and species should be promoted and fostered. In this regard, the last Census of Marine Life (CoML) includes approximately 320,000 species[3] identified to date. The IUCN (International Union for Conservation of Nature) Red List has only evaluated some 2,100 marine species[4] (not including birds). Furthermore, significantly fewer marine species than land species appear in conservation conventions or protocols. This gap can be attributed to many factors, including the fact that the oceans have always been considered an inexhaustible space for exploitation, not conservation.

This panorama places us in prehistoric times as far as knowledge of the oceans is concerned. Moreover, although the earth is covered by three times more water than land –considering only surface area and not depth or volume– the oceans remain a mystery, limiting the possibilities for protection. As a consequence of this lack of information, many marine species are now at risk and may even become extinct without ever having been identified or included in a census. This is also the reason why the lists of fauna and flora that appear in protection agreements do not include all the species that are currently at risk. However, and despite the fact that many of these species have already been identified along with the importance of their ecological functions, there continues to be a significant lack of endangered marine species included in

red lists. Their protection has been historically reduced to species that are highly visible or merely attractive to humans, without taking into account their ecological importance or their role in the food chain.

The IUCN Red List is considered a reference document for the conservation state of both land and marine species, but also reflects the lack of studies concerning the marine environment. Threat categories are based on the evaluation of the species included in the lists (Table 1). The DD category (data deficient) accounts for almost one-third of the total.

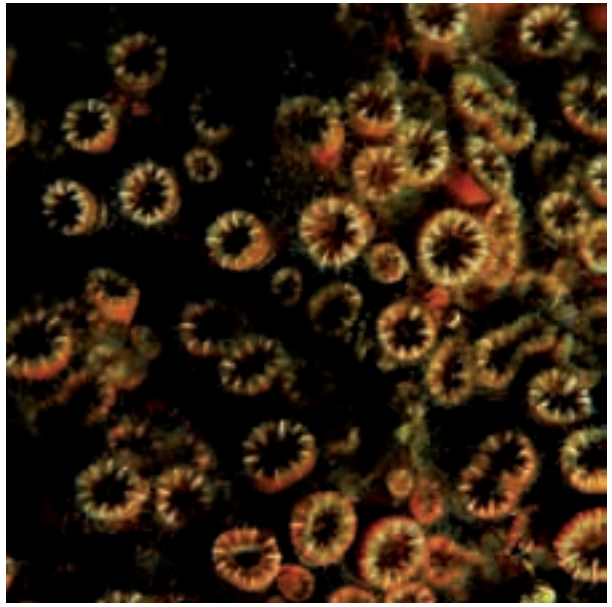
Table 1. IUCN Red List world classification of marine species (not including birds).

IUCN Category	Abbreviation	Marine species
Extinct	EX	10
Extinct in the wild	EW	0
Critically endangered	CR	68
Endangered	EN	99
Vulnerable	VU	381
Low risk	LR/cd	6
Near threatened	NT	336
Data deficient	DD	647
Least concern	LC	611

According to the 2008 IUCN report[5], almost 45,000 species of flora and fauna around the world fall under one of the organization's categories. The lack of data reduces the number of marine species to 5.6% of the total and this is clearly insufficient to reflect and represent the biodiversity of this biomass, both in relative terms, in comparison to land species, and in absolute terms.

The goldblotch grouper (*Epinephelus costae*) is catalogued as DD. Management must be based on the application of the precautionary principle, especially for commercial species. Cabrera, Balearic Islands. Spain. © OCEANA/ Carlos Suárez

EUROPE



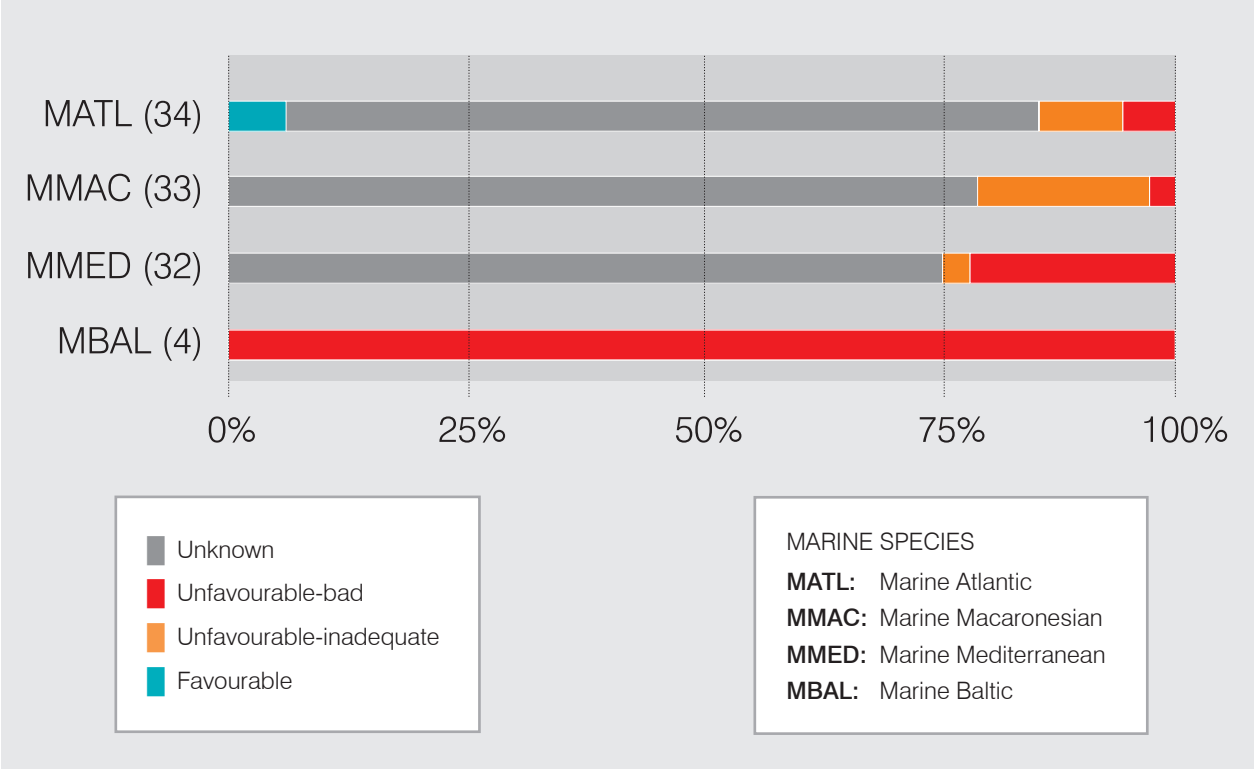
Colonial coral (*Polycyathus muellerae*) in the Columbretes Islands, Spain. © OCEANA/ Juan Cuetos

The importance of the fishing sector and historic dumps must be taken into account when analysing the situation of marine species in Europe, because these are the main causes of ocean degradation. Regarding dumps, control measures and legislation have reduced chronic spillage to some degree, at least as far as contamination from land-based sources is concerned; however, the overexploitation of fishing resources continues to constitute an important factor in the disappearance of marine species and habitat degradation due to destructive fishing gear. The semi-enclosed seas, including the Baltic and Mediterranean, suffer the most serious consequences from this situation.

The European territory is located between parallels 27º and 70º and includes a wide variety of habitats harbouring high levels of biodiversity, including migratory marine species such as the leatherback turtle (*Dermochelys coriacea*) or the bluefin tuna (*Thunnus thynnus*), which complete a part of their life cycles in European waters. Marine environment protection measures in Europe do not take these facts into account because, although a Marine Strategy Framework Directive exists for this environment[6], the efforts made by Member States for research and protection are insufficient. The lists of marine species included in the Habitats Directive, as well as other conventions that are legally binding for the European Union, also lack sufficient measures to halt biodiversity loss in the marine environment.

The first species and habitats[7] evaluation carried out under the Habitats Directive and published in June 2009 indicates a significant problem in marine species protection: 57% of the marine species assessed in this report were classified as “unknown”, between 75% and 80% of species in the Mediterranean, Atlantic and Macronesian are also catalogued as “unknown” and 100% of those evaluated in the Baltic are “unfavourable bad” (Figure 1).

Figure 1. Assessment of marine species in the Habitats Directive (2001-2006).



SPAIN

The status of marine conservation in Spain could improve significantly with the application of the Framework Directive on the marine environment, which ensures the development of this Directive by transposing it to national legislation. Although updating the lists of protected marine species is not obligatory, it is necessary as these species are not adequately represented.

The most important tool used in Spain to protect wild species is the Catálogo Español de Especies Amenazadas[8] (Spanish Catalogue of Threatened Species), which only lists 39 marine species, including catadromous/anadromous species (those developing part of their life cycle in river systems) and anchihaline species (those living in extreme environments with temporary connections to seawater). Of these, the majority are marine mammals like dolphins (*Delphinus delphis* and *Tursiops truncatus*, among others) or sea turtles (*Dermochelys coriacea, Caretta caretta, Chelonia mydas* and *Eretmochelys imbricata*). Species of fishing interest are practically not represented at all; the brown spiny lobster (*Panulirus echinatus*), which is included in the list of nine invertebrate species in the catalogue, is one of the few that has commercial interest.

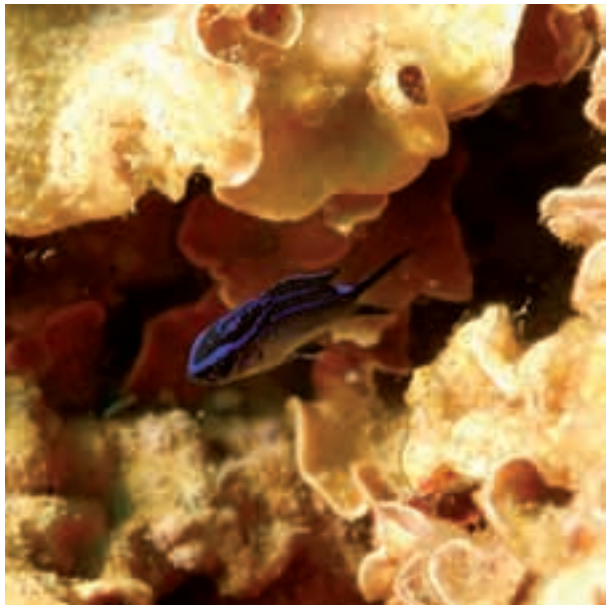
Table 2. Marine species in the Spanish Catalogue of Threatened Species.

Classification	Marine species
Endangered	9
Sensitive to habitat alteration	3
Vulnerable	14
Of special interest	13

Research carried out by different sea and ocean institutions has often led to surprising discoveries including new species, unmentioned locations, unknown aspects of ecosystems, and the filming of species that have never before been observed. The most basic way of obtaining full knowledge of the marine environment is by studying it. Furthermore, urgent measures focused on the particular needs of each area must be established. If the current state of the marine environment were transferred to the terrestrial environment, immediate measures would certainly be taken.

Brown algae (*Desmarestia ligulata*), distributed throughout Scandinavia and Morocco, also identified in the western Mediterranean. It grows in the subtidal area and makes up a habitat for various species. Destructive fishing practices are one of its major threats. © OCEANA/ Enrique Talledo

Elephant ear sponge (*Spongia agaricina*). A species of commercial interest, especially for decoration. It is found in shallow waters down to 100-120 m. Asturias, Spain. © OCEANA/ Enrique Talledo



Young damselfish (*Chromis chromis*) in a *Mesophyllum alternans* reef. This calcareous algae forms maërl bottoms that are ecologically highly valuable and take hundreds of years to form. © OCEANA/ Juan Cuetos

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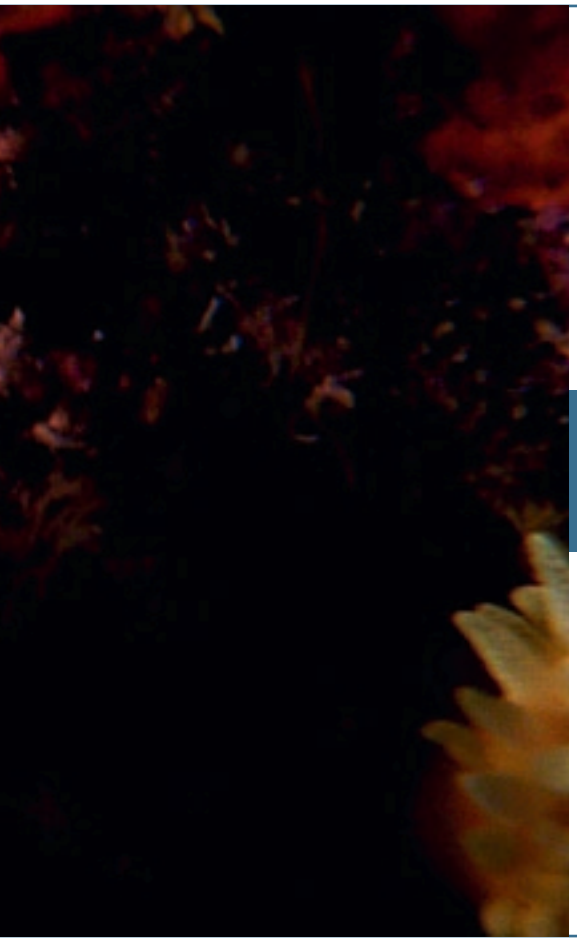
Yellow cup coral (*Leptopsammia pruvoti*). © OCEANA/ Houssine Kaddachi



CONSERVATION AGREEMENTS

Striped dolphin (*Stenella coeruleoalba*), a marine mammal listed in various conservation agreements, although populations are still at risk. Cadiz, Spain. © OCEANA/ Carlos Minguell

The initial international structure for the protection of marine species began in the 1970s with the creation of the **Convention on International Trade in Endangered Species of Wild Fauna and Flora** (CITES) to control the international trade in endangered species and the IUCN Red List to assess their state of conservation. However, both were focused on the terrestrial environment. It was not until ten years later that the marine environment was introduced into an international agreement –the London Convention–, although this did not take marine species into account and was initially focused on reducing marine pollution.

Again, ten more years passed until marine species were taken into consideration in draft conventions, although they were divided into sectors. Both the Bonn Convention on the Conservation of Migratory Species (CMS) and the Bern Convention on wildlife and habitats, for example, refer mainly to birds or migratory land vertebrates, although they also include some migratory marine mammals.

Thanks to the development of these types of protocols and international conventions, as well as the approval of laws in different administrative scopes, some advances are now being made in the conservation of terrestrial species and habitats. However, these advances in protection for marine species and ecosystems are far behind and are slow because it was only relatively recently that this environment was taken into consideration due to a lack of knowledge.

The protection lists that include marine species are mainly focused on vertebrates and, among these, the ones that are most visible to human beings, such as birds or cetaceans, while almost completely omitting protection for invertebrates or algae. These last groups are especially rare in the lists despite the fact that there are more than 124,500 species registered in the census[9] to date worldwide. Marine fish are not usually included either, except some species that are of commercial interest, which is often the cause of their poor conservation state. Despite the overexploitation of these species, economic interests

have distorted the principles that govern their inclusion or exclusion from the conventions. In fact, both the Bern Convention and CMS include only six marine fish of commercial interest, while the Barcelona Convention, which is the agreement that lists the most fish, includes approximately 12.

There are seven international agreements (including the Habitats Directive) that protect European marine species, although a convention or treaty that exclusively protects marine species and habitats has yet to be created. We cannot even affirm that any single convention, or any combination of them, currently in effect includes a representative list of marine species and habitats that are in need of protection.

The long-snouted seahorse (*Hippocampus guttulatus*) is very sensitive to changes in its habitats, formed by abundant vegetation, which can exert pressure on existing populations. Isla de Arosa, Spain.

STATUS OF CURRENT LEGISLATION

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES was created to control international trade in wild species of flora and fauna and their by-products. Under the auspices of the United Nations Environment Programme (UNEP), the Secretariat of the Convention establishes an international legal framework, providing the member Parties with a structure to establish control systems. The Parties meet at least once every two years.

The Convention lists over 34,000 species[10] worldwide, of which roughly 28,000 are plants and 5,000 are animals, although protection under this convention only covers international trade. As far as the European seas are concerned, the CITES appendixes list just over 150 marine species.

Barcelona Convention

This convention is aimed at protecting the Mediterranean Sea against pollution. The Contracting Parties to the Convention take appropriate measures to prevent, abate, combat and, as far as possible, eliminate pollution in this area. The Barcelona Convention pays particular attention to pollution via dumping from ships and aircraft, pollution resulting from exploration and exploitation of the seabed and pollution from land-based sources.

Mediterranean solitary coral (*Balanophylla europaea*) in the Balearic Islands, Spain. © OCEANA/ Carlos Suárez

Within this convention, a protocol was created in 1995 –the "Protocol concerning specially protected areas and biological diversity of the Convention to protect the Mediterranean Sea against pollution"– promoting the creation of protected areas and the conservation and regulation of threatened or endangered species of flora and fauna. The three annexes to the Protocol include a list of criteria that the Parties must respect when choosing which marine and coastal areas are to be protected, as well as a list of threatened or endangered species and species whose exploitation requires regulation.

The Convention and, more specifically, the Protocol established in 1995, reflects a change in the way the marine environment is perceived, although its lack of information limits the establishment of direct measures for protection. This convention lists roughly 117 marine species in its annexes[11].

Bern Convention

This is one of the first international agreements aimed at conserving habitats and species of wild fauna and flora. The Bern Convention establishes general guidelines to develop conservation measures and includes a list of specific species to be protected. Its adoption in the European Union led to the creation of the Birds Directive[12], the Habitats Directive[13] and also influenced other directives.

The scope of its application is focused on the European continent, although because it includes the protection of migratory species as one of its priorities, especially birds, it is extended to other countries, mainly Africa. The Bern Convention came into force in the 1980s, when the marine environment was widely unknown, although it is updated thanks to the biannual reports compiled by the Parties. However, the same cannot be said of the Directives adopted after this Convention, which have formalized lists of protected species using the Convention's appendixes but which have not been updated. As such, while the Bern Convention's lists of species to be protected include, although in a small proportion, marine invertebrates, algae and other species not commonly found in such lists, the lists of species included in the Birds and Habitats Directives have remained practically unchanged.

Basking shark (*Cetorhinus maximus*) in the Mediterranean Sea. One of the most threatened species of sharks due to overexploitation.
© OCEANA/ Houssine Kaddachi

Pen shell (*Pinna nobilis*), a bivalve whose exploitation must be regulated because it is listed in annex IV of the Habitats Directive. Columbretes Islands, Spain. © OCEANA/ Juan Cuetos

The effectiveness of this convention is now quite limited because when countries sign to become member parties, they are allowed to establish exceptions regarding areas and species as best suits their needs. In the case of the European Union, there is more flexibility in some aspects due to the transposition of the Convention into the aforementioned Directives.

Bonn Convention or Convention on Migratory Species

The Bonn Convention aims to conserve terrestrial, marine and avian migratory species listed in its Appendix I; in other words, those in danger of extinction in at least one of their areas of distribution. Furthermore, it promotes conservation measures among the Parties and international cooperation for the protection of species listed in Appendix II of the Convention.

The Bonn Convention holds a Conference of the Parties every two years in which resolutions and recommendations are adopted or strategic plans are designed with counselling from the standing Scientific Council. Among some of the species protected by this Convention are cetaceans, turtles and sharks, including the porbeagle shark (*Lamna nasus*) and mako sharks (*Isurus* spp.), less commonly listed in other protection conventions.

Examples of the results of cooperation between Parties include the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean and contiguous Atlantic Area (ACCOBAMS) in 1996 and the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) in 1992 –later extended to the Gulf of Biscay and adjacent Atlantic waters– of which Europe is a Party. However, although highly migratory species are indeed listed, such as the basking shark (*Cetorhinus maximus*) and various marine mammals (cetaceans, pinnipeds), the appendixes do not include species of commercial interest whose populations are also threatened likely due to the economic interests generated by their extraction.

Convention for Protection of the marine environment of the North-East Atlantic (OSPAR)

The OSPAR Convention started with the Oslo Convention of 1972, aimed at preventing marine pollution via dumping from ships and aircraft, and with the Paris Convention of 1974, aimed at preventing marine pollution from land-based sources. These two conventions were unified, updated and extended to prevent marine pollution in the North East Atlantic and became the OSPAR Convention.

Sebadal (*Cymodocea nodosa*) seagrass bed found off Mediterranean and Canary Island coast lines. It is a habitat used mainly for spawning, although most of the species receive little protection. Almeria, Spain. © OCEANA/ Carlos Minguell

At first, this convention did not include the direct protection of marine areas or species. It was only after the adoption of Annex V on the "**Protection and Conservation of Ecosystems and Biological Diversity in Marine Areas**", in 1992, when the OSPAR Convention addressed this issue, establishing that Member Parties must take measures to conserve marine biodiversity and attempt to recover areas damaged by human activity.

As we can see, the marine environment was taken into consideration late and with a limited scope, although this convention is innovative in the way it focused on the protection of species depending on their conservation state in each OSPAR marine area. Nevertheless, the lack of knowledge over the environment, the species and their conservation state once again limited the expansion of the lists, which in this case include 16 types of marine habitats and roughly 20 species[14]. Although these lists are used as

Orange coral (*Astroides calycularis*) is found in shallow waters, between 30-40 m. It is a very fragile species that is susceptible to pollution and is currently at risk. Cadiz, Spain. © OCEANA/ Juan Carlos Calvín

Island grouper (*Mycteroperca fusca*). Protection for species caught in fisheries began very late due to commercial interest, now putting their survival at risk. © OCEANA/ Carlos Minguell

tools to designate OSPAR protected areas, their expansion would allow the inclusion of more areas in need of protection.

United Nations Convention on the Law of the Sea (UNCLOS)

The adoption of the Law of the Sea was one of the most important steps taken to regulate the marine environment, the foundation of its management and its protection. Although the convention itself does not establish conservation measures for habitats or species, its Annex I[15] includes a list of highly migratory species or groups of species. The convention considers these species resources for which it creates the bases for shared management between countries, encouraging them to establish conservation measures both in and outside of their Exclusive Economic Zones (EEZ).

International Union for Conservation of Nature, Red List (UICN)

The IUCN Red List promotes the protection of species and creates an inventory on the conservation state of flora and fauna, classifying them into nine categories. This assessment is carried out by prestigious specialists and the Red List is a reference document for the conservation state of species. However, it does not have legislative implications. This is the reason why it cannot establish binding restrictions or measures, although because of its international prestige, States sometimes adopt parts of its classification to include it in their national legislation.

For the conventions mentioned above, their lists include many more land species than marine species. The inclusion of marine fauna and flora is far behind that of land fauna and flora, and is conditioned by the advances in the knowledge on this environment, which remains scarce.

Table 3. Summary of international agreements that include lists of european protected marine species.

Convention	Geographic scope	Objectives	Year	Nature	Comments
IUCN	Global	Global Assessment of the state of conservation of species on a global level and promotion of their conservation.	1963	- Non-binding. Red Lists are frequently included in legislation.	Internationally prestigious list of the conservation state of species.
CITES	Global	Conservation of threatened species of wild fauna and flora through control over their international trade.	1973	- Establishes an international legal framework for the trade in threatened species and/or their by-products.	Conference of the Parties, meets at least every two years.
Barcelona	Mediterranean	- Protection of the Mediterranean Sea. - Reduce and prevent pollution. - Protect common natural heritage and resources, as well as specific areas by creating specially protected areas.	1976	- Adopted by the EU through Council Decision 77/585/CEE.	Development of Protocols to protect species and areas though Action Plans and other tools (for example, the SPA/BD Protocol).
Bern	Europe+Global	- Conservation and protection of species and natural habitats, especially those requiring the cooperation of various countries. - In particular, endangered and vulnerable species, including migratory species.	1979	- Binding for Member Parties. - Biannual reports and annual meetings.	Allows Member Parties to make exceptions on the application of the Convention concerning areas and/or species.
Bonn (CMS)	Global	- Contributes to the conservation of migratory land and marine species throughout their distribution areas.	1979	- Binding for the Convention and/or Agreement Parties.	Allows Parties to subscribe to Conventions or Agreements within the Convention.
OSPAR	North East Atlantic	- Develops actions to prevent marine pollution: best available techniques, the polluter pays principle and the precautionary principle. - Protect the marine environment by developing measures to conserve and protect marine biodiversity and particular areas or species.	1992	- The Decisions are binding for Member Parties. - The Member Parties meet annually and there is a Ministerial meeting every 5 years.	Unifies: - The Oslo Convention (1972) against dumping from ships and aircraft. - The Paris Convention (1974). Prevention of land-based pollution.
UNCLOS Annex I	World	- International legal framework on the law of the sea; Annex I includes highly migratory marine species.	1982	- Binding for Member Parties	Only includes migratory species.

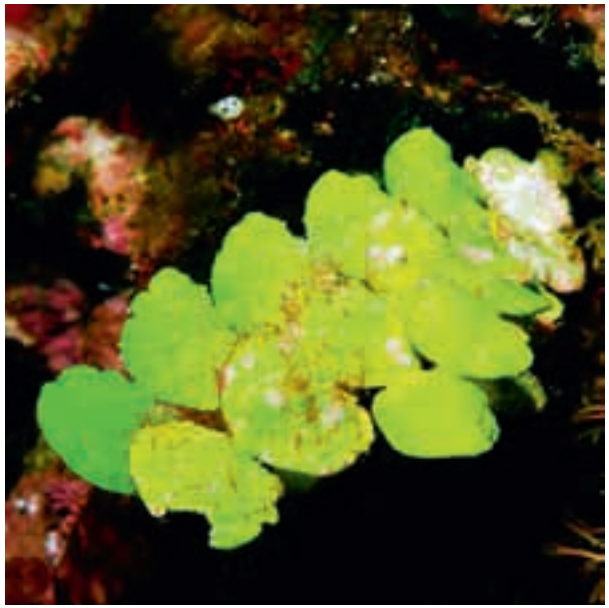
Red gorgonian (*Paramuricea clavata*). © OCEANA/ Carlos Suárez

THE MISSING PIECES OF THE PUZZLE

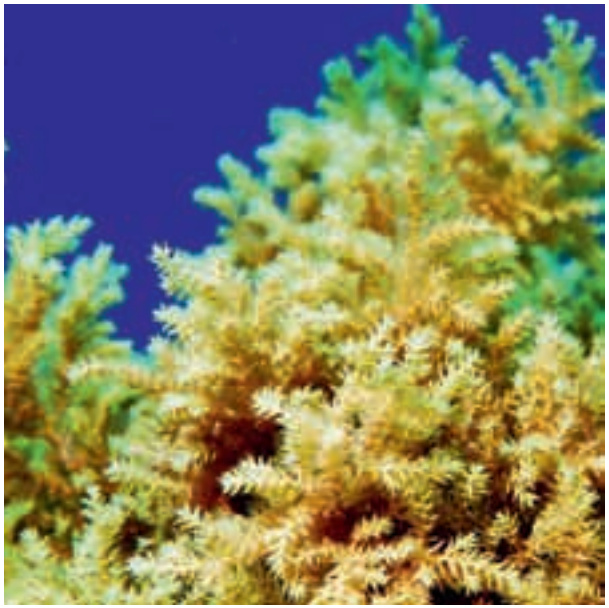
The conventions described above are complemented by national and regional agreements that in many cases are adaptations or transpositions of these conventions, approved by higher administrative bodies. After studying the different agreements and legislations, it is obvious that there are legal loopholes concerning the protection of marine species and habitats. The concrete issues on which these agreements are based establish very specific lines of action and, given the fact that there is no specific agreement on the protection of the marine environment, there are gaps that need to be filled regarding its protection.

The first step that needs to be taken in this process is to raise awareness of the marine environment and foster scientific studies. This way, specific criteria can be established that allow for sustainable management and protection. The characteristics of the marine environment, the need to treat it comprehensively and the large number of natural or anthropogenic factors that intervene in it make it necessary to consider it as a unified whole so that the measures adopted will have real and quantifiable effects.

The agreements that include more direct protection of marine species do so through trade control, marine pollution regulation or the protection of some migratory species. Furthermore, their lists are not complete enough to reflect the reality of these species, often controlling only one aspect. This system does not guarantee the maintenance of a favourable conservation state for the species due to the diverse nature of the threats that intervene in their degradation. Apart from the species themselves, protection measures must also protect their feeding needs, their habitats and include measures to prevent the threats that endanger them. Obviously, this requires in-depth scientific study, but faced with the lack of data on marine species, the precautionary principle should be systematically applied for all species, commercial or otherwise, for which data is lacking.



Cactus algae (*Halimeda tuna*). Balearic Islands, Spain. © OCEANA/ Juan Cuetos



Cystoseira amentacea is a brown alga that occurs in infralittoral rocky seabeds. Its proximity to the coast and susceptibility to water quality put it at risk. It is listed in annex II of the Barcelona Convention and the Mediterranean population is listed in appendix I of the Bern Convention. Columbretes Islands, Spain. © OCEANA/ Juan Cuetos

Mediterranean snakelocks anemone (*Anemonia sulcata*), a species consumed in southern Spain. Experts recommend protection, although it is not yet listed in any convention. Spain. © OCEANA/ Juan Cuetos

3

Loggerhead turtle (*Caretta caretta*). © OCEANA/ Carlos Suárez

THREATENED SPECIES

Dark colonial coral (*Phyllangia mouchezii*) is present from the Portuguese Atlantic to Senegal and the Mediterranean Sea. It´s found in dark caves with bottoms over 40 m deep. This species is only included in CITES appendix II and is catalogued as VU in Andalusia. Balearic Islands, Spain. © OCEANA/ Juan Cuetos

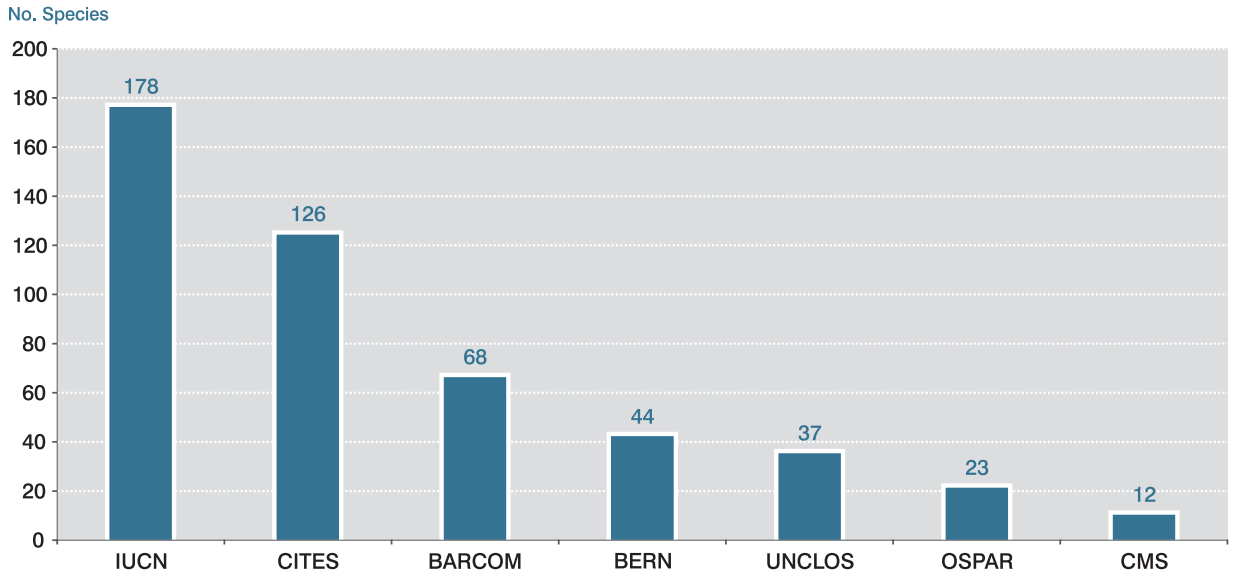
Understanding the importance of species as units that help to balance ecosystems helps us understand their particular importance. To date, 32 phyla have been identified in the oceans, 16 of which occur exclusively in this environment. In this context, the degradation of the oceans causes an imbalance. In order to maintain the stability and productivity of our oceans, we must protect the species and their habitats and develop management plans.

Actions for the marine environment should not be limited to species that are already at risk. This type of reactive behaviour conditions scientific studies and does not account for possible synergies that can accelerate or increase marine biodiversity loss.

The information that exists today on marine species makes it impossible to draw a reliable map of their exact conservation state. Most of the information available has generally been driven by commercial interests, where studies have been carried out on exploited species that presented some type of anomaly caused, most of the time, precisely by their overexploitation. Although studies are being developed on wild species, they are still focused on specific areas or groups of flora or fauna. Available data on invertebrates or algae is still very scarce and, consequently, these species are not adequately represented in conservation lists although they constitute the main habitat-forming organisms which harbour a wide variety of species during some part of their life cycles.

An example of the lack of representation of marine species in protection agreements is made patent by the proposed list attached to this report. This list was created taking into account existing international agreements on the protection of species with annexes that include European marine species. The list includes the species not included in the Habitats Directive (but included in other list as national list species) as well as lists of national species, and also relevant species that are not otherwise represented. The IUCN Red List includes the most number of marine species, followed by CITES (Graph 1).

Graph 1. Representation in conventions of the species included in the attached lists.



It should be stressed that while the Red List's objective is the assessment and protection of species, it is not legally binding. CITES is strictly limited to international trade. Furthermore, it hardly includes any species of fisheries interest except a few sharks including the basking shark (*Cetorhinus maximus*) and the whale shark (*Rhincodon typus*), although it does include all species of hard corals (Scleractinians) and black corals (Antipatharians), limiting only international trade in these species.

Species of commercial interest like the common seabream (*Pagrus pagrus),* Atlantic halibut (*Hippoglossus hippoglossus)* and the guitarfish (*Rhinobatos* spp.), among others, have especially suffered from the lack of attention paid to the marine environment. On one hand, they have

Common seahorse (*Hippocampus hippocampus*).
© OCEANA/ Enrique Talledo

been the victims of heavy fishing pressure which has put their populations at risk and, on the other hand, it is precisely this type of fishery interest that has prevented them from being included in international lists and conservation agreements. These three species are not included in any international agreements although the seabream and the halibut are classified as "Endangered" in the IUCN Red list, and the guitarfiish is classified as "Critically Endangered".

The situation is no better for invertebrates. These species are particularly vulnerable to alterations in their habitats because they are often sessile organisms; in other words, they are anchored to the substrate, such as poriferans (sponges) and various types of cnidarians (e.g. anemones, corals). In addition, many of these species are usually found at depths less than 200 meters, and as such, they are directly in the range of human activity. The protection afforded to a few cnidarians almost exclusively concerns their international trade through CITES or the regulation of their exportation through Annex III of the Barcelona Convention. Only some species of the *Antipathes* spp. genus are included in Annex III of the Bern Convention. Other specific species like orange coral (*Astroides calycularis*), false black coral (*Savalia savaglia*) and the hydrocoral *Errina aspera* are included in Appendix II of this same convention, which establishes strict protection measures. Red coral (*Corallum rubrum*) is a special case because it is included in the annexes of various conventions, including the Habitats Directive, the Barcelona Convention and the Bern Convention, but its international trade is not regulated since it does not appear in CITES.

Trawling scars on a seagrass bed. Trawling is one of the main causes for the direct destruction of marine habitats. Balearic Islands, Spain.
© OCEANA/ Mar Mas

However, the species that are least taken into consideration are algae. If we examine the logic behind the need to protect certain marine species, we find that algae have no fishery interest (although commercial interest has increased lately)– they have not been commercially exploited and are not attractive to human beings. These aspects make them easily forgettable, but we must understand that they play a fundamental role in the formation of habitats. Certain species of calcareous algae belonging to the *Phymatolithon, Litothamnion, Mesophyllum* and *Lithophyllum* families form reef-like and maërl seabeds that are indeed protected and considered priority habitats in many agreements, like the Habitats Directive, but the species that form these habitats themselves are not afforded any protection at all. Apart from forming habitats that provide refuge for a variety of species, the photosynthetic capacity of these algae places them at the bottom of the food chain and, as such, they sustain many other species.

Moreover, well-known species like *Posidonia oceanica*, *Zostera noltii* and *Cymodocea nodosa,* acknowledged by the scientific community for their fundamental role in sediment retention and the habitat formation, are not included in the Habitats Directive. Only *Posidonia oceanica* beds are included as habitats of interest, but not as a unique species. The other two species are only included in the Bern Convention lists. These are three examples of the lack of attention suffered by marine species. Even species that have been proven by scientific studies to play a fundamental role in marine ecosystems, and those that are of interest to humans, lack fair treatment given their risk situation and ecological value.

The following are descriptions of a few relevant marine species. In some cases, they are listed in one or various international agreements, although in no case are they included in the Habitats Directive annexes.

Oyster (*Ostrea edulis*), a very well known species that is highly valued as a delicacy, although it is classified as endangered in the North Atlantic, OSPAR region II. Murcia, Spain. © OCEANA/ Juan Cuetos

Fact sheet 1

Galeorhinus galeus

Tope shark

Distribution: Mainly in the Atlantic and Mediterranean, with some populations in Oceania, in coastal areas from Chile to Alaska and in the Pacific islands.

Threats: Overfishing.

Conventions: Vulnerable in the Red List.

Observations: Not included in any of the nature conservation convention annexes.

Traditionally targeted for its highly valuated meat, oil, squalene and fins.

Fact sheet 2

Epinephelus marginatus

Dusky grouper

Distribution: Central Atlantic, Mediterranean and SW Indian Ocean.

Threats: Overfishing and destruction of habitats.

Conventions: Endangered in the Red List, Bern (III).

Observations: Despite the deterioration of populations, the public does not perceive this species as being endangered. Strongly overexploited for its meat in all types of professional and sporting fisheries.

Fact sheet 3

Anthipatarians

Black corals

Distribution: Worldwide, from shallow seabeds to abyssal depths.

Threats: Destruction of habitats and overexploitation.

Conventions: Some species included in CITES, Bern or Barcelon.

Observations: Historically exploited for its beauty and medicinal properties. Destructive fishing practices have destroyed many populations.

Fact sheet 4

***Tethya* spp.** (Pallas, 1766)

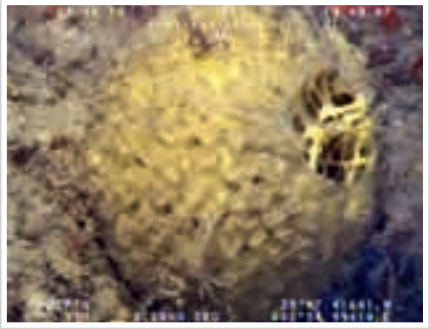
Sea lemons and oranges

Distribution: From the North Sea to the Mediterranean and Canary Islands.

Threats: Destruction of habitats, pollution, climate change.

Conventions: Barcelona (II).

Observations: Only Mediterranean populations are protected. Usually lives isolated or in small colonies. Populations are distributed on seabeds no deeper than 300-400 meters, in areas where human impact is strong.



Fact sheet 5

***Paramuricea* spp.**

Gorgonians

Distribution: Atlantic, Mediterranean, Caribbean and areas in the Pacific.

Threats: Destructive fishing, acidification and loss of habitats.

Conventions: None.

Observations: Many species are endemic or have a limited range of distribution, increasing their vulnerability. They can form extensive colonies forming habitats, reducing erosion and providing substrate and shelter for a variety of species.

Fact sheet 6

Mesophyllum alternans

Distribution: Mediterranean.

Threats: Destructive fishing, acidification and loss of habitats.

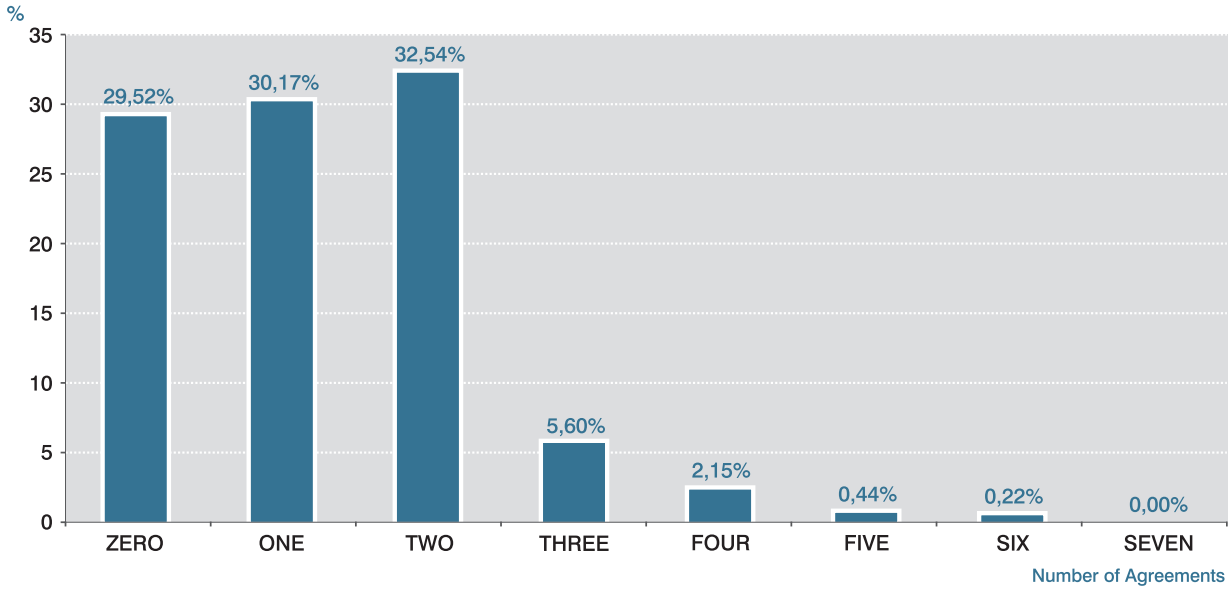
Conventions: None.

Observations: Calcareous algae that can form part of essential habitats like coralline or generate its own microhabitats, including reefs.

Coralline algae and other organisms with calcareous skeletons are extremely vulnerable to an increase in seawater pH.

The degree of representation of the proposed species in the annex to this report has been analysed. We should remember that the way these lists are focused limits the scope of protection for the species they include. One method to increase protection using the existing legislative tools could be to include species in more than one list depending on their characteristics and the scope of the agreement. However, after analysing the data, we observe that the appearance of species in more than one list is rare: 29.5% of the proposed species were not included in any international list, 32% were included in two lists and 30% were included in one. The conventions that include the European area have been taken into consideration for the analysis of the data, including the IUCN Red List, which does not have legal implications.

Graph 2. Percentage of species included in international conservation conventions.



A horn sponge (*Axinella polypoides*) fixed to a soft substrate at 25 m depth, although it can occur at over 100 m depth. It is sensitive to pollution and a victim of trawl fisheries. Cantabrian Sea, Spain.
© OCEANA/ Enrique Talledo

Once again, this data reflects the need to develop more specific tools for marine species and increase the number of species included in protection agreements. Protection measures should be established as necessary and in line with the scientific advances made in the study of the species. Many agreements have mechanisms in place to update their lists. However, the Habitats Directive does not, making its protection lists obsolete.

ANALYSIS OF THE CURRENT SITUATION AND THREATS

The scientific community corroborates the need to expand knowledge on the marine environment. Governmental and non-governmental research institutes and oceanographic institutes aim to develop studies that expand the knowledge of marine habitats and species. For example, organisations like the IUCN aim to assess 20,000 marine species by 2010. In that same year, the Census of Marine Life (CoML) plans on publishing the first census of marine life worldwide in order to update the number of known species and manage them.

While the scientific community attempts to advance with firm steps, political and legislative reactions to the protection of marine species does not seem to follow in the same direction. According to the commitments acquired through the Convention on Biological Diversity[16], the objectives established to halt the loss of biodiversity are not being reached. Furthermore, the scientific advances made in the knowledge on species are not being correctly reflected with actions that promote species protection or management.

Meanwhile, the factors that negatively affect marine biomass continue; species continue to disappear even before they are studied and the direct or indirect destruction or degradation of habitats does not help to correct this trend. As such, it is essential to reduce the factors and actions that negatively affect the health of our oceans; this is as essential as increasing scientific knowledge of the marine environment. A variety of factors influence the nature of these threats, that sometimes require a change in our habits and/or the correction or improvement of available technologies.

The following are examples of the threats that negatively affect marine organisms, in general.

Threat 1. Direct destruction of habitats. There are many causes of habitat destruction, from legal or illegal use of destructive fishing gear and practices like trawling, to natural causes like tsunamis. However, measures must be focused on parameters that can be controlled by humans, like destructive fishing practices. Measures must also be established to strictly control marine and costal construction and offshore drilling to develop these activities in low impact areas and limit the exploitation of the seabed in areas of high ecological value.

Yellow cup coral (*Leptopsammia pruvoti*) lives in caves or dark areas in deep waters. Despite its fragility, only its international trade is regulated through CITES appendix II. Guipúzcoa, Spain.
© OCEANA/ Enrique Talledo

Tree coral (*Dendrophyllia ramea*), like other corals and calcareous species, is sensitive to ocean acidification that occurs as increased levels of CO_2 are absorbed from the atmosphere. © OCEANA/ Carlos Minguell

Threat 2. Climate Change. Apart from the well-known effects of climate change on the oceans (increased sea level, increased temperatures, etc.), another impact is the change in the pH level of seawater. The marine environment naturally absorbs roughly 30% of atmospheric CO_2 and 80% of atmospheric heat[17]. As a consequence of the increase in carbon emissions into the atmosphere, CO_2 increases and the oceans become saturated. This alters the chemical balance of carbon, which produces carbon precipitation, limiting the availability of dissolved organic C in the marine environment. Consequently, it is difficult for organisms with calcareous structures, like corals or crustaceans, to form their skeletons, and these may even dissolve in this acidified medium.

Threat 3. Overfishing. The overcapacity of the world's fishing fleets, together with frequent illegal fishing activity and its lack of control, are currently two of the main factors that are causing the deterioration of populations of species of commercial interest. In addition, this trend is being extended to species that are of interest to the aquiculture industry, such as small pelagics, due to the increased demand to raise and fatten aquiculture species.

Threat 4. Dumping from ships. Dumpings at sea have well known impacts, but the real seriousness from ship spills is not as known., however, are less well known. Black tides caused by ship accidents account for only 5% of the hydrocarbons that are dumped into the oceans. Most of the dumping is generated by "bilge dumping", or the illegal discharging of bilge waters on the high seas. Because this activity is chronic and difficult to control, it poses a real and significant threat to marine species and the marine environment in general.

Threat 5. Pollution from land-based sources. Pollution from land-based urban and industrial sources is a worldwide problem. Even developed countries are far from reaching 100% water filtering or treatment before dumping it into the oceans. The consequences of this dumping depend on the origin of the waters. However, eutrophication continues to be a common problem caused by dumping organic agents into the marine environment, leading to an uncontrollable proliferation of algae or micro-organisms that are often toxic and can negatively affect other species and their natural habitats.

Threat 6. Noise pollution. Increased maritime traffic and the use of sonars cause changes in the behaviour of some species, including disorientation in cetaceans and subsequent strandings on the coasts or collisions with vessels and, as a consequence, groups are segregated and feeding habits are disrupted.

White gorgonia (*Eunicella verrucosa*), a species listed as vulnerable in the IUCN Red List and listed in regional red lists of Andalusia and Galicia, although it is not protected under any convention. Cantabria, Spain. © OCEANA/ Sergio Gosálvez

In an attempt to adjust the risks suffered by the proposed species, we have qualitatively established the degree of impact that the threats described above have on some groups of species. This map may help us have a quick, global view of the need to reduce these threats and protect the proposed species.

Table 4. Impact of the threats described on some groups of species.

Group of species	Threat 1	Threat 2	Threat 3	Threat 4	Threat 5	Threat 6
Class Osteichthyes						
Class Ascidiacea						
Clase Chondrichthyes						
Subclass Elasmobrachii						
Subclass Holocephali						
Class Mammalia						
Class Anthozoa						
Class Hydrozoa						
Class Asteroidea						
Class Echinoidea						
Class Holothuroidea						
Class Bivalvia						
Class Gastropoda						
Class Bryopsidophyceae						
Class Ulvophyceae						
Class Calcarea						
Class Demospongiae						
Class Florideophyceae						
Class Gymnolaemata						
Class Stenolaemata						
Class Magnoliopsida						
Class Malacostraca						
Class Maxillopoda						
Class Phaeophycea						
Class Sipunculidea						
Class Polychaeta						

No data
Low
Medium
High
Very high

Based on the above table, the habitat destruction is the threat that directly affects the most species. Similarly, acidification is gaining importance in the marine environment and risks becoming one of the principal agents of its degradation. Because it is difficult to control or to reduce its effects, we must work on establishing prevention measures directly related to reducing emissions and maintaining our marine habitats healthy. This qualitative analysis demonstrates the need to develop models to be applied on a small scale and based on specific, concrete data. These estimates stress the need to gain knowledge on species' conservation state and their functions and interactions with the marine environment and with the agents that alter it.

Sea urchin (*Paracentrotus lividus*). Cantabria, Spain.

Thornback ray (*Raja clavata*), a mainly benthic elasmobranch. It is threatened in the North Atlantic (OSPAR Region II) mainly due to overfishing. Spain. © OCEANA/ Silvia García

REORGANISING THE HABITATS DIRECTIVE ANNEXES

The many advances made in recent years concerning the marine environment, its habitats and species was the driving force behind the proposal in this report to include additional marine species in the Habitats Directive and to unify the lists included in regional conventions and national catalogues. Indeed, some countries have adapted their laws and some international agreements have expanded their lists and improved their conditions to meet the requirements of these small but important new discoveries. However, the European Union has not taken these advances into consideration, despite the fact that this Directive constitutes the EU's most powerful legislative tool for the protection of marine species. The lack of an instrument that establishes periodic revisions of the annexes and the Directive articles makes it impossible to apply the knowledge derived from scientific advances, despite the fact that *Article 19* states the following: *"Such amendments as are necessary for adapting Annexes I, II, III, V and VI to technical and scientific progress shall be adopted by the Council."*

If we focus on marine species, the importance of the Habitats Directive for the protection of species is not reflected in its annexes. Despite the fact that 22 of the 27 European Union Member States are coastal countries or islands, and despite the fact that Europe is surrounded by four seas or oceans, this Directive only includes nine marine species under its Annex IV, the one that establishes strict protection measures. Of these species, five are sea turtles and the rest are cetaceans. Annex II, which specifies the need to create special areas for species protection, only includes three species and one genus (*Alosas* spp.); while Annex V, which suggests management for those species undergoing some type of exploitation, apart from this genus, includes four other species (see table 5).

This makes a total of 14 species and two groups of marine species included in the Directive annexes, which is clearly insufficient and places this European policy at the tail end of the conventions that protect marine species.

Nevertheless, we must remember that one of the main reasons why this directive has not been effective is the lack of compliance and application by EU Member States. Consequently, all coun-

tries must urgently comply with their commitments to continue advancing and prevent this gap from widening.

Apart from including the species proposed in the attached lists, the Habitats Directive must reorganise the marine species currently listed in its annexes; in other words, it must include the existing marine species in the corresponding annexes in keeping with scientific advances.

Annex II. Animal and plant species of community interest whose conservation requires the designation of special areas of conservation.

The designation of protected areas has proven to be one of the most effective tools to protect species. As such, we understand that the existence of threatened or endangered species warrants the designation of marine protected areas. The development of management plans associated to these areas must correspond not only to the conservation state of the species that inhabit the area, but also to the other environmental factors that condition it. This Annex must necessarily include sessile species or species that develop their life cycle in small areas, as well as migratory species that develop parts of the life cycle in specific areas. As such, many cnidarians, poriferans and rhodophytes must be included in these lists, just as all the species already included in the Directive must appear in this annex.

Annex IV. Animal and plant species of community interest in need of strict protection.

According to Articles 12 and 13 of the Directive, Member States must take the necessary measures to protect the species listed in this annex, prohibiting deliberate capture, sale or exchange and destruction, including the use of non-selective fishing gear. Member States must also establish a system to enforce compliance with these measures. As such, this annex provides the most effective support for species.

The scientific studies that have been carried out on certain species have revealed important information about their conservation state. Because this annex is obsolete as far as marine species are concerned, it should be expanded taking into consideration the existing lists compiled by groups of experts and other conventions.

Mediterranean madrepora (*Cladocora caespitosa*), the largest coral in the Mediterranean. Its calcareous structure can reach a diameter of up to 50 cm. Mediterranean Sea, Italy. © OCEANA/ Thierry Lannoy

Cup coral (*Caryophyllia inornata*). Columbretes Islands, Spain.
© OCEANA/ Juan Cuetos

Annex IV should include all commercial and non-commercial species that are at risk, for example the longfin mako (*Isurus paucus*) and the great white shark (*Carcharodon carcharias*), since the Directive does not include any shark or ray species. Black corals and sponges from the *Spongia* genus should also be included, as well as many others in the list attached to this report.

Annex V. Animal and plant species of community interest whose taking in the wild and exploitation may be subject to management measures.

In general, management measures should be established for all commercially exploited species. Some marine species like Atlantic cod (*Gadus morhua*), red coral (*Corallium rubrum*) and the great hammerhead (*Sphyrna mokarran*) are in a poor state of conservation precisely because of the lack of management measures to control their exploitation. Consequently, this Directive should include not only commercial species that are at risk, but also all the species that suffer any type of exploitation from fishing or collecting activities. The development of management plans should correspond to the species' conservation state and its populations, depending on the pressures exerted on them. Furthermore, measures should be adopted so that conservation principles take priority over economic ones, particularly in the fishing sector.

The following is a summary of the changes proposed for the marine species listed in the Directive annexes, as a complement to the incorporation of the proposed species into these annexes, to achieve the correct representation of the marine environment.

Table 5. Proposal to reorganise the species listed in the Habitats Directive Annexes.

Marine species in Habitats Directive	Annex I	Annex II	Annex IV	Annex V
Alosa spp.		Currently included	Proposed for inclusion	Currently included
Cetacea (all species)		Proposed for inclusion	Currently included	
Lepidochelys kempii		Proposed for inclusion	Currently included	
Eretmochelys imbricata		Proposed for inclusion	Currently included	
Dermochelys coriacea		Proposed for inclusion	Currently included	
Patella ferruginea		Proposed for inclusion	Currently included	
Lithophaga lithophaga		Proposed for inclusion	Currently included	
Pinna nobilis		Proposed for inclusion	Currently included	
Centrostephanus longispinus		Proposed for inclusion	Currently included	
Corallium rubrum		Proposed for inclusion	Proposed for inclusion	Currently included
Lithothamnium coralloides		Proposed for inclusion	Proposed for inclusion	Currently included
Phymatholithon calcareum		Proposed for inclusion	Proposed for inclusion	Currently included
Tursiops truncatus		Currently included	Proposed for inclusion	
Caretta caretta		Currently included	Currently included	
Chelonia mydas		Currently included	Currently included	
Scyllarus latus			Proposed for inclusion	Currently included
Annex I (habitat-forming species)	Currently included	Proposed for inclusion	Proposed for inclusion	

The objective of including the proposed species and modifying the Annexes is to show the need to create a protocol for updating the Directive annexes. Advances are constantly being made in knowledge on the marine environment and this requires the continuous adaptation of legislation and conservation measures. Therefore, this proposal is presented as the minimum requirement and first step to unify the lists and correctly represent marine species in Community legislation.

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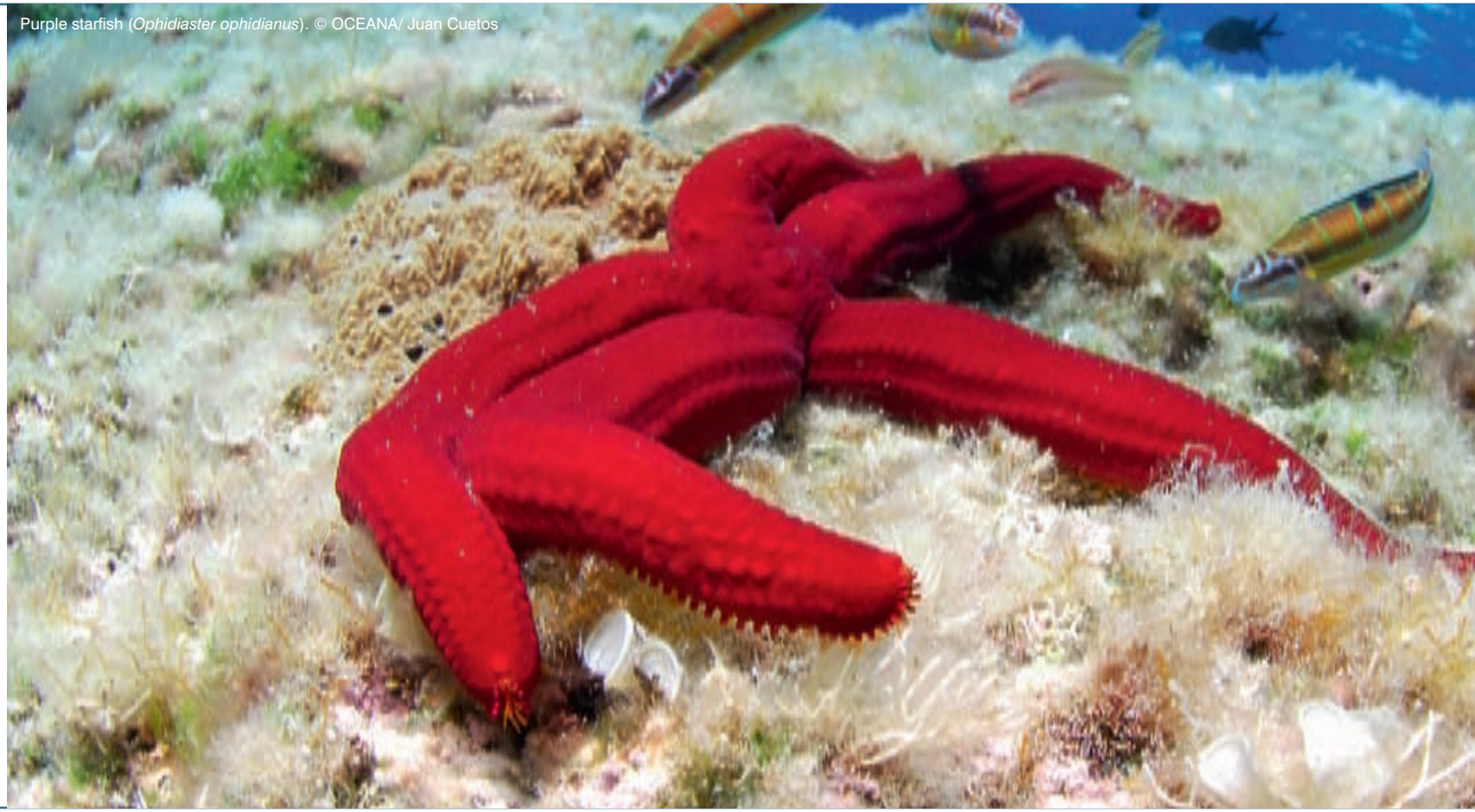


Purple starfish (*Ophidiaster ophidianus*). © OCEANA/ Juan Cuetos

CONCLUSIONS

Yellow cup coral (*Leptosammia pruvoti*) around small colonial coral (*Hoplangia durotrix*), a colonial species that lives in shallow waters caves and dark crevices, where it generally becomes fixed to rocks. Columbretes Islands, Spain. © OCEANA/ Juan Cuetos

- The species list attached to this report is the minimum to be included in the Habitats Directive and other legislation. Because marine species are hardly represented in its annexes, the Directive must be updated and revised. As a European legislative tool, the Directive cannot ignore marine habitats and species that are a fundamental part of Europe's natural heritage and biodiversity. The species listed have been selected because they appear in protection agreement, legislation or conservation catalogues, or because they are relevant, well-known species studied by the scientific community that are not included in any list.

- The marine species most widely represented in the conservation agreements that affect European waters are marine mammals (Orders: Cetacea and Pinnipedia) and turtles (Families: Cheloniidae and Dermochelyidae); since these animals are "close" and appeal to humans, they have benefited from protection, although the risks derived from human activity continue to be detrimental to their populations. To a much lesser degree, some species of sharks, such as mako sharks (*Isurus* spp.) and the great white shark (*Carcharodon carcharias*), are included in the protection lists. As far as sessile organisms are concerned, only a few species of cnidarians of the Antipatharia and Scleractinia orders are acknowledged in international agreements, mainly to control their international trade. Protection for poriferans is mainly focused on specific species such as *Aplysina cavernícola* and *Asbestopluma hypogea.*

There are, however, many orders, families and species that hardly appear in international agreements or European legislation at all. The common seabream (*Pagrus pagrus*), the Atlantic halibut (*Hippoglossus hippoglossus*) and the guitarfish (*Rhinobatos* spp.) are examples of species of fishery interest, but algae should also be taken into account (for example, *Desmarestia* spp.) as well as gorgonians (*Paramuricea* spp.), among many other invertebrates.

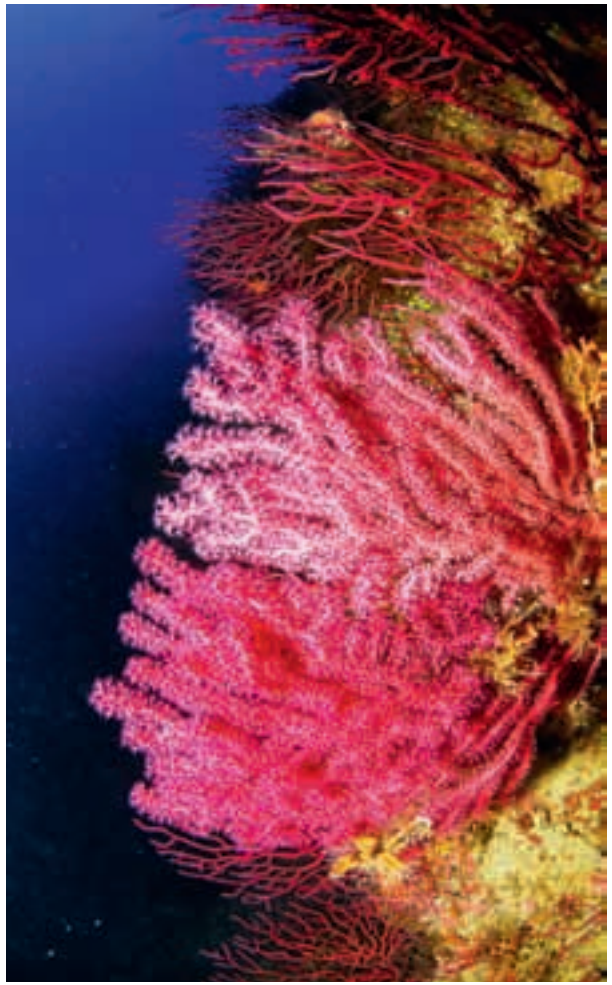
- It is necessary to update and revise the species protection agreements, particularly those concerning the marine environment, because new species are constantly being discovered and new information about their conservation state is continuously being compiled. Consequently, the agreements that lack procedures for periodic revisions become quickly obsolete. The Habitats Directive is one of the most obvious examples. Only nine marine species, apart from cetaceans, are listed in Annex IV, the one that affords the most protection. Of these nine species, five are sea turtles. It is evident that new taxa must be included in order to bring this convention up to date with the real situation of Europe's oceans and seas.

The genus *Squatina* spp. is very vulnerable to by-catch in trawl and longline fisheries although only the angelsharks (*Squatina squatina*) are protected by any agreement. Las Palmas, Spain.
© OCEANA/ Carlos Suárez

- Advances must be made in marine environment research to obtain a general map of the conservation state of marine species. This cannot be undertaken without firm support from governments, who must acknowledge the need to increase efforts to close the gap between knowledge of the terrestrial and marine environments. Scientific studies are essential if we are to understand life in the oceans and constitute a tool to legislate and manage the marine environment through correct management of its habitats and species.

- Commercially exploited species should be included with the rest of marine species. International agreements and legislation in general have been particularly restrictive with exploitable species, mainly fish, and depend too strongly on economic criteria. Productive

The tree coral (*Dendrophyllia ramea*) creates hard, three-dimensional structures that protect and harbour many fish and algae species. Chafarinas Islands, Spain. © OCEANA/ Juan Cuetos



The red gorgonia (*Paramuricea clavata*) is a colonial aggregation of polyps that is slow-growing and susceptible to destructive fisheries. Murcia, Spain. © OCEANA/ Juan Cuetos

activities such as fishing must be carried out according to environmental criteria, with the common objective of maintaining the long term diversity and productive capacity of our oceans.

- International agreements on the protection of marine species are based on a sectoral scope, making them less effective. International coordination is necessary for the management of the marine environment, both to establish coherent measures between adjacent national waters, and to agree on joint actions in international waters. Two points must be taken into consideration if these measures are to be established:

  - Coordination between existing international agreements. This may lead to a general analysis of the current situation on the protection of marine species. This way, loopholes not taken into consideration by current agreements would be acknowledged in order to develop legal tools to close them.

  - The creation of a specific agreement for the marine environment. That is, creating an international agreement on the comprehensive protection of marine species and habitats that takes into account the current scientific information available, as well as the advances that will be made in the future, and that bases extractive activities on environmental sustainability criteria.

Goldblotch grouper (*Epinephelus costae*), a fish of commercial interest that mainly occurs above 50 m. It lives mainly in rocky caves although it may be found on soft, sandy or muddy bottoms. Murcia, Spain. © OCEANA/ Juan Cuetos

Green calcareous algae (*Halimeda tuna*), an important component of reef structures. Because it is slow-growing, its destruction implies the irreparable loss of the habitat. Murcia, Spain. © OCEANA/ Juan Cuetos

Because the dusky grouper (*Epinephelus marginatus*) is commercially exploited, it is classified as “Endangered” by the IUCN, although it is protected only by the Bern Convention (Appendix III). Las Palmas, Spain. © OCEANA/ Carlos Suárez

5

Tree coral (*Dendrophyllia ramea*). © OCEANA/ Juan Carlos Calvín

ANNEX

List of species to be included in the conservation agreements

This list only includes those species that are already listed in annexes to an international agreement, European legislation, national or regional catalogue and in the categories of the IUCN. The intention is, as a first step, to unify the lists taking into account the species for which consensus has been reached by the scientific and political communities regarding the need to protect them. Many other species must be added as advances are made in marine environmental research and more information is compiled about these species and their conservation state and degree of vulnerability. Some of these species have already been proposed by groups of experts and various organisations. This is a dynamic list that is continuously evolving as more data is compiled and it will be the subject of a specific Oceana report in the future.

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Phylum	Chordata				
Class	Osteichthyes				
Subclass	Actinopterygii				
Order	Atheriniformes				
Family	Atherinidae				
Genus	Atherina				
		Atherina boyeri (Risso, 1810)	Big-scale sand smelt	**RL**: DD	
Order	Beryciformes				
Family	Trachichthyidae				
Genus	Hoplostethus				
		Hoplostethus atlanticus (Collett, 1889)	Orange roughy	**OSPAR:** I, V	
Order	Clupeiformes				
Family	Engraulidae				
Genus	Engraulis				
		Engraulis encrasicolus (Linnaeus, 1758)	European anchovy		a.
Family	Clupeidae				
Genus	Sprattus				
		Sprattus sprattus (Linnaeus, 1758)	Brisling		a.

Classification		Scientific name	Common name	Conservation agreements	i
Order	Gadiformes				
Family	Gadidae				
Genus	Gadus				
		Gadus morhua (Linnaeus, 1758)	Atlantic cod	**OSPAR**: II, III/ **RL**: VU (A1bd)	
Genus	Melanogrammus				
		Melanogrammus aeglefinus (Linnaeus, 1758)	Haddock	**RL:** VU (A1d+2d)	
Family	Lotidae				
Genus	Gaidropsarus				
		Gaidropsarus vulgaris (Cloquet, 1824)	Threebeard rockling		a.
		Gaidropsarus guttatus (Collett, 1890)			a.
Order	Perciformes				
Family	Gobiidae				
Genus	Aphia				
		Aphia minuta mediterranea (Risso, 1810)	Nonnat		a.
Genus	Chromogobius				
		Chromogobius quadrivittatus (Steindachner, 1863)	Banded goby		a.
Genus	Didogobius				
		Didogobius splechtnai (Ahnelt & Patzner, 1995)			a.

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Gammogobius				
		Gammogobius steinitzi (Bath, 1971)	Steinitz's goby		a.
Genus	Pomatoschistus				
		Pomatoschistus tortonesei (Miller, 1969)	Ghiozzetto di faro	**BERN**: II (Med)/ **BARCOM**: II	
Genus	Zosterisessor				
		Zosterisessor ophiocephalus (Pallas, 1814)	Grass goby	**RL**: DD	
Family	Istiophoridae				
Genus	Istiophorus				
		Istiophorus albicans (Latreille, 1804)	Atlantic sailfish	**UNCLOS**: YES	
Family	Labridae				
Genus	Labrus				
		Labrus merula (Linnaeus, 1758)	Brown wrasse		a.
		Labrus bergylta (Ascanius, 1767)	Ballan wrasse		a.
Family	Mugilidae				
Genus	Mugil				
		Mugil cephalus (Linnaeus, 1758)	Black mullet		a.
Family	Polyprionidae				
Genus	Polyprion				

Classification		Scientific name	Common name	Conservation agreements	i
		Polyprion americanus (Bloch & Schneider, 1801)	Wreckfish	**RL:** DD	
Family	Sciaenidae				
Genus	Sciaena				
		Sciaena umbra (Linnaeus, 1758)	Brown meagre		a.
Genus	Umbrina				
		Umbrina cirrosa (Linnaeus, 1758)	Corb	**BERN:** III/ **BARCOM**: III	
Family	Scombridae				
Genus	Auxis				
		Auxis rochei (Risso, 1810)	Bullet tuna	**UNCLOS**: YES	
		Auxis thazard (Lacepede, 1800)	Frigate tuna	**UNCLOS**: YES	
Genus	Euthynnus				
		Euthynnus alletteratus (Rafinesque, 1810)	Little tunny	**UNCLOS**: YES	
Genus	Katsuwonus				
		Katsuwonus pelamis (Linnaeus, 1758)	Skipjack tuna	**UNCLOS**: YES	
Genus	Thunnus				
		Thunnus alalunga (Bonnaterre, 1788)	Albacore	**RL:** DD/ **UNCLOS**: YES	
		Thunnus albacares (Bonnaterre, 1788)	Yellowfin tuna	**RL**: LRlc/ **UNCLOS**: YES	
		Thunnus obesus (Lowe, 1839)	Bigeye tuna	**RL:** VU A1bd/ **UNCLOS:** YES	

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Classification		Scientific name	Common name	Conservation agreements	i
		Thunnus thynnus (Linnaeus, 1758)	Bluefin tuna	**OSPAR**: V/ **RL:** DD/ **UNCLOS:** YES/ **BARCOM:** III	
Family	Serranidae				
Genus	Epinephelus				
		Epinephelus aeneus (Geoffroy Saint-Hilaire, 1817)	Grouper	**RL:** NT	
		Epinephelus caninus (Valenciennes, 1843)	Dogtooth grouper	**RL:** DD	c.
		Epinephelus costae (Steindachner, 1878)	Goldblotch grouper	**RL:** DD	c.
		Epinephelus haifensis (Ben-Tuvia, 195)	Haifa grouper	**RL:** DD	c.
		Epinephelus marginatus (Lowe, 1834)	Dusky grouper	**RL:** EN/ **BERN**: III	
Genus	Mycteroperca				
		Mycteroperca fusca (Lowe, 1838)	Island grouper	**RL:** EN B1ab(v)	
		Mycteroperca rubra (Bloch, 1793)	Comb grouper	**RL:** LC	c.
Family	Sparidae				
Genus	Pagrus				
		Pagrus pagrus (Linnaeus, 1758)	Red porgy	**RL:** EN A1bd+2d	
Family	Trachinidae				
Genus	Echiichthys				
		Echiichthys vipera (Cuvier, 1829)	Lesser weever		a

Classification		Scientific name	Common name	Conservation agreements	i
Family	Xiphiidae				
Genus	Xiphias				
		Xiphias gladius (Linnaeus, 1758)	Broadbill	**RL:** DD/ **UNCLOS**: YES/ **BARCOM:** III	
Order	Pleuronectiformes				
Family	Pleuronectidae				
Genus	Hippoglossus				
		Hippoglossus hippoglossus (Linnaeus, 1758)	Atlantic halibut	**RL:** EN A1d	
Genus	Platichthys				
		Platichthys flesus (Linnaeus, 1758)	European flounder	**RL:** LC	
Genus	Pleuronectes				
		Pleuronectes platessa (Linnaeus, 1758)	Plaice	**RL:** LC	
Order	Salmoniformes				
Family	Argentinidae				
Genus	Argentina				
		Argentina sphyraena (Linnaeus, 1758)	European argentine		a.
Genus	*Glossanodon*				
		Glossanodon leioglossus (Valenciennes, 1848)	Smalltoothed argentine		a.

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Classification		Scientific name	Common name	Conservation agreements	i
Family	Salmonidae				
Genus	Argyrosomus				
		Argyrosomus regius (Asso, 1801)	Meagre		a.
Order	Syngnathiformes				
Family	Syngnathidae				
Genus	Entelurus				
		Entelurus aequoreus (Linnaeus, 1758)	Snake pipefish		a.
Genus	Hippocampus				
		Hippocampus guttulatus (Cuvier, 1829)	Long-snouted seahorse	**CITES:** II/ **OSPAR**: II, III, IV, V/ **RL:** DD/ **BERN:** II (Med)/ **BARCOM:** II	
		Hippocampus hippocampus (Linnaeus, 1758)	Short-snouted seahorse	**CITES**: II/ **OSPAR**: II, III, IV, V/ **RL**: VU (A2cd)	
Genus	Syngnathus				
		Syngnathus tenuirostris (Rathke, 1837)	Narrow-snouted pipefish		a.
		Syngnathus abaster (Risso, 1827)			a.
Order	Tetraodontiformes				
Family	Balistidae				
Genus	Balistes				

Classification		Scientific name	Common name	Conservation agreements	i
		Balistes vetula (Linnaeus, 1758)	Queen triggerfish	**RL:** VU A2d	
Family	Diodontidae				
Genus	Chilomycterus				
		Chilomycterus atringa (Linnaeus, 1758)	Spotted burrfish		a.
Class	Ascidiacea				
Order	Stolidobranchia				
Family	Pyuridae				
Genus	Halocynthia				
		Halocynthia papillosa (Gunnerus, 1765)	Red sea-squirt		a.
Class	Chondrichthyes				
Subclass	Elasmobranchii				
Order	Carcharhiniformes				
Family	Carcharhinidae				
Genus	Carcharhinus				
		Carcharhinus brachyurus (Günther, 1870)	Bronze	**RL:** NT, DD(Med)/ **UNCLOS:** YES	
		Carcharhinus brevipinna (Müller & Henle, 1839)	Great blacktip shark	**RL:** NT, DD(Med)/ **UNCLOS:** YES	

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Classification		Scientific name	Common name	Conservation agreements	i
		Carcharhinus falciformis (Müller & Henle, 1839)	Ridgeback shark	**RL:** LRlc/ **UNCLOS:** YES	
		Carcharhinus galapagensis (Snodgrass & Heller, 1905)	Galapagos shark	**RL:** NT/ **UNCLOS:** YES	
		Carcharhinus limbatus (Müller & Henle, 1839)	Blacktip shark	**RL:** LRnt/ **UNCLOS:** YES	
		Carcharhinus longimanus (Poey, 1861)	Oceanic whitetip shark	**RL:** VU/ **UNCLOS:** YES	
		Carcharhinus melanopterus (Quoy & Gaimard, 1824)	Blacktip reef shark	**RL:** LRnt/ **UNCLOS:** YES	
		Carcharhinus obscurus (Lesueur, 1818)	Dusky shark	**RL:** LRnt/ **UNCLOS:** YES	
		Carcharhinus plumbeus (Nardo, 1827)	Sandbar shark	**RL:** LRnt/ **UNCLOS:** YES	d.
		Carcharhinus signatus (Poey, 1868)	Night shark	**RL:** VU (A2abd+3bd+4abd)/ **UNCLOS:** YES	
Genus	Galeocerdo				
		Galeocerdo cuvier (Péron & Lesueur, 1822)	Leopard shark	**RL:** LRnt/ **UNCLOS:** YES	
Genus	Prionace				
		Prionace glauca (Linnaeus, 1758)	Blue shark	**RL:** LRnt/ **BERN:** III/ **UNCLOS:** YES/ **BARCOM:** III	
Genus	Rhizoprionodon				
		Rhizoprionodon acutus (Rüppell, 1837)	Milk shark	**RL:** LC/ **UNCLOS:** YES	
Family	Pseudotriakidae				
Genus	Pseudotriakis				

Classification		Scientific name	Common name	Conservation agreements	i
		Pseudotriakis microdon (de Brito Capello, 1868)	False cat shark	**RL:** DD	
Family	Scyliorhinidae				
Genus	Apristurus				
		Apristurus aphyodes (Nakaya & Stehmann, 1998)		**RL:** DD	
		Apristurus atlanticus (Koefoed, 1927)	Atlantic ghost catshark	**RL:** DD	
		Apristurus laurussonii (Saemundsson, 1922)	Cat shark	**RL:** DD	
		Apristurus manis (Springer, 1979)	Ghost catshark	**RL:** LC	
		Apristurus microps (Gilchrist, 1922)	Smalleye catshark	**RL:** LC	
		Apristurus profundorum (Goode & Bean, 1896)	Deepwater catshark	**RL:** DD/ **UNLCOS:** YES	
Genus	Galeus				
		Galeus atlanticus (Vaillant, 1888)	Atlantic sawtail cat shark	**RL:** NT	
		Galeus polli (Cadenat, 1959)	African sawtail catshark	**RL:** LC	
Family	Scyliorhinidae				
Genus	Scyliorhinus				
		Scyliorhinus stellaris (Linnaeus, 1758)	Dogfish		a.
Family	Sphyrnidae				
Genus	Sphyrna				
		Sphyrna lewini (Griffith & Smith, 1834)	Scalloped hammerhead	**RL:** LRlc/ **UNCLOS**: YES	d.

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Classification		Scientific name	Common name	Conservation agreements	i
		Sphyrna mokarran (Rüppell, 1837)	Great hammerhead	**RL:** EN (A2bd+4bd)/ **UNCLOS:** YES	d.
		Sphyrna zygaena (Linnaeus, 1758)	Common hammerhead	**RL:** LRlc/ **UNCLOS**: YES	d.
		Sphyrna tudes (Valenciennes, 1822)	Smalleye hammerhead	**RL:** VU (A2ad+3d+4ad)	
Family	Triakidae				
Genus	Galeorhinus				
		Galeorhinus galeus (Linnaeus, 1758)	Soupfin shark	**RL:** VU/ **UNCLOS:** YES	d.
Genus	Mustelus				
		Mustelus asterias (Cloquet, 1821)	Smooth-hound	**RL:** LRlc	a., d.
		Mustelus mustelus (Linnaeus, 1758)	Gray mouth dog	**RL:** LRlc	a., d.
		Mustelus punctulatus (Risso, 1826)			d.
Order	Hexanchiformes				
Family	Chlamydoselachidae				
Genus	Chlamydoselachus				
		Chlamydoselachus anguineus (Garman, 1884)	Frilled shark	**RL:** NT	
Family	Hexanchidae				
Genus	Heptranchias				
		Heptranchias perlo (Bonnaterre, 1788)	Sevengilled shark	**RL:** NT	d.

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Hexanchus				
		Hexanchus griseus (Bonnaterre, 1788)	Atlantic mudshark	**RL**: LRnt/ **UNCLOS**: YES	
Order	Lamniformes				
Family	Cetorhinidae				
Genus	Cetorhinus				
		Cetorhinus maximus (Gunnerus, 1765)	Basking shark	**CITES:** II/ **RL:** VU (A1ad+2d)/ **CMS:** I and II/ **OSPAR:** AII/ **BERN:** I and II/ **UNCLOS:** YES	
Family	Mitsukurinidae				
Genus	Mitsukurina				
		Mitsukurina owstoni (Jordan, 1898)	Goblin shark	**RL:** LC	
Family	Alopiidae				
Genus	Alopias				
		Alopias superciliosus (Lowe, 1841)	Bigeye thresher shark	**UNCLOS:** YES	
		Alopias vulpinus (Bonnaterre, 1788)	Common thresher	**RL:** DD/ **UNCLOS:** YES	
Family	Lamnidae				
Genus	Isurus				
		Isurus oxyrinchus (Rafinesque, 1810)	Blue pointer	**RL:** LRnt/ **CMS:** II/**BERN:** III/ **UNCLOS:** YES/ **BARCOM:** III	

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Classification		Scientific name	Common name	Conservation agreements	i
		Isurus paucus (Guitart Manday, 1966)	Longfin mako	**RL:** VU (A2bd+3d+4bd)/ **CMS:** II/ **UNCLOS:** YES	
Genus	Carcharodon				
		Carcharodon carcharias (Linnaeus, 1758)	Great white shark	**RL:** VU (A1bcd+2cd)/ **CITES:** II/ **CMS:** I and II/ **BERN:** II/ **UNCLOS:** YES	
Genus	Lamna				
		Lamna nasus (Bonnaterre, 1788)	Blue dog	**RL:** VU (A2bd+3d+4bd)/ **CMS:**II/ **OSPAR:** AII/ **BERN:** III/ **BARCOM:**III	
Family	Odontaspididae				
Genus	Carcharias				
		Carcharias taurus (Rafinesque, 1810)	Sand tiger shark	**RL:** VU (A1ab+2d)/ **UNCLOS:** YES	d.
Family	Odontaspididae				
Genus	Odontaspis				
		Odontaspis ferox (Risso, 1810)			d.
Order	Orectolobiformes				
Family	Ginglymostomatidae				
Genus	Ginglymostoma				

Classification		Scientific name	Common name	Conservation agreements	i
		Ginglymostoma cirratum (Bonnaterre, 1788)	Cat shark	**RL:** DD	
Family	Rhincodontidae				
Genus	Rhincodon				
		Rhincodon typus (Smith, 1828)	Whale shark	**RL:** VU (A1bd+2d)/ **CITES:** II/ **CMS:** II/ **UNCLOS:** YES	
Order	Pristiformes				
Family	Pristidae				
Genus	Pristis				
		Pristis pectinata (Latham, 1794)	Common sawfish	**RL:** CR (A2bcd+3cd+4bcd)	d.
		Pristis pristis (Linnaeus, 1758)	Largetooth sawfish	**RL:** EN (A1bcd+2cd)/ **CITES:** I	d.
Order	Rajiformes				
Family	Dasyatidae				
Genus	Dasyatis				
		Dasyatis centroura (Mitchill, 1815)	Roughtail stringaya	**RL:** LC	
Family	Gymnuridae				
Genus	Gymnura				
		Gymnura altavela (Linnaeus, 1758)	Spiny butterfly ray	**RL:** VU	d.

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Classification		Scientific name	Common name	Conservation agreements	i
Family	Myliobatidae				
Genus	Aetobatus				
		Aetobatus narinari (Euphrasen, 1790)	Spotted duckbill ray	**RL:** NT	
Genus	Manta				
		Manta birostris (Walbaum, 1792)	Atlantic manta	**RL:** NT	
Genus	Mobula				
		Mobula mobular (Bonnaterre, 1788)	Devil fish	**RL:** EN A4d/ **BARCOM:** II	
Genus	Pteromylaeus				
		Pteromylaeus bovinus (Geoffroy Saint-Hilaire, 1817)	Duckbill	**RL:** DD	c.
Family	Rajidae				
Genus	Bathyraja				
		Bathyraja pallida (Forster, 1967)	Pale ray	**RL:** LC	
		Bathyraja richardsoni (Garrick, 1961)	Richardson's ray	**RL:** LC	c.
Genus	Dipturus				
		Dipturus batis (Linnaeus, 1758)	Common skate	**RL:** CR (A2bcd+4bcd)/ **OSPAR:** All	d.
		Dipturus oxyrinchus (Linnaeus, 1758)	Long-nosed burton skate	**RL:** NT	
Genus	Raja				

Classification		Scientific name	Common name	Conservation agreements	i
		Raja montagui (Fowler, 1910)	Homelyn ray	**RL:** LC/ **OSPAR:** II, III, IV, V	
		Raja asterias (Delaroche, 1809)	Starry skate	**RL:** LC	
		Raja clavata (Linnaeus, 1758)	Thornback skate / ray	**RL:** LRnt/ **OSPAR:** II	
		Raja microocellata (Montagu, 1818)	Owl ray	**RL:** LRlc	
Genus	Rajella				
		Rajella dissimilis (Hulley, 1970)		**RL:** LC	
Genus	Rostroraja				
		Rostroraja alba (Lacepède, 1803)	Bottlenosed skate	**RL:** EN (A2cd+4cd)/ **BERN:** III **OSPAR:** II, III, IV/ **BARCOM:** III	d.
Genus	Leucoraja				
		Leucoraja circularis (Couch, 1838)	Cuckoo ray		d.
		Leucoraja melitensis (Clark, 1926)	Maltese ray	**RL:** CR (A2bcd+3bcd+4bcd)	d.
Genus	Amblyraja				
		Amblyraja hyperborea (Collett, 1879)	Artic skate	**RL:** LC	
Family	Rhinobatidae				
Genus	Rhinobatos				
		Rhinobatos cemiculus (Geoffroy Saint-Hilaire, 1817)	Blackchin guitarfish	**RL:** EN (A4bd)	d.
		Rhinobatos rhinobatos (Linnaeus, 1758)	Common guitarfish	**RL:** EN (a4cd)	d.

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Classification		Scientific name	Common name	Conservation agreements	i
Order	Squaliformes				
Family	Centrophoridae				
Genus	Centrophorus				
		Centrophorus granulosus (Bloch & Schneider, 1801)	Gulper shark	**RL:** VU (A2abd+3d+4d)/ **OSPAR:** IV and V	d.
		Centrophorus squamosus (Bonnaterre, 1788)	Leafscale gulper shark	**RL:** VU (A2bd+3bd+4bd)/ **OSPAR:** All	
Genus	Deania				
		Deania calcea (Lowe, 1839)	Birdbeak dogfish	**RL:** LC	
Family	Dalatiidae				
Genus	Centroscymnus				
		Centroscymnus coelolepis (Barbosa du Bocage & Brito Capello, 1864)	Portuguese dogfish	**RL:** DD/ **OSPAR:** All	
Genus	Dalatias				
		Dalatias licha (Bonnaterre, 1788)	Kitefin shark	**RL:** NT	
Genus	Etmopterus				
		Etmopterus princeps (Collett, 1904)	Great lanternshark	**RL:** DD	
Genus	Euprotomicrus				
		Euprotomicrus bispinatus (Quoy & Gaimard, 1824)	Pygmy shark	**RL:** LC	

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Oxynotus				
		Oxynotus centrina (Linnaeus, 1758)	Humantin	**RL:** VU (a2bcd+4bd)	d.
		Oxynotus paradoxus (Frade, 1929)	Sailfin roughshark	**RL:** DD	
Genus	Somniosus				
		Somniosus microcephalus (Bloch & Schneider, 1801)	Greenland shark	**RL:** NT	
Genus	Scymnodon				
		Scymnodon squamulosus (Günther, 1877)	Velvet dogfish	**RL:** DD	
Family	Somniosidae				
Genus	Centroselachus				
		Centroselachus crepidater (Barbosa du Bocage & de Brito Capello, 1864)	Longnose velvet dogfish	**RL:** LC	
Family	Squalidae				
Genus	Squalus				
		Squalus acanthias (Linnaeus, 1758)	Piked dogfish	**RL:** VU (A2bd+3bd+4bd)/ **CMS:** II/ **OSPAR:** All	d.
		Squalus blainville (Risso, 1827)	Longnose spurdog		a.
		Squalus uyato (Rafinesque, 1810)	Little gulper shark	**RL:** DD	
Order	Echinorhiniformes				

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Classification		Scientific name	Common name	Conservation agreements	i
Family	Echinorhinidae				
Genus	Echinorhinus				
		Echinorhinus brucus (Bonnaterre, 1788)	Bramble shark	**RL:** DD	
Order	Squatiniformes				
Family	Squatinidae				
Genus	Squatina				
		Squatina aculeata (Cuvier, 1829)	Sawback angelshark	**RL:** CR (a2bcd+3cd+4cd)	c.
		Squatina oculata (Bonaparte, 1840)	Monk fish	**RL:** CR (a2bcd+3cd+4bcd)	c.
		Squatina squatina (Linnaeus, 1758)	Angel shark	**RL:** CR (A2bcd+3d+4bcd)/ **OSPAR:** II, III, IV/ **BARCOM:** II/ **BERN:** III	c.
Order	Torpediniformes				
Family	Torpedinidae				
Genus	Torpedo				
		Torpedo andersoni (Bullis, 1962)	Florida torpedo	**RL:** DD	b.
		Torpedo (Torpedo) marmorata (Risso, 1810)	Spotted torpedo	**RL:** DD	b.
		Torpedo (Tetronarce) nobiliana (Bonaparte, 1835)	Atlantic torpedo	**RL:** DD	b.
		Torpedo torpedo (Linnaeus, 1758)	Ocellated torpedo	**RL:** DD	a.
Subclass	Holocephali				

Classification		Scientific name	Common name	Conservation agreements	i
Order	Chimaeriformes				
Family	Chimaeridae				
Genus	Chimaera				
		Chimaera monstrosa (Linnaeus, 1758)	Rabbitfish	**RL:** NT	
Family	Chimaeridae				
Genus	Hydrolagus				
		Hydrolagus affinis (de Brito Capello, 1868)	Atlantic chimaera	**RL:** LC	
		Hydrolagus lusitanicus (Moura, Figueiredo, Bordalo-Machado, Almeida & Gordo, 2005)		**RL:** DD	
		Hydrolagus mirabilis (Collett, 1904)	Large-eyed rabbitfish	**RL:** LC	
Family	Rhinochimaeridae				
Genus	Harriotta				
		Harriotta haeckeli (Karrer, 1972)	Smallspine spookfish	**RL:** DD	
		Harriotta raleighana (Goode & Bean, 1895)	Longnosed chimaera	**RL:** LC	
Genus	Rhinochimaera				
		Rhinochimaera atlantica (Holt & Byrne, 1909)	Knifenose chimaera	**RL:** LC	
Class	Mammalia				
Order	Carnivora				

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Classification		Scientific name	Common name	Conservation agreements	i
Family	Odobenidae				
Genus	Odobenus				
		Odobenus rosmarus (Linnaeus, 1758)	Walrus	**RL:** LRlc/ **CITES:** IIIw (Denmark)/ **BERN:** II	
Phylum	Annelida				
Class	Polychaeta				
Order	Aciculata				
Family	Polynoidae				
Genus	Gesiella				
		Gesiella jameensis (Hartmann-Schröder, 1974)			a.
Order	Sabellida				
Family	Sabellariidae				
Genus	Sabellaria				
		Sabellaria alveolata (Linnaeus, 1767)			a.
Phylum	Sipuncula				
Class	Sipunculida				
Order	Spunculiformes				

Classification		Scientific name	Common name	Conservation agreements	i
Family	Sipunculidae				
Genus	Sipunculus				
		Sipunculus nudus (Linnaeus, 1766)			a.
Phylum	Arthropoda				
Class	Malacostraca				
Order	Decapoda				
Family	Galatheidae				
Genus	Munidopsis				
		Munidopsis polymorpha (Koelbel)			a.
Family	Majidae				
Genus	Maja				
		Maja squinado (Herbst, 1788)	Spiny spider crab	**BERN:** III/ **BARCOM:** III	a.
Family	Ocypodidae				
Genus	Uca				
		Uca tangeri (Eydoux, 1835)	Fiddler crab		a.
Family	Palinuridae				
Genus	Palinurus				
		Palinurus elephas (Fabricius, 1787)	Commun spiny lobster	**BERN:** III/ **BARCOM:** III	a.

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Classification		Scientific name	Common name	Conservation agreements	i
		Panulirus echinatus (Smith, 1869)	Brown spiny lobster		a.
Family	Nephropoidea				
Genus	Homarus				
		Homarus gammarus (Linnaeus, 1758)	Lobster	**BERN:** III/ **BARCOM:** III	a.
Family	Scyllaridae				
Genus	Scyllarus				
		Scyllarus arctus (Linnaeus, 1758)		**BERN:** III/ **BARCOM:** III	a.
		Scyllarus pigmaeus		**BERN**: III	
Class	Maxillopoda				
Order	Pedunculata				
Family	Pollicipedidae				
Genus	Pollicipes				
		Pollicipes pollicipes (Gmelin, 1789)	Leaf barnacle		a.
Order	Sessilia				
Family	Balanoidea				
Genus	Megabalanus				
		Megabalanus azoricus		**OSPAR:** V	
Family	Pachylasmatidae				

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Pachylasma				
		Pachylasma giganteum (Phil.)			b.
Phylum	Bryozoa				
Class	Gymnolaemata				
Order	Cheilostomata				
Family	Hippoporinidae				
Genus	Pentapora				
		Pentapora fascialis (Pallas, 1766)			a.
Class	Stenolaemata				
Order	Tubuliporata				
Family	Horneridae				
Genus	Hornera				
		Hornera lichenoides		**BARCOM:** II	
Phylum	Porifera				
Class	Calcarea				
Order	Lithonida				
Family	Petrobionidae				
Genus	Petrobiona				

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Classification		Scientific name	Common name	Conservation agreements	i
		Petrobiona massiliana (Vacelet & Lévi, 1958)		**BERN:** II (Med)/ **BARCOM:** II	
Class	Demospongiae				
Order	Astrophorida				
Family	Geodiidae				
Genus	Geodia				
		Geodia cydonium (Jameson, 1811)	Sponge	**BARCOM:** II	
Order	Dictyoceratida				
Family	Irciniidae				
Genus	Sarcotragus				
		Sarcotragus foetidus (Schmidt, 1862)		**BARCOM:** II	
		Sarcotragus pipetta (Schmidt, 1868)		**BARCOM:** II	
Family	Spongiidae				
Genus	Hippospongia				
		Hippospongia communis (Lamarck, 1814)		**BERN:** III/ **BARCOM:** III	
Genus	Spongia				
		Spongia agaricina (Pallas, 1766)	Elephant ear	**BERN:** III/ **BARCOM:** III	a.
		Spongia officinalis (Linnaeus, 1759)		**BERN:** III/ **BARCOM:** III	
		Spongia zimocca (Schmidt, 1862)		**BERN:** III/ **BARCOM:** III	

Classification		Scientific name	Common name	Conservation agreements	i
Order	Hadromerida				
Family	Tethyidae				
Genus	Tethya				
		Tethya aurantium (*Tethya* sp. plur.) (Pallas, 1766)		**BARCOM:** II	a.
Order	Halichondrida				
Family	Axinellidae				
Genus	Axinella				
		Axinella cannabina (Esper, 1794)		**BARCOM:** II	a.
		Axinella polypoides (Schmidt, 1862)		**BARCOM:** II	
Family	Dictyonellidae				
Genus	Scopalina				
		Scopalina lophyropoda (Schmidt, 1862)			a.
Order	Haplosclerida				
Family	Petrosiidae				
Genus	Petrosia				
		Petrosia ficiformis (Poiret, 1798)			a.
Family	Phloeodictyidae				
Genus	Calyx				

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
		Calyx nicaeensis (Risso, 1826)			a.
Order	Lithistida				
Family	Corallistidae				
Genus	Corallistes				
		Corallistes nolitangere (Schmidt, 1870)			a.
Order	Poecilosclerida				
Family	Cladorhizidae				
Genus	Asbestopluma				
		Asbestopluma hypogea (Vacelet & Boury-Esnault, 1996)		**BERN:** II (Med)/ **BARCOM:** II	
Order	Verongida				
Family	Aplysinidae				
Genus	Aplysina				
		Aplysina cavernicola (Vacelet, 1959)		**BERN:** II (Med)/ **BARCOM:** II	a.
Phylum	Mollusca				
Class	Bivalvia				
Order	Veneroida				
Family	Mactridae				

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Eastonia				
		Eastonia rugosa (Helbling)			a.
Order	Myoida				
Family	Pholadidae				
Genus	Barnea				
		Barnea candida (Linnaeus, 1758)			a.
Genus	Pholas				
		Pholas dactylus (Linnaeus, 1758)		**BERN:** II (Med)/ **BARCOM:** II	
Order	Pteriomorpha				
Family	Mytilidae				
Genus	Modiolus				
		Modiolus lulat (Dautzenberg, 1891)			a.
Family	Ostreidae				
Genus	Ostrea				
		Ostrea edulis (Linnaeus, 1758)	Edible oyster	**OSPAR:** II	
Family	Spondylidae				
Genus	Spondylus				
		Spondylus gaederopus (Linnaeus, 1758)			a.

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Order	Pterioida				
Family	Pinnidae				
Genus	Pinna				
		Pinna pernula (Chemnitz, 1785)		**CMS:** II/ **BARCOM:** II	
		Pinna rudis (Linnaeus, 1758)	Rough penshell	**BERN:** II (Med)	a.
Order	Veneroida				
Family	Arcticidae				
Genus	Arctica				
		Arctica islandica (Linnaeus, 1767)	Ocean quahog	**OSPAR:** II	
Family	Mesodesmatidae				
Genus	Donacilla				
		Donacilla cornea (Poli, 1795)			a.
Order	Lucinoida				
Family	Ungulinidae				
Genus	Ungulina				
		Ungulina cuneata (Spengler, 1782)			a.
Class	Gastropoda				
Subclass	Orthogastropoda				

Classification		Scientific name	Common name	Conservation agreements	i
Family	Haliotididae				
Genus	Haliotis				
		Haliotis coccinea canariensis			a.
Family	Trochidae				
Genus	Gibbula				
		Gibbula nivosa (Adams, 1851)		**BERN:** II (Med)/ **BARCOM:** II	
Family	Turbinidae				
Genus	Bolma				
		Bolma rugosa (Linnaeus, 1767)			a.
Order	Patellogastropoda				
Family	Patellidae				
Genus	Patella				
		Patella candei (d'Orbigny, 1840)	Limpet		a.
		Patella nigra (da Costa, 1771)	Safian limpet	**BERN:** II (Med)/ **BARCOM:** II	a.
		Patella ulyssiponensis aspera (Gmelin, 1791)	Azorean limpet	**OSPAR:** V	
Order	Sorbeoconcha				
Family	Muricidae				
Genus	Babelomurex				

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
		Babelomurex benoiti (Tiberi, 1855)			a.
		Babelomurex cariniferus (Sowerby, 1834)			a.
Family	Mitridae				
Genus	Mitra				
		Mitra cornea (Lamarck, 1811)			a.
		Mitra zonata (Marryat, 1818)		**BERN:** II (Med)/ **BARCOM:** II	a.
Family	Volutidae				
Genus	Ampulla				
		Ampulla priamus (Gmelin, 1791)	Spotted flask		a.
Family	Fasciolariidae				
Genus	Fasciolaria				
		Fasciolaria lignaria (Linnaeus, 1758)			a.
Family	Muricidae				
Genus	Latiaxis				
		Latiaxis babelis (Requien, 1849)		**RL:** LRnt	
Genus	Nucella				
		Nucella lapillus (Linnaeus, 1758)	Atlantic dogwinkle	**OSPAR:** II, III, IV	
Family	Nassariidae				

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Nassarius				
		Nassarius tingitanus (Pallary, 1901)			a.
Family	Bursidae				
Genus	Bursa				
		Bursa scrobilator (Linnaeus, 1758)			a.
Family	Cypraeidae				
Genus	Erosaria				
		Erosaria spurca (Linnaeus, 1758)		**BERN:** II (Med)/ **BARCOM:** II	a.
Genus	Luria				
		Luria lurida (Linnaeus, 1758)		**BERN:** II (Med)	a.
Genus	Schilderia				
		Schilderia achatidea (Gray, in G.B. Sowerby II, 1837)		**BERN:** II (Med)/ **BARCOM:** II	a.
Genus	Zonaria				
		Zonaria pyrum (Gmelin, 1791)		**BERN:** II (Med)/ **BARCOM:** II	a.
Family	Cerithiidae				
Genus	Cassiella				
		Cassiella abylensis (Gofas, 1987)			a.
Family	Epitoniidae				

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Epitonium				
		Epitonium jolyi (Monterosato, 1878)			a.
Family	Naticidae				
Genus	Natica				
		Natica vittata (Gmelin, 1791)			a.
Genus	Sinum				
		Sinum bifasciatum (Récluz, 1851)			a.
Family	Ranellidae				
Genus	Charonia				
		Charonia lampas (Linnaeus, 1758)		**BERN:** II/ **BARCOM:** II	a.
		Charonia tritonis (Linnaeus, 1758)	Variegated triton-shell	**BERN:** II/ **BARCOM:** II	a.
		Charonia variegata (Lamarck, 1816)			a.
Genus	Cymatium				
		Cymatium corrugatum (Lamarck, 1816)			a.
		Cymatium parthenopeum (von Salis, 1793)	Giant triton	**RL:** LRlc	a.
Genus	Ranella				
		Ranella olearia (Linnaeus, 1758)		**BERN:** II (Med)/ **BARCOM:** II	a.
		Ranella parthenopaeum		**RL:** LRnt	

Classification		Scientific name	Common name	Conservation agreements	i
Family	Tonnidae				
Genus	Tonna				
		Tonna galea (Linnaeus, 1758)	Giant tun	**BERN:** II (Med)/ **BARCOM:** II	
Family	Vermetidae				
Genus	Dendropoma				
		Dendropoma petraeum (Monterosato, 1884)	Vermetid snail	**BERN:** II (Med)/ **BARCOM:** II	
Phylum	Echinodermata				
Class	Asteroidea				
Order	Valvatida				
Family	Ophidiasteridae				
Genus	Hacelia				
		Hacelia attenuata (Gray, 1840)	Red starfish		a.
Family	Asterinidae				
Genus	Asterina				
		Asterina panceri (Gasco, 1870)	Seastar	**BERN:** II (Med)/ **BARCOM:** II	a.
Family	Ophidiasteridae				
Genus	Ophidiaster				
		Ophidiaster ophidianus (Lamarck, 1816)	Violet starfish	**BERN:** II (Med)/ **BARCOM:** II	a.

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Class	Echinoidea				
Order	Echinoida				
Family	Echinidae				
Genus	Echinus				
		Echinus esculentus (Linnaeus, 1758)		**RL:** LRnt	a.
Genus	Paracentrotus				
		Paracentrotus lividus (Lamarck, 1816)		**BERN:** III/ **BARCOM:** III	
Phylum	Cnidaria				
Class	Anthozoa				
Order	Actiniaria				
Family	Sagartiidae				
Genus	Actinothoe				
		Actinothoe anguicoma (J. Price in Johnston, 1847)			b.
Family	Actiniidae				
Genus	Anemonia				
		Anemonia sulcata (Pennant, 1777)	Mediterranean snakelocks anemone		b.
Genus	Cribrinopsis				

Classification		Scientific name	Common name	Conservation agreements	i
		Cribrinopsis crassa (Andrés, 1881)	Fat anemone		a.
Genus	Tealia				
		Urticina crassicornis (Müll.) Ehr.	Dahlia anemone		b.
Family	Sagartiidae				
Genus	Diadumene				
		Diadumene cincta (Stephenson, 1925)	Orange anemone		b.
Family	Edwardsiidae				
Genus	Edwardsia				
		Edwardsia ivelli (Manuel, 1975)	Ivell's seanemone	**RL:** DD	
Genus	Nematostella				
		Nematostella vectensis (Stephenson, 1935)	Starlet sea anemone	**RL:** VU (A1ce)	
Genus	Paraedwardsia				
		Paraedwardsia arenaria (Carlgren in Nordgaard, 1905)			b.
Family	Metridiidae				
Genus	Metridium				
		Metridium senile (Linnaeus, 1761)	Plumose anemone		b.
		Metridium dianthus			b.
Family	Sagartiidae				

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Sagartia				
		Sagartia elegans (Dalyell, 1848)	Purple anemone		b.
		Sagartia troglodytes (Price in Johnston, 1847)			b.
Family	Hormathiidae				
Genus	Adamsia				
		Adamsia palliata (Bohadsch, 1761)	Cloak anemone		b.
Order	Gorgonacea				
Family	Ellisellidae				
Genus	Ellisella				
		Ellisella paraplexauroides (Stiasny, 1936)			a.
Family	Gorgoniidae				
Genus	Eunicella				
		Eunicella filiformis (Studer, 1878)			a.
		Eunicella gazella (Studer, 1901)			a.
		Eunicella labiata (Thomson, 1927)			a.
		Eunicella verrucosa (Pallas, 1766)	Board sea fan	**RL:** VU (A1d)	a.
Genus	Leptogorgia				
		Leptogorgia guineensis (Grasshoff, 1988)			a.

Classification		Scientific name	Common name	Conservation agreements	i
		Leptogorgia lusitanica (Stiasny 1937)			a.
Family	Plexauridae				
Genus	Paramuricea				
		Paramuricea biscaya (Grasshoff, 1977)			c.
		Paramuricea candida (Grasshoff, 1977)			c.
		Paramuricea clavata (Risso, 1826)	Red gorgonian		a.
		Paramuricea grayi (Johnson, 1861)			c.
		Paramuricea macrospina (Koch, 1882)	Spiny gorgonia		c.
		Paramuricea placomus (Linnaeus, 1758)			c.
Genus	Spinimuricea				
		Spinimuricea atlantica (Johnson, 1862)			a.
Genus	Swiftia				
		Swiftia dubia (Thomson, 1929)			c.
		Swiftia pallida (Madsen, 1970)			c.
		Swiftia rosea (Grieg, 1887)			c.
Genus	Villogorgia				
		Villogorgia bebrycoides (Koch, 1887)			c.
Order	Antipatharia		Blacks corals	**CITES:** II (All)	

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Family	Antipathidae				
Genus	Antipathes				
		Antipathes spp.		**BERN:** III (Med)/ **BARCOM:** III	
		Antipathes squamosa		**RL:** CT/ **CITES:** II/ **BERN:** III/ **BARCOM:** III	
		Antipathes dichotoma (Pallas, 1766)		**RL:** CT/ **CITES:** II/ **BERN:** III/ **BARCOM:** III	
		Antipathes grayi (Roule, 1902)		**RL:** CT/ **CITES:** II/ **BERN:** III/ **BARCOM:** III	
		Antipathes virgata (Esper, 1798)		**RL:** CT/ **CITES:** II/ **BERN:** III/ **BARCOM:** III	
Genus	Cirripathes				
		Cirripathes spp.		**CITES:** II	
		Cirripathes flagellum (Brook, 1889)		**RL:** CT/ **CITES:**II	
Genus	Stichopathes		Bushy black coral		
		Stichopathes spp.		**CITES:** II	
		Stichopathes abyssicola (Roule, 1902)		**RL:** CT/ **CITES:**II	
		Stichopathes filiformis (Gray, 1868)		**RL:** CT/ **CITES:**II	
		Stichopathes gracilis (Gray, 1858)		**RL:** CT/ **CITES:**II/ **BARCOM:** III	

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Pteropathes				
		Pteropathes spp.		**CITES:** II	
		Pteropathes fragilis (Brook, 1889)		**RL:** CT/ **CITES:**II	
Family	Schizopathidae				
Genus	Schizopathes				
		Schizopathes spp.		**CITES:** II	
		Schizopathes affinis (Brook, 1889)		**RL:** CT/ **CITES:**II	
		Schizopathes crassa (Brook, 1889)		**RL:** CT/ **CITES:**II	
		Stauropathes punctata (Roule, 1905)		**RL:** CT/ **CITES:**II	
Genus	Bathypathes				
		Bathypathes spp.		**CITES:** II	
		Bathypathes patula (Brook, 1889)		**RL:** CT/ **CITES:**II	
Genus	Stauropathes				
		Stauropathes spp.		**CITES:** II	
Genus	Parantipathes				
		Parantipathes spp.		**CITES:** II	
		Parantipathes larix (Esper, 1790)		**RL:** CT/ **CITES:**II	
Family	Leiopathidae				

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Leiopathes				
		Leiopathes spp.		**CITES:** II	
		Leiopathes glaberrima (Esper, 1792)	Smooth black coral	**RL:** CT/ **CITES:**II/ **BARCOM:** III	
Family	Myriopathidae				
Genus	Antipathella				
		Antipathella spp.		**CITES:** II	
		Antipathella subpinnata (Ellis & Solander, 1786)		**RL:** CT/ **CITES:**II	
		Antipathella wollastonii (Gray, 1858)		**RL:** CT/ **CITES:**II	
Genus	Tanacetipathes				
		Tanacetipathes spp.		**CITES:** II	
Order	Scleractinia			**CITES:** II (All)	
Family	Acroporidae				
Genus	Isopora				
		Isopora spp.		**CITES:** II	
		Isopora palifera		**RL:** NT/ **CITES:** II	
Family	Caryophylliidae				
Genus	Anomocora				

Classification		Scientific name	Common name	Conservation agreements	i
		Anomocora spp.		**CITES:** II	
Genus	Aulocyathus				
		Aulocyathus spp.		**CITES:** II	
Genus	Asterosmilia				
		Asteromilia spp.		**CITES:** II	
Genus	Caryophyllia				
		Caryophyllia spp.		**CITES:** II	
Genus	Ceratotrochus				
		Ceratotrochus spp.		**CITES:** II	
Genus	Coenocyathus				
		Coenocyathus spp.		**CITES:** II	
Genus	Coenosmilia				
		Coenosmilia spp.		**CITES:** II	
Genus	Dasmosmilia				
		Dasmosmilia spp.		**CITES:** II	
Genus	Deltocyathus				
		Deltocyathus spp.		**CITES:** II	
		Deltocyathus agassizi (De Pourtalès, 1867)		**CITES:** II	b.

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
		Deltocyathus italicus (Michelotti, 1838)		**CITES:** II	b.
Genus	Desmophyllum				
		Desmophyllum spp.		**CITES:** II	
Genus	Eusmilia				
		Eusmilia spp.		**CITES:** II	
		Eusmilia fastigiata (Pallas, 1766)	Smooth flower coral	**RL:** LC/ **CITES:** II	b.
Genus	Hoplangia				
		Hoplangia spp.		**CITES:** II	
Genus	Lophelia				
		Lophelia spp.		**CITES:** II	
		Lophelia pertusa (Linnaeus, 1758)		**CITES:** II/ **OSPAR:** All	a.
Genus	Paracyathus				
		Paracyathus spp.		**CITES:** II	
Genus	Polycyathus				
		Polycyathus spp.		**CITES:** II	
Genus	Pourtalosmilia				
		Pourtalosmilia spp.		**CITES:** II	
		Pourtalosmilia anthophyllites (Ellis & Solander, 1786)		**CITES:** II	a.

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Premocyathus				
		Premocyathus spp.		**CITES:** II	
Genus	Solenosmilia				
		Solenosmilia spp.		**CITES:** II	
Genus	Stephanocyathus				
		Stephanocyathus spp.		**CITES:** II	
Genus	Tethocyathus				
		Tethocyathus spp.		**CITES:** II	
Genus	Thalamophyllia				
		Thalamophyllia spp.		**CITES:** II	
Genus	Trochocyathus				
		Trochocyathus spp.		**CITES:** II	
Genus	Vaughanella				
		Vaughanella spp.		**CITES:** II	
Family	Dendrophylliidae				
Genus	Astroides				
		Astroides spp.		**CITES:** II	

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
		Astroides calycularis (Pallas, 1766)	Orange coral	**CITES:** II/ **BERN:** II (Med)/ **BARCOM:** II	a.
Genus	Balanophyllia				
		Balanophyllia spp.		**CITES:** II	
		Balanophyllia europaea (Risso, 1826)		**RL:** DD/ **CITES:** II	
Genus	Cladopsammia				
		Cladopsammia spp.		**CITES:** II	
Genus	Dendrophyllia				
		Dendrophyllia spp.		**CITES:** II	
		Dendrophyllia cornigera (Lamarck, 1816)		**CITES:** II	a.
		Dendrophyllia laboreli (Zibrowius & Brito, 1984)		**CITES:** II	a.
		Dendrophyllia ramea (Linnaeus, 1758)		**CITES:** II	a.
Genus	Eguchipsammia				
		Eguchipsammia spp.		**CITES:** II	
Genus	Enallopsammia				
		Enallopsammia spp.		**CITES:** II	
Genus	Leptopsammia				
		Leptopsammia spp.		**CITES:** II	

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Thecopsammia				
		Thecopsammia spp.		**CITES:** II	
Family	Faviidae				
Genus	Cladocora				
		Cladocora spp.		**CITES:** II	
		Cladocora cespitosa (Linnaeus)	Stone coral	**RL:** DD/ **CITES:** II	a.
		Cladocora debilis (Milne Edwards & Haime, 1849)	Thin tube coral	**CITES:** II	a.
Genus	Solenastrea				
		Solenastrea spp.		**CITES:** II	
		Solenastrea hyades (Dana, 1846)	Knobby star coral	**RL:** LC/ **CITES:** II	b.
Family	Flabellidae				
Genus	Flabellum				
		Flabellum spp.		**CITES:** II	
Genus	Javania				
		Javania spp.		**CITES:** II	
Genus	Monomyces				
		Monomyces spp.		**CITES:** II	
Genus	Truncatoflabellum				

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
		Truncatoflabellum spp.		**CITES:** II	
Family	Fungiacyathidae				
Genus	Fungiacyathus				
		Fungiacyathus spp.		**CITES:** II	
Family	Guyniidae				
Genus	Guynia				
		Guynia spp.		**CITES:** II	
Genus	Schizocyathus				
		Schizocyathus spp.		**CITES:** II	
Family	Oculinidae				
Genus	Madrepora				
		Madrepora spp.		**CITES:** II	
		Madrepora oculata (Linnaeus, 1758)	Zigzag coral	**CITES:** II	a.
Genus	Oculina				
		Oculina spp.		**CITES:** II	
		Oculina patagonica		**RL:** LC/ **CITES:** II	
Family	Pocilloporidae				
Genus	Madracis				

Classification		Scientific name	Common name	Conservation agreements	i
		Madracis spp.		**CITES:** II	
		Madracis asperula (Milne Edwards & Haime, 1849)		**RL:** DD/ **CITES:** II	
		Madracis pharensis (Heller, 1868)		**RL:** LC/ **CITES:** II	
Family	Rhizangiidae				
Genus	Astrangia				
		Astrangia spp.		**CITES:** II	
Genus	Phyllangia				
		Phyllangia spp.		**CITES:** II	
		Phyllangia mouchezii (Lacaze-Duthiers, 1897)		**CITES:** II	a.
Genus	Polycyathus				
		Polycyathus spp.		**CITES:** II	
Family	Turbinoliidae				
Genus	Deltocyathoides				
		Deltocyathoides spp.		**CITES:** II	
Genus	Peponocyathus				
		Peponocyathus spp.		**CITES:** II	b.
Genus	Sphenotrochus				
		Sphenotrochus spp.		**CITES:** II	b.

Kingdom Animalia

Classification		Scientific name	Common name	Conservation agreements	i
Order	Zoantharia				
Family	Epizoanthidae				
Genus	Epizoanthus				
		Epizoanthus couchii (Johnston in Couch, 1844)			a.
Family	Parazoanthidae				
Genus	Savalia				
		Savalia savaglia (Bertoloni, 1819)	False Black coral	**BERN:** II (Med)/ **BARCOM:** II	a.
Genus	Isozoanthus				
		Isozoanthus dubius (Carlgren, 1913)			c.
		Isozoanthus sulcatus (Gosse, 1859)			c.
Genus	Parazoanthus				
		Parazoanthus anguicomus (Norman, 1868)			a.
		Parazoanthus axinellae (Schmidt, 1862)			a.
Class	Hydrozoa				
Order	Anthoathecata				
Family	Milleporidae				
Genus	Millepora		Fire corals		
		Millepora spp.		**CITES:** II	

Classification		Scientific name	Common name	Conservation agreements	i
Family	Stylasteridae				
Genus	Crypthelia				
		Crypthelia spp.		**CITES:** II	
Genus	Errina				
		Errina spp.		**CITES:** II	
		Errina aspera (Linnaeus, 1767)		**CITES:** II/ **BERN:** II (Med)/ **BARCOM:** II	
Genus	Lepidopora				
		Lepidopora spp.		**CITES:** II	
Genus	Pliobothrus				
		Pliobothrus spp.		**CITES:** II	
Genus	Stenohelia				
		Stenohelia spp.		**CITES:** II	
Genus	Stylaster				
		Stylaster spp.		**CITES:** II	

RL: Red List. Red List of the International Union of Conservation of Nature (IUCN). Species included in its lists./ **CITES:** Convention on International Trade in Endangered Species of Wild Fauna and Flora. Species included in its appendixes./ **CMS:** Convention on the Conservation of Migratory Species of Wild Animals. Species included in its appendixes./ **OSPAR:** Convention for the Protection of the Marine Environment of the Northeast Atlantic. Species found in OSPAR Regions./ **UNCLOS:** United Nations Convention on the Law of the Sea. Species included un Annex I, high migratories./ **BERN:** Bern Convention on the Conservation of European Wildlife and Natural Habitats. Species included in its appendixes./ **BARCOM:** Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. Species included in its annexs.

(i) Species not included in international agreements, but of importance to ecosystems.
a. Species that are regionally threatened and included in regional or national lists./ **b.** Species whose protection is recommended by experts./ **c.** Species that require protection due to their fragility or role as essential habitat creators./ **d.** Proposals to be listed in conventions.

Kingdom Plantae

Classification		Scientific name	Common name	Conservation agreements	i
Phylum	Tracheophyta				
Class	Magnoliopsida				
Order	Alismatales				
Family	Cymodoceaceae				
Genus	Cymodocea				
		Cymodocea nodosa (Ucria) Ascherson	Seagrass	**BERN:** I	a.
Family	Hydrocharitaceae				
Genus	Halophila				
		Halophila decipiens (Ostenf.)	Paddle grass		a.
Family	Posidoniaceae				
Genus	Posidonia				
		Posidonia oceanica (Linnaeus) Delile	Seagrass	**BERN:** I/ **BARCOM:** II	a.
Family	Ruppiaceae				
Genus	Ruppia				
		Ruppia maritima (Linnaeus)			a.
Family	Zosteraceae				
Genus	Zostera				
		Zostera noltii (Hornemann, 1832)	Dwarf eelgrass	**BARCOM:** II	a.

Classification		Scientific name	Common name	Conservation agreements	i
		Zostera marina (Linnaeus)		**BERN:** I	a.
Phylum	Rhodophyta				
Class	Florideophyceae				
Order	Nemaliales				
Family	Naccariaceae				
Genus	Naccaria				
		Naccaria wiggii (Turner) Endlicher			a., c.
Order	Ceramiales				
Family	Ceramiaceae				
Genus	Griffithsia				
		Griffithsia opuntioides (J. Agardh)			a.
Genus	Spyridia				
		Spyridia hypnoides (Bory de Saint-Vincent) Papenfuss			a., c.
Family	Rhodomelaceae				
Genus	Alsidium				
		Alsidium corallinum (C. Agardh)			a.
Genus	Osmundaria				
		Osmundaria volubilis (Linnaeus) R.E. Norris			c.

Kingdom Plantae

Classification		Scientific name	Common name	Conservation agreements	i
Order	Cryptonemiales				
Family	Halymeniaceae				
Genus	Grateloupia				
		Grateloupia doryphora (Montagne) M.A. Howe			c.
Genus	Halymenia				
		Halymenia trigona (Clemente) C. Agardh			b.
Family	Gloiosiphoniaceae				
Genus	Schimmelmannia				
		Schimmelmannia schousboei (J. Agardh)		**BERN:** I (Med)/ **BARCOM:** II	
Genus	Peyssonnelia				
		Peyssonnelia rosa-marina (Boudouresque & Denizot)			c.
Family	Kallymeniaceae				
Genus	Kallymenia				
		Kallymenia spathulata (J. Agardh) P.G.Parkinson			c.
Order	Corallinales				
Family	Corallinaceae				
Genus	Goniolithon				
		Goniolithon byssoides (Lamarck) Foslie		**BERN:** I (Med)/ **BARCOM:** II	

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Lithophyllum				
		Lithophyllum frondosum (Dufour) G. Furnari, Cormaci & Alongi			b., c.
		Lithophyllum lichenoides (Ellis) Rosanoff ex Hauck, nom. illeg.		**BERN:** I (Med)/ **BARCOM:** II	
		Lithophyllum racemus (Lamarck) Foslie			b., c.
		Lithophyllum tortuosum (Esper) Foslie			b., c.
Genus	Tenarea				
		Tenarea tortuosa (Esper) M. Lemoine			c., d.
Genus	Mesophyllum				
		Mesophyllum alternans (Cabioch & Mendoza) Foslie			b., c.
		Mesophyllum expansum (Philippi) Cabioch & Mendoza			b., c.
Genus	Neogoniolithon				
		Neogoniolithon mamillosum (Hauck) Setchell & Mason			c.
Genus	Phymatolithon				
		Phymatolithon calcareum (Pallas) Adey & D.L. McKibbin			a.
Genus	Spongites				

Kingdom Plantae

Classification		Scientific name	Common name	Conservation agreements	i
		Spongites fruticulosus (Kützing)			b., c.
Genus	Titanoderma				
		Titanoderma trochanter (Bory de Saint-Vincent) Benhissoune, Boudouresque, Perret-Boudouresque & Verlaque, 2002			c., d.
Family	Hapalidiaceae				
Genus	Lithothamnion				
		Lithothamnion valens (Foslie, 1909)			b., c.
		Lithothamnion minervae (Basso)			b., c.
		Lithothamnion philippii (Foslie)			b., c.
Order	Gelidiales				
Family	Gelidiaceae				
Genus	Ptilophora				
		Ptilophora mediterranea (H. Huvé) R.E. Norris, 1987		**BERN:** I (Med)/ **BARCOM:** II	
Order	Gigartinales				
Family	Solieriaceae				
Genus	Sarconema				
		Sarconema filiforme (Sonder) Kylin			b.

Classification		Scientific name	Common name	Conservation agreements	i
Family	Furcellariaceae				
Genus	Halarachnion				
		Halarachnion ligulatum (Woodward) Kützing			a.
Family	Hypneaceae				
Genus	Hypnea				
		Hypnea esperi (Bory de Saint-Vincent, nom. illeg.)			c.
		Hypnea cervicornis (J. Agardh)			c.
Family	Nemastomataceae				
Genus	Nemastoma				
		Nemastoma dichotomum (J. Agardh)			c.
Family	Phyllophoraceae				
Genus	Ahnfeltiopsis				
		Ahnfeltiopsis devoniensis (Greville) P.C. Silva & DeCew, 1992			a.
		Ahnfeltiopsis pusilla (Montagne) P.C. Silva & DeCew			a.
Genus	Gymnogongrus				
		Gymnogongrus crenulatus (Turner) J. Agardh			d.
Genus	Phyllophora				

Kingdom Plantae

Classification		Scientific name	Common name	Conservation agreements	i
		Phyllophora crispa (Hudson) P.S. Dixon			b., c.
Family	Sarcodiaceae				
Genus	Chondrymenia				
		Chondrymenia lobata (Meneghini) Zanardini			b., c.
Family	Schizymeniaceae				
Genus	Schizymenia				
		Schizymenia dubyi (Chauvin ex Duby) J. Agardh			c.
Family	Sphaerococcaceae				
Genus	Sphaerococcus				
		Sphaerococcus rhizophylloides (J.J. Rodríguez)			c., d.
Family	Gymnophlaeaceae				
Genus	Platoma				
		Platoma cyclocolpa (Montagne) F. Schmitz			b., c.
Family	Solieriaceae				
Genus	Solieria				
		Solieria chordalis (C. Agardh) J. Agardh			b.
Order	Gracilariales				
Family	Gracilariaceae				

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Gracilaria				
		Gracilaria cervicornis (Turner) J. Agardh			a.
Order	Rhodymeniales				
Family	Rhodymeniaceae				
Genus	Fauchea				
		Fauchea repens (C. Agardh) Montagne & Bory de Saint-Vincent			a.

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Kingdom Chromista

Classification		Scientific name	Common name	Conservation agreements	i
Phylum	Ochrophyta				
Class	Phaeophyceae				
Order	Fucales				
Family	Cystoseiraceae				
Genus	Cystoseira				
		Cystoseira spp.			c.
		Cystoseira abies-marina (S.G. Gmelin) C. Agardh			a., b.
		Cystoseira amentacea (included var. *stricta* and var. *spicata*) (C. Agardh) Bory de Saint-Vincent		**BERN:** I (Med)/ **BARCOM:** II	
		Cystoseira mauritanica (Sauvageau)			a., b.
		Cystoseira mediterranea (Sauvageau)		**BERN:** I (Med)/ **BARCOM:** II	
		Cystoseira sedoides (Desfontaines) C. Agardh		**BERN:** I (Med)/ **BARCOM:** II	
		Cystoseira spinosa (included *C. adriatica*) (Sauvageau)		**BERN:** I (Med)/ **BARCOM:** II	
		Cystoseira tamariscifolia (Hudson) Papenfuss			a.
		Cystoseira zosteroides (C. Agard)		**BERN:** I (Med)/ **BARCOM:** II	
Family	Fucaceae				
Genus	Fucus				

Classification		Scientific name	Common name	Conservation agreements	i
		Fucus virsoides (J. Agardh)			c., d.
Family	Sargassaceae				
Genus	Sargassum				
		Sargassum acinarium (Linnaeus) Setchell, 1933			c., d.
		Sargassum flavifolium (Kützing, 1861)	Mojaban		c., d.
		Sargassum (Sargassum) hornschuchii (C. Agardh)			c., d.
		Sargassum trichocarpum (J. Agardh)			c., d.
Order	Desmarestiales				
Family	Desmarestiaceae				
Genus	Desmarestia				
		Desmarestia viridis (O.F. Müller) J.V. Lamouroux	Ke-Urushigusa		b.
		Desmarestia ligulata (Lightfoot) J.V. Lamouroux	Color changer		b.
		Desmarestia dudresnayi (J.V. Lamouroux ex Leman)			b.
Order	Dictyotales				
Family	Dictyotaceae				
Genus	Dilophus				
		Dilophus mediterraneus (Schiffner)			b.

Kingdom Chromista

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Stypopodium				
		Stypopodium fuliginosum (Martius) Kützing			b.
Order	Laminariales				
Family	Alariaceae				
Genus	Undaria				
		Undaria pinnatifida (Harvey) Suringar, 1872			c.
Family	Laminariaceae				
Genus	Laminaria				
		Laminaria ochroleuca (Bachelot de la Pylaie)	Kelp	**CITES:** II/ **BERN:** I (Med)	
		Laminaria rodriguezii (Bornet)		**BERN:** I (Med)/ **BARCOM:** II	
Family	Phyllariaceae				
Genus	Phyllaria				
		Phyllaria purpurascens (C. Agardh) Rostafinsky			a.
Genus	Saccorhiza				
		Sacchorhiza polyschides (Lightfoot) Batters			b.
Order	Scytosiphonales				
Family	Scytosiphonaceae				

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Petalonia				
		Petalonia zosterifolia (Reinke) Kuntze			a.

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Species in Habitats Directive

Classification		Scientific name	Common name	Conservation agreements	i
Phylum	Chordata				
Class	Osteichthyes				
Order	Clupeiformes				
Family	Clupeidae				
Genus	Alosa				
		Alosa spp.	Shad	**HD:** II and V/ **OSPAR:** II, III, IV*/ **BERN:** III*/ **BARCOM:** III*	
Class	Mammalia				
Order	Cetacea				
		All species		**HD:** IV/ **CMS:** I and II/ **BERN:** II* and III/ **UNCLOS:** SI*/ **BARCOM:** II*	a., b.
Family	Delphinidae				
Genus	Tursiops				
		Tursiops truncatus	Bottle-nosed dolphin	**HD:** II and IV/ **CMS:** I and II/ **BERN:** II and III/ **BARCOM:** II	a., b.
Class	Sauropsida				
Order	Testudines				
Family	Dermochelyidae				
Genus	Dermochelys				
		Dermochelys coriacea (Vandelli, 1761)	Leatherback turtle	**RL:** CR A1abd/ **HD:** IV/ **CMS:** I/ **UNCLOS:** II/ **BARCOM:** II	a., b.

Classification		Scientific name	Common name	Conservation agreements	i
Family	Cheloniidae				
Genus	Caretta				
		Caretta caretta	Loggerhead turtle	**HD:** II and IV/ **CMS:** I/ **BARCOM:** II	a., b.
Genus	Chelonia				
		Chelonia mydas	Green turtle	**HD:** II and IV/ **CMS:** I/ **BARCOM:** II	a., b.
Genus	Lepidochelys				
		Lepidochelys kempii	Atlantic ridley	**HD:** IV/ **BARCOM:** II	a., b.
Genus	Eretmochelys				
		Eretmochelys imbricata	Hawksbill turtle	**RL:** CR A2bd/ **HD:** IV/ **BARCOM:** II	a., b.
Phylum	Mollusca				
Class	Gastropoda				
Order	Patellogastropoda				
Family	Patellidae				
Genus	Patella				
		Patella ferruginea (Gmelin, 1791)	Ribbed Mediterranean limpet	**HD:** IV/ **BERN:** II/ **BARCOM:** II	a.
Class	Bivalva				
Order	Pteriomorpha				
Family	Mytilidae				

Species in Habitats Directive

Classification		Scientific name	Common name	Conservation agreements	i
Genus	Lithophaga				
		Lithophaga lithophaga (Linnaeus, 1758)	European date mussel	**HD:** IV/ **BERN:** II/ **BARCOM:** II	a.
Family	Pinnidae				
Genus	Pinna				
		Pinna nobilis (Linnaeus, 1758)	Noble pen shell	**HD:** IV/ **BARCOM:** II	a.
Phylum	Arthropoda				
Class	Malacostraca				
Order	Decapoda				
Family	Scyllaridae				
Genus	Scyllarus				
		Scyllarus arctus (Linnaeus, 1758)	Small European locust lobster	**HD:** V/ **BARCOM:** III	a.
Phylum	Echinodermata				
Class	Echinoidea				
Order	Diadematoida				
Family	Diadematidea				
Genus	Centrostephanus				
		Centrostephanus longispinus (Philippi, 1845)		**HD:** IV/ **BERN:** II/ **BARCOM:** II	
Phylum	Rhodophyta				

Classification		Scientific name	Common name	Conservation agreements	i
Class	Florideophyceae				
Order	Corallinales				
Family	Hapalidiaceae				
Genus	Lithothamnion				
		Lithothamnion coralloides (*F. flabelligera*) Foslie		**HD:** V	c.
Genus	Phymatolithon				
		Phymatolithon calcareum (*F. squarrulosum*) Foslie		**HD:** V	c.
Phylum	Cnidaria				
Class	Anthozoa				
Order	Gorgonacea				
Family	Coralliidae				
Genus	Corallium				
		Corallium rubrum (Linnaeus, 1758)	Red coral	**HD:** V/ **BERN:** III/ **BARCOM:** III	b., c.

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(*) Only some species from this taxonomic group.

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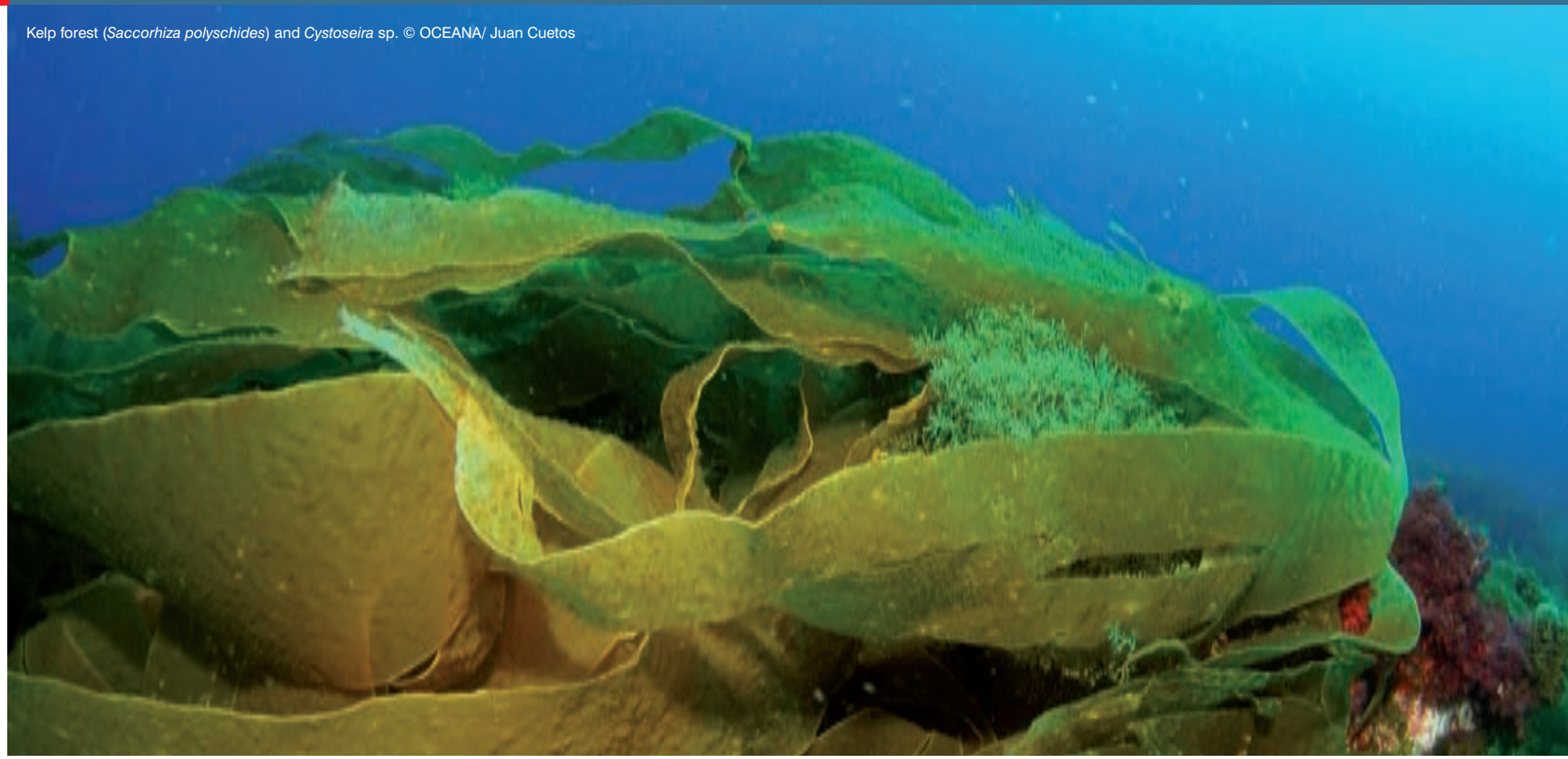

Kelp forest (*Saccorhiza polyschides*) and *Cystoseira* sp. © OCEANA/ Juan Cuetos

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5 WILDLIFE IN A CHANGING WORLD. An analysis of the 2008 IUCN Red List of Threatened Specie.

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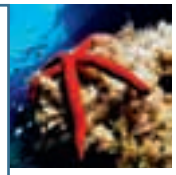

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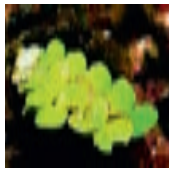






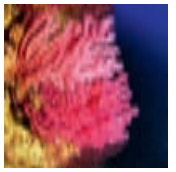

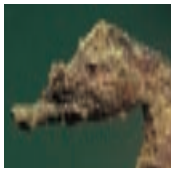

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