

Maritime spatial planning: opportunities & challenges in the framework of the EU integrated maritime policy

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Abstract In recent years, maritime spatial planning (MSP) has become an internationally emerging, promising tool for the implementation of integrated ocean management. MSP provides the appropriate framework for public authorities and stakeholders to coordinate their action across sectors and administrative boundaries, and to optimize the use of natural resources. In November 2008 the European Commission adopted the Communication “Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU” (COM(2008) 791 final) aiming to facilitate the development of MSP by Member States and to stimulate its implementation at national and EU level. Core element of this Roadmap is a set of ten key principles for MSP in Europe. Although endorsed as valid and comprehensive, further discussion and research is needed to identify challenges, measures and tools for the key principle’s practical application. This special issue of the Journal of Coastal Conservation: Planning and Management (JCCPM) seeks to contribute to this discussion. Its purpose is to shed light from different angles on the various aspects of the mentioned ten key principles and provide lessons learned from experience in different maritime areas around the

world. Taking a more scientific, rather than a political point of view, the following articles will debate the different principles, their practical handling, as well as the consequences linked to their application.

Keywords EU integrated maritime policy · Maritime spatial planning · Roadmap · Key principles for maritime spatial planning

Introduction

The European Seas exhibit a wide spectrum of environmental traits, ranging from pristine marine reserves to regions impacted by a large variety of economic and recreational activities. Managing maritime areas—with the aim of reconciling the discordant needs of protecting their ecological balance and exploiting their natural resources—requires adequate policies and the integration of differing sectoral approaches and interests in a coherent set of measures.

Given the pressing need for a better coordination of maritime affairs at the European level, the European Commission (EC) adopted on 10 October 2007 the so-called “Blue Book” (COM(2007a) 575)¹ introducing a new Integrated Maritime Policy (IMP) for the European Union (EU), together with an accompanying Action Plan (SEC(2007b) 1278).² The policy was endorsed by the European

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¹ Communication from the Commission “An Integrated Maritime Policy for the European Union”, COM(2007a) 575 final of 10.10.2007. Available at http://ec.europa.eu/maritimeaffairs/policy_documents_en.html

² Communication from the Commission “An Integrated Maritime Policy for the European Union”, SEC(2007b) 1278 final of 10.10.2007. Available at http://ec.europa.eu/maritimeaffairs/policy_documents_en.html

Council in December 2007. Maritime spatial planning (MSP)³ can be defined as the “public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process”.⁴ It is considered a key instrument for the implementation of the IMP, in that it will help public authorities and stakeholders to coordinate their action and to optimize the use of natural resources, benefiting both economic development and environmental protection at sea.

As a consequence, a Communication titled “Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU”⁵ was adopted by the EC on 25 November 2008, aiming to facilitate the development of MSP by Member States and to stimulate its implementation at national and EU level. Core element of this Roadmap is a set of ten key principles for MSP which should form the “backbone” of a common approach on MSP and its implementation in the EU. The principles have been identified based on existing practice in MSP, as well as international and EU instruments that have to be respected while setting up a MSP process.

As a Roadmap follow-up, the European Commission organized a series of four workshops throughout 2009, in order to facilitate a debate that would help guide the further development of MSP in the EU. These workshops brought together stakeholders from all relevant areas, such as policy, maritime industries and NGOs. One of the results of this debate was the endorsement of the mentioned ten key principles for the integrated process that is needed to implement MSP. However, it was felt that further research and in-depth discussion is also needed to identify challenges that will likely occur with the key principles’ practical application, including measures and tools needed therefore.

This special issue seeks to contribute with its articles to this discussion. Only a few fully integrated MSP processes are currently in place or under development, around the world, yet

the political interest and international debate on the topic increases constantly. MSP is a promising tool that can offer a sustainable and appropriate way to manage maritime space, not only in national waters, but particularly in maritime regions shared by several countries. All of the oceans are interconnected and human development has significant impact on the ecological status of marine ecosystems, whether this development is land- or sea-based. However, knowledge about complex marine ecosystems and how to best manage the manner and intensity of human maritime uses, remains limited. It is therefore our responsibility to continue the debate on MSP and encourage further attempts to develop instruments that are tailor-made for the ecosystem-based management of our seas and oceans.

MSP Rationale

Although fairly new at the European level, MSP originally started as a management approach for nature conservation in the Great Barrier Reef Marine Park, with the Great Barrier Reef Marine Park Act, already in 1975. What is important to recognize, however, is that fully integrated MSP stretches beyond the mere management of the seas and oceans for conservation purposes.

MSP is a neutral instrument for improved decision-making, providing a framework for arbitrating between human activities at sea and for managing their impact on the marine environment. Its objective is to balance sectoral interests, achieve sustainable use of marine resources and optimize the use of marine space. The sustainable management of marine regions, however, depends on the condition and capacity of the respective ecosystem(s). The capacity of ecosystems, i.e. the impacts of human activities a given ecosystem can cope with, is not negotiable. MSP seeks to both benefit economic development and the marine environment. The ecosystem-based approach is consequently the overarching principle of any MSP process, as planning must seek to protect and improve the marine environment.

Oceans and seas encompass highly complex ecosystems that cut across administrative borders. Past experience has shown that mainly sectoral approaches to the exploitation of marine resources do not lead to long-term, well-balanced and responsible development. Equally inappropriate are unilateral decisions made by a state in its own best interests, which take no consideration of the effect any decision will have on neighbouring states.

Maritime activities always have a cross-border dimension. The world’s oceans and seas are interlinked, and action taken in one maritime area will have (whether intended or unintended) effects on other activities either in the same or in adjacent areas. The ever more intense use of the oceans and seas by maritime sectors have added to the pressure on the marine environment.

³ The term “maritime” spatial planning will be used throughout the article, although in international practice the terms “marine spatial planning” or “coastal and marine spatial planning” are more commonly used. In an EU context the term “maritime spatial planning” was chosen to emphasize the cross-sectoral approach of the process. “Maritime” refers to all maritime human activities including the protection of the marine environment. As the European Commissioner for Maritime Affairs and Fisheries Maria Damanaki explains it “spatial planning of the sea was [initially] perceived in the EU as an environmental policy. However, it is now regarded as a sector-neutral approach with the objective not only to protect the marine environment but also to promote economic growth of the maritime economy.” (published in *Marine Ecosystems and Management (MEAM)*, Vol. 4, No. 4, February-March 2011, available at <http://depts.washington.edu/meam/>)

⁴ Ehler, C. and Douvère, F., UNESCO. 2009, page 18

⁵ Communication from the Commission “Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU” COM (2008a) 791 final of 25.11.2008. Available at http://ec.europa.eu/maritimeaffairs/spatial_planning_en.html

Challenges like the globalization of trade, the worldwide transport of goods, and particularly the changing climate, and the need to adapt to its effects, require cross-sectoral and cross-border management approaches. MSP provides the appropriate framework to meet these requirements.

Coastal states sharing a common approach to the management of maritime areas, an approach that takes into account its own cross-border impacts, will find it easier to avoid conflicts between competing interests, to coordinate the use of limited space and resources for the greater benefit of all, and finally to reduce the economic costs of non-coordination. In this context, MSP can provide the basis for simplified licensing procedures and for reducing the costs of regulatory and administrative processes, constituting a transparent and reliable planning framework.

In fact, it's not only the different maritime sectors and the various human activities that have to be coordinated (horizontal coordination). It's also the responsible authorities and different governance levels (vertical coordination). The multiple challenges of maritime affairs and the powers to tackle them are presently dealt with by numerous public and private players at different governance levels, from the United Nations to small coastal communities. However, there is a maritime dimension to virtually every major issue facing countries around the world today, including the need to adapt to climate change, environmental protection and conservation, international trade, transport and logistics, the security of energy supply, research and innovation and so forth. An integrated approach is needed that allows for an effective and efficient coordination of the various authorities and agencies involved in ocean related decision-making. Improved cross-sectoral coordination is considered as one of the key elements for modern policy-making. It can lead to the systematic identification of synergies between sectors or inefficiencies in regulations which in turn will help to accomplish more effective and cost-efficient political decisions. MSP provides the appropriate framework to organise governance levels in a cross-sectoral and integrated manner. It can thus help to increase the coherence of national and international policies.

It is important to understand that MSP is not static. MSP is a process, in contrast to a one-time plan that once achieved will remain unchanged for decades. MSP can be characterized as a "circular process" that evolves from the agreement on overarching goals and the subsequent definition of future oriented development objectives, via a data gathering and assessment phase, to the consultation of stakeholder, the participatory development of a spatial plan, to measures for the plan's enforcement, and finally to the monitoring of the entire process, the evaluation of the achievements and the revision of planning where needed.

MSP has to be adaptive, in order to maintain its strength and full potential as an integrated tool. Though planning must

be reliable and provide certainty, it is essential to retain enough flexibility so as to enable a reaction to changing framework conditions or political priorities. A silver bullet does not exist, but current practice shows that a MSP process should be reviewed after a period of 5 to 7 years.

Given the lack of obvious geographical constraints in the marine environment, aside from continental margins and bottom relief, the MSP process must be based on the specificities of individual basins or sub-basins (e.g. ecological characteristics, natural processes impacting the local environment, presence of coastal features or infrastructures, human activities, etc.). The scope of MSP in terms of geographic coverage will differ according to regional conditions. Although activities on land may have a direct impact on marine regions, MSP manages only maritime activities and activities in coastal waters. It has to be stressed, however, that MSP in the long-term will not be successful if an integration of land-based planning, in particular coastal planning, with maritime planning is not achieved.

The EC ten key principles for MSP—explained

Core element of the above mentioned EC "Roadmap on MSP" are ten key principles that should form the cornerstones of MSP implementation across the EU. These principles have been devolved from current approaches towards MSP in European Countries, Canada, Australia and the United States of America. Additionally international and EU regulations have been reviewed that have to be respected during the development and implementation of a MSP process.

Of particular relevance in this regard is the United Nations Convention on the Law of the Sea (UNCLOS).⁶ It balances the rights and interests of e.g. flag states, coastal states and port states. The division of seas and oceans into maritime zones, some of which must be claimed by coastal states in order to have legal effect, is particularly relevant as it has direct impact on the set up and potential regulations within MSP. Also of importance is the principle of freedom of navigation, guaranteed under UNCLOS, which is conditional upon rules and standards on maritime safety and protection of the marine environment being met.

At the EU level, a substantial body of environmental legislation exists that must be taken into account. The Marine Strategy Framework Directive (MSFD) (2008/56/EC)⁷ is to be highlighted, as it constitutes the environmen-

⁶ Adopted in 1982, entered into force in 1994.

⁷ 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). Available at http://ec.europa.eu/environment/water/marine/index_en.htm

tal pillar of the IMP⁸ and is of direct relevance for MSP in the EU. The Directive requires EU Member States to achieve good environmental status of their seas by 2020, to apply an ecosystem approach, and to ensure that pressure from human activities is compatible with good environmental status. Member States are further required to cooperate where they share a marine region or sub-region and use existing regional structures for coordination purposes, including with third countries. The MSFD does not directly regulate maritime activities, but their impact must be taken into account for the determination of good environmental status. In fact, the MSFD forms an important piece of environmental legislation that provides legitimacy for MSP processes not only at national but particularly at international level, i.e. for sea areas that are shared by several states.

Using MSP according to area and type of activity

MSP is a place-based process. Thus, an assessment of ongoing and predictable future activities in the maritime area that is considered for MSP implementation is essential at the beginning of any MSP process. Subsequent management decisions regarding the desired development and use of the area in question should be based on the results of such an assessment.

Sectors are used to define their own development objectives, which follow mainly a single-sector-related interest, and usually are not coordinated with objectives of other sectors. Attempting to accommodate all desired sectoral objectives within the limited capacity of a given ecosystem always leads to severe overload of the system. The ecosystem-based approach is the underpinning principle of MSP. Hence, any MSP process must be adapted to the particular, area-specific state and condition of the ecosystem. Ideally, criteria and indicators should be in place to measure cumulative effects of all activities in a given area. Sector- or project-based assessments, such as currently undertaken environmental impact assessments (EIA), should be overcome in favour of an integrated, region- or ecosystem-based impact assessment.

MSP operates within three dimensions, addressing activities (a) on the sea bed; (b) in the water column; and (c) on the surface at the same time. This allows for the multi-purpose use of marine space. However, the compatibility of different maritime uses and the “management need” of a particular maritime region might vary over time. This is especially relevant given the differing intensities of human activities at sea and the vulnerability of specific important habitats, for example spawning grounds, or resting areas for migrating species during certain periods

⁸ cf. Recital 3 of the Marine Strategy Framework Directive

of the year Time should therefore be taken into account as the fourth dimension in MSP.

Although a MSP regime should be implemented for the entire area that is under the jurisdiction of a given state (e.g. the state’s EEZ or territorial waters), a prescriptive maritime spatial plan may not need to cover the same area. For densely used or particularly vulnerable areas, a comprehensive maritime spatial plan should be developed that reflects the different dimensions of the marine ecosystem and uses tools, such as ocean zoning, to designate areas for maritime uses including rules for their enforcement. For areas with a lower density of use, the definition of general management principles might suffice. The decision to opt for a stricter or more flexible approach should be subject to a thorough assessment and evaluation process.

The paper of Olsen et.al. in this special issue tackles the principle of place-based management at different spatial scales. Norway is one of the leading European countries that has developed integrated MSP plans for its national waters. The paper is based on the experience gained during the development of these plans.

Defining objectives to guide MSP

MSP is a forward looking process. It should be used to manage both ongoing activities and guide future development in a given sea area. Current practice emphasizes that objectives have to be developed at different levels of detail. Objectives should be defined at a rather general strategic level as well as at a concrete, more specific level that is suitable for operationalisation, implementation and measurement. Although MSP is a neutral instrument seeking to integrate all maritime sectors in an equal manner, particular circumstances might influence the general starting point of objective setting (e.g. environmental objectives to protect vulnerable ecosystems or objectives to secure the development of a particular maritime sector due to political priorities). It is therefore of utmost importance to develop an overarching strategy or vision for a given sea area that is appropriate to guide the activities in this area. Objectives at all levels of detail should be derived from this overarching strategy. Generally, the defined objectives should be able to provide a reliable and sound framework for the management of maritime activities and should allow arbitration in the case of conflicting sectoral interests.

In its recent Communication “Maritime Spatial Planning in the EU—Achievements and Future Development”,⁹ the EC further specifies that objectives should be based on

⁹ Communication from the Commission “Maritime Spatial Planning in the EU—Achievements and Future Development” (COM (2010) 771 final of 17.12.2010. Available at http://ec.europa.eu/maritimeaffairs/spatial_planning_en.html#6

long-term perspectives and must be future-oriented. Planning objectives should take entire regional seas or sea basins into account, and strategic as well as operational objectives on different spatial scales (global, European, regional, national, local) should be seen as components of the same planning framework.¹⁰

The Integrated Ocean Management (IOM) process for the Eastern Scotian Shelf in Nova Scotia, Canada, is one of the furthest developed processes of this kind in Canada. Significant effort has been made to assess the human activities in this area and shape sound objectives that are able to guide the future development of this maritime area. The paper of Hall et.al. illustrates the current and future directions in Eastern Canada.

Developing MSP in a transparent manner

MSP is a participatory approach that seeks to involve all relevant parties and stakeholders as early as possible. The participatory development of a maritime spatial plan is the subsequent step that follows on the identification of an overarching development strategy for a given sea area and on the definition of measurable objectives within a MSP process. Ultimately, it is an interim step and not the final stage. A maritime spatial plan is, however, an important tool for MSP implementation.

In order to involve stakeholders appropriately throughout an entire MSP process, this must be set up in a transparent manner. Its different steps should be easy to follow and understand, not only for the maritime sectors affected by a MSP regime, but also for the general public. All documents and procedures of a MSP process should be easily accessible and written in a common language. Broad acceptance and buy in by all involved stakeholders is essential for the success of any MSP approach. A transparent set up will allow full information to all parties concerned at every step of the process and therefore improve predictability and increase acceptance. Furthermore, it is important to adequately address expectations concerning the decision-making process and to communicate and justify reasons for decisions taken within the process to all relevant and concerned stakeholders.¹¹

Governance structures are complex and have usually evolved over many decades. In order to be able to establish a transparent process that cuts across existing governance structures and seeks to integrate them it is important to understand why similar processes may or may not have

worked out in the past. The paper on governance baselines by Olsen et.al. in this special issue discusses the potential benefits of baseline information that may help to shape any MSP process in a successful way.

Stakeholder participation

In order to achieve broad acceptance, ownership and support for implementation, it is equally important to involve all relevant stakeholders, including coastal regions, at the earliest possible stage in the planning process. Stakeholder involvement against this background means not only the involvement of maritime sectors or representatives of certain maritime activities. It includes as well the general public, Non-Governmental Organisations (NGOs), and anybody who might be concerned or have an interest in the development of a given sea region. Stakeholders are an important source of knowledge that can significantly raise the quality of MSP. Local and regional knowledge is important to incorporate into a MSP process and might be only available via people that live for generations in the same area. A broad ownership by stakeholders can be the key factor for success of the entire approach.

It is considered important to demarcate roles and responsibilities and to encourage interaction between stakeholder groups, rather than just between policy-makers and stakeholders. A broad stakeholder participation lengthens the whole process. It is therefore essential to design a MSP process in a way that allows enough time and that plans ahead for several stakeholder involvement rounds. Depending on the complexity of the challenges that have to be tackled during an MSP process, it might be beneficial to plan for multiple stakeholder involvement stages, allowing for an in-depth exchange of opinions and discussion of the issues involved. It is widely agreed that the additional time taken for a thorough stakeholder involvement will be recouped later on in the implementation phase, through an increased sense of ownership resulting from continuous involvement.¹²

Coordination within member states—simplifying decision processes

MSP provides the appropriate framework to simplify decision making processes and speed up licensing and permit procedures, for the benefit of maritime users and maritime investment alike. However, in order to use MSP in an ideal, crosscutting manner and up to its full capacity, an appropriate governance structure for its implementation

¹⁰ cf. Communication from the Commission “Maritime Spatial Planning in the EU—Achievements and Future Development” (COM (2010) 771 final of 17.12.2010. page 4

¹¹ cf. Communication from the Commission “Maritime Spatial Planning in the EU—Achievements and Future Development” (COM (2010) 771 final of 17.12.2010. page 4

¹² cf. Communication from the Commission “Maritime Spatial Planning in the EU—Achievements and Future Development” (COM (2010) 771 final of 17.12.2010. page 4

is needed.¹³ Currently, the expertise to deal with the multiple challenges of maritime affairs, and also the powers to tackle them, are spread between numerous public and private players at different levels of governance. A responsible administrative body should be identified that is able to steer the entire MSP process and ensure the involvement of all relevant services and sectors related to maritime affairs. The coordinating function does not necessarily require the creation of a new authority but can be realised within established governance structures. It is important to take both the horizontal coordination (between sectors) and vertical coordination (between different governance levels) into account. The administrative body thus has to be equipped with suitable long-term resources.

A strengthened internal coordination of maritime affairs should benefit the development of the so-called “one-stop-shop” approach. This will lead to simplified decision processes, streamlined application procedures and a better overview of the ongoing and foreseen maritime uses in a given sea area. Cumulative effects of human activities at sea can easier be taken into account.

Ensuring the legal effect of national MSP

Although MSP appears to be somewhat similar to land-use planning—it seeks to allocate limited space in a rational and sustainable manner and arbitrates between competing sectoral interests—it is different from terrestrial planning. This results mainly from (a) the very complex and interrelated marine ecosystems, shared by numerous highly migratory species, (b) the different set of laws, rules and regulatory processes applicable for MSP (terrestrial planning is largely concerned with the regulation of privately owned land), and (c) the particular role time plays regarding the compatibility of uses. The same sea area can host multiple uses provided they are compatible. However, the vulnerability of marine ecosystem and thus the basis for compatibility of uses vary over time, which makes time-related management of human activities at sea highly important.

MSP has to have regulatory power and be legally binding if it is to be effective. This might also raise the issue of the appropriate administrative level/framework for MSP as the legal and institutional frameworks for terrestrial planning are not necessarily appropriate for the implementation of MSP. Current practice in EU Member States suggests that several tools of a different nature can be used in a legally binding maritime spatial plan. Such tools follow the tradition of land-use planning and can be e.g. planning targets which are legally binding for sectorial planning at project level (like for wind farms) or planning principles

which are guidelines that need to be particularly considered in the decision process.

It is important to recognize that both legally binding tools and tools of a more indicative nature can be used—and combined with each other—to implement a maritime spatial plan. What is essential, however, is to clarify who is to be bound by the plan (i.e. economic actors, public authorities, general public) and who is to held accountable for its implementation and enforcement.

One of the tools that can be used to implement a maritime spatial plan is ocean zoning. Experience with the use of zoning as a fundamental component of MSP has been gained for the management of the Great Barrier Reef Marine Park, in Australia, for more than two decades. Zoning is used aside other management measures that include even non-spatial measures such as education or industry partnership. The paper of Kenchington et al. discusses some common misunderstandings of zoning and identifies lessons to be learned that may be relevant for others, addressing management and use of marine ecosystems and natural resources.

Cross-border cooperation and consultation

Cooperation across borders is essential, particularly at EU level, as all European seas and oceans are shared by several Member States and third countries. Effective cross-border MSP requires the development of a joint vision based on exploration of common interests (e.g. offshore electricity grid, fisheries, shipping).¹⁴ The world’s seas and oceans are interlinked, and action in one sea or policy area that impact the sea may have positive or negative, intended or unintended effects on other sea or policy areas. As stated before, the ecosystem-based approach is the overarching principle of MSP. Thus, it is of utmost importance to ensure coherence of development and planning within a given marine ecosystem—especially if it stretches beyond administrative borders—and even between different interlinked ecosystems.

Cross-border cooperation in MSP will also lead to the development of common standards and processes. This in turn will improve communication and exchange of knowledge and information between different states and raise the overall quality of MSP.

H. Backer addresses in his paper the particular circumstances of regional transboundary MSP in the Baltic Sea. Here, as elsewhere, a regional MSP process would require increased dialogue between sectors and the development of joint information gathering and management of both

¹³ cf. European Commission, COM(2008b) 395 final, 2008

¹⁴ Communication from the Commission “Maritime Spatial Planning in the EU—Achievements and Future Development” (COM (2010) 771 final of 17.12.2010. page 5

environmental and socio-economic data. The paper elaborates on how this could be achieved.

Incorporating monitoring and evaluation in the MSP process

MSP operates in an environment exposed to constant change. It is based on data and information likely to vary over time. The planning process must be flexible enough to react to such changes and allow plans to be revised in due course. To meet these two requirements, a transparent regular monitoring and evaluation mechanism should be part of MSP.

It is important to prepare for the necessary steps and arrangements of a sound monitoring and evaluation process right at the starting point of MSP. The fact that natural marine environmental processes and different uses of marine space have different spatial/temporal scales should be fully built into the monitoring and evaluation systems.¹⁵

Equally important is the allocation of appropriate funds and resources for monitoring and evaluation. Current practice shows that high efforts are made for the first steps of MSP (e.g. objective setting, data collection, or development of a maritime spatial plan) whereas the preparation for monitoring and evaluation remains half hearted or is not foreseen at all. MSP has to be adaptive and flexible in order to utilise its full potential as management instrument. This can only be achieved by a regular evaluation of the set MSP objectives and a monitoring of the process's performance.

The paper of Douvere et.al. discusses the different steps that must be involved in an adaptive approach to MSP: alternative ways need to be explored to meet management objectives; a monitoring and evaluation plan should be designed; ecological and socio-economic objectives of the spatial management plan must be clearly stated up front. The paper addresses the importance of monitoring and evaluation for adaptive MSP.

Achieving coherence between terrestrial and maritime spatial planning - relation with ICZM

Achieving consistency between terrestrial planning (including coastal zones) and maritime planning systems is a challenge. Drainage areas or land-based impacts from activities such as agriculture and urban growth are relevant in the context of MSP. Equally, offshore infrastructure like wind farms or other developments like the installation of pipelines and cables need a connection on land. This is why terrestrial and maritime spatial planning should be coherent.

¹⁵ Communication from the Commission "Maritime Spatial Planning in the EU—Achievements and Future Development" (COM (2010) 771 final of 17.12.2010. page 5

Coastal zones are the "hinge" between maritime and terrestrial development. Integrated Coastal Zone Management (ICZM) seeks to apply a cross-sectoral, trans-disciplinary approach to manage the transitional areas between the land and the sea in a sustainable manner. While in general ICZM covers only a limited stretch of water close to the shoreline, and does not typically address maritime activities offshore, MSP is specifically concerned with planning and management of maritime activities.

The challenges of integrating terrestrial and maritime spatial planning result from their different legal and institutional frameworks, relevant stakeholders, involved parties and governmental authorities that have responsibility over either of the two. The respective services should cooperate to ensure coherence. Procedures should be established to ensure the exchange of information about ongoing and foreseen developments that are relevant to both maritime and terrestrial planning. This might also involve the organisation of regular coordination meetings and the development of structures for stakeholder involvement that cover both land-side and maritime stakeholders.

H.D. Smith et.al. make an attempt to solve the challenge of how to integrate the different planning systems. The integration of spatial planning systems is considered, followed by evaluation of relationships between spatial planning, and the wider field of environmental management. The paper identifies the significant factors which must be considered in the integration of marine and terrestrial planning systems over the coming decades.

A strong data and knowledge base

MSP has to be based on sound information and scientific knowledge. Planning needs to evolve with knowledge (adaptive management). The Commission has started several scientific and data gathering tools that will assist MSP in this process. These include a European Marine Observation and Data Network (EMODNET),¹⁶ an integrated database for maritime socio-economic statistics (currently under development by ESTAT), the European Atlas of the Seas¹⁷ and the Global Monitoring for Environment and Security initiative.

However, it has to be acknowledged that there is no ideal data and perfect information. MSP should thus be built up on the best available data and knowledge. Lagging information should not be used as an excuse to delay the preparations for and the start of implementing MSP. A foreseen monitoring and evaluation process creates the appropriate framework to

¹⁶ cf. Commission Staff Working Document "Building a European marine knowledge infrastructure: Roadmap for a European Marine Observation and Data Network" SEC(2009) 499 final of 7.4.2009. Available at http://ec.europa.eu/maritimeaffairs/emodnet_en.html

¹⁷ Available at http://ec.europa.eu/maritimeaffairs/atlas/index_en.htm

incorporate new knowledge, information and available data. The monitoring and evaluation of an MSP process itself will provide new information and knowledge (e.g. have the set objectives been achieved? Where the set priorities the right ones? Does the planning process appear to be sound and transparent?) which will increase the quality level of MSP and thus provide for increasingly informed maritime spatial planning over time.

Conclusion and outlook

The continuous proliferation of economic activities in the European Seas is leading to an ever increasing competition between sectoral interests—such as shipping and maritime transport, settlements and ports development, offshore energy, fisheries and aquaculture, recreation and tourism—and with environmental conservation concerns. The effects of climate change, in particular the expected sea level rise, higher temperatures and acidification, and frequency of extreme weather events, are likely to induce changes in the ecosystems, and the maritime activities, of many marine basins.

MSP can play an important role in the mitigation of these effects, by promoting a sustainable and efficient use of marine space and in a cost-efficient adaptation to the impact of changes not only offshore but in coastal waters and pelagic regions as well.

Experience in implementing MSP currently remains limited in Europe and around the world, perhaps with the sole exception of Australia. Some European states are more advanced in planning their coastal and offshore waters, like the Netherlands, Belgium, Germany or Norway, while others have developed new legislation to advance MSP (e.g. the United Kingdom, Sweden and France). Nevertheless, numerous challenging issues for a sound implementation of MSP remain and are very similar at the international and global scale. Some of the most important questions are listed below:

How can socio-economic issues be best incorporated in MSP?

How can diverging sectoral interests best be integrated?

What are the economic benefits of MSP and what data can be used to measure them?

How can cumulative effects of human activities at sea be measured, particularly if several nations share the same sea basin?

How can different intensities of human interaction with the sea be measured?

What is the way forward to take the temporal dimension into account for adaptive MSP?

What is the best way to involve stakeholders and interest groups across different sectors and administrative boundaries?

How can coherence between terrestrial planning and MSP be achieved?

How can data that have been collected according to different standards be harmonized?

In order to answer at least some of these questions, the EC has launched several projects and studies as a follow up to the Roadmap and the discussion that got started in 2009. This includes two preparatory actions in the Baltic Sea and the North Sea/North East Atlantic that seek to test MSP, including the key principles set out in the Roadmap, in a cross-border set up, i.e. in a sea area shared by several Member States. Furthermore, a study has been finalized that aims to identify economic benefits of MSP for different maritime sectors.¹⁸ The scope of this study does not include the ecosystem benefits of MSP which might be tackled by a later initiative.

The reason why the EC became so active in supporting the development of MSP can be mainly derived from the need of enhanced cross-border cooperation. This could be seen as a specific European issue, given the relatively small seas (compared for example with United States or Canadian waters) that are shared by numerous countries. But seeing it this way would be too short sighted. Cross-border cooperation for the sake of maritime management becomes increasingly relevant as migratory resources such as fish stocks do not respect national borders and activities on one side of a border have almost certainly effects on activities on the other side. In the marine environment, administrative or jurisdictional borderlines lose their dividing character. A common approach to managing marine space on each side of the border would thus enable efficient and smooth application of MSP, favouring the development of maritime activities and the protection of the marine environment based on a common framework and similar legislative implications.

MSP is seen as a process that can enhance sustainable growth as it provides legal certainty, predictability and transparency, thus reducing costs for investors and operators, in particular those operating in more than one country. These elements are instrumental in promoting investments and creating growth and jobs. In times of changing framework conditions and economic challenges it might offer a way to smart ocean management, aiding investment and development that is in line with healthy ecosystems.

MSP as an integrative, cross-cutting tool that is gaining momentum, not only in Europe but also in Canada, the United States of America and Japan. We hope that this special issue helps to enlighten some aspects of MSP, to understand the capacity of the instrument but, also its limits, and to carry the discussion about MSP implementation further.

¹⁸ Study on the economic effects of Maritime Spatial Planning. Final report and report on case studies available at http://ec.europa.eu/maritimeaffairs/study_msp_en.html

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