

Review

Marine Strategy Framework Directive – a step towards holistic approach in water management

Radu MIHĂIESCU¹, Tania MIHĂIESCU^{2*}, Edward MUNTEAN², Nicoleta Muntean²

¹*Babes-Bolyai University, Faculty of Environmental Science, 30 Fantanele St., 400294 Cluj-Napoca, Romania*

²*University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, 3–5 Manastur St., 400372 Cluj-Napoca, Romania*

Received 12 June 2012; received and revised form 10 July 2012; accepted 2 August 2012
Available online 1 December 2012

Abstract

The deterioration of the marine environment has become evident all over the world and European waters are no exception. Therefore in the last few years the European Union has been engaged in an effort to develop a marine strategy to protect the marine environment and a more encompassing integrated maritime policy that would provide a comprehensive system for the management of the uses of the marine areas of Europe. The EU Marine Strategy Framework Directive (2008/56/EG, MSFD) provides a regulatory framework for the management of the impacts of a variety of human activities on the EU's marine waters. The MSFD introduces the notion of "good environmental status" and constitutes a framework for the sustainable use of the marine environment in order to ensure its continued use by current and future generations. The effective protection of the marine resource base is indeed a precondition for achieving sustainable wealth and generating employment, at a time when the EU is seeking to reinvigorate its economy. It will also enhance the quality of life in the European Union.

Keywords: Marine Strategy Framework Directive, good environmental status, water management, strategy

Introduction

Covering nearly three-quarters of the earth's surface, marine and coastal waters are the earth's largest and most vital resources, influencing global energy cycles and biological processes upon which all life depends. Marine ecosystems are a major source of biodiversity and play a key role in weather and climate patterns affecting our livelihoods. They provide us a wide range of essential goods and services – from solar energy to carbon absorption. The marine environment is a major contributor to quality of life and social well-being, and its conservation is indispensable for the economic prosperity of maritime regions and the EU as a whole.

But Europe's marine environment is deteriorating fast. Pressures on natural marine resources and demand for marine ecological services are often too high. Threats to the EU's marine environment include impacts from climate change, commercial fishing, introduction of exotic species, pollution and introduction of dangerous substances from shipping, oil and gas exploration, oil spills, nutrient enrichment from agriculture and untreated urban waste water, marine litter and noise. In 2007, the European Commission adopted an Integrated Maritime Policy (IMP) that replaces compartmentalized resource management with a holistic and integrated ecosystem-based approach to the management of human activities (EBM) while simultaneously encompassing all elements of maritime activity [1].

* Corresponding author.
Tel: 0040745516916
e-mail: tmihaiescu@yahoo.com

In an effort to meet one of the IMP's strategic initiatives – the development of new tools to implement EBM – several EU member states expressed their intention to use marine spatial planning (MSP) as a means to implement EBM and, subsequently, MSFD goals [1,3,8]. In fact, the international efforts to develop MSP during the last decade, as well as its increasing importance in European policy [5], demonstrate its potential. MSP is a key tool that facilitates the coordinated planning of competing activities and strategic management of maritime space, thus promoting sustainable development and use of resources [3,8]. The EU Marine Strategy Framework Directive (2008/56/EG; MSFD) creates a regulatory framework for action by all EU member states to achieve or maintain good environmental status in all European seas by 2020. For this reason, all marine states of the EU must implement the Directive by developing and implementing national strategies. To this effect, the MSFD assigns EU member states a major programme of activities in a very tight timeframe. Hence, by 2010, the Directive should actually be transposed into national law and EU-wide criteria and methodological standards should be laid down (including for marine species and habitats) by a range of working groups in the EU Commission and under regional marine conventions. Moreover tasks have to be completed by 2012. Those tasks include an initial assessment of marine waters, the determination of good environmental status and the establishment of environmental targets. Besides Member states must report by 2013 among other things on progress in establishing marine protected areas. Furthermore monitoring programmes must be established and implemented by 2014, and programmes of measures must be developed by 2015 and must enter into operation by 2016. Finally a good environmental status is to be achieved in all European seas by 2020. The MSFD stipulates: [...that "good environmental status" means ...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 MSFD requires analysis of pressures and impacts in order to link changes in the status of the environment to drivers and pressures. They both require definition of restoration targets defined as the good environmental status, and a comparison of these targets across the Member States, sub-regions

and regional seas in order to ensure consistency of environmental objectives and approaches across the EU's coastal Member States (MS).

Brief overview on the EU Marine Strategy Directive

The MSFD – Directive 2008/56/EC of the European Parliament and of the Council [2] – establishes a framework within which member states must take the necessary measures to achieve, or maintain, GES throughout their marine environments, including the water column, seabed and subsoil, from coastal waters to the entire exclusive economic zones (EEZ) by 2020. In order to do so, each member state has to develop and implement marine strategies (MS) for its marine regions/sub-regions accounting for the transboundary effects on the quality of the marine environment within each of those regions/sub-regions. These MS are intended to (1) protect and preserve marine ecosystems (preventing its deterioration or improving its restoration) and (2) prevent or reduce the anthropogenic inputs in the marine environment, by consistent application of an EBM approach.

The MSFD provides a regulatory framework for the management of the impacts of a variety of human activities on the EU's marine waters. The Directive does not merely focus on protection of the marine environment, but constitutes a framework for the sustainable use of the marine environment in order to ensure its continued use by current and future generations. The MSFD is a particular Directive in the sense that it regulates a management approach to human activities having an impact on the marine environment rather than preventing or prohibiting specific sources of pollution separately. While there is value in limiting pollution from specific sources, there was also a particular need in the EU to consider the cumulative impacts of human activities as well as some naturally induced changes on the marine environment in order to ensure their long-term viability.

Many of the concepts and approaches used by the MSFD for the EU's marine waters have originated from international fora and agreements. Some are included in legally binding international obligations the EU is a party to. Others have been discussed or are beginning to be discussed within international organisations and structures. This study aimed at investigating how the MSFD contributes to the implementation of international obligations, commitments and initiatives in relation to the protection of the marine environment.

The MSFD contributes to the implementation of such international commitments in, broadly, three different manners. First, the analysis showed that the MSFD also contributes to the implementation of a number of international commitments in the area of protection of the marine environment, often in a complementary manner to other pieces of EU legislation. Secondly, the text of the MSFD explicitly refers to a number of international and regional conventions that were of particular relevance in the development of the Directive and to which the Directive directly aims to contribute. Finally, the MSFD foresees the possibility to respond to upcoming international initiatives and obligations in this area and can thus be adapted to take account of such international or regional developments as are needed to protect the marine environment. This is particularly important for this area in which scientific and technological knowledge develops rapidly and in which many uncertainties on the functioning of marine ecosystems remain.

As mentioned above, the MSFD specifically refers to a number of instruments it aimed to contribute to. These instruments are UNCLOS, the CBD and the World Summit on Sustainable Development and the regional seas conventions applicable to EU marine regions. UNCLOS is often referred to as the international instrument that provided the legal framework for contemporary principles of protection of the marine environment, including the ecosystem based approach, the precautionary approach and sustainable development. In its recital 17, the MSFD notes that the obligations of the EU and its Member States have to be taken fully into account in the Directive. This is, for example, done through the provisions on cooperation to protect the marine environment and the obligation to ensure that activities under a party's jurisdiction do not cause damage beyond its marine waters. The Directive also explicitly aims to support the strong position taken by the Community in the context of the CBD, on halting biodiversity loss, ensuring the conservation and sustainable use of marine biodiversity and on the creation of a global network of marine protected areas by 2012. The establishment of such a network of MPAs under the MSFD, including the integration of those set up under other pieces of legislation, is seen as an important step towards fulfilling this obligation, both within the framework of the CBD and of the World Summit on Sustainable Development (recitals 7 and 18). As can be seen from the thematic assessment in section 3, the MSFD is found to

provide essential support to the effectiveness of such MPAs in the EU's marine waters.

The Marine Strategy Directive and the EU's Integrated Maritime Policy

The MSFD is viewed by the Commission as the "environmental pillar" of a much wider and broadly encompassing IMP. As suggested by the Commission, the IMP is expected to address, in coordinated and cross-sectoral fashion, the totality of Europe's relationship with oceans and seas. Fundamentally, the IMP would consider the interrelated issues of maximizing the sustainable use of European seas, minimizing conflict among users, and protecting the marine environment. The MSFD specifically addresses this latter element, one that is to be considered and balanced in light of the other elements. The MSFD is seen by the Commission and the Council as being nested in the IMP rather than as being a stand-alone Directive. Given the wide sweep of the proposed IMP, with its attention to the multitude of uses of marine space, it is not surprising that maritime spatial planning has become a focal point of attention in EU institutions.

This evolving tool is regarded as both a means and as a process to assist in minimizing conflicts by designating the location of different uses in particular areas, but also as a mechanism to contribute to protection and restoration of environmental sustainability and health. Reflecting a modern perception of ocean space, maritime spatial planning considers marine areas in terms of four dimensions: the seabed, the water column, the water surface, and time. The inclusion of time as the fourth dimension acknowledges the fact that use compatibility varies temporally. This conception of ocean space allows for varying uses in the different layers of the vertical spatial column of marine space.

Clearly, attention will have to be given to the interplay of land-based activities on marine waters to ensure consistency of activities in those two interrelated areas. Coordination between terrestrial planning and marine spatial planning will be needed. The Commission recognizes that coherence between on shore planning efforts in drainage basins, in the coastal zone, and in marine waters is required. Coordination of efforts associated with other EU Directives and Recommendations, such as the Water Directive and the Coastal Management Recommendation, will be of key importance in that regard. An overarching principle of the MSFD is the ecosystem-based approach and the integrated management of policies aiming to protect the EU marine environment. The MSFD indeed puts in

place a framework aiming to ensure an integrated approach to the protection of the marine environment of the EU and to ensure its sustainable use. The Directive was developed with this aim in order to address the fragmented management of the EU's marine waters by making sure that the collective pressures of socio-economic activities do not adversely affect ecosystems and are contained within sustainable levels. The Directive thus aims at achieving a balance between the activities in the EU's seas and the protection of its marine environment. This theme thus relates primarily to the overall management of the marine environment and its sustainability for future generations, covering all human impacts on the marine environment in an integrated manner. It also partly covers coastal management as far as this is relevant to the MSFD.

Conclusion

The Marine Strategy Framework Directive is said to be the "environmental pillar" of a wider Integrated Maritime Policy.

It provides a plan of action with designated responsibilities and obligations and a schedule that is to be adhered to by member states and the European Commission.

The MSFD represents a significant step in the European endeavor to advance marine water use management and sets the stage for future development of European marine policy.

The implementation of the Directive will determine its success or failure and will require the cooperation of many governmental and nongovernmental entities. It will also require an effective balancing of different considerations, most notably protection of ecological systems and economic development.

Despite the unquestionable relevance of EBM in achieving sustainable development, there is still a gap between theory and practice because governments and stakeholders lack the necessary operational tools to implement it.

References

- [1] Meiner A. Integrated maritime policy for the European Union – consolidating coastal and marine information to support maritime spatial planning. *J. Coast. Conservat.* 2010;14:1–11.
- [2] European Union. Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008, establishing a framework for community action in the

field of marine environmental policy (Marine Strategy Framework Directive). *Official J. Eur. Union*, L164: 19–40.

[3] European Commission. Roadmap for maritime spatial planning: achieving common principles in the EU – 791 Final. Brussels: Communication from the Commission; 2008. 11 pp.

[4] European Commission. International Conventions. In<http://ec.europa.eu/environment/water/marine/conventions_en.htm>, accessed in 17/04/2012.

[5] Long R. The Marine Strategy Framework Directive: a new European approach to the regulation of the marine environment, marine natural resources and marine ecological services. *J. Energy Nat. Res. Law* 2011;29(1):1–44.

[6] European Commission. Commission Decision 2010/477/EU of 1 September 2010 on criteria and methodological standards on good environmental status of marine waters. *Brussels: Official J. Eur. Union*, L232: 14–24.

[7] OSPAR Commission. OSPAR regional implementation framework for the EU Marine Strategy Framework Directive – MSFD Road Map. London: OSPAR Commission; Publication No. 501/2010; 2010. 19 pp.

[8] European Union. Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000, establishing a framework for community action in the field of Water Policy (Water Framework Directive). *Official J. Eur. Communities*, L327: 1–72.

[9] Borja A, Elliot M, Carstensen J, Heiskanen A-S, van de Bund W. Marine management – towards an integrated implementation of the European Marine Strategy Framework and the Water Framework Directives. *Mar. Pollut. Bull.* 2010; 60:2175–86.

[9] Lawrence Juda, "The European Union and Ocean Use Management: The Marine Strategy and the Maritime Policy," *Ocean Development and International Law* 38 (2007): 259–282.

[10] Arild Underdal, *Integrated Marine Policy: What? Why? How? Marine Policy* 4 (1980): 159–169.