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## **Particularly Sea-Sensitive Areas and Marine Protection Zones. A Controversial Issue that needs Interpretation**

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### **Abstract**

It has been accepted that when an area or zone has been approved as being particularly sensitive, some specific measures against maritime activities and environmental issues can be adopted for monitoring and control. Marine zones have been used around the world as an important resource management tool. They can help protect sensitive natural resources from overuse, separate conflicting visitor uses and preserve the variety of marine life, or biodiversity, of an area. A Particularly Sensitive Sea Area (PSSA) is an area that needs special protection through action by IMO because of its significance for recognized ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities. However, the criteria for the identification of particularly sensitive sea areas and those for the designation of special areas are not mutually exclusive. The relevant conventions both at the international and regional level (UNCLOS, MARPOL, Barcelona) have detailed provisions dealing with such zones or areas. Even the Exclusive Economic Zone has been used as a semi-ecological zone by some states when shipping activities are involved. This paper will investigate the current situation in the Mediterranean Sea, specifically what kind of protection zones and other marine protection areas are established but create problems in terms of multiple uses and different users, and then discuss and propose a basis-network of zoning that is consistent with international law, to be functioning in the Eastern Mediterranean, particularly in Greek waters.

**JEL Classification:** K33; Q58; R41.

**Keywords:** Sensitive Areas; Ecological Zones; Shipping; Pollution; Greek Seas.

### **1. Introduction**

During the last years international environmental law when referring to marine pollution, has shifted from adopting measures to reduce and prevent it, to actually take more measures for preserving and managing the marine environment and its resources. More or less, the same route is followed by international maritime law in the sense that international navigation should not be hindered by the coastal state's extensive regulations with regard to exercise full jurisdiction against foreign ships.

MARPOL 1973/78 provides for the establishment of "special areas" where very strict

standards are enforced to ship discharges. These provisions are found in annexes I, II, IV and V. These special areas may include and the high seas, i.e. the Mediterranean Sea as a whole is considered a special area for the purposes of annexes I and V. A PSSA (particularly sensitive sea area) is an area that needs special protection because of its recognized significance for ecological, socio-economic or scientific reasons. To identify such an area we must examine the existing conditions, its vulnerability in case of damage from shipping activities and the availability of protective measures approved by IMO. However, the PSSA scheme has no mandatory character. Designating PSSAs can be found in IMO Resolution A.927(22) and can be located anywhere in the seas, irrespective of their legal condition, including the high seas.

Article 1 of UNCLOS (law of the sea convention) includes definitions of pollution of the marine environment and dumping. Several other articles refer in general to the rights and obligations of states in relation to protection and preservation of the marine environment and the prevention of marine pollution on the high seas, the EEZ (Exclusive Economic Zone) and the territorial sea. IMO though is the competent international organization to adopt rules and standards relating to pollution from vessels and pollution by dumping. While the definition included in UNCLOS applies to all sources of marine pollution, MARPOL deals only with pollution from vessels and accordingly includes a definition of “discharges” from ships.

In many areas, the competence of the coastal State should be more extensive in order to protect its special environment from vessel source pollution. Article 194(5) of the LOS Convention confirms this development, providing that measures under Part XII ‘...shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life’. Article 211(6) of the LOS Convention provides the coastal State the right to establish a ‘...clearly defined area of their exclusive economic zones...where the adoption of special mandatory measures for the prevention of pollution from vessels is required for recognized technical reasons in relation to its oceanographical and ecological conditions, as well as its utilization or the protection of its resources and the particular character of its traffic...’. This article indicates that special areas may only be within the EEZ. There is no explicit mention of the territorial sea in this respect. However, it seems that parts of the territorial sea also could be established as a special area. Otherwise, the regulation within the EEZ could turn out stricter than within the State’s territory and this was probably not intended. There is a question if the entire EEZ can be categorized as a special area.

Problems arise from different interpretation originating from the needs of each interesting party, having activities in the same sea-area, that is to say, flag states, coastal states, port states, environmental bodies and shipping communities that all must be taken into consideration. This study aims at answering issues such as:

- (i) Which are the conflicts among flag states, coastal states and port states rights and jurisdiction?
- (ii) Does the concept of EEZ and other protection zones impose hindrances to international navigation and shipping routes?
- (iii) What kind of maritime zones are to be found in the Mediterranean Sea and do they affect international shipping?

- (iv) Are MPAs the identical solution to the problem of establishing protection zones beyond the areas of national jurisdiction?

## **2. Marine protection areas and state's jurisdiction**

Special maritime zones enable coastal States to participate more actively in the protection of the natural environment. The maritime zones are established by Part V of the UNCLOS Convention (1982). Sometimes, for special protection and in recognition of the inevitability of change, it is important that an ecosystem-based management plan must be used.

Article 56(1)(b)(iii) of UNCLOS provides that in the EEZ the coastal State has jurisdiction with regard to the protection and preservation of the marine environment. In exercising this jurisdiction the coastal State is empowered to enact laws and regulations for the prevention, reduction, and control of vessel-source pollution in the EEZ. Such laws and regulations must, in accordance with article 211(5) of UNCLOS, conform to and give effect to "generally accepted international rules and standards established through the competent international organization" (IMO). Several provisions of UNCLOS regulate the rights of the coastal State in cases of violations to international anti-pollution rules and standards committed in the EEZ by vessels navigating either in the EEZ or the territorial sea (Blanco-Bazan, 2000).

The EEZ is a result of the coastal State's desire to gain greater management and observation over the economic resources adjacent to the coast, particularly with regard to fishing. The vast size of the EEZ and the importance of the resources and economic uses of the area, motivate coastal states' concerns about navigation because much of the vessel source pollution takes place within 200 miles, yet beyond the territorial sea. A state may exercise legislative and enforcement jurisdiction in the capacity of flag State, but with regard to ships in transit, the pollution control relies on international rules.

In addition, when we refer to the impact of navigation in the EEZ, the coastal State should take several factors under scrutiny, i.e. identify any shipping activities in the area and to what extent vessel source pollution may harm the marine environment. The basis for jurisdictional provisions within the EEZ should always be with regard to the sovereign rights the coastal State enjoys within the zone. Coastal States are not given full jurisdiction to enforce international regulations against foreign ships, their powers are limited to the likelihood of harm.

The enforcement of MARPOL relies primarily on the exercise of flag State jurisdiction in regard to the construction, design, equipment and manning of ships. In addition, MARPOL includes regulations relating to the inspection of foreign ships voluntarily in a port, to ensure that they comply with anti-pollution rules and standards otherwise the ship will not be allowed to sail from this port if these requirements are not met. Furthermore, MARPOL entitles port States to institute proceedings in accordance with their law. Provisions on the institution of proceedings in this regard should be read together with the regulations included in article 228 of UNCLOS. Regulations contained in UNCLOS and MARPOL on the exercise of flag and port State jurisdiction should be related to the UNCLOS provisions dealing with the exercise of coastal State jurisdiction in

connection with the enforcement of anti-pollution measures. These provisions regulate the institution of proceedings for violations in respect of foreign ships navigating the jurisdictional waters of the coastal State without voluntarily entering its ports or the port of another State.

This apparent overlapping of provisions can be solved with an interpretation of both UNCLOS Part XII and MARPOL which helps to avoid inconsistencies by pointing out at the similarities and differences of both bearing in mind their ultimate purpose. Both treaties aim at the protection of the marine environment by means of ensuring that anti-pollution preventative measures are properly implemented. However, UNCLOS focuses more on measures to be taken to prevent and penalize discharges in ocean spaces while in the case of MARPOL violations are not only related to illegal discharges but also to the non-compliance of preventative measures to be applied on board irrespective of whether discharges take or not place (IMO, 2008).

A comparison between areas requiring special mandatory measures mentioned in article 211(6) of UNCLOS and provisions on special areas under MARPOL indicates that, while the former are restricted in jurisdictional scope to the EEZ, the MARPOL special area provisions cover enclosed or semi-enclosed areas which may include parts of the territorial sea, the EEZ and the high seas. While MARPOL special requirements apply only to the discharge of harmful substances, article 211(6) of UNCLOS does not contain any specification as to the kind of measures that may be taken. The guidelines on PSSAs provide advice to IMO Member Governments in the formulation and submission of applications for the designation of PSSAs to ensure that, in the process, all interests –those of the coastal State, flag State, and the environmental and shipping communities– are thoroughly considered on the basis of relevant scientific, technical, economic, and environmental information regarding the area at risk of damage from international shipping activities (Jensen, 2006).

States Parties to IMO treaties are under the obligation to enforce jurisdiction on ships flying their flag, irrespective of the maritime zone where the ships may be. Accordingly, the differences of legal status between the territorial sea, the EEZ and the high seas do not directly influence the way safety and anti-pollution measures on board should be implemented. The existence of maritime zones does become relevant in determining how coastal State jurisdiction should be exercised in connection with the enforcement of routing measures to be adopted by the Organization. IMO's general provisions on ships' routing should in this regard be interpreted together with the corresponding provisions of UNCLOS.

### **3. The Mediterranean Sea: a case study**

The Mediterranean Sea is a semi-enclosed sea that needs special protection from various sources of marine pollution. Although shipping is not the most important source, still more than 300 tankers are crossing this sea-area either to call at ports or passing near coasts by entering zones of national jurisdiction.

Then, one may ask what kind of protection zones or areas have been either declared or enforced in the Mediterranean Sea?

1. Under the MARPOL convention the whole Mediterranean Sea is considered a special area. Regulation 1 §10 of Annex I (oil) and Annex V (garbage), in which, for technical reasons relating to their oceanographical and ecological condition and to their sea traffic, the adoption of special mandatory methods for the prevention of sea pollution is required. Under the Convention, these special areas are provided with a higher level of protection than other areas of the sea.

2. In 2005 IMO adopted measures such as Resolution A.982 (24) for the identification and designation of PSSAs. When an area is approved as a PSSA, specific measures can be used to control the maritime activities in that area, such as routing measures, strict application of MARPOL discharge and equipment requirements for ships, such as oil tankers and installation of Vessel Traffic Services (VTS).

3. The protocol of 1995 (Barcelona Convention) provides for the establishment of specially protected areas of Mediterranean interest (SPAMI).

4. The ACCOBAMS agreement (conservation of Cetaceans on the Black Sea, Mediterranean Sea and contiguous Atlantic area) in 2007 proposed certain marine protected areas (MPAs) (Figure 1).

5. Natura 2000 network: special protected areas (SPA) and sites of community importance (SCI).

6. Ecological protection zones: in which the coastal State prohibits certain practices, with the approval of the IMO (i.e. the French Ecological Protection Zone of the Mediterranean, a sanctuary for cetaceans and an exclusion zone for all forms of oil discharge).

7. Surveillance zones: in which the coastal state ensures surveillance against offences breaking international regulations, including monitoring illicit discharge, i.e. a tanker or container ship en route from Asia to Europe will pass through over a dozen surveillance zones, some of which will be effective, others less so.

8. EEZs have been declared only by 5 states, namely Egypt, Cyprus, Israel, Lebanon and Syria. These states have not yet declared any MPAs in the same area but no one could tell whether these EEZs are also considered areas for protecting their marine environments (Figure 2).

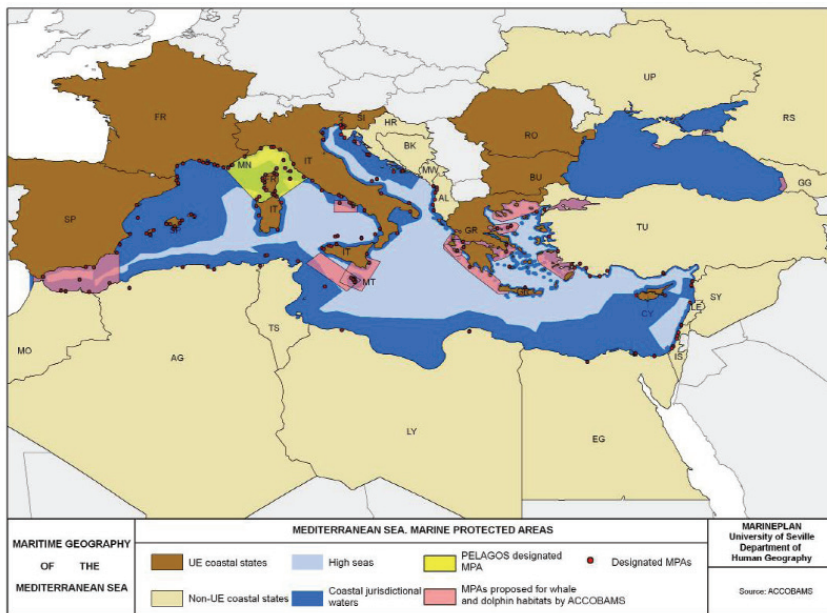
The French Ecological Protection Zone in the Mediterranean Sea came into effect in 2004. France can prosecute offences related to marine pollution outside the 12 n.m. limit and up to 60 n.m. from the coast, in accordance with the MARPOL Convention. Due to lack of action on behalf of certain flag States, France found a solution in part of the possibilities offered by MARPOL and by UNCLOS, which was included in French legislation. In other words, to penalize vessels which pollute on the boundary of territorial waters. This widening of the governed area offers a new way of protecting the Mediterranean Sea, with a probable gradual increase in the adoption of similar zones by other coastal States.

This new area provides more motivation for aerial observation and facilitates the affirmation of which country is responsible for the protection of an environment which is threatened every time a vessel is caught polluting the sea. Thus the Turkish container ship the *Timic*, caught polluting by the illicit discharge of oil in the Mediterranean EPZ on 29 January 2004, had to provide a bank guarantee of 300,000 € before being allowed to continue its journey.

The announcement of similar zones by Croatia and Slovenia in the Adriatic Sea were challenged by Italy and the issue has been postponed. A new proposal under the umbrella of the Barcelona SPA/BD protocol, is based on the establishment of a network of MPAs in the Adriatic Sea encompassing the territorial waters of the six states as well as the waters beyond national jurisdiction, is considered an effective tool for the conservation of the area's valuable marine biodiversity, currently threatened by a number of human induced pressures (Vidas, 2008).

In the future, since state practice exists, i.e. in the U.S. waters a foreign ship entering the 200 n.m. limit (that is the EEZ) is subject to the jurisdiction of the coastal state. In case of a pollution incident in this zone the US coastguard may escort the guilty ship into port and arrest the master, asking compensation from the flag state and participation in the cleaning up operations. The same practice is usually followed by Canada, Japan and Australia. One may suggest that an EEZ could mean an EEZ but instead of "economic" replaced by "ecological" and create more confusion in the interpretation of such terms.

**Figure 1. Marine Protected Areas in the Mediterranean Sea**

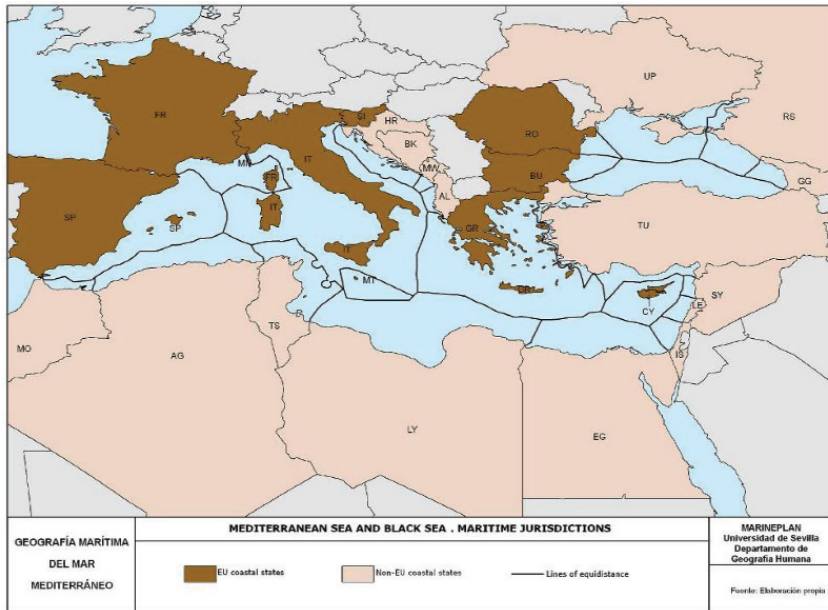


Basically, the concept of SPAMI is an instrument on MPAs at the regional level. The protocol of 1995 applies to all maritime waters of the Mediterranean Sea (Scovazzi, 2004) irrespective of their legal condition, i.e. territorial waters, EEZs, ecological zones, high seas and to the terrestrial coastal areas proposed by the contracting parties. The extension of the application of the protocol to the high seas was decided on account of the necessity to protect the highly migratory species which move and have no artificial boundaries made by man on the sea. But what will happen if, in the future no high seas exist in the Mediterra-

near Sea? The paradigm of the Black Sea where all states have declared an EEZ and no high seas areas can be found is not an identical solution (Figure 2).

The existence of a SPAMI list does not hinder a contracting party from creating and managing MPAs which are not included or intended to be in the list but it is vital to be protected by national legislation.

**Figure 2. The Hypothetical 200 n.m. limit in the Mediterranean Sea**



The establishment of MPAs becomes more difficult when they cover waters that lie outside national jurisdiction. It is not easy to map boundaries based on hydrographic, geological or biological events to be operational as they lack a legal-administrative framework, let alone that some uses of the maritime space, such as navigation, are regulated by international agreements. On top of this, however, their environmental impact or the fact that they are imposed on other uses or are competing for the same space means that they need to be taken into consideration when planning the maritime space. Such is the case of ports and shipping routes (Figure 3).

#### 4. Zoning and Shipping

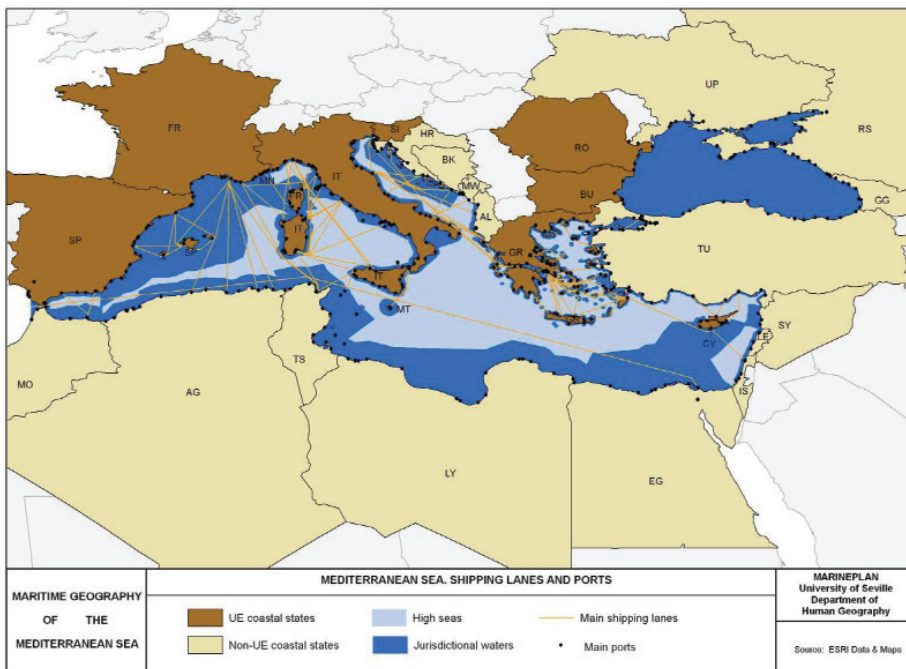
The maritime zones relevant to shipping used to be the two traditional zones (i) a narrow belt of water running along the coast, known as the territorial sea and (ii) the high seas. Nowadays a third zone is particularly important for the shipping industry, the EEZ.

The territorial waters are usually supplemented by internal waters under the full sovereignty of the coastal state and treated as equivalent to land, but subject to the right of

innocent passage for foreign ships. The high seas were defined as an area beyond the territorial sea in which no claim of sovereignty or jurisdiction by a state was permitted. Thus freedom of navigation was guaranteed as well as other freedoms such as fishing. The advent of EEZ reduced the high seas area but the regime affecting the surface is left unaltered by UNCLOS.

Major tension in shipping world is between coastal or port states on the one hand and flag states on the other, particularly as regards pollution, in the sense that measures favoured by coastal states to minimize the risk of pollution to their coastlines may well have adverse economic consequences for shipping.

**Figure 3. Ports and main shipping lanes for maritime traffic in the Mediterranean Sea**



One proposal in the eastern Mediterranean Sea and particularly in Greek waters is based on the creation of a network of marine (ecological) protection zones, i.e. in the south Ionian Sea where it is justified by reasons of the marine park of Zakynthos and the adjacent coast of west Peloponnese (under the Natura 2000 network protection). This proposed MPA could serve as a basis for creating a network of flexible and objective MPAs in Greek seas that are consistent with international law and are not located on international shipping routes (Alexopoulos, 2013).



## **5. Conclusions**

It seems that MPAs are the only and simple methods of designing and enforcing protection zones that may create less opposition by states with different interests and the shipping industry provided that they do not impose barriers to international navigation. Especially in the Mediterranean Sea they strongly related to SPAMI and usually do not cover large areas of waters beyond national jurisdiction. In 2010 more than 5,000 MPAs existed covering 8% of world oceans.

MPAs could be established and best performed by applying a combination of statistical methodologies and decision support tools. In such a way it would be easier to coordinate and co-operate among neighbouring states by solving problems relating to political, legal, socio-economic, administrative and institutional aspects of a network creation process (N. di Sciara, 2010). The MPA network will be of important use because it follows the new approach adopted by the EU to reduce marine pollution in the Mediterranean Sea, i.e. the Horizon 2020 project. It aims at identifying the top sources of sea pollution by 2020 by grouping specific activities: municipal waste and urban waste water, capacity-building measures, use of programs such as LIFE and SMAP to develop greater knowledge of environmental issues and make use of special indicators to monitor pollution.

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