



**MARINE PEACE PARKS
IN
THE MEDITERRANEAN**



**PREVIEW OF
A CIESM PROPOSAL**

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The case for Marine Peace Parks

The context

The long history of the Mediterranean Science Commission (CIESM), an organization conceived in 1910 by pioneers of oceanography such as Prince Albert 1st of Monaco, did nurture over time the humanistic vision - some may call it idealistic - that personal collaborations among researchers across strong cultural, linguistic and religious divides can overcome the mistrust, sectarianism, intolerance - those seeds of conflicts and wars - that plague the region. Today the vitality and diversity of CIESM programs, and the thousands of researchers from all shores who work jointly on the exploration and lasting protection of this highly impacted sea, attest of the modernity and power of this vision.

The challenge

Far too little - less than 2% - of the Mediterranean Sea is currently protected. Existing MPAs are often limited to the coast ... and to the size of confetti. Obviously this will not suffice to preserve Mediterranean biodiversity and integrity from the assaults of coastal development, urbanization, overfishing, tourism, fast-growing maritime traffic, oil and gas off-shore exploration.

One of the main reasons for this dismal level of protection is the fragmented nature of maritime governance in international waters, the poor enforcement of existing regulations and difficult concertation / harmonization between EU and non-EU countries. How to circumvent such obstacles? How to reconcile such low protection levels with the targets defined by the Convention of Biological Diversity at its recent meeting in Nagoya (October 2010)? How to effectively protect at least 10% of the world ocean by 2020? How to move Governments to multiply by five the coverage of marine protection?

An innovative, ecosystemic solution

In November 2010, CIESM did gather thirty of its top marine experts in the Sicilian town of Syracuse to examine and refine a bold initiative that would assign vast, coast-to-coast, trans-frontier marine areas - of oceanographic, biological and geological importance - to conservation. The outcome (CIESM Monograph 41, 2011) is a detailed, rigorous scientific rationale for eight large areas (see map) identified in both the western and eastern basins of the Mediterranean.

Goals and objectives for concerned countries

- Increase cooperation, training and coordination between National agencies across the border;
- Develop, manage joint research programs and data sets;
- Jointly design, enforce pragmatic, dynamic measures, such as spatial zoning, temporary restrictions of fishing, restricted navigation corridors, optimal location of off-shore drilling operations, etc.

The term 'Marine Peace Parks' became an evidence for those familiar with the troubled, conflict-ridden history of the Mediterranean region. Moving towards their implementation will be a huge challenge, as the fate of recent attempts (Gulf of Aqaba, Korean Peninsula) amply demonstrates. It would mark the first time that such a well-tested concept (on land) becomes a reality in the marine world.

The origin of Peace Parks

Transboundary protected areas were first developed in terrestrial environments with the clear, explicit objective to conserve biodiversity while fostering regional cooperation and security (IUCN McNeil 1990; Hamilton et al. 1996). The benefits of transfrontier conservation are many: the larger zone of protection so created does substantially reduce the risk of biodiversity loss and enhances genetic mixing. Further, opportunities for staff exchange and joint training at various levels promote mutual understanding between different approaches, different jurisdictions, and thus optimize management of large areas, as shown by the current success of transboundary cooperation in the Wadden Sea. Taking the concept further, it became a deliberate instrument of peace in sensitive regions such as the once-troubled zone between Nicaragua and Costa Rica or the Virunga volcano region shared by Rwanda, Zaire and Uganda. These are the seeds of the current CIESM proposal.

The creation of transfrontier 'peace parks' will safeguard and improve existing friendly relations between States, and lower the strain of existing disputes over contested sea territory. And particularly so in the Mediterranean Sea, where historical conflicts and ideological tensions are the rule.



Eight Marine Peace Parks proposed by CIESM



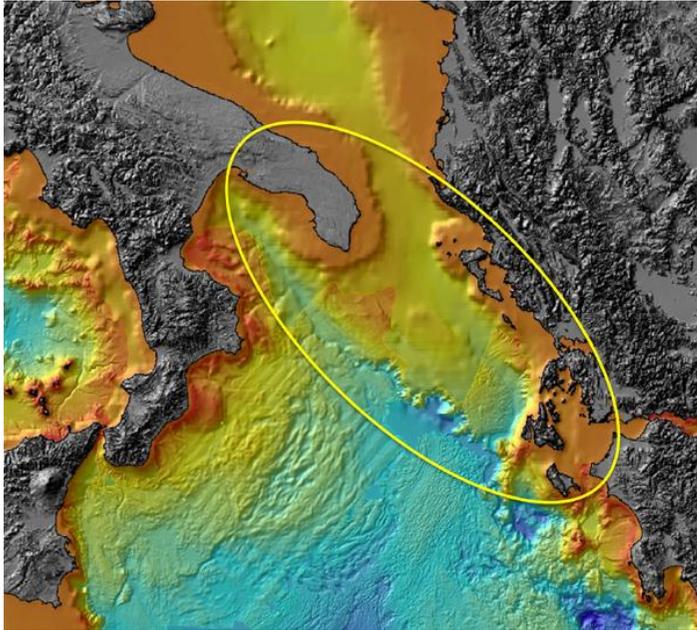
Adapted from National Geographic Magazine

The CIESM proposal is very innovative in that it combines three powerful, unique features:

1. The coast-to coast nature of CIESM marine parks integrates contiguous coastal and open sea habitats, allowing for a coherent set of measures to protect what is a dynamic, inter-connected marine system. The dimension of the park will provide a more suitable range and connecting corridors to larger animals that actively move across the landscape, enhancing the robustness and resilience of the ecosystem in the face of climate change, and thus ultimately enhancing resource yields and local economies.
2. Not only will Marine Peace Parks preserve an endemic, threatened biota (unique deepsea communities, white coral beds, monk seals, rare endemic species, fin whales, spawning grounds of bluefin tunas, etc.), they will also protect unique geological features (deep sea canyons, mud volcanoes, sea mounts, hypersaline craters), and key oceanographic processes (surface sites of deep water formation, strait fluxes) from the fast-growing exploitation of marine resources by modern technology.
3. The complex history and geography of the Mediterranean Sea, where no coastal point is farther than 200 nautical miles away from waters under another jurisdiction, is taken into account. Today a large number of legal disputes, some very ancient, others quite modern, all still unresolved. The trans-frontier structure of the CIESM Marine Peace Parks puts this problem aside: it will encourage, without prejudice to current national claims, the Governments of those countries directly concerned to join forces and develop joint planning in the pursuit of a cause higher than their national interest.



One example: the CIESM Marine Peace Park proposed in the north Ionian Sea



A hotspot of biodiversity hosting many threatened and endangered species such as the common dolphin, sperm whale and Cuvier's beaked whales, sharks and rays. This sector of the Mediterranean combines high levels of marine diversity and a relatively low human population density.

Key features in need of protection

- A unique oceanographic circulation, connecting the south Adriatic Sea to the northern Ionian Sea, establishing vital corridors;
- A seabed, derived from the Apulian platform and marked by a rich variety of marine canyons, caves and submarine valleys, the latter hosting extensive white coral banks;
- Deep hypersaline anoxic basins characterized by poorly known, highly specialized microbial communities;
- Several submarine caves in the region represent a unique, vulnerable ecosystem, with specialized species assemblages, highly vulnerable to disturbance;
- Extensive deep sea white coral banks, considered biodiversity "hotspots" in the Mediterranean, have been found in two valleys located in the Ionian Sea and South Adriatic.

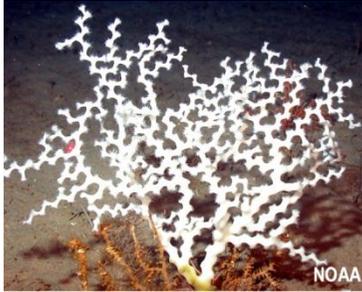
Major pressures

The region is a complex mosaic of relatively well-preserved stretches of coast interspersed with areas subjected to multiple stressors, in particular deep sea fishing, illegal harvest of date mussels, and heavy metal contamination.

High geo- and biodiversity

Massive Mesozoic limestones characterize the area. About 6 million years ago, during the 'Messinian Salinity Crisis' (see CIESM Monograph 33, 2007), the former Apulian platform was subjected to intense continental erosion and karsts processes. As a result, many caves and aerial valleys were cut into these rocks, to be later submerged in the low Pliocene.





The recent exploration of the deep sea between the Southern Adriatic and the Ionian seas led to the discovery of important white-coral banks (*Lophelia pertusa*, *Madrepora oculata*): one south of Capo Santa Maria di Leuca; another in the Canyon of Bari (between Italy and Albania). The coral banks represent an important biodiversity “hotspot” and require urgent protection from trawl and long lines fishing.

The North Ionian is extremely rich in submarine caves, which the EU Habitat Directive singles out as a special habitat in need of protection.

Illegal fishing

Hundreds of kilometres of subtidal rocky coast have been destroyed in Apulia due to the illegal fishery of the date mussel *Lithophaga lithophaga*. This rock boring bivalve is extracted from the substrate with sledgehammers... Deep sea fishing and illegal artisanal fishery are not the only threats; the Apulian area has been selected as a priority area for wind farms, with potential impacts on marine mammals due to noise and vibration generation.



Coastal diversity

The eastern sector (Greek and Albanian waters) is vital for biodiversity. Beyond the Amvrakikos Gulf, which is one of the most important wetland systems in Greece, there are important lagoons in Apulia and in Albania. The Albanian sector, especially the Karaburuni Peninsula – Sazani Island, has been identified as a priority area for marine biodiversity conservation by recent national and international environmental reports.

Strong oceanographic connections

The northern sector constitutes an important migrating corridor for cetaceans (*Delphinus delphis*, *Physeter macrocephalus*), marine turtles and the monk seal (*Monachus monachus*) to and from the Adriatic Sea.

