EP

United Nations Environment Programme

UNEP(DEPI)/MED WG.382/14
10 may 2013

English
ORIGINAL: English

MEDITERRANEAN ACTION PLAN

Eleventh Meeting of Focal Points for SPAs

Rabat, Morocco, 2-5 July 2013

Draft Proposals of amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol)

Delegates are kindly requested to bring their documents to the meeting

UNEP
RAC/SPA - Tunis, 2013

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GENERAL CONTEXT

The adopting, in 1995, of the new Protocol on Specially Protected Areas and Biological Diversity (SPA /BD Protocol) was followed, in 1996, by the adopting of three annexes, including an Annex II on the list of endangered or threatened species and an Annex III on the list of species whose exploitation is regulated; these Annexes contain respectively and initially 104 and 28 species of marine Mediterranean flora and fauna.

At their Fifteenth Ordinary Meeting (Almeria, January 2008), the Contracting Parties to the Barcelona Convention adopted a format for revising these Annexes and asked RAC/SPA to assess the status of the species appearing therein. The suggestions aimed at taking account of changes that had occurred in the naming of certain species (taxonomic modifications) after they had been put onto one or the other Annex, and also proposing the listing of new species.

The Contracting Parties, at their Sixteenth Ordinary Meeting (Marrakech, November 2009), adopted the amending of Annexes II and III (Decision IG.19/12), allowing species of flora, birds and fishes to be added and bringing up to 158 the number of species listed in Annex II and up to 43 the number of species listed in Annex III.

In 2012, the Contracting Parties, at their seventeenth Ordinary Meeting (Paris) adopted other amendment to the Annexes II and III of the SPA/BD Protocol as indicated by the Decision IG.20/5.

With the need to ensure that the lists of species appearing in Annexes II and III to the Protocol are updated, taking into account both the evolution of the conservation status of species and the emergence of new scientific data, RAC/SPA has contacting their Focal Points inviting them to do proposal for amending annex II and III of the SPA/BD Protocol.

For that Purpose, Italy has submitted proposals for amending the annex II and III of SPA/BD Protocol, which is presented in this document.

Form for proposing amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Proposed by : Italy

Species concerned:

Antipathella subpinnata (Ellis & Solander, 1786)

Antipathes dichotoma Pallas, 1766

Antipathes fragilis Gravier, 1918

Leiopathes glaberrima (Esper, 1792)

Parantipathes larix (Esper, 1790)

Amendment proposed :

- ■ Inclusion in Annex II
- ☐ Inclusion in Annex III
- ☐ Removal from Annex II
- ■ Removal from Annex III

Taxonomy

Class : Anthozoa

Order : Antipatharia

Family: Myriopathidae

Genus and Species :

Antipathella subpinnata (Ellis & Solander, 1786)

Known Synonym(s): *Antipathes subpinnata* Ellis & Solander, 1786

Common name (English and French): black coral

Class : Anthozoa

Order : Antipatharia

Family: Antipathidae

Genus and Species :

Antipathes dichotoma Pallas, 1766

Antipathes fragilis Gravier, 1918

Inclusion in other Conventions :

All species are listed in CITES Appendix II

All species are listed in SPA/BD' protocol Annex III under the wrong name "Antipathes sp.plur."

Known Synonym(s): *Antipathes dichotoma* Pallas, 1766 *:* *Antipathes aenea* von Koch, 1889 *and Antipathes mediterranea* Brook, 1889 *Antipathes fragilis* Gravier, 1918 *: Antipathes gracilis* von Koch, 1889 and *Antipathes flexibilis* Gravier, 1919 Common name (English and French): black coral Class : Anthozoa Order : Antipatharia Family: Leiopathidae Genus and Species : ***Leiopathes glaberrima*** (Esper, 1792) Known Synonym(s): *Antipathes glaberrima* Common name (English and French): black coral Class : Anthozoa Order : Antipatharia Family: Schizopathidae Genus and Species : ***Parantipathes larix*** (Esper, 1790) Known Synonym(s): Common name (English and French): black coral	

Justification for the proposal :

Despite the fact the Mediterranean black corals have been described more than 300 years ago, it was not until very recent ROV surveys that these species were documented for the first time in their natural habitats. Long considered rare species (Opresko & Försterra, 2004), recent ROV footages show that these corals thrive in the mesophotic rocky habitats of the Mediterranean Sea between 60 and 300 m depth (Bo *et al.*, 2012).

All the Mediterranean species belonging to the Order Antipatharia are habitat forming species and basing on recent scientific studies (Bo *et al.* 2013 A,B,C, Bo *et al.*, 2012, Bo *et al.*, 2011) these habitats are known to be strongly subjected to fishing impact that may drastically reduce their distribution by damaging the arborescent colonies and enhancing epibionts' colonization (Bo *et al.*, 2009; Deidun *et al.*, 2010).

Not only the occurrence of evidently damaged specimens, but also the presence of only few scattered colonies, may be an indication of bottom fishing exploitation (Bo *et al.*, 2013A, C), since these species tend to normally occur in wide meadows of up to 30,000 colonies (Bo *et al.*, 2009).

Thanks to their large corallum (up to 2 m wide), these corals represent an optimal refuge for numerous invertebrates and fish species (Bo *et al.*, 2008, 2009, 2011) and occasionally may act as fish nursery (Bo *et al.*, 2013B). Furthermore, the role of these organisms as biological archives has been recently demonstrated through the radiocarbon dating of a Mediterranean colony of *Leiopathes glaberrima* one of the most longevous organisms known on Earth, with more than 2000 years old (Bo *et al.,* 2013 B).

Biological data

Brief description of the species:

Antipathella subpinnata (Ellis & Solander, 1786) :

large colonies up to 1.5 m tall characterised by long, numerous and flexible ramifications. On the stem there are long, thin, acute, smooth, cylindrical spines, which become dendritic at the base of the stem, and are irregularly arranged. On the branchlets the spines are mainly simple. The polyps are monoserial, with a slightly sagittally elongated outline, since the two lateral couples of tentacles are close to the oral cone and the sagittal tentacles are inserted at a lower level. Polyps show a typical white colour, which may turn, in females, slightly pink when the colony is fertile.

Antipathes dichotoma Pallas, 1766 :

large colonies up to 2 m wide with loosely long flexible branches and very large yellow polyps. Branches emerge from the bearing ramifications at 45°-90° upwards, but the longest one, not ramified at their apex, bend downwards giving the colonies a willow-like aspect. The polyps are monoserial, with the exception of the stem where polyps are arranged irregularly in several rows.

Antipathes fragilis Gravier, 1918 :

This is the less known black coral species for the Mediterranean Sea. It is characterized by long branches, separated and directing perpendicularly. Larger branches have a darker skeleton with respect to thinner branches, which are golden. Spines are triangular. Polyps are small, can occur with different sizes and are distinctly separated between each other. Sagittal tentacles are slightly longer than the lateral ones.

Leiopathes glaberrima (Esper, 1792) :

corals of big dimensions, arborescent, over 2 m high. The corallum is irregularly branched, with long and curved pinnules, sometimes arranged monoserially. Spines on the pinnules are poorly developed, small, simple and smooth. They present a globose triangular shape. They are almost absent on major branches. Polyps are monoserial and may be either white or bright orange in colour. On major branches are irregularly distributed around the axis of the ramification. The arborescent colonies offer shelter to numerous species of crabs, shrimps and fish.

Parantipathes larix (Esper, 1790) :

The species is characterized by a monopodial, pinnulated corallum, which at times can be ramified. Generally it shows a bottle-brush colony that can be tall as much as 2 m. Pinnules are simple, arranged perpendicularly to the stem. Spines are simple, triangular and smooth. Polyps are white, monoserial along the pinnules. Occasionally associated with the fish *Lappanella fasciata*.

Distribution (current and historical)

Antipathella subpinnata Ellis & Solander, 1786 : Mediterranean Sea ; Eastern Atlantic Ocean

(The Macaronesian cogeneric *Antipathella wollastoni* (Gray, 1857) has been recently reported near the Gibraltar Strait (Ocaña et al., 2007))

Antipathes dichotoma Pallas, 1766 : Mediterranean Sea, Atlantic Ocean

Antipathes fragilis Gravier, 1918 : Mediterranean Sea

Leiopathes glaberrima (Esper, 1788) : Mediterranean Sea, Atlantic Ocean

Parantipathes larix (Esper, 1788) : Mediterranean Sea, Eastern Atlantic Ocean

Population estimate and trends: data deficient. Studies to quantify the presence of the specie in the Italian and in the Mediterranean waters are fundamental.

Habitat(s) :

Antipathella subpinnata (Ellis & Solander, 1786) : 55-500 m ; hard substrata, on rocks. This species usually thrives in rocky habitats with moderate currents and clear water, whether small specimens with poor ramification can be found in silted environments.

Antipathes dichotoma Pallas, 1766 : 58-1410 m; rocky substrate. The species avoids vertical walls lashed by strong currents, it prefers silted environments characterized by low currents.

Antipathes fragilis Gravier, 1918 : 70-100 m; hard bottoms.

Leiopathes glaberrima (Esper, 1792) : 90-600 m ; rocky habitat with low to moderate current. Usually the species lives on shallow rocky shoals moderate or heavily silted. It is common to this black coral in the white coral banks, together with *A. dichotoma* and deep specimens of *A. subpinnata* (Vertino *et al.*, 2010).

Parantipathes larix (Esper, 1790) : 70-200 m ; hard bottom. This species prefers silted environments characterized by low currents. Usually are found only sparse specimens, but occasional dense patches have been recorded.

Threats

Existing and potential threats:

Almost 100% of the black coral populations studied so far showed traces of fishing impact, in the form of damaged colonies, dead colonies, colonized branches, scattered colonies, sparse lost gears as a result of local activities mainly involving trawling, gill net, bottom long lines and traditional recreational fishing gears (Bo *et al.*, 2013C).

The complete loss of these populations, as documented on some heavily exploited deep rocky shoals off the Gulf of Naples, completely transforms the underwater seascape, greatly reducing the three-dimensional habitat created by these *engineering species*. As filter feeders, these corals, together with gorgonians and scleractinians, actively participate to the pelagic-benthic coupling of the deep sea through the recycle of planktonic particulate organic matter. These ecosystems support a great benthic and pelagic biodiversity including that of commercial fish species, which may potentially be lost (Bo *et al.*, 2013C).

Exploitation:

Despite the use of black coral skeleton is reported since ancient times in the Mediterranean basin, at present there is no commercial exploitation of this resource for the jewellery trade and the collection of these corals is considered accidental bycatch.

Proposed protection or regulation measures

Banning of deep-sea fishing, oil exploration and illegal dumping on the habitat created by this species.

Need of studies to map the black coral populations in the Mediterranean Sea and identification of the most dense meadows.

Establishment of off-shore protected areas with restrictions on fishing activities together with monitoring plans.

The drafting and the implementation of a black coral protection plan is strongly recommended.

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Form for proposing amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Proposed by : Italy	Species concerned: *Callogorgia verticillata*(Pallas, 1766)
	Amendment proposed : ■ Inclusion in Annex II ☐ Inclusion in Annex III ☐ Removal from Annex II ☐ Removal from Annex III

Taxonomy Class : Anthozoa Order : Alcyonacea Family: Primnoidae Genus and Species : *Callogorgia verticillata* (Pallas, 1766) Known Synonym(s) : Common name (English and French):	Inclusion in other Conventions : No

Justification for the proposal :

C. verticillata can play an important ecological role; it is considered an ecosystem engineers species, creating complex three-dimensional habitats, sustaining high biodiversity levels and promoting high levels of functioning in both epi-benthic and proximal interstitial surroundings. The colonies represent a colonizable substrate, create refuges for numerous other species and may represent a nursery area for fish. The rocky habitats hosting biocoenoses dominated by cnidarians assemblages are key environments when surrounded by soft bottoms, because they concentrate larval settling and sinking of organic material, thus favouring the development of benthic communities also in their vicinity. These habitats are extremely sensitive to the impact of human activities such as trawling, deep-sea fishing, oil exploration, drilling and dumping.

Biological data

Brief description of the species:
C. verticillata has colony tall until 100 cm, one plane branched. The colour of the colony is white.

Distribution (current and historical):
Atlantic Sea and Mediterranean Sea.

Population estimate and trends:
study to estimate population and trends must be improved.

Habitat(s) :
rocky bottoms more than 100 metre depth, with no strong current, lower circalittoral ("roche du large" and coralligenous biocenosis), and bathyal zone.

Threats

Existing and potential threats:

This specie is sensitive to the impact of human activities such as trawling, deep-sea fishing, oil exploration, drilling and dumping.
C. verticilla often shows signs of wrecking or is deeply abraded and covered by epibionts. Various factors may increase the susceptibility of a certain species to the damage, for example, its size may increase the chance to remain entangled or its flexibility may increase the resistance to mechanical friction.

Exploitation:

No

Proposed protection or regulation measures

Banning of deep-sea fishing, oil exploration and dumping on the habitat created by this species.

Need of studies to map the distribution of the habitat created by this species.

Up to now few marine protected areas include the ecosystems of twilight zone, or the same protection tools are used as for the shallow ecosystems. It could be hoped for identification of suitable protection measures of mesophotic zone.

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Form for proposing amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Proposed by : Italy	Species concerned: *Cladocora* spp. *Cladocora caespitosa* (Linnaeus, 1767) *Cladocora debilis* Milne Edwards & Haime, 1849
	Amendment proposed : ■ Inclusion in Annex II ☐ Inclusion in Annex III ☐ Removal from Annex II ☐ Removal from Annex III

Taxonomy Class : Anthozoa Order : Scleractinia Family: Caryophylliidae Genus and Species : *Cladocora caespitosa* (Linnaeus, 1767) *Cladocora debilis* Milne Edwards & Haime, 1849 Known Synonym(s) : *Madrepora caespitosa* Linnaeus, 1767 for *Cladocora caespitosa* (Linnaeus, 1767) *Cladocora patriarca* Pourtalès, 1874 and *Cladocora paulmayeri* Doderlein, 1913 for *Cladocora debilis* Milne Edwards & Haime, 1849 Common name (English and French): pillow coral and cladocore for *Cladocora caespitosa* (Linnaeus, 1767) thin tube coral for *Cladocora debilis* Milne Edwards & Haime, 1849	Inclusion in other Conventions : Both species are listed in CITES Appendix II

Justification for the proposal :

Both are habitat -building species, able to create reefs highly vulnerable to water pollution, to fishing activities that interact with the seafloor and to anchorage.

Biological data

Brief description of the species:

Cladocora caespitosa (Linnaeus, 1767): Colonial coral with calcareous skeleton formed by cylindrical corallites, more or less branched. The polyps, with autotrophic symbionts (zooxanthellae), are brown with clear tips and have always calices pointing upwards. The shape of the colony varies from compact bearings, also 50 cm in diameter in surface water, to more ramified colonies at greatest depths.

Cladocora debilis Milne Edwards & Haime, 1849: Colonies are arborescent with one main branch and several collateral branches formed by budding and growing irregularly in various directions Corallites are very porous and fragile, 2.5–4.9 mm in diameter with the number of septa ranging from 24 to 30, arranged in three cycles in smaller and four cycles in bigger calices. The lateral branches are not always smaller in diameter than the main branch. The colour of expanded polyps was transparent white. *Cladocora debilis* does not harbour symbiotic zooxanthellae like *C. Caespitosa*, and it is typical for greater depths.

Distribution (current and historical)

Cladocora caespitosa (Linnaeus, 1767): Mediterranean Sea (endemic)

Cladocora debilis Milne Edwards & Haime, 1849: Atlantic Ocean, Mediterranean Sea (Gulf of Naples and Adriatic Sea)

Population estimate and trends:

data deficient

Habitat(s) :

Cladocora caespitosa (Linnaeus, 1767): up to 50 m; hard substrata, sometimes in *Posidonia* meadows

Cladocora debilis Milne Edwards & Haime, 1849: 28-100 m; hard substrata

Threats

Existing and potential threats:

Pollution and mechanical damage from the use of heavy anchors and fishing gears.

Exploitation:

Collected for use as decorations in aquaria.

Proposed protection or regulation measures

Regulation of human activities to avoid their impact on the colonies of these species, in particular in the presence of reefs made by these species.

Need of studies to map the distribution of these coral habitats.

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Form for proposing amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Proposed by : Italy	Species concerned: *Ellisella paraplexauroides* (Stiasny, 1936)
	Amendment proposed : ■ Inclusion in Annex II ☐ Inclusion in Annex III ☐ Removal from Annex II ☐ Removal from Annex III

Taxonomy Class : Anthozoa Order : Alcyonacea Family: Ellisellidae Genus and Species: *Ellisella paraplexauroides* (Stiasny, 1936) Known Synonym(s): *Ctenocella paraplexauroides* Stiasny, 1936 Common name (English and French):	Inclusion in other Conventions : The species is not included on the species list of other relevant conventions

Justification for the proposal :

E. paraplexauroides is a species rare, with a extremely fragmented distribution in the Mediterranean and with a strong vulnerability to demographic collapse and fishing activity. Due to these reason *E. paraplexauroides* may be a good candidate for a conservation strategy. Indeed, commercial fishing activities, for example through long-line fishing, directly damage this gorgonian that is particularly vulnerable because of its arborescent morphology, fragile construction and the general slow growth rate.

Biological data

Brief description of the species:

The gorgonian *Ellisella paraplexauroides* (Stiasny 1936) is a rare and occasional species and the only member of the genus *Ellisella* recorded in European waters (Grasshoff, 1992). It is one of the largest colonial invertebrates in the Mediterranean forming brick-red candlestick colonies, up to 2 m high. The branched colonies have thin, whip-like ramifications arising from a common short stem, heading parallel upwards and dividing dichotomously. Although *E. paraplexauroides* is a large and charismatic invertebrate, very little is known about its basic ecology, biology, and population organization.

Distribution (current and historical)

Ellisella paraplexauroides is a typical Atlanto-Mediterranean species with a wide bathymetric distribution range (20-690 m depth). In the North Atlantic, the species occurs along the west coast of Africa (from Angola to Morocco), off the Canary Islands, and at some sites in southwestern Spain (reviewed by Angiolillo *et al.*, 2012). In contrast, *E. paraplexauroides* is rare and discontinuously distributed in the Mediterranean, thus far found only in isolated colonies on the Seco de los Olivos offshore bank (Almeria, Spain), around Alboran and Chafarinas Islands, along the Ceuta and Melilla coasts, at some locations off Algeria and Tunisia, and in the Strait of Sicily (Arroyo *et al.*, 2008, Angiolillo *et al.*, 2012).

Population estimate and trends:

Few data are available concerning biology and ecology of *E. paraplexauroides*. This has probably resulted from the analysis of small fragments only while *in situ* observations have been rarely dedicated to this species. This species has always been considered very rare and occasional (Grasshoff, 1992; Arroyo *et al.*, 2008) and never forming dense meadows.
The richest population known so far is the one at Chafarinas Islands (González García *et al.*, 2005). Quantitative data on the populations of *E. paraplexauroides* have been reported in the literature only in Chafarinas Islands by Maldonado *et al.* (2013).

Habitat(s) :

E. paraplexauroides is an euribathyc species, living on rocky substrate. It may show a wide bathymetric distribution ranging from 15 to 690 m depth, with the shallowest records found mainly in the Mediterranean Sea and the deepest specimens found in the Atlantic Ocean. In particular, it has been reported on the shelf's edge at mesophotic depths between 50 and 150 m (Angiolillo et al., 2012; Templado *et al.*, 1986, 2006; Tocino *et al.*, 2009), mainly associated with assemblages of other gorgonians and corals, but it can also live at bathyal depths. In the Gulf of Cádiz, Gibraltar Strait and Alborán Sea there are some sites where *E.paraplexauroides* was observed in very shallow waters (15–30 m), and also between the *Posidonia oceanica* mattes (Aguiliar *et al.*, 2010; Ocaña *et al.*, 2000; Brito & Ocaña, 2004).

Threats

Existing and potential threats:

Some major threats to gorgonian populations are fishing gear entanglement, disease and predation.
The major threat derives from assorted fishing practices, as is evident from increasing reports of damage in this regard. For instance, coastal sport fishing (fishing rods), artisanal small-scale fleets (operating longlining, trawling lines, gillnetting, trap deployment, etc.), and boat anchorage have been shown to damage from 25 to 40% of the gorgonians in areas where those activities are common (e.g. Bavestrello *et al*., 1997; Chiappone *et al*., 2005; Heifetz *et al*., 2009).
A study carried out in the Chafarinas Islands strongly suggest that most mortality of *E. paraplexauroides* population and any irreversible damage noticed in this gorgonian population resulted from continuous unregulated fishing (gillnetting and trolling, but also occasional trawling) (Maldonado *et al*., 2013). Daily unregulated use of nets and fishing lines has an adverse effect not only on the coenosarc and polyps, but also on the tridimensional architecture of the colonies. In many cases, tangled fishing gear and broken branches drastically disrupt the pattern of water circulation through the colony branches. Colonies disturbed in these various ways are then easily settled by larvae and propagules from a diverse array of benthic organisms.
In the past decade, gorgonian populations have also reportedly suffered severe diseases triggered by a complex combination of pathogenic microbia and abnormally high seawater temperatures.
Gastropods, crustaceans, and polychaetes are well-known predators of gorgonian polyps. Although predation rarely leads to colony death, a massive attack has been shown to cause significant local mortality.

Exploitation:

No data

Proposed protection or regulation measures

Regulation of the human activities (deep-sea fishing, oil exploration and dumping) where the species is present with high density of colonies.

Need of studies to map the distribution of the species.

The complex structure and richness of species of the assemblages hosting *E. paraplexauroides*, together with its vulnerability to human activities, should motivate the decision of giving the species protected status to ensure the preservation of this rare gorgonian in the Mediterranean Sea.

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Form for proposing amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Proposed by : Italy	Species concerned: *Lophelia pertusa (Linnaeus, 1758)*
	Amendment proposed : ■ Inclusion in Annex II ☐ Inclusion in Annex III ☐ Removal from Annex II ☐ Removal from Annex III

Taxonomy Class : Anthozoa Order : Scleractinia Family: Caryophylliidae Genus and Species : *Lophelia pertusa (Linnaeus, 1758)* Known Synonym(s): Dendrosmilia nomlandi Durham & Barnard, 1952 Lophelia californica Durham, 1947 Lophelia prolifera (Pallas, 1766) Lophohelia affinis Pourtalès, 1868 Lophohelia prolifera Lophohelia prolifera f. brachycephala Moseley, 1881 Lophohelia prolifera f. gracilis Duncan, 1873 Lophohelia subcostata Milne Edwards & Haime, 1850 Lophohelia tubulosa Studer, 1878 Madrepora pertusa Linnaeus, 1758 Madrepora prolifera Pallas, 1766 Common name (English and French): deep-water coral, cold water coral, deep sea coral, white coral	Inclusion in other Conventions : CITES Appendix II.

Justification for the proposal :

The species is one of the two characterising the biocenosis of deep-sea coral in the Mediterranean Sea. In fact, the coral build-up consists of a complex three-dimensional structure providing ecological niches for a large diversity of associated species, including crustacean and fish of economic interest.
Lophelia pertusa is a species structuring an habitat that is a real hot spot of biodiversity, but the skeletons of the colonies of this species are fragile and extremely sensitive to the impact of human activities such as trawling, deep-sea fishing, oil exploration, drilling and illegal dumping.
A reduction of the presence of the habitat created by this species was found for the North western Mediterranean – Ligurian Gulf (Tunesi *et al.*, 2001).

Biological data

Brief description of the species:
This species forms large tree-like colonies which may be fixed or free; corallites connected by cylindrical branches of very dense peritheca. The growth form is variable, branches may anastomose where they converge. Corallites up to 12 mm diameter with strongly exsert, rather brittle septa irregularly arranged in three or four cycles. Columella and pali are absent. Polyps translucent: white, pink or yellowish, with up to 50 tentacles with obsolete terminal knobs.

Distribution (current and historical): Atlantic and Mediterranean Sea – Italian waters: Ligurian Sea, Tuscan Archipelago, Ionian Sea

Population estimate and trends:

Up to now Santa Maria di Leuca Bank is the only site well known. Research campaigns were carried out to collect data about geology, biology and cartography. Nevertheless studies to quantify the presence of the specie in the Italian and in the Mediterranean waters are fundamental.

Habitat(s) :

On rocky or soft bottoms usually in depths in excess of 400 m. Rarely found attached to solid substrata as the dead basal parts of the coral are usually attacked by a boring sponge, *Cliona* sp., which weakens it, eventually causing breakage; therefore in most localities this coral forms large free clumps or patches up to 1 m high and 50 m across. The continual weakening action of the clionid sponges results in numerous small portions of the coral breaking away from the main mass. These form a substratum for the development of further colonies, thus extending the patches laterally.

Threats

Existing and potential threats:

In the last twenty years human activity has begun to have an impact on the deep sea biocoenosis, this impact is mainly due to deep-sea fishing, oil exploration and illegal dumping.
The obvious impact of trawling on the coral banks is mechanical damage caused by otter boards and nets that destroy the three-dimensional structure of coral reefs. Furthermore, bottom trawl activity alters the hydrodynamic and sedimentary conditions. Members of the associated fauna also suffer. The scale of these effects depends on the frequency of the disturbance from trawling. Deep-water coral banks are especially fragile and easily reduced to rubble by towed fishing gear. In an area with a high fishing pressure the coral reef community was replaced by a low diversity community. Other fishing gears, such as longlines, can also cause damage to this biocoenosis since they cause breakage. (Tursi et al. ,2004)

Exploitation:

no

Proposed protection or regulation measures

Banning of deep-sea fishing, oil exploration and illegal dumping on the habitat created by this species.

Need of studies to map the distribution of deep-sea coral habitats.

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Form for proposing amendments to Annex II and Annex III to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Proposed by : Italy	Species concerned: *Madrepora oculata* Linnaeus, 1758
	Amendment proposed : ■ Inclusion in Annex II ☐ Inclusion in Annex III ☐ Removal from Annex II ☐ Removal from Annex III

Taxonomy Class : Anthozoa Order : Scleractinia Family: Oculinidae Genus and Species : *Madrepora oculata* Linnaeus, 1758 Known Synonym(s): *Amphihelia moresbyi* Alcock, 1898 *Cyathohelia formosa* Alcock, 1898 *Lophohelia investigatoris* Alcock, 1898 *Lophohelia tenuis* Moseley, 1881 *Madrepora alcocki* Faustino, 1927 *Madrepora candida* (Moseley, 1881) *Madrepora kauaiensis* Vaughan, 1907 *Madrepora tenuis* (Moseley, 1881) *Madrepora venusta* Milne Edwards & Haime, 1850 *Madrepora vitiae* Squires & Keyes, 1967 Common name (English and French): deep-water coral, cold water coral, deep sea coral, white coral	Inclusion in other Conventions : CITES Appendix II.

Justification for the proposal :

The species is one of the two characterising the biocenosis of deep-sea coral in the Mediterranean Sea. In fact, the coral build-up consists of a complex three-dimensional structure providing ecological niches for a large diversity of associated species, including crustacean and fish of economic interest.
Madrepora oculata is a species structuring an habitat that is a real hot spot of biodiversity, but the skeletons of the colonies of this species are fragile and extremely sensitive to the impact of human activities such as trawling, deep-sea fishing, oil exploration, drilling and illegal dumping.
A reduction of the presence of the habitat created by this species was found for the North western Mediterranean – Ligurian Gulf (Tunesi *et al.*, 2001).

Biological data

Brief description of the species:
he species is quite variable in its tendency to branch, its texture and color and other aspects, even within specimens in the same coral colony. It is bushy, growing in small colonies that form thickets, creating matrices that are fan-shaped and about 30 to 50 cm high. It has thick skeletal parts that grow in a lamellar pattern. As its skeleton is fragile and unable to sustain a large framework, in the deeper areas it is usually found among stronger coral, such as *Lophelia pertusa* and *Goniocorella dumosa*, that offer protection. In areas where it dominates, it is usually found in rubble and debris rather than in coral reefs.

Distribution (current and historical): Atlantic and Mediterranean Sea – Italian waters: Ligurian Sea, Tuscan Archipelago, Ionian Sea

Population estimate and trends:

Up to now Santa Maria di Leuca Bank is the only site well known. Research campaigns were carried out to collect data about geology, biology and cartography. Nevertheless studies to quantify the presence of the specie in the Italian and in the Mediterranean waters are fundamental.

Habitat(s) :

On rocky or soft bottoms usually in depths in excess of 150 m in the Mediterranean Sea. Rarely found attached to solid substrata as the dead basal parts of the coral are usually attacked by a boring sponge, *Cliona* sp., which weakens it, eventually causing breakage; therefore in most localities this coral forms large free clumps or patches up to 1 m high and 50 m across. The continual weakening action of the clionid sponges results in numerous small portions of the coral breaking away from the main mass. These form a substratum for the development of further colonies, thus extending the patches laterally.

Threats

Existing and potential threats:

In the last twenty years human activity has begun to have an impact on the deepsea biocoenosis, this impact is mainly due to deep-sea fishing, oil exploration and illegal dumping.
The obvious impact of trawling on the coral banks is mechanical damage caused by otter boards and nets that destroy the three-dimensional structure of coral reefs. Furthermore, bottom trawl activity alters the hydrodynamic and sedimentary conditions. Members of the associated fauna also suffer. The scale of these effects depends on the frequency of the disturbance from trawling. Deep-water coral banks are especially fragile and easily reduced to rubble by towed fishing gear. In an area with a high fishing pressure the coral reef community was replaced by a low diversity community. Other fishing gears, such as longlines, can also cause damage to this biocoenosis since they cause breakage. (Tursi et al. ,2004)

Exploitation:

no

Proposed protection or regulation measures
Banning of deep-sea fishing, oil exploration and illegal dumping on the habitat created by this species. Need of studies to map the distribution of deep-sea coral habitats.

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