

# MPA NEWS



Published on *MPA News* (<https://mpanews.openchannels.org>)

## Special Feature: Innovation and MPAs in the Mediterranean Sea

### BOX: The Mediterranean - A Semi-Enclosed Sea Rich in Biodiversity, Culture, and MPA Initiatives

"The Mediterranean Sea is a place of paradox and surprises. Despite many people's image of the area as being vastly overpopulated, with built up shorelines, polluted waters, and over-exploited resources, the Mediterranean is in actuality a thriving, diverse ecosystem upon which people of many different cultures depend...."

Thus begins an essay by Tundi Agardy on the Mediterranean Sea and the promise it holds as a center for MPA-related conservation. Her essay is available on the *MPA News* website. As executive director of Sound Seas, a US-based NGO, Agardy is closely involved with an array of Mediterranean MPA initiatives, including ones described in the following special feature.

The editorial board of *MPA News* is grateful to Tundi Agardy and to Giuseppe Notarbartolo di Sciara, marine conservation policy coordinator for the Tethys Research Institute (an Italian NGO) and IUCN WCPA Mediterranean coordinator, for their guidance and assistance in spearheading the research for the Mediterranean coverage in this issue.

The Mediterranean Sea is generally recognized more for its role as a cradle of Western civilization than as a role model for marine conservation. However, there are some innovative MPA-related initiatives underway in the region - initiatives that could provide useful examples for MPA practitioners elsewhere. This month, *MPA News* examines some of these efforts, their implementation so far, and the challenges they face.

### Creating a Mediterranean-Wide MPA Network: The SPAMI System

In the early 1970s, marine pollution had become a major concern for Mediterranean scientists and government officials. Visible signs of a "sick" sea, including tar balls on beaches from tanker spills, led Mediterranean states to seek a plan for identifying the extent of Mediterranean pollution, and for protecting the region's marine environment in general. The resulting Mediterranean Action Plan was approved in 1975 by 16 nations and the European Community. One year later the Barcelona Convention, providing the legal framework for implementing the plan, was signed.

The Barcelona Convention remains the keystone of efforts to protect the Mediterranean Sea, including the designation and management of MPAs. Under a 1995 protocol to the convention, contracting parties agreed to create what will essentially be a Mediterranean-wide, representative MPA network - a system of sites known as Specially Protected Areas of Mediterranean Importance (SPAMI). The SPAMI system, consisting of 12 sites so far, demonstrates the opportunities available for regional MPA management within an overarching legal framework.

Chedly Rais is scientific director of the Regional Activity Centre for Specially Protected Areas, which serves as secretariat of the SPAMI system and is centered in Tunisia. "The main elements provided by the Barcelona Convention and relevant protocol are the legal basis and binding character of provisions," says Rais. Not only are contracting parties made aware of the importance of the areas covered by SPAMIs, he says, but they are also forbidden from undertaking activities "contrary to the objectives" for which SPAMIs are established (i.e., protecting representative ecosystems, endangered and critical habitats, or other sites of particular importance). In addition, the Barcelona Convention and protocol provide a framework for cooperation and solidarity among Mediterranean countries, says Rais, which implies financial support, technical assistance, and exchanges of experienced personnel among parties in implementing the protected areas.

Proposals for inclusion of protected areas on the SPAMI list must indicate the management measures to be applied to an area as well as the means of implementation. The party or parties that propose inclusion of a site are responsible for its management.

Of the SPAMIs listed so far, there are seven in Spain, one in France, and three in Tunisia. Each is small or moderately sized and along a coast. The twelfth SPAMI - the Pelagos Sanctuary for Mediterranean Marine Mammals - stands in stark contrast. Spanning 87,500 km<sup>2</sup>, it is much larger than the others and includes national waters of three contracting parties: France, Italy, and Monaco. Benefiting from the regional framework provided by the Barcelona Convention, the sanctuary is the first Mediterranean transboundary protected area. Additionally, a significant portion of the sanctuary lies outside of national marine jurisdictions, making it arguably the first high-seas MPA in the world (see box at end of article). Parties to the protocol are bound by regulations set forth for each of the SPAMIs, whether inside or outside national waters.

The SPAMI system faces some obstacles to creating an effective, representative network of protected areas. At present, most of the listed SPAMIs lack management plans, despite the requirement that such plans exist before a site is listed. (The contracting parties included these areas on the list with the intent of "kick-starting" the SPAMI process; evaluations of each site are expected to conclude before the next meeting of the parties in November 2003.) The SPAMI list is also far from representing the full range of habitats in the Mediterranean.

In addition, though contracting parties are bound by the protocol, non-parties are not. Although this is not a major concern in national waters, where nations are free to enforce their protected area regulations, it becomes more complex on the Mediterranean high seas. "The SPAMI system needs to gain support from non-Mediterranean states and persuade them to comply with the measures applicable to the SPAMIs," says Rais. One goal, he says, is to involve the International Maritime Organization (IMO) in the SPAMI system, potentially through recognizing the SPAMIs as Particularly Sensitive Sea Areas, an IMO designation. "In that case, all IMO member states would recognize the importance of the sites, and ships flying their flags would be required to comply with SPAMI regulations," he says.

Despite these challenges, the SPAMI system offers a valuable template for regional conservation, says Giuseppe Notarbartolo di Sciara, Mediterranean coordinator for the IUCN World Commission on Protected Areas. "The legal and operational framework of the SPAMIs provides an extraordinary opportunity for creating a real network of Mediterranean MPAs, which should not be missed," he says.

### *Sistema Afrodite*: Coordinating the Monitoring of MPAs Throughout Italy

In recent years Italy has designated 16 marine protected areas, and nearly 20 more are in the pipeline. Italian MPAs are multiple-use protected areas, typically including one or more core "A" zones (i.e., no-entry, no-take reserves); buffer "B" zones where limited human activities are permitted; and general reserve "C" zones having a lesser degree of protection. At present, each MPA functions as a separate entity, facing its own set of institutional, administrative, and management challenges.

*Sistema Afrodite* is an attempt to unite Italian MPAs into a cohesive network. Developed and led by the Italian government's Central Institute for Applied Marine Research (ICRAM), *Afrodite* is focusing on the science of these MPAs, standardizing and synchronizing the research carried out at each site. By standardizing the knowledge gained, *Afrodite* intends to allow scientists to assess effectiveness of the core zones, detect environmental trends, identify gaps in MPA coverage, and, ultimately, provide information to improve management. It is among the first attempts in the world to synchronously monitor a set of parameters across a wide protected area system using standardized methods. Data collection is coordinated to the day and hour.

Now in its first three-year phase (2001-2004), the program has coordinated a number of research activities, primarily conducted in the highly protected "A" zones of the MPAs. These activities include:

- Detailed cartography, including bathymetry and geomorphology;
- Monitoring of the water column, phyto- and zooplankton, and sediments;
- Habitat and species inventories, using standardized data-entry forms;
- Fish visual census, with data collected from A and C zones;
- Benthic sampling; and
- Pollution monitoring, using sand samples and biomarker studies in fish.

Measurements are taken on a range of schedules, varying by activity: the water column is measured fortnightly, for example, while fish are sampled every six months. All data collected are entered into a

single database designed to meet the needs of different users, including academics, managers, teachers, and the general public.

Such extensive monitoring has required a substantial research team. To carry out the array of measurements, ICRAM has secured the cooperation of several partners within the National Research Council (CNR) and the National Consortium of Marine Science Institutes (CoNISMa) of the Italian university system. In addition, a special committee of international experts in the field of MPA science has provided advice on research standardization for the program.

Marine biologist Fiorenza Micheli of Stanford University (US) is a member of the international advisory committee. She says the large scale of the program and involvement of so many researchers required an extensive preparatory phase, involving workshops and meetings where potential approaches were presented and roles of research units were defined. "This was, and is, an unprecedented and extremely important effort in a research environment that has lacked large-scale, coordinated research," says Micheli.

If one viewed an MPA network as a systematic sampling scheme, then MPA-based research would yield information not only about individual sites but also about large marine ecosystems as a whole. Standardized research in MPA systems would be able to provide information on whole water bodies such as the Mediterranean Sea, including distribution and abundance of species, status of habitats, predictions on future status, and efficacy of management.

Although *Afrodite* is still early in its implementation, its organizers are optimistic of its future, including the potential for expanding it to other MPA systems within the Mediterranean region or beyond. "*Afrodite* represents a model that could be followed everywhere," says Felicia Coleman of Florida State University, another member of the international advisory committee. "It sets Italy squarely in the forefront as the most progressive country in MPA assessment."

**For more information:**

**Chedly Rais**, Regional Activity Centre for Specially Protected Areas, Boulevard de l'Environnement, PB 337 CEDEX 1080 Tunis, Tunisia. Tel: +216 1 795 760; E-mail: chedly.rais@rac-spa.org.tn; Web: [www.rac-spa.org.tn](http://www.rac-spa.org.tn).

**Giuseppe Notarbartolo di Sciara**, Tethys Research Institute, c/o Municipal Aquarium, Viale G.B. Gadio 2, 20121 Milano, Italy. Tel: +39 0258 314889; E-mail: disciara@tin.it.

**Fiorenza Micheli**, Hopkins Marine Station, Pacific Grove, CA 93950, USA. Tel: +1 831 655 6250; E-mail: micheli@stanford.edu.

**Felicia Coleman**, Institute for Fishery Resource Ecology, Department of Biological Science, Tallahassee, FL 32306-1100, USA. Tel: +1 850 644 2019; E-mail: coleman@bio.fsu.edu.

---

## **BOX: "The First High-Seas MPA" - The Pelagos Sanctuary for Mediterranean Marine Mammals**

The most noteworthy of the Specially Protected Areas of Mediterranean Importance (SPAMIs) is the one that best demonstrates the unique capacities for MPA designation afforded by the Barcelona Convention.

The 87,500-km<sup>2</sup> Pelagos Sanctuary for Mediterranean Marine Mammals, more than half of which lies in international waters, has been argued to be the first high-seas MPA in the world. Although whale sanctuaries in the Indian Ocean and Southern Ocean have been in place for several years under the auspices of the International Whaling Commission, their regulations are largely limited to a prohibition on commercial whaling. In contrast the Mediterranean sanctuary, which entered into force in 2002, requires contracting parties to protect the area's marine mammals and habitats from all direct or indirect negative effects, including pollution and dangerous fishing gears.

Contracting parties under the Barcelona Convention are required to abide by the regulations of protected areas on the convention's SPAMI list, whether the SPAMIs lie inside or outside national waters. This is what makes the high-seas portion of the Mediterranean sanctuary possible.

The sanctuary contains internal maritime waters and territorial waters of France, Italy, and Monaco, as well as the adjacent high seas, which comprise 53% of the total area. Note that no exclusive economic zones, or EEZs, are included. The reason: Mediterranean coastal states have so far been reluctant to establish 200-nautical mile EEZs, although afforded the right to do so by international law. (France and Spain have declared EEZs for their non-Mediterranean waters.) Therefore the Mediterranean high seas begin beyond the 12-nm limit of each nation's territorial sea.

If coastal states were to establish EEZs in the region, the sanctuary would lie completely within national waters of France, Italy, and Monaco - the three states that jointly proposed its designation. Under the designation agreement, these nations claim the right to enforce the sanctuary's regulations on the high seas even with respect to ships flying the flag of third states (presumably including non-Mediterranean nations), within the limits established by the rules of international law. No formal prosecution of a high-seas violation in the sanctuary has tested the fitness of this arrangement.

Responsibility for managing the sanctuary also rests with the three nations, which have initiated efforts to draft a management plan and address such issues as the management of whale watching, traffic and collisions, military exercises, and the illegal use of driftnets in the area. NGOs, which played an active role in the sanctuary's planning, are expected to continue their involvement.

Ecologically, the sanctuary is characterized by high levels of offshore primary productivity, caused by the conjunction of oceanography, climate and other factors. The sanctuary contains habitat suitable for the breeding and feeding needs of all eight cetacean species regularly found in the Mediterranean Sea, from fin and sperm whales to four species of dolphins.

---

**Source URL:** <https://mpanews.openchannels.org/news/mpa-news/special-feature-innovation-and-mpas-mediterranean-sea#comment-0>