UNIVERSITY OF THE AEGEAN
DEPT OF MARINE SCIENCE

NATIONAL MARINE
PARK OF ZAKYNTHOS

CONTRIBUTION OF MPAs TO THE IMPLEMENTATION OF Marine Spatial Planning (MSP) DIRECTIVE: *Lessons learnt from the case of the National Marine Park of Zakynthos*

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11 Πανελλήνιο Συμπόσιο Ωκεανογραφίας + Αλιείας
ΥΔΑΤΙΝΟΙ ΟΡΙΖΟΝΤΕΣ
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MPAs and MSP: *Conceptual issues*

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MPAs are considered to be a typical example of MSP implementation

Human use & activities

Protection and conservation objectives

Management objectives & plans

- ❑ **Ecosystem based approach**
- ❑ **Sustainable development**
- ❑ **Precautionary principle**
- ❑ **Adaptive management**

Management implementation

Spatial & temporal regulations

Funding?

Planning

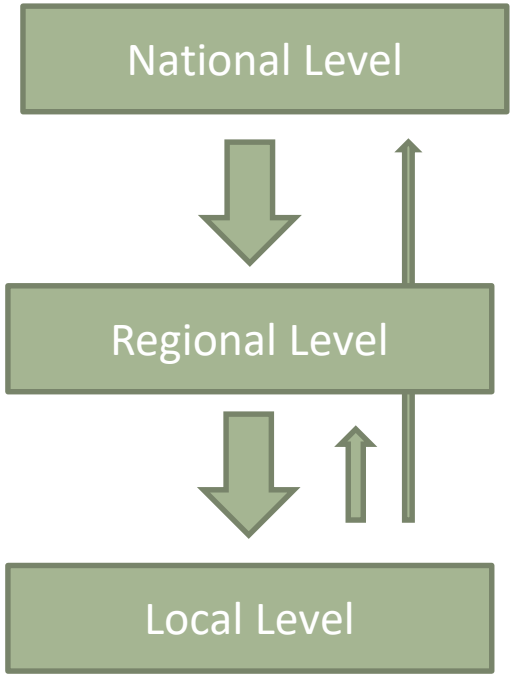
Enforcement

Evaluation

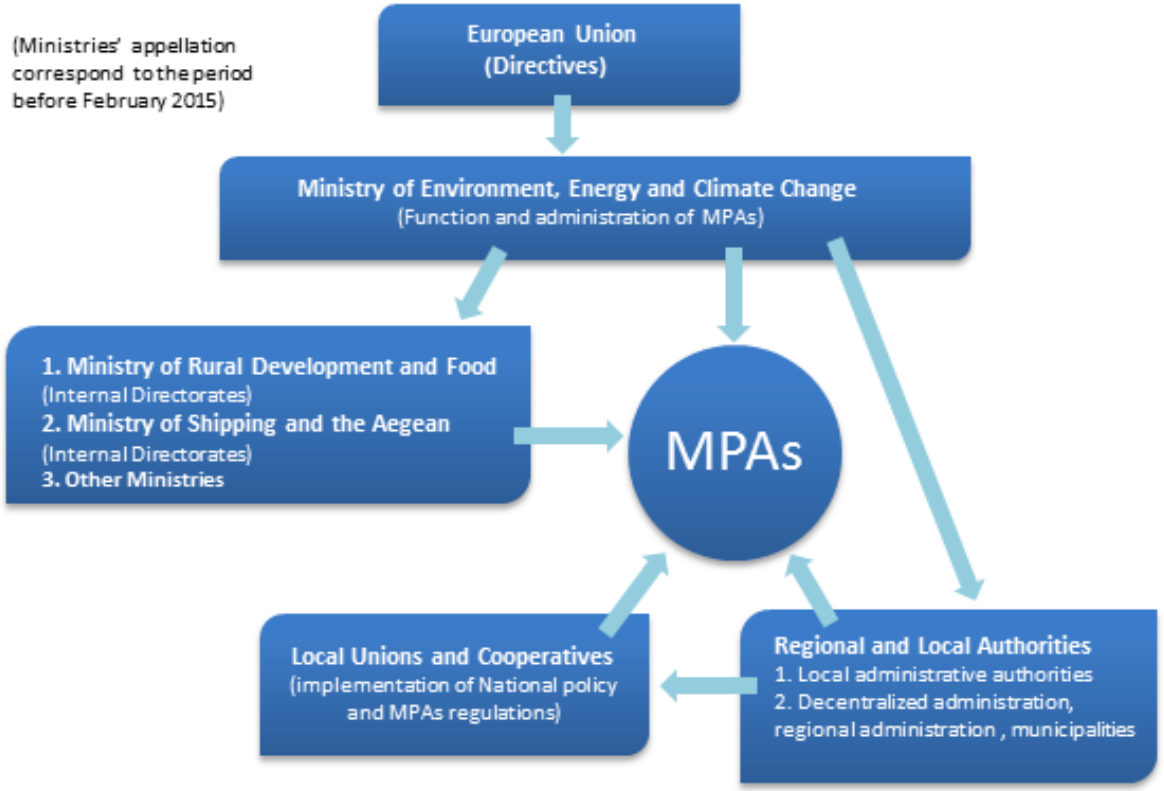
MPAs and MSP: *Governance*

MPAs governance is rather complex

Management Levels



MPAs' governance/management is rather complex due to the multiple levels of governance as well as the difficulty in the coordination of the numerous agencies, offices, institutions and stakeholders that are involved in the governance and management processes.



MPAs and MSP: *N.M.P.Z . main facts*

MSP in the MPA of NMPZ

PROTECTED AREA of NMPZ

Marine area : 89 km^2
- Terrestrial area : 14.2 km^2
- Peripheral area: 31 km^2
- Natura 2000: 2 Site of Community interest
  1 Site Special Protected Area
- Priority species : Loggerhead Sea Turtle (*Caretta caretta*), Monk seal (*Monachus monachus*), Cory's shearwater (*Calonectris diomeda*), Eleonora's falcon (*Falco eleonora*)
- Priority habitats: Posidonia beds, Calcareous fens with *Cladium mariscus*
- Number of Loggerhead Sea Turtle nests (average): 1200
- Importance of nesting activity: Zakynthos hold about 35-40 % of the Greek nests and about 20 % of the nesting effort in the Mediterranean

MANAGEMENT AGENCY (established in 2000)
- Administrative and scientific staff : 13
- Wardens: 19 + 23 seasonal wardens
- Management Board : 1 president, 10 members

MPAs and MSP: *N.M.P.Z . main facts*

MSP in the MPA of NMPZ

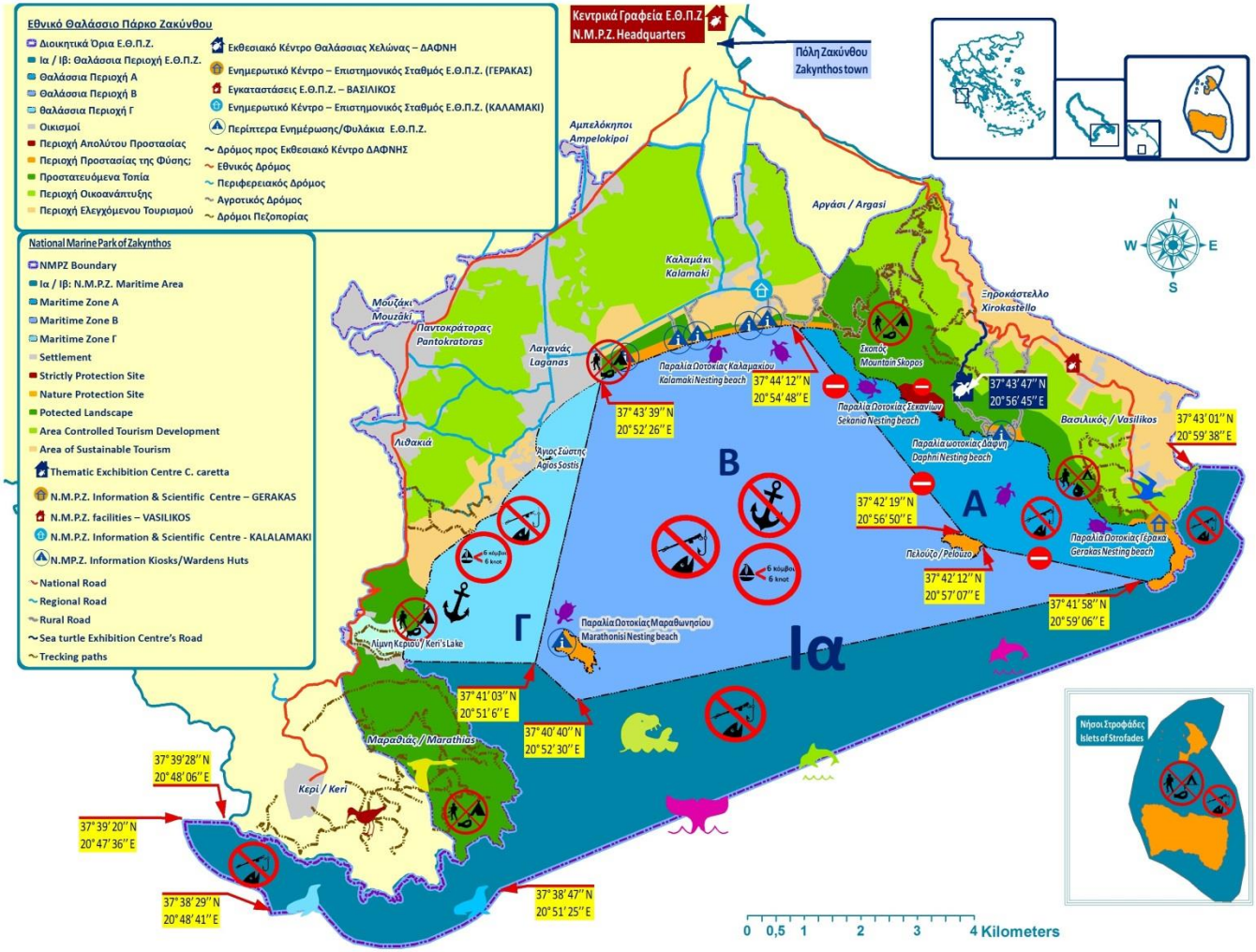
Spatial and Temporal Zoning scheme

Conservation objectives (e.g. carrying capacity according to the species, habitats, anthropogenic pressures)

Regulation of human Activities (e.g. Tourism Fishing, Urbanization Shipping)

Favourable Conservation Status Sustainable development

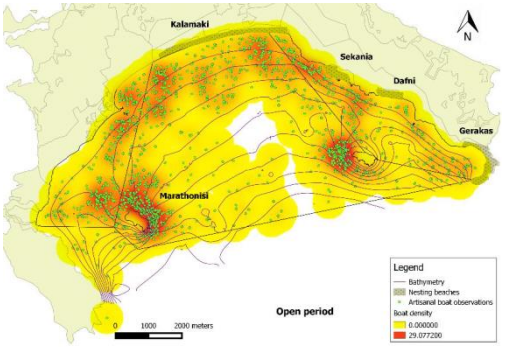
Spatial & temporal Regulations Management Measures



MPAs and MSP: *adaptive management*

MSP in the MPA of NMPZ

Fisheries



Legislation

All Zones, all year round: permanent ban of trawlers, purse seiners, recreational and spear fishing

Zone A: no boating activity, no-take area for 6 months/year (no fishing activity from May to October).

Zone B: boating activity with a speed limit of 6 knots, no anchoring permitted.

Zone C: boating activity with a speed limit of 6 knots, anchoring permitted.

Governance

Fishermen are participating in the Management Body of the MPA and are involved in fish stock monitoring

Enforcement

Human & material resources, port police authority

Monitoring

Human & material resources, research institutes, universities

Planning

5 year Management Plan to be renewed

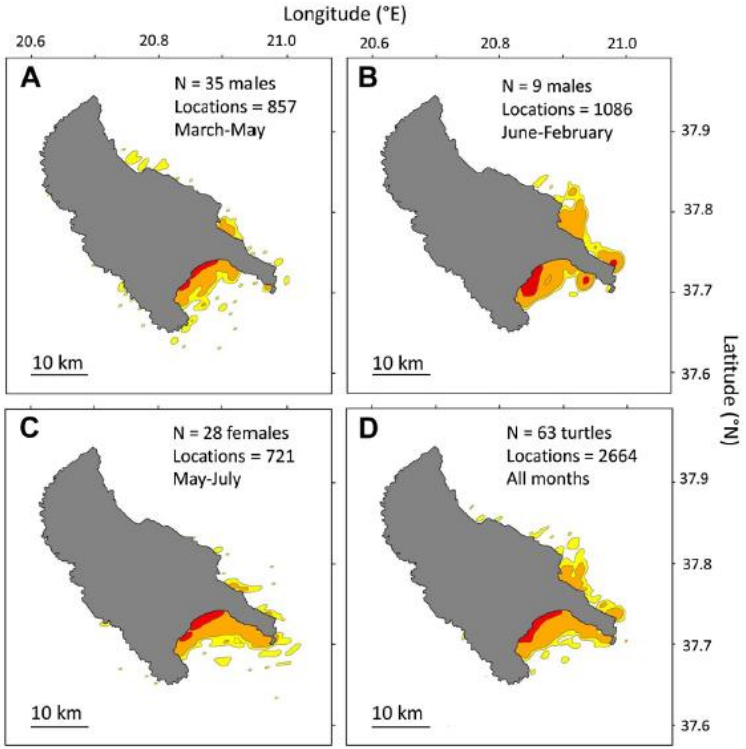
Funding ?

MPAs and MSP: *adaptive management*

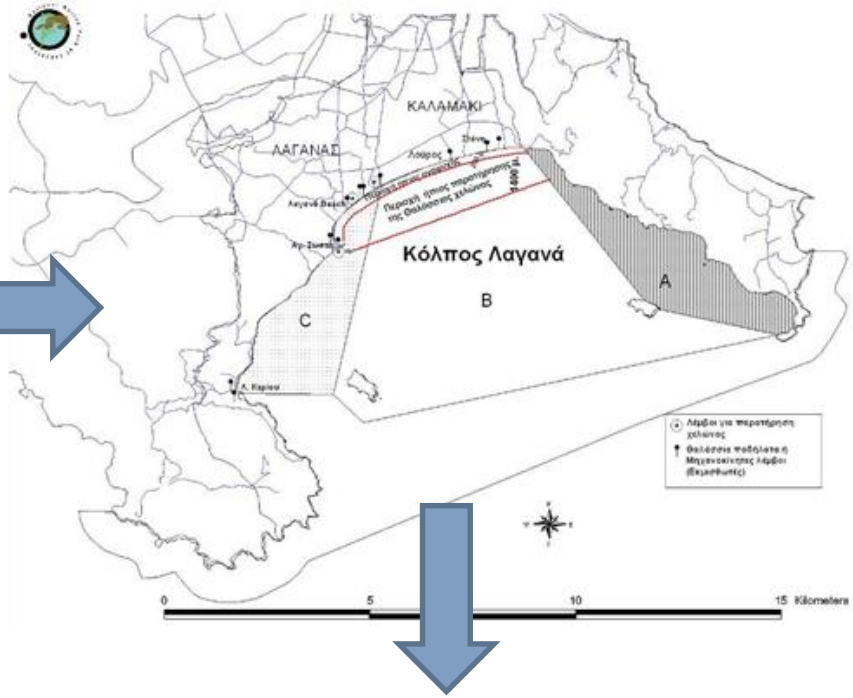
MSP in the MPA of NMPZ

Breeding & Resting Marine Area of *Caretta caretta*

Scientific Monitoring



Management measures



Stakeholders Involvement

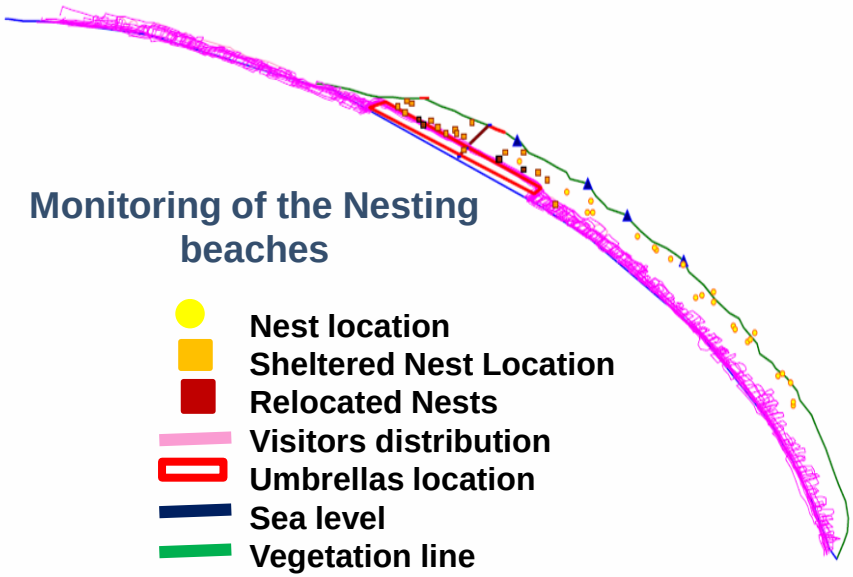
Endorsed by the NMPZ
NATIONAL MARINE PARK OF ZAKYNTHOS
ΕΘΝΙΚΟ ΘΑΛΑΣΣΙΟ ΠΑΡΚΟ ΖΑΚΥΝΘΟΥ
Ειδικός Συνεργάτης ΕΘΠΖ

Cooperation with specific groups of in-water turtle watching businesses, and incentives to follow the regulations by signing codes of conduct & eco-label

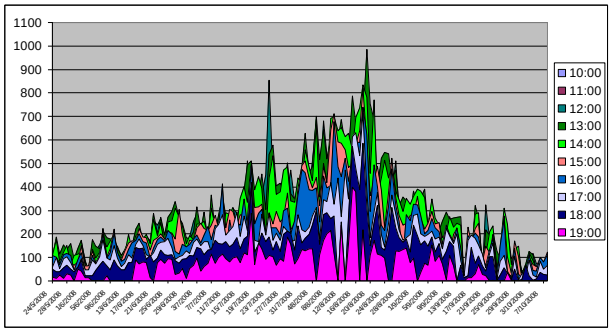
MPAs and MSP: *adaptive management*

MSP in the MPA of NMPZ

Management of *Caretta caretta* Nesting Beaches



Carrying capacity according to law = 350 persons at the same time on the nesting beach



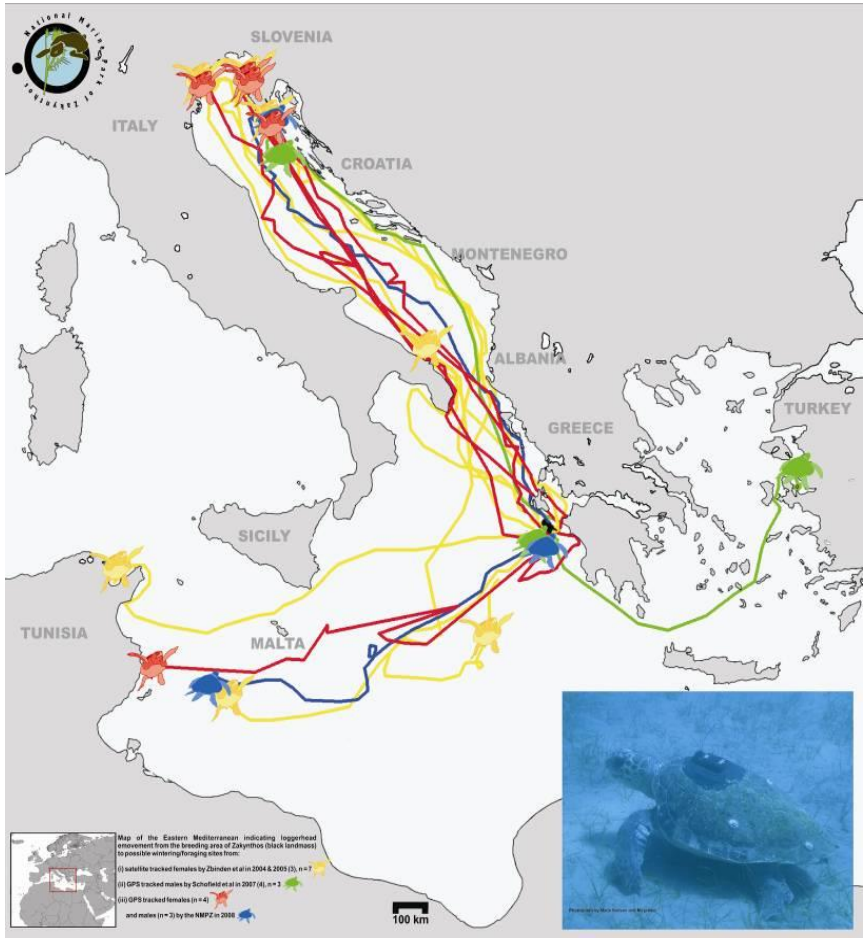
Considering the number of visitors at the same time, the total number of visitors and nests' location, the visitors' length of stay on the beach is reconsidered each week.

Daily Based Adaptive Management → **Daily Monitoring - Regulation of human use** → **Favourable Conservation Status**

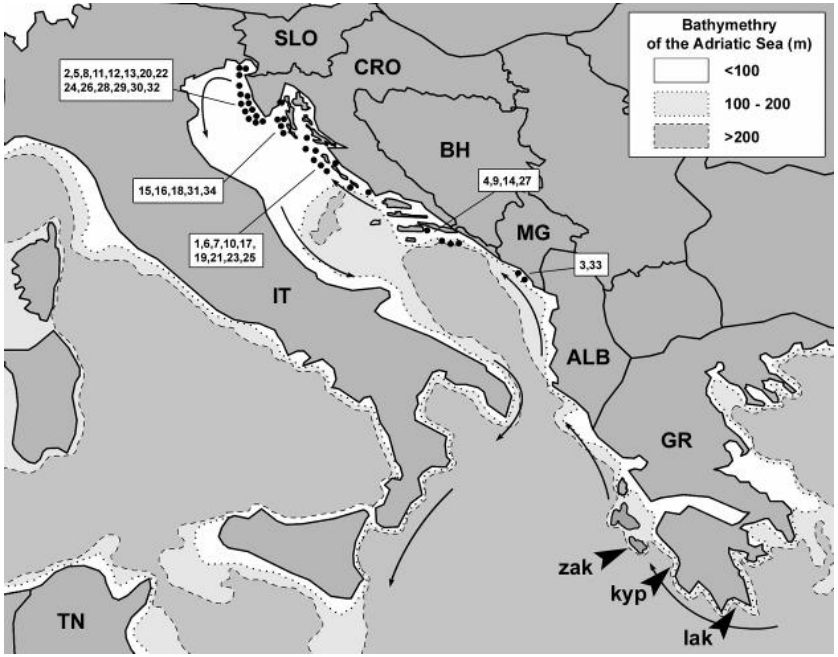
MPAs and MSP: *Ecological coherence*

MSP in the MPA of NMPZ

Highly mobile species

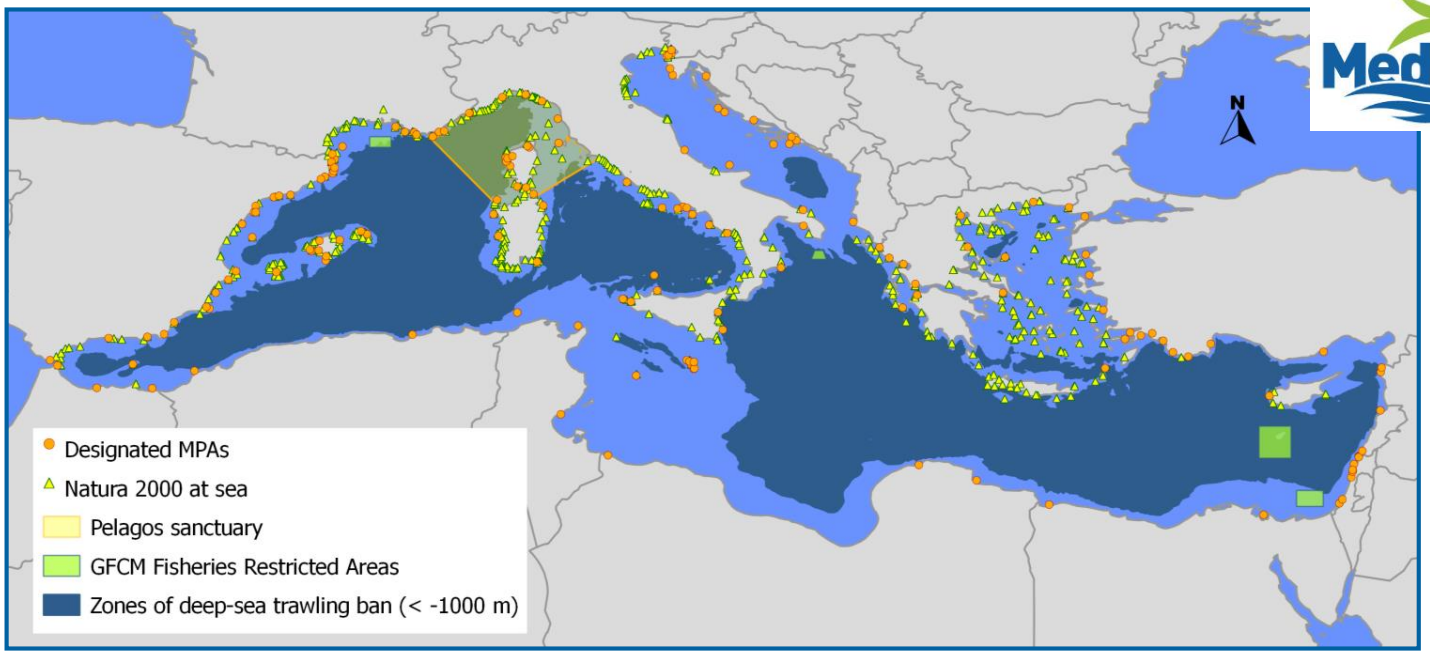


Need for large scale integrated management of species & habitats



MPAs and MSP: *Importance of MPAs*

MPAs in the Mediterranean



- **170 designated MPAs**
- **507 Natura 2000 sites**
- **4 Fisheries Restricted Areas (GFCM)**
- **Zones of deep-sea trawling ban**

4.56% of the Mediterranean Sea total area ***(1.08% without Pelagos sanctuary)***

5.26% of the Med. Sea total area

MPAs and MSP: *Challenges*

Future Perspectives

- Experience from the function and operation of MPA will benefit to the implementation of MSP
- Precautionary principle should be implemented in every planning procedure regarding the current and future threats (e.g. climatic change effects, pollution, habitat loss, viruses)
- Governance should consider both bottom up and top down approach in order to enhance planning and management effectiveness of human activities in a sustainable way
- Planning of marine uses should be based on state of the art technological advances (e.g. satellite data, telemetry, databases, data collection, on line applications for scientific purposes)
- MSP should be implemented at regional seas level (e.g. Aegean, Adriatic sea), thus ensuring ecological coherence
- Ecosystem based approach should ensure the sustainable development of coastal and marine areas included in the marine spatial planning strategy
- Flexibility is needed in the planning process in order to deal with the constantly changing environmental, ecological, socio - economic parameters which have an immediate impact on both human and natural global environment