

5

Marine Protected Areas as Spatial Protection Measures under the Marine Strategy Framework Directive

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Introduction

In 2002 the European Union (EU) developed a thematic strategy for the protection and conservation of the marine environment with the overall aim of promoting sustainable use of the seas and conserving marine ecosystems in line with the Sixth Community Environment Action Programme.¹ In 2008 a legally binding framework was adopted as the environmental pillar of the future maritime policy for the EU²: the Marine Strategy Framework Directive (MSFD, 2008/56/EC). This Directive now applies to 28 Member States – of which 22 have a marine zone³ – and obliges them to achieve or maintain a Good Environmental Status (GES) in the marine environment by 2020.

To this end, the Member States shall identify and afterwards take the necessary measures. These include spatial protection measures as an element of the so-called ‘programmes of measures.’ The MSFD pays particular attention to these measures, as it contains specific provisions about the possible types and criteria for networks of Marine Protected Areas (MPAs). Within this chapter, the requirements of spatial protection measures and their relevance with respect to the goals of the MSFD are discussed.

Area of Application of the MSFD

According to Art. 2(1), the MSFD is applicable to all marine waters. This term is defined in Art. 3(1)(a) MSFD for the purpose of the Directive as ‘waters, the seabed and subsoil on the seaward side of the baseline from which the extent of territorial waters is measured extending to the outmost reach of the area where a Member State has and/or exercises jurisdictional rights, in accordance with the UNCLOS [...]’. The abbreviation ‘UNCLOS’ within this definition stands for the United Nations Convention on the Law of the Sea of 1982, in force since 1994. This convention, often referred to as ‘constitution for the oceans’⁴, defines different marine zones; within some of them coastal states may exercise sovereignty or jurisdiction. The (full) sovereignty of the coastal state extends to a sea area described as the territorial sea which extends up to a distance of 12 nautical miles seawards from the baselines (Art. 2(1) and 3 UNCLOS). The baselines are defined in accordance with Art. 5 to 7 UNCLOS. As the concept of sovereignty reaches further than jurisdictional rights in the meaning of Art. 3(1)(a) MSFD, territorial seas of the Member States belong to marine waters under the Directive.

Moreover, UNCLOS confers jurisdictional rights to the coastal state on the continental shelf and within the exclusive economic zone (EEZ). Article 76(1) UNCLOS defines the continental shelf as the 'seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance'. The coastal state exercises exclusive rights with regard to the exploration and exploitation of the natural resources of the continental shelf (Art. 77 UNCLOS). The EEZ comprises the waters beyond and adjacent to the territorial sea up to a distance of 200 nautical miles from the baselines. This follows from the regulations in Art. 55, 57 UNCLOS. Within this zone, the coastal state exercises the sovereign rights and jurisdiction mentioned in Art. 56 UNCLOS and related detailed regulations. While the exclusive rights on the continental shelf exist *ipso iure* (Cacaud, 2005), the establishment of an EEZ requires a proclamation, because a provision equivalent to Art. 77(3) UNCLOS does not exist. In cases where a coastal state has proclaimed an EEZ, the underlying continental shelf is integrated in the regime of the EEZ by Art. 56(3) UNCLOS. It is also noteworthy that the MSFD is applicable in marine areas where Member States in their role as coastal states only proclaim some of the exclusive rights encompassed by the full regime of the EEZ provided by UNCLOS. Such (exclusive) fishing zones and ecological protection zones currently exist in the Mediterranean Sea. Depending on the individual case it remains unclear to what extent it is possible to make a contribution to the GES by exercising the exclusive rights in these zones. Due to its applicability in marine waters, the MSFD represents the marine counterpart to the Water Framework Directive (WFD,

2000/60/EC) which was adopted in 2000. The area of application of the WFD covers waters on the landward side of the baseline. These include transitional waters and the coastal waters. As this Directive aims at the protection and improvement of the aquatic environment *inter alia* against discharges, emissions and losses of hazardous substances (see Art. 1 lit. (c) WFD), it provides an indirect contribution to the GES of the marine environment which must not be neglected.

Implementation Process

The implementation of the MSFD is divided into two successive stages (Art. 5(3) MSFD). It began with a preparation stage comprising an initial assessment, a determination of the GES and the establishment of environmental targets. This stage should have been completed with the establishment and implementation of a monitoring programme by July 2014. The second stage concerns the programmes of measures: these had to be developed by 2015 at the latest, and implementation had to start by 2016 at the latest. According to this schedule, monitoring programmes should also have already been established and implemented. The Member States should have made publicly available relevant information on the spatial protection measures within the programmes of measures by 2013 at the latest (Art. 13(6) MSFD).

Spatial Protection Measures

The programmes of measures are regulated in detail by Art. 13 et seq. of the MSFD. According to Art. 13(1) of the Directive, Member States shall identify measures which need to be taken in order to achieve or maintain GES. Therefore, any measure included in the programmes has to be chosen with regard to the initial assessment

made pursuant to Art. 8(1) MSFD and the characteristics for GES on the basis of the qualitative descriptors in Annex I of the MSFD. Furthermore, the measures must be devised with reference to the environmental targets, established under Art. 10(1) and Annex VI of the MSFD.⁵ Also worth mentioning here are the requirements laid down in Art. 13(3) MSFD: ‘Member States shall give due consideration to sustainable development and, in particular, to the social and economic impacts of the measures envisaged.’ Moreover, ‘Member States shall ensure that measures are cost-effective and technically feasible, and shall carry out impact assessments, including cost-benefit analyses, prior to the introduction of any new measure.’

Spatial protection measures represent a special category within the aforementioned programmes (Art. 13(4) MSFD). They contribute ‘to coherent and representative networks of marine protected areas, adequately covering the diversity of the constituent ecosystems’. Although, as described above, the programmes of measures have to be developed by 2015, Art. 13(6) MSFD obliged the Member States to make the relevant information on these areas publicly available by 2013. This had to take place in respect of the marine regions or subregions defined by Art. 4 MSFD.

Background: Global International Law

From the perspective of global international law, it appears that two conventions are of particular importance with regard to the establishment of MPAs. Firstly, in 1993 the Convention on Biological Diversity (CBD) entered into force. All Member States and the EU itself have become members of this treaty during recent years.⁶ According to Art. 8 lit. (a) CBD, parties should ‘[e]stablish a system of protected areas or areas where special measures need to be taken to conserve biological diversity’. The term

protected area is defined in Art. 2 CBD as ‘a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives’, and biological diversity means ‘the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part’, comprising diversity within species, between species and of ecosystems. It appears that it has become widely recognized that the obligation in Art. 8 lit. (a) CBD not only extends to territorial seas, but also to marine areas where coastal states only exercise sovereign rights and jurisdiction. This follows from the relationship of the convention with UNCLOS as laid down in Art. 22 CBD and Art. 237 UNCLOS. It also follows from these provisions that UNCLOS takes priority in its application in the marine area.⁷

Secondly, the general obligation of Art. 192 in Part XII of the UNCLOS requires parties to protect and preserve the marine environment. This rule represents a codification of customary international law and is therefore binding for all states. An outstanding provision with regard to MPAs in the UNCLOS is Art. 194(5) which clarifies that ‘measures taken in accordance with this Part 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’ (Scovazzi, 2011). It is still under debate whether the contracting parties have to protect the features mentioned in Art. 194(5) UNCLOS not only from pollution (see the definition in Art. 1(4) UNCLOS) but also from negative impacts that result from other sources (Czybulka, 2016a). It appears that the European Commission tends towards the latter opinion.⁸ Moreover, it can be anticipated that the decision of the Arbitral Tribunal in the ‘Chagos MPA’ Case⁹ in 2015 will strengthen this position in future discussions.¹⁰ Irrespective of this debate, there is no doubt that MPAs can serve as a very

effective tool to protect and preserve ecosystems, habitats and species not only against pollution but also against other anthropogenic impairments.

While the prerogative of the coastal states to establish MPAs within their territorial seas has never been doubted since the UNCLOS entered into force, it is still being debated whether, and, if so, under which legal conditions MPAs may be established on the continental shelf and within EEZs. Although the current state of this discussion shall not be presented here in all its facets, it should be emphasized that any restriction of activities by a coastal state on the continental shelf and within an EEZ may only be carried out with due regard to the rights of other states. These include, in particular, the 'rights of communication' (Art. 79 UNCLOS for the continental shelf and Art. 58(1), 87 UNCLOS for the EEZ).¹¹

It should be noted that the rights and duties of the states with regard to the use and protection of the marine environment including the marine resources are specified in regional seas conventions (RSCs) for different marine regions. The RSCs with a scope of application extending to marine regions falling under Art. 4 MSFD will be discussed below.

Networks of MPAs

On the one hand, requirements with regard to networks of MPAs resulting from the general provisions concerning the achievement and maintenance of GES influence the design of MPA networks. On the other hand, specific requirements follow from Art. 13(4) MSFD.

General Requirements of the MSFD

On the one hand, the relevance of networks of MPAs as an element of the programmes of measures under the MSFD results from their contribution to GES. On the other hand, the general provisions concerning the

programmes of measures are important in addition to the detailed regulations regarding the description of GES.

A spatial protection measure contributes to GES if it has an effect on environmental status that fosters its development towards being considered as 'good'. The MSFD defines the environmental status in Art. 3(4) as 'overall state of the environment in marine waters, taking into account the structure, function and processes of the constituent marine ecosystems together with natural physiographic, geographic, biological, geological and climatic factors, as well as physical, acoustic and chemical conditions, including those resulting from human activities inside or outside the area concerned'. According to Art. 3(5) MSFD, GES 'means the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations'. The basis for the determination of GES in the marine regions or subregions is the list of qualitative descriptors in Annex I. As spatial protection measures have an effect that is limited to specially selected areas within marine regions or subregions, they are most likely to improve the status of certain local features in line with the objectives of some of the descriptors, such as:

- (1) Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.
- (6) Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.

Spatial protection measures are also well suited to promote the defined goals of other descriptors, including:

- (3) Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
- (4) All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.

For the remaining descriptors, it appears that spatial protection measures are more or less likely to contribute to their goals where specific areas are concerned. It should be noted that the criteria and methodological standards for the descriptors have to be laid down according to Art. 9(3) MSFD. Consequently, the Commission adopted Decision 2010/477/EU with detailed specifications for each of the descriptors, for which a revision process has already been announced (European Commission, 2014).

When determining GES, Member States shall take into account the indicative list of elements set out in Table 1 of Annex III to the MSFD as well as, in particular, 'physical and chemical features, habitat types, biological features and hydromorphology' (Art. 9(1) MSFD). The elements listed in Table 1 are relevant for spatial protection measures in so far as the description of the characteristics of habitat types and biological features, according to the detailed criteria, serves as a basis for the selection of these measures. The requirements with regard to the representativeness of MPA networks (see below) greatly depend on this data.

Article 9(1) MSFD requires Member States to take into account the pressures or impacts of human activities in each marine region or subregion, having regard to the indicative lists set out in Table 2 of Annex III, when

determining GES. The kinds of (negative) pressures and impacts on the marine environment which are best addressed by spatial protection measures can thus be inferred; indeed, area-based protective approaches are suitable for reducing the majority of the listed pressures and impacts.

Attributes of MPA Networks

According to Art. 13(4) MSFD, networks of MPAs should be coherent and representative. Moreover, the diversity of the constituent marine ecosystems must be covered by these networks.

The attribute 'coherent' is not explicitly defined for the purposes of the MSFD, but it is variously used in other contexts within the Directive. For example, a coherent legislative framework is required to achieve the envisaged objectives (recital (9) of the preamble) and the Directive should further enhance coherent contribution of the EU and the Member States with regard to international agreements (recital (16) of the preamble). Moreover, Art. 1(4) MSFD refers to the coherence of policies, agreements and legislative measures. It appears that in these cases coherence is to be understood as a call for common and coordinated political actions. It is therefore possible to derive some idea about the design requirements of a coherent network from the usage of the term elsewhere in the Directive.

Nevertheless, the meaning of coherence and representativity as attributes of networks of MPAs still remains rather unclear. The strategic document including a work programme for 2014 and beyond, within the Common Implementation Strategy (CIS) for the MSFD, by the Member States and the European Commission lists a 'common understanding on coherence and representativeness of MPAs in support of GES' as an activity to be undertaken. One plan is to benefit from work undertaken within the framework of the Convention for the Protection of the Marine Environment of the

North-east Atlantic (OSPAR Convention) on the assessment of coherence of MPAs. The assessment criteria developed by OSPAR can provide indications for the interpretation of the network attributes in Art. 13(4) MSFD. Ardron (2008) acknowledges that the ecological coherence of the OSPAR network can be assessed under the general criteria of adequacy/viability, representativity, replication and connectivity. Based on this scheme, the explicit reference to representativity in the wording of Art. 13(4) MSFD appears only to be a special emphasis, as it is covered anyway by the overarching aim of a coherent network. The four subcriteria have been developed by scientists at a global level and their main characteristics are commonly accepted. Therefore, the OSPAR framework follows a recognized methodological concept. This is also evident from the fact that the Conference of the Parties (COP) of the CBD decided in 2008 to select MPAs on these criteria, although the terms used differ slightly. Thus, COP Decision IX/20 on 'Marine and coastal biodiversity', *inter alia*, lists and defines in Annex II:

Representativity is captured in a network when it consists of areas representing the different biogeographical subdivisions of the global oceans and regional seas that reasonably reflect the full range of ecosystems, including the biotic and habitat diversity of those marine ecosystems.

Connectivity in the design of a network allows for linkages whereby protected sites benefit from larval and/or species exchanges, and functional linkages from other network sites. In a connected network individual sites benefit one another.

Replicated ecological features means that more than one site shall contain examples of a given feature in the given biogeographic area. The term 'features' means 'species, habitats and ecological processes' that naturally occur in the given biogeographic area.

Adequate and viable sites indicate that all sites within a network should have size and protection sufficient to ensure the ecological viability and integrity of the feature(s) for which they were selected.

As the EU and its Member States are all parties to the CBD, these criteria (including their respective definitions) should be taken into account as subcriteria of the term 'coherence' mentioned in Art. 13(4) MSFD. Even so, it remains a peculiarity of Art. 13(4) MSFD that the attribute 'representativity' is given equal weight to coherence and is not subordinated. In practice, however, this does not make any difference with regard to the substantive requirements to be met by MPA networks.

Types of Spatial Protection Measures

The term 'spatial protection measures' is not defined either within Art. 13(4) or in Art. 3 MSFD. However, the former provision lists examples of types of MPAs that fall under the term ('such as'), covering MPAs designated under EU law or within the framework of international or regional agreements.

MPAs Designated under EU Law

Many years before the MSFD entered into force, the 1979 Birds Directive (codified in 2009/147/EC) and the Habitats Directive (92/43/EEC) together obliged Member States to establish special protection regimes for certain areas. These protected areas are designated under the national law of the Member States in accordance with the duties created by the above-mentioned EU Directives. After being reported to the EU, the areas designated under either Directive belong to the Natura 2000 network (Art. 3(1) Habitats Directive). Although not explicitly laid down in the Directives, it cannot be

denied that the area of application of both Directives extends to marine areas under the jurisdiction of the Member States. This was most notably the result from the 'Gibraltar Decision' taken by the European Court of Justice (ECJ) in 2005.¹² Therefore, the Natura 2000 network can be extended into the marine area and contribute to the objectives of the MSFD. Following from Art. 13(4) MSFD, the existing marine Natura 2000 sites are incorporated into the programmes of measures.

The spatial protection established by Natura 2000 is limited to certain natural features, and aims to maintain these features in a favourable conservation status within their natural range. Special Protection Areas in accordance with Art. 4(1) of the Birds Directive may only be designated for birds listed in Annex I and for regularly occurring migratory birds not listed in this Annex. Special Areas of Conservation, designated under Art. 3(1) of the Habitats Directive, host natural or semi-natural habitat types listed in Annex I and significant populations of the plant and animal species listed in Annex II.

MPAs Established in the Framework of Global and Regional International Agreements

The second type of MPAs falling under Art. 13(4) MSFD concerns sites which are agreed by the EU or Member States in the framework of 'international or regional agreements'.¹³

The CBD obliges its contracting parties on a global level to achieve targets for the designation of MPAs (Dudley and Hockings, this volume). However, the convention does not introduce a special type of protected area. Instead, the obligation is met by the designation of MPAs under regional international law or the national law of a contracting party.

The term regional (international) agreements in the sense of Art. 13(4) MSFD includes the 'regional sea conventions'

defined in Art. 3(10) MSFD but is more far reaching. Therefore, MPAs in the framework of the RSCs are of particular relevance with respect to spatial protection measures. Article 3(10) MSFD mentions some of the RSCs applicable in the different marine regions of the EU waters (see Art. 4 MSFD). This includes the Convention on the Protection of the Marine Environment of the Baltic Sea (Helsinki Convention), the Convention for the Protection of the Marine Environment of the North-east Atlantic (OSPAR Convention) and the Convention for the Marine Environment and the Coastal Region of the Mediterranean Sea (Barcelona Convention). The Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention) is not included, although the Black Sea is one of the marine regions listed in Art. 4(1) MSFD.

Since 2014, MPAs within the framework of the Helsinki Convention have been established according to HELCOM Recommendation 35/1 'On a System of Coastal and Marine Baltic Sea Protected Areas'.¹⁴ By taking these measures, the contracting parties contribute to their obligation to 'conserve natural habitats and biological diversity and to protect ecological processes' stated in Art. 15 of the Helsinki Convention. Within the system of the OSPAR Convention there exists a similar Recommendation 2003/3 'on a Network of Marine Protected Areas'. In contrast, the Parties of the Barcelona Convention decided to sign a separate agreement which is dedicated to MPAs in the Mediterranean Sea area. The 1982 Protocol Concerning Mediterranean Specially Protected Areas was replaced in 1995 by the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA Protocol). The revised version allows the designation of two different types of MPAs: Specially Protected Areas (SPAs) under Art. 5 and Specially Protected Areas of Mediterranean Importance (SPAMIs) under Art. 8. It should

be noted that MPAs of the second type may be established in the high seas or may extend over two or more marine areas belonging to different coastal states. The contracting states to the Bucharest Convention adopted the Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea Against Pollution in 2002 which entered into force in 2007.¹⁵ Due to Art. 4(1) lit. (a) of this protocol, each contracting party shall take all necessary measures to 'protect, preserve, improve and manage in a sustainable and environmentally sound way areas of particular biological or landscape value, notably by the establishment of protected areas [...]'. Moreover, the 'Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea' of 2009 states explicitly the need for MPAs.

Besides the RSCs, there exist conventions for the protection of certain species at the regional level. Two examples, concluded within the framework of the Bonn Convention on Migratory Species, are the Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) and the Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS). ACCOBAMS constitutes an explicit obligation to conserve whales using the instrument of MPAs. This obligation may be fulfilled by the protection of certain areas under national law or within the framework of an RSC. One example for this is the Pelagos Sanctuary for Mediterranean Marine Mammals. This MPA was initially established by a trilateral agreement between France, Monaco and Italy¹⁶ and was some years later listed as a SPAMI in accordance with the SPA Protocol mentioned above.¹⁷

Finally, the agreements establishing the regional fisheries management organizations (RFMOs) have to be considered as regional (international) agreements in the sense of Art. 13(4) MSFD. It is possible that

fishing closures in certain areas on the basis of these agreements qualify as MPAs, but this depends on an assessment case by case (see below).

Further Spatial Protection Measures

Besides the types of MPAs explicitly mentioned in Art. 13(4) MSFD, there exist different kinds of spatial protection measures which do not necessarily offer all the characteristics of MPAs but nevertheless may contribute to networks of MPAs in accordance with this provision.

The first group is made up of area-based restrictions with regard to fishing activities. The exploitation of stocks of fish, crustaceans and molluscs not only affects the stocks as a component of marine biodiversity, but food webs and the integrity of the seafloor can also be substantially impaired (UNEP/MAP, 2012). Fisheries restricted areas can address these problems as an integral part of MPA networks. The restrictions may be focused on certain fishing methods or gears, either throughout the year or restricted to seasonal periods. The marine regions covered by the MSFD fall within the competence of different RFMOs on the basis of international conventions. Although the name may suggest otherwise, the General Fisheries Commission for the Mediterranean (GFCM) is also responsible for the Black Sea. Another RFMO which covers a larger geographical area, including the Mediterranean and Black Seas, is the International Commission for the Conservation of Atlantic Tunas (ICCAT). The scope of ICCAT is limited to tuna and tuna-like species. This is different in the case of the North East Atlantic Fisheries Commission (NEAFC). But although the 'Regulatory Area' of the NEAFC covers parts of the North Sea, it does not decide over binding management measures within EEZs or territorial seas.¹⁸ Therefore, the area of application does not interfere with one of the MSFD's marine regions. An instructive example of a spatial

protection measure regarding the regulation of fisheries is the fisheries restricted area (FRA) as provided for in Art. 8 (a) (iv) of the GFCM Agreement. Its purpose is ‘the protection of vulnerable marine ecosystems, including but not limited to nursery and spawning areas.’¹⁹

Area-based fisheries measures are also an element of the EU’s Common Fisheries Policy (CFP). Recital (39) of the MSFD addresses the importance of a ‘full closure to fisheries of certain areas, to enable the integrity, structure and functioning of ecosystems to be maintained or restored and, where appropriate, in order to safeguard, inter alia, spawning, nursery and feeding grounds’ within the framework of the CFP. Recital (11) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (the ‘Basic Fisheries Regulation’, BFR) consequently highlights the contribution of the CFP to the aims of the MSFD, namely achieving GES. The BFR institutes two types of area-based fisheries measures. Firstly, the EU shall, after identification of suitable areas by the Member States, establish fish stock recovery areas under Art. 8 BFR. These areas primarily concern the protection of ‘heavy concentrations’ of fish below minimum conservation reference size and spawning grounds. Areas suitable to form part of a coherent network of protected areas have to be taken into account. Secondly, Art. 11 BFR empowers the Member States to adopt conservation measures with regard to the regulation of fisheries within waters under their sovereignty or jurisdiction to comply with their obligations resulting from Art. 13(4) MSFD. Appropriate measures within the territorial seas may be taken in accordance with Art. 20 BFR. Moreover, the EU’s fisheries legislation provides the EU and the Member States with area-based instruments at the regional level. Council Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of

fishery resources in the Mediterranean Sea (MFR), for example, allows the establishment of ‘Community fishing protected areas’ (Art. 6 MFR) and ‘national fishing protected areas’ (Art. 7 MFR).

Another human activity that requires limitation in certain areas is shipping, which is controlled by the International Maritime Organization (IMO) established in 1948.²⁰ This organization has the competence to establish different kinds of protecting measures, including Particularly Sensitive Sea Areas (PSSAs). These areas are based on IMO Resolution 982 and do not constitute restrictions on maritime traffic. This follows from the definition of a PSSA in IMO Resolution 398 as ‘an area that needs special protection through action by IMO because of its significance for recognized ecological, socio-economic, or scientific attributes where such attributes may be vulnerable to damage by international shipping activities’. With respect to PSSAs, other regulations may serve as ‘associated protective measures’. These include areas to be avoided (ATBAs) and no anchoring areas (NAAs). ATBAs are expressly provided for in Regulation 8 (a) of Chapter V of the International Convention for the Safety of Life at Sea (SOLAS). The definition for NAAs is laid down in IMO Resolution 572, which defines them as ‘[a] routing measure comprising an area within defined limits where anchoring is hazardous or could result in unacceptable damage to the marine environment’. These IMO measures must not be confused with areas regulated in Art. 211(6) UNCLOS which covers special cases where coastal states believe that a clearly defined area within their EEZ needs special protection against pollution from ships, because international rules and standards are inadequate. The IMO is involved in the decision concerning the establishment of such areas.

Furthermore, maritime spatial planning instruments may play an important role as spatial protection measures (Schachtner, this volume). The EU recently introduced a

Maritime Spatial Planning Directive (MSPD, 2014/89/EU). According to Art. 8(1) of this Directive, Member States are obliged to 'set up maritime spatial plans which identify the spatial and temporal distribution of relevant existing and future activities and uses in their marine waters'. In particular, nature and species conservation sites and protected areas represent interests mentioned in Art. 8(2) MSPD that qualify as spatial protection measures within the framework of maritime spatial planning. This is further supported by the fact that the programmes of measures required by Art. 13(1) MSFD, which include those falling under Art. 13(4) MSFD, shall *inter alia* contain spatial and temporal distribution controls as listed in Annex VI No (3) to the MSFD.

Last but not least spatial protection measures are not limited to binding restrictions. These include, for instance, (voluntary) codes of conduct regarding the exercise of certain uses in specific marine areas. Other examples include the application of economic instruments to encourage the use of marine areas in an environmentally sound manner (MSCG, 2014; Ojea *et al.*, this volume). Moreover, Member States or authorized persons may actively eliminate factors which have a negative effect on the environmental status within a marine area, for example by rehabilitating contaminated sites.

Initiation of Spatial Protection Measures

In the foregoing discussion, reference was made to measures that may not be taken by the Member States due to a lack of competence. For these cases, a procedure is laid down in Art. 13(5) MSFD. This provision makes clear that Member States must not remain inactive. If the management of a human activity at European or international level is likely to have a significant impact on the marine environment, the competent

authority or international organization shall be addressed. This obligation refers to spatial protection measures in particular. As far as regional international organizations are concerned, the Member States operate within the framework of their general obligation contained in Art. 6(1) MSFD to make use of existing regional institutional cooperation structures, including those under RSCs. Especially when it comes to measures of regional organizations, Member States have significant influence on decisions over protective measures in their position as contracting parties to the underlying conventions.

Closing Remarks

The huge achievement of the MSFD, including with respect to networks of MPAs, is its integrative approach. Article 13(4) MSFD places new demands for establishing coherent networks of protected areas within European waters that did not exist in EU law before. Thus, MPA networks must contribute to GES taking account of the ecosystem approach, and the spatial protection measures taken shall give due consideration to sustainable development including social and economic impacts. These requirements for the network necessitate the integration of measures which go beyond Natura 2000 in several respects. To begin with, MPAs agreed within the framework of global and regional international organizations have to be added. Moreover, a variety of possible spatial protection measures have to be integrated if necessary, although these may not meet all characteristics of MPAs (however defined). In conjunction with the reformed CFP, the MSFD fosters the interaction of EU fisheries and environmental law, especially if it comes to the protection of certain areas within MPA networks. A number of sectoral regulatory measures are not covered by the EU's (exclusive) competence, namely those with regard to shipping, yet even these have

to be applied within the MPA networks through consultation with the responsible body. Although the MSFD is only applicable within EU waters, the GES of marine regions will depend crucially on appropriate measures taken by third parties. Article 6(2) MSFD requires coordination between Member States and third countries that share the same marine region. This includes measures with respect to transboundary MPA networks. The tight timetable leading to the envisaged achievement of GES should thus accelerate their establishment, and not only limited to EU waters.

However, the MSFD does have some intrinsic problems which complicate the implementation of its ambitious goals by 2020. In particular, the application of Art. 13(4) MSFD is hampered because the meanings of essential terms, or their relation to each other, have not been defined in the Directive. This appears astonishing in view of the fact that Art. 3 MSFD contains a long

list of detailed definitions for the purpose of the Directive. Sometimes it can be advantageous to refrain from the definition of certain terms since it allows their flexible interpretation with due regard to developments in science and politics during the implementation process. But when it comes to Art. 13(4) MSFD, Member States would benefit from more detailed interpretative guidance *within* the Directive. This issue is especially pertinent for questions such as: To what degree is the term ‘spatial protection measure’ wider in its scope than the term ‘marine protected area’? What are the demands placed on the (natural) coherence of a network of MPAs and how do they relate to the attribute of representativity, and how does this differ from the meaning of the term ‘coherence’ in the general provisions of the MSFD? The EU must make every effort to foster a common understanding among the Member States concerning the answers to these questions.

Notes

- 1 See also Recital (4) of the MSFD.
- 2 See also Recital (3) of the MSFD.
- 3 See also Recital (15) of the MSFD.
- 4 First stated by T.T.B. Koh, President of UNCLOS III, available under http://www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf; see also Proelß (2012).
- 5 The Member States have to pay special attention to their obligation resulting from Art. 13(7) MSFD.
- 6 A regularly updated list of parties is provided at <https://www.cbd.int/information/parties.shtml>
- 7 It is not possible to present all aspects of the discussion here, but reference should be made to the examination by CBD/SBSTTA (2003).
- 8 Recital (2) of Council Regulation (EC) No 734/2008 of 15 July 2008 on the

- protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears reads: ‘The absence of a regional fisheries management organisation or arrangement does not exempt States from their obligation under the law of the Sea to adopt with respect to their nationals such measures as may be necessary for the conservation of the living resources of the high seas, including the protection of vulnerable marine ecosystems against the harmful effects of fishing activities.’
- 9 Decision of the Arbitral Tribunal Constituted under Annex VII of the United Nations Convention on the Law of the Sea of 18 March 2015 in the Matter of the Chagos Marine Protected Area – Republic of Mauritius./United Kingdom of Great Britain and Northern Ireland –.

- 10 See the discussion of this decision by Czybulka (2016b).
- 11 This conflict is discussed in detail by Proelß (2012).
- 12 ECJ, Judgement of the Court of 20 October 2005 (Commission of the European Communities./ United Kingdom of Great Britain and Northern Ireland), C-6/04.
- 13 To be precise, the correct formulation would be 'global and regional international agreements', since agreements on a regional level are also 'international'.
- 14 This Recommendation superseded Recommendation 15/5.
- 15 The protocol is available at http://www.blacksea-commission.org/_convention-protocols-biodiversity.asp
- 16 Agreement concerning the Creation of a Marine Mammal Sanctuary in the Mediterranean of 25 November 1999, in force since 21 February 2002 (2176 UNTS 249).
- 17 A regularly updated list is provided under http://www.racspa.org/sites/default/files/doc_spamis/spamis_2015.pdf
- 18 See the map provided under <http://archive.neafc.org/about/ra.htm>
- 19 A regularly updated list is provided under <http://www.fao.org/gfcm/data/map-fisheries-restricted-areas/en/>
- 20 Convention on the International Maritime Organization of 6 March 1948, in force since 17 March 1958 (289 UNTS 3).

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