



Development of Regional Joint Master Program in Maritime Environmental Protection and Management - MEP&M -

KNOW-HOW TRANSFER RELATED TO THE TO THE LATEST TOPICS IN
INTERNATIONAL LAWS ON CLIMATE CHANGE AND MARINE POLLUTION
(DEV.3.4.3)

Université Côte d'Azur (UCA-F)

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Virtual meeting via Zoom application

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Biography

- ⇒ **15 years work experience in the field**
- ⇒ **2008-2011: CETMEF to conduct the first offshore wind farm planning**
- ⇒ **2014 – 2018 : an EI reviewer for the regional state of PACA. Reviewed more than 500 marine EIA.**
- ⇒ **Wrote guidebooks for the private and public companies**
- ⇒ **Currently coordinating the impact of leisure boating / coastal construction / diving**
- ⇒ **Co coordinating the Med Posidonia Network**

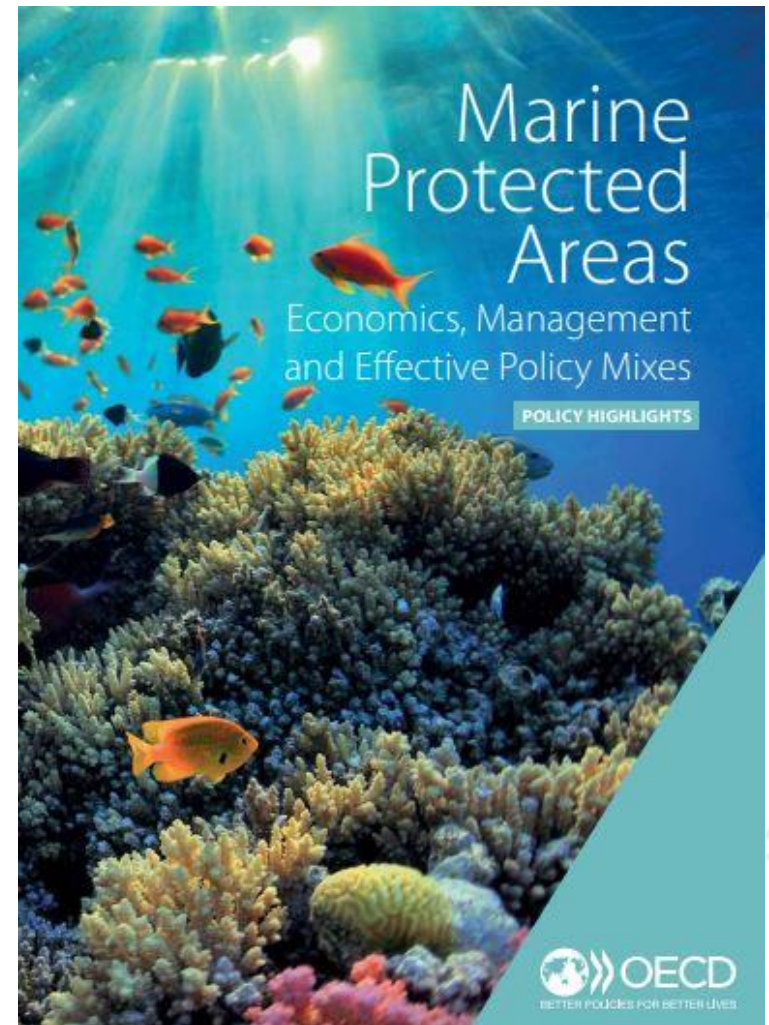
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Objectives

- **Definitions**
- **History and role of MPAs**
- **E.g. in France**
- **Efficiency / limits / perspectives**



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Definitions



Depending on local / national / international legislation

Definitions

IUCN definition

“A marine protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”

nature conservation is the priority

History of MPA's

Almost No MPA's before 2nd World War..

1962 : first world congress about national parks to establish recommendations to create marine parks or reserves

1970 => 128 MPA's in 27 countries

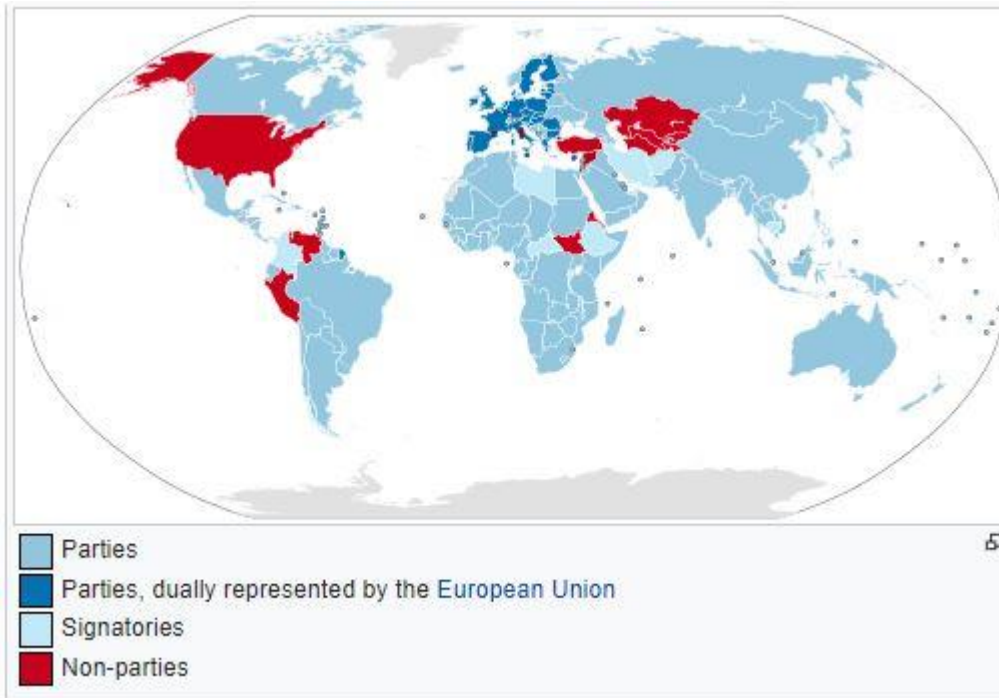
Europe : 1963 : Port Cros National Park

Australia : 1975 : Great Barrier reef

=> recent process ! (terrestrial – 1872, Yellowstone National Park)

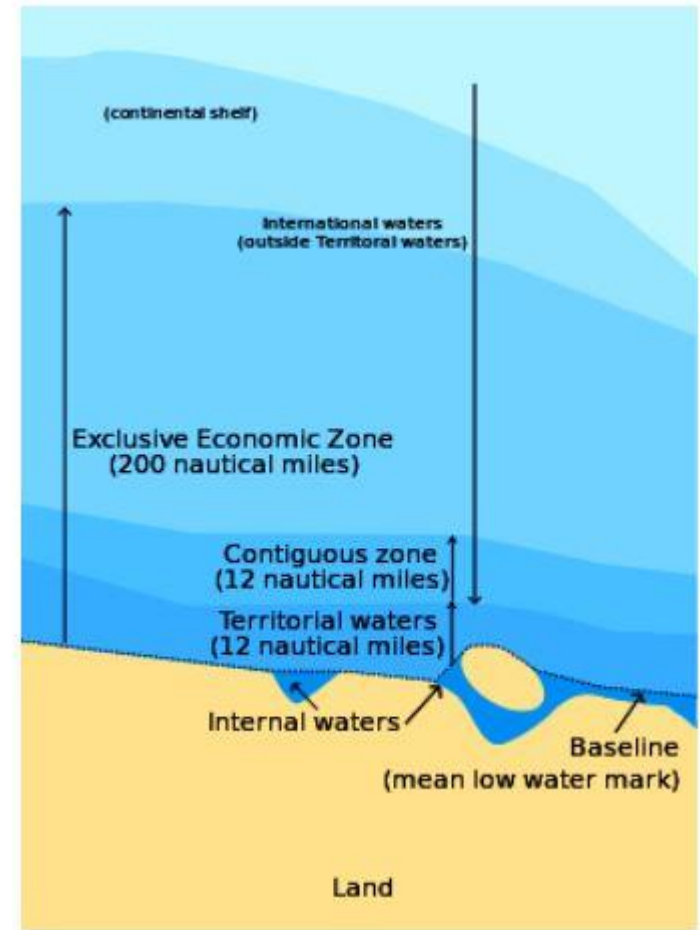
Montego Bay (UNCLOS) Convention

168 countries



=> gave responsibility to countries

https://www.un.org/depts/los/reference_files/chronological_lists_of_ratifications.htm



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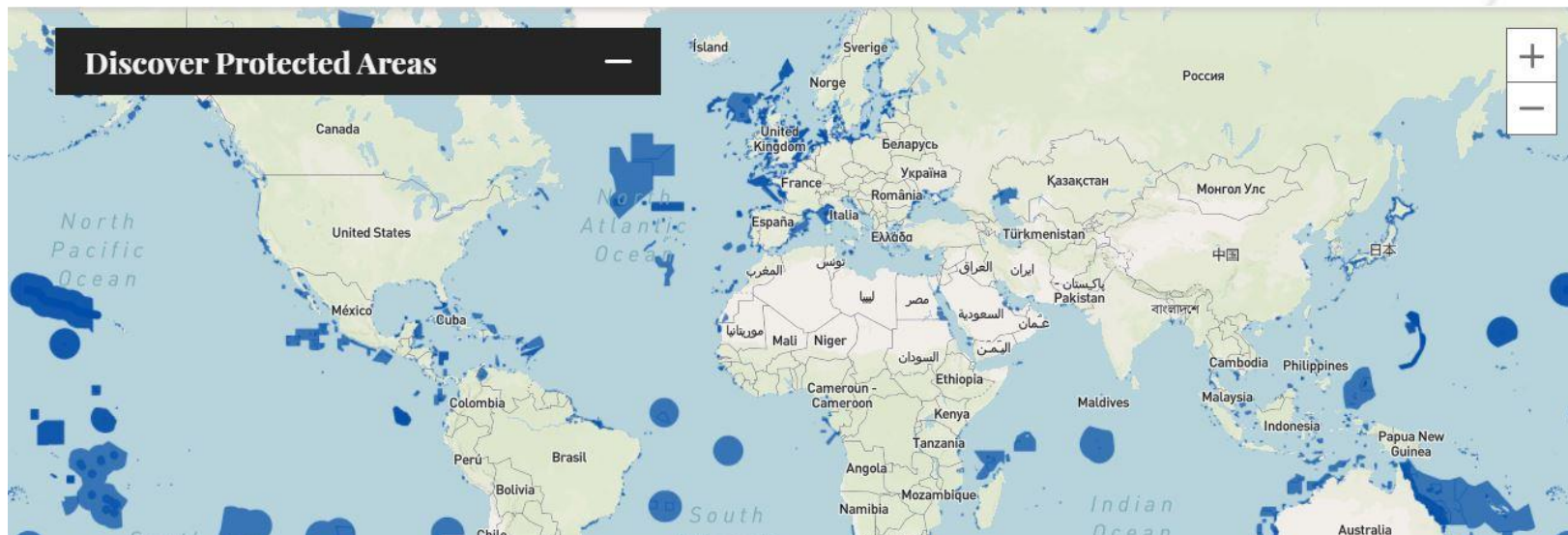
1980 – 2020

1985 => 430 MPA's in 69 countries

=> 2021 : 19 000 MPA's (7,7 % of the ocean)

official UN data base : <https://www.protectedplanet.net/en>

non official : Marine Conservation Institute : <https://mpatlas.org/>



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Political Ambition

Convention on Biological Diversity (CBD) 1992, Earth planet, Rio. « 10 % of each ecological region effectively protected by 2010 ».

Aichi, 2010 : 10 % of marine and coastal areas conserved « effectively and equitably managed, ecologically representative, ... » (Aichi biodiversity target 11)

**⇒ Next objective : Protect 30% of the Ocean by 2030 ?
(Next CBD 2020 reported)**

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Role of MPA's

- ⇒ **Protect nature and ban all activities ?**
- ⇒ **Manage sustainable development ?**
- ⇒ **Inventory and knowledge ?**
- ⇒ **Raise awareness ?**

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History of MPA's

1960 : conservation for amenity benefits

1970 : conservation and science

from 1980 : sustainable development concept

balance between economy # social # environment ?

⇒ many conceptions of
MPAs

A critical history of marine
protected areas

John Humphreys^{a,b}, Robert W.E. Clark^b

^aInstitute of Marine Sciences, University of Portsmouth, Portsmouth, United Kingdom;

^bSouthern Inshore Fisheries and Conservation Authority, Poole, United Kingdom

Abstract

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IUCN Criteria to define a MPA

Essential characteristics that a MPA needs to have:

- ✓ conservation focused with nature as the priority
- ✓ defined goals and objectives which reflect these conservation values
- ✓ suitable size, location, and design that deliver the conservation values
- ✓ defined and fairly agreed boundary
- ✓ management plan or equivalent, which addresses the needs for conservation of the MPA's major values, and achievement of its social and economic goals and objectives
- ✓ resources and capacity to effectively implement



Guidelines for applying the IUCN protected area management categories to marine protected areas

Jon Day, Nigel Dudley, Marc Hockings, Glen Holmes,

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List of criteria for a « good » MPA ?

⇒ **Natural area of environmental interest**

⇒ **Habitat threatened where management measures and control are necessary**

no pressures => no need of MPAs ?

⇒ **Governance gathering all types of stakeholders : fishermen, env. associations, scientists, etc.**

⇒ **Management plan with financial support**

⇒ **Coordinated by a public / private structure and supported by authorities. Full time job !**

⇒ **Short term and long term actions : knowledge, strategy, management measures, monitoring, raising awareness, etc.**

Objectives of MPA's

- increase knowledge
- boost local / national regulations and reinforce protection
- management works (buoys, etc.)
- sustainable development of activities adapted to the objectives of the MPA (local sustainable fisheries, etc.)
- raise awareness
- **importance of governance :
gathers different stakeholders
who have to make collective decisions**



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French Political Ambition

France : 3 % of world's marine surface (2nd)

Objective to protect 30 % of protected areas by 2030.

10 % with strict protection

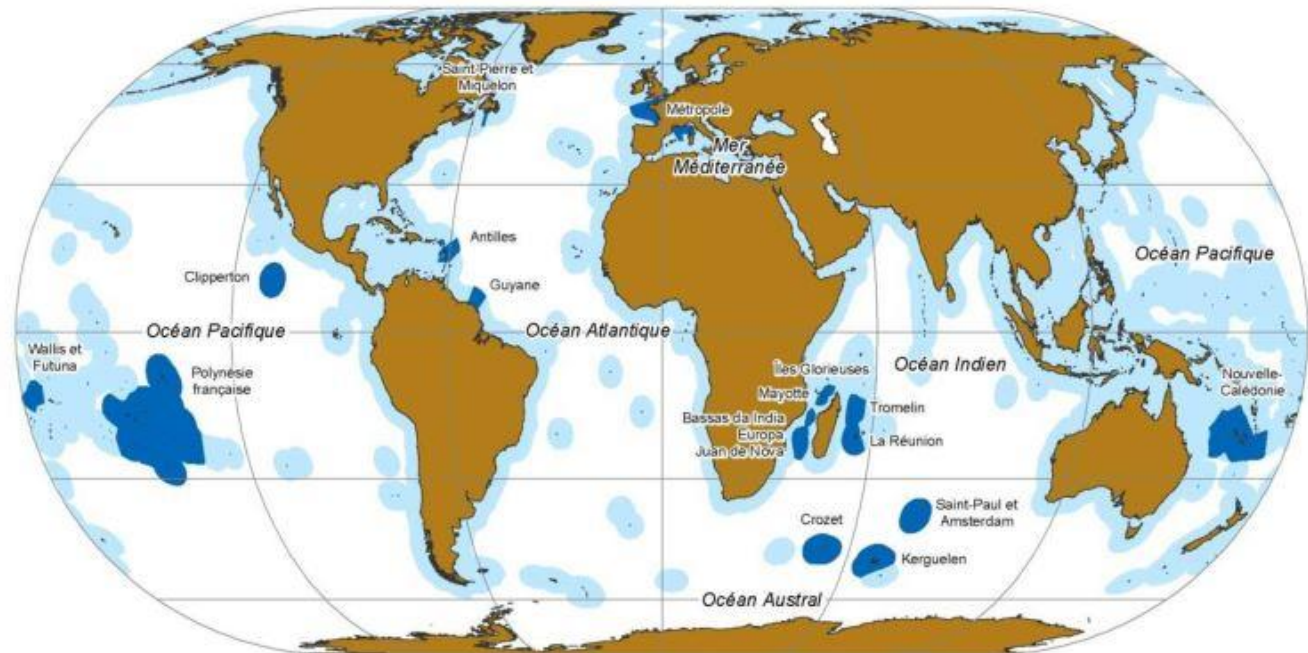


Figure 1 : répartition des eaux sous juridiction française sur le globe.

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French MPA's

- ❑ marine sectors of national parks ;
- ❑ marine sectors of natural reserves ;
- ❑ marine sectors of decrees for the protection of biotopes ;
- ❑ marine sectors of Natura 2000 sites ;
- ❑ maritime public domain coordinated by the Conservatoire du littoral;
- ❑ natural marine parks ;
- ❑ RAMSAR sites ;
- ❑ UNESCO world heritage sites ;
- ❑ biosphere reserves ;
- ❑ sites related to Barcelona convention (Mediterranean sea), OSPAR (North East Atlantic), Nairobi (East Africa...), Carthagène (West Indies/Caribbean) et CCAMLR (Antartica) ;
- ❑ marine sectors of national reserve of game and wild life;
- ❑ fisheries conservation areas ;
- ❑ marine sectors of regional natural parks.
- ❑ etc.

=> list of 15 types of MPAs (decree 2011)

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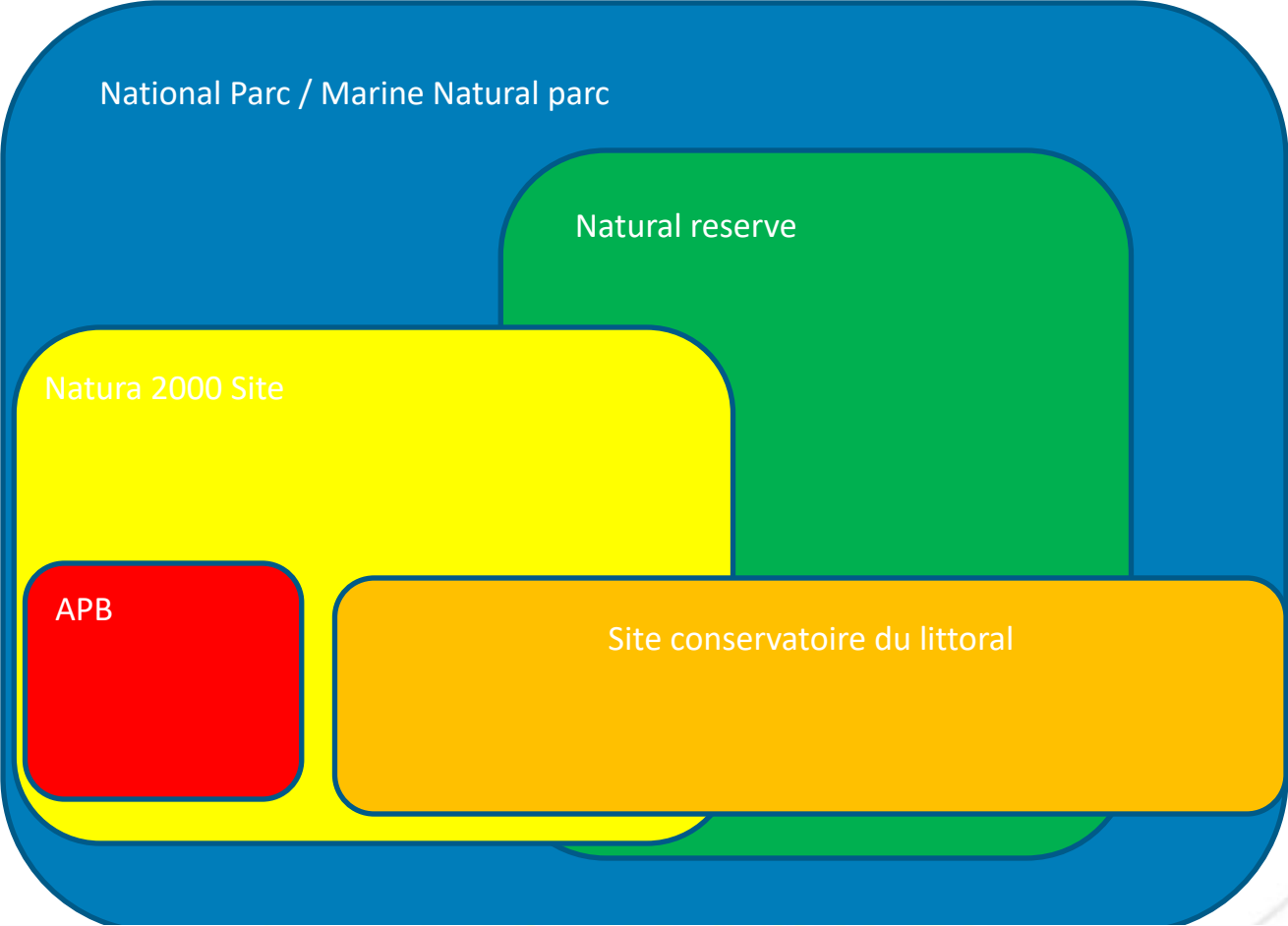
Finalités de création d'une AMP (inscrite dans le texte de création)

Catégorie



	Bon état espèces et habitats à statut	Bon état autres espèces et habitats	Rendu de fonctions écologiques clés	Bon état des eaux marines	Exploitation durable des ressources	Dévt durable des usages	Maintien du patrimoine culturel maritime	Valeur ajoutée sociale, économique, scientifique ou éducative
Réserve naturelle	X	X	X					X
Site N2000	X							
Parc national	X	X	X	X	X	X	X	X
Parc naturel marin	X	X	X	X	X	X	X	X
DPM Conservatoire du littoral	X	X	X			X	X	X
Arrêté de protection de biotope	X							

Different layers of MPAs



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2021 : Adoption in France of the national strategy of protected areas :

- 30% of protected areas
- 10% with strong protection (only 1,8 % en 2020).

.=> related to the EU strategy



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EU Biodiversity Strategy for 2030 (adopted in 2020)

https://eur-lex.europa.eu/resource.html?uri=cellar:a3c806a6-9ab3-11ea-9d2d-01aa75ed71a1.0001.02/DOC_1&format=PDF

NATURE PROTECTION

1. Legally protect a minimum of **30% of the EU's land area and 30% of the EU's sea area** and integrate ecological corridors, as part of a true Trans-European Nature Network.
2. Strictly protect at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests. (10 %)
3. Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately

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EU Nature restoration plan : key commitments

1. Legally binding EU nature restoration targets to be proposed in 2021, subject to an impact assessment. **By 2030, significant areas of degraded and carbon-rich ecosystems are restored; habitats and species show no deterioration in conservation trends and status; and at least 30% reach favourable conservation status or at least show a positive trend.**
2. The decline in pollinators is reversed.
3. The risk and use of chemical pesticides is reduced by 50% and the use of more hazardous pesticides is reduced by 50%.
4. At least 10% of agricultural area is under high-diversity landscape features.
5. At least 25% of agricultural land is under organic farming management, and the uptake of agro-ecological practices is significantly increased.
6. Three billion new trees are planted in the EU, in full respect of ecological principles.
7. Significant progress has been made in the remediation of contaminated soil sites.
8. At least 25,000 km of free-flowing rivers are restored.

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EU Nature restoration plan : key commitments

9. There is a 50% reduction in the number of Red List species threatened by invasive alien species.
10. The losses of nutrients from fertilisers are reduced by 50%, resulting in the reduction of the use of fertilisers by at least 20%.
11. Cities with at least 20,000 inhabitants have an ambitious Urban Greening Plan.
12. No chemical pesticides are used in sensitive areas such as EU urban green areas.
- 13. The negative impacts on sensitive species and habitats, including on the seabed through fishing and extraction activities, are substantially reduced to achieve good environmental status.**
- 14. The by-catch of species is eliminated or reduced to a level that allows species recovery and conservation.**

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ENABLE TRANSFORMATIVE CHANGE

New European biodiversity governance framework

Building on an integrated and whole-of-society approach (european business for biodiversity,

Reinforcement of the 'user pays' and 'polluter pays' principles

Improving knowledge, education and skills

Raising the level of ambition and commitment worldwide (for the next CBD)

Support the agreement on marine biological diversity of areas beyond national jurisdiction (BBNJ)

Double financial flows to developing countries for biodiversity, etc.

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One Ocean Summit (feb. 2022 - Brest)

- ⇒ 30% protection target for Exclusive Economic zone supported by 83 countries (including EU)
- ⇒ legally binding treaty for the conservation and sustainable development of marine biological diversity in areas beyond national jurisdiction
- ⇒ 43 countries to join the “High Ambition Coalition on Biodiversity Beyond National Jurisdiction (BBNJ)”
- ⇒ mandate for plastic global treaty
- ⇒ create a low sulphur emissions zone across the Mediterranean starting on 1 January 2025
- ⇒ French initiative for Posidonia Protection

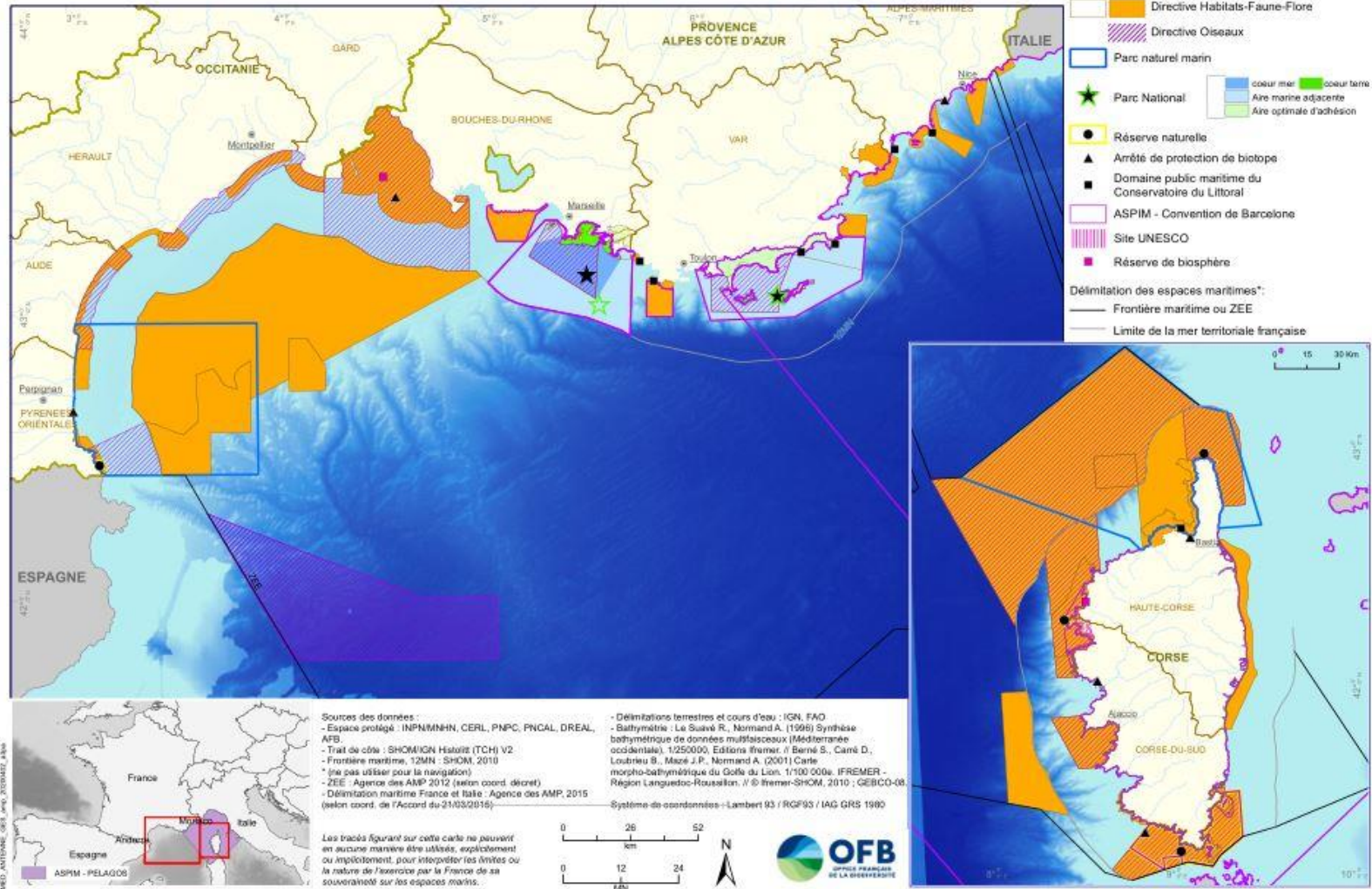
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MPA's in South of France

FAÇADE MÉDITERRANÉE Aires marines protégées

EDITEE LE : 02/04/2020



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Marine national parks

10 national parks in France

2 types of sectors :

Heart / Adhesion area

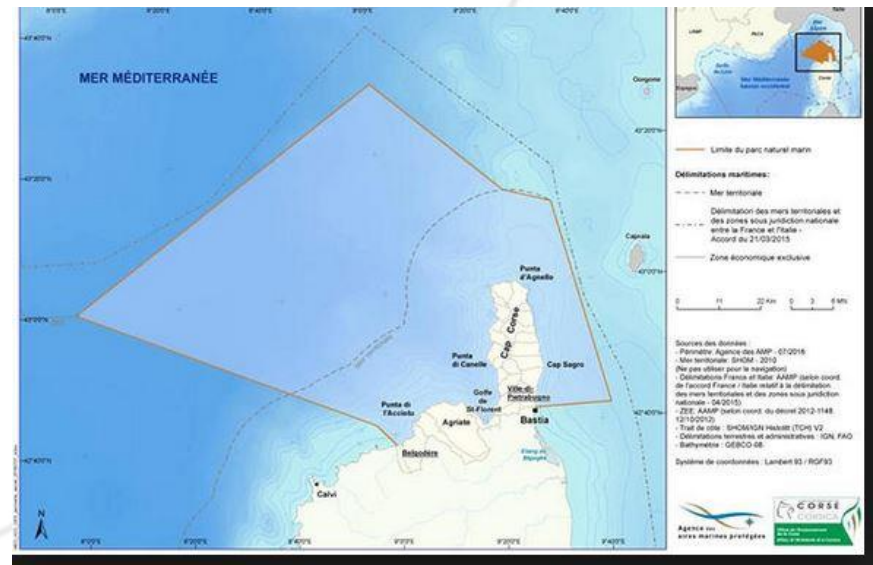
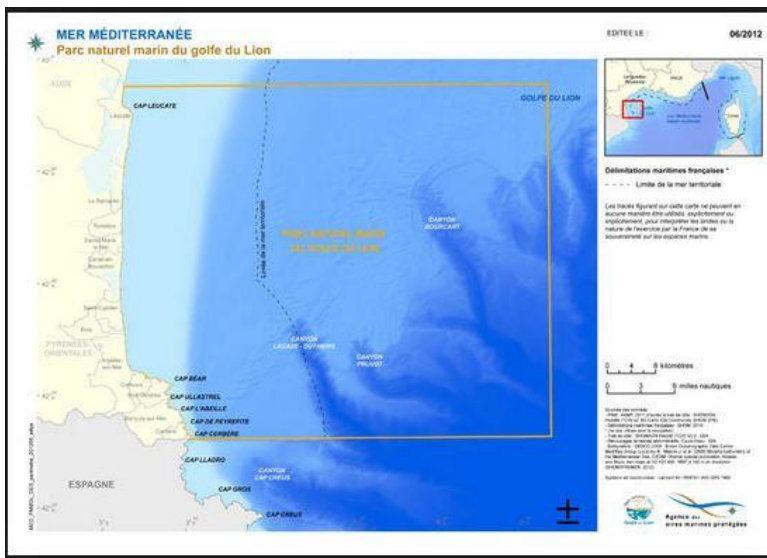
Objective to protect strictly / regulate activities in the heart area

Power to control and have their own regulations



Marine natural parks

- Type of MPA. 9 created since 2006.
- different objectives : knowledge, protection and sustainable development of activities
- Governance : management board gathering authorities, towns concerned, scientists, socio professionals.
- => They have the power to refuse a project.
- 15 years management plan



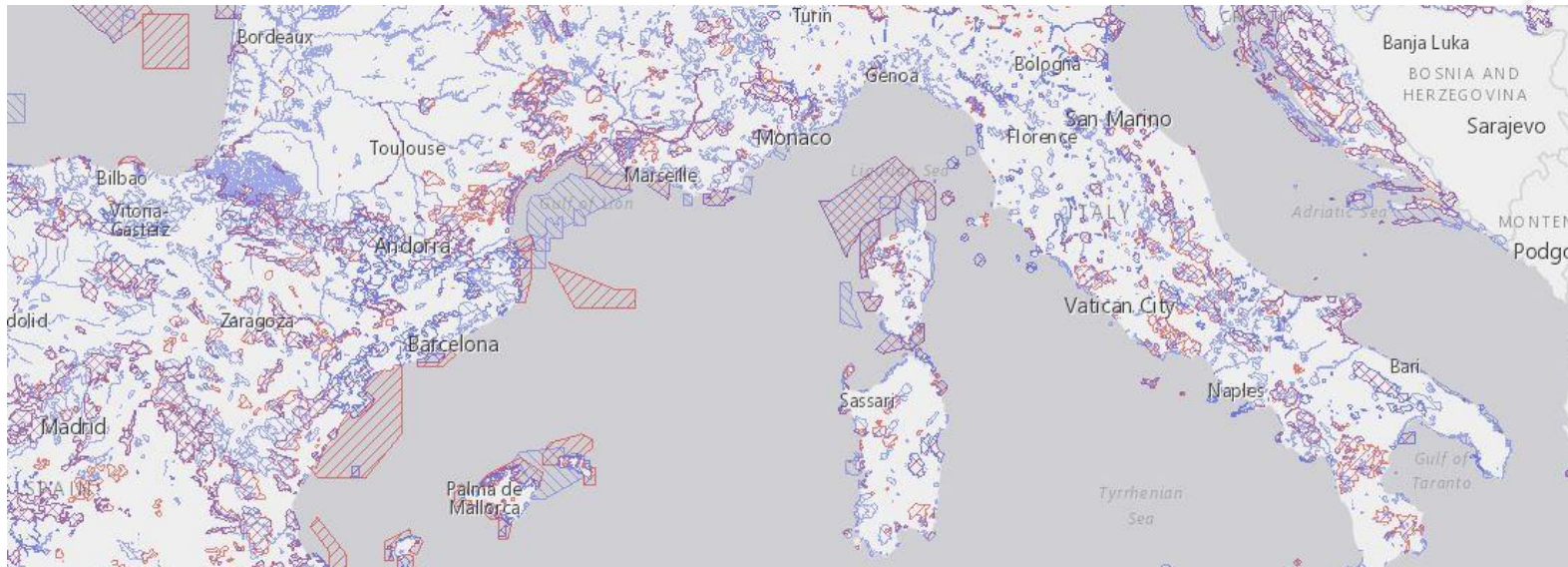
Natura 2000 network

⇒ Birds & Habitat directive = Natura 2000 network (largest ecological network in the world)

⇒ **Assessment of plans/projects in N2000 sites necessary**

3150 marine N2000 sites => more than 10% of the total EU marine area

<https://natura2000.eea.europa.eu/>



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Natura 2000 in France

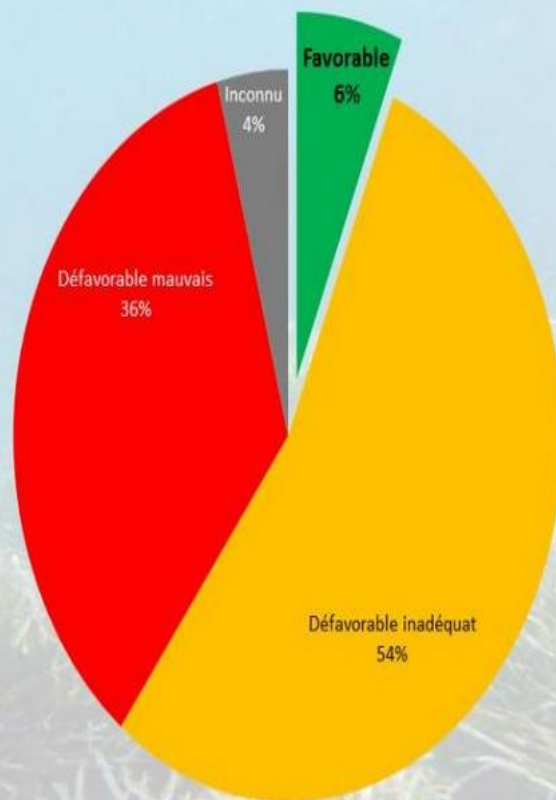
- ⇒ many sites designed in France
 - ⇒ volunteer agreement based on consultation meetings
 - ⇒ objective : managing different activities with a sustainable goal and protect the environment
 - authority in charge : maritime prefect
 - action plan (DOCOB) : defines objectives, actions and indicators.
 - different chart involving many different stakeholders
- ⇒ Important to have a local public coordinator to be efficient**



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Etat de conservation des habitats marins et côtiers d'intérêt communautaire en métropole (période 2013-2018)



Note : Résultats toutes régions biogéographiques confondues (49 évaluations).



Visuel ONB, d'après :

Origine des données : Rapportage DHFF, UMS PatriNat (OFB-CNRS-MNHN), janvier 2020

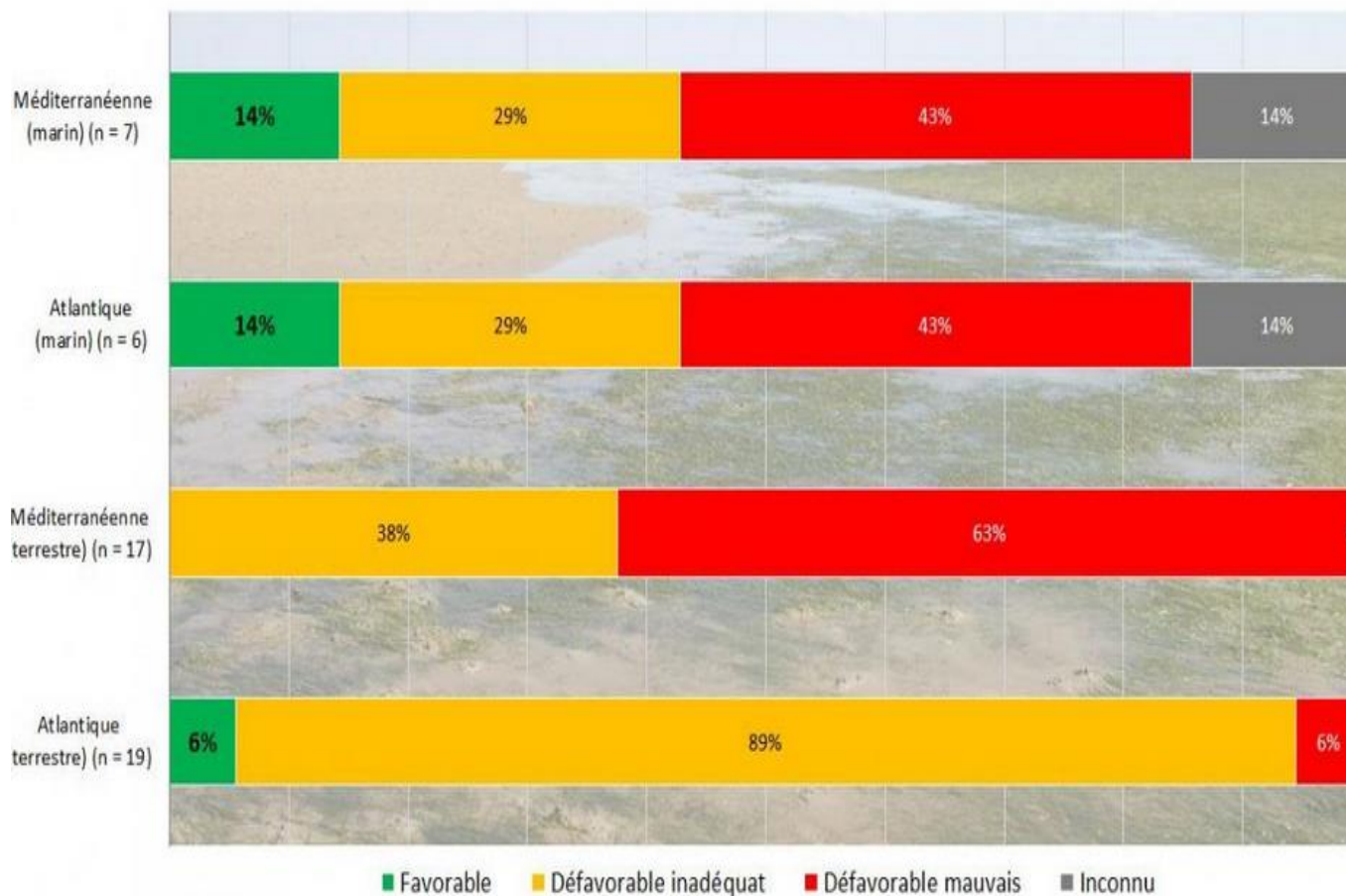
Traitements : UMS PatriNat - Tour du Valat - SDES, 2020

Photo : Habitat de Posidonies, Cap Camarat (Normandie, Michael)

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État de conservation des habitats marins et côtiers d'intérêt communautaire par région biogéographique (période 2013-2018)



Note : 49 évaluations.



ONB

Visuel ONB, d'après :

Origine des données : Rapportage DHEF - IIMS - PatriNat (OFRL-CNRS-MNHN) - janvier 2020

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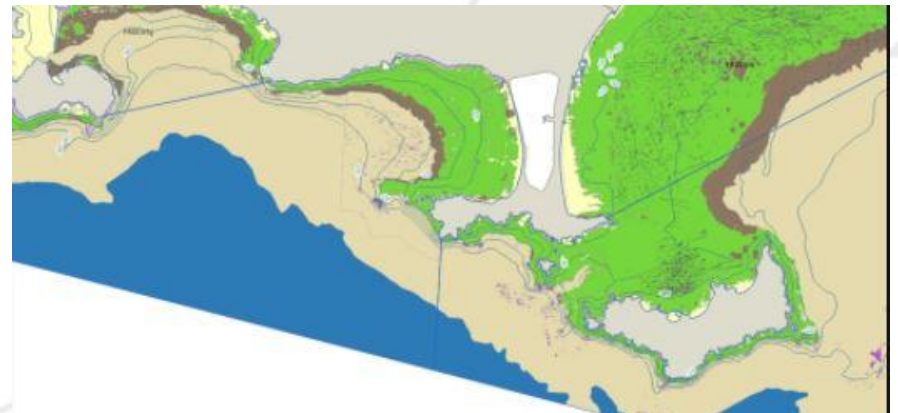
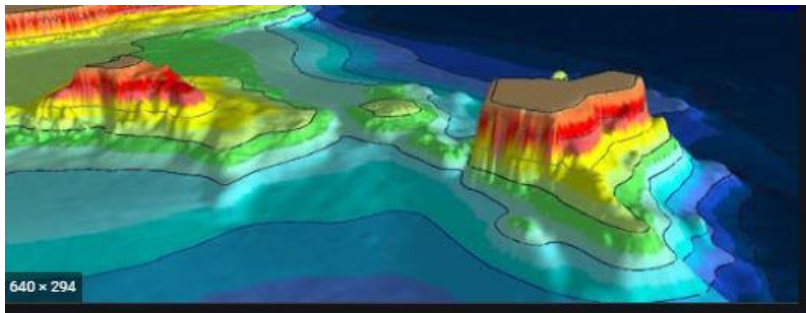


E.g. of actions in MPAs : knowledge / R&D

Increase knowledge

- Mapping habitats

- test new technology



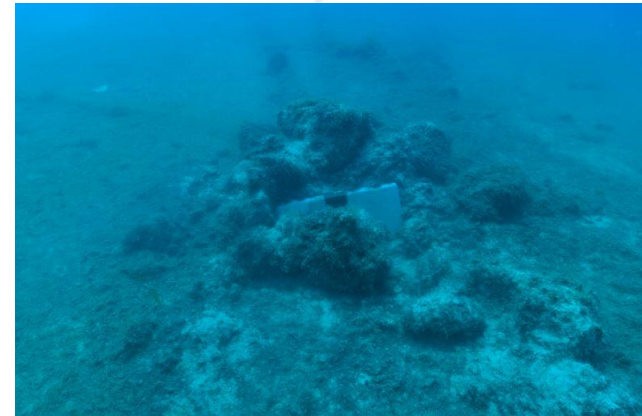
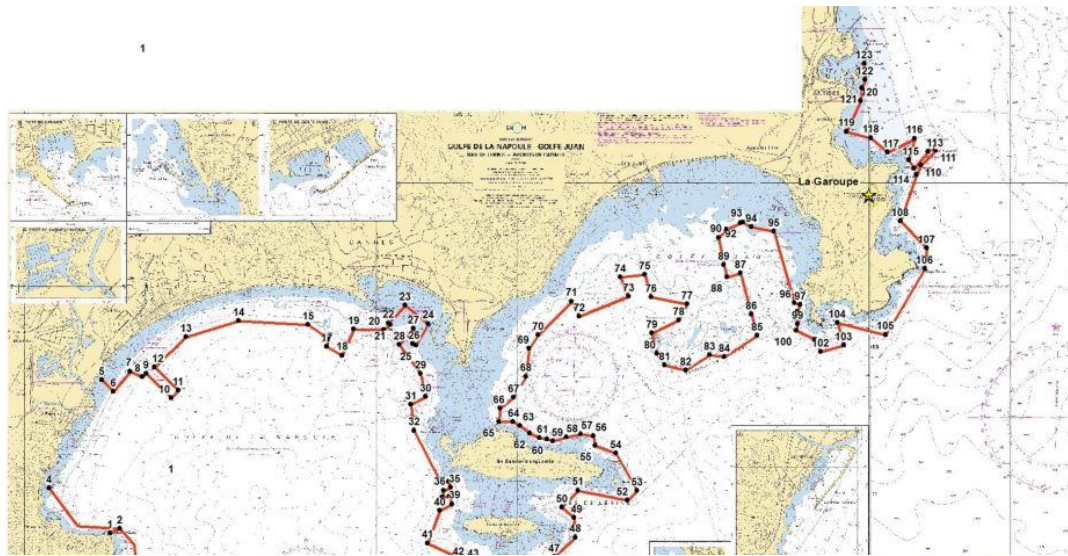
Example of actions : boost new regulations

Anchoring issues :

OEC / andromede :

https://www.youtube.com/watch?v=ui_Z0389jD0

=> ban for Yachts > 24 m to anchor in Posidonia

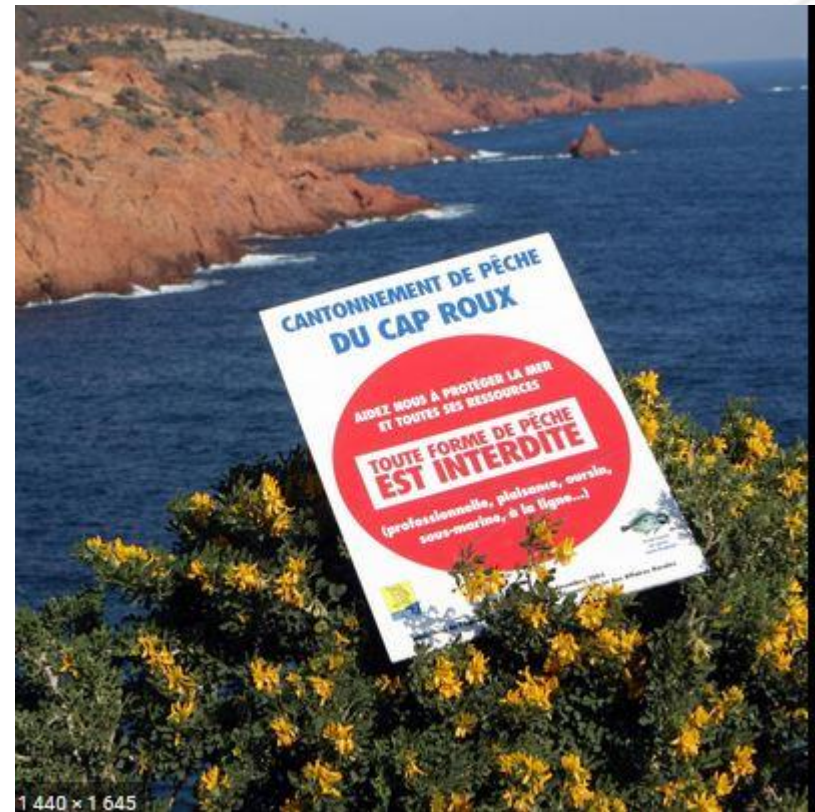
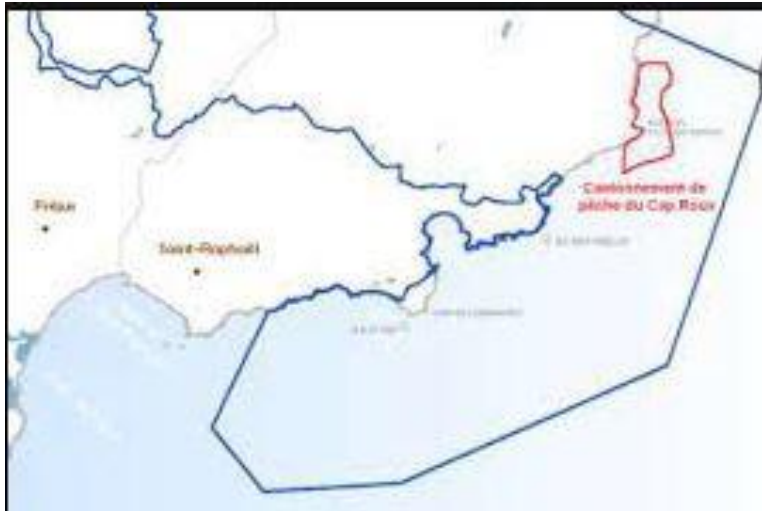


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Example of actions : boost new regulations

Creation of fisheries reserve, etc.



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Example of sustainable equipment & actions

Park of ecological buoys for leisure boats / diving buoys



Beach cleans, remove lost fishnets, etc.



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Example of sustainable activities



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Example of awareness actions

Marine education areas for schools, creation of underwater paths, leisure boats campaigns, beach cleaning campaigns, chart with ferries, etc.

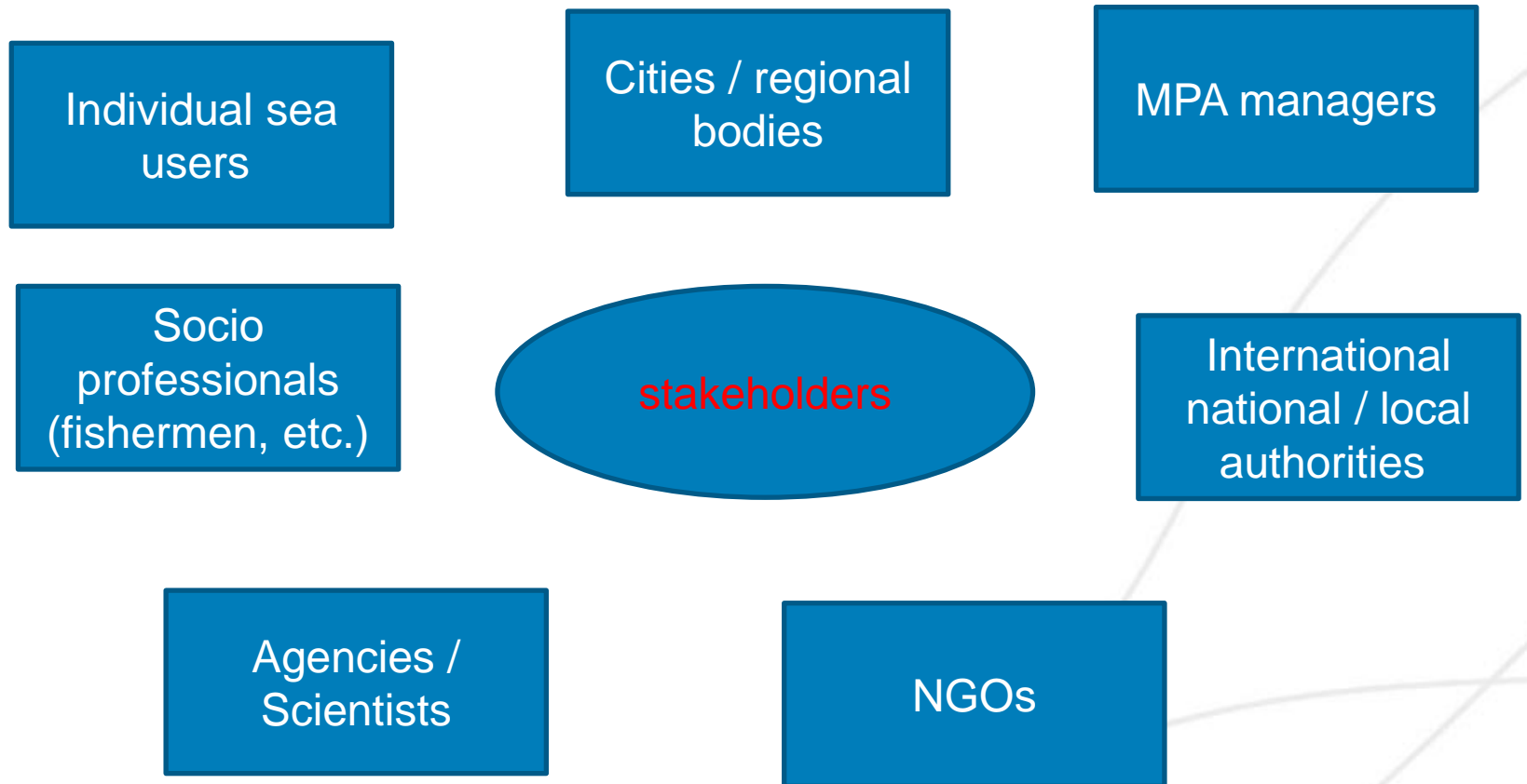


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Stakeholders in the marine field

Large diversity => complex



=> IMPORTANT TO TAKE INTO ACCOUNT IN THE CONSULTATION MEETINGS

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Type of consultation meetings

Information : bring information to the population.

Consultation : opinions are gathered, but not sure it will be taken into account!

Concertation : large consultation. Opinions are reviewed and exchanges take place.

Co-construction : the different stake holders build the project. But they are not part of the decision process.

Co-decision : all the stakeholders decide together

=> important to imply all the different stakeholders specially in MPAs

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Limits of MPA's and perspectives

- Ocean = freedom unconsciously
- many « paper » MPA's created
- few are strictly protected and effectively managed



2.7 % of the ocean
is fully or highly protected from fishing impacts

7.7 % of the ocean
is protected according to WDPA / ProtectedPlanet

<https://mpatlas.org/>

33 % of MPA in France / only 0,25 % are strictly managed

Lack of financial and human support for management measures

Lack of effective governance, support for control, etc.

Urgent need to improve local capacity building

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Perspectives

- **Aichi objectives (CDB 2010) : representative network, coherent and effectively managed**

Benefits of MPA's start to be well known

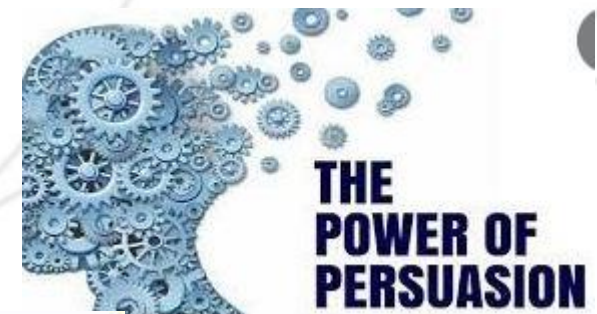
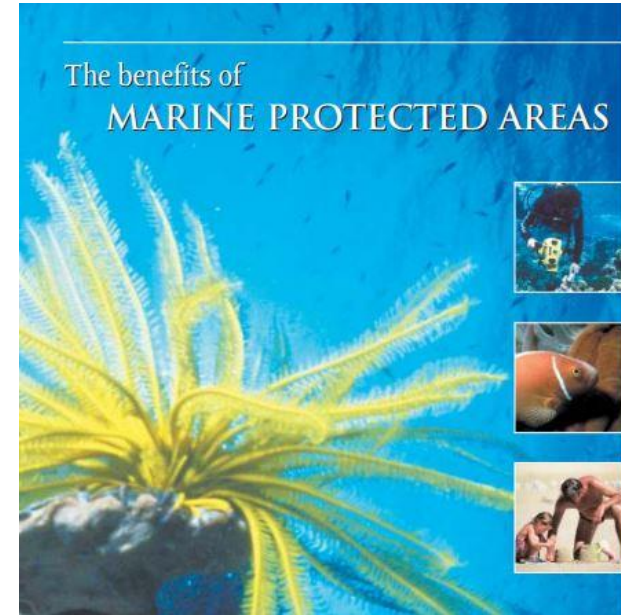
e.g. Posidonia beds : 250 000 euros / Ha / yr!

but not always enough to convince decision makers!

⇒ **development of marketing tools**

Report effect of MPA's

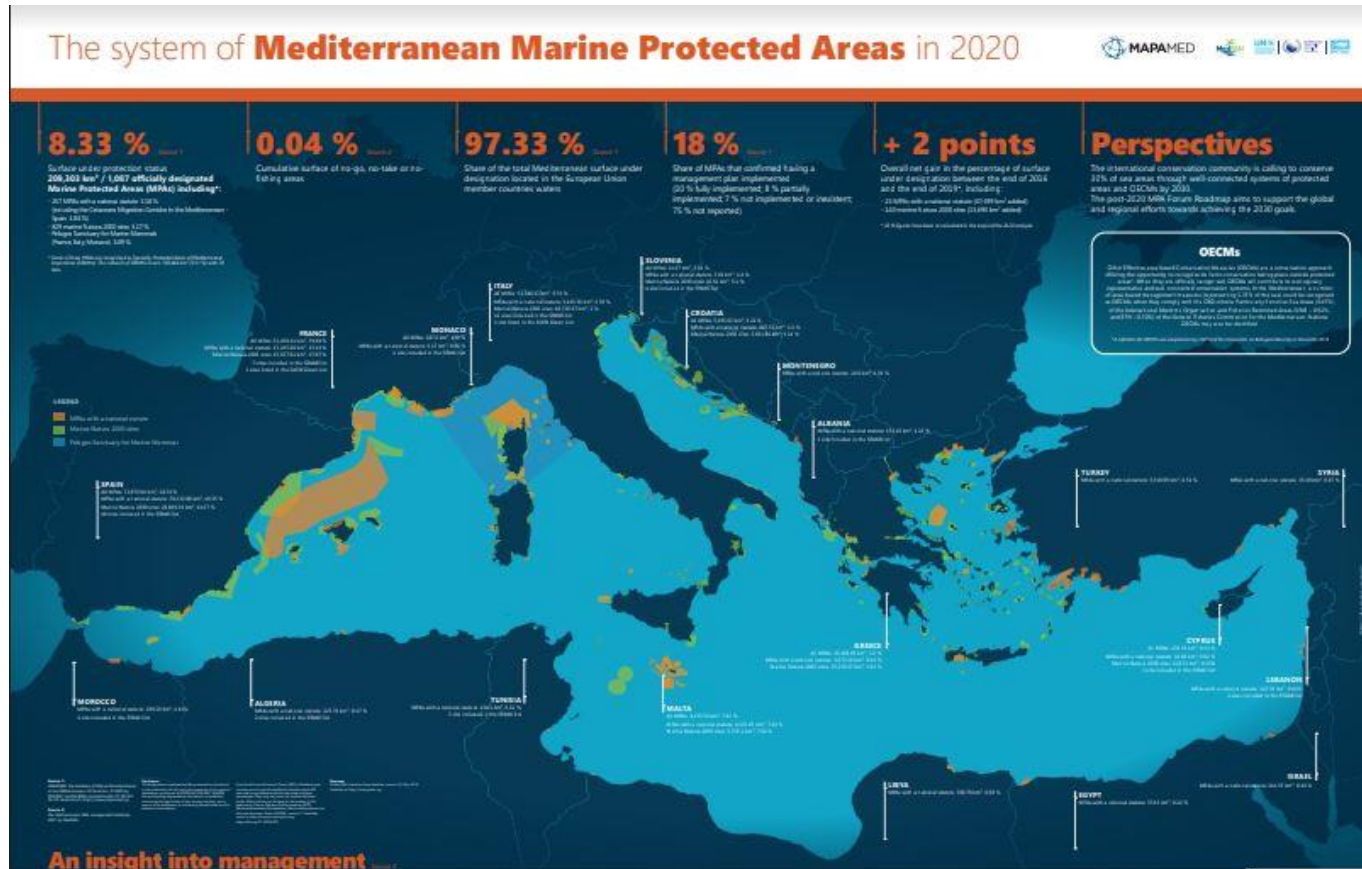
⇒ **protection can't lead to the destruction of non MPA. Need to be more investigated**



COOPERATION BETWEEN MPAs

MEDPAN <https://medpan.org/>

=> network of Marine Protected Areas managers in the Mediterranean



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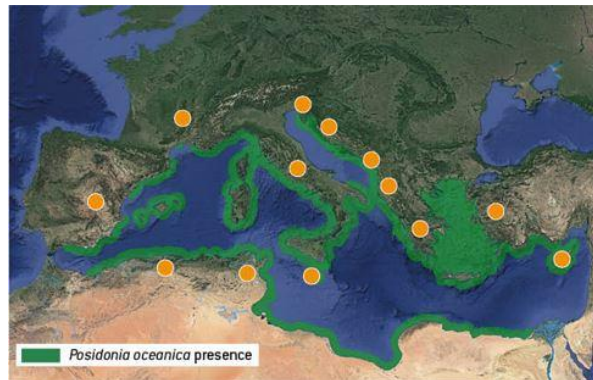


INTERNATIONAL COOPERATION

MPAs do not cover the whole coastal areas

Some environmental stakes can be outside the MPA and not yet protected

Ex with Posidonia habitat



=> important to work with relevant stakeholders in different countries

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the MPN in a nutshell



Biogeographical Process Network Event



anchors away!

Report on the Anchors Away Networking Event:
Mitigating direct anthropogenic impacts on Posidonia beds

Athens, 21-22 November 2019



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INITIAL OBJECTIVE : to better protect the Posidonia habitat from anchoring



Densité de yachts dans la baie de Beaulieu @ C Meinesz

- [short version : https://www.youtube.com/watch?v=KfQeNZXjySg](https://www.youtube.com/watch?v=KfQeNZXjySg)
- [OEC / Andromede Oceanologie : https://www.youtube.com/watch?v=yhRdrBVHk-c](https://www.youtube.com/watch?v=yhRdrBVHk-c)

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Long term **OBJECTIVE** : protect 100 % of Posidonia habitat by 2030

- **Mediterranean World's Forum / One Ocean Summit**

The MPN Recommendations for Posidonia protection, Mediterranean cooperation & concrete measures



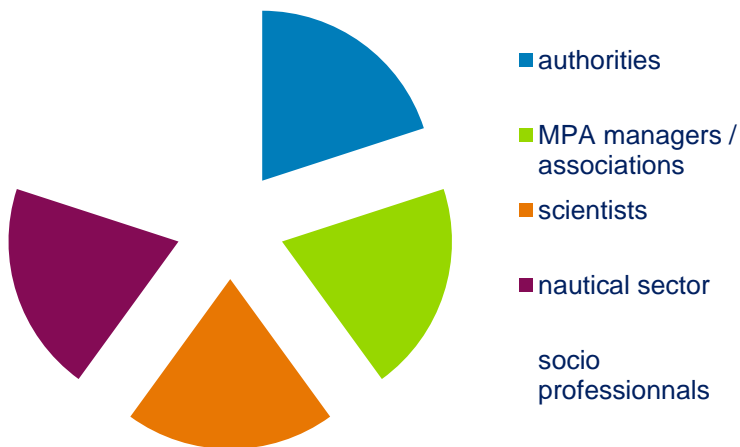
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Objective : inclusive network

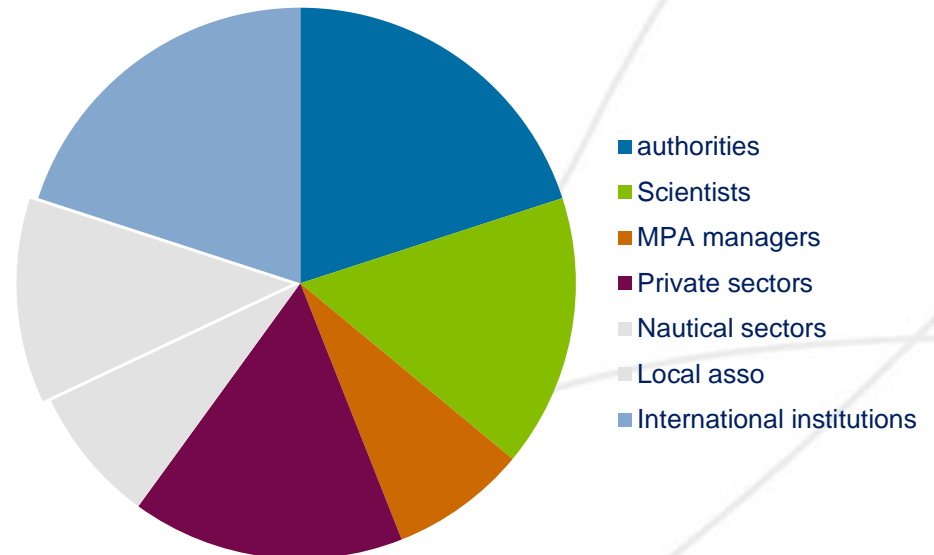


• OBJECTIVES

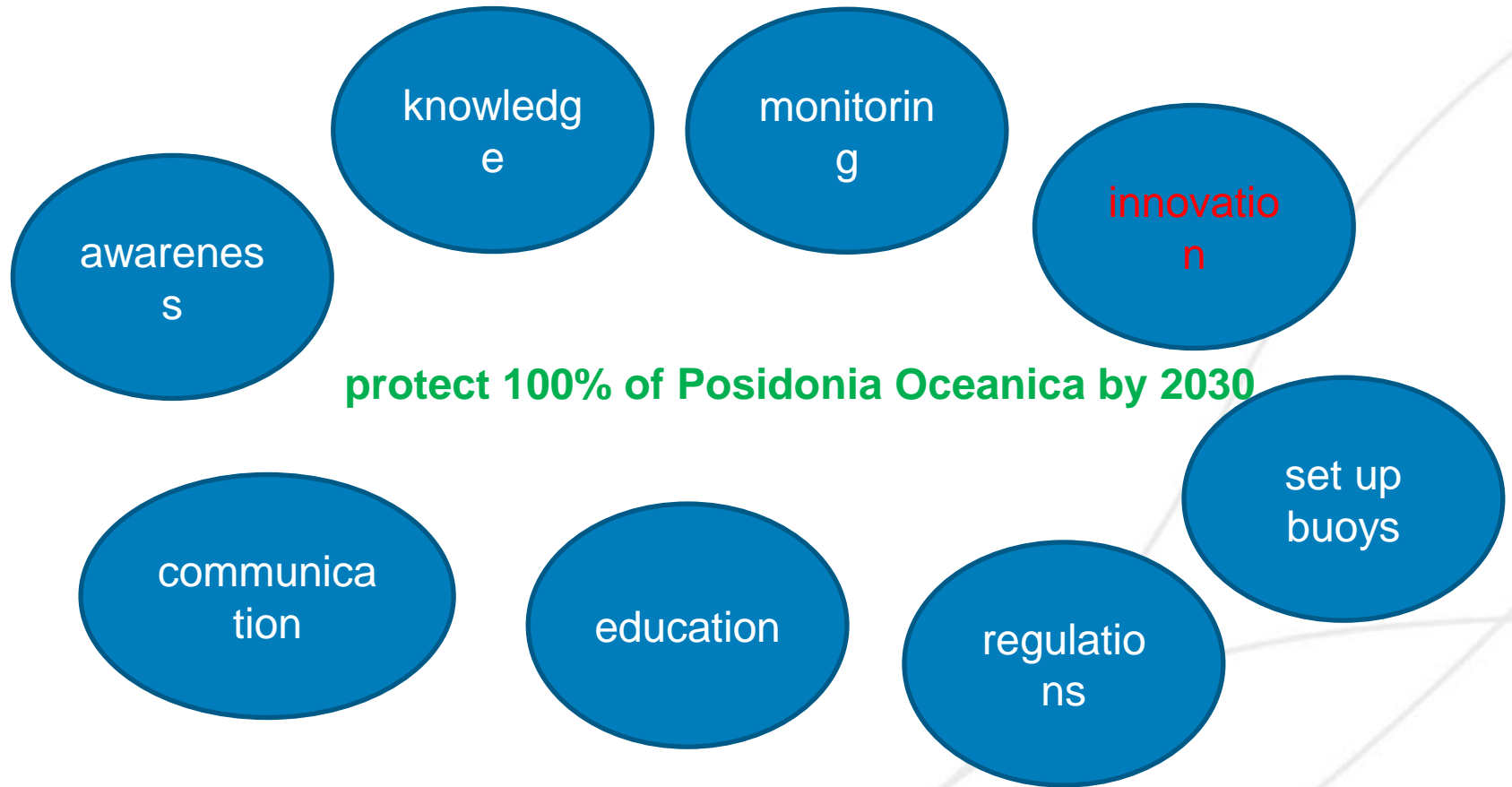
nb of countries covered with Posidonia Oceanica : 15



RESULTS



MPN action plan (being updated)



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First results



REPORT

Comparative legal analysis on protection of Posidonia meadows in the Mediterranean Sea

A benchmark on regulations on anchoring

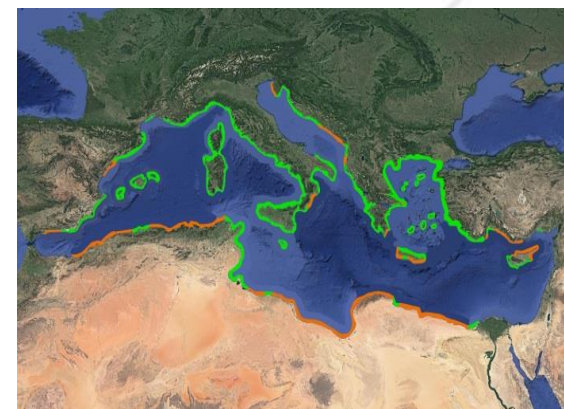
Submitted to
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Document No. 20144905/13206

September 2021



Mon Drive > PosidoniaAnchoring Network ▾

Nom

-  5. REGULATIONS
-  3. MPN MEETINGS
-  4. KNOWLEDGE
-  8. MPN COMMUNICATION: Website, booklet, video
-  6. TOOLS & SOLUTIONS
-  7. AWARENESS TOOLS & PHOTOS
-  1. CONTACT LIST
-  2. MPN EVENTS
-  0. STEERING COMMITTEE & MPN ADMINISTRATION_restri.

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First results



<https://medposidonianetwork.com/>

Photograph OCEANA / Carlos Minguell © LIFE BaHAR for NZK

What is the Mediterranean Posidonia Network (MPN)?



NETWORKING WITH THE AIM OF THE POSIDONIA PROTECTION FROM ANCHORING IMPACTS.

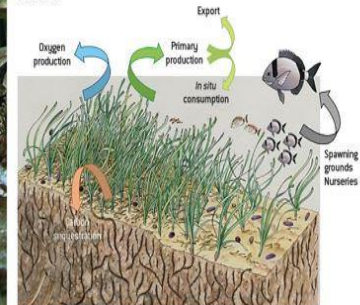
Posidonia oceanica seagrass: key habitat of the mediterranean

Posidonia oceanica is endemic to the Mediterranean Sea. It covers 27,000 km² of the coastal areas and is present up to 40 m depth.

Protection status: Posidonia is protected at international and european level. National and local protection vary for each country.

Main roles: important source of oxygen, nursery area, protects beaches from erosion and is an important carbon sink.

> The economical value of Posidonia seagrass is higher than coral reefs or the Amazon rainforest.



However the species is highly vulnerable, the growth rate is very slow (one meter per century) and once destroyed it cannot be restored.

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First results



Reinforce the network	
Zoom meetings	> 20 meetings – 25 people on average
Online MPN webinar sept 2020	> 30 participants
MPN physical meeting Sept 21	11 countries – 60 participants



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