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# Workshop document of the MEG workshops, 6th of May, Brussels

**Workshop report of Marine Expert Group**

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**Summary**
May 6th 2014, a workshop was organized for the Marine Expert Group (MEG) in Brussels by the consortium of Deltares, AZTI, SYKE and HCMR, in cooperation with DG ENV. The aim of the workshop was to discuss both the criteria definitions and classification method developed in Task 1 of the project, 'Analyse and compare criteria used by Member States, in the context of Regional Sea Conventions (RSC) and by third parties for establishing coherent, adequate and representative networks of marine protected areas (MPAs). In this document the main points discussed during the workshop as well as the preparatory interviews and comments received on the Task 1 background report are laid down.

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final

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# 1 Introduction

This report was produced as the deliverable under Task 2 of the service request “Develop and test methodology and criteria for assessing coherence, adequacy and representativity of European networks of marine protected areas”.

The objectives of this project are to:

a. Provide operational definitions of primary criteria such as coherence, adequacy and representativity as identified by the MSFD art. 13.4 for assessing European networks of marine protected areas;
b. Provide operational definitions of additional criteria such as replication, connectivity and management effectiveness;
c. Develop and test a methodology for assessing whether European networks of marine protected areas are coherent, adequate and representative, as per the operational definitions mentioned above;
d. Develop an EU guidance document for assessing coherence, adequacy and representativity across the four marine regions and associated sub-regions, and organise a debate with the relevant Member States Marine Expert group.

On Tuesday the 6th of May 2014, a workshop was organized for the Marine Expert Group (MEG) in Brussels by the consortium of Deltares, AZTI, SYKE and HCMR, in cooperation with DG ENV. The aim of the workshop was to discuss both the criteria definitions and classification method developed in Task 1 of the project, ‘Analyse and compare criteria used by Member States, in the context of Regional Sea Conventions (RSC) and by third parties for establishing coherent, adequate and representative networks of marine protected areas (MPAs).’

# 2 Preparation phase

## 2.1 Speakers

A series of speakers from the Regional Sea Conventions was invited to present:

1. A short introduction on the area (region) and its MPAs.
2. The criteria on which these MPAs are assessed on a national and regional scale.
3. Governance and important stakeholders in the area.
4. Best practices in terms of assessing coherence, representativeness and adequacy on a regional scale.

Furthermore, two non-EU speakers were invited to present lessons learned from outside of the EU, which could benefit the process of assessing coherence of an MPA network in the EU.

The invited speakers were approached through the relevant networks of the consortium partners, as well as through suggestions from DG ENV and the EEA. The final list was made based on availability.

## 2.2 Interviews

In preparation of the workshop, three interviews were conducted with representatives of the different RSCs within the EU. These interviews provided a first idea of the possible sensitivities around the topic of an MPA network and the criteria defined in Task 1 and aided with drafting the agenda as well as providing content (see appendix B for a list of the questions posed and appendix C).

## 2.3 Criteria

The criteria drawn up in the draft deliverable under Task 1 coherence, adequacy and representativity have been presented in a diagram (Figure 3.1) which provided the basis for the discussions on the criteria and the methodology during the workshop.

# 3 The workshop

The workshop was attended by about 40 people including representatives from Regional Sea Conventions, Member States, networks and stakeholder organisations (see appendix A for the list of attendees).

The majority of the presentations and discussions took place in a plenary session (see appendix D for the agenda, appendix E for the presentations and Appendix A for the attendance list). After lunch there was approximately one hour in which the group was divided into two sessions: one on assessment criteria lead by Raul Castro and one on the assessment method, led by Samuli Korpinen.

## 3.1 Opening

At 9.30 the session was opened by Joachim d'Eugenio followed by Juan-Pablo Pertierra, Fotios Papoulios and Cor Schipper, the chairs of the day. It was emphasized that the reason the MEG was invited to this workshop was that it should support the implementation of N2000 in the marine environment. The MEG is also the main group for addressing MPAs under the MSFD.

## 3.2 Presentations by non-EU speakers

*Mark Carr of the University of California* gave a presentation on a network of MPAs in the state of California, USA. In the Californian process the stakeholders were responsible for creating the network which was then evaluated by the scientists. They had several iterations to come to a division of state waters into no-take and take zones up to 5 miles off-shore. It was a single sector user process in which only fisheries were taken into account. The process of assigning the MPA was based on the species that were aimed to be protected, mainly fish, and the larval dispersal through a model was used as a guideline in determining the spacing between the MPAs. The biological responses of the installation of the MPA network are currently being monitored, so at this moment it is hard to say what the effect of the MPA is.

*Mat Vanderklift of CSIRO* in Perth, Australia, presented his lessons learned from MPAs in Australia, which were not set up to be a network. The most important question to ask in installing an MPA is what do you really want to achieve with the MPA? Do you want to conserve specific species, or is your aim to safeguard the ecosystem services that an area provides? In setting up the Australian MPAs, it was assumed that surrogates were efficient. To determine the effectiveness of the MPA, individual fish were tagged. Result showed that the MPA was working well for some species, but for some of the species they were most eager to protect it was not working very well. This probably has to do with the fact that fish move out of the MPA and then get caught by fishermen (compliance for the MPA is 98%). Furthermore, external factors, like heating events, can have a marked effect on an area, for which it is hard to foresee management measures unless management is done in an adaptive way.

In the *discussion* that followed several topics were raised. The objectives of a network should be that the whole is greater than the sum of the separate parts. Also objectives for the MPA network should be seen in the light of the larger context of the MSFD and that of the RSCs. Furthermore, it was asked whether there was a list available for the proxies used in the

Australian case and if they worked well. They seem to work well for algae and seagrass for example, but not as a proxy for fish.

### 3.3 Presentation by the project and the RSCs

At 11.45 *Raul Castro of AZTI*, Spain, presented the main outcomes of the draft deliverable under Task 1 of the project. The criteria defined here are demonstrated in Figure 3.1. Within the MSFD there is a need to define quality and quantity targets. The interpretation of some MSs is that they have to make 10% of marine environment into an MPA based on MSFD Article 13.4 (Note: Member States must identify marine protected areas other than those designated as Natura 2000 sites (cf. Article 13.4 and 13.5).

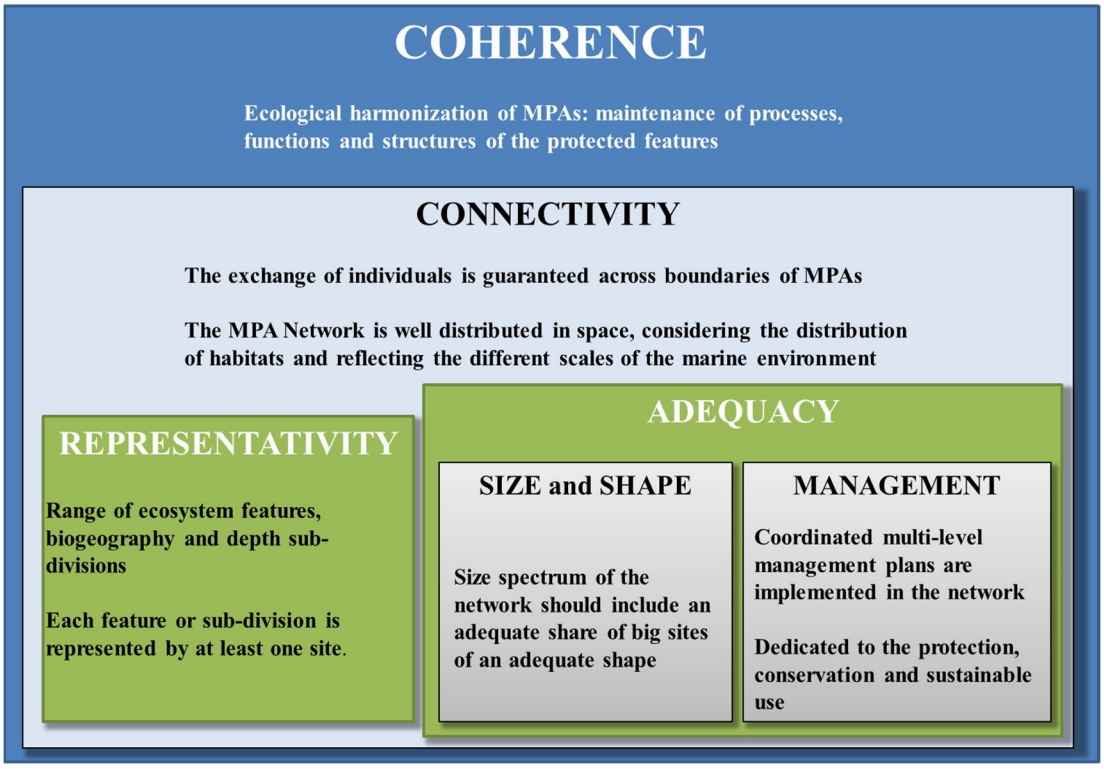


*Figure 3.1 Overview of the different criteria proposed in the draft report of the project and the relationships between them.*

*Jochen Krause of the Federal Agency for Nature Conservation*, Germany, provided an overview of the process around MPAs in Germany in the context of HELCOM and OSPAR. HELCOM and OSPAR should complete an ecologically coherent and well-managed network of MPAs together with the N2000 network by 2010. Under article 13.4 it is stated that spatial protection measures can be taken, which do not necessarily have to be MPAs. OSPAR has assessed coherence in its region and found that there were gaps in the high seas and offshore areas and a strong bias towards the coastal zones. HELCOM also has criteria to assess ecological coherence. Neither the HELCOM network nor the common network of BSPA (Baltic Sea Protected Area)/N2000 is considered coherent.

There was a *short discussion* here on targets and whether there is a need to have a species list of protected species. For OSPAR such a list exists which is based mainly on the features for which the MPAs have been designated in terms of their objective.

*Souha el Asmi from the RAC/SPA UNEP/MAP* and *Chloe Webster of MEDPan* together presented assessment criteria and feasibility for establishing coherent, adequate and representative MPA networks from a Mediterranean point of view. Here, about 700 MPAs have been evaluated (about 5% of the Mediterranean). A large part of the MPA area consists of the Pelagos sanctuary for marine mammals. Criteria for the assessment were based on the CBD from 2007. To assess connectivity surface currents and larval dispersal from groupers were used. Modelling needs to be coupled with genetic studies and the final currentology of an area should be looked at. A status report has been made of MPAs in the Mediterranean in 2012. A next status report should be published in 2016 and the Mediterranean has adopted a Roadmap to 2020 for regional level, for national level and local level.

In the *discussion* that followed, several topics were raised. The adequacy criterion was discussed in relation to management. Also it was discussed that the science should eventually lead to the incorporation of the MSFD and that one of the observations on the draft deliverable is that it seems that we are starting from scratch, whereas major progress has been made in the RSCs. How can we use this information?
At this stage the discussions were halted and the group broke for lunch.

### 3.4 Parallel sessions

At 14.00 the group was divided into two parallel sessions on assessment criteria (group 1) and assessment methods (group 2).
*In group 1* the main point of discussion was the target value. The main conclusions of the discussions were:

1. The 10% target value is a given by MSFD Art. 13.4, however the interpretation of what this means is not only related to MPAs but can also be achieved through different spatial measures. The point is what has to be 10%? The habitat, the species?
2. We should try to think in human pressures. How are the human pressures interfering with the ecosystem? The system has its own dynamics.
3. There is a need to start talking about ambitions first and later the quantitative targets, as well involving stakeholders in the process.

*In group 2* the session started with an exercise in which the attendees wrote down shortly what they would like to discuss in terms of assessment methods. The topics raised were very diverse: Data sources and databases, Conservation features (spatial scale, habitats and species), Connectivity, Objectives and criteria (sub-criteria), Management (adaptive and effectiveness) and RSCs, MSFD Art. 13.4 related to how the network is contributing to GES.
It was suggested to make a selection of topics to discuss in more detail. There was a discussion on the RSC work and how it can be used as a basis. There appears to be a range of terms used in the different RSCs and N2000 and there should be some agreement on how to interpret these terms. It was also stated that the practicalities of what is feasible and achievable could help focus the work in the RSCs and how the timing of the RSC work relates to the process that the MSs have to carry out under the MSFD. It seems that the linkage between the MPAs and descriptors under the MSFD is unclear.

Then the topic of looking at management in the assessment was discussed. The main question here was what are we looking for in completing the network? An MPA should be adequately managed in order to achieve GES. Furthermore, the assessment should be practical in terms of management objectives, which can be different on different scales.

In discussing connectivity, it was stated that this criterion is not included in Art 13.4 and agreeing on species and human activities that cut off connectivity is really difficult to assess across RSSs. In order to come to some agreement, the proxy that can be used could be determined.

The main conclusions were:

1. The assessments by RSCs are a good starting point for the assessment of coherence, but timelines may diverge between MSs and their MSFD timeline and the RSC process. The Commission expects that the RSC can perform this role so that MSs are coordinating the work in a regional context.
2. There are differences between the work in the RSCs and the question is whether management should be part of the assessment as a part of adequacy. Within OSPAR the assessment is first focusing on the ecological feature and then on the management.
3. Management objectives should be used as a basis for an assessment of coherence and different management categories are needed rather than IUCN categories. Do these objectives exist and do they relate both to national and regional objectives? IUCN categories are thought to be a theoretical exercise since these are not connected to obligations.
4. For connectivity species, habitats and human activities should be taken into account. It seems to be a foundation for a more straightforward approach, but the concept is hard to determine from a scientific basis.
5. What is the relationship between GES and MPAs. How do MPAs aid in achieving GES for different descriptors?
6. There is a need to streamline the different terminology: is the project contributing to this or rather confusing the discussions? It seems that there is some difference in the interpretation of the terminology among the RSCs.

### 3.5 Final discussion on criteria and method: scientifically sound, practically feasible

This discussion, led by Gerda Roeleveld of Deltares, the Netherlands, started off with a common conclusion from both parallel sessions; that there is a need to establish a link between the MPAs and achieving GES under the MSFD.
There was a discussion on targets and that there are two different types: policy and ecological targets and how to deal with those in the context of MPAs. Then, the topic of the relationship between Article 13.4 and N2000 was raised; is Article 13.4 sufficiently covered by N2000 and if not, do we need to complete N2000 to achieve GES or do we need additional policy instruments? Another point that is raised is that Art 13.4 should be read well by MSs, but there is a need to stick with the spirit of the text rather than the literal interpretation.

### 3.6 Actions for the MEG and DG ENV

The group gets 10 working days from today (deadline is thus Tuesday the 20$^{th}$ of May) to get back with comments on the draft report of the project. The project/Juan-Pablo Pertierra will let the MEG see the new draft for comments before it goes to the MSCG. The flow of information will take place through CIRCAB. If we need an extra meeting, DG ENV needs to organize that.

# 4 Conclusions and next steps

The goal of the workshop was to discuss both the criteria definitions and classification method developed in Task 1 of the project, 'Analyse and compare criteria used by Member States, in the context of Regional Sea Conventions (RSC) and by third parties for establishing coherent, adequate and representative networks of marine protected areas (MPAs).' The workshop was attended by about 40 people including representatives from Regional Sea Conventions, Member States, networks and stakeholder organisations. From chapter 3 the main conclusion will be summarized and based on the outcome of the workshop the follow up have been synthesized.

## 4.1 Final conclusions

Relation MSFD and other EU policies

- The project should build more on the work that has already been carried out in the RSCs.
- What is the relationship between N2000 and MSFD Art 13.4? Do we need additional policy instruments? MSs need to comply with Art 13.4, but the interpretation and the spirit of the text should not be forgotten; there is more to it than the 10% target value.
- It was discussed that there is a need to establish a link between MPAs and GES. Ecological objectives should be clear and should provide a basis for the policy objectives.
- Need to have a clear overview of the objectives of the MPAs and how these should be classified in a regional/EU wide approach with which objectives.
- There was a discussion on the different scales in which MSs and RSC operate and the relation between the CFP and the MSFD.

Process

- There are different types of targets: policy ones and ecological ones, and the last latter are harder to measure.
- New management perspectives are needed with clear targets and objectives.
- Management objectives should be used as a basis for an assessment of coherence and different management categories are needed rather than IUCN categories.
- Involving the stakeholders in the process is important.
- There are lessons to be learned from overseas MPA implementations.

Member states and RSCs

- There are differences between the RSCs in terms of criteria and assessment methods, these should be clarified.

## 4.2 Follow-up

This chapter 4 builds further upon the discussions held during the workshop. The following main points have been synthesized:

1. Build on RSC's networks assessment experience.

The Task 1 report should build to a much greater extent upon the work already done over the past decade on network assessment by the Regional Sea Conventions (RSC's), OSPAR and HELCOM in particular. This has partly been incorporated in the final version of the Task 1 report and will be further taken up under Task 3.
The RSC's have already developed network assessment criteria and methods, although the objective against which the MPA-networks are assessed, as well as the types of MPA's that constitute the assessed networks differ from those of the MSFD.

As a next step, the extent to which the criteria and methods used by the RSC's for their network assessments are covering the aspects that the MSFD requires to take into account for GES, will be analyzed in Task 3.

2. Specify link between MPAs and GES

Under Article 13.4, one of the options for MSs to achieve GES in their waters is to assign MPAs as a spatial protection measure. From the workshop it appeared that the interpretation of this Article can vary among institutions, which means that there is still a need for debate on this topic. We will address article 13.4 in our Task 3 report, where we will try and specify the relationship between MPAs and achieving GES. MPAs are not a goal in itself, but are a means of achieving a certain conservation status, which could aid in achieving GES. Apart from the MSFD, there is of course the N2000 legislation in place that has a relationship with currently existing MPAs. N2000 and its relationship with the MSFD will be further discussed in Task 3.

3. More reflection is needed regarding management aspects

Management plans are a means of assessing the objectives for a specific area. Opinions amongst MEG members vary as regards management aspects to be included into- or excluded from networks assessment criteria. Some welcome inclusion of management into the adequacy criterion, either with or without application of IUCN-levels; some are against inclusion altogether or against inclusion in the adequacy criterion in particular and some also dispute the use of IUCN-levels; others argue management aspects should constitute a separate criterion. There seems however to be a common view that:

- Management status should not be operationalized in terms of having a management plan in place and implementing it; it should rather be assessed on the existence of management arrangements or measures that allow the site to meet its respective objectives. Whether or how this is enforced is of course important, but difficult to assess in the scope of this project.
- A range of protection levels should be possible, depending on the conservation features to be protected.

For the moment, including management status in the assessment criteria seems relevant, the more so as the assessment criteria may apply to spatial protection measures as part of the MSFD Program of Measures. This point will be taken up further in Task 3.

After the workshop, MEG-members provided written comments to the draft of the Task 1 report via CIRCABC. These comments elaborate in more depth the issues that were raised during the workshop and add considerably to a better understanding. Comments from the MEG on the Task 1 report are incorporated as Appendix F, with an explanation of which will be taken up and which are outside of the scope of this project and will thus not be incorporated.

# A List of attendees

**Marine Strategy Framework Directive (MSFD)**

***Marine Expert Group (MEG)***

**Meeting of 06/05/2014 (Brussels) - Participants' list**

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# B List of questions for interviewed members Marine Expert Group (MEG)

Short explanation at the start of the interview:

We, a consortium of Deltares and three other, are charged by DG ENV to help them develop a coherent EU policy on MPA's and to operationalize EU policy objectives into concrete assessment criteria and a feasible assessment method. The organization of a workshop for the MEG on the 6th of May 2014 on this matter is a major part of the work we have been assigned. Through this workshop we aim to benefit from the hands-on experience of MEG members with MPAs and to build support for EU policy development and -implementation.
In order to put together a meaningful agenda for this upcoming MEG workshop, we are interviewing 8 people *(refer to email for an overview of the other interviewees)* and ask them for their insights and views on MPA policy matters.
Do you have any questions so far, or with regard to the list of questions we sent you?

Questions:

About the current 'collection' of MPA's:

1. To what extent do you have an overview of the currently assigned MPA's (at MS-level or at marine basin level)?
   *Can you say something about differences (e.g. size, scale, importance of MPA's) between the 4 marine basins and differences between MS?*

2. Do you know which criteria/main considerations were used to determine MPA's? *Do you agree with these, or would you rather have seen another focus?*

3. Are you aware of any cross-border or regional coordination with regard to the appointment of (current) MPA's?

About assessment criteria & method:

4. What is your opinion on the three criteria: adequacy, coherence and representativeness?
   What are the main issues in operationalizing them to your opinion?
   *How about the data availability for the assessment criteria to be chosen? We are considering operationalization on three different levels of scale, does that make sense to you? Is there any reason to differentiate criteria e.g. according to marine basins (or from other points of view)?*

5. DG ENV also indicated 3 additional criteria: replication, connectivity and management effectiveness. Do you think they are useful/necessary?
   *Can they be operationalized?*

6. What are your expectations and/or hopes as regards the assessment by DG ENV? What could be the outcome?

About the workshop:

7. What would be the three major topics you would like to see on the agenda? Can you elaborate on their importance for the implementation of the EU-MPA-policy? Do you foresee any political sensitivity on these topics?

8. Do you know of any speakers who would be suitable to present these topics for discussion at the workshop?

9. Are there any (other) stakeholders or stakeholder groups (currently not represented in the GEM) you would strongly advise DG ENV to consult in view of MPA-policy-implementation?

# C Main points from interviews with OSPAR (Emily Corcoran), MedPAN (Chloe Webster) and Romanian Marine Institute (Laura Alexandrov)

1. Overview of MPAs

It seems that OSPAR and the MED at least have Status reports and databases of the MPAs in their region. Romania also has maps of the MPAs, which has been the responsibility of the BSC.

2. Criteria/main considerations

OSPAR and the MED also have documents in which the criteria are described. These seem to be ecological and practical and at least in the case of Romania also include conventions and EU instruments like the Habitat Directive.

3. Cross border/regional coordination

At OSPAR there is regional coordination for areas that are beyond the national jurisdiction, or areas with split jurisdictions. Typical examples of such coordination are when the seabed is under national jurisdiction (part of the continental shelf) and the water column is international water (high seas). In the MED cross-border initiatives are also occurring, however, it is unclear to what extent these are coordinated by the RSC. Romania shares some MPAs with Ukraine and Bulgaria with whom they try to cooperate.

4. Three criteria

In all RSCs there are discussions on these criteria. HELCOM seems to be furthest with this process and thus the MED has adopted their definitions. OSPAR has their own criteria which they have ranked in their 2012 report and are based on a balance between being pragmatic and making evidence-based decisions. Romania also has definitions for these criteria, but they do not seem to be related to more regional criteria.

5. Three additional criteria

The additional criteria are commented on as being important by both OSPAR and the MED, however OSPAR also noted that especially connectivity, requires a very high level of understanding of the system and can pose difficulties for management if it turns out that the MPAs do not meet these criteria. MEDPAN is working on a new analysis of the typology of MPAs and is also developing guidelines for assessing management effectiveness. Romania also has definitions for these criteria, but they do not seem to be related to more regional criteria.

6. Expectations for the outcome of the workshop

The expectations differ a bit between the different RSCs, however some commonalities can be observed:

- A better understanding of individual MPAs vs a network of MPAs on a regional or pan-European scale.
- Exchange of experiences between experts from different RSCs.

- Clearer instructions to MSs on criteria and the link between the different directives (MSP/ICZM, MSFD) including standardisation of methodologies, harmonization of EU policies and implementation at a national level.

7. Three major topics for the workshop.

OSPAR suggested to include guidance on criteria on a regional scale and the trade-off between ecological and socio-economic parameters. Romania's topics focused more on the technical aspects (protection of biodiversity, areas with sensitivities and vulnerabilities, etc.) but also named the identification of different uses of an area, the better involvement of end-users and security aspects of the marine space. MED thought the agenda was complete.

8. Political sensitivity on these topics?

Yes. In the OSPAR region this is mainly related to the split jurisdiction and the right of initiative of MSs to use or protect their environment. There are differences between the RSCs in terms of how far they are with meeting their targets (HELCOM Is the most advanced). In the MED and the BSC the issue is related more to the fact that there are many states adjacent to the seas that are not part of the EU and that the political climate and security/conflict issues are more prominent here.

9. Speakers that could present?

All interviewees have suggestions for speakers, which will be discussed with the EU. Chloe Webster will do a presentation herself with Souha el Asmi. These are:
David Johnson, Henning from Nordheim, Tina Blanford, Per Moksnes, Jeff Ardron, Tania Zaharia, Laura Alexandrov and Valeria Abaza

10. Stakeholders that should be included?

Representatives of the socio-economic sectors, GFCM, wetland representatives, professional and artisanal communities of the fishermen, people from tourism, sailors, etc.; NGO-s in the field of coastal statement monitoring and environment protection. In summary, the sectors and NGOs.

# D Workshop agenda

## Agenda

Marine Expert Group Meeting

**How to assess coherence and representativity of networks of marine protected areas?**

Brussels, 6 May 2014

Venue: DG Environment, Avenue de Beaulieu 5, Room C

A Background document Task 1 "Assessment criteria and methods for MPAs, preliminary analysis results " will be available for uploading from the EU platform CIRCABC https://circabc.europa.eu at 30 April at the latest.

| *Time* | *Item* | *Speaker* |
|---|---|---|
| *9.30* | *Opening*<br>**plenary session** | **Mr. Juan-Pablo Pertierra** /DG ENV (chair) |
| *9.40* | *Provisionary title:*<br>**Coherent network of MPA's, the California experience** | **Professor Dr. Mark H. Carr** (Department of Ecology and Evolutionary Biology, University of California, USA) |
| *10.00* | *Provisionary topic:*<br>**Assessment and management of MPA's** | **Dr. Mat Vanderklift** (CSIRO, Independent Nature Institute in Australia) |
| *10.20* | *Discussion*<br>**Lessons to be learnt?** | **Dr. Gerda Roeleveld** (Deltares) |
| *10.55* | *Coffee break* | |
| *11.10* | *Provisionary title*<br>**Assessment Criteria for European MPA's, different options** | **Dr. Ibon Galparsoro** (AZTI) |
| *11.25* | *Provisionary subject:*<br>**Assessment criteria and feasibility from a Baltic and OSPAR point of view** | **Dr. Jochen Krause** (BfN/Federal Agency for Nature Conservation) |
| *11.45* | *Provisionary subject:*<br>**Assessment criteria and feasibility from a Mediterranean point of view** | **Mrs. Souha El Asmi** (Regional Activity Center for Specially Protected Areas/RAC /SPA) |
| *12.05* | *Discussion*<br>**Operational definition of criteria and their feasibilities** | *Discussion led by* **Dr. Samuli Korpinen** (SYKE) |
| *13.00-14.00* | *Lunch Break, canteen DG ENV and Registration for 2 groups (parallel afternoon sessions)* | All |
| *14.00* | *Parallel session* **1 Focus on targets and ambitions** | *Session Led by* **Dr. Ibon Galparsoro** (AZTI) |

| | | |
|---|---|---|
| *14.00* | *Parallel session* **2 Assessment method and criteria** | *Session led by* **Dr. Samuli Korpinen** (SYKE) |
| *15.15* | *Preparing report back from 2 parallel sessions* | **Rapporteurs** (Deltares, SYKE, HCMR, AZTI) |
| *15.25* | *Plenary*<br>*Report back from parallel sessions* | **Rapporteurs** (Deltares, SYKE, HCMR, AZTI) |
| *15.45* | *Final discussion*<br>**Criteria and method: scientifically sound, and practically feasible** | *Discussion led by* **Mrs. Gerda Roeleveld** (Deltares) |
| *16.45* | *Conclusions* **of Workshop** | *Conclusion led by* **Mr. Joachim D'Eugenio** (DG ENV) |
| *17.00* | *Closure* | **Mr. Juan-Pablo Partierra** /DG ENV (chair) |

# E Presentations of the invited speakers

# Designing and managing for successful MPAs

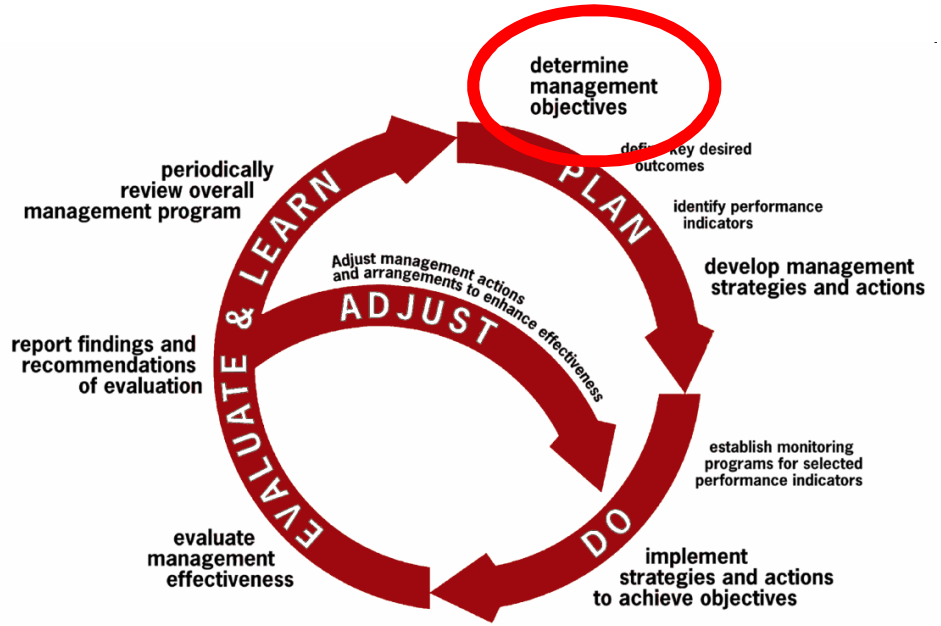
Mat Vanderklift
Andy Steven, Ian Cresswell, Russ Babcock

CSIRO WEALTH FROM OCEANS FLAGSHIP
www.csiro.au

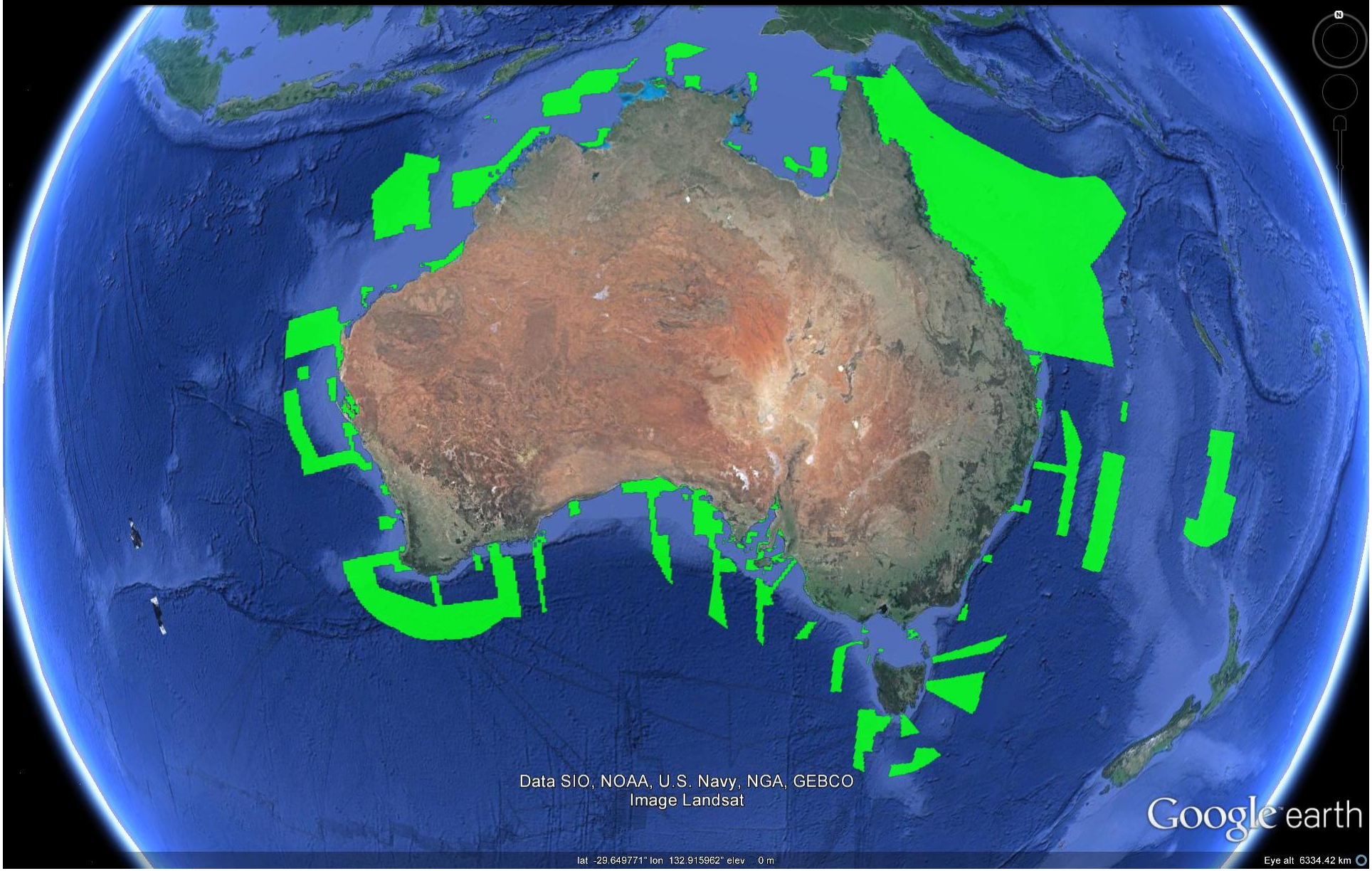
# Objectives are important

- First… decide what the objectives of an MPA are

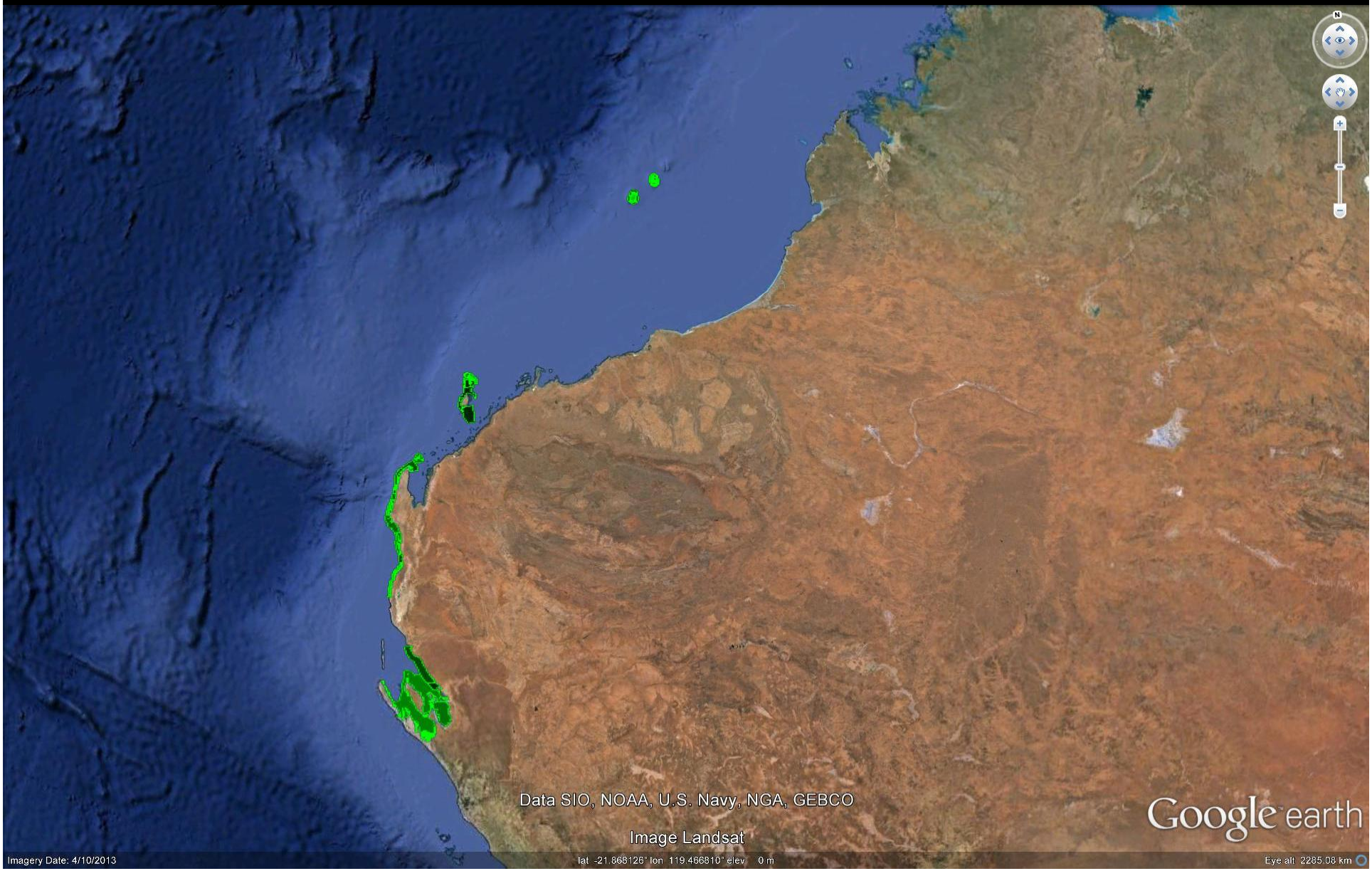
- What are we trying to achieve?
  - protection of species?
  - protection of ecological processes?
  - protection of ecosystem services?
  - …?



# The Australian experience: national MPA network



# The Australian experience: state MPA network



# Some design principles

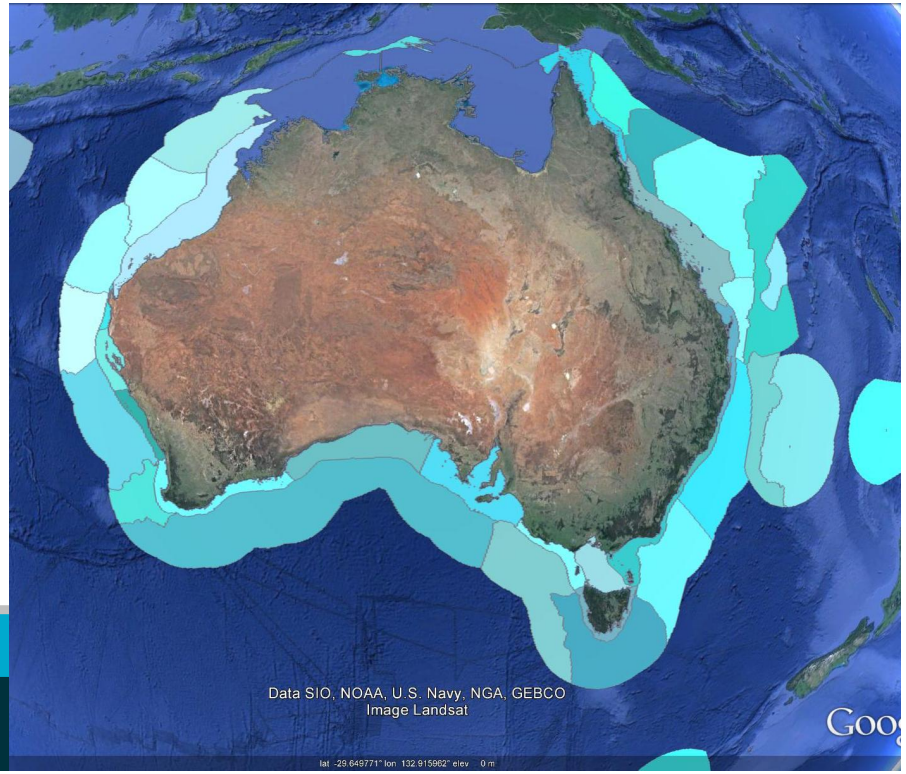
- Different principles have been applied in different places.

- Australia:
  - Comprehensive: *include the full range of ecosystems/habitats/etc*
  - Adequate: able *to maintain ecological viability and integrity*
  - Representative: *area selected should reflect biodiversity of the ecosystem*

- UNEP:
  - Adequate
  - Representative
  - Resilient
  - Connected

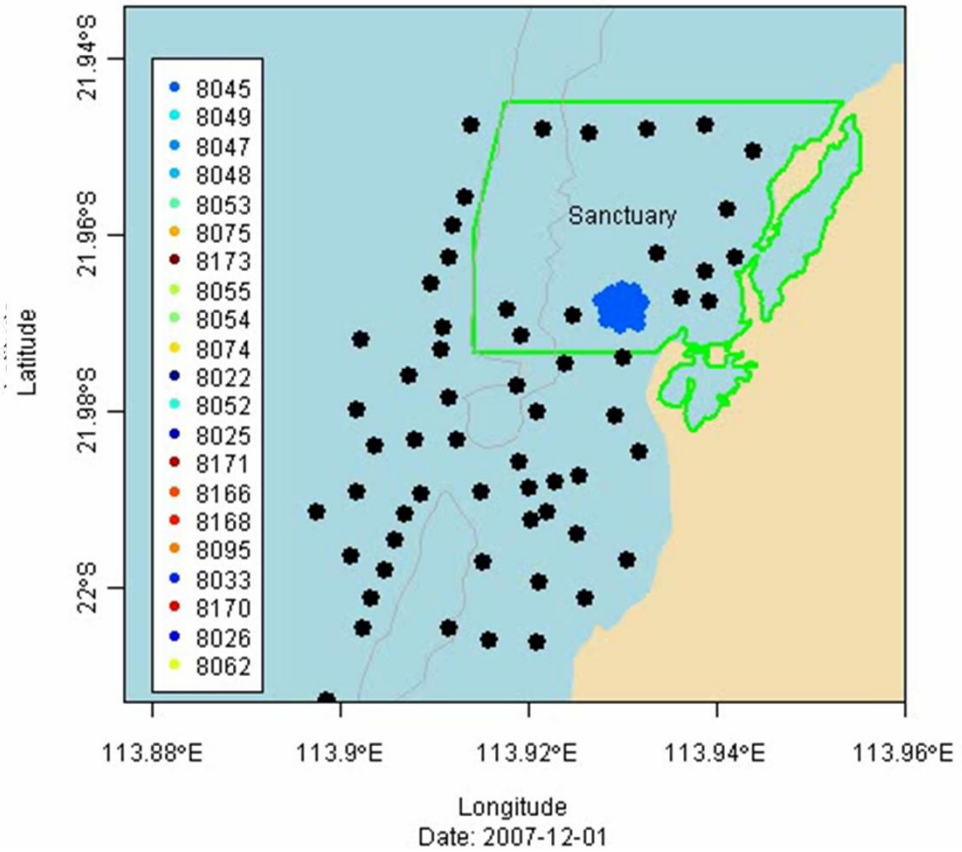
# Design practice

- Comprehensive: *include the full range of ecosystems/habitats/etc*
- What is an ecosystem? Or a habitat? How different should they be before we split them?
- Classification systems
  - Often need to use surrogates
  - Assumes that surrogates are efficient



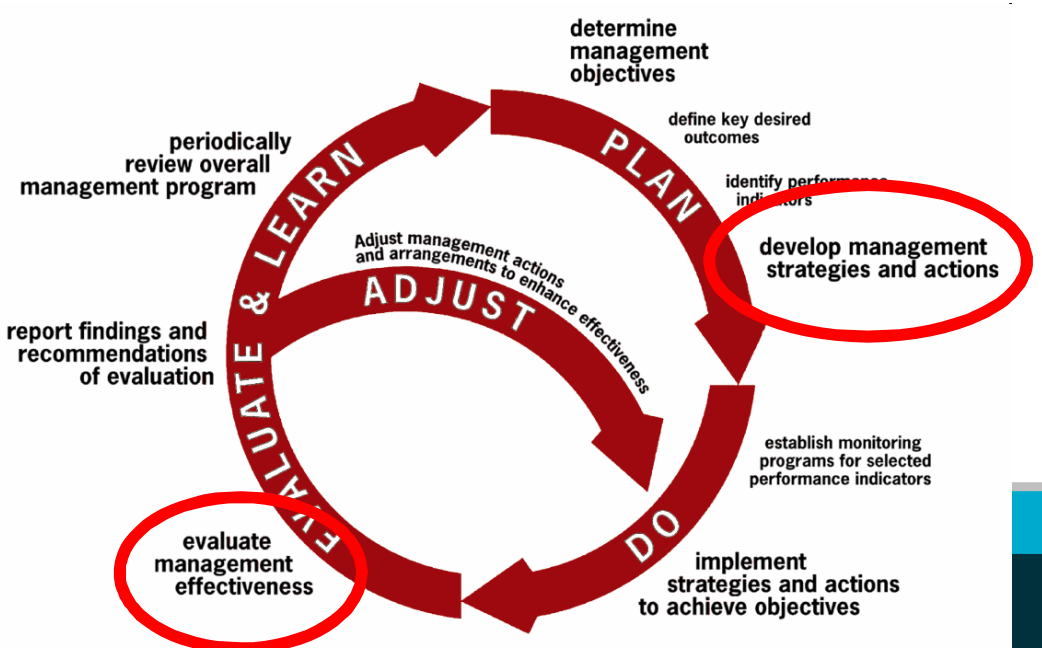
# Design practice

- Adequate: *able to maintain ecological viability and integrity*
- What size? How far apart?



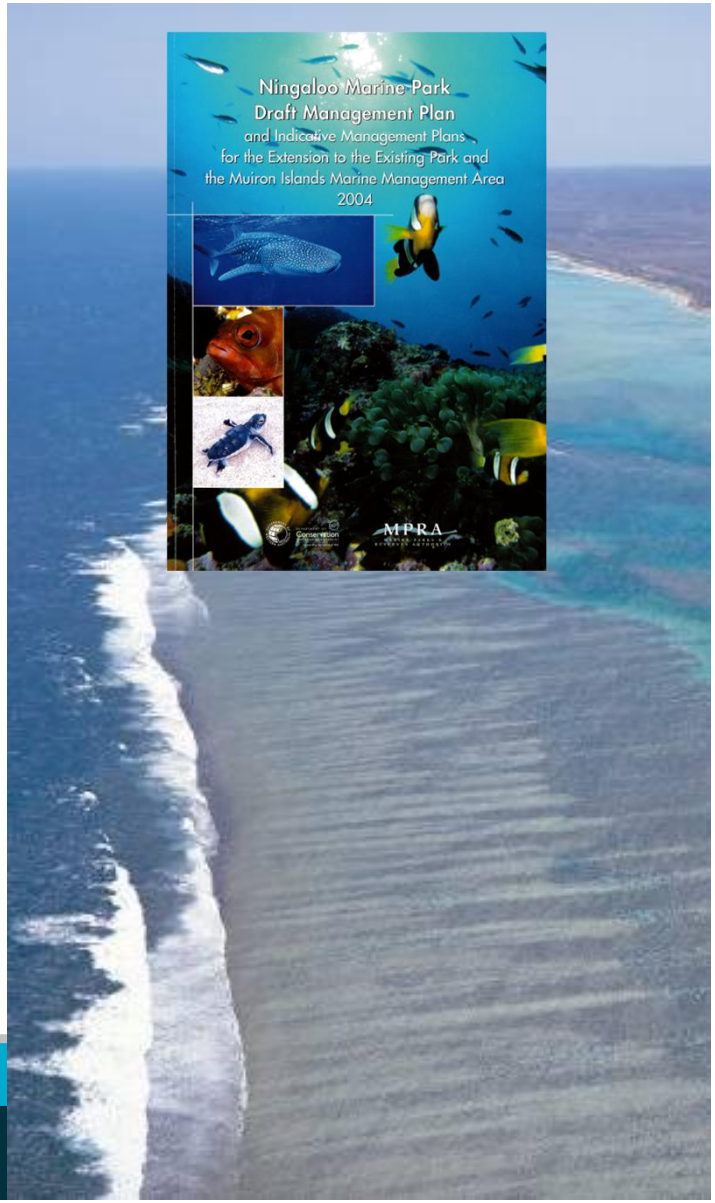
# Have we succeeded?

- Monitoring and evaluation
  - Are objectives being met?
  - What should be measured?
  - How?




# Case study: Ningaloo Marine Park

- Ecological values
  - e.g. coral reef communities, finfish
- Key Performance Indicators
  - e.g. finfish
- Performance measures
  - e.g. finfish: diversity, abundance
- Targets
  - e.g. *No loss of finfish species abundance in Sanctuary Zones as a result of human activity in the reserves*



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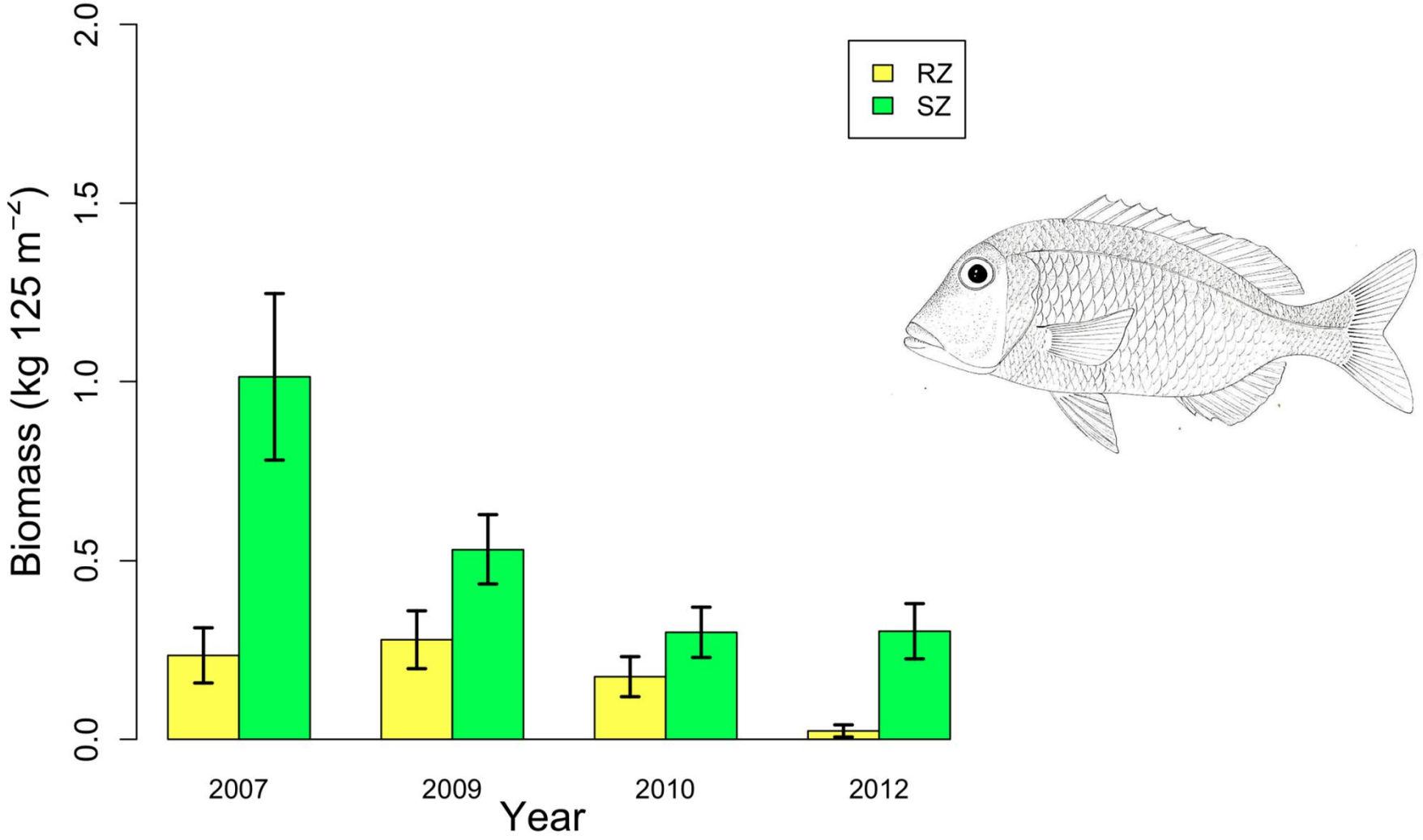


# Indigenous Protected Areas





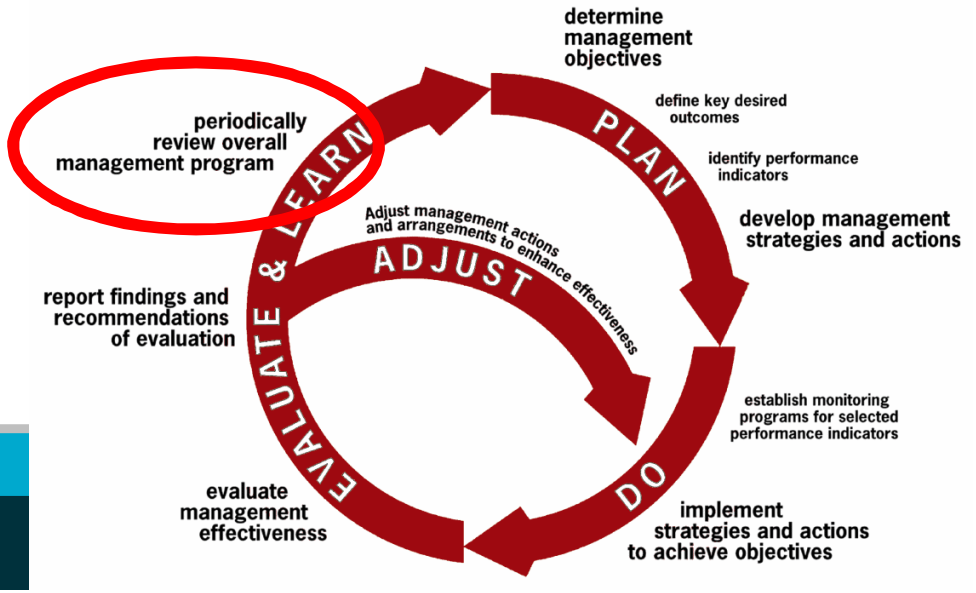
Objective: *By 2015 Bardi Jawi are using turtle sustainably*


PRO
VID18289

# MPAs in a changing world

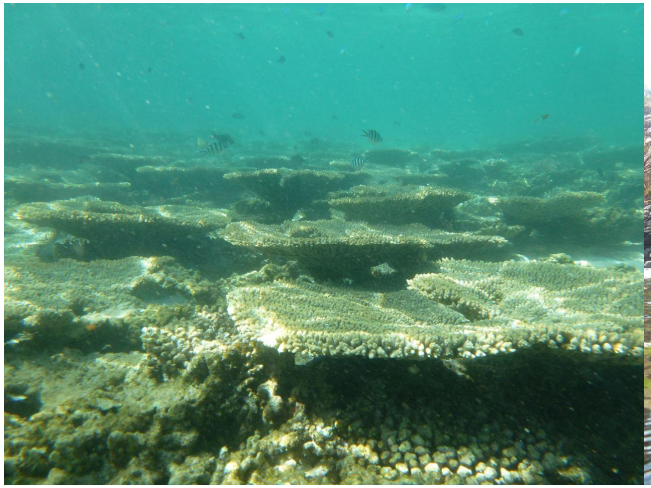
- How do we manage when the scale of a threat is too large?
  - Species will become locally extinct
  - New species will arrive
- Do we need to move from “preserve and protect”?
- We need new management perspectives

- What do we want to achieve?

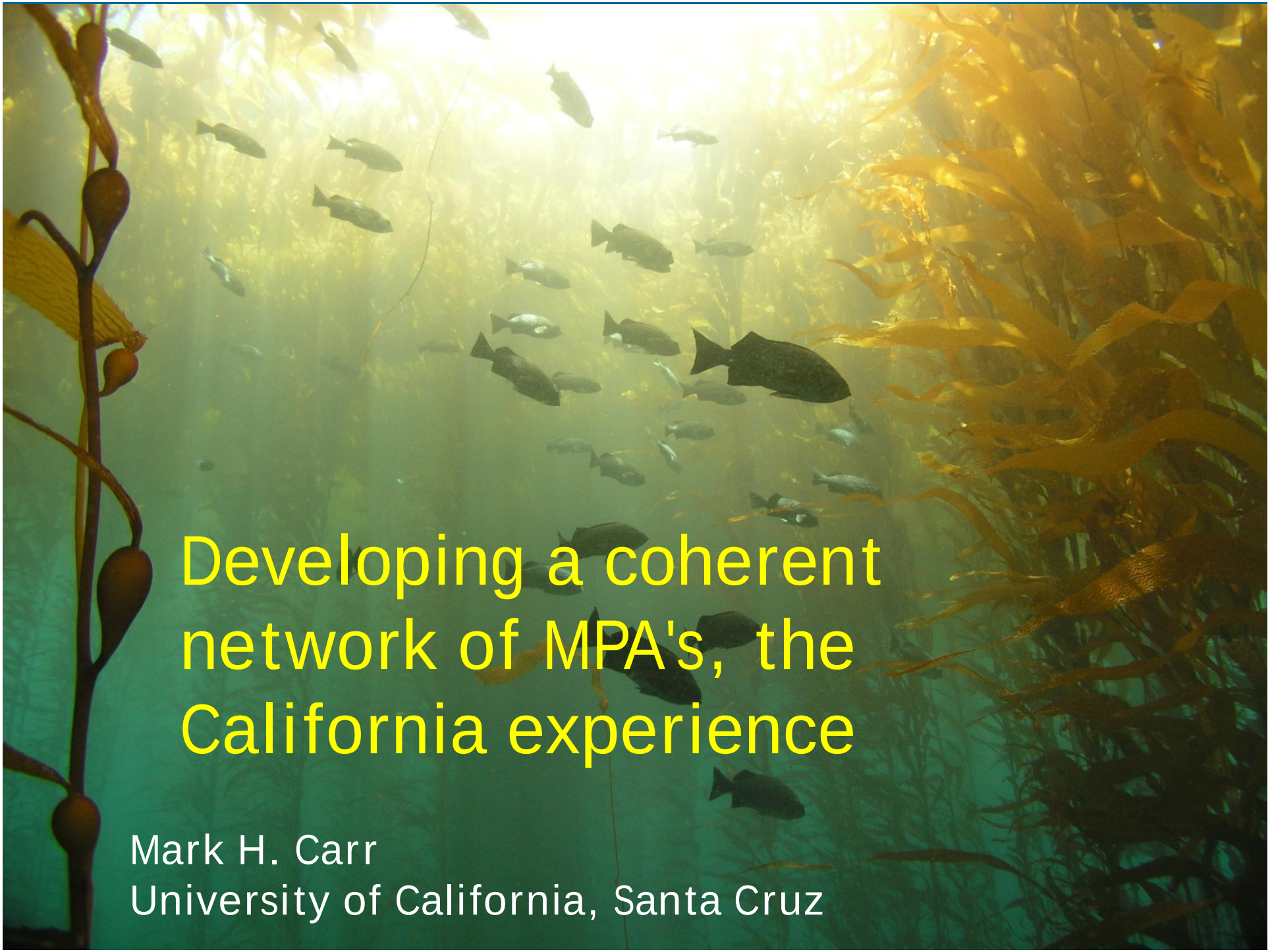


# Concluding thoughts

- Objectives are important
- Think innovatively about managing biodiversity: move beyond ‘preserve and protect’
- Partnerships between managers and scientists
  - to move from design principles to design practice
  - to reduce uncertainty



# Thank you



# Developing a coherent network of MPA's, the California experience

Mark H. Carr
University of California, Santa Cruz

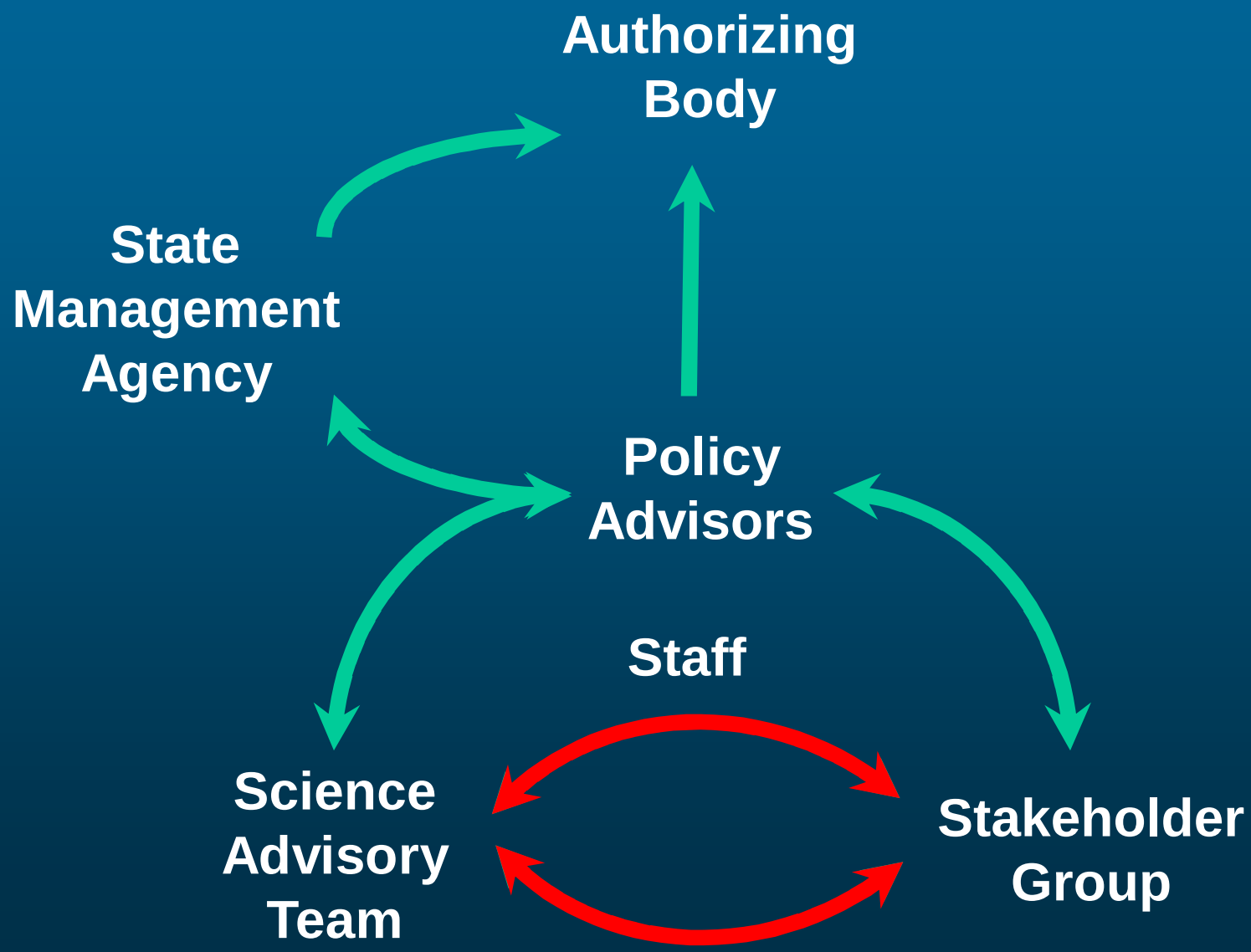
# California Marine Life Protection Act

Legislative mandate for state-wide network of MPAs

Based on best readily available science

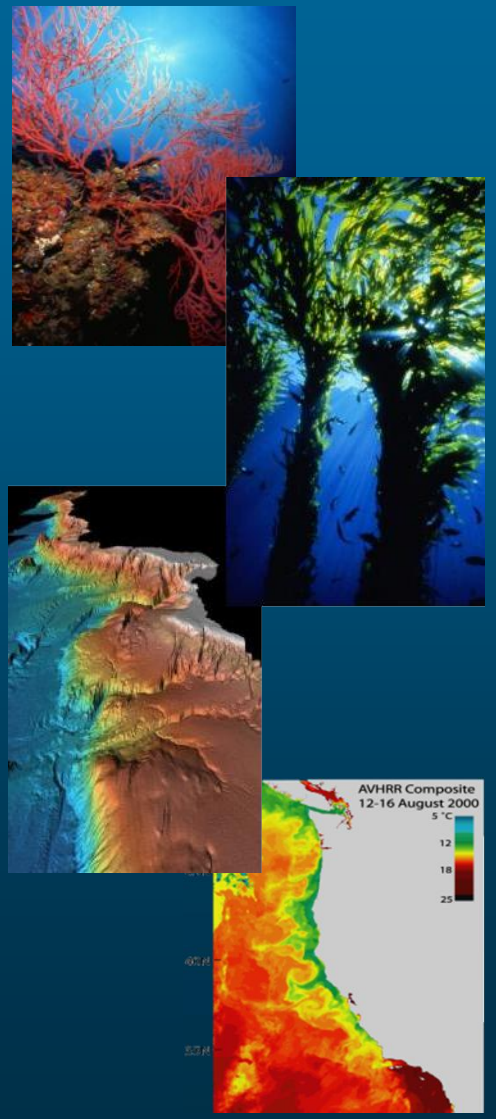
Stakeholder generated

# Marine Life Protection Act - Process



# CA Marine Life Protection Act Goals

1. Protect natural diversity and ecosystem functions.
2. Sustain and restore marine life populations.
3. Improve recreational, educational, and study opportunities.
4. Protect representative and unique habitats.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. Ensure that MPAs are designed and managed as a network.



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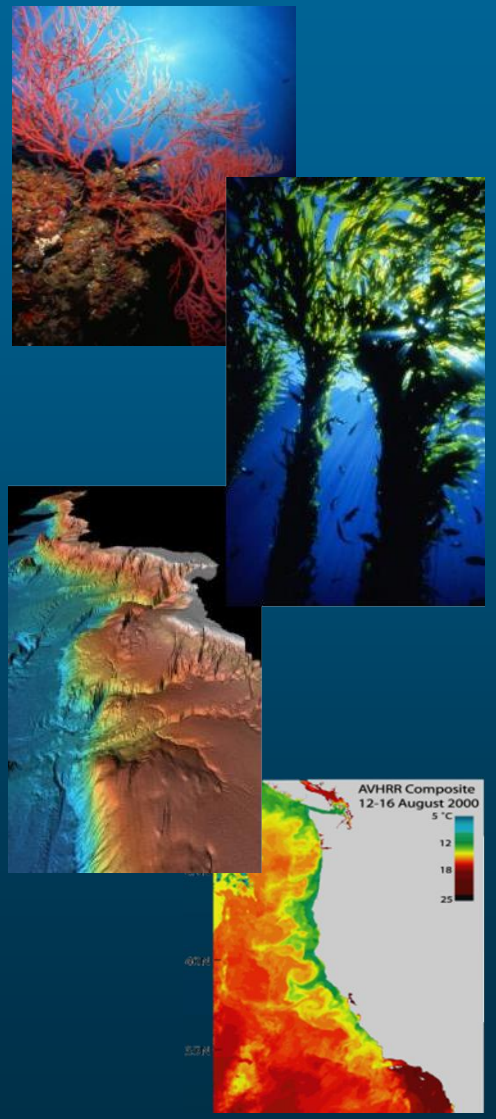

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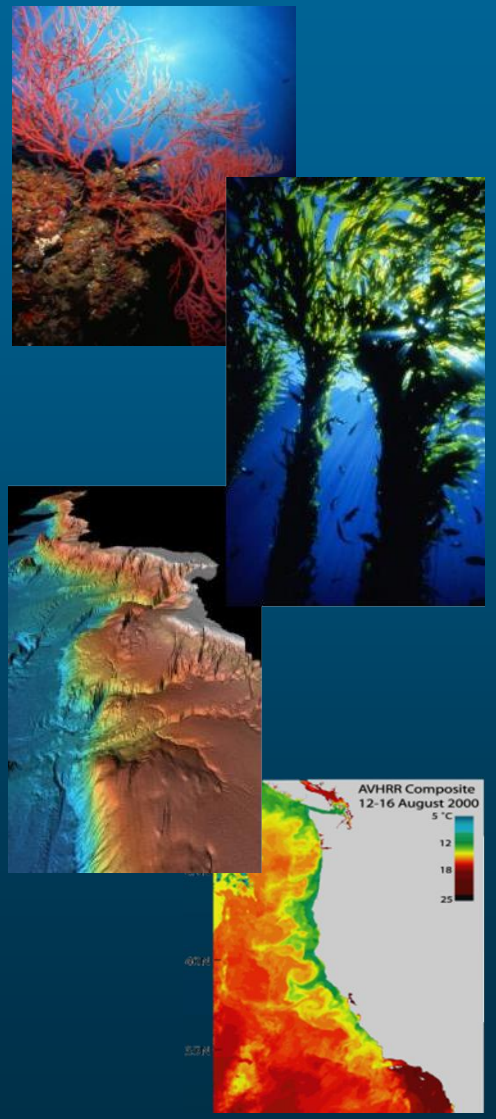


# COHERENCE

Ecological harmonization of MPAs: Maintenance of processes, structures and functions of the protected features

## CONNECTIVITY

Exchange of individuals is guaranteed across boundaries of MPAs
The MPA network is well distributed in space, considering the distribution of habitats and reflecting the different scales of the marine environment

## REPRESENTIVITY

Range of ecosystem features biogeography and depth subdivisions

Each feature or sub-division is represented by at least one site

## ADEQUACY

### SIZE and SHAPE

Size spectrum of the network should include an adequate share of big sites of an adequate shape.

### MANAGEMENT

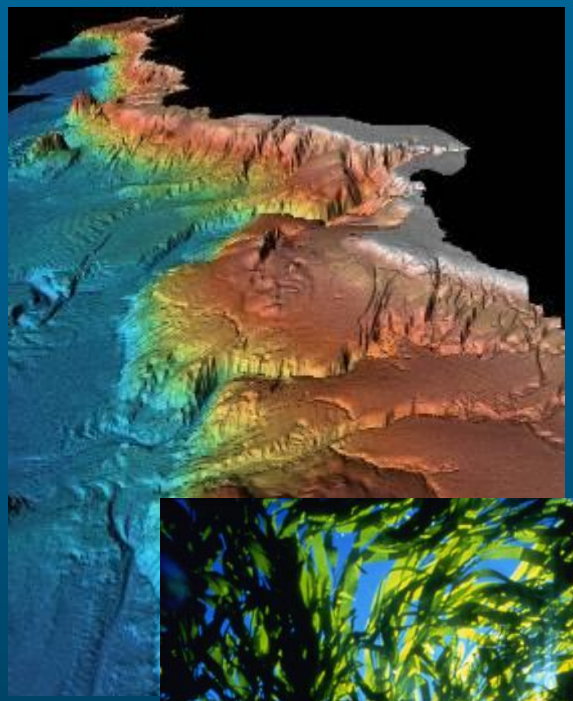
Coordinated multi-level management plans are implemented in the network

Dedicated to the protection, conservation, and sustainable use

# Ecosystem Features

Identify features using:

- Bottom Type and Depth
- Living Habitats (kelps, seagrasses)
- Oceanographic features



Bottom Type:

- rocky reefs
- sandy or soft bottoms
- estuaries

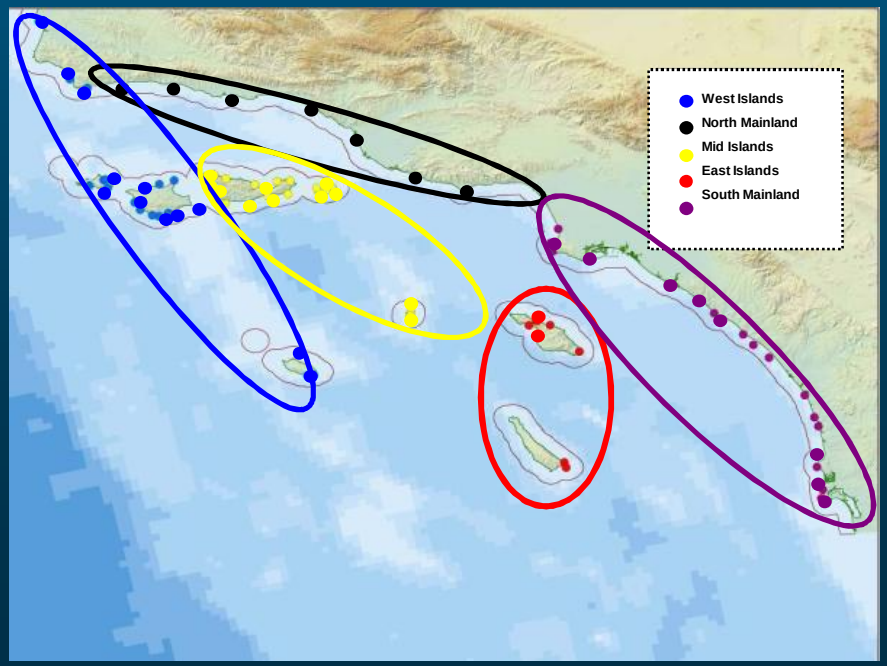
Depth Zones:

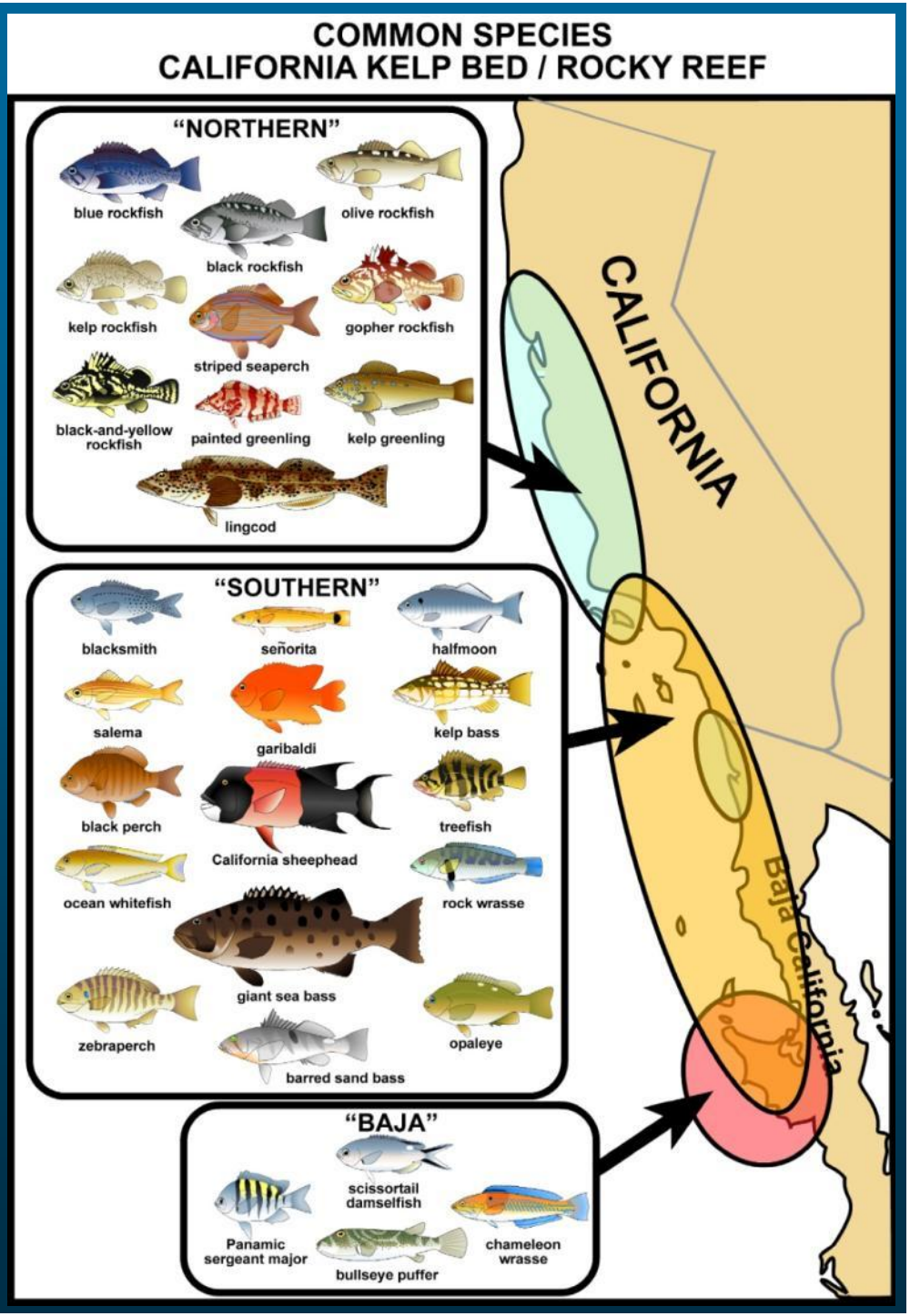
- Intertidal
- Intertidal to 30 m
- 30 to 100 m
- 100 to 200 m
- 200 m and deeper

Biogenic: kelp forests, seagrass beds, marsh

# Geographic Differences Within Ecosystem Features

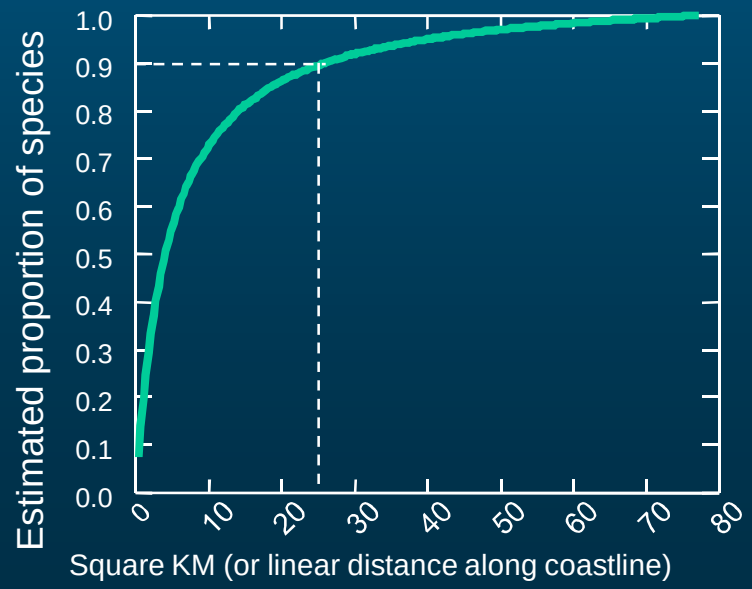
Marine communities vary at multiple scales



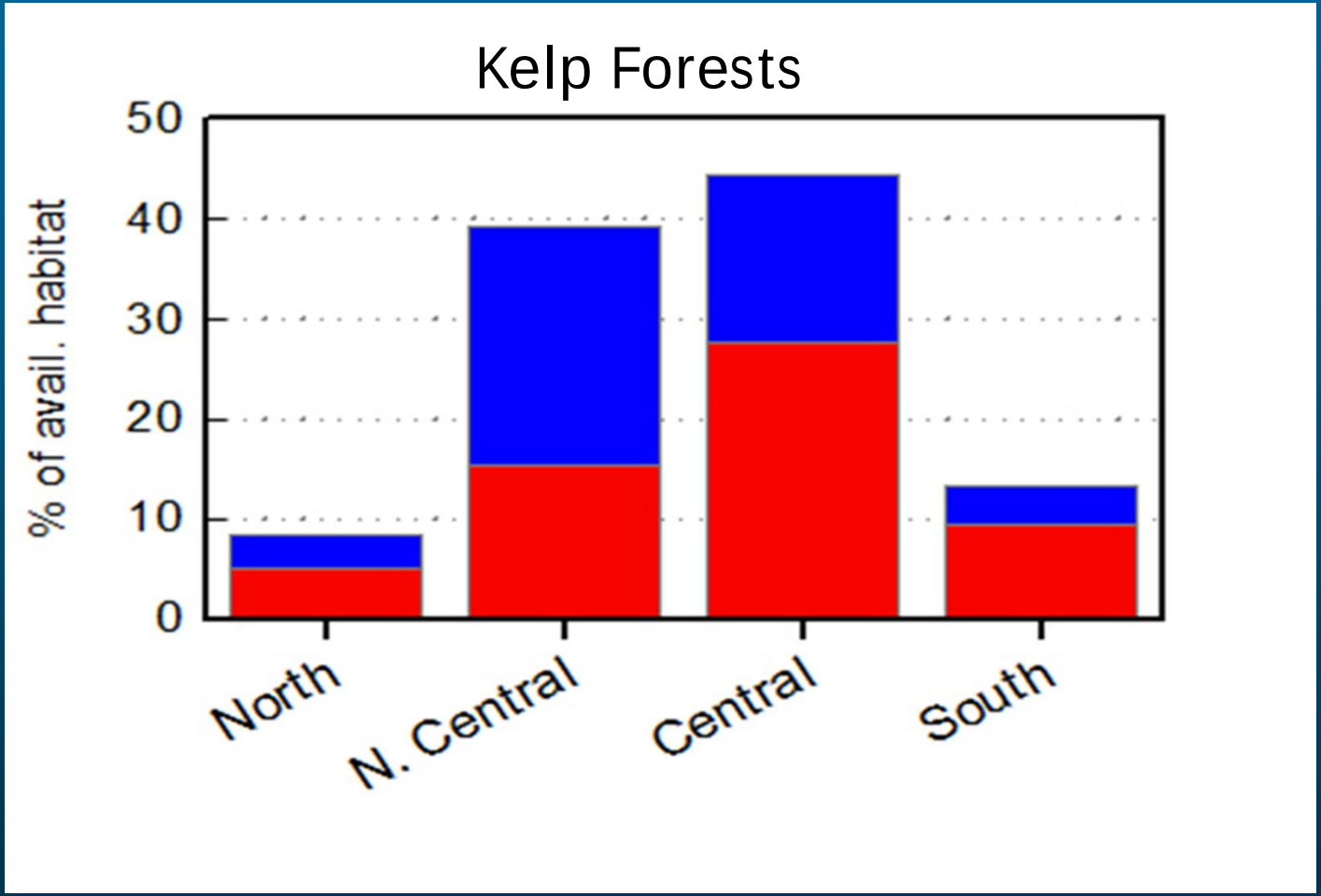



# Ecosystem Feature Representivity and Replication Guidelines

- Each key ecosystem feature represented in at least three to five replicate MPAs within large-scale biogeographic region
- Each feature represented in at least one replicate MPA within each smaller-scale bioregion
- Habitat adequacy: replicates determined by species-area curves →



# Ecosystem Feature Representivity and Replication




Percent representivity not targeted!
Emerged from replication and spacing guidelines

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Ecological harmonization of MPAs: Maintenance of processes, structures and functions of the protected features

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Range of ecosystem features biogeography and depth subdivisions

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### SIZE and SHAPE

Size spectrum of the network should include an adequate share of big sites of an adequate shape.

### MANAGEMENT

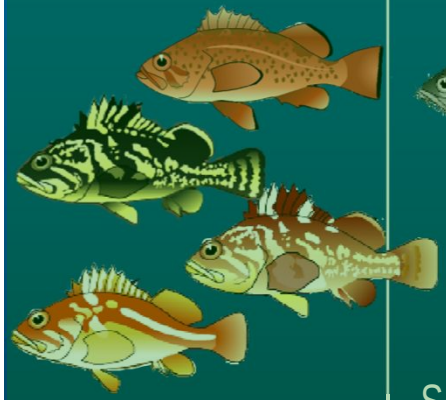
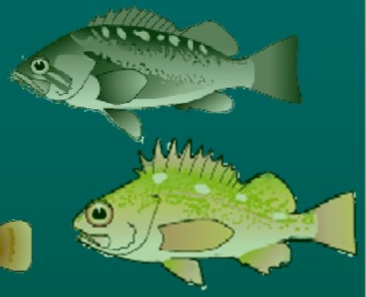
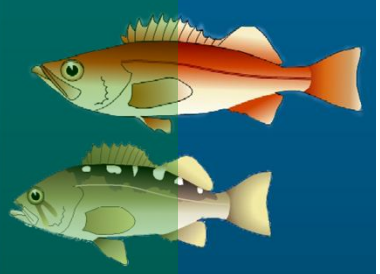
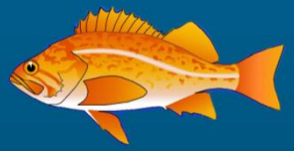
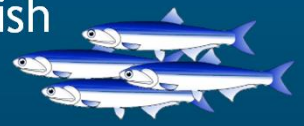
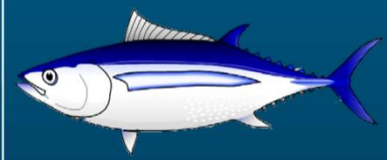
Coordinated multi-level management plans are implemented in the network

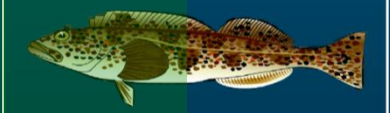
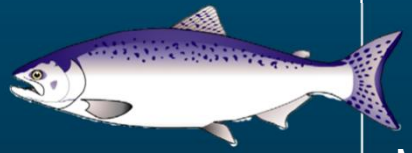
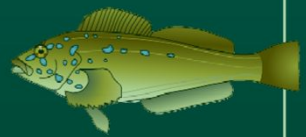
Dedicated to the protection, conservation, and sustainable use

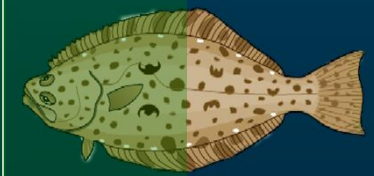
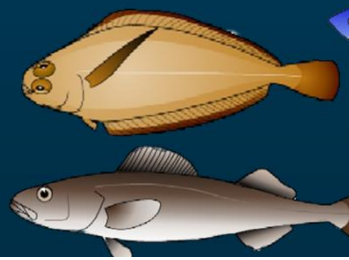
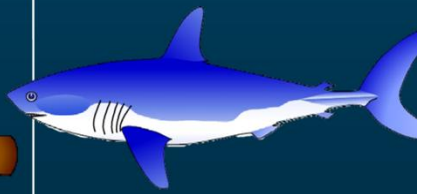
# Adequacy: MPA size based on fish movement

## Adult Home Range Size

| 0 – 1 km | 1 – 10 km | 10 – 100 km | 100 – 1000 km | > 1000 km |
|---|---|---|---|---|
| Many rockfish | Some rockfish | Some rockfish | Few rockfish | Some schooling fish |
| Other reef fish | Some surfperch | Other reef fish | Some schooling fish | Tunas |
| Some surfperch | | Some flatfish | Salmon | Many sharks |
| | | | More flatfish | |

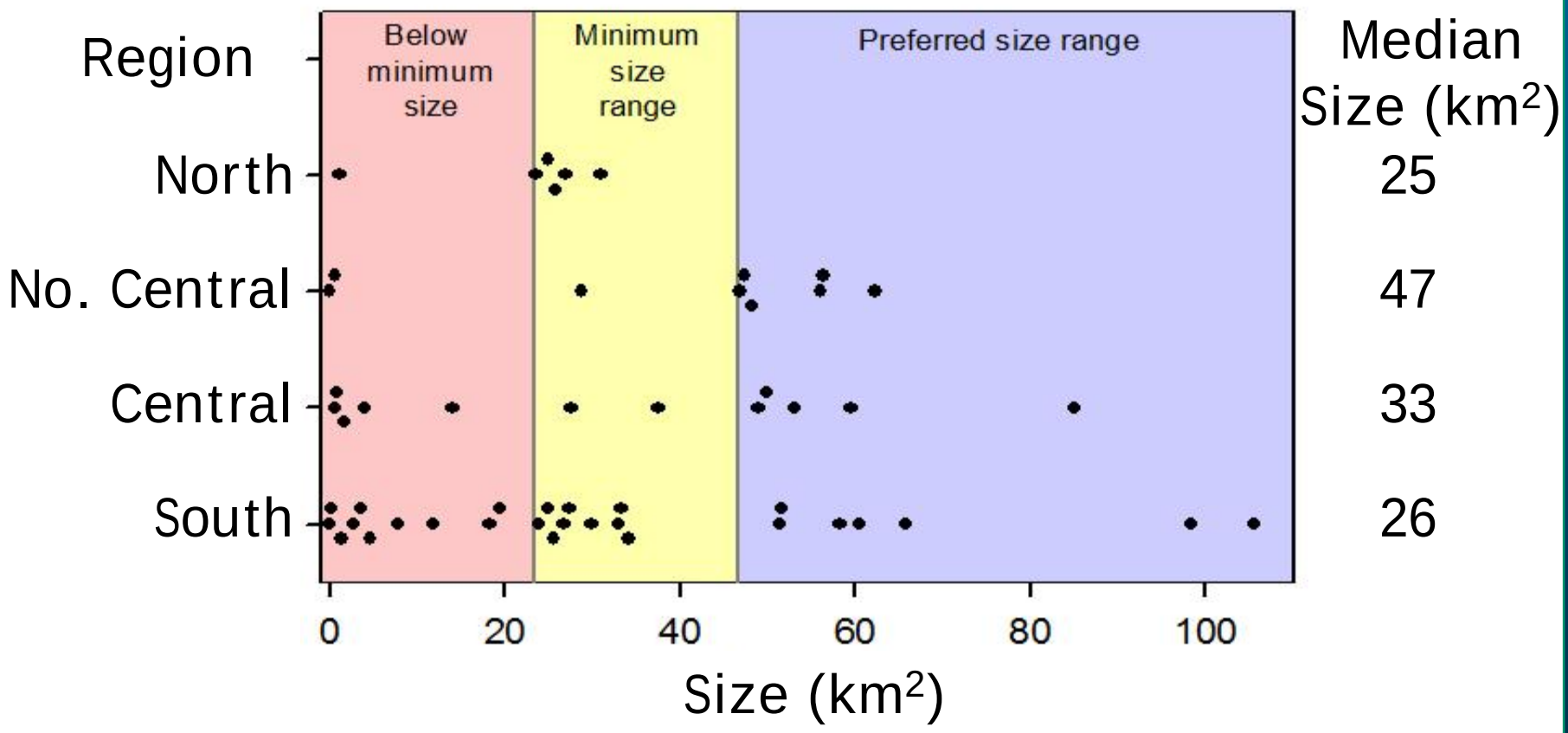
# Adequacy: Size and Shape

- Reserves must be large enough to contain adult movement

- Extend across depths onshore to offshore to accommodate movement

- Minimum size = 25 - 50 sq km
  Preferred size = 50 - 100 sq km

# Size Assessment
# MPAs of Adequate Protection



## COHERENCE

Ecological harmonization of MPAs: Maintenance of processes, structures and functions of the protected features

## CONNECTIVITY

Exchange of individuals is guaranteed across boundaries of MPAs
The MPA network is well distributed in space, considering the distribution of habitats and reflecting the different scales of the marine environment

### REPRESENTIVITY

Range of ecosystem features biogeography and depth subdivisions

Each feature or sub-division is represented by at least one site

## ADEQUACY

### SIZE and SHAPE

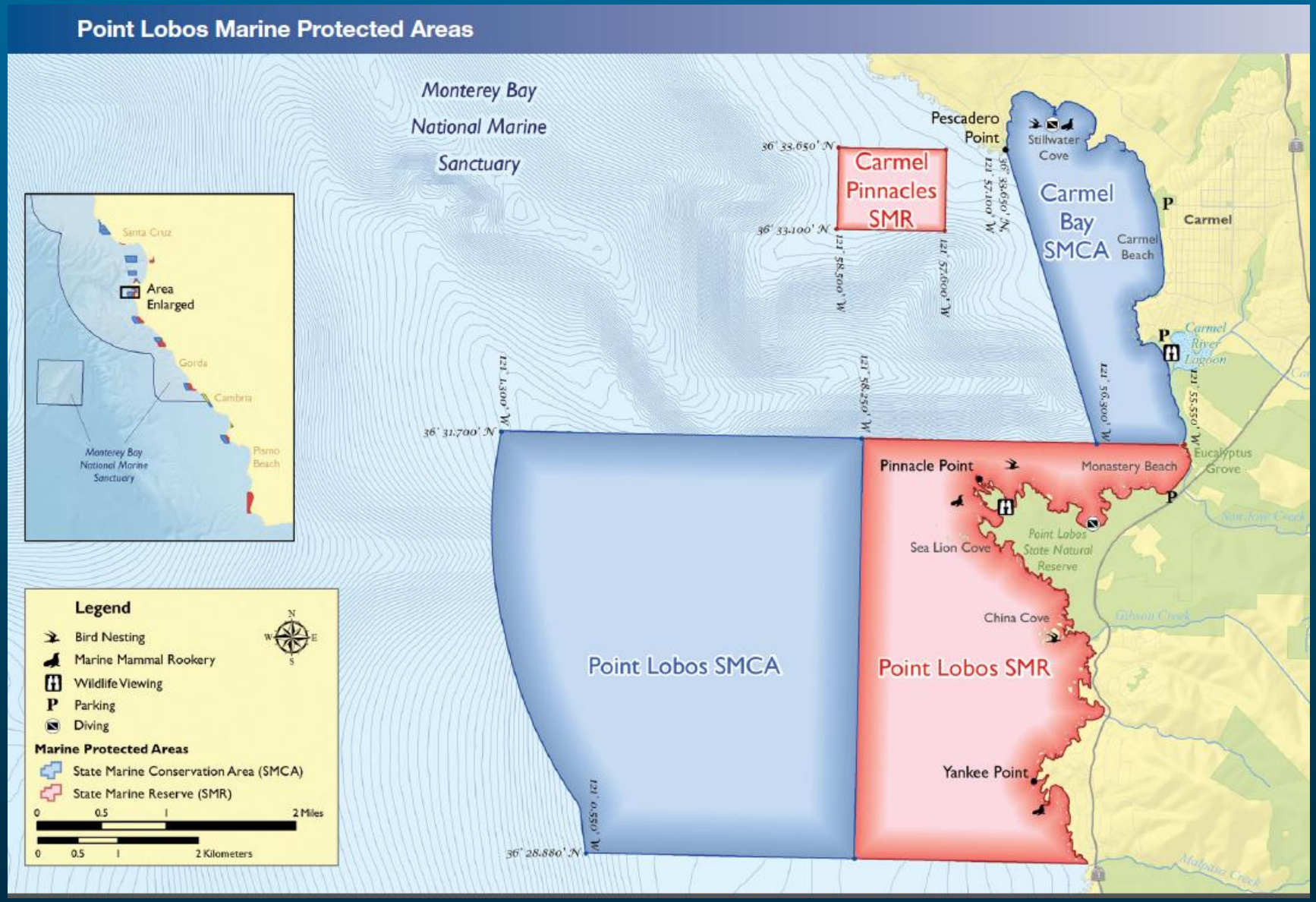
Size spectrum of the network should include an adequate share of big sites of an adequate shape.

### MANAGEMENT

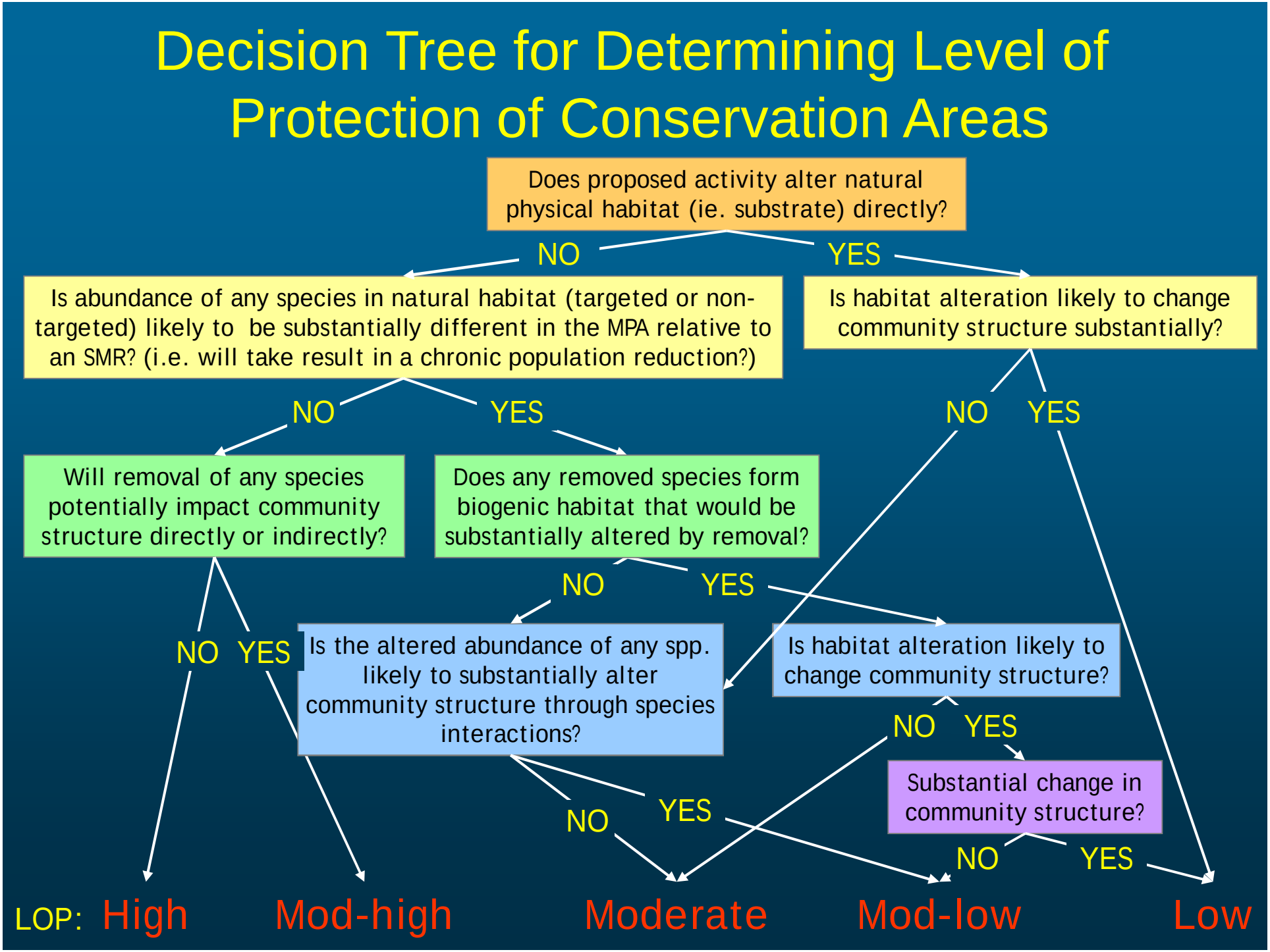
Coordinated multi-level management plans are implemented in the network

Dedicated to the protection, conservation, and sustainable use

# Management: Levels of Protection



# Decision Tree for Determining Level of Protection of Conservation Areas



# COHERENCE

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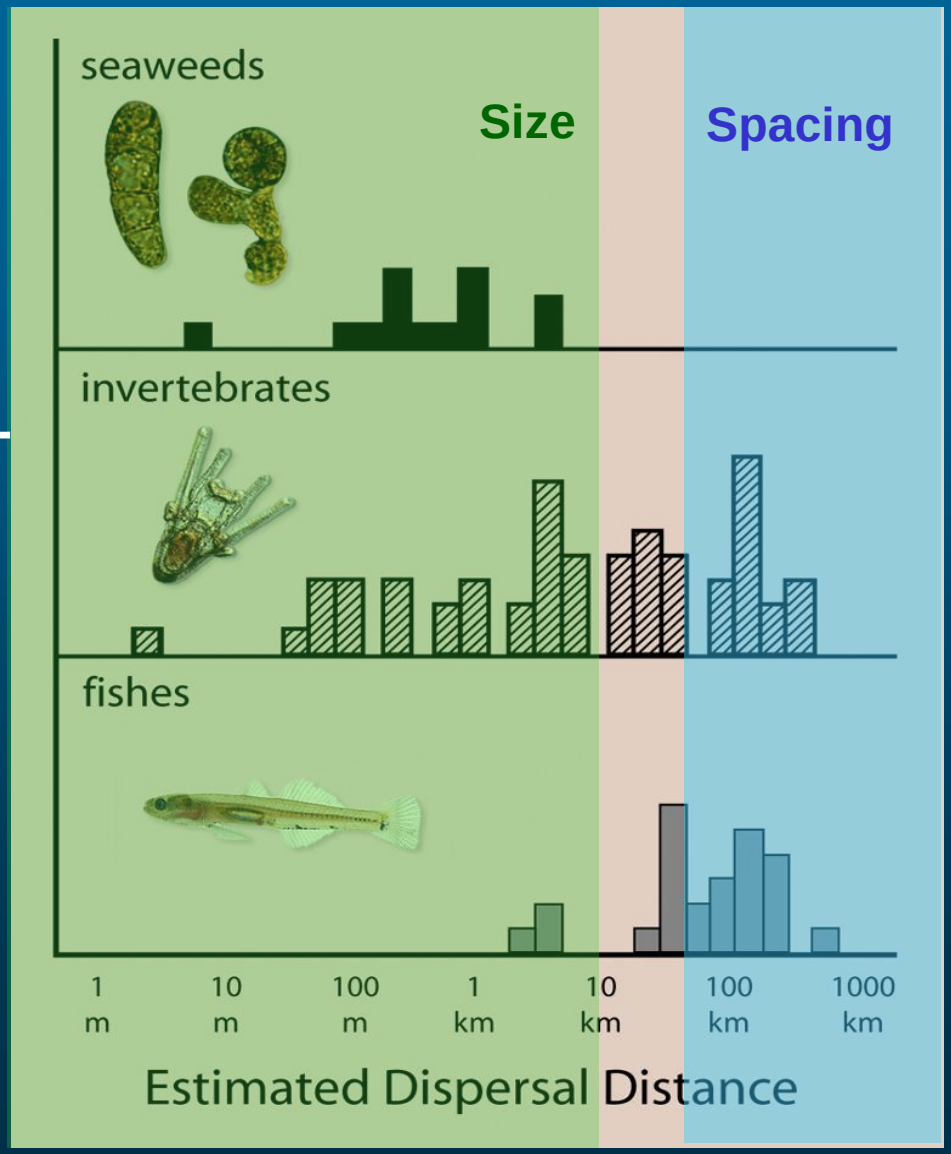
# Characteristics of Networks

Single large reserve

dispersal of young

Network of smaller reserves - same overall size

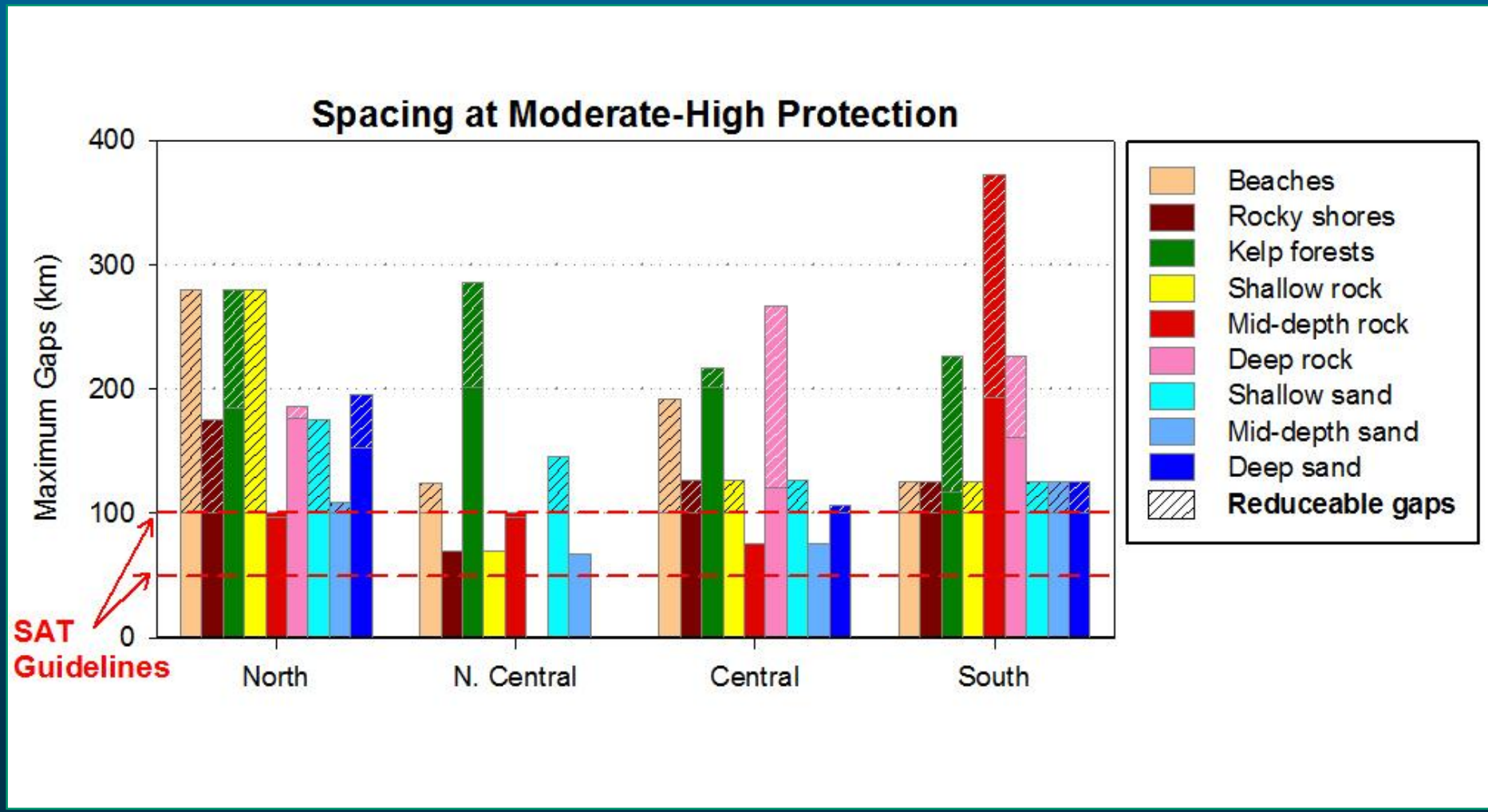
# Size and Spacing Guidelines




**Data from Kinlan and Gaines 2003, PISCO 2007**

- Size:
  - 5-10 km, minimum
  - 10-20 km, preferred
  - Intertidal to deep waters
- Spacing:
  - 50 – 100 km apart
- Size and spacing are inter-related
  - smaller MPAs should be closer together
  - larger MPAs may be spaced farther apart

# Evaluation of MPA Spacing
# Five Different Proposed MPA networks



# The Product:

- MPAs established between 2007 and 2012
- 63 no-take reserves;
  1291 $km^2$
  9.4% of state waters
- 124 MPAs total;
  2197 $km^2$
  16% of state waters

# Additional resources on the MLPA

Saarman, E. et al. 2013. The role of science in supporting marine protected area network planning and design in California. Ocean and Coastal Management 74:45–56.

Gleason, M. et al. 2013. Designing a statewide network of marine protected areas in California: achievements, costs, lessons learned, and challenges ahead. Ocean and Coastal Management 74:90–101.

# COHERENCE

**Ecological harmonization of MPAs: maintenance of processes, functions and structures of the protected features**

## CONNECTIVITY

**The exchange of individuals is guaranteed across boundaries of MPAs**

**The MPA Network is well distributed in space, considering the distribution of habitats and reflecting the different scales of the marine environment**

## REPRESENTATIVITY

**Range of ecosystem features, biogeography and depth sub-divisions**

**Each feature or sub-division is represented by at least one site.**

## ADEQUACY

### SIZE and SHAPE

**Size spectrum of the network should include an adequate share of big sites of an adequate shape**

### MANAGEMENT

**Coordinated multi-level management plans are implemented in the network**

**Dedicated to the protection, conservation and sustainable use**

Bundesamt für Naturschutz

# Ecological coherence in MPA networks (OSPAR and HELCOM)

06.05.2014

Dr. Jochen Krause

Marine Expert Group, Brussels

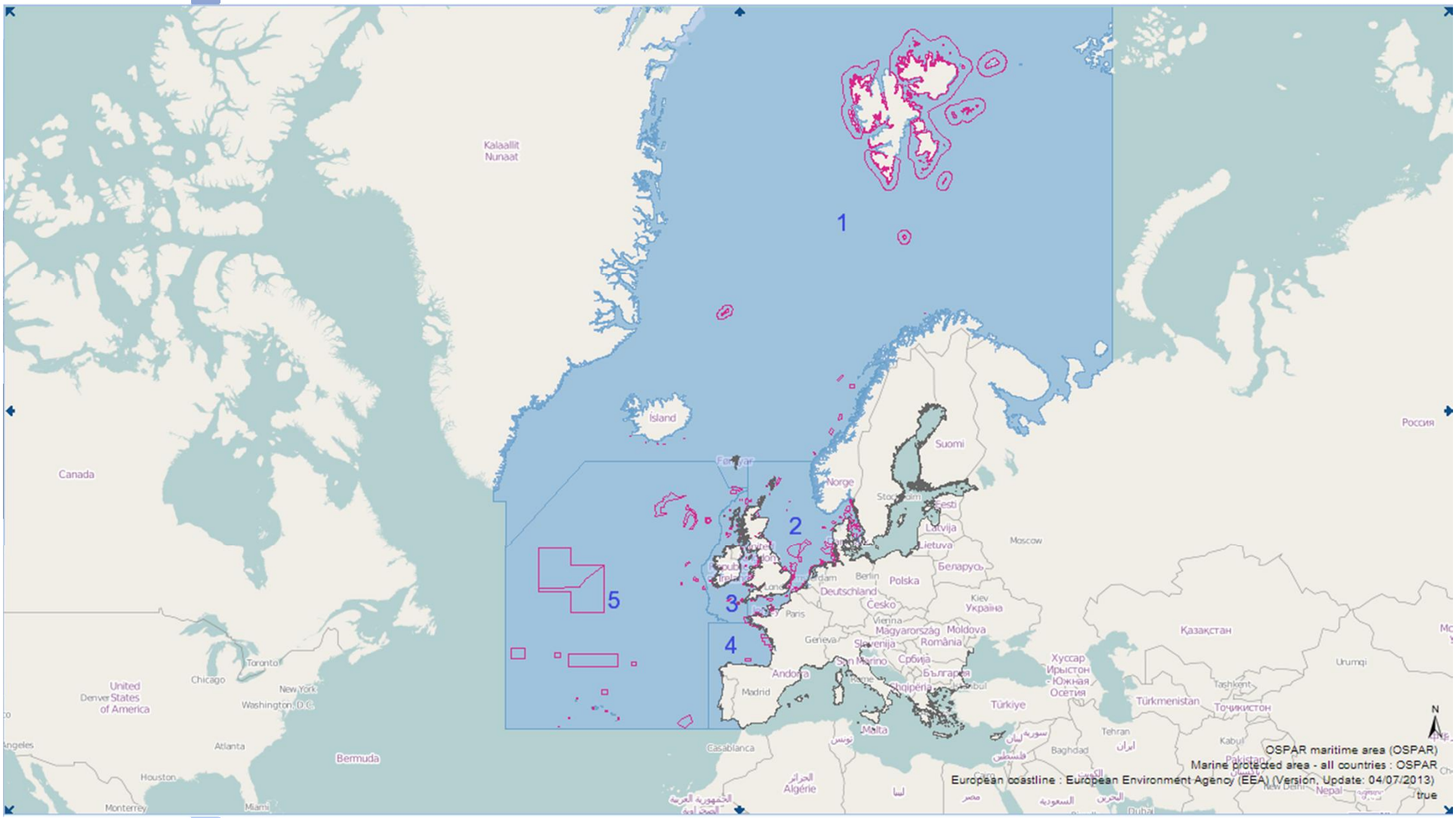




# MPAs under the OSPAR and the Helsinki Conventions

- Helsinki Rec. 15/5 (1995)
- OSPAR Annex V/Sintra Statement (1998)
- Joint Bremen Declaration (2003): *Complete by 2010 an ecological coherent and well-managed network of MPAs together with the Natura 2000 network*

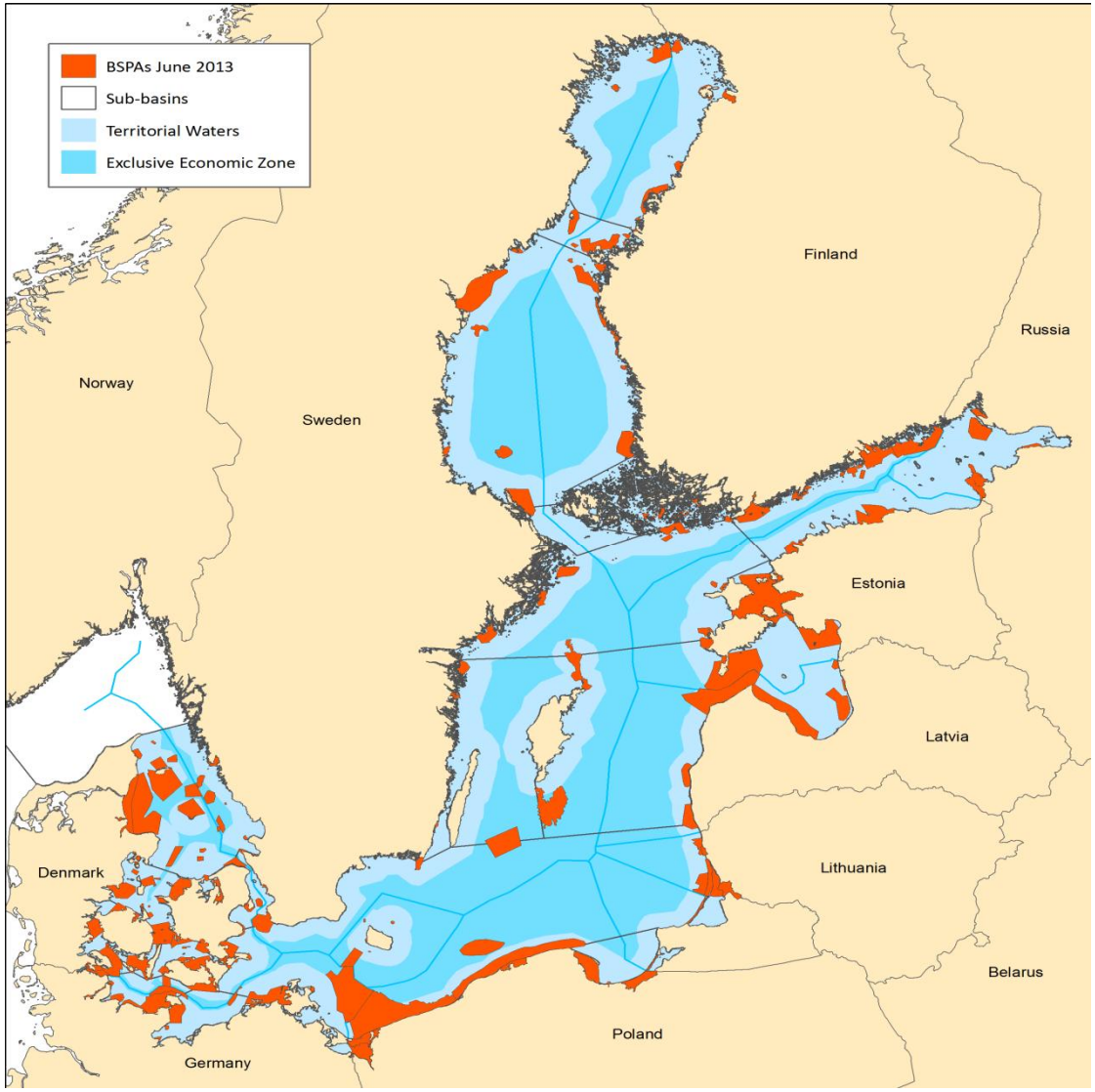
# OSPAR MPA network



# Number and size of OSPAR MPAs

| Maritime zone | Number of MPAs | Total marine surface area (km²) | Percentage (in surface area) of sites classed as MPAs/the maritime zone considered (%) |
|---|---|---|---|
| Within the 3 nautical mile limit | 266 | 148805.89 | 3.55 |
| Within territorial seas (12 nautical miles) | 287 | 163588.55 | 3.31 |
| Within waters under national jurisdiction (200 nautical miles) | 327 | 215210.45 | 1.81 |
| In the high seas (beyond waters under national jurisdiction) | 9 | 480909.36 | |

# HELCOM MPA network (Baltic Sea Protected Areas – BSPAs)



# Number and size of BSPAs

- 163 established HELCOM MPAs
- Cover a total area of 53 642 $km^2$ (includes both coastal and marine areas)
  - Marine fraction of this area is 90%

- Total coverage: 11.7% of Baltic Sea area
- TW: 14.7%; EEZ: 4.6 %; Total: 10.3 % (2010); Most HELCOM MPAs situated near the shores of the Baltic Sea

# Coherence in MSFD

Article 13 (4): Programmes of measures established pursuant to this Article shall include spatial protection measures, contributing to coherent and representative networks of marine protected areas, adequately covering the diversity of the constituent ecosystems, such as special areas of conservation pursuant to the Habitats Directive, special protection areas pursuant to the Birds Directive, and marine protected areas as agreed by the Community or Member States concerned in the framework of international or regional agreements to which they are parties.

# Framework

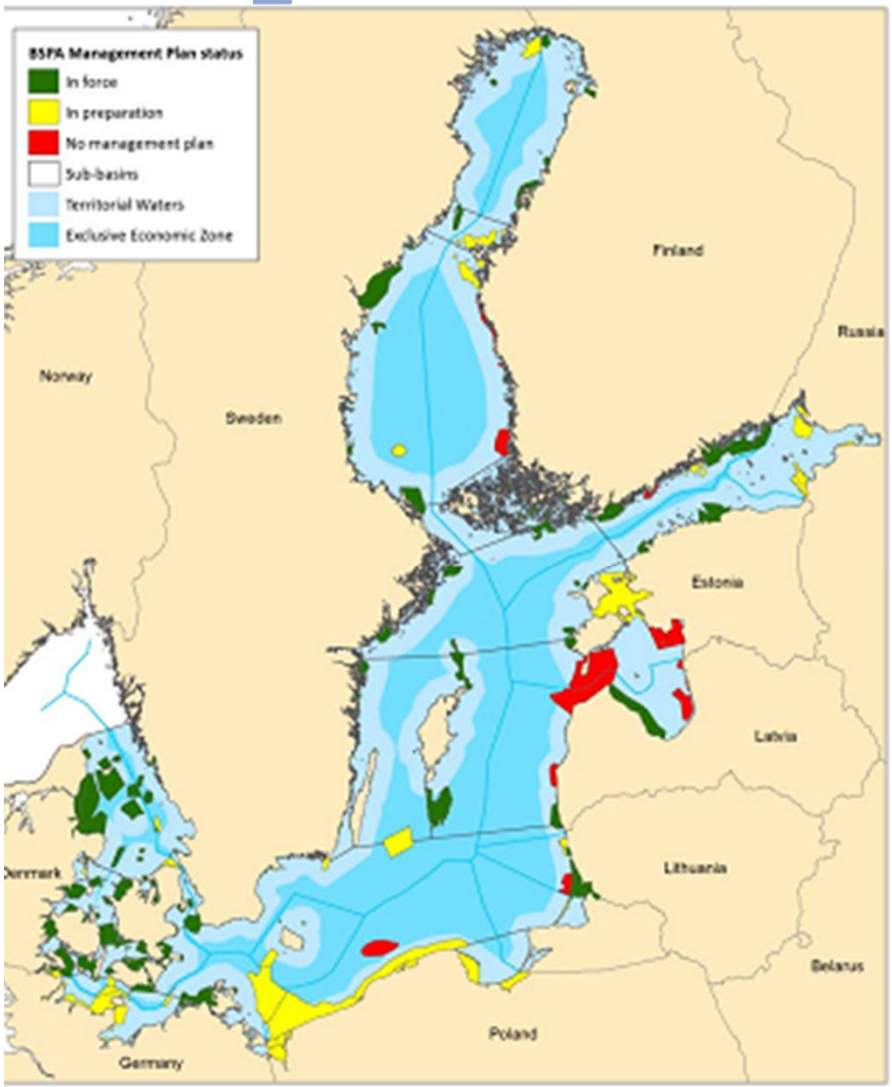
- Contributions of Helsinki Convention and OSPAR Convention to:
  - Spatial protection measures
  - Coherent networks
  - Representative networks
  - Adequate networks

# Spatial protection measures (1)

- Existing obligations for all MS by Habitats Directive:
  - Concerning protected species and habitats
  - Concerning EIAs under Article 6(3)
  - Exceptions under 6(4)

- OSPAR:
  - Spatial protection measures reflected in definition of MPAs (e.g. OSPAR Rec 2003/3)
  - Development of guidance on management effectiveness of OSPAR MPAs

# Spatial protection measures (2)




igure 7. Management plans for BSPAs are in place in most Danish and Swedish areas, while in the Baltic countries specially new BSPAs are still lacking plans (status in June 2013).

- Of the 163 BSPAs 106 (65 %) have a management plan in force. 42 BSPAs (26 %) have a management plan in preparation, and 15 BSPAs (9 %) have no management plan at all
- Develop and apply by 2015, management plans and/or measures for already existing BSPAs
- Every new BSPA designation should within five years be followed by the establishment of a management plan and/or measures

# Coherence, representativity and adequacy under OSPAR

- OSPAR developed 3 main “spatial test to assess coherence” (and 3 supporting tests):
  - geographically well-distributed
  - Minimum 3% coverage of  most (seven of the ten) relevant Dinter biogeographic provinces
  - Represents most (70%) of the OSPAR threatened and/or declining habitats and species

# Assessment of coherence 2012 (1)

- MPAs are geographically well-distributed:
  - Major gaps in the offshore and high seas areas of Regions I, IV and V
  - Nearshore component of Regions II and III are showing signs of ecological coherence (smaller gaps identified around the Channel Islands, southern Norway, southern Ireland and south east England)
  - Strong distribution bias of MPAs towards the coastal zone and shallow shelf, suggesting coherence has not been achieved at depths greater than 75 m

# Assessment of coherence 2012 (2)

- Minimum 3% coverage of  most (seven of the ten) relevant Dinter biogeographic provinces:
  - 7 of the 10 biogeographic provinces of particular relevance to OSPAR meet the 3% coverage threshold → test passed
- Represents most (70%) of the OSPAR threatened and/or declining habitats and species:
  - Lack of data so no reliable answer
  - Models used as proxy

# Additional tests of coherence

- Broad-scale habitat representativity and replication (test 6), adequacy and viability (test 7) and connectivity (test 8)
  - in specific areas varying degrees of these elements of ecological coherence have been achieved but also highlight uncertainties and limitations

→ assessment concludes that whilst the OSPAR MPA network as a whole is not ecologically coherent there are positive signs

# Coherence, representativity and adequacy under OSPAR

- Evolution of 3 spatial test to assess coherence across the network

| Original drafting of the principles | Proposed update |
|---|---|
| Spatially well distributed, without more than a few gaps | MPAs are geographically well-distributed, with a maximum distance of 250km for nearshore/coastline, 500km for offshore and 1000km for the high seas areas between MPAs |
| Covers at least 3% of most (seven of the ten) relevant Dinter biogeographic provinces | MPAs, in combination with other relevant spatial measures as deemed appropriate, cover at least 10% in area of all Dinter biogeographic provinces |
| Represents most (70%) of the OSPAR threatened and/or declining habitats and species (with limited home ranges), such that at least 5% [or at least three sites] of all areas in which they occur within each OSPAR Region is [are] protected | Represent all EUNIS Level 3 habitat classes and OSPAR T&D species and habitats for which MPAs are considered appropriate at least more than once in all relevant biogeographic provinces a given feature is present. |

# Ecological coherence under HELCOM

- Criteria for coherence within HELCOM network in accordance with EC HD Annex III coherence criteria
- Adequacy
  - Size; Quality (Eutrophication, Ship traffic, Fishing intensity); Protection of indicator species & biotopes; Coverage of essential habitats
- Representativity
- Replication of features
- Connectivity

# Ecological coherence under HELCOM

- Adequacy
- Representativity
  - Representation of indicator species & biotopes;
  - Marine landscape representation;
  - Geographical representation
- Replication of features
- Connectivity

# Ecological coherence under HELCOM

- Adequacy
- Representativity
- Replication of features
  - Replication of indicator species & biotopes;
  - Replication of marine landscape types (between-sites / within-sites)

Connectivity

# Ecological coherence under HELCOM

- Adequacy
- Representativity
- Replication of features
- Connectivity
  - marine landscape types (5 landscapes);
  - species specific connectivity (5 species)

# Assessment of coherence of HELCOM MPA network

- Assessment of HELCOM network (2012) concludes: that neither the current network of Baltic Sea Protected Areas nor a common BSPA/Natura 2000 network could be considered ecologically coherent with respect to all four coherence criteria.

# Conclusion

- Both, Helsinki and OSPAR Conventions have developed criteria to complement the marine Natura 2000 network for each regional sea
- Criteria similar but not identical
- In accordance with HD Annex III
- Both networks have been improved, but both are not coherent according to their own criteria

# Thank you

# Background: HELCOM

- Baltic Marine Environment Protection Commission

→ Helsinki Commission (HELCOM) with Helsinki Convention

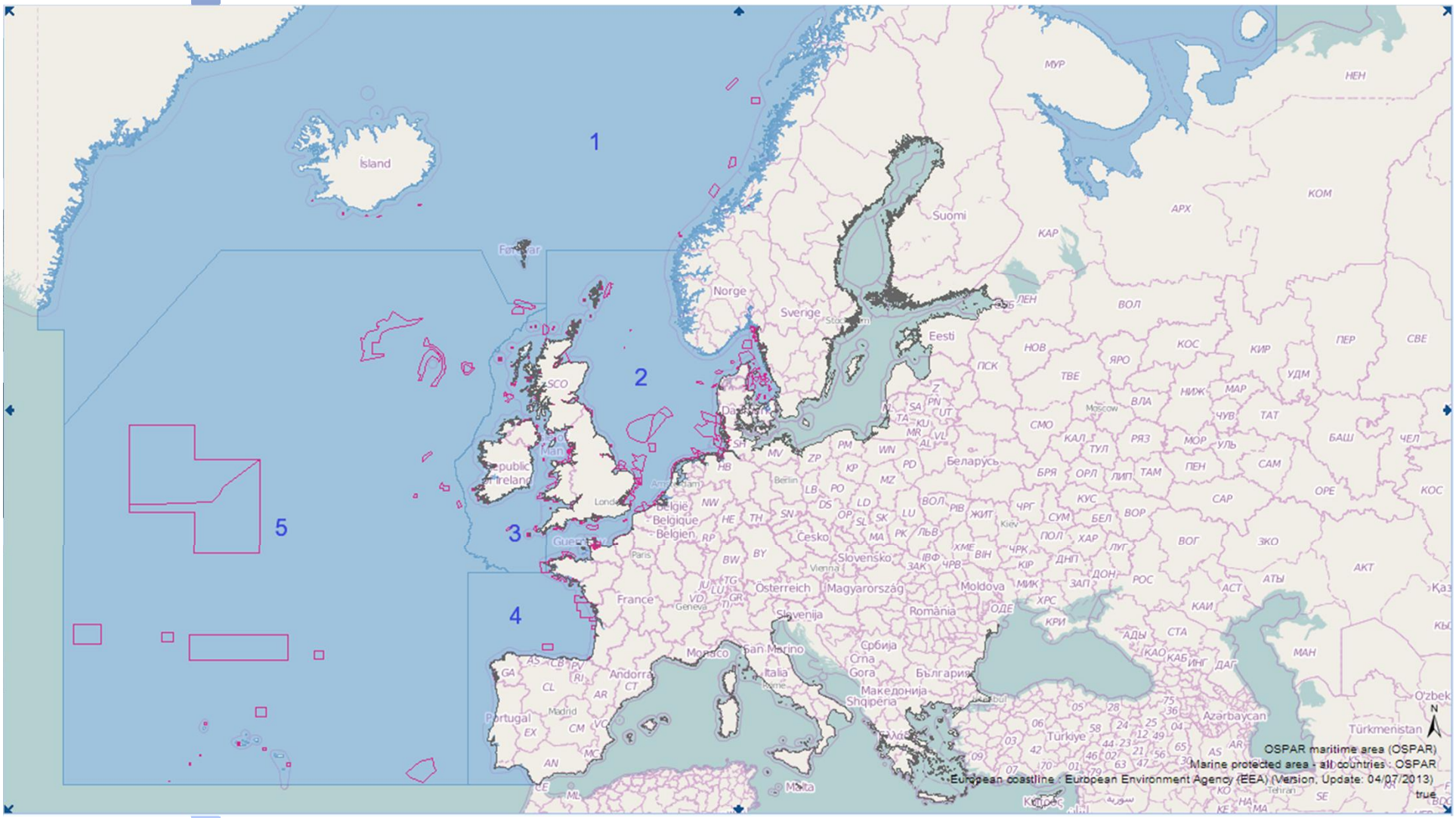
- Governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area
- Established in 1974 to protect marine environment of the Baltic Sea from all sources of pollution through intergovernmental cooperation

- Contracting Parties: Denmark, Estonia, the European Union, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden

# Background: OSPAR

- Cooperation of 15 governments of western coasts and catchment of Europe together with EU Commission to protect environment of North-East Atlantic
- Started in 1972 with Oslo Convention against dumping, later unified with Paris Convention of 1974 to cover land-based sources and the offshore industry → 1992 OSPAR Convention
- Contracting parties are:
  - Belgium
  - Denmark
  - Finland
  - France
  - Germany
  - Iceland
  - Ireland
  - Luxembourg
  - The Netherlands
  - Norway
  - Portugal
  - Spain
  - Sweden
  - Switzerland
  - United Kingdom

# OSPAR MPA network (2)



# Coherent networks

- Annex III HD coherence criteria (a)-(e)
  - Relative value; geographical situation; total area; number of natural habitat types; global ecological value for biogeographic region

# Representative networks

- Annex III HD Stage 1 a: degree of representativity of natural habitat type

# Assessment criteria and feasibility for establishing coherent, adequate and representative MPA networks from a Mediterranean point of view

Souha EL ASMI, *Programme Officer*
Regional Activity Centre for Specially Protected Areas (RAC/SPA)
UNEP/Mediterranean Action Plan – Barcelona Convention

Chloë WEBSTER, *Scientfic Officer*
Network of Managers of Marine Protected Areas in the Mediterranean (MedPAN)

Marine Expert Group Meeting
*How to assess coherence and representativity of networks of marine protected areas?*
Brussels, 6 May 2014

# Key figures

## The World

10 280 MPAs

8.3 million km²

2.3 % of Global Ocean

(Spalding *et al.*, 2013)

## The Mediterranean

0.8 % of world's oceans surface area

677 MPAs = 6.6 % of the World's MPAs

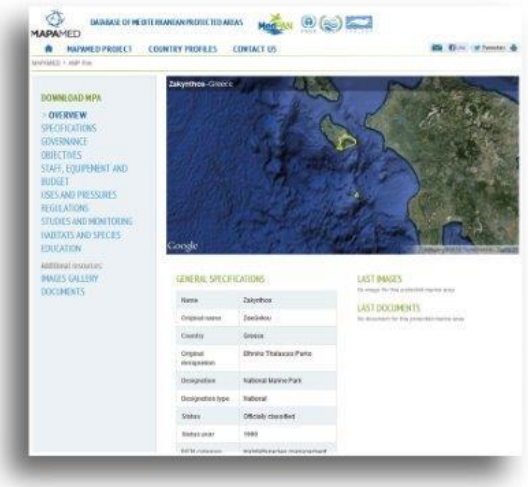
114 600 km² =
4.6 % of the Mediterranean
1.38 % of the World's protected surface area

# MAPAMED the online database on Mediterranean MPAs

## MAPAMED - Database interface

Two ways of displaying search results:


The or the give access to the MPA Profile page:



www.mapamed.org

# Where do we stand in the Med?

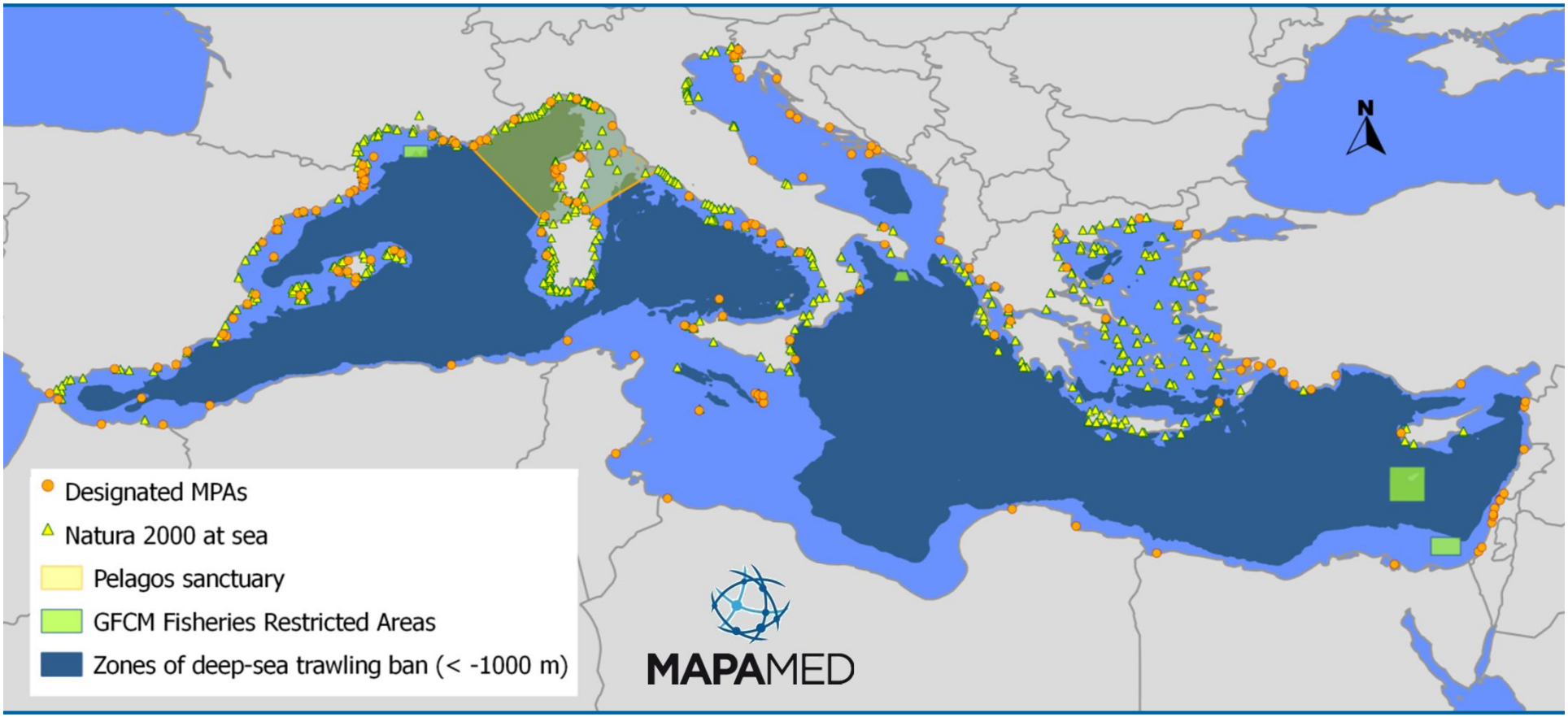
- 170 designated MPAs
- 507 Natura 2000 sites

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

- 4 Fisheries Restricted Areas (GFCM)

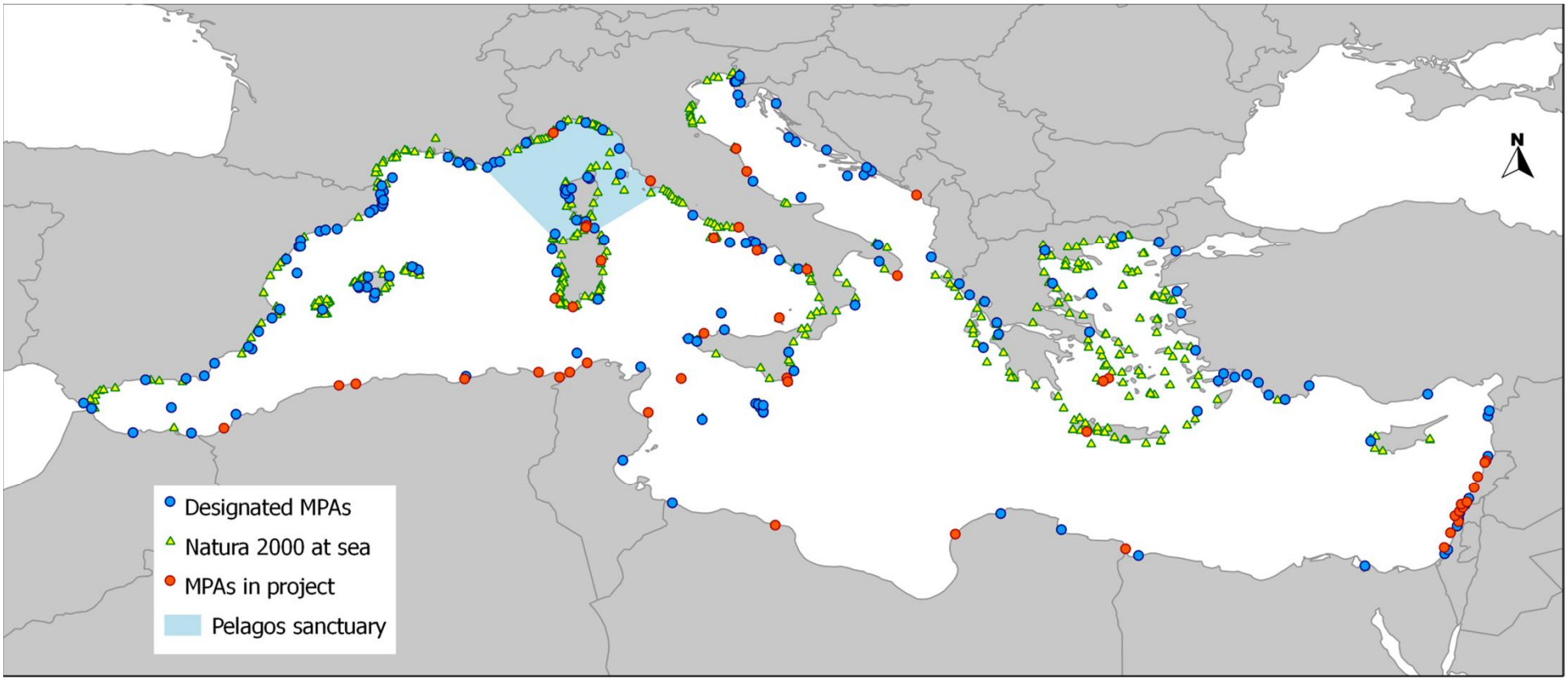
5,26% in Total.....

- Zones of deep-sea trawling ban



# 170 declared MPAs
# 507 Natura 2000

# + 55 MPAs in project



# Barcelona Convention: 32 SPAMIs

## Specially Protected Areas of Mediterranean Importance


**ALGERIA**
**DZ1**. Banc des Kabyles Marine Reserve (2005)
**DZ2**. Habibas Islands (2005)

**FRANCE**
**FR1**. Port-Cros National Park (2001)
**FR2**. Natural Reserve of Bouches de Bonifacio (2009)
**FR3**. The Blue Coast Marine Park (2012)
**FR4**. The Embiez Archipelago - Six Fours (2012)

**CYPRUS**
**CY1**. Lara – Toxeftra Turtle Reserve (2013)

**ITALY**
**IT1**. Marine Protected Area of Piemmirio (2008)
**IT2**. Marine Protected Area of Portofino (2005)
**IT3**. Marine Protected Area of Miramare (2008)
**IT4**. Marine Protected Area of Tavolara-Punta Coda Cavallo (2008)
**IT5**. Marine Protected Area of Torre Guaceto (2008)
**IT6**. Marine Protected Area of Punta Campanella (2009)
**IT7**. Marine Protected Area of Capo Caccia-Isola Piana (2009)
**IT8**. Marine Protected Area of Porto Cesareo (2012)
**IT9**. Marine Protected Area of Capo Carbonara (2012)
**IT10**. Marine Protected Area of Penisola del Sinis (2012)

**LEBANON**
**LB1**. Palm Islands Nature Reserve (2012)
**LB2**. Tyre Coast Nature Reserve (2012)

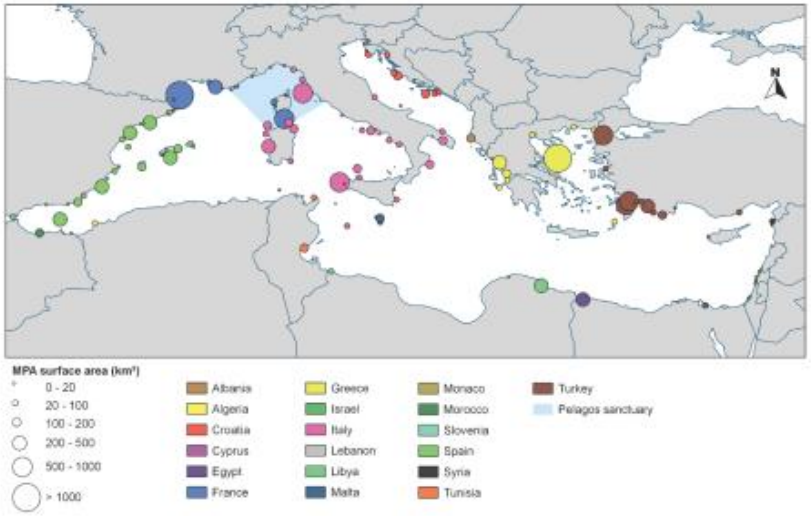
**MOROCCO**
**MA1**. Al-Hoceima National Park (2009)

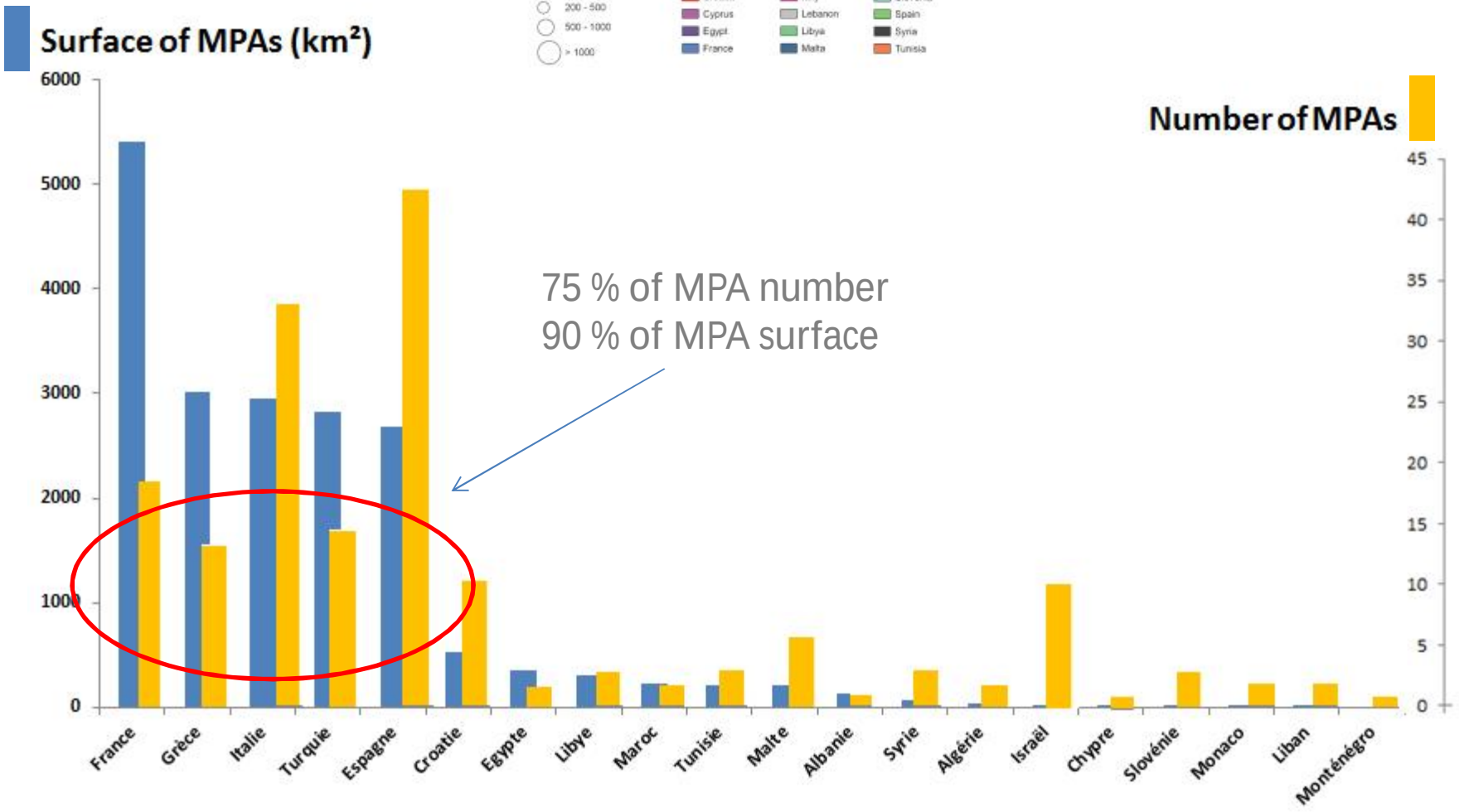
**SPAIN**
**SP1**. Maro-Cerro Gordo Cliffs (2003)
**SP2**. Archipelago of Cabrera National Park (2003)
**SP3**. Natural Park of Cabo de Gata-Nijar (2001)
**SP4**. Natural Park of Cap de Creus (2001)
**SP5**. Sea Bottom of the Levante of Almeria (2001)
**SP6**. Alboran Island (2001)
**SP7**. Columbretes Islands (2001)
**SP8**. Medes Islands (2001)
**SP9**. Mar Menor and Oriental Mediterranean zone of the Region of Murcia coast (2001)

**TUNISIA**
**TN1**. La Galite Archipelago (2001)
**TN2**. Kneiss Islands (2001)
**TN3**. Zembra and Zembretta National Park (2001)

**FRANCE, ITALY AND MONACO**
**Int1**. Pelagos Sanctuary for the Conservation of Marine Mammals (2001)

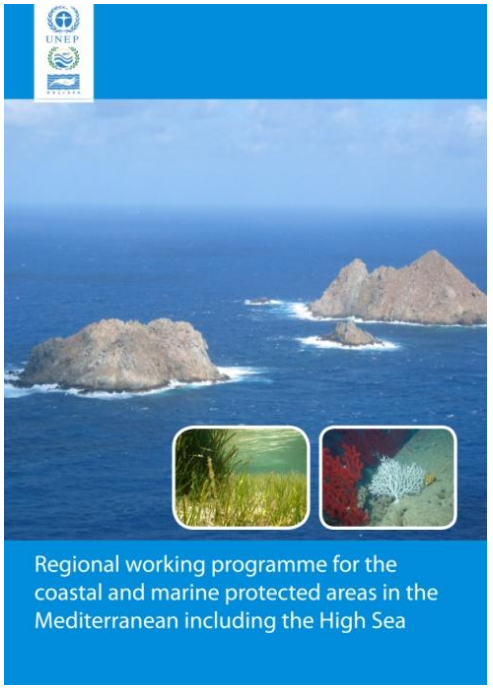
# MPA Distribution



# Criteria for MPA selection

Regional working programme
for the coastal and marine protected areas
in the Mediterranean including the High Sea (2009)

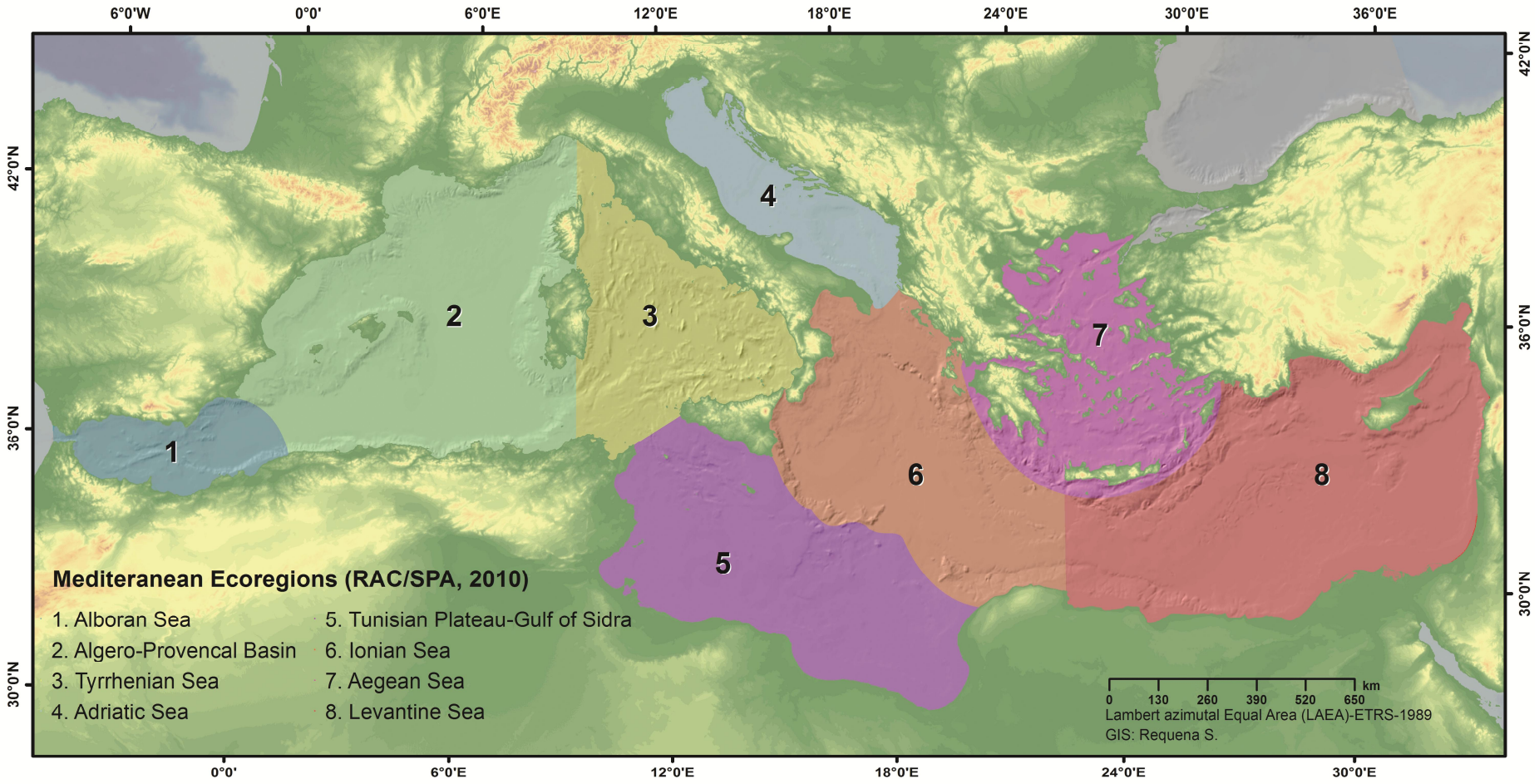



➡ Steps for MPA network design

1. Identification of large scale ecological units
2. Identification of priority conservation areas
3. Identification of sites to develop true ecological networks

# Criteria for MPA selection

1. Identification of large scale ecological units



# Criteria for MPA selection

2. Identification of priority conservation areas

## CRITERIA *(adapted from CBD, 2007)*:

a) Uniqueness or Rarity

b) Special importance for life history stages of species

c) Importance for threatened, endangered or declining species and/or habitats

d) Vulnerability, Fragility, Sensitivity, or Slow recovery

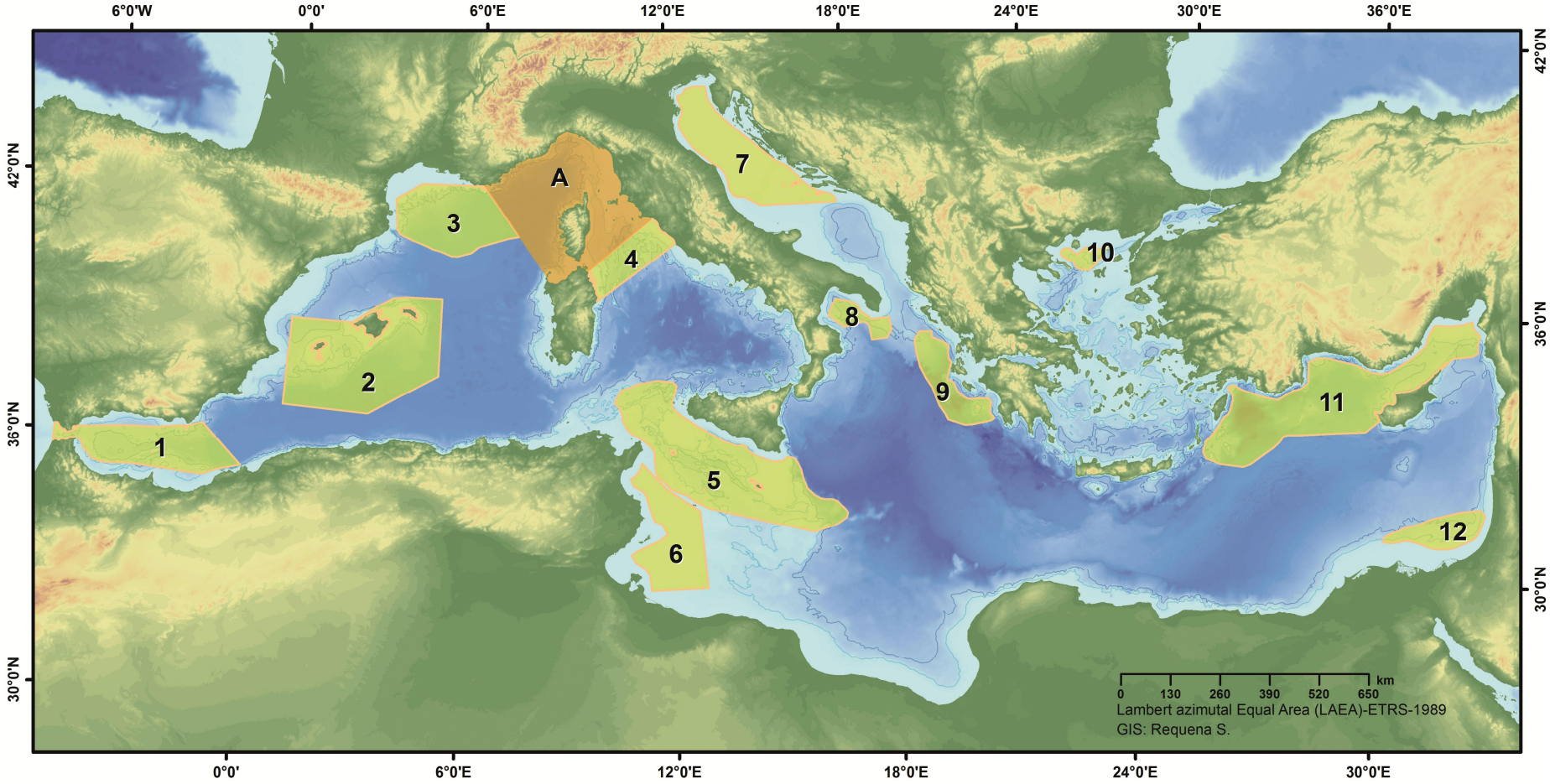
e) Biological Productivity

f) Biological Diversity

g) Naturalness

# Criteria for MPA selection

## 2. Identification of priority conservation areas




1. Alboran Sea; 2. Balearic Islands area; 3. Gulf of lion area; 4. Tyrrhenian Sea; 5. Northern Strait of Sicily (including Adventure bank and surrounding banks); 6. Southern Strait of Sicily; 7. Ionian Sea; 10. Thracian Sea; 11. North-east levantine Sea and Rhodes Gyre; 12. Nile Delta region

# Criteria for MPA selection

3. Identification of sites to develop true ecological networks

## CRITERIA *(adapted from CBD, 2007)*:

a) Ecologically and biologically significant areas

b) Representativity

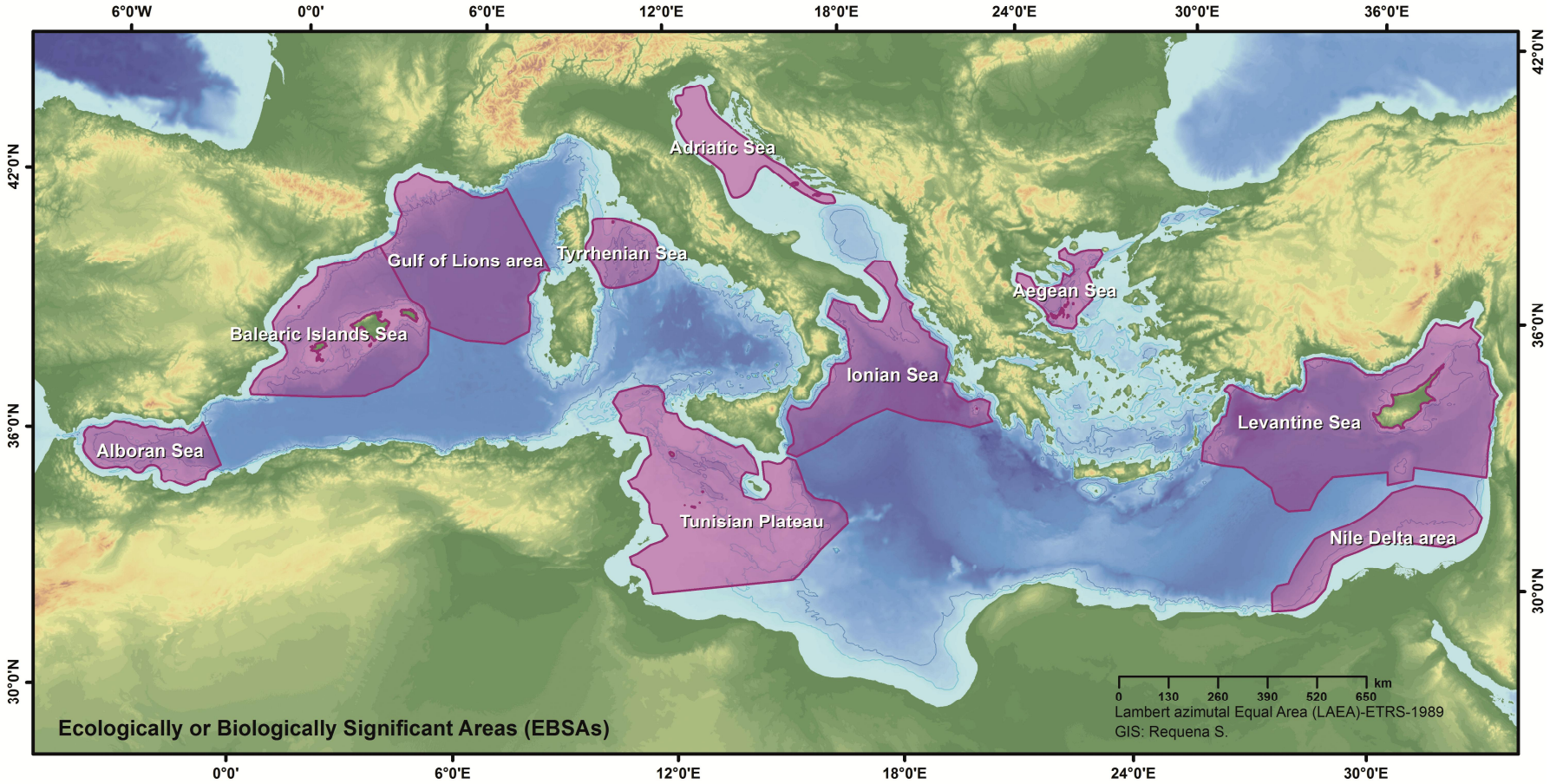
c) Connectivity

d) Replicated ecological features

e) Adequate and viable sites

# Criteria for MPA selection

## 3. Identification of sites to develop true ecological networks




1. Alboran Sea; 2. Balearic Islands area; 3. Gulf of lion area; 4. Tyrrhenian Sea; 5. Tunisian Plateau; 6. Adriatic Sea; 7. Ionian Sea; 8. Aegean Sea; 9. levantine Sea; 10. Nile Delta region

# Criteria for the selection of SPAMIs

*Annex I to the SPA/BD Protocol*

## Criteria concerning the regional value of the area

a) Uniqueness

b) Natural representativeness

c) Diversity

d) Naturalness

e) Presence of habitats that are critical to endangered, threatened or endemic species

f) Cultural representativeness

## Criteria on scientific, educational or aesthetic interest

## Other favouring characteristics and factors

Open Sea SPAMIs

a) Sustainable use criteria

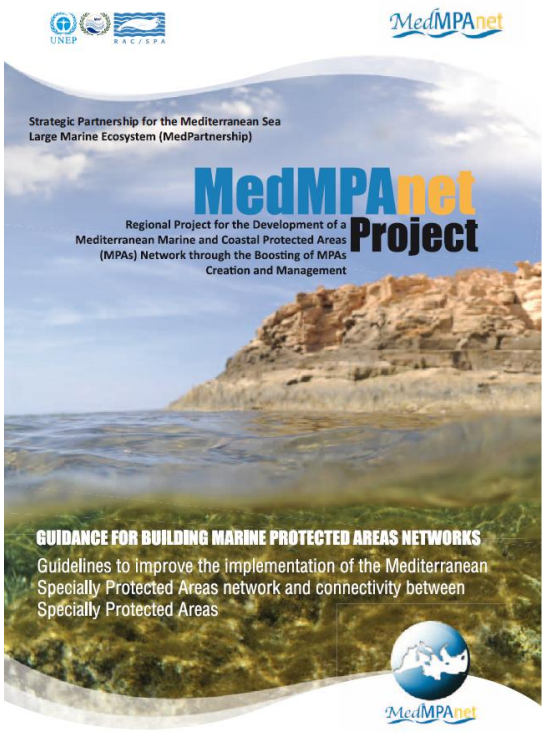
b) Feasibility criteria

# Guidelines to improve the implementation of the Mediterranean Specially Protected Areas network and connectivity between Specially Protected Areas

- Offer a broad **methodological framework** within which to consider representativity, replication and connectivity criteria when designing MPA networks;

- Provide some **general guidance for improving representativeness, efficiency and functionality** of MPA networks;

- Illustrate some **good practices.**



# Governance and important stakeholders

## REGIONAL CONVENTIONS AND AGREEMENTS

- The Barcelona Convention and its Protocols (UNEP/MAP Secretariat, Athens):

SPA/BD Protocol / concerning Specially Protected Areas and Biological Diversity (RAC/SPA, Tunis)

- General Fisheries Commission for the Mediterranean (GFCM, Rome)

- Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Areas (ACCOBAMS, Monaco)

# Governance and important stakeholders

## Inter-governmental and non-governmental organizations playing a regional role

- IUCN Centre for Mediterranean Cooperation (IUCN-Med, Malaga)

- Network of Managers of Marine Protected Areas in the Mediterranean (MedPAN, Marseille)

- WWF Mediterranean Programme (Rome) and North-African Programme (Tunis)

- Conservatoire du Littoral EU & International Delegation / Small Islands Intiative (PIM, Aix-en-Provence)

Conservatoire du littoral

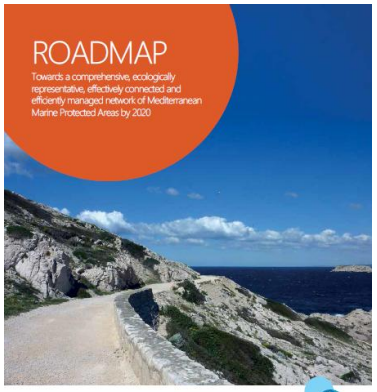
# The 2012 Forum of Marine Protected Areas in the Mediterranean
25 – 28 Nov. Antalya, Turkey

The 2012 Forum of Marine Protected Areas in the Mediterranean
25 – 28 Nov. Antalya, Turkey

THE 2012 FORUM
of Marine Protected Areas
in the Mediterranean

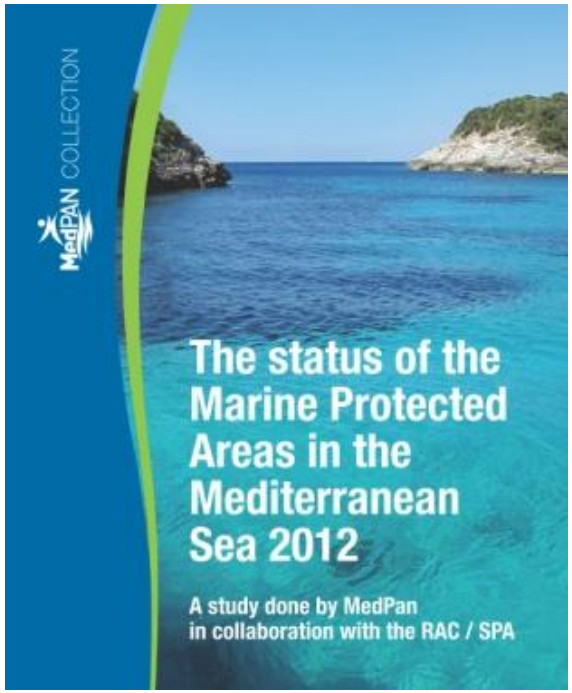
MARINE PROTECTED AREAS:
**Everyone's Business.**

*Boosting the Marine Protected Areas network for the benefits of the Mediterranean society.*




## ROADMAP to 2020

"To achieve by 2020 a connected, ecologically representative, effectively managed and monitored network of Marine Protected Areas which ensures the long term conservation of the key components of the marine biodiversity and gives solid support to the sustainable development of the region. "




# Assessing the current Mediterranean system of MPAs

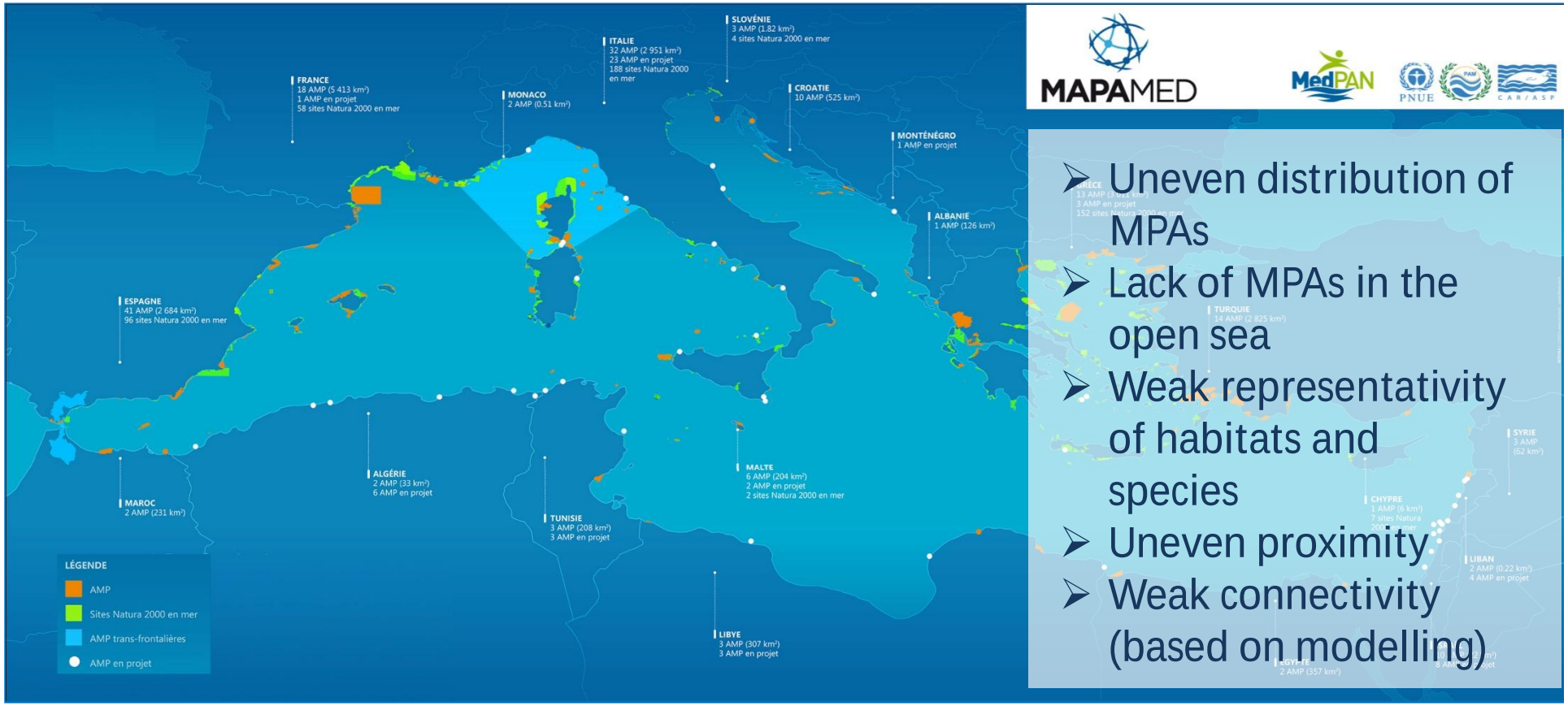
-

# The 2012 Status Report

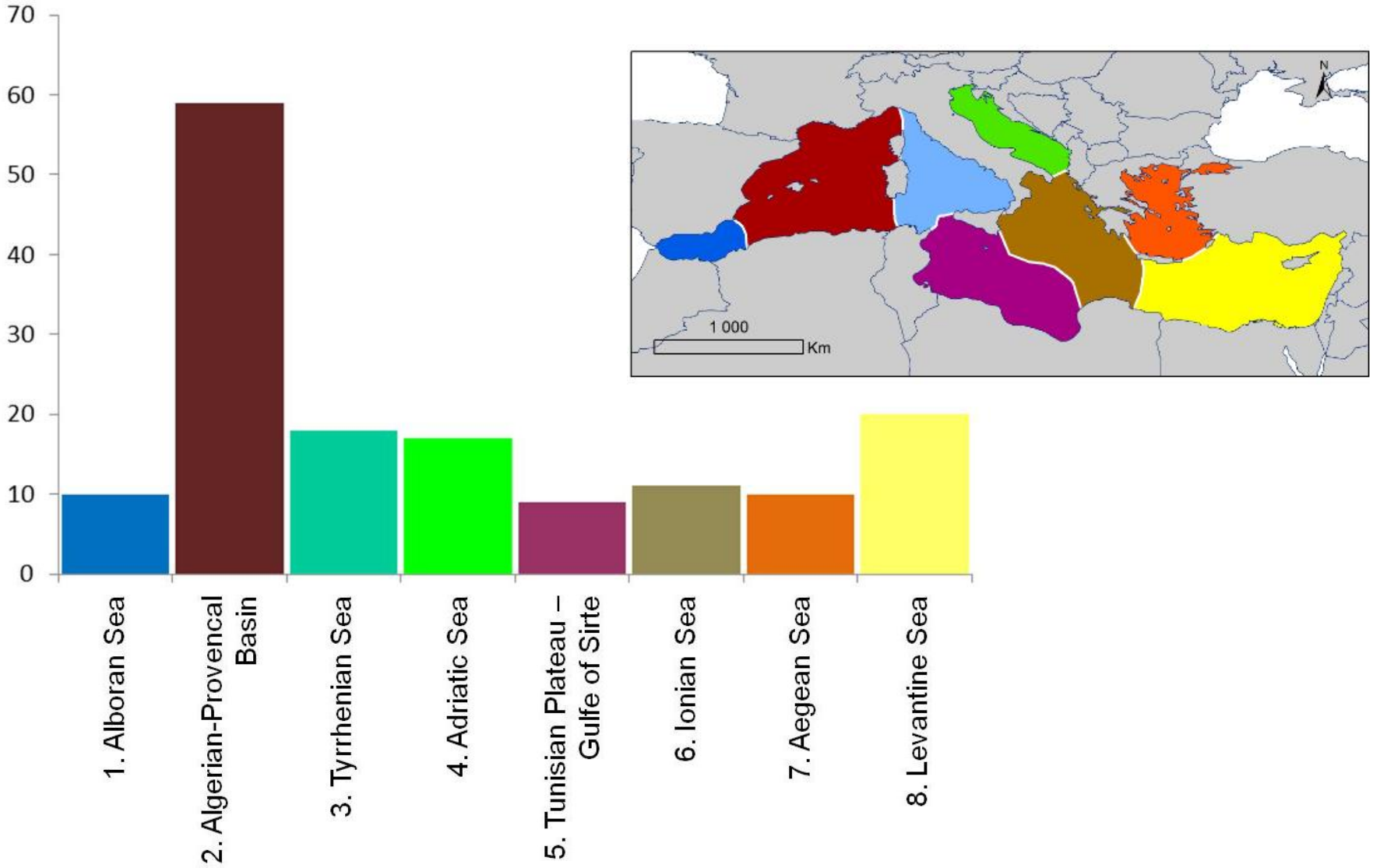
Catherine Gabrié, Erwann Lagabrielle, Claire Bissery, Estelle Crochelet, Bruno Meola, Chloë Webster, Joachim Claudet, Aurore Chassanite, Sophie Marinesque, Philippe Robert, Madeleine Goutx

# Ecological coherence of the system of MPAs: an over-arching concept for all criteria

## *visual analysis*

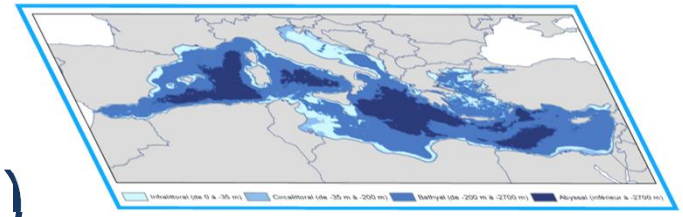


# Representativity of Mediterranean eco-regions



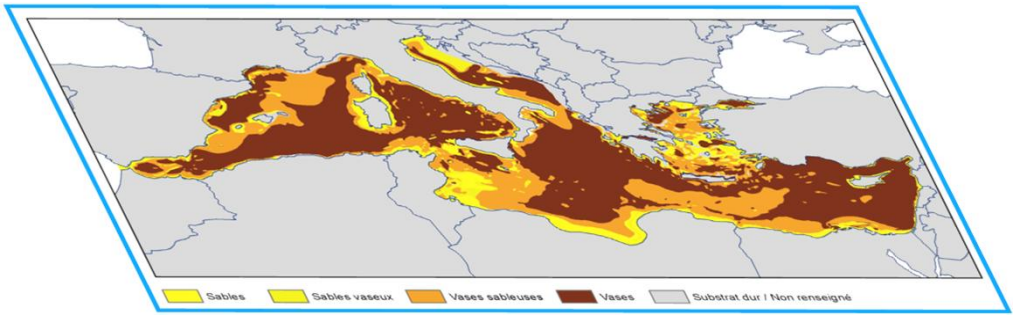
# Representativity of Habitats

- Representativity of benthic marine habitats (infralittoral, circalittoral, bathyal, & abyssal zones and beyond) by:



- Building a map of bentho-sedimentary habitats (biotopes) across the whole basin
- Assessing remarkable habitats in the western part of the basin (homogeneous layer) : the *Posidonia* and *Cymodocea* seagrass meadows (representative of the infralittoral zone) and the coralligenous (cricalittoral)
- Assessing remarkable geomorphological components for: deep sea canyons, seamounts, submarine knolls and submarine banks.

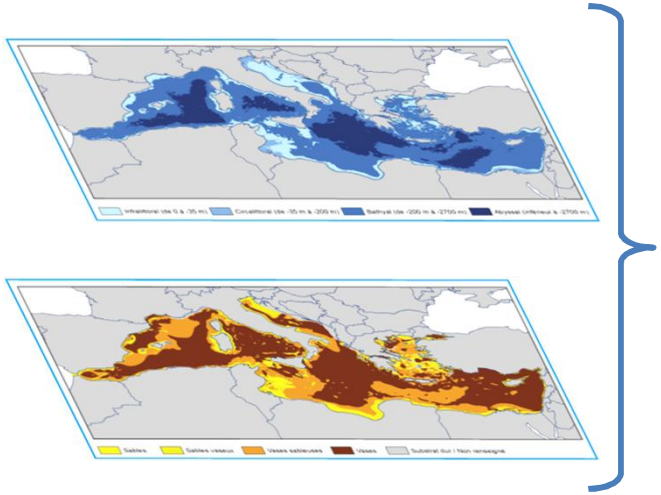
Taza National Park, Algeria © M. Foulquié

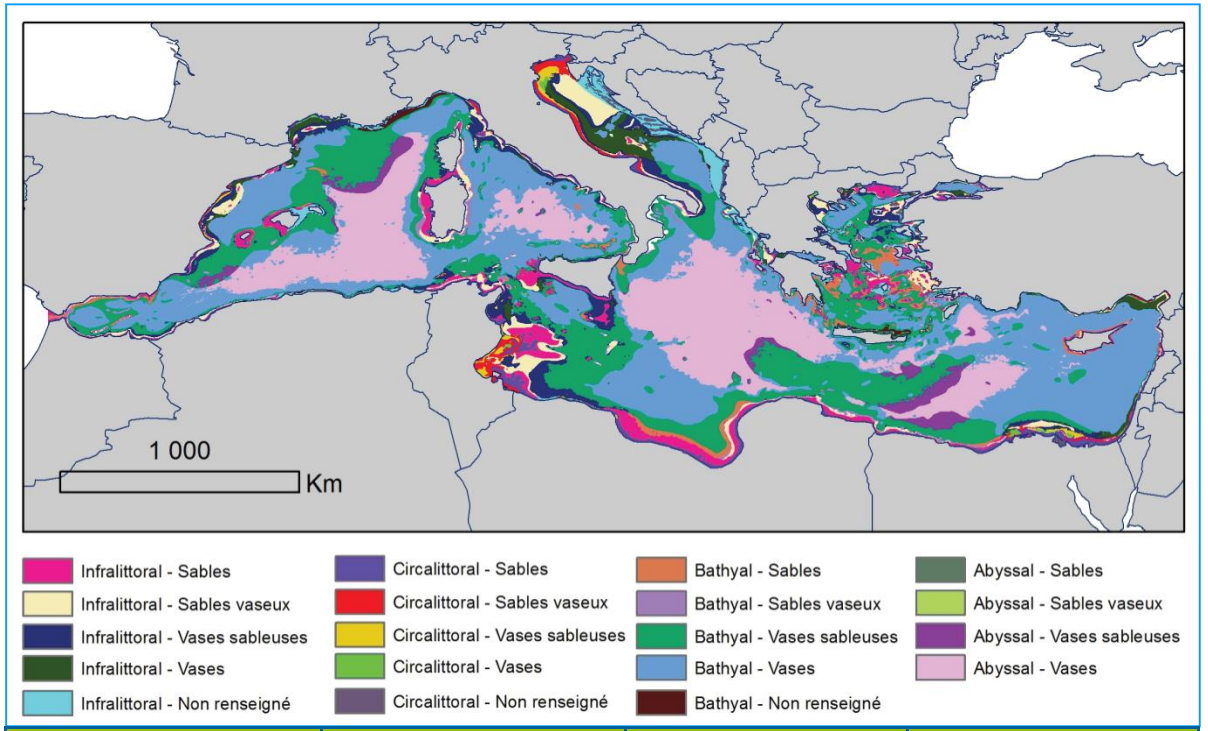



Substrate
- Sand
- Muddy sand
- Sandy mud
- Mud
- Hard substrate

# Representativity of Habitats

## Representation of seabed habitats



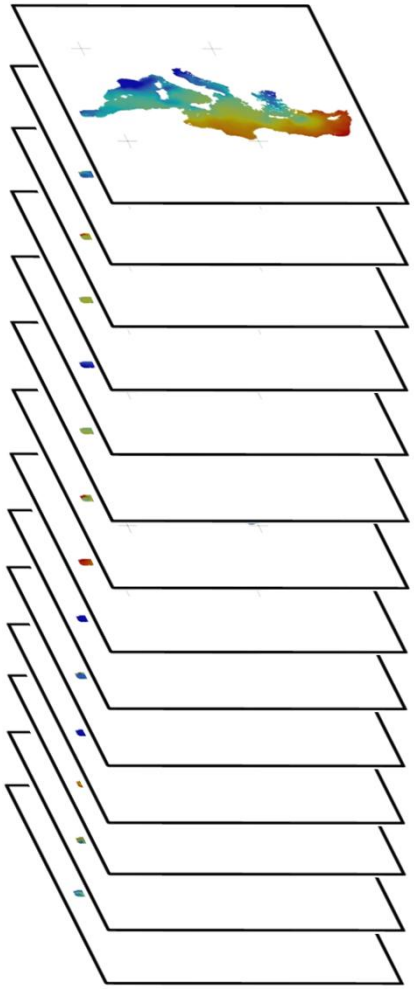



| | Infralittoral | Circalittoral | Bathyal | Abyssal |
|---|---|---|---|---|
| Without Pelagos | 10,18 | 3,89 | 0,57 | 0 |
| With Pelagos | 12,58 | 7,19 | 4,25 | 2,05 |

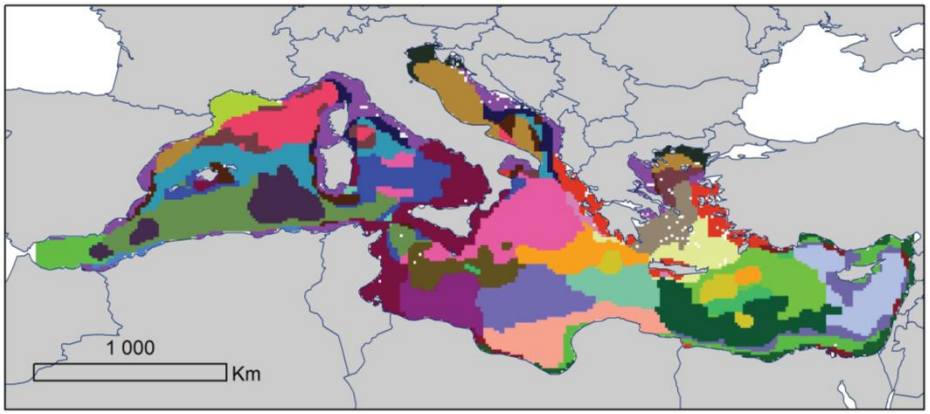
*% of depth zones protected*

# Representativity of Habitats

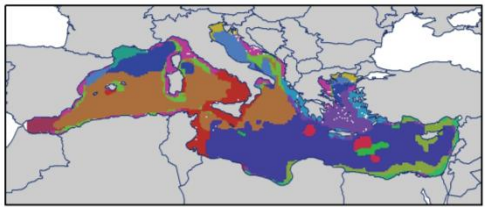
- Representatation of epi-pelagic bioregions



- Average SST
- Average chla
- Average K490*
- pH
- Salinity
- Min SST
- Min K490
- Dissolved oxygen
- SST range
- Chla range
- Eddies
- Depth
- SST fronts
- Chla fronts




*Level III*



*Level II*

*Level I*

* *K490: attenuation coefficient at 490nm*

# Representativity of some specific habitats

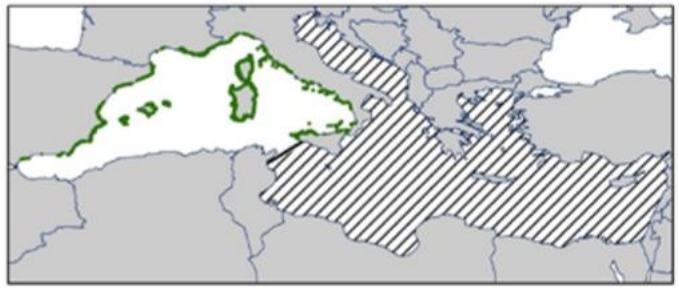
**Coralligenous and *Posidonia* meadows**

(Mapped only for Western Mediterranean basin – EUseamap)


a. Coralligeneous substrate

**12%**

**5%**



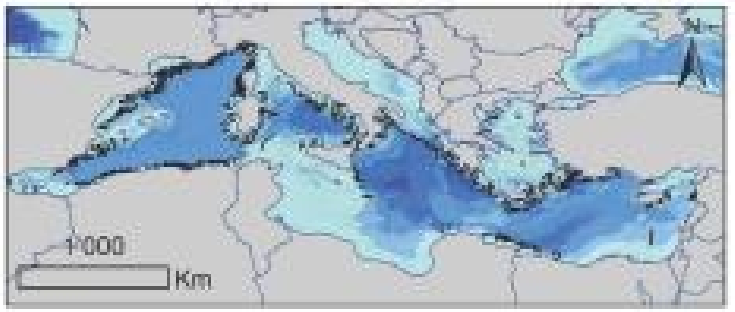
b. *Posidonia oceanica* seabed

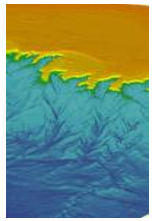
**50%**

**20%**

**Canyons**

(Harris and Whiteway, 2011 ; UICN, 2012)

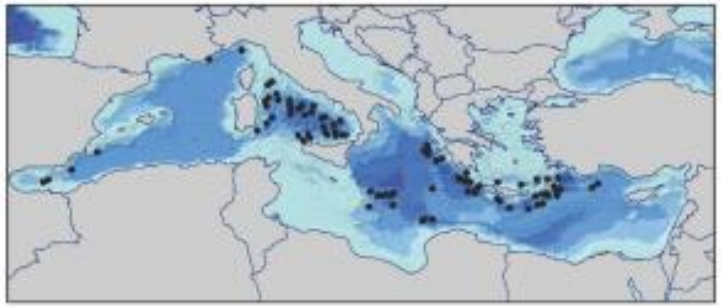


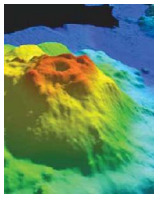



**13%**

**3%**

**Seamounts** (Yesson *et al*., 2011)





**7%**

**3,5%**

# Representativity of some threatened species

- Marine Mammals
  7 sp. of cetaceans
  Monk seal

- Turtles (nesting sites)

- Fish
  Blue fin tuna (*Thunnus thynnus*)
  &
  16 sp of different trophic levels

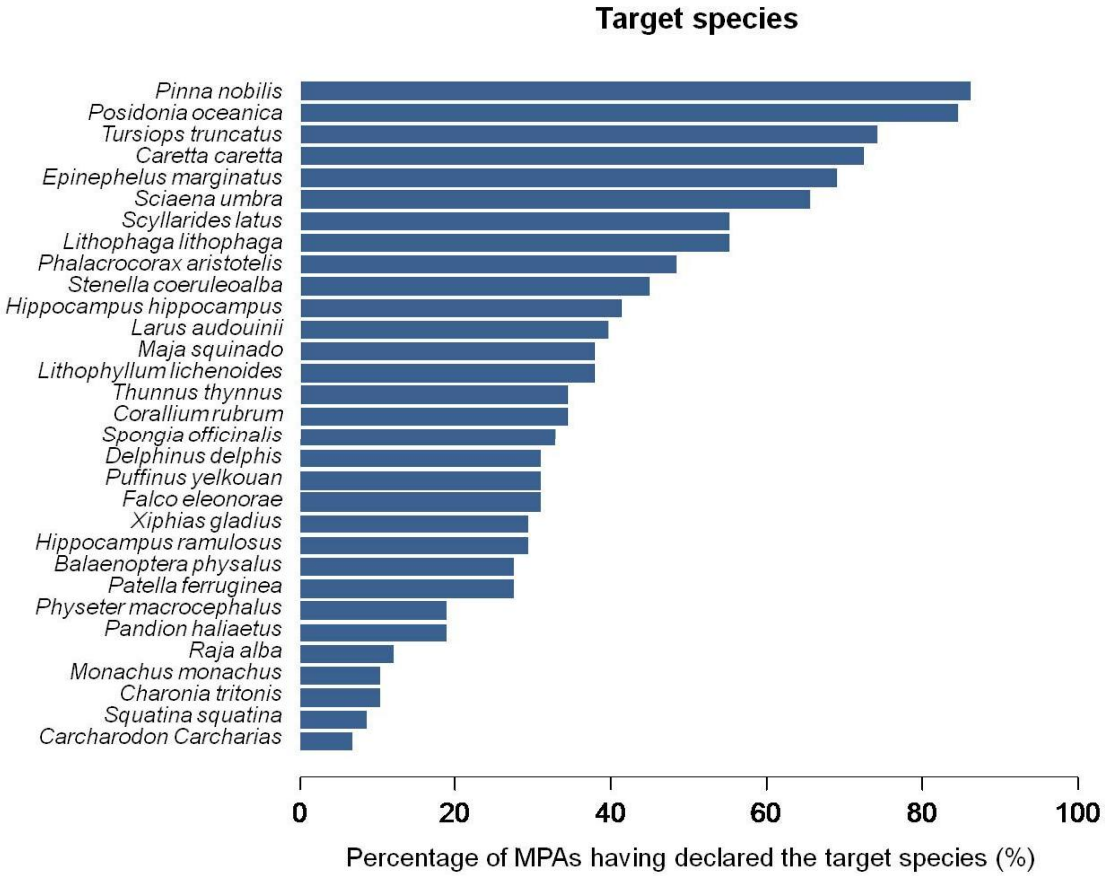
- Birds (4 sp.)

- Distribution range
- Data on catches
- Scientific litterature

+

- Cross-check with data from questionnaires for MPA managers (n=80)

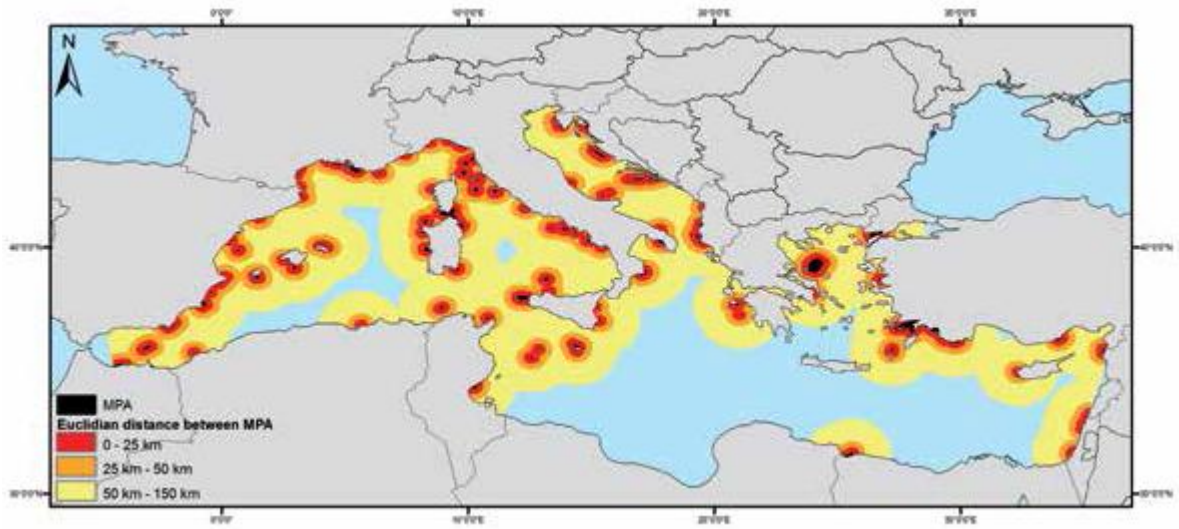
# Representativity of some species Reported by managers in n=80 MPAs

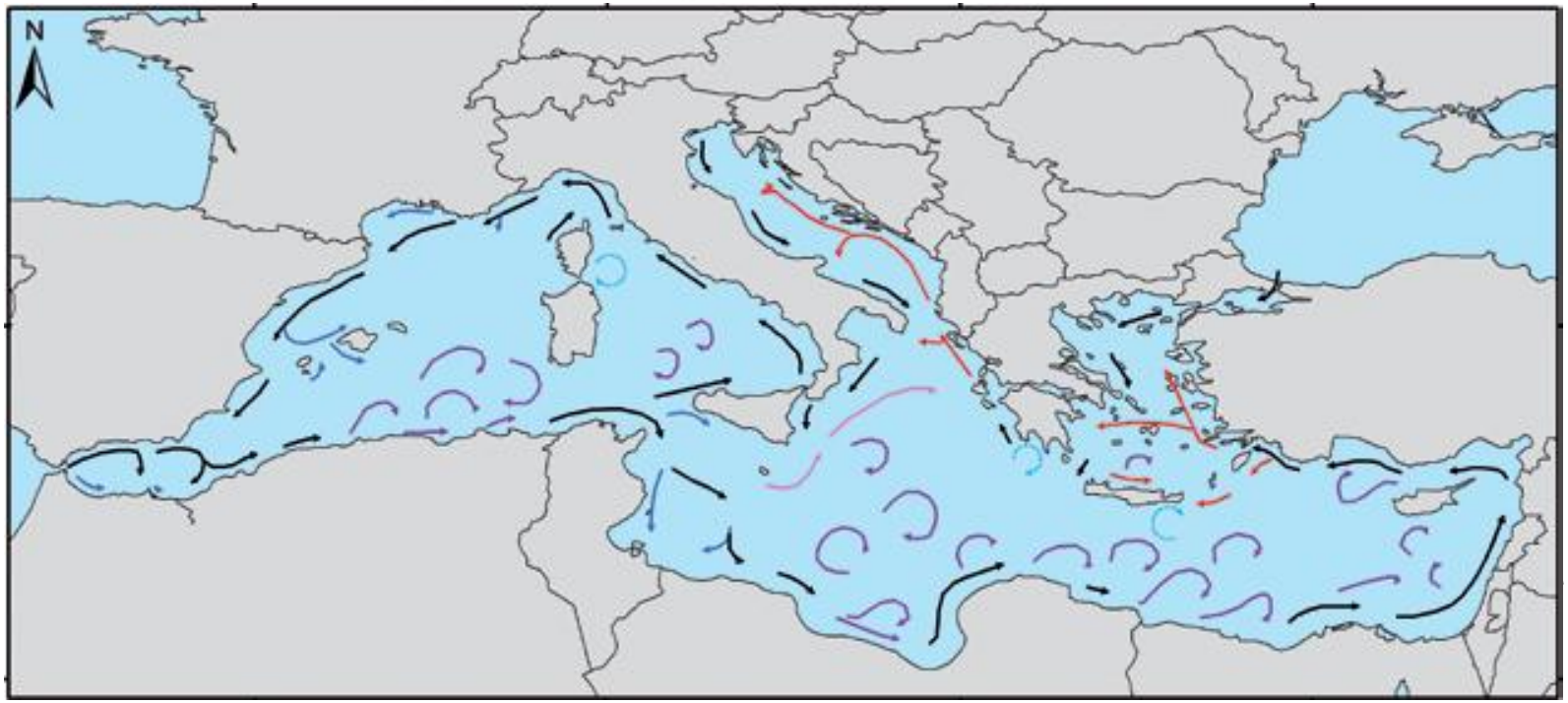



90% of species (SPA/BD protocol) are present in MPAs (14 species not mentionned /146 species)

Some figures from very rares species are to be confirmed :
*Lithophaga :* presence in 60 % of MPAs
*Delphinus delphis* : 25 %
White shark : 6 %
Monk seal : about 10%

# Proximity & Connectivity



# Adequacy

- Size
- Age
- Type/character
- Management
- Uses & Pressures

## Management

- Existence or absence of a management plan
- Existence of baseline studies for the MPA
- Implementation of regular monitoring programmes or occasional studies within the MPA
- Type of governance (participation of stakeholders)
- Presence of no-take zones
- Perception of the global evolution of fishery resources
- Personnel assigned to the MPA (sworn staff, staff training)
- Importance of the surveillance effort
- Existing infrastructure and equipment
- Awareness raising tools developed by the MPA
- Financing of the MPA and the existence of a business plan

# Improving assessments and use of criteria for finer analysis

*Ideas based on the 2012 experience of the Mediterranean analysis of the system of MPAs*


PLANNING FOR FUTURE ANALYSIS

STATUS REPORT TO BE PUBLISHED IN 2016

# Improving assessments and use of criteria for finer analysis

*Ideas based on the 2012 experience of the Mediterranean analysis of the system of MPAs*

## FUTURE ANALYSIS NEED TO ASSESS COHERENCE:

- At the national level when there is a network approach
- On the scale of each eco-region
- With finer adequacy parameters
- Using cross-methods on connectivity
- Looking closer at zoning
- By better integrating the replication criteria
- ...

# Improving assessments and use of criteria for finer analysis

*Ideas based on the 2012 experience of the Mediterranean analysis of the system of MPAs*

## FUTURE ANALYSIS NEED TO:

- Sort MPAs by typology/character in a finer way
- Obtain a larger sample of MPA managers and finer analysis linked to management measures (re threats)
- Have more scientific data on habitats (especially Eastern Basin) & perhaps adjust choice of habitats per ecoregion
- Take into account connectivity within the framework of Marine Spatial Planning (beyond MPA boundaries)

## Supportive actions at Regional/Global Level in order to reach effective, representative and well connected network of MPAs

- Compile existing data and encourage research and field surveys to establish Databases and Atlases to be used as tools for MPA planning and management
- Disseminate technical tools for MPA system planning and management
- Facilitate exchange of experiences and best practice
- Offer assistance to national authorities
- Facilitate the multilateral processes for the identification of potential MPA sites in ABNJ

## Supportive actions at Regional/Global Level in order to reach effective, representative and well connected network of MPAs

- Develop, at pilot scale, institutional arrangements for the management of MPAs in ABNJ supported by innovative and robust governance, promoting improved relationship between fisheries and MPAs

- Facilitate the establishment of compliance mechanisms to monitor the implementation of the adopted measures

# THANK YOU
# for your attention !!!

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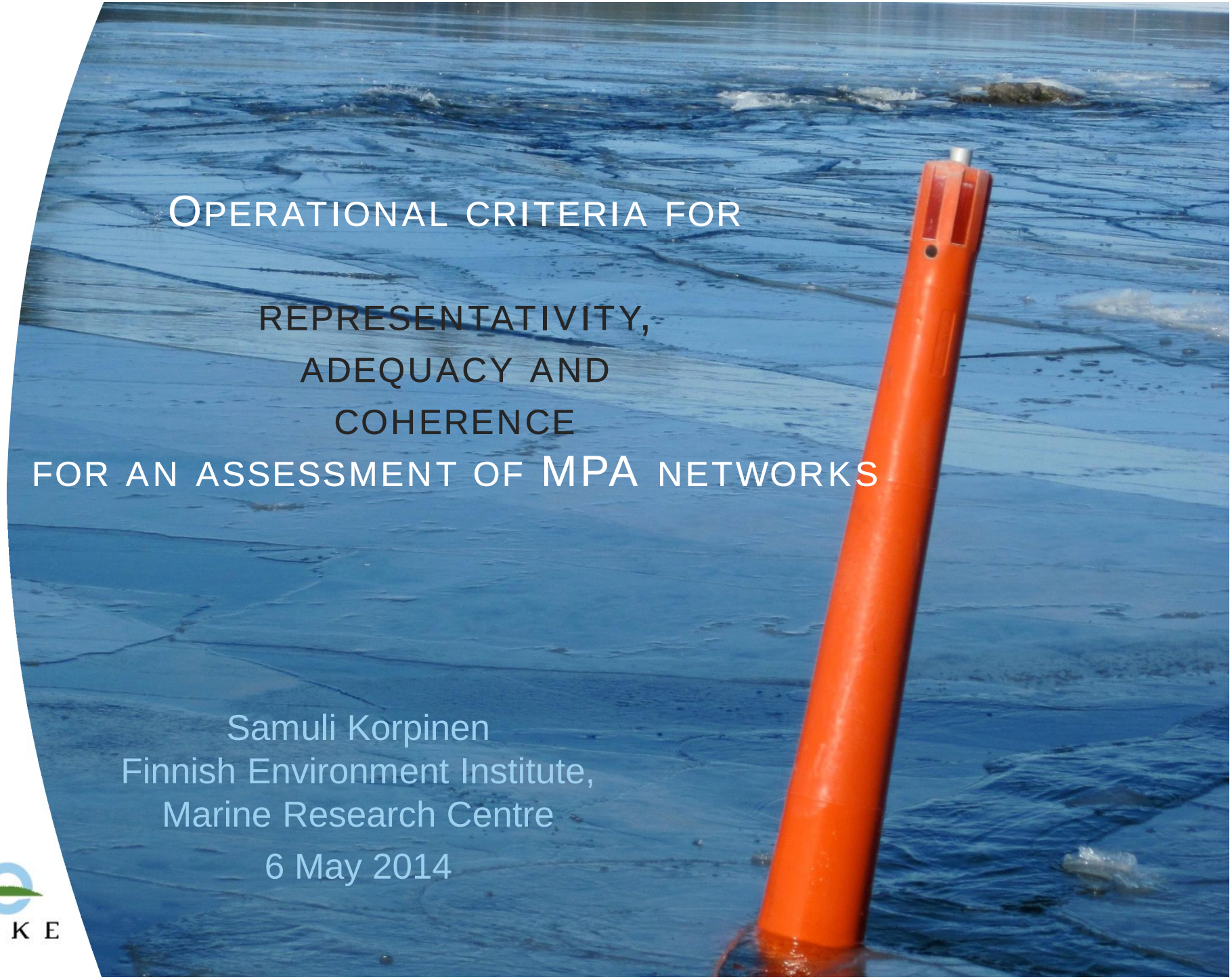


MARINE RESEARCH CENTRE

# OPERATIONAL CRITERIA FOR REPRESENTATIVITY, ADEQUACY AND COHERENCE FOR AN ASSESSMENT OF MPA NETWORKS

Samuli Korpinen
Finnish Environment Institute,
Marine Research Centre

6 May 2014

SYKE

MARINE RESEARCH CENTRE

# European assessment criteria for MPA networks

## COHERENCE

**Ecological harmonization of MPAs: maintenance of processes, functions and structures of the protected features**

### CONNECTIVITY

**The exchange of individuals is guaranteed across boundaries of MPAs**

**The MPA Network is well distributed in space, considering the distribution of habitats and reflecting the different scales of the marine environment**

### REPRESENTATIVITY

**Range of ecosystem features, biogeography and depth sub-divisions**

**Each feature or sub-division is represented by at least one site.**

### ADEQUACY

#### SIZE and SHAPE

**Size spectrum of the network should include an adequate share of big sites of an adequate shape**

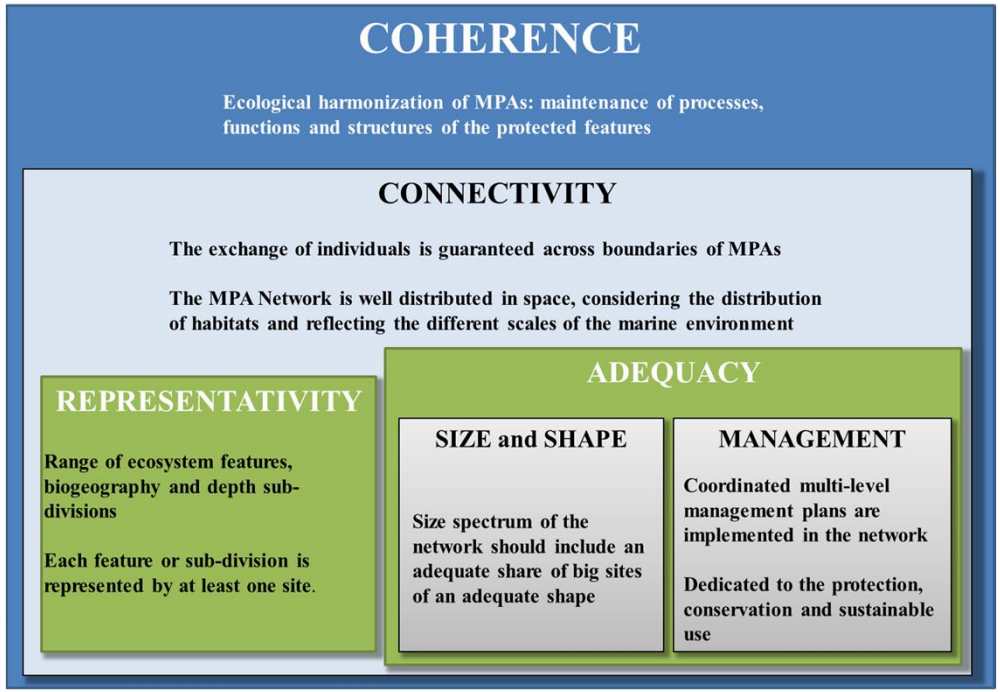
#### MANAGEMENT

**Coordinated multi-level management plans are implemented in the network**

**Dedicated to the protection, conservation and sustainable use**

SYKE

# What do we mean by the terms?




REPRESENTATIVITY:
Conservation features!
What is protected?

ADEQUACY:
Protection efficiency!
How well is protected?

CONNECTIVITY:
A network factor!

# Representativity

- Biogeographic areas: e.g. sub-basins, inshore/offshore areas;
- Depth zones: e.g. shallow water (photic seabed) areas, aphotic coastal waters and reefs/sea mounts, shelf waters, deep seas, etc.;
- Broad-scale habitats: e.g. substrate types;
- HD Annex I habitats;
- Other habitat/biotope types (e.g. EUNIS 4-6);
- Species (HD Annex II, IV; other)

- Landscapes (estethic/cultural reasons)
- Cultural heritage (monuments, scenery, life styles)

MARINE RESEARCH CENTRE

# Adequacy

To reach the conservation objectives an MPA needs to

- be of adequate size to
  - cover sufficient amount of the protected habitats,
  - ensure species mobility within the site,
  - buffer against external pressures;
- be protected against human activities that jeopardize the conservation objectives:
  - a management plan must be in force,
  - relevant management levels need to be used:

| | |
|---|---|
| No entry zone | No take zone |
| Fishery restriction area | Protection of large-scale ecological processes |
| Singular natural enclaves | Particular management zones |
| Traditional activities management zones | Sustainable management zones |

SYKE

# F Addressing comments from the MEG

In this document we have made a selection of the main comments per person who provided feedback on the Task 1 background report of this project. We realize that there were very specific comments, some were contradictory, however, we would rather address them in the following tasks 3 and 4. We want to move forward and use the comments in the total process rather than spending a lot of effort on finalizing the Task 1 report. We have tried to address these comments in various ways:

- Have incorporated comments in the updated version of the Task 1 report
- Will use comments further along in the project, of producing Tasks 3 and 4
- Will use the comments as a background for developing our thinking process in this subject
- Will not address the comments and give an explanation why

**1. DG Environment, David Connor**

- Better reflect on Article 13.4 and what this could mean, and also reflect on the context of the MSFD
    - *This comment will be addressed: in Task 1 and 3 the criteria and indicators have been/will be identified that do or can link with Article 13.4. Subsequently in Task 4 we will provide guidance on how to further develop and implement the methodology developed under Task 3. The subsequent actual development and implementation are beyond the scope of this project.*

- Little consideration to assessment scales, unit, types of spatial protection areas to be included and data needed for the assessment
    - *This comment will **partly** be addressed: we feel that there are several other projects in which these issues have been discussed (i.e. SCALES, EU data project) so we will keep it in the back of our minds during the work in Task 3 (identification of criteria, indicators and units in which these are expressed, dependent on the scale; data availability at various scales; and possibilities to use proxies where data are lacking), however in our opinion it goes beyond the scope of this project to really address these issues in detail.*

- Think further about where this process is leading to
    - *This comment will partly be addressed, even though the political process associated with this we see as something that the DG ENV would take the lead in. We feel that as a consortium we are responsible for providing a structured and scientifically sound method, but not so much for the consequences of its application other than the recommendations we will provide in Task 4 (and possible consequences of the implementation of our assessment method) and the wider context of this project that we are taking on board in all of the tasks we are carrying out.*

**2. RSPB, UK, Tom Hooper**

- (Consider how operational definitions link back to Article 13.4) *see David Conner above*

- More specific ideas on an assessment methodology
    - *This comment will be addressed: in Task 3 where the methodology will be developed*

- More comprehensive comparison of criteria used by MS, RSCs and 3rd parties
    - *This comment will **not** be addressed: the catalogue and the first draft of the Task 1 reportprovide a broad range of criteria and where and how they are used. It goes beyond the scope of this project to go into more detail on this, since we will finally develop our own criteria (based on what already has been developed in other contexts such as RSCs).*

- Make more use of experiences within RSCs, i.e. through the BALANCE project
    - *This comment will be addressed: in Task 3 where a separate section on RSC experiences will be taken up*

- Unclear whether percentages will be used as targets and how these will be determined
    - *This comment will be addressed: in Task 3 where we will further develop the targets for through tests with a case study, using more and less ambitious target values*

- Important to separate out the term 'ecological coherence' and the collection of criteria within which it comprises
    - *This comment will be addressed: in Task 3 where we will continue the development of the criteria into our methodology*

**3. DAHG, Ireland, Eamonn Kelly**

- (Important to have a clear understanding of the overall high level objective of the spatial protection measures and the MSFD MPA network envisaged in Article 13(4) ) *see David Connor above*
- Considering the criteria and sub-criteria, distinguish what may be theoretically possible and what will be operationally cost-effective
    - *This comment will be addressed: in Task 3 where we will continue the development of the criteria into our methodology*

**4. International association of Oil & Gas Producers, Belgium, Bernard Vanheule**

- (We recommend to respect the spirit of the Art.13.4 text and take into account the requirements for MPAs in the existing Birds and Habitat Directive) *see David Connor above*.
- Target values now seem to be arbitrarily chosen, but should rather be set referring to the local situation, taking into account stakeholders.
    - *This comment will **partly** be addressed: In Task 1 we have derived target values from different sources, which are cited in the text or the criteria catalogue. We realise that it is difficult to establish generic targets for all the seas and regions in Europe, which show different characteristics and diverse ecosystems. Nevertheless, for the purpose of this project, generic criteria and targets were requested. Furthermore, in Task 3, we will provide an argumentation on how target values were developed, however, in this project, we do not have a*

*stakeholder process in place beyond the meeting with the MEG in May and the meeting with the MSCG in the fall. This issue will not be solved within the scope of this project, only mentioned as one of the recommended follow-up actions as part of the roadmap in Task 4.*

- Information is missing on how the amount and location of marine protective areas and the need for a MPA network is being weighed against other priorities of the EU commission such as economic use of the marine area (Action plan Blue Economy) and security of energy supply
    - *This comment will **not** be addressed: this comment is very much related to political issues on a European scale. As objective consultants we cannot provide information on how the EU commission is valuing or weighing the importance of MPAs compared with other priorities. We can mention in Task 3 and 4 that these questions exist and that the Commission should be aware of these questions, however, we will not address them. (cf last comment by David Connor)*
- Key question is what the designation of MPA results in in terms of restrictions on activities and what would be the effect on existing activity in newly designated MPA's.
    - *This comment will be **not** be addressed: in our opinion it goes beyond the scope of this project to address the full scale of the socio-economic consequences of the installation of MPAs..*

**5. Oceana, France, Nicolas Fournier**

- It is important to determine the correct scale at which these analyses should be carried out. Oceana recommends that these analyses are done for meaningful spatial areas, such as regional sea level.
    - *This comment will be addressed: in Task 4 where we will provide a roadmap on how, to further develop and implement the methodology developed under Task 3 based on a case study area. This will be in the shape of recommendations in which spatial issues will also be addressed.*
- We propose that the overall aim is to create "Ecologically coherent" networks of MPAs, which is then assessed based on criteria: connectivity, representativity, adequacy and replication
    - *This comment will be addressed: in Task 3 where we will continue the development of the criteria into our methodology*
- The intention of the network is to contribute to the MSFD objective of achieving Good Environmental Status, which is intrinsically an ecological status. Therefore we suggest that a higher proportion of more strictly protected areas under IUCN categories Ia, Ib and II (e.g. marine reserves) be represented (at least 30% of the network); and not an equal % among all categories. This will give a stronger emphasis on the degree of protection/management required to support effectively GES.
    - *This comment will **be used to further develop our thinking**, especially in the Task 3 adequacy and management criteria. How the division of proportions of UICN categories for protected areas will be made is eventually something that we see as a political decision, since this also means that there are implications in terms of increased numbers of MPAs which would require investments and time. Our task is to highlight the implications of such a decision.*

**6. Defra, UK, Laura Weiss**

- (The UK is concerned by the proposed approach and criteria set out within the report and that and that it is not consistent with Art 13(4) of the MSFD) *see David Connor above*
- The UK considers that the task was set out not to try to reinvent the wheel, but to build on the work already done by Member States through the Regional Seas Conventions and Natura 2000, which does not come across as the approach in the material received to date.
    - *This comment will be addressed: in Task 3 where a separate section on RSC experiences will be taken up. We will also take into account other MPA networks such as the N2000 within Task 3 and the roadmap of Task 4.*
- Considerations on the definition of the different criteria and the targets for them
    - *This comment will be addressed in Task 3, where we will continue the development of the criteria into our methodology*

**7. BfN Vilm, Germany, Jochen Krause**

- A suggestion for a new structure of the Task 1 report has been made by Jochen.
    - *This comment will **partly** be addressed: in Task 4 we will use Jochens' new structure as inspiration for the analytical report/guidance document*

**8. RAC-SPA/MEDPAN, France, Chloe Webster**

- It is unclear whether the report deals with the establishment or the assessment of MPAs
    - *This comment **has been addressed**: in the revised version of the Task 1 report.*
- The CBD has not been taken into account
    - *This comment **has been addressed**: in the revised version of the Task 1 report.*

**9. DGALN/DEB/EN3, France, Sarah Combalbert**

- According to our understanding, these terms (representativity, coherence and adequacy) as they stand in the Directive could be interpreted either as network criteria and/or as broad objectives to ensure that MPA networks sufficiently contribute to meeting GES: this leads to confusion in the report since they seem to be used both ways.
    - *This comment will be addressed in Task 3, where we will continue the development of the criteria into our methodology*
- We feel that insufficient attention is paid to the question: to what extent will a coherent, representative and adequate MPA network enable us to reach GES?
    - *This comment will be addressed: in both Task 3, where we will further develop our methodology*
- There is general inconsistency regarding whether the objectives/criteria focus on establishing MPA networks or assessing these networks
    - *This comment will be addressed: in Task 1 where we have collated existing criteria that will be used for the assessment in Task 3, where we will clarify that the methodology developed now focuses on already existing MPAs. In Task 4 we can describe the steps that must be taken.*
- The list of MPAs used for the analysis in the catalogue seems to be incomplete for France and the origin of the information of the IUCN categories is unclear
    - *This comment **has been addressed**: in the revised version of the Task 1 report.*

**10. Europêche**

- Given the purpose of the document is to assess the application of approaches to assessing ecological coherence, adequacy and replication, it is surprising that the document is so prescriptive in terms of recommendations. We would expect such a document to evaluate the merits and limitations of different approaches but that specific proposals should be formed by government institutions associated with delivering policy. The provision of specific proposals would seem to be premature in this sense.

    - *This comment will **partly** be addressed: in Task 3 and Task 4. One the one hand we agree with the statement, indeed the final decision on how the assessment method will be executed and which target values are chosen is a political decision that should be taken by the Commission and stakeholders. On the other hand, in this contract we are asked to come up with recommendations for criteria and target values that can be used as a basis for an assessment method, therefore we have to come with concrete suggestions. In Task 3, we will test these criteria and target values based on a case study and will provide an analysis of the installation of less or more ambitious levels. In Task 4, we will come up with a roadmap for the assessment of MPAs, in which we will also provide implications of certain choices. Our project is a vehicle through which the topic of MPAs can be discussed, however, there is a much broader EU process outside of this project for which our work can provide input, but not make decisions on.*
- It is instructive to note at the outset that Member States have already substantially progressed in developing MPA networks according to regional seas convention guidance and in delivering the Natura MPA networks. The application of criteria must therefore recognise there is a diversity of approaches already taking place under broader guidance frameworks and that it is appropriate that Member States consider their selection of sites based up their particular marine circumstances (as acknowledged in the report, p 23).

    - *This comment will be addressed: in the final version of the Task 1 report, as well as in the report of Task 3. In the latter report we will link our criteria and network analysis more to already existing approaches on RSC level.*
- There is a risk of pressure displacement, in which areas outside of the MPAs might be more affected by fisheries and/or other socio-economic activities. Further work should be undertaken when selecting sites to understand the socio-economic impacts of possible designations.

    - *This comment will be addressed: in Task 3 and Task 4. We will take this suggestion up as a recommendation as part of our roadmap in Task 4.*
- There is not enough reasoning provided for the choice of using IUCN criteria as a basis, nor are the target values sufficiently substantiated.

    - *This comment will be addressed: in the final version of the Task 1 report, as well as in the report of Task 3. In the latter report we will use a case study as a basis for choosing more or less ambitious target values.*
- We would like to see more information included on allowing (eco-)tourism in protected areas.

    - *This comment will be **partly** addressed: it goes beyond the scope of our project to include detailed information on socio-economic sectors (e.g. eco-*

*tourism), however, we will take this comment into account in our Task 4 roadmap, either as a recommendation or as a short paragraph.*

- Some suggestions on adaptation:
    - *This comment will be addressed: as part as the recommendations of Task 4*
- Consultation and cooperation with all stakeholders should already take place at an early stage in order to gain insight in the possible consequences of MPA design and development
    - *This comment **has been** and will be addressed: on the one hand we have consulted stakeholders during the MEG workshop and are including (part of their) suggestions, furthermore, the continued involvement of stakeholders will be taken up as a recommendation under Task 4. The EU will facilitate the discussion process within MPA design and development.*