

The background of the slide is a photograph of the Mediterranean Sea. In the foreground, the water is a deep blue with gentle ripples. In the middle ground, a small sailboat with a white sail is visible on the right side. In the background, there are dark, silhouetted mountains or hills under a pale, overcast sky.

Marine/Maritime Spatial Planning Case Study:

Marine Protected Areas (MPAs) - The Mediterranean Sea

Ibrahim Boubekri

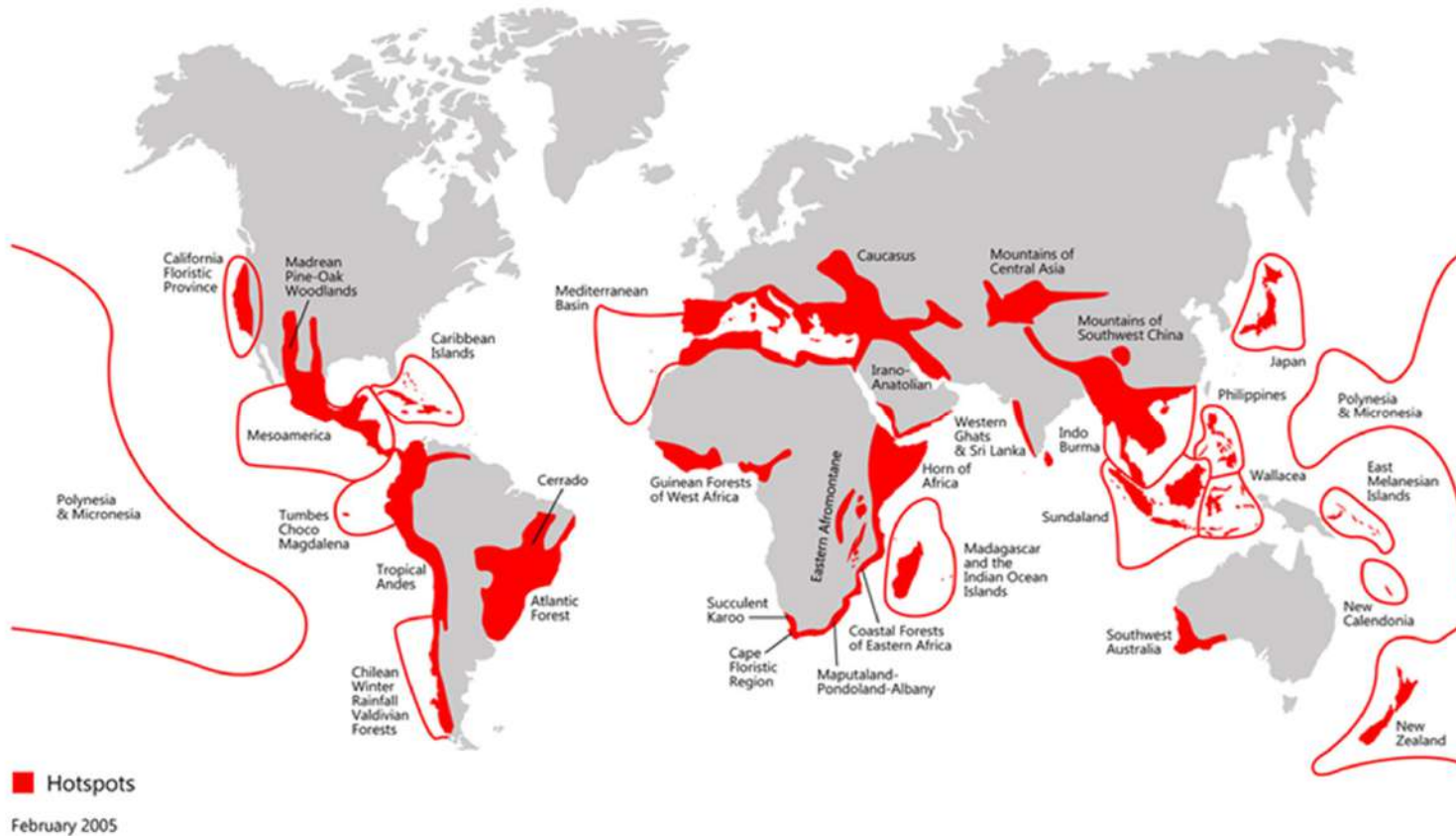
Leibniz Institute for Baltic Sea Research, Warnemünde, Germany

The background of the slide is a high-angle photograph of a rugged, rocky coastline. In the foreground, there are several pine trees. The middle ground shows a steep, rocky cliffside covered with sparse green vegetation and more pine trees. At the bottom of the frame, a small, crescent-shaped bay with exceptionally clear, turquoise water is visible, surrounded by the same rocky terrain. The sky is a clear, pale blue.

Overview

- 1. The Mediterranean Sea**
- 2. Status of MPAs in the Mediterranean Sea**
- 3. Designations and Governance of Mediterranean MPAs**
- 4. Means for effective management of Mediterranean MPAs**
- 5. Conclusions**

1. The Mediterranean Sea *A biodiversity hotspot*



The Mediterranean Basin is the second largest hotspot in the world.

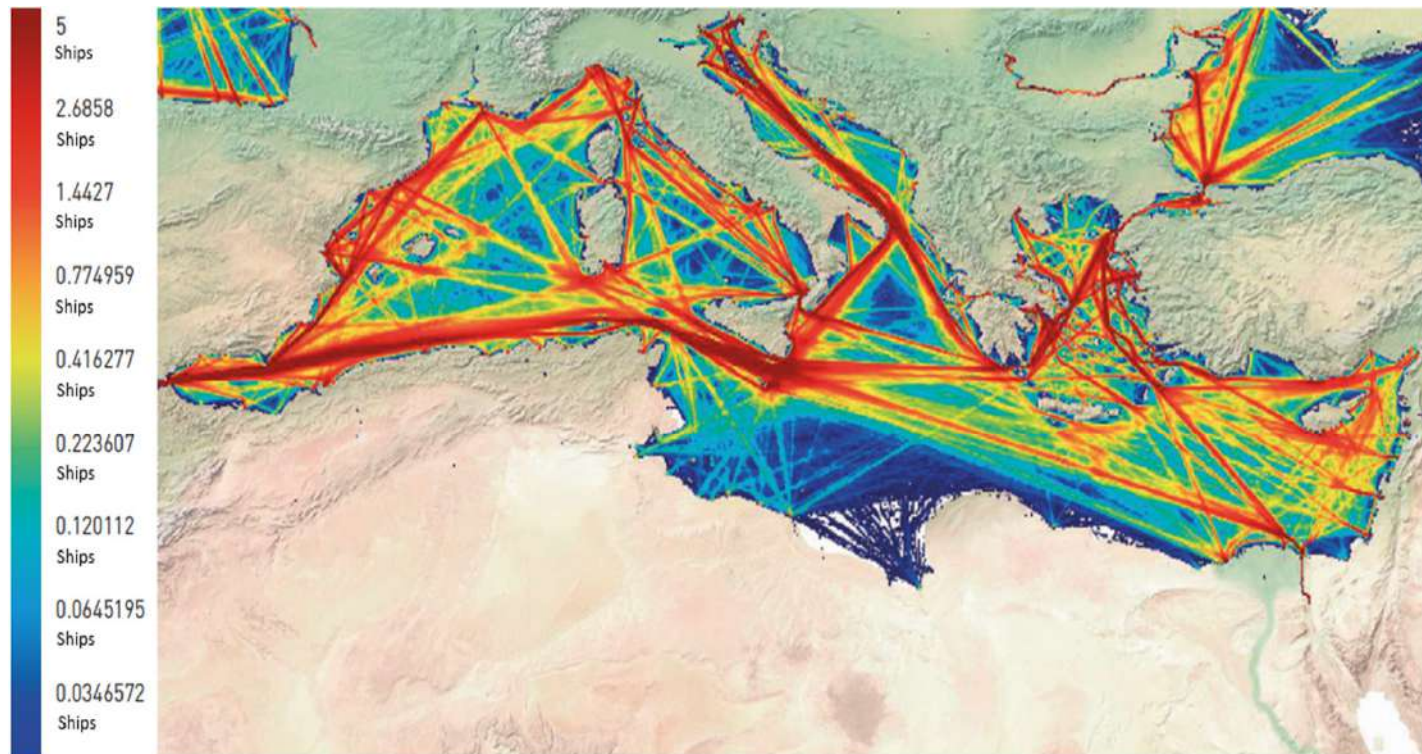


This makes it a global priority for conservation.

Hotspot: “Area featuring *exceptional concentrations of endemic species* and experiencing *exceptional loss of habitat*” Myers (1988)

1. The Mediterranean Sea

A sea under high pressure: Maritime traffic



➤ **1/3** of global maritime traffic

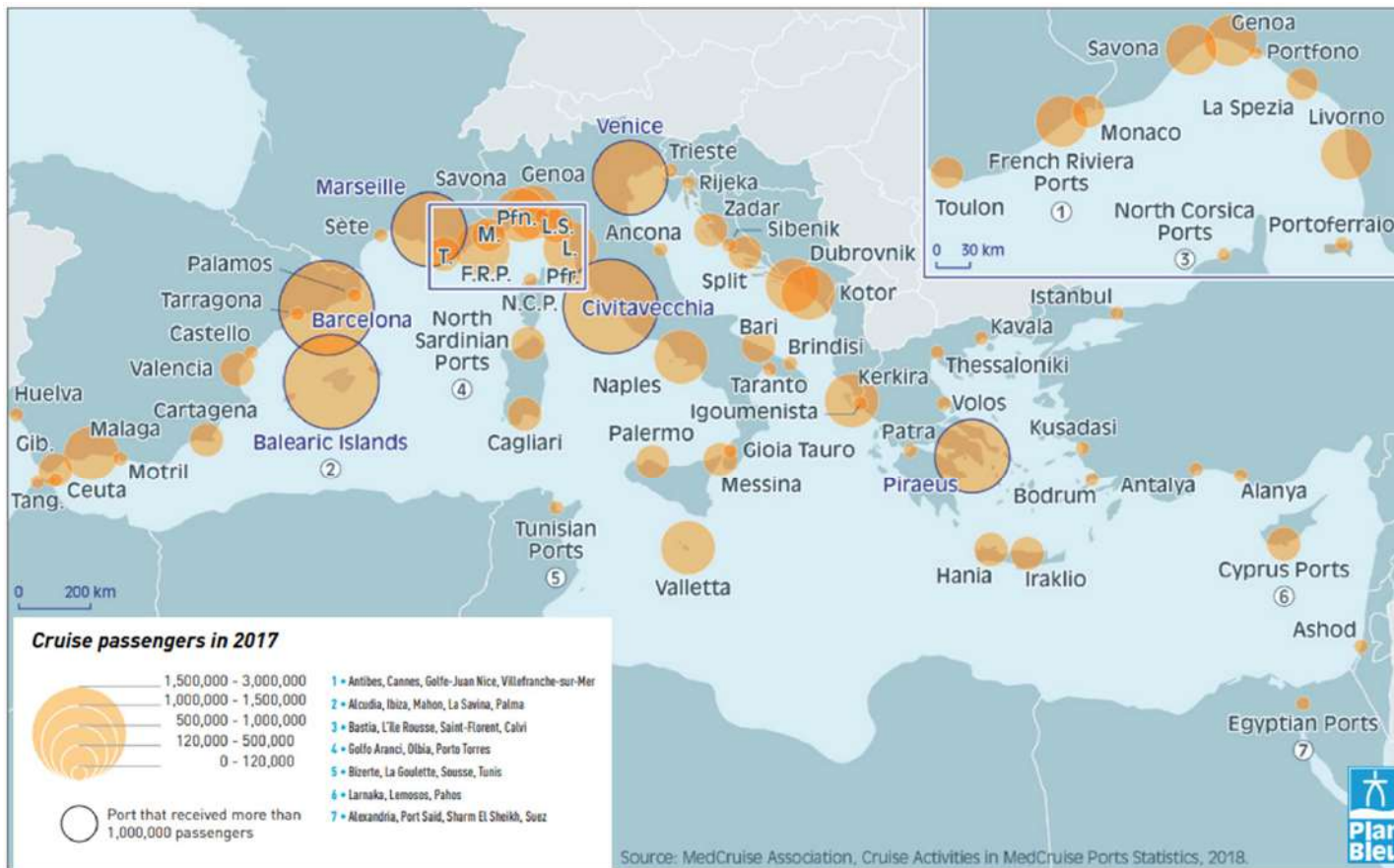
Traffic density in the Mediterranean Sea Area

Source: INERIS, 2019

Source: UNEP/MAP and Plan Bleu (2020)

1. The Mediterranean Sea

A sea under high pressure: Coastal tourism



➤ **1st** world tourist destination and **2nd** biggest cruising region in the world

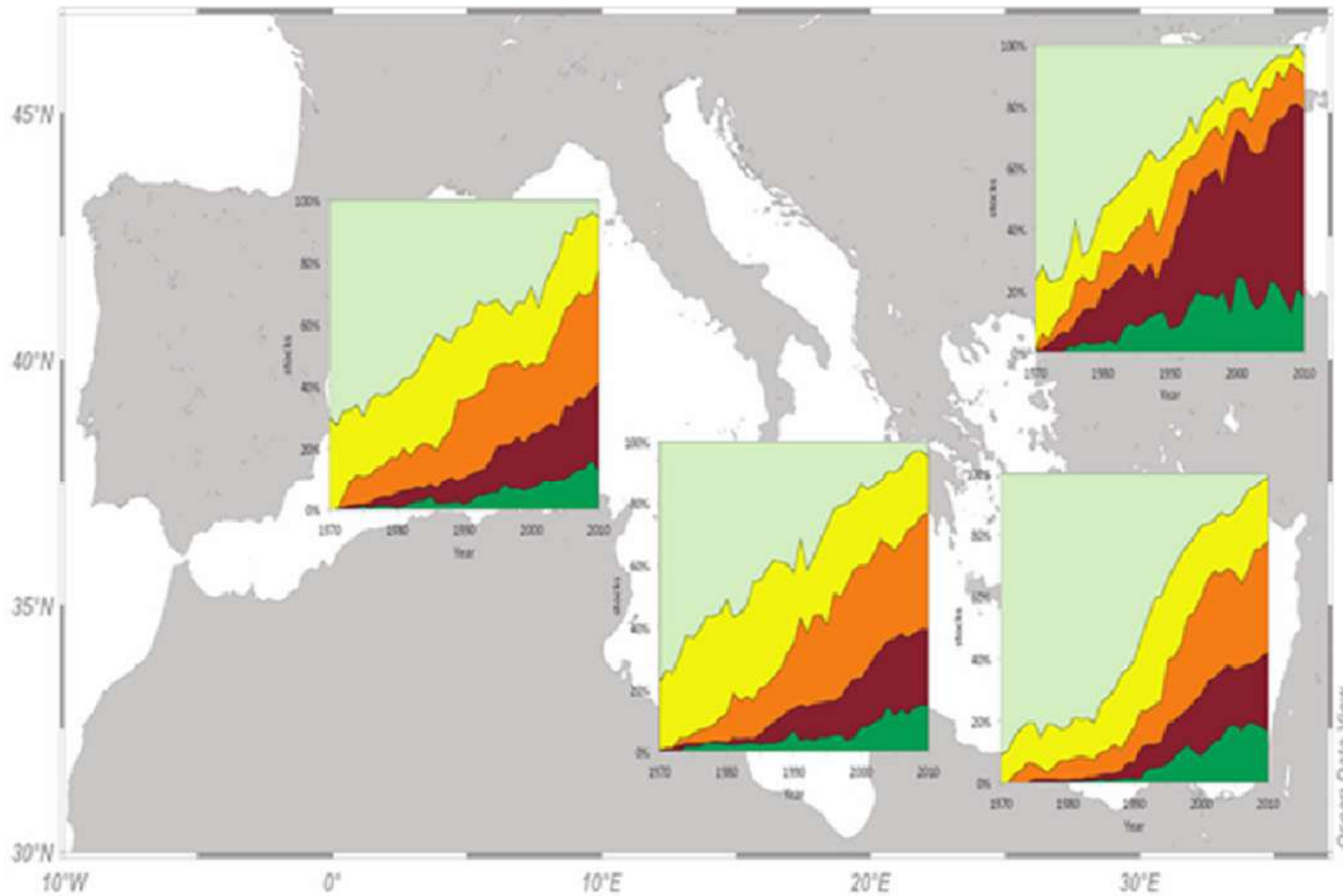
Cruise passengers per cruise call in the Mediterranean, 2017

Source: MedCruise Association, 2018

Source: UNEP/MAP and Plan Bleu (2020)

1. The Mediterranean Sea

A sea under high pressure: Natural resources exploitation

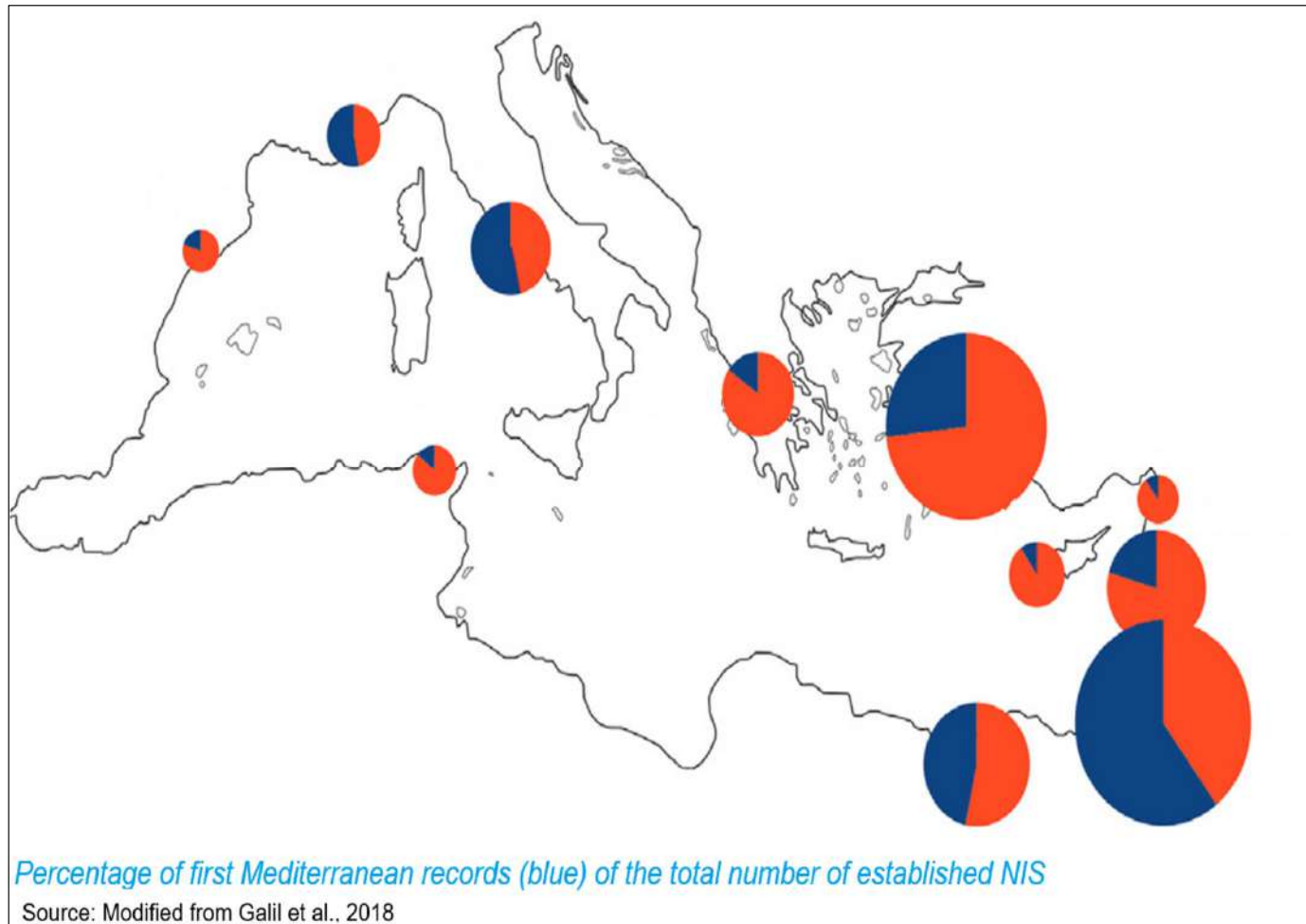


Source: FAO, 2022

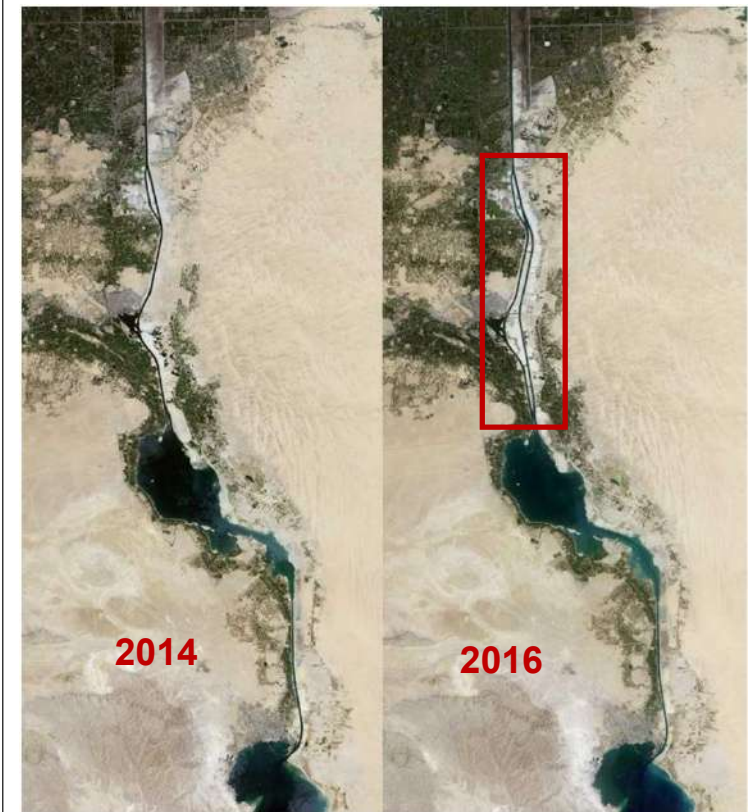
- Overexploited resources, **73%** of overexploited fish stocks in 2020

1. The Mediterranean Sea

A sea under high pressure: Non Indigenous Species (NIS)



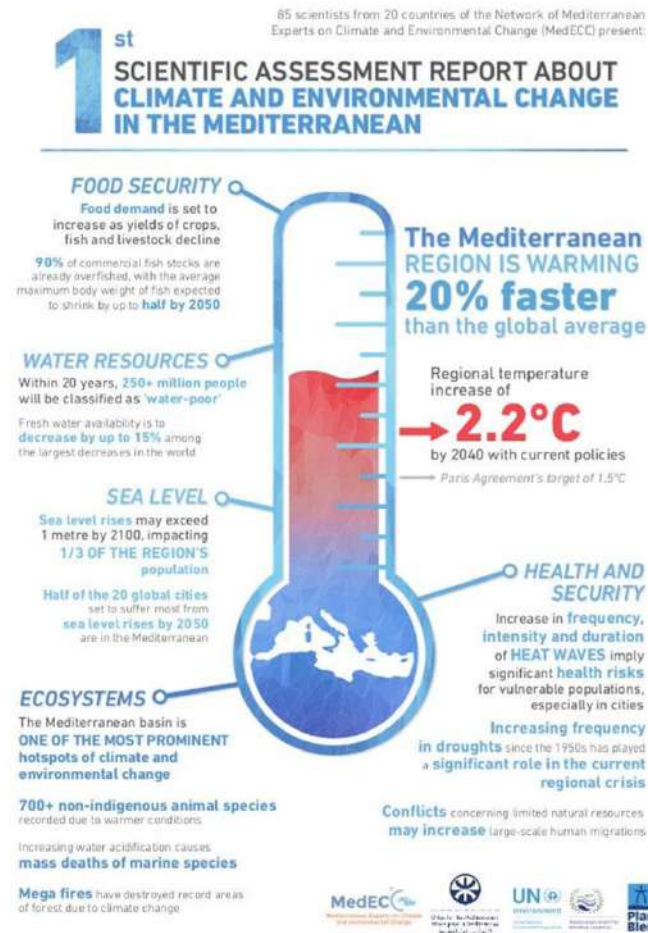
- More than **700** multicellular non indigenous species (NIS)



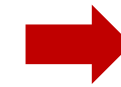
In red, the fraction of NIS most likely introduced via the Suez Canal

1. The Mediterranean Sea

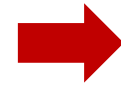
A sea under high pressure: Climate change



Source: MedECC, 2020



The Mediterranean region is warming 20% faster than the globe average.



Sea level rises may exceed 1 meter by 2100, impacting 1/3 of the region's population.



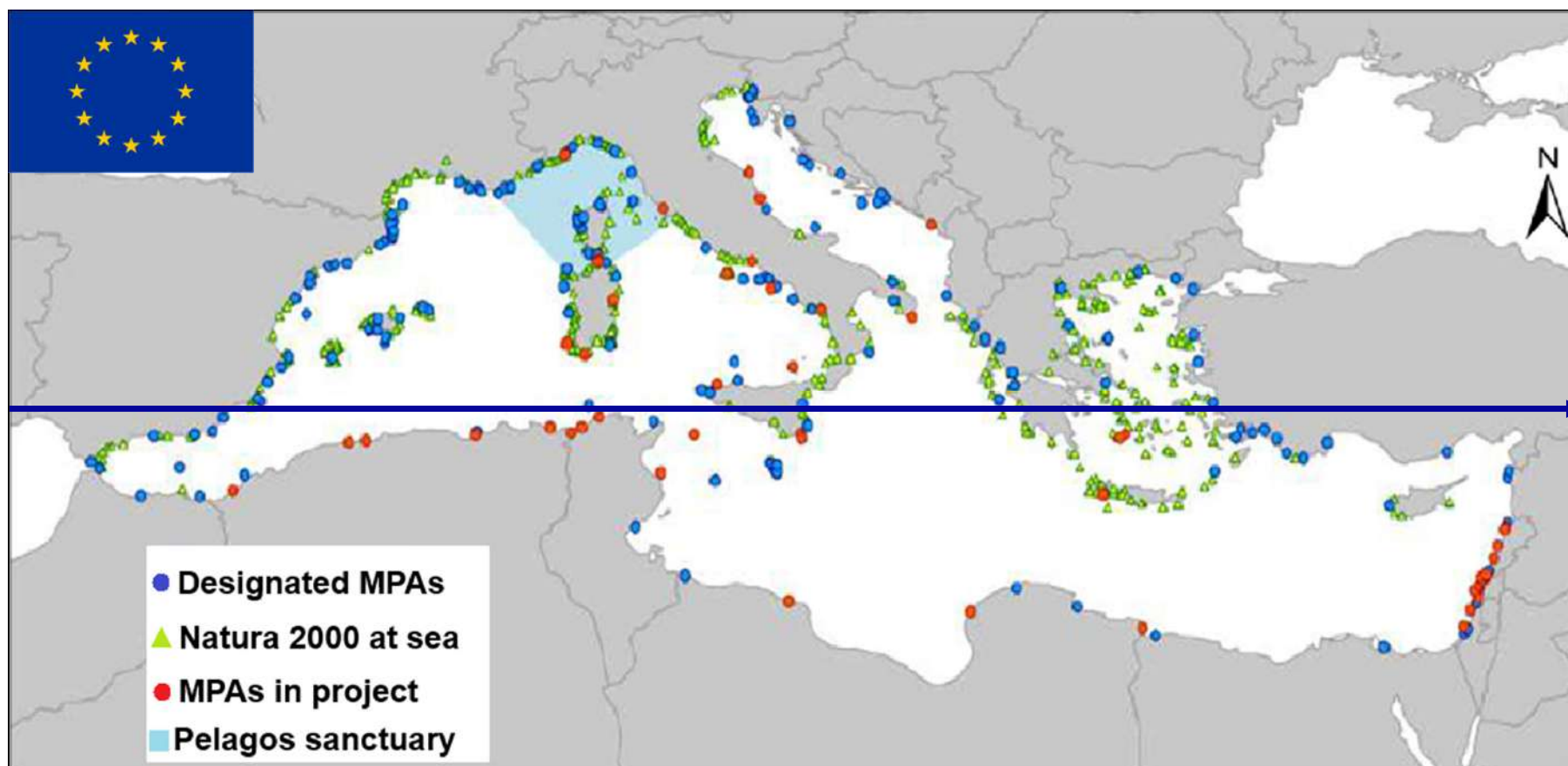
1. The Mediterranean Sea

The legal and institutional framework

Level	Legal/Institutional instrument
Global (International)	<ul style="list-style-type: none"> ➤ The Convention on Biological Diversity (CBD, came into force in 1993) ➤ The Sustainable Development Goals (SDG 14, adopted in 2015) ➤ The Kunming-Montreal Global Biodiversity Framework (KM-GBF, adopted in 2021)
Regional (Intercontinental)	<ul style="list-style-type: none"> ➤ The United Nations Environment Programme - Mediterranean Action Plan (UNEP/MAP, adopted in 1975) ➤ The Barcelona Convention (adopted in 1976, amended in 1995)
European Union (UE) (Continental)	<ul style="list-style-type: none"> ➤ The Habitats Directive (adopted in 1995) ➤ The Water Framework Directive (adopted in 2000) ➤ The Marine Strategy Framework Directive (MSFD, came into force in 2008) ➤ The Directive establishing a framework for Maritime Spatial Planning (adopted in 2014) ➤ The EU Biodiversity Strategy for 2030 (published in 2020)

2. Status of MPAs in the Mediterranean Sea in 2020

The state of the art



The system of Mediterranean Marine Protected Areas (MPAs) in 2020. Source: MedPAN and UNEP/MAP-SPA/RAC (2023)



3. Designations and Governance of Mediterranean MPAs

Coverage goal



- ➔ Protecting 10% of the world's oceans by 2020.
- ➔ Ecologically representative, well-connected, and effectively managed MPAs.

➤ Up to **January 2020**, there were **1,087** officially designated MPAs in the Mediterranean Sea, covering a surface area of **209,303 km²** and representing **8.3%** of the Mediterranean Sea.

- ➔ **The 10% coverage goal set by Aichi Target 11 has not been reached by 2020.**
- ➔ **The goal of representativity has also not been achieved, as over 97% of Mediterranean MPAs are located within EU waters.**



3. Designations and Governance of Mediterranean MPAs *Management goal*

- **30%** of Mediterranean MPAs are **supervised** by a **national authority**.
- **27%** have a **governance council**.
- **11%** reported having a **co-management system** in place.
- **28%** reported operating on the principle of **consultation**.
- **5%** reported having **no type of co-management** in place.

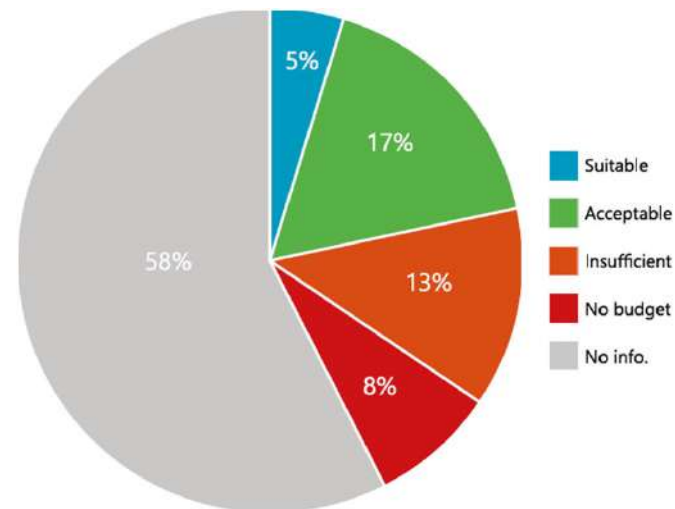
➔ **Co-management *stricto sensu* remains a fair minority practice in national MPAs in the Mediterranean, but MPAs generally involve local stakeholders via consultation processes.**

➔ **The need for implementing participatory governance models to promote greater buy-in and support for conservation efforts.**



4. Means for effective management of Mediterranean MPAs *Financial resources*

Recently, in the Mediterranean Sea, institutions at all levels have shifted their focus from the **coverage goal** (i.e., protected surface area) to the **effectiveness of conservation measures**.



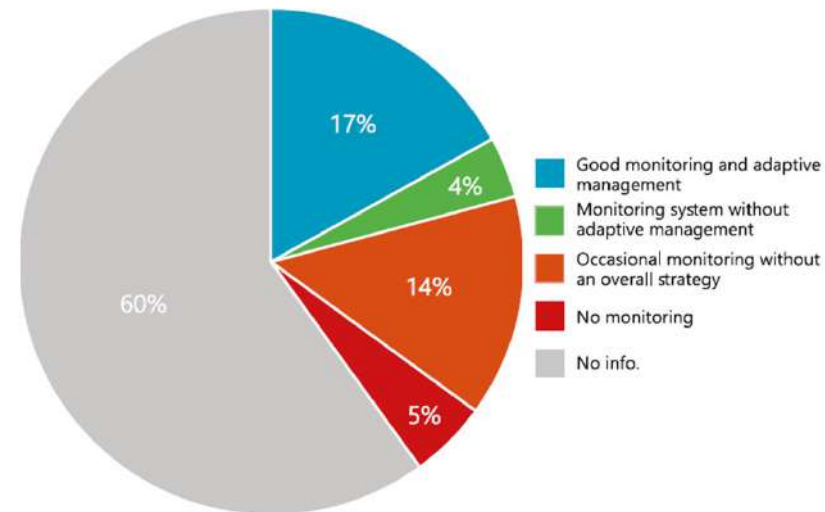
Do MPAs have suitable budget?

In 2020, a budget which is considered to be suitable is available for only 5% of national MPAs.



4. Means for effective management of Mediterranean MPAs *Monitoring*

The implementation of a good and regular **monitoring system** is essential to assess management effectiveness.



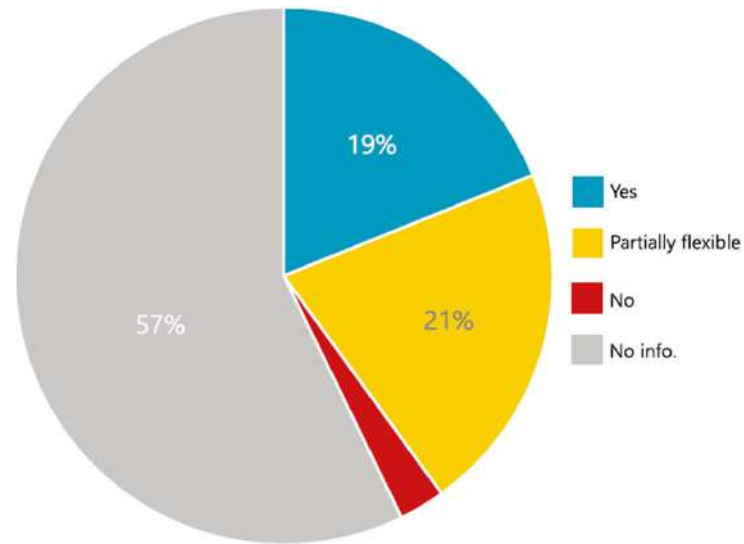
Do MPAs have a monitoring system?

Only 17% of MPAs consider that a good monitoring and evaluation system exists, is implemented and is used for adaptive management.



4. Means for effective management of Mediterranean MPAs *Legislative framework*

MPAs also need **strong legislative frameworks** and **clear management tools** to function properly.



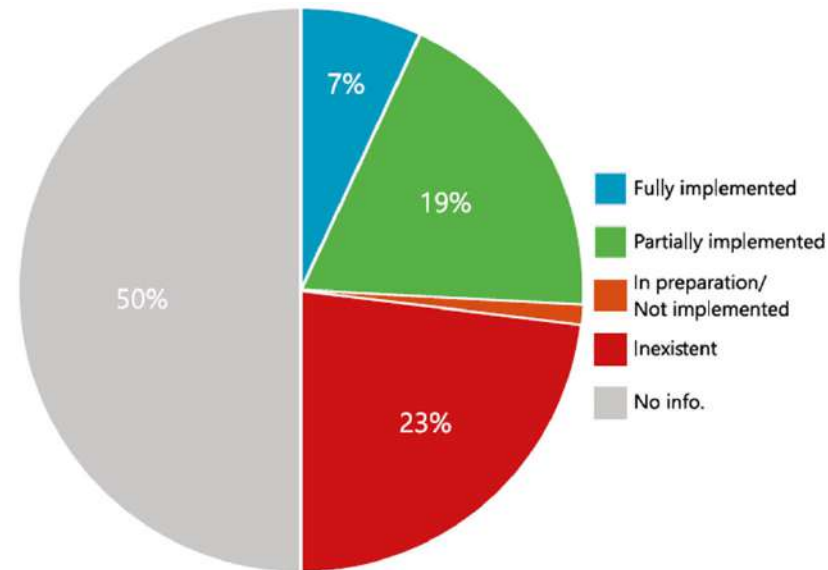
Do MPAs have suitable regulations?

Data show the legislation to provides sufficient flexibility in 19% of Mediterranean MPAs (21% from EU countries and 11% from non-EU countries).

Source: MedPAN and UNEP/MAP-SPA/RAC (2023)



4. Means for effective management of Mediterranean MPAs *Management plan*



Do MPAs have a management plan?

A management plan is fully implemented in only 7% of the national MPAs, whilst it is partially implemented in 19%.

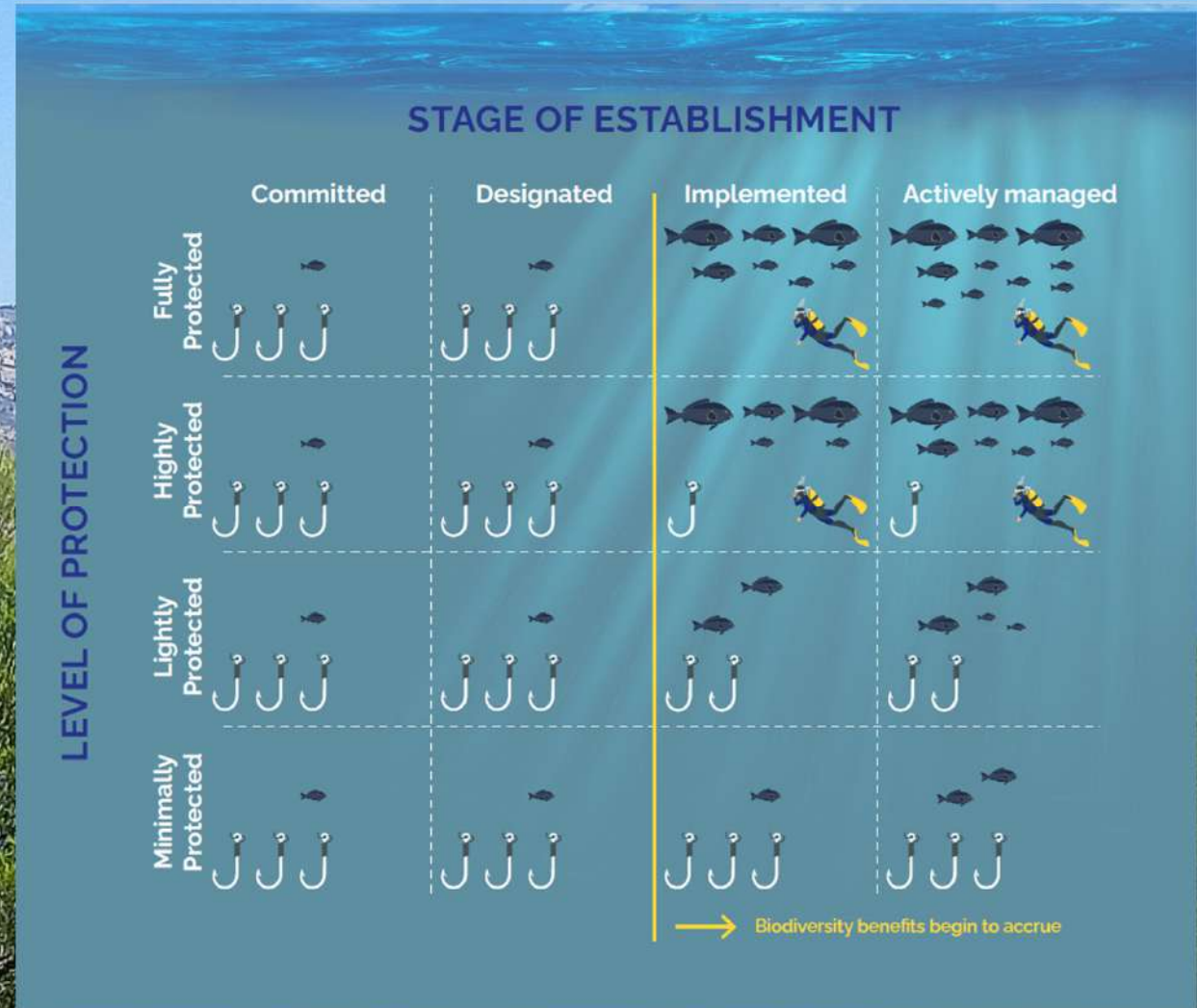
➔ Many Mediterranean MPAs still lack the basic means needed for effective management and equitable governance.

Source: MedPAN and UNEP/MAP-SPA/RAC (2023)

5. Conclusions

Conservation outcomes are not guaranteed by the designation of MPAs alone:

- The establishment of an MPA can go through various stages before effective management is implemented.
- The social-ecological outcomes of an MPA will ultimately depend on its financial and human resources, sustained monitoring, flexible and enforced regulations, and an implemented management plan.



Matrix based on LEVEL of protection and STAGE of establishment of MPAs
Source: Grorud-Colvert (2021)

In order to achieve significant protection outcomes at the Mediterranean Sea, a more equitable and representative system of MPAs must be implemented, actively managed, and providing a high level of protection.

Thank you for your attention!

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EFFECTIVE
PROTECTED AND RESTORATION MANAGEMENT • MEDITERRANEAN SEAS

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