

An underwater photograph showing a large school of small, silvery fish swimming in clear blue water. The fish are concentrated in the middle ground, moving towards the right. In the foreground, there are dark, rocky structures covered in green algae or coral. Sunlight rays filter down from the surface, creating a bright, shimmering effect at the top of the frame.

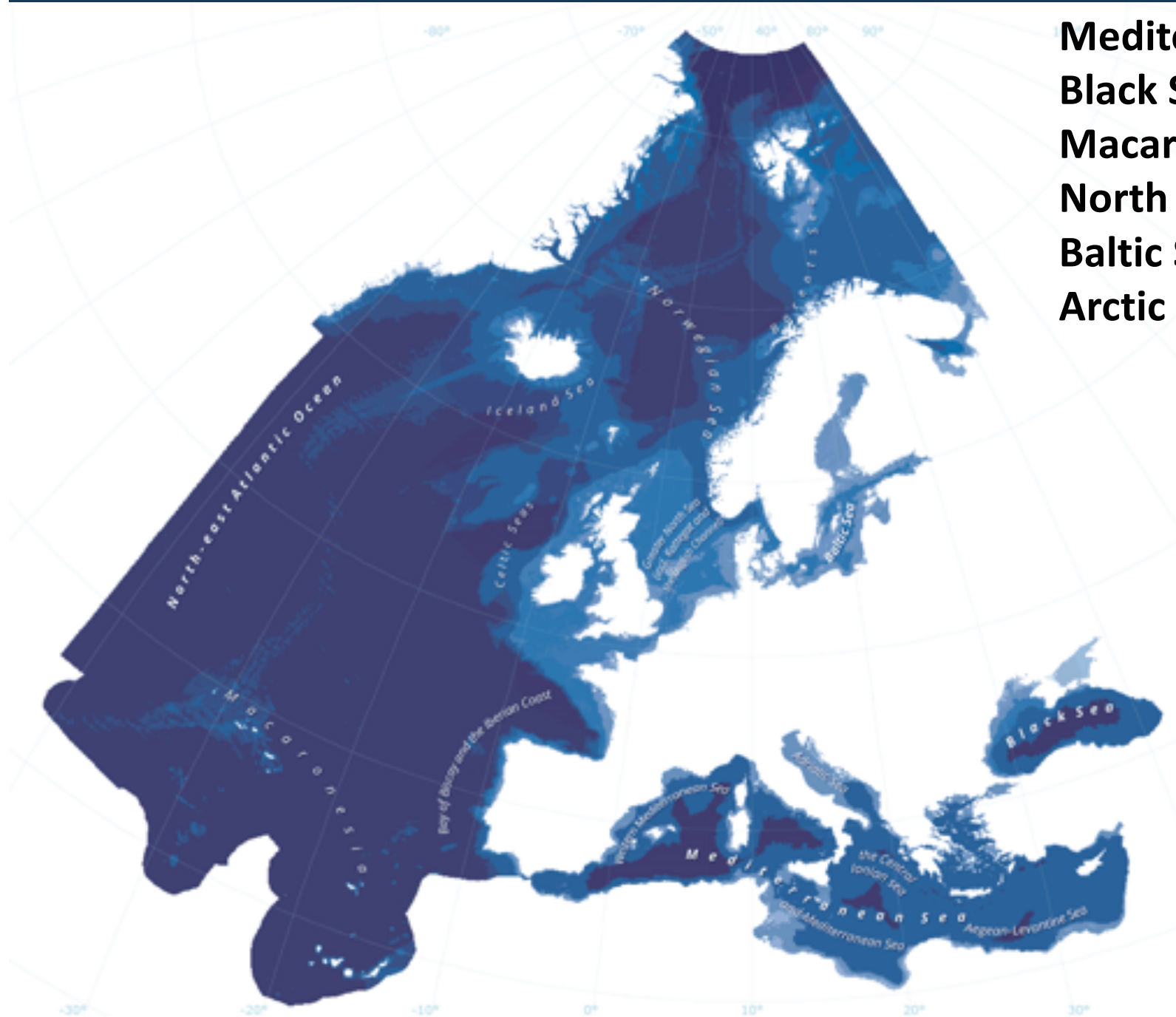
**University of Trieste: GLOBAL CHANGE ECOLOGY a.a.
2020-2021**

**Conservation & Management in Marine Protected
Areas**

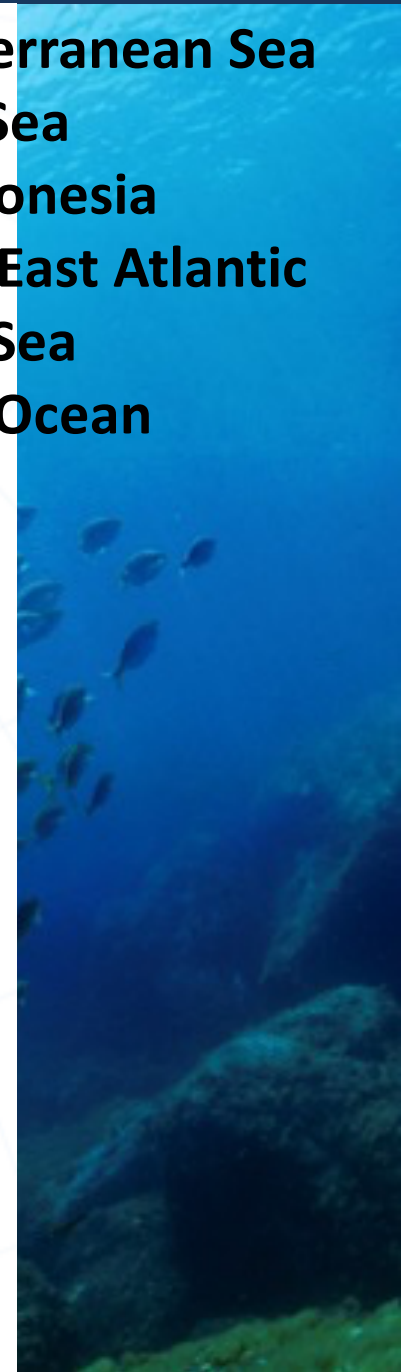
Dr. Stanislao Bevilacqua (sbevilacqua@units.it)

**MPAs in EU, Mediterranean Sea and
Italy**

The European Seas



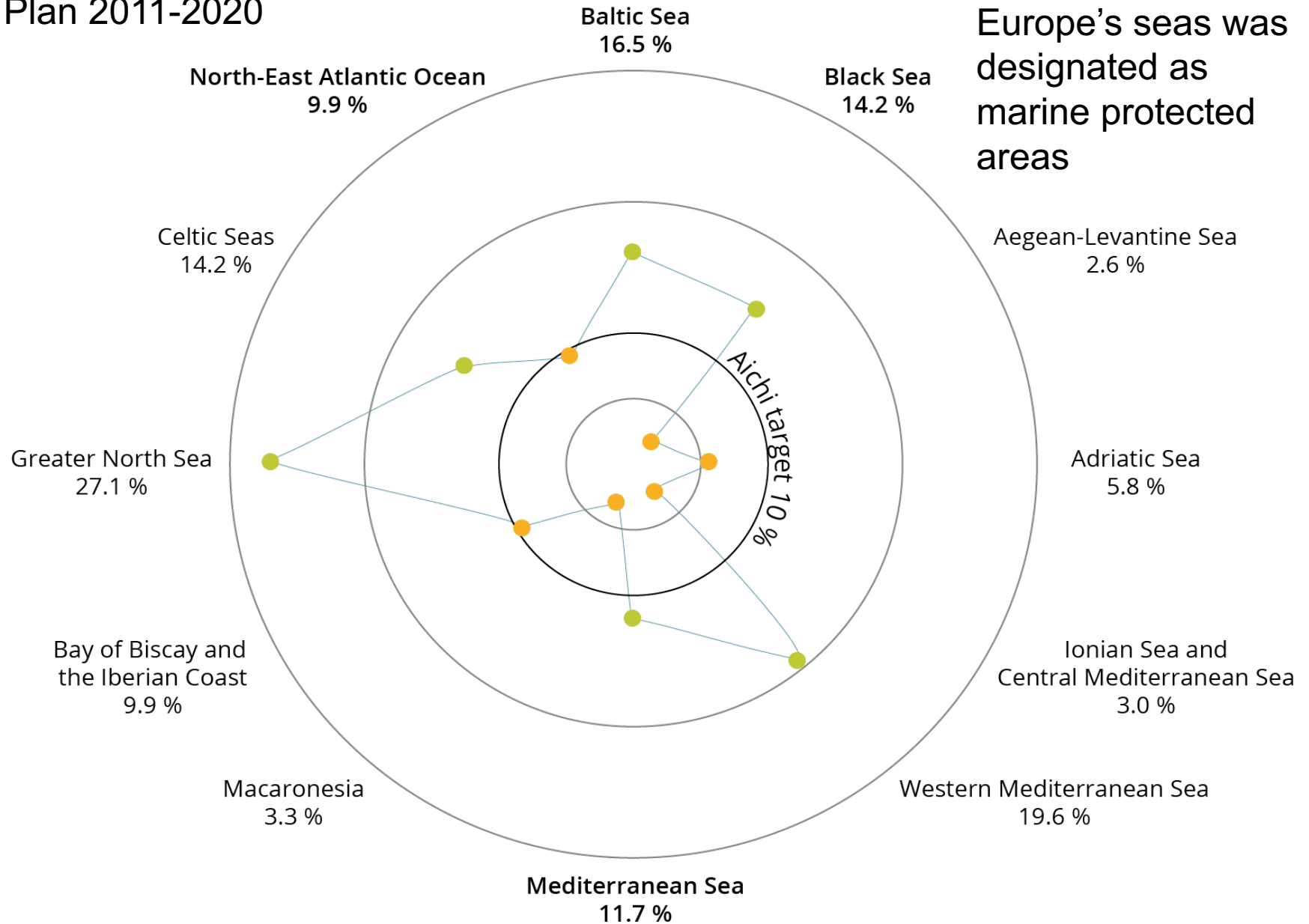
Mediterranean Sea
Black Sea
Macaronesia
North East Atlantic
Baltic Sea
Arctic Ocean



Marine conservation targets

Distance of Europe's seas to Aichi target 11, 2016
Convention on Biological Diversity
Strategic Plan 2011-2020

A total of 10.8 % of the surface of Europe's seas was designated as marine protected areas



EU MPAs in a nutshell



Near shore (0-1 NM)

44.3 %

(165 301 km²)



Territorial (1-12 NM)

8.6 %

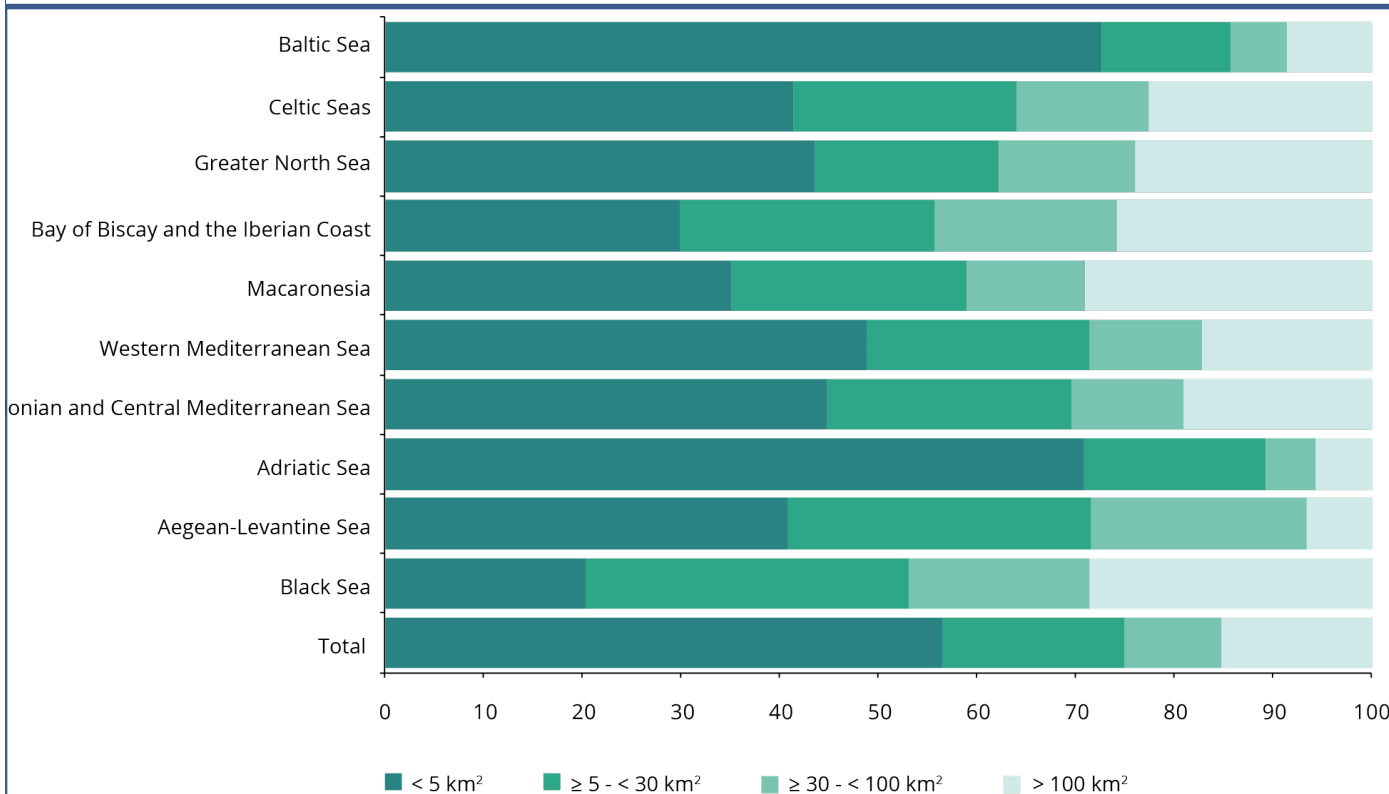
(856 125 km²)



Offshore (12 NM-END)

7.2 %

(4 769 289 km²)



Most of protected surface is in coastal areas, whereas territorial waters and offshore areas are poorly covered. Most of MPAs extend for less than 5 square km

Natura 2000 Sites

Sites of Community Importance (SCI) – marine SIC are basically *Posidonia oceanica* meadows ('SIC')

Specially Protected Areas (SPA) – related to birds (mostly transitional environments) ('ZPS')

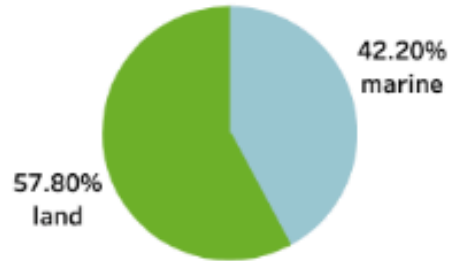
Special Areas of Conservation (SAC) – species or habitats ('ZSC')

SPAMI: areas of importance for conserving the components of biological diversity in the Mediterranean Sea; contain ecosystems specific of the Mediterranean area or habitats of endangered species; are of special interest at the scientific, aesthetic, cultural or educational levels.

Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol), the Contracting Parties to the Barcelona Convention established the List of Specially Protected Areas of Mediterranean Importance (RAC/SPA)

Natura 2000 Sites

Natura 2000 area - Tutti

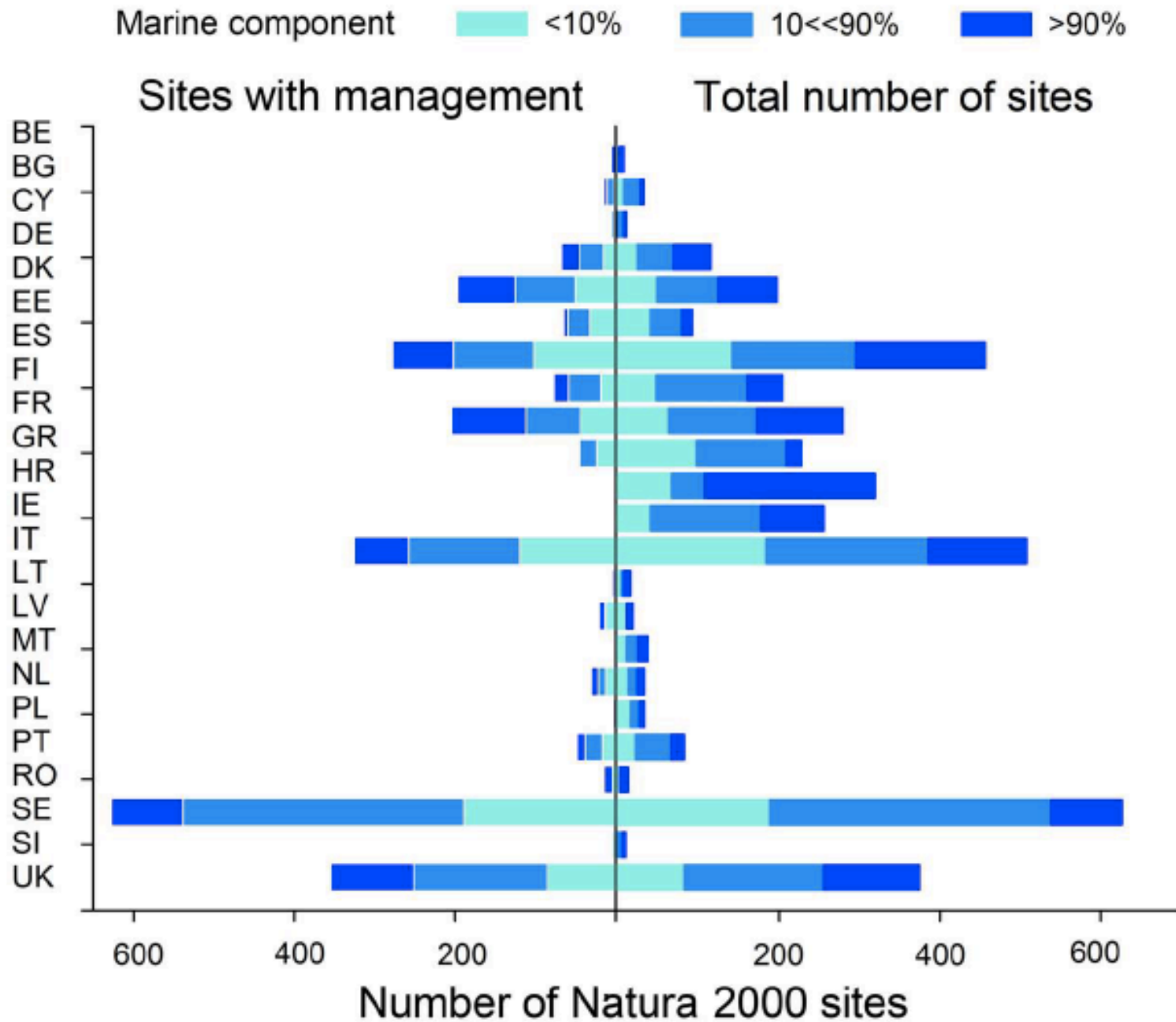


Natura 2000 marine area (km ²)	573,131
Natura 2000 land area (km ²)	784,994
EU land area (km ²)	4,376,978
Natura 2000 land area (%)	17.9

Marine Natura 2000 sites covered about 573 000 km² or 9% of Europe's seas, although they are mainly in near-shore and coastal waters



Natura 2000 Sites



Management

MISURE DI CONSERVAZIONE DEI SITI MARINI DEL FRIULI VENEZIA GIULIA

Allegato 5

Misure sito-specifiche del sito

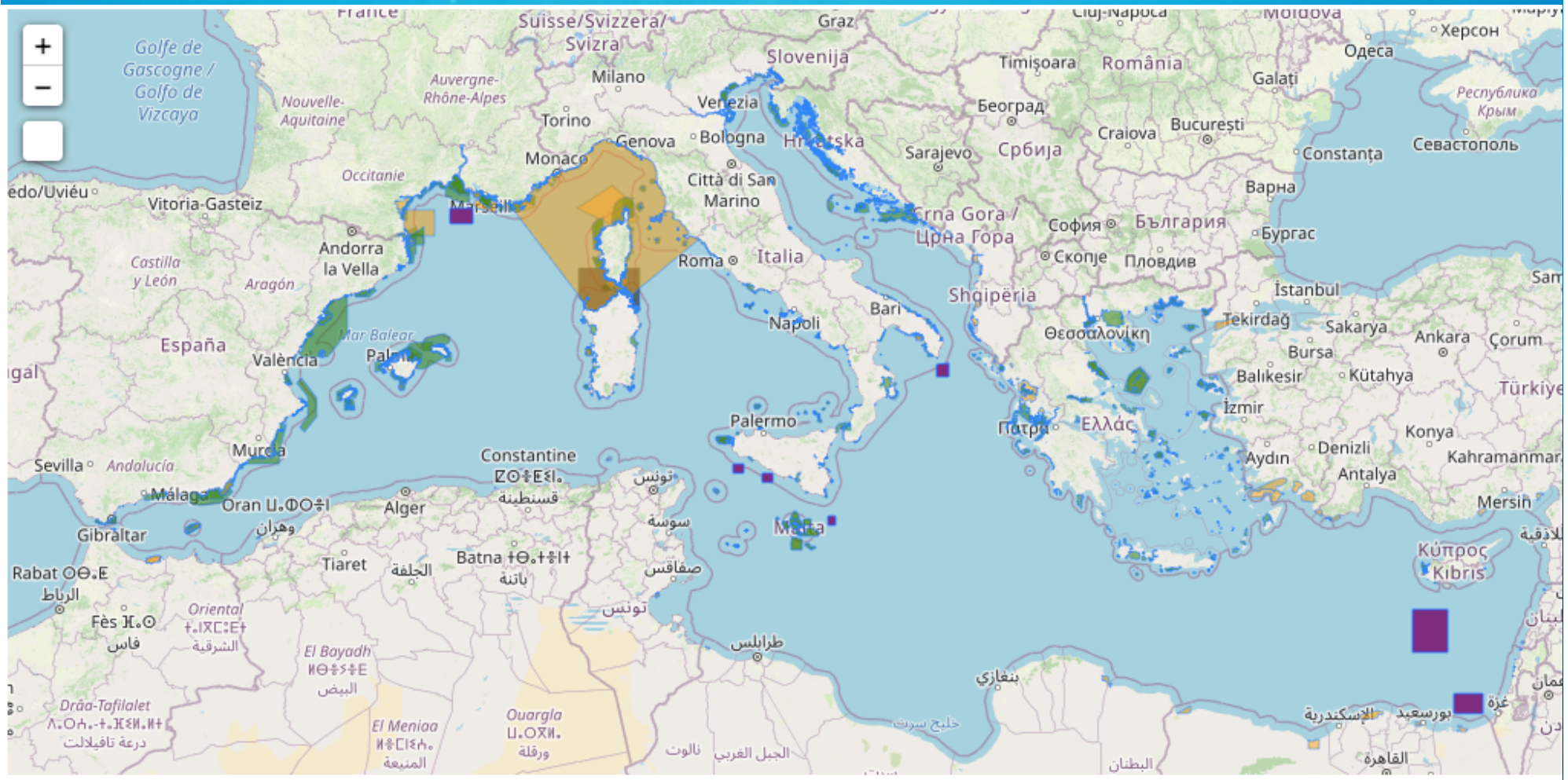
"IT3330009 - Trezze San Pietro e Bardelli"

descrizione dell'azione	Predisposizione di boe a basso impatto o segnalazione dei siti sulla carta nautica al fine di individuare agevolmente sul territorio i siti Natura 2000 e le aree delle misure REF26.0 REF27.0
descrizione dell'azione	Divieto di realizzazione di opere costiere, trivellazioni e di posa di cavi e condotte sottomarini
descrizione dell'azione	Divieto di esercitare la pesca professionale con reti da traino (incluse quelle denominate tratte), draghe, ciancioli, sciabiche da natante, sciabiche da spiaggia e reti analoghe sulle praterie di fanerogame marine e sull'habitat coralligeno e nelle aree indicate in cartografia
descrizione dell'azione	Divieto di pesca professionale per molluschi (Turbosoffianti per fasolari, vongole e cappelunghe) nelle aree indicate in cartografia
descrizione dell'azione	Divieto di raccolta, asportazione, danneggiamento di formazioni rocciose e minerali. Divieto di alterazione dell'ambiente geofisico. Il prelievo di campioni è consentito solo per finalità scientifiche previa autorizzazione del soggetto gestore.
descrizione dell'azione	Divieto di ancoraggio sull'affioramento roccioso (evitando quindi di intaccare la parte rocciosa)
descrizione dell'azione	Monitoraggio delle specie di allegato II, IV e V della Direttiva Habitat e specie della Direttiva Uccelli e degli impatti su di esse secondo modalità e criteri definiti dal MATTM.
modalità attuazione	Intervento pubblico
soggetto attuatore	Regione FVG ARPA FVG Università degli studi
stato di avanzamento e/o attuazione	Misura da attivare

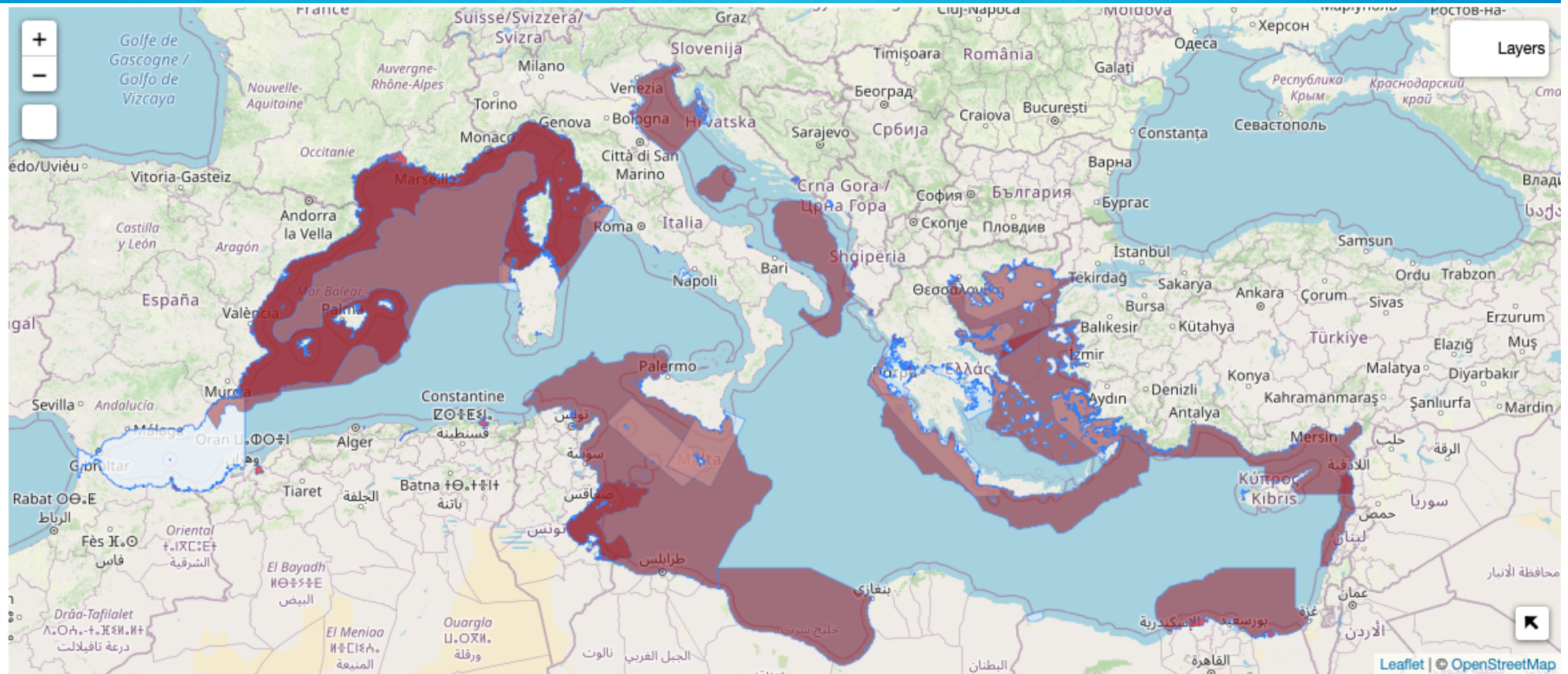
The Mediterranean Sea: all protection



MAPAMED



The Mediterranean Sea: EBSA



Ecologically or biologically significant area

Ecologically or biologically significant areas

What is an ecologically or biologically significant area (EBSA)?

An EBSA is an area of the ocean that has special importance in terms of its ecological and biological characteristics: for example, by providing essential habitats, food sources or breeding grounds for particular species. In 2008, a process to recognise these special areas was put in place by the United Nations Convention on Biological Diversity (CBD). Based on a set of seven scientific criteria, this process provides a framework to methodically and objectively describe those areas of the ocean that are crucial to the healthy functioning of the global marine ecosystem. EBSAs are areas of the ocean that are judged – through a technical process – to meet one or more of the following seven scientific criteria:

Uniqueness or rarity

Special importance for life stages of species

Importance for threatened, endangered, or declining species or habitats

Vulnerability, fragility or slow recovery

Biological productivity/diversity

Naturalness

The Mediterranean Sea

There are 1,215 MPAs and OECMs in the Mediterranean covering 171,362 km² which places a surface of 6.81% under a legal designation

9.79% of European waters are covered mostly due to the Natura 2000 at sea network which rarely affords strict restrictive measures.

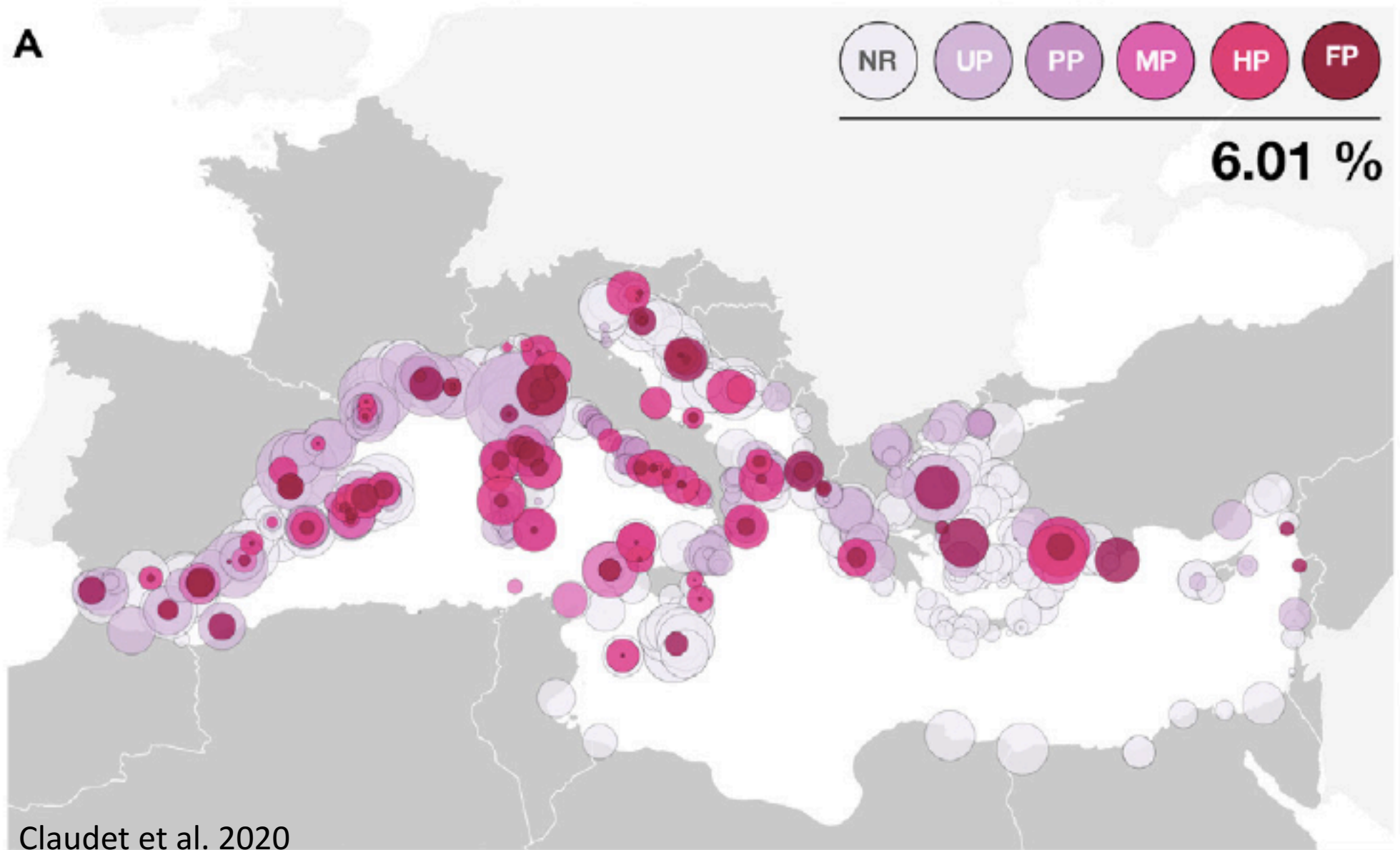
Mostly shallow waters

39.77% of *Posidonia* meadows and 32.78% of Mediterranean coralligenous communities are covered.

65.05% of MPAs of national designations have a marine surface of less than 50 km² (77.17% of all MPAs and OECMs), 69 nationally designated sites have a marine area smaller than 10 km² and 46 are larger than 100 km².

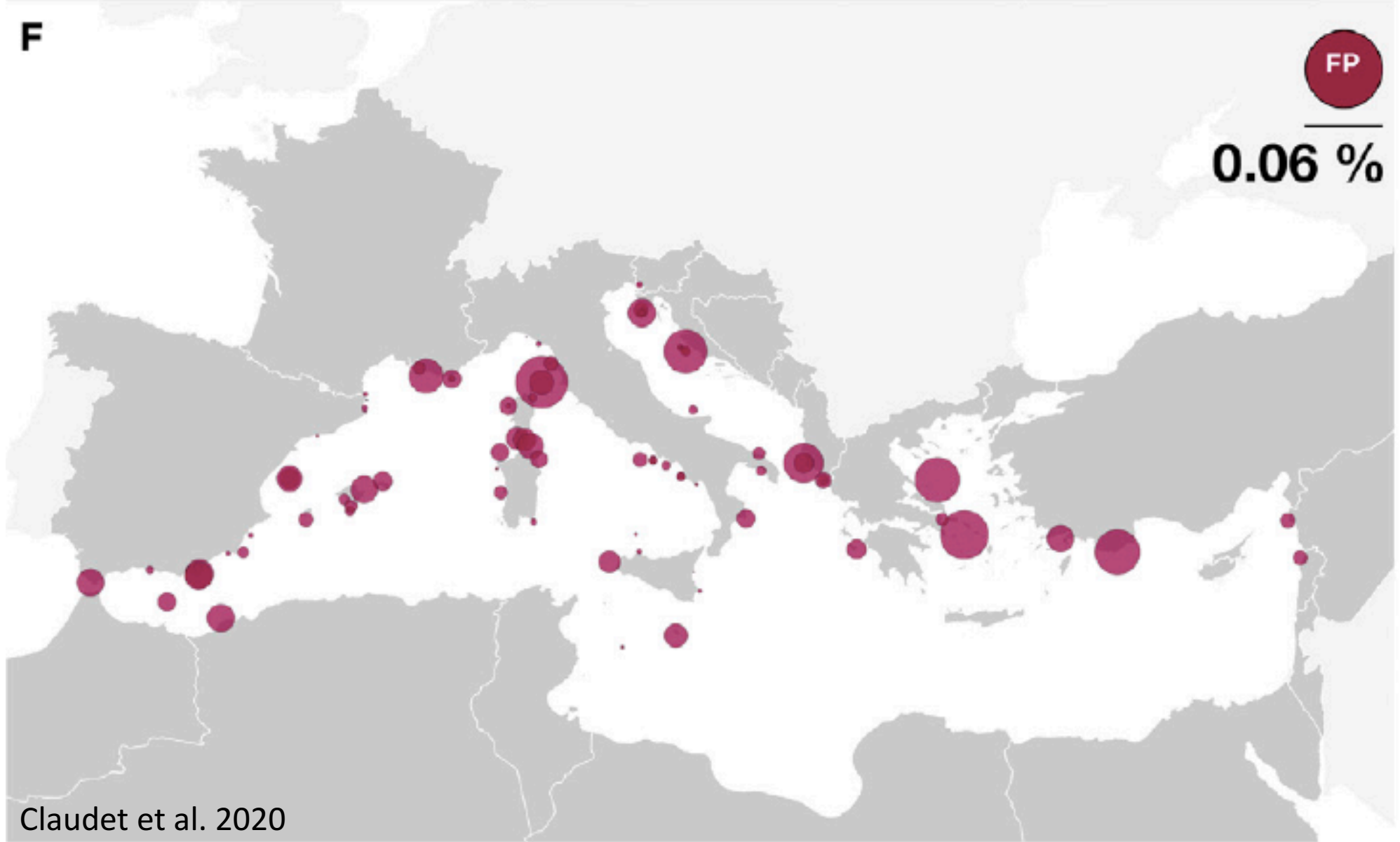
78% of nationally designated MPAs are over 10 years old, which is considered the minimum age for an MPA to reach a certain maturity (even though the time required for an MPA to be effective varies greatly from one area to another) and 46 sites are over 20 years old.

Mediterranean MPAs

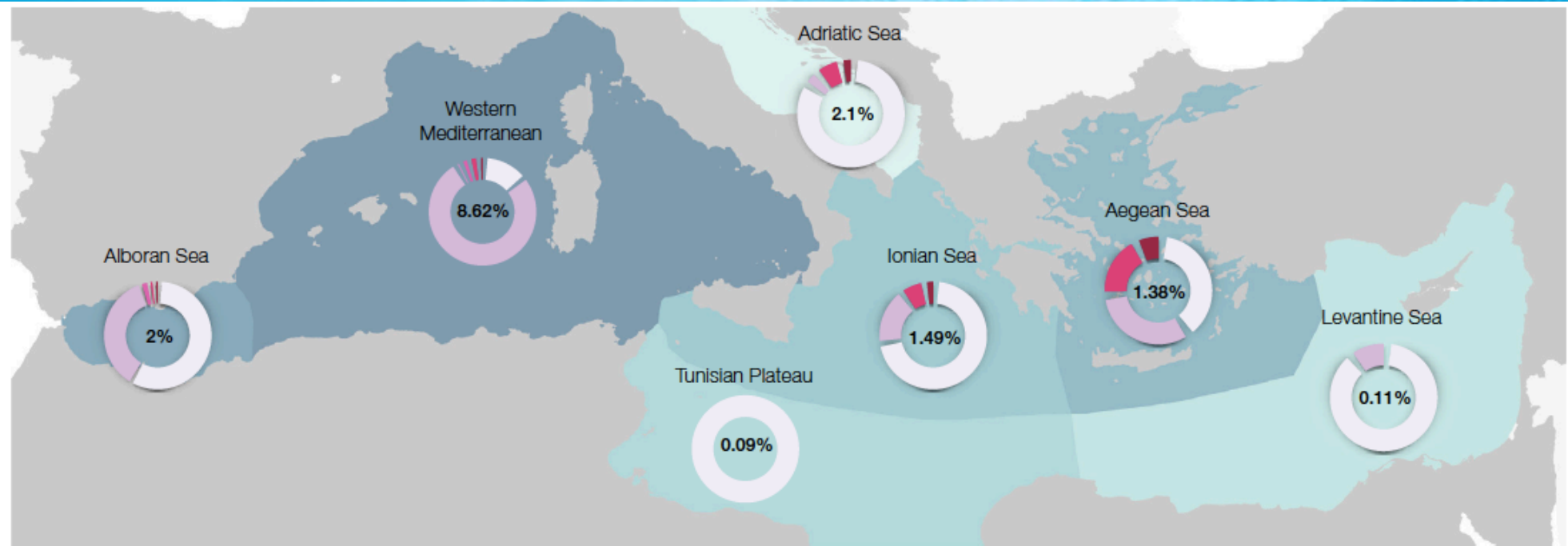


Mediterranean MPAs: full/high protection level

F



Mediterranean MPAs: protection in sub-basins

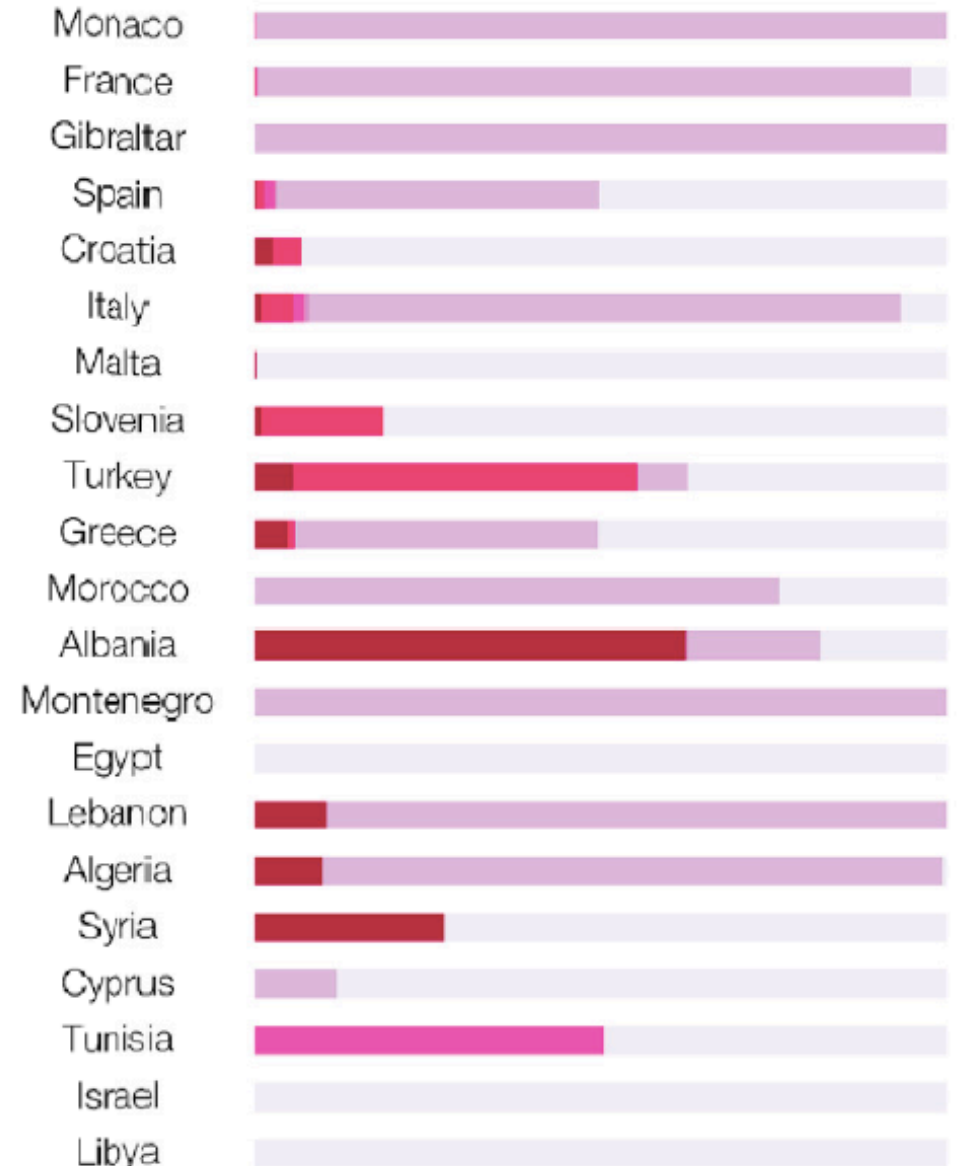
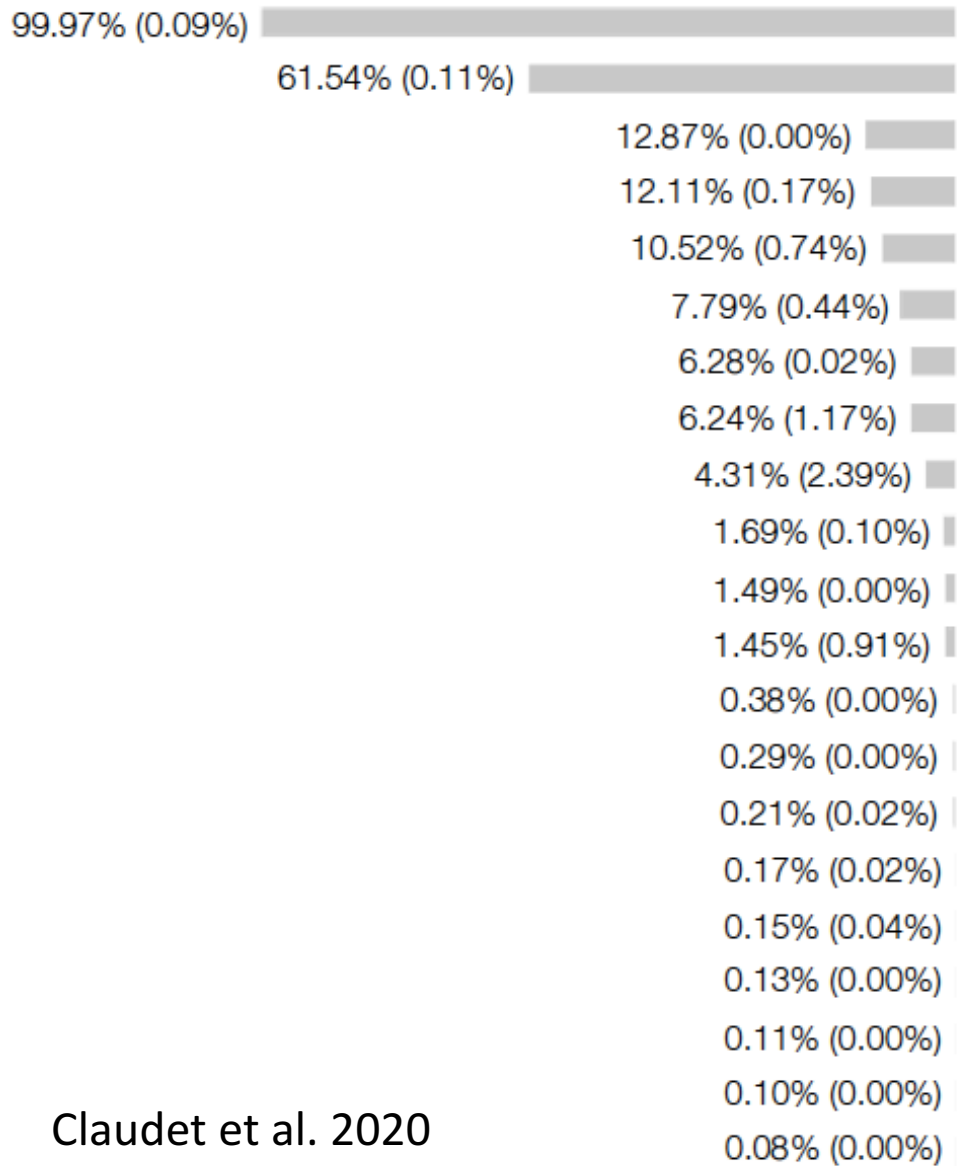


Levels of protection | Not regulated | Unprotected | Poorly Protected | Moderately Protected | Highly Protected | Fully Protected

Over **72.77%** of the surface covered is located in the **Western Mediterranean**, **90.05%** of the total surface covered by MPAs and OECMs are found in EU waters.

Claudet et al. 2020

Mediterranean MPAs: countries







Claudet et al. 2020



100 90 80 70 60 50 40 30 20 10 0
Proportion of countries' coastal and marine areas covered by protection

0 25 50 75 100
Distribution of levels of protection (in %)

The Italian coasts

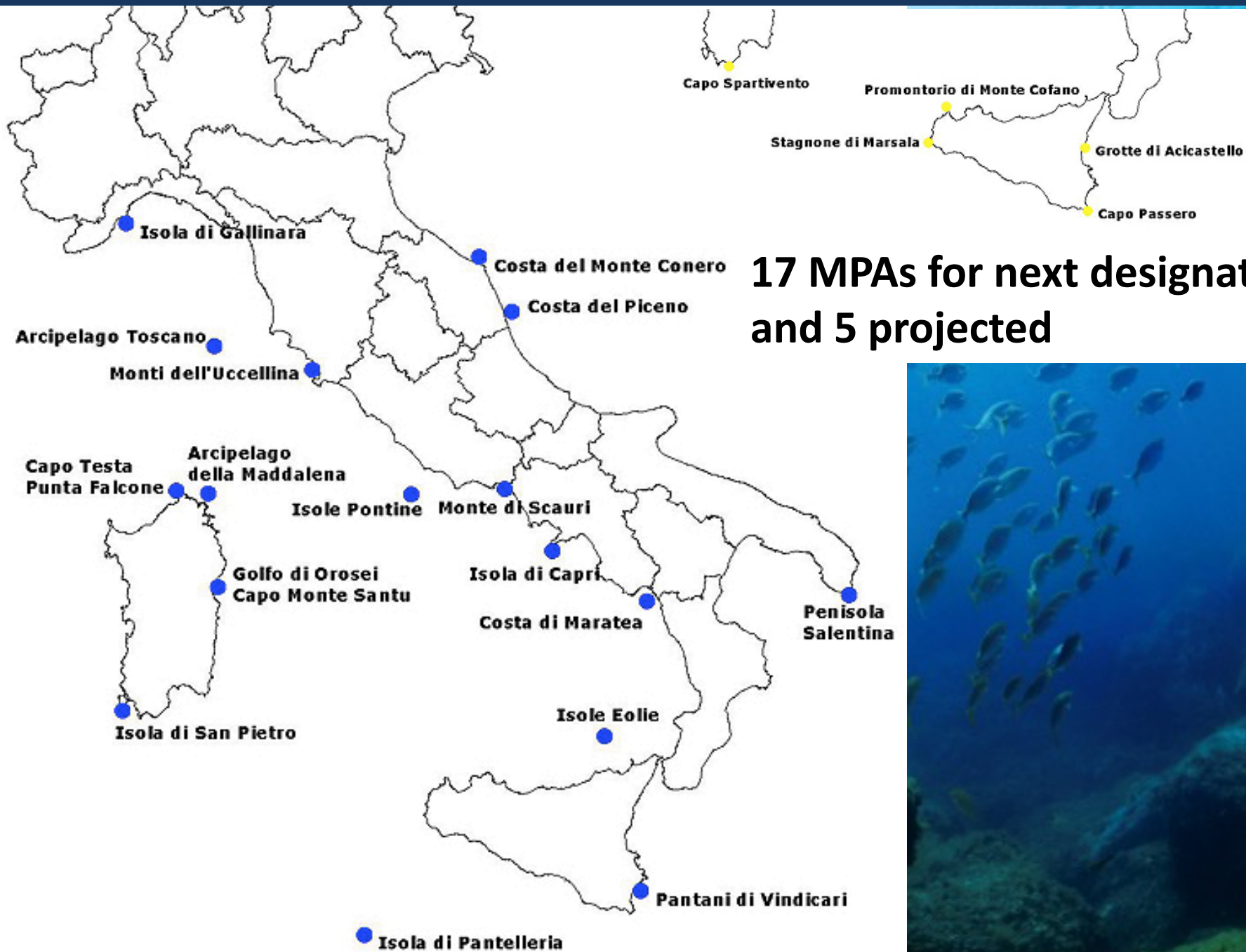
-  Porto Cesareo
-  Capo Rizzuto
-  Isola di Ustica
-  Capo Gallo



-  Isole Egadi
-  Isole Ciclopi
-  Plemmirio
-  Messina Capo Milazzo
-  Isole Pelagie

-  La Spezia Cinque Terre AMP
-  Miramare
-  Isola Bergeggi
-  Portofino
-  Secche della Meloria
-  Santuario Mammiferi Marini
-  Torre Cerrano
-  Isole Tremiti
-  Secche di Tor Paterno
-  Isole di Ventotene e Santo Stefano
-  Parco Sommerso di Baia
-  Regno di Nettuno
-  Parco Sommerso di Gaiola
-  Punta Campanella
-  Santa Maria di Castellabate
-  Costa Infreschi Masseta
-  Isola dell'Asinara
-  Tavolara
-  Capo Caccia - Isola Piana
-  Santa Teresa Gallura Capo Testa - Punta Falcone
-  Penisola del Sinis - Isola di Mal di Ventre
-  Villasimius Capo Carbonara
-  Torre Guaceto

The Italian coasts: next designation



**17 MPAs for next designation
and 5 projected**



Legal framework

Laws for protection of nature at national (e.g. L. 394/91), international and EU level

Data on environmental, biological, socio-economic context and peculiarities

Proposal for zonation, boundaries, protection levels, aims of conservation, after further studies

Involvement of local bodies and stakeholders

Institution

