



MORO Forschung

Benefits of considering spatial interests in sectoral policies using the example of the Integrated Maritime Policy

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Summary

Better integration of spatial interests in sectoral policies represents a significant requirement for the national ministers responsible for spatial planning and territorial development in the context of the Territorial Agenda 2020. This requirement is based on the new EU objective of territorial integrity and territorial cohesion as anchored in the Lisbon Treaty. Considering spatial diversity in the planning process – i.e. different regional characteristics – increases efficiency and synergies and, as a result, supports ambitious growth objectives of the European Union.

Studies have shown that spatial aspects in sectoral policies are currently taken into consideration very differently. Some sectoral policies, such as regional and transport policies, are characterised by a strong spatially differentiated approach, while other sectoral policies, such as research and fishing policies, only consider spatial aspects to a very limited extent. The research project “The territorial dimension of future EU cohesion policy”, carried out on behalf of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR), highlighted that a lack of knowledge of the benefits of a spatially differentiated approach amongst politicians is jointly responsible for the limited consideration of spatial aspects in individual sectoral policies.

The pilot study aimed to investigate how sectoral policies can benefit from the consideration of spatial objectives and thereby be implemented even more effectively. The study should develop arguments which highlight the benefits of integrating spatial aspects in sectoral planning. This should be analysed using the example of the Integrated Maritime Policy, a comparatively “young” multi-spatial and multi-sectoral area of policy. With respect to the Integrated Maritime Policy, the research project included the specific question of whether, and if so, how maritime policy fully utilises its integration potential and how it can be even more effectively implemented by considering spatial relationships.

Primarily the European and German Integrated Maritime Policies were analysed during the course of the pilot study. In addition, the transnational maritime policy approaches within the framework of

the INTERREG III B and IV B projects in the North Sea Region and the Baltic Sea Region were incorporated. Stakeholders in maritime policy were also included in the development of the study by participating in two events.

The pilot study highlighted the fact that the maritime space finds itself caught in a conflict between protection and usage, articulated through sectoral policy activities. In this regard, sectoral policies have a dual spatial impact. On the one hand, areas are directly affected through the intention to use or protect the maritime space. There are overlapping demands regarding the spatial use, mostly in the form of competition for space. However, synergies can also be achieved between the different interests through multiple usages. On the other hand, sectoral policies also influence the maritime space indirectly. They affect the value-creation chain and regional development and set priorities.

The pilot study illustrated that maritime policy, with its integrated approach (also on a regional level), has led to sectoral policies paying more attention to spatial interests and interactions with other sectoral policies. Maritime interests as a whole were strengthened through the discussions about the importance of the ocean for the environment and economy of Europe and Germany carried out as part of the Integrated Maritime Policy. In the opinion of the key players of maritime policy involved in the study, the contribution of the Integrated Maritime Policy to the development of the regional coastal areas and coastal waters can be seen as positive, overall.

The introduction of maritime spatial planning as an important element of maritime policy in Germany had a significant impact on the usages in the coastal waters and the exclusive economic zone (EEZ) in the North Sea and Baltic Sea. Maritime spatial planning in the German EEZ for the first time provided an overview of all maritime usages. This led to a new transparency of usages in the EEZ. In the context of spatial planning for the EEZ in the North Sea and Baltic Sea, notably the conflict between players within the wind energy sector (being supported by climate policies) and traditional shipping players could be solved by specifying priority zones for wind parks and for primary shipping routes.

By integrating different sectoral policies, the Integrated Maritime Policy follows a participatory approach which, from an overall perspective, strengthens democratic values in general and in context of the specific implementation of policies.

When investigating the benefits of considering spatial interests in the Integrated Maritime Policy, the following primary benefits could be identified from the literature analysis and from practical examples:

Main Benefits

Knowledge generation - Considering spatial interests in the Integrated Maritime Policy enables the expansion of knowledge related to spatial usage interests, interactions and development dynamics. By considering the spatial interests of the various maritime key players, social, ecological and economic interests are disclosed. A more solid understanding of spatial relationships and interactions enables decisions and resolutions affecting maritime space to be made on a broader factual basis.

Coordinating and balancing interests - Early consideration and management of the spatial needs of the various subareas of marine policy enables an improved identification, evaluation and balanced judgement of the objectives of the various maritime key players with regard to the diverse usage and protection demands on maritime space. This does not only lead to a reduction in conflicting uses, but also to the creation of synergies between different uses and activities. Coherence between specialist planning at different spatial levels can be facilitated by coordinating and balancing interests, which supports the place-based approach.

Legal and planning reliability - The Integrated Maritime Policy, particularly within the framework of the formal instrument of maritime spatial planning, offers the benefit of a high degree of legal and planning reliability from the explicit consideration of spatial interests. Spatial provisions in maritime spatial plans (usually) create both long-term legal and planning reliability due to the formal regulatory nature of these spatial plans. As such, the procedure for considering the spatial interests for maritime spatial plans is transparently regulated.

Cost reduction through efficiency - The Integrated Maritime Policy - and maritime spatial planning as part of the Integrated Maritime Policy - enable to coordinate the development of various maritime activities with one another even more effectively and economically. It also improves the coordination between authorities in the individual countries. In particular, maritime spatial planning contributes to the transparency of decision-making processes and leads to simplified certification and approvals procedures. The administrative management as a whole is therefore improved and the administrative time required and workload are reduced for maritime users and planners.

Optimisation of sector interests - Through the integrated approach of maritime policy and its subareas as well as the consideration of spatial interests, the assertion of individual sector interests in consultation with the interests of other sectors is strengthened. Participatory decision-making processes, which do not only involve the various maritime policy sectors, but also maritime key players from different (hierarchical) (cross-sectoral and multi-level) levels, are essential here.

Need for action

In the pilot study, a plan of action required for an improved consideration of spatial interests in maritime policy was formulated. For example, sector policies were to record and publish the spatial demands of the planned use and its spatial impact from the very beginning when developing strategies. This procedural step may help to identify conflict potential between users of the maritime space even earlier, and in the framework of “better governance” and participatory processes, the search for alternative solutions can be discussed, coordinated and resolved.

The developments on the ocean are decisively influenced by developments on land. There is potential for the further development of spatial and sectoral planning by making further efforts to better integrate spatial planning on land and spatial planning on the ocean. The time perspective must be taken into special consideration in this regard. Dynamics and interactions on the ocean or between land and ocean can occur at different times.

In particular, the ocean as a system does not adhere to administrative boundaries. Therefore, there is also a need for transnational coordination processes as well as formal and/or informal cooperation structures when dealing with projects and plans with a spatial impact. From the German coastal federal states' perspective, there will also be a need in future to strive for an even stronger harmonisation of transnational cooperation.

In the context of spatial planning for the exclusive economic zone, spatial interests and potential competition between the offshore wind energy sector and the fishing sector need to be clarified. Knowledge generation on cumulative effects and interactions might also help to uncover synergies.

Carrying out strategic spatial impact assessments might encourage multiple usages of the oceans. At present, the knowledge about successful conflict resolutions between maritime usages mostly is not yet sufficiently recorded. The existing but "hidden" knowledge could be analysed in studies about best-practice solutions and made transparent.

Although there is currently no direct action required, there is a perspective for the future development of maritime spatial planning. This could be in the form of mandatory socio-economic and socio-cultural analyses for projects and plans with a spatial impact. In the case of the socio-economic analysis, the key focus is on the regional effects of projects or planning on the economy and the population.

Introduction and background

Better integration of spatial interests in sectoral policies is a significant requirement for the national EU ministers to promote an increased cooperation of the member states in the context of the Territorial Agenda 2020. This requirement is based on the new EU objective of territorial cohesion as anchored in the Lisbon Treaty. Considering spatial diversity in the planning process – i.e. different regional characteristics – should lead to increased efficiency and synergies and, as a result, support the ambitious growth objectives of the European Union.

Studies have shown that spatial aspects in sectoral policies are currently taken into consideration very differently. Some sectoral policies are characterised by a strong spatially differentiated approach, while other sectoral policies only consider spatial aspects to a limited extent. This investigation aimed to analyse how sectoral policies might benefit from the consideration of spatial objectives and thereby be implemented even more effectively. In this publication, arguments will be summarised which highlight the benefits of integrating spatial aspects in sectoral planning.

This publication is based on the results of a pilot study, which looked at the benefits of considering spatial interests in sectoral policies using the integrated maritime policy as an example carried out on behalf of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) and the Federal Ministry of Transport and Digital Infrastructure (BMVI). The central methodical approach of the pilot study was an extensive qualitative analysis of political documents relating to maritime and spatial policies along with relevant specialist literature. To supplement the qualitative document analysis, two specialist workshops were held with key players from the fields of maritime policy and maritime spatial planning. In addition, interviews were conducted with individual experts in maritime policy and maritime spatial planning in Germany, the content of which primarily focused on the instruments and benefits of implementing the Integrated Maritime Policy particularly at the level of the northern German federal states.

The example of the Integrated Maritime Policy was used to analyse how spatial effects and interrelationships as

well as the benefits of integrating spatial aspects into sectoral planning are taken into consideration. Maritime policy was chosen as an analysis example because it is a cross-sectoral policy, i.e. it is configured in a way that it incorporates maritime-related sectoral policies in an integrative manner. This enables spatial effects and interrelationships to be studied and the benefits of integrating spatial aspects to be demonstrated on the basis of the Integrated Maritime Policy.

Different spatial dimensions were examined in the course of the investigation in line with the character of the Integrated Maritime Policy that, as far as administration is concerned, spans various spatial levels: the European, the national and the regional level (federal states, if necessary other political subdivisions). On the one hand, the approaches to an Integrated Maritime Policy at EU level are of interest, while, on the other hand, the Integrated Maritime Policy is translated into national policy. It is against this backdrop that the implementation of the Integrated Maritime Policy in Germany and especially at the regional level of the northern German states is of interest. In the context of this investigation, particular importance is attached to maritime spatial planning. Maritime spatial planning is a central instrument of the Integrated Maritime Policy that enables authorities and stakeholders to pursue a coordinated and integrated approach.

In relation to the EU cohesion policy, the 2009 report by Dr. Fabrizio Barca pointed out the significance of what is referred to as the „place-based approach“, thereby prompting discussions about the cohesion policy and this place-based approach. The place-based approach describes a long-term strategy for tapping into unused potentials and for reducing long-term social disadvantages in certain places through external intervention and the employment of a multi-level governance in which, above all, specific local knowledge and local players become involved. This focus expressly takes the territorial interrelationships and the involvement of regional players and regional and local political levels into account. This place-based approach and its implementation within the EU has since then formed part of various studies. For example, during the Polish Council Presidency in 2011, a survey

about the extent to which the member states have already integrated the place-based approach into their public measures at national, regional and local levels was conducted among the member states. Similarly, this study makes a further contribution towards investigating the application of the place-based approach, paying particular attention to the Integrated Maritime Policy.

Looked at from a spatial perspective, it is first of all apparent that the Integrated Maritime Policy and maritime spatial planning devote themselves to maritime space as one of their elements.

At first glance, the ocean appears to be an expanse of great openness and breadth, the surface of which for the most part gives an impression of being free and unspoilt. However, this first impression is deceptive because the ocean is increasingly the place where various utilisation and protection claims on the maritime space compete. At the same time and from a planning perspective, the ocean as a space displays a number of special characteristics.

Multi-dimensionality of the maritime space - The ocean is made up of several spatial levels such as the air space above the ocean, the ocean surface, the water column below, the ocean bed and the subsoil below the ocean bed. There are various utilisation and protection claims on these spatial levels of the ocean.

The location of non-ubiquitous, localised resources - The ocean is characterised by a range of variations in terms of position relations and geographical factors such as topography and geomorphology, climate and ecosystem. The maritime space does not form a homogeneous spatial unit, rather is it characterised by the presence of localised resources. They, for example, include the raw materials sand and gravel, areas of importance for ecosystem services, but also areas that can be used for tourism as well as for generating renewable energy (wind, waves, tidal).

A high proportion of mobile structures - Besides the presence of permanent and fixed structures, the ocean is characterised by a high proportion of mobile, „flowing“ structures (such as shipping, fish). Compared with

planning on land, which is more geared towards fixed structures, planning on the ocean must therefore to a greater extent reconcile fixed and permanent structures with mobile ones.

Dynamically coherent system - The ocean is a coherent system in which minor local changes can have major effects on the entire system. At the same time, many of these interrelationships, causes and interactions are unknown.

Dynamic interaction between developments on land and on the ocean - Usage density in the ocean is greatly influenced by developments on land: population density correlates to a large extent with the intensity of use of the ocean. The ocean environment and the ecosystem on land also form a system in which they dynamically influence each other. This is particularly apparent with regard to the water cycle.

Large-scale planning - With regard to planning, on the open ocean there are only a few spatial planning reference points and reference variables such as settlement areas. The planned uses must therefore be located with the help of coordinates. In addition, uses at sea, compared with uses on land, are very often performed and calculated in larger areas.

Variety of legal frameworks - The ocean is governed by a wide variety of regulations and framework conditions from the international to the regional level. On the international level, the ocean is, for example, governed by the United Nations Convention on the Law of the Sea that regulates maritime law, or in European waters on a European level, by the directive of the European Parliament and of the Council establishing a framework for maritime spatial planning. There are also regulations and framework conditions on both at national and regional level. These are, for example, the national spatial plans for the exclusive economic zone in the North Sea and the Baltic Sea in Germany, federal state spatial planning or integrated coastal zone management in the northern German federal states (see Figure 1).

The purposes of the Integrated Maritime Policy

The purpose of the Integrated Maritime Policy is to create a coherent policy framework in which the interests of individual subareas and sectoral policies are coordinated. This requires integrative instruments for shaping policy. Given that the maritime space is a spatially multi-dimensional and dynamically coherent system, it is necessary to look at interventions in this system with regard to their effects on the system as a whole. Due to the multidimensional nature of the physical (maritime) space, the interactions and interrelationships must be examined on the following levels:

- Vertical systemic interrelationships between the subsoil below the ocean bed, the ocean bed, the water column, the surface and the airspace
- Horizontally systemic interrelationships between various marine areas and between conditions on land and in the ocean
- Systemic interrelationships between various spatial scale (local, regional, national, transnational, global) levels
- Development dynamics depending on time

In connection with an integrative political approach, it is necessary to consider human interventions in the maritime space as a whole and the interrelationships within the framework of decision-making processes. They require a political framework of horizontal and

cross-sector, policy-shaping instruments and, in view of the multi-layered political levels (see the multi-level system of the EU), the development of forums for reaching agreement. This represents a challenge, because the predominant multi-layered political structures are primarily sectoral in nature.

Maritime policy is shaped on all political levels. The following Figure 1 shows that issues relevant to the ocean are steered within both an international context and in the European, national and regional context (for example in Germany). They are interrelated.

The Integrated Maritime Policy is still a comparatively recent policy and as such represents a cross-sector coordination policy and not an original sectoral policy. It is characterised by supra-spatial and cross-sector approaches and its aim is to steer the various sectoral policies that relate to the ocean in an integrative way. Sectoral policies are aimed at influencing and shaping special fields and at pushing demands and targets for shaping and regulating human communities. The maritime-related sectoral policies take the interests and objectives of the various (maritime) players with regard to their needs in terms of using and protecting the maritime space into account. These usage and protection needs are spatially relevant and impact space to varying degrees.

Considering of sea-related issues at different political levels

Global level	European level	Federal level	Regional level
International law and international agreements, such as <ul style="list-style-type: none"> • UNCLOS - United Nations Convention on the Law of the Sea • Protocol to the London Convention • Marine policy treaties • International Whaling Commission • Global fisheries agreements 	Integrated Maritime Policy of the EU <ul style="list-style-type: none"> • Maritime spatial planning • Integrated maritime surveillance • Marine data and knowledge • Sea basin strategies • Blue growth Macro-regional strategies INTERREG programmms Sectoral policies	Spatial planning <ul style="list-style-type: none"> • Spatial plan for the EEZ in the North Sea and the Baltic Sea Integrated maritime policy <ul style="list-style-type: none"> • Development Plan - Strategy for an integrated German Maritime Policy • Federal Government Coordinator for the Maritime Industry Sectoral policies and plans <ul style="list-style-type: none"> • Spatial offshore grid plan National ICZM strategy	Federal state planning Regional spatial planning concepts / programme Maritime action plans Sea-relevant initiatives ICZM Sectoral policies and planning

Figure 1: The political levels of how maritime policy is shaped (Source: own research)

Sectoral policies, such as the economic, energy, research and environmental policy, are differently organised in the European Union member states, both thematically and administratively. This also applies to the administrative structure of federal and federal state ministries.

The maritime space is caught between diverse objects of protection and uses that are articulated within the context of sectoral policy-related negotiation. Sectoral policies have a dual spatial impact. On the one hand, projects intending to use or protect the maritime space directly affect areas. These area claims often overlap and express themselves in the form of competitions for space. However, synergies between the various interests can be created by multiple usages. On the other hand, sectoral policies also influence the maritime space indirectly

by affecting the value-creation chain and regional development and by setting priorities. For example, the target of reducing greenhouse gases does not represent a direct claim. Nevertheless, projects associated with this target express themselves in a manner that has a great spatial impact, for example in the context of prioritising offshore wind energy.

In the following, the term „subareas of maritime policy“ will be used owing to the various responsibilities and organisation of the sectoral policies at different spatial and political levels that relate to the ocean. Thematically, the definition of the subareas of maritime policy is orientated towards the diverse uses and objects of protection of the maritime space. Figure 2 gives an overview of the central subareas of the Integrated Maritime Policy.

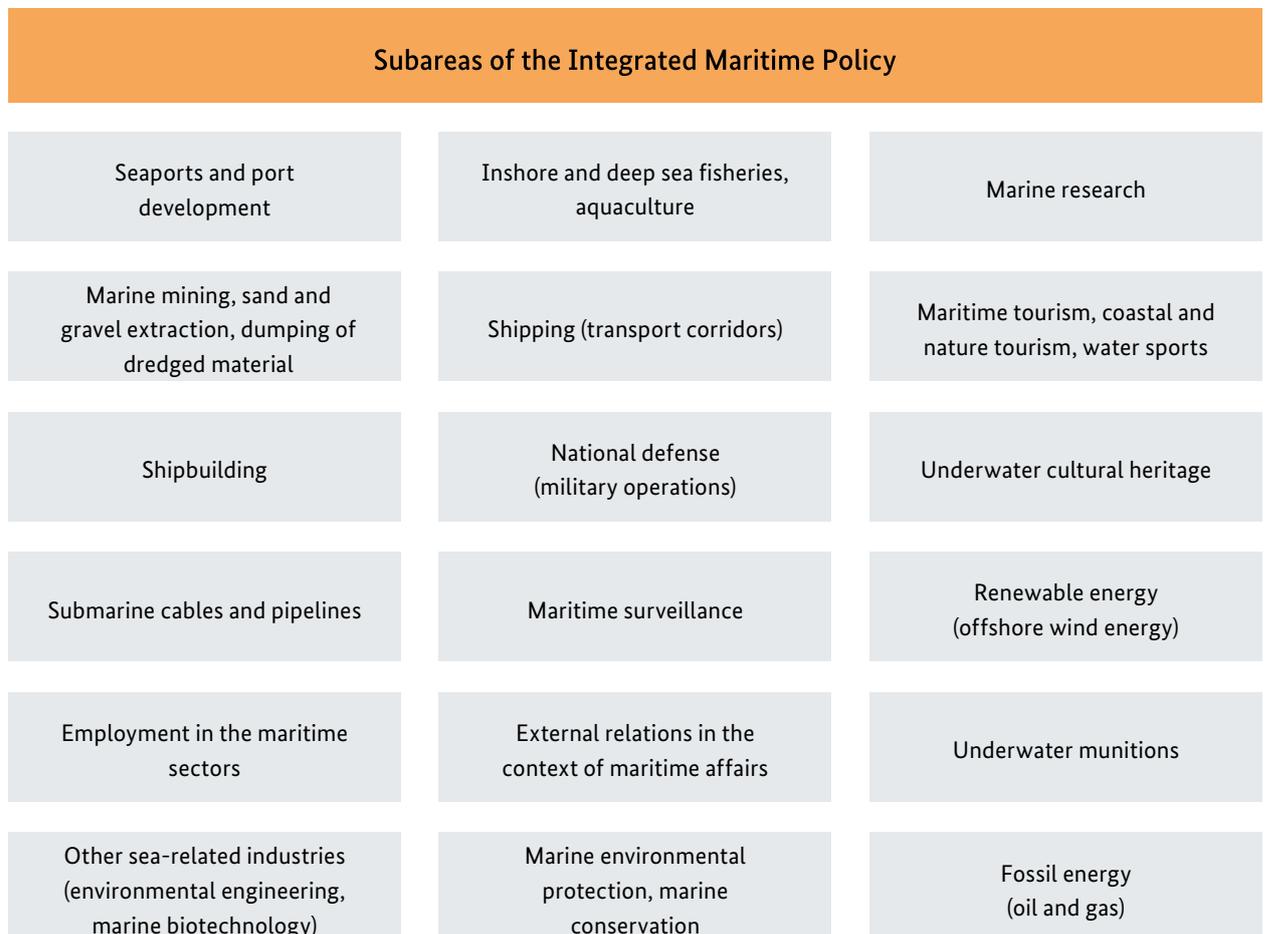


Figure 2: The subareas of the Integrated Maritime Policy (Source: own research)

The development of the Integrated Maritime Policy at the European level

Europe is surrounded by four seas and oceans, in the immediate proximity of which approximately half the population of the European Union (EU) lives. Around 70,000 km of coastline surround the continent, which handles the greater part of its trade via maritime routes. The maritime space is of great socio-economic and ecological importance to Europe and its member states. The European maritime space is used for diverse purposes and is caught between different conflicting interests. In recent decades, the conflicts between the sector interests have greatly intensified against the backdrop of a continuous increase in the use of European seas and oceans.

By the mid-2000s, individual regulations had been drawn up in the EU for the various maritime-related areas such as fisheries and aquaculture, energy production, maritime transport, the environment, tourism, research, security and monitoring, and also spatial planning. Since some parts of these regulations were contradictory and other parts of them pursued common goals, and given that the state of the oceans continued to decline, it became necessary to develop an integrative approach and to coordinate the various sectoral policies with respect to the maritime space. The observation of the European Commission „that all questions relating to the oceans and seas are interconnected, [so that] maritime-related measures must be developed in a coordinated way“ (European Commission, 2007) is essential in this context. This finding forms the basis of the introduction brought forward by the European Union of an integrated EU maritime policy in October 2007 with the presentation of the so-called „Blue Book“ – the Commission’s proposal for Integrated Maritime Policy (IMP) – and the accompanying „action plan“.

In December 2007, the European Council welcomed the „Blue Book“ proposed by the Commission on the IMP and the accompanying action plan. Since then, the European Union’s Integrated Maritime Policy has strived for coordination of the sectoral policies and the development of cross-sector policy instruments, and has called on the member states to develop national integrated maritime policies on the basis of the aims and actions specified in the action plan. The creation of „optimum conditions for a sustainable use of the oceans and seas“

and „simultaneous growth in the maritime economy and in the coastal regions“ is formulated as the primary aim of the European Integrated Maritime Policy. The „Blue Book“ also explains the horizontal planning instruments with which the aims of the Integrated Maritime Policy should be achieved:

- Maritime surveillance
- Maritime spatial planning and integrated coastal zone management (ICZM)
- European Marine Observation and Data Network (EMODNET)

This was followed in subsequent years by various notifications and reports from the European institutions on the Integrated Maritime Policy. The process of implementing the Integrated Maritime Policy at the European and national level has been significantly advanced by the large-scale participation of stakeholders and supported by the experience gained in cross-border and transnational INTERREG projects.

In 2008, as part of the regular legislation programme, the European institutions adopted the „Marine Strategy Framework Directive“ (MSFD) that pursues a holistic, sustainable and integrative approach to the protection of the marine environment. The Directive, which is also regarded as an environmental pillar of the Integrated Maritime Policy, was promoted by the European Commission’s Directorate-General for the Environment and strives to achieve a good marine environment and community status.

Also since 2008, the European Maritime Day has been held every year in all European countries. The European Maritime Day was brought into being by the President of the European Commission, the European Parliament and the Council of the European Union in order to increase the profile of the maritime economy in Europe and to support a clear and coherent approach towards maritime policy and maritime affairs within the European Union.

The central event is the European Maritime Day conference that is held every year in a different member state. At this conference, representatives from the business and scientific sectors come together with

political decision-makers to discuss, to debate and to exchange experiences and solutions.

In 2011, the European Parliament and the European Council approved the proposal for a „regulation to create a programme supporting the further development of the Integrated Maritime Policy“ put forward by the Commission. Under this programme, a total of 40 million euros was available for the Integrated Maritime Policy for the period 2011 to 2013. These funds, among other things, supported the development of cross-sector instruments such as maritime spatial planning, the common information-sharing environment and the working-out and implementation of regional strategies for sea basins.

The Blue Growth strategy was approved by the Commission in 2012 and, among other things, is aimed at developing ecologically innovative solutions that can potentially unify the social, ecological and economic aims of the European Union. In the context of the Blue Growth strategy, the strategic use of the maritime space should contribute towards achieving the target of the Europe 2020 strategy. In a focused way, the maritime use is promoted in the economic sectors of aquaculture, coastal tourism, maritime biotechnology, marine energy and deep-sea mining. In current debates, the Blue Growth strategy is identified as a policy initiative organised on a purely sectoral basis. Strategies were separately developed for the named economic sectors without having been examined in advance with regard to their environmental and spatial effect or in particular in terms of their cumulative effects.

The European Integrated Maritime Policy strengthens the regional agreements made under international law between the countries adjoining the European sea basins and supports the development of strategies based on international cooperation. Within the framework of the maritime policy, strategies for growth and development are promoted that support the strengths of every large maritime region in the EU and that address its weaknesses. The macro-regional strategies of the EU must also be mentioned in this context, since they represent a spatial approach to cooperation at the European level and in some cases include sea basins, for example the Baltic Sea. Macro-regions are transnational regions that are,

among other things, characterised by shared challenges, a common identity and functional interrelation. The aim of macro-regional strategies is to determine shared challenges in particular geographical regions and to define aims for simplifying cooperation at the economic, social and territorial level and to strengthen existing collaborations in the macro-regions. To achieve this, existing financial resources (e.g. from EU funding programmes) should be used in a more targeted and more impact-oriented way in the macro-regions. Macro-regional strategies are still a comparatively new concept of the EU. Macro-regional strategies have been existing since 2009 - initially for the Baltic Sea region (2009), then for the Danube region (2011) as well as for the Adriatic and the Ionian Sea (2014). A macro-regional strategy for the Alpine region has also been worked out.

Against the backdrop of far-reaching reforms in the common fisheries policy and the need to look at the previously separate maritime policy areas – Integrated Maritime Policy and common fisheries policy – as one policy, the existing European Fisheries Fund (EFF) was revised for the 2014 to 2020 funding period into the European Maritime and Fisheries Fund (EMFF) with new objectives assumed. In this context the Integrated Maritime Policy was financially strengthened, while the funds for the IMP were quadrupled and 5% of the total volume of the EMFF 2014 are intended for the Integrated Maritime Policy up to 2020.

Since then, the Integrated Maritime Policy has been defined at the European level as follows: The „Integrated Maritime Policy [means] a Union policy whose aim is to foster coordinated and coherent decision-making to maximise the sustainable development, economic growth and social cohesion of Member States, and notably the coastal, insular and outermost regions in the Union, as well as maritime sectors, through coherent maritime-related policies and relevant international cooperation“ (European Commission, 2014 (Article 3, Paragraph 2, Number 10)).

In July 2014, the European Parliament and the European Council approved a directive creating a framework for maritime spatial planning. One important aim of this directive is to promote the sustainable growth of the

maritime economy by strengthening maritime spatial planning, along with the sustainable development of the maritime areas and the sustainable use of marine resources. The EU directive provides a framework for maritime spatial planning, while the member states are responsible for conceiving and defining the form and content of spatial plans for their territorial waters.

As the comments above show, an Integrated Maritime Policy at EU level is primarily a political initiative. Acts of law that exist are the Marine Strategy Framework Directive and, since 2014, the EU framework directive for maritime spatial planning.

At this point, the developments in the Baltic Sea region, that have influenced the further development of the European maritime policy in a variety of ways, should be mentioned. Many strategic and analytical documents (for example the „EU Strategy for the Baltic Sea Region“, 2009, and „A Sustainable Blue Growth Agenda for the Baltic Sea Region“, 2014) exist specifically for the Baltic Sea.

VASAB (Visions and Strategies around the Baltic Sea), a transnational and multilateral conference of ministers from 11 neighbouring states of the Baltic Sea region, who are responsible for spatial planning and spatial development, has contributed towards the further development of the European Integrated Maritime Policy. It draws up common guidelines and principles for spatial development of the Baltic Sea region and provides a forum for exchanging know-how in

the field of spatial planning and spatial development between the states of the Baltic Sea region. In 2009, the Conference of Ministers responsible for Spatial Planning and Development adopted a long-term strategy with an action plan for spatial development in the Baltic Sea region (VASAB Long-Term Perspective for the Territorial Development of the Baltic Sea Region). 10 principles for maritime spatial planning in the Baltic Sea were developed within the framework of this strategy. They for example include to apply the principle of sustainable management, in other words to strike a balance between economic, ecological, social and other interests. Together with the Helsinki Commission (HELCOM), VASAB set up a maritime spatial planning (MSP) working group in 2010 with the aim to facilitate the coordination and implementation of maritime spatial plans within the framework of the EU Strategy for the Baltic Sea Region and in line with the HELCOM Baltic Sea Action Plan and the VASAB strategy.

Maritime policy in the context of spatial development policy objectives

In the course of adopting the Lisbon Treaty (2009) and in view of the objective of achieving economic, social and territorial cohesion formulated therein, the territorial dimension has increased in importance. Cohesion policy plays an important role in the EU 2020 strategy as well, and territorial cohesion is considered alongside economic and social cohesion. Other spatial development policy objectives that relate to maritime policy were formulated within the framework of the Territorial Agenda 2020. VASAB and HELCOM developed more specialised objectives for the Baltic Sea region.

In 2007, the ministers responsible for spatial development in the European Union member states agreed upon a first so-called „EU Territorial Agenda“. In 2011, a new version of the Territorial Agenda titled „Territorial Agenda 2020“ (TA 2020) was approved in Hungary at the Informal Ministerial Meeting of Ministers responsible for Spatial Planning and Territorial Development. The TA 2020 pursues the objective of communicating strategic orientations for spatial development, integrating the territorial dimension at all levels of government more firmly into various areas of policy and guaranteeing the implementation of the Europe 2020 strategy in harmony with the principles of territorial cohesion. The TA 2020 emphasises that „those responsible for design and implementation of sectoral policies should take the principles and objectives of the Territorial Agenda into consideration“.

In this context, the TA 2020 formulates guidelines on strategic orientation for spatial development that are also of importance in the context of the political organisation of the European maritime space. With regard to the maritime space, the TA 2020, on the one hand, refers to the importance of increased activities in the maritime sector for territorial cohesion in Europe and, on the other hand, to the increase in spatial conflicts between different users arising from these increased activities. The importance of cooperation in the field of maritime spatial planning is emphasised in the TA 2020 in order to reconcile users' different interests and find a solution to conflicts in the European maritime areas.

The TA 2020 calls upon the member states to conduct their planning in the maritime sector in close coordination with their existing planning instruments

and to embed maritime planning into them. This is to ensure that the development of both land and maritime spaces is not disconnected but shared and balanced.

Statements relevant to the Integrated Maritime Policy are made in the TA 2020. The requirements according to the TA 2020 are:

- Considering the territorial effects in all phases of the strategic programme planning, programme evaluation and programme monitoring
- Considering local characteristics, regional initial positions and requirements for the development of (functional) spatial development strategies (see also place-based approach and smart specialisation)
- Closer collaboration between sectoral policy areas and sectors at different spatial levels, which means both horizontally and vertically integrated multi-level governance and planning
- Strengthening evidence-based policy-making on the basis of the cross-sector generation and utilisation of sector-specific knowledge
- Supporting macro-regional and cross-border approaches
- Supporting research, human capital and innovative strength
- Guaranteeing and improving the territorial connection of the individual to infrastructure facilities (e.g. shipping, air travel, trans-European energy networks) and the development of inter-modal traffic solutions as well as combined sea and land transport connections
- Supporting the decentralised, efficient, safe and environmentally-friendly generation and utilisation of renewable, low-carbon energy
- Improved management and interlinking of the environmental, landscape and cultural assets of regions through joint risk management

An analysis of how the TA 2020 is considered in the Integrated Maritime Policy at the European level shows that the links between the TA 2020 and the maritime policy papers are not directly shown and described. Nevertheless, large parts of the content of the TA 2020 are contained in the policy documents of the Integrated

Maritime Policy. This enables the links described below to be identified in particular.

Besides maritime spatial planning, the European Integrated Maritime Policy identifies the instruments „integrated maritime surveillance“ and „maritime knowledge“. These likewise show clear links to the guidelines of the TA 2020.

The Integrated Maritime Policy is seen as a concept for coordination between different policy areas. Even if there are legitimate grounds for scrutinising whether there is actual integration beyond the various policy levels and specialist fields, the Integrated Maritime Policy nevertheless inherently takes up the main requirement of the TA 2020, namely to „think integratively“.

There is also similarity between the guidelines of the TA 2020 and the Integrated Maritime Policy with regard to prioritising support for „blue energy“.

The concept of developing macro-regional strategies as called for in the TA 2020 is also reflected in the European Integrated Maritime Policy in terms of developing sea basin strategies.

The cited correlations show that the Integrated Maritime Policy (of the European Union) takes spatial development policy principles into consideration. However, potentials still exist with regard to the most important guideline of the TA 2020 – namely to consider the spatial relevance of objectives and plans already at the strategic planning stage, so that spatial interests can be identified and taken into account early on. In addition and as a matter of principle, the links to the TA 2020 and its objectives could be shown more clearly in the policy documents of the Integrated Maritime Policy.

The clearest links between the TA 2020 and the concrete maritime policy measures can be identified in the process of drawing up the EU maritime spatial planning directive.

This directive is particularly important because it is the first and to date the only EU act of law that explicitly regulates spatial planning interests.

When preparing the directive, the European Commission

put forward a „road map“ of 10 principles for maritime spatial planning in the EU. The following principles in particular show clear interfaces with the guidelines of the TA 2020:

- „Building up a viable database and knowledge base“
- „Coherence of spatial planning on land and at sea (ICZM)“
- „Cross-border cooperation and consultation“
- „Involvement of interest groups“
- „The use of maritime spatial planning depending on territory and area of activity“

The directive for establishing a framework for maritime spatial planning, that was finally adopted in 2014, committed the member states to introduce maritime spatial planning. The EU defines a framework for spatial planning, while the member states are responsible for formulating and defining the form and content of spatial plans for their territorial waters.

HELCOM and VASAB supervised important projects for developing maritime spatial planning within the framework of the EU Strategy for the Baltic Sea Region and worked out 10 principles of maritime spatial planning, focussing on their application in the Baltic:

- Sustainable management
- Long-term perspectives and targets
- Coherent planning between the land and the sea
- High data quality to guarantee the information basis
- Transnational coordination and consultation
- Planning on the basis of localised characteristics
- Implementation of the ecosystem approach
- Precautionary approach
- Participation (and transparency)
- Planning as a continuous process

Spatial conflicts in subareas of the Integrated Maritime Policy

The subareas of the Integrated Maritime Policy and the associated usage and protection interests of the players in these subareas are connected to the (in some cases considerable) utilisation of the maritime space. The result of a study in the spatial context of Belgium's maritime space was that the overall demand on the maritime space is 2.6 times higher than the existing maritime area (Maes et al., 2005). The utilisation demands of fishing and shipping in particular are high due to the fact that they involve almost the entire maritime area.

Most of the European maritime space, particularly in the North Sea and the Baltic Sea, is in fact subject to plans or is already being used. The increasing intensity of use of the maritime space in recent years has led to intensified conflicts between the various interest groups. In this context, a distinction is made between potential and actual conflicts of use. The extent of the potential for conflict between uses and space demands is based on the expansion of the area being utilised, its intensity and its dynamics with regard to future developments and potential hazards, that go hand in hand with the use of the maritime space.

However, the tensions between the subareas of maritime policy are not exclusively determined by direct area claims, that manifest themselves in the shape of localised competitions for space, but also by contradictory objectives of sectoral policies and therefore indirect spatial interests (for example in the case of the Blue Growth strategy and the Marine Strategy Framework Directive).

The actual extent of the conflicts between different usages of the oceans and seas is also influenced by the following factors:

- The amount of knowledge of spatial interests, possible conflicts of objectives, interactions between usages and the amount of knowledge of the marine ecosystem and cumulative effects of the various usages of the oceans and seas on this ecosystem
- The way in which attempts are made to assert self-interests in the policy (self-interests versus a search for compromise solutions)

- The nature of the regulatory context, i.e. the coordinating legal and administrative instruments (laws, administrative structures, planning instruments) and their coherence at the various spatial and political levels

The compatibility of different maritime objects of protection and uses was examined within the framework of various research and planning projects. The results of the individual studies show evaluations that differ from each other in terms of detail, but for the most part show the major subareas of maritime policy that are competing with each other. The following maritime usages and subareas of maritime policy show a particularly potential for conflict:

Marine environmental protection

The marine environmental protection was greatly boosted when the Marine Strategy Framework Directive came into force (2008). Plans to protect the oceans and seas go hand in hand with the aim of achieving a favourable environmental status by 2020. For example, all the seas of the German North Sea coast (Wadden Sea National Park) are earmarked as a Natura-2000 area. Other maritime usages can sometimes be restricted in Natura-2000 areas. While on the one hand, marine environmental protection can restrict other uses, such protection is, on the other hand, jeopardised in areas not designated as Natura-2000 areas with regard to achieving the objective of a favourable marine environmental status – particularly by port industries and the extraction of raw materials such as oil, sand and gravel. Wind farms, which contribute towards climate protection by producing renewable energy, can also put sea birds and marine life at risk – even though initial research results indicate that wind turbines can have a positive effect on the underwater flora and fauna. This must be weighed up in each particular case.

Fisheries

Fishing is an expansive and also the oldest way in which humans exploit the sea. Compared with other extensive maritime usages, it has decreased in importance in recent decades in Europe in general and in Germany in particular. Given that fish is permanently on the move, fishing is difficult to be located. Traditionally, the usage claims of fishermen have extended to the entire maritime space, which brings them into conflict with other

maritime usages. This particularly applies to areas that are suitable for raw material extraction and for wind energy generation, because simultaneous use is not possible. At the European level, the management of fish stocks is the object of far-reaching discussions within the framework of fisheries policy and is regulated particularly against a backdrop of overfishing and the need to protect marine life (there are also international agreements, regulations and fishing quotas). However, the objectives of marine environmental protection and fishing are not inherently in conflict with each other. For example, the designation of protection zones and spawning grounds contributes towards the regeneration of fish stocks, and consequently towards maintaining the resources being managed. In a workshop of the Mare Directorate-General, it was stated in discussions on this issue that maritime spatial planning can make an important contribution towards taking the space requirements of the fishing industry into account (European Commission. DG MARE, 2013).

Aquaculture

The controlled breeding of fish, mussels, crabs and algae is becoming increasingly important against a backdrop of overfishing and the increasing demand for food from aquatic sources. Within the framework of the Blue Growth strategy, at European level, aquaculture was identified as an economic sector in which growth rates are expected to be significant. The EU's Common Fisheries Policy provides for the targeted strategic advancement of sustainable aquaculture for the period 2014 to 2020. Aquaculture faces special challenges particularly against the backdrop of the ecosystem and sustainability approach. Underwater factory farming is often associated with the use of antibiotics and chemicals in open seas, which are in conflict with the aims of marine environmental protection. Algae cultivated in aquaculture facilities can be used for making certain products, for example in the cosmetics or pharmaceuticals industries, and also in a targeted way for absorbing pollutants from the water. The expansion of aquaculture in Europe also proves to be difficult in terms of identifying suitable areas in maritime spaces that have already been claimed for other uses (e.g. shipping, raw material extraction, marine environmental protection). However, the dual use of the maritime space by extensive aquaculture and offshore wind energy is regarded as being potentially spatially compatible.

Shipping

Shipping is a significant linear user of maritime space. In recent decades and against the backdrop of growth in both international and European trade, it has greatly increased with regard to frequency and transport volumes. Most maritime traffic is governed by international agreements. Shipping occupies a prominent place in international law, and this must be implemented in national regulations. The safeguarding and strengthening of maritime traffic is formulated as the first guideline in the context of the spatial planning for the German exclusive economic zone (EEZ). This is implemented by defining priority and reserve areas for maritime traffic and forms the reference point with which other uses must be aligned. Against this backdrop, there are in particular fundamental potentials for conflict between shipping and other area-extensive types of use (e.g. offshore wind energy, fisheries, raw material extraction and military use). In practice, conflicts that exist between shipping and fixed installations are those that are not regulated by binding procedures but by regulations in spatial planning. From the perspective of marine environmental protection, too, the continuous increase in maritime traffic is seen as a potential obstacle to achieving environmental objectives (see the Marine Strategy Framework Directive). Shipping faces the challenge of further reducing shipping-related air pollution by using clean shipping technologies – both in ports (e.g. by using shore power) and at sea (e.g. by using alternative fuels such as liquid natural gas (LNG)). Factors such as potential collisions and the improper exchange of ballast water, the consequence of which is the spreading of invasive species, are regarded as having a negative influence on the water quality and on the flora and fauna.

Wind energy

In 2008, the EU directive for the promotion of the use of energy from renewable sources came into force against the backdrop of the European climate package. This set the target that renewable energies should account for at least 20% of the total energy consumption by 2020. This should, among other things, be achieved by better using the sea (wind, wave and tidal power). The marine energy sector is a key area of the European Blue Growth strategy. Using the maritime space to produce wind energy is associated with a significant area requirement for wind turbines. This new and extensive type of use (in comparison with traditional

claims for space such as military, fisheries, shipping and raw material extraction) is frequently perceived as a competitor by the traditional users of the sea. Players in the fields of marine environmental protection and tourism see themselves as being hampered by wind turbines due to them encroaching on the cultural and natural landscape. In the Seanergy 2020 project, supported via the „Intelligent Energy – Europe“ programme, maritime spatial planning was identified as a powerful, integrating instrument that provides a framework for coordinating the expansion of renewable energies beyond national borders and taking spatial interests into account. In Germany, priority areas (without exclusion) have been defined for offshore wind energy in the context of the North Sea and Baltic Sea exclusive economic zone. In the state plans of individual coastal states, however, suitable areas were defined (with foreclosure effect).

Raw material extraction, for example sand and gravel

The areas claimed for the extraction of raw materials heavily depend on the natural geographical conditions and on their immobile occurrence in the sea bed. In other words, the areas for extracting raw materials are fixed in particular locations. The extraction of raw materials is connected above all to encroachment into benthic habitats, i.e. habitats on or near the sea bed, and may conflict with marine environmental protection objectives. There is also the potential for competition with other maritime usages such as shipping, offshore wind energy and undersea cables, since they can sometimes form obstacles to each other and there is a risk of collisions. Over the past decade, the European Union designated the extraction of marine raw materials as a key economic sector in the Blue Growth strategy due to the increased demand for raw materials and forecast growth and employment potential. In the North Sea and Baltic exclusive economic zone, it is primarily sand and gravel that are brought to the surface and shipped. The situation with individual areas where permission has been granted for sand and gravel extraction in conservation areas is seen as a problem.

National defence in the context of military activities

Extensive use is periodically made of maritime areas for the purpose of military activities. National defence is a sovereign duty. The military use of the exclusive

economic zone is not expressly regulated in the United Nations Convention on the Law of the Sea and does not constitute a body of regulations as defined by the spatial planning law. No regulations covering military use are in place in accordance with the spatial plan for the North Sea exclusive economic zone. However, the existing military exercise areas have been included in the spatial plan for information purposes, and their interests were taken into account for coordination purposes when the area was demarcated for other uses. However, since wind energy applications for offshore wind farms can also be made outside the priority areas, this means that the possibility of granting approval for wind farms in exercise areas must be intensively examined. Military activities can potentially harm the marine environment due to the release of substances and energy in the form of light and underwater noise. Military use is also only to a limited extent compatible with civilian use such as tourism, shipping and raw material extraction due to the potential for collisions and damage as well as noise pollution.

Tourism

Coastal and sea tourism is one of Europe's most important economic sectors, particularly in Germany's coastal states. Within the framework of the EU's Blue Growth strategy, this sector was designated a key area for supporting intelligent, sustainable and socially integrative growth in Europe. Sustainable tourist use is regarded as potentially synergic for a large number of maritime usages. For example, tourism is well suited as a new source of income for fishermen and thereby contributes towards regional development. However, wind farm operators, too, can incorporate tourism use as a complement to their own user interests (e.g. in the form of trips, exhibitions or similar). In Germany and particularly within the framework of integrated coastal zone management, issues are coordinated for the purpose of reconciling claims on maritime space made by tourism, on the one hand, and by marine environmental protection and nature conservation, on the other hand. Transnational synergy potentials between tourism and marine environmental protection and nature conservation are also sounded out and further developed within the framework of EU INTERREG (European Territorial Cooperation) projects.

Integrated Maritime Policy in the German EEZ and the coastal waters

The political and administrative structures in Germany have a very sectoral character. The respective sectoral policies are primarily aimed at optimising what are in most cases mono-thematic specialised objectives. In the opinion of the maritime players interviewed for this study, maritime policy has, with its integrative approach, also resulted in sectoral policies taking greater account of spatial interests and interactions with other sectoral policies at the regional level. Maritime interests as a whole were strengthened through the discussions about the importance of the ocean for the environment and economy of Europe and Germany carried out as part of the Integrated Maritime Policy. This is particularly expressed in the regional development of the economic sector (e.g. Maritime Cluster Northern Germany) and in the strong marine research in the northern German coastal states. The Integrated Maritime Policy follows a participatory approach with the integration of various sectoral policies into the maritime policy. From a larger perspective, the Integrated Maritime Policy strengthens the concept of democracy with this participatory approach – also when implementing policies.

The strategic framework targets and the priorities of maritime policy in Germany are presented in the „Entwicklungsplan Meer – Strategie für eine integrierte deutsche Meerespolitik“ (Maritime Development Plan – Strategy for an integrated German maritime policy). The Development Plan has been existing since 2011. It represents the policy platform for incorporating governmental and non-governmental maritime players into the decision-making processes. The working and decision-making structures include the coordination and control of the Development Plan within the framework of departmental meetings, an interministerial working group, a network of the committees that are relevant to the seas and oceans and linking of the relevant political levels in Germany. A continuous dialogue about the Integrated Maritime Policy is also maintained with associations and organisations. In this context, the Development Plan pursues the following objectives as a matter of priority (BMVBS 2011):

- Enhance the competitiveness of German maritime industry and exploit the potential for job creation

- Achieve a good environmental status in the North Sea and Baltic Sea by 2020, thereby making them the cleanest and safest seas
- Assume a share of the responsibility for global and ecological developments and support efforts to tackle climate change

The “Entwicklungsplan Meer” is supplemented by an action plan in which both ongoing and planned measures for achieving the objectives are listed. In principle, by incorporating the involved parties into the decision-making process at an early stage, the aim is to achieve transparency of the different interests. Important instruments for achieving transparency and for striking a balance between different interests are the formal horizontal planning instruments such as, for example, spatial planning in the EEZ and in the coastal seas or transnational and cross-sector planning in the North Sea and Baltic Sea region along with integrated coastal zone management. The development plan in particular develops its spatial impact through the implementation of its aims and main focuses within these formal horizontal planning instruments.

The German Federal Government introduced the brand „Das Meer – Unser Blaues Wunder“ (The Sea - Our Blue Miracle) in the context of the Maritime Development Plan. This brand is intended to make a wider public more aware of the sea's diversity and its complex interrelationships with politics, the economy and science. The logo „Das Meer – Unser Blaues Wunder“ was developed as a communicative instrument that can be employed for projects, events and exhibitions as well as for other campaigns dealing with all aspects of the sea. Following a decision by the BMVI, projects proposed that reflect and transport the objectives derived from the Maritime Development Plan can be given the common logo „Das Meer – Unser Blaues Wunder“.

Maritime spatial planning is an important element of the Integrated Maritime Policy in Germany, particularly from the point of view of taking spatial interests into account. The introduction of maritime spatial planning had a major effect on usages in the exclusive economic zone (EEZ) in the North Sea and Baltic Sea, particularly by including priority areas for wind farms, main

shipping routes and pipeline routes. For the first time, it has provided an overall picture of all the maritime usages in the North Sea and the Baltic Sea, thereby providing a new transparency of usages in the EEZ.

Maritime spatial planning in the German EEZ reinforces the reversibility approach towards any use of the area (it must be possible to reverse any actions taken in the area). Environmental, shipping and wind energy interests are coordinated in this way and conflicts settled. During the spatial planning of the North Sea and Baltic Sea EEZ, notably the conflict between players within the wind energy sector (being supported by climate policies) and traditional use by shipping, could be solved by specifying priority zones for wind farms and for primary shipping routes.

In addition to the instruments at federal level, in Germany the Integrated Maritime Policy is also implemented at the level of the northern German coastal states (Free Hanseatic City of Bremen, Free and Hanseatic City of Hamburg, Lower Saxony, Mecklenburg-Western Pomerania, Schleswig-Holstein). The Integrated Maritime Policy in the coastal states is in particular characterised by the integration of maritime-related specialist fields and by the integration of land-related and maritime-related planning.

Free Hanseatic City of Bremen

In 2011, the Free Hanseatic City of Bremen presented a maritime action plan describing its Integrated Maritime Policy. The Maritime Action Plan expressly relates to the framework of the integrated maritime policies of the European Union and of the Federal Government. Primary areas of action are green ports and efficient shipping, sustainable logistics and integrated hinterland links, maritime technologies of the future, regional centre of excellence for offshore wind energy and the centre of excellence for marine research. These five primary areas of action are supplemented by the following horizontal areas of action: applied R&D and know-how transfer, employment, training and skilling, the environment and sustainability, structural change and Bremen – Bremerhaven location issues. These horizontal areas of action have interfaces and points of contact with the individual primary areas of action. In

the field of the ICZM, Bremen for the most part works closely with the neighbouring state of Lower Saxony.

Free and Hanseatic City of Hamburg

Since 2007, maritime policy has been a primary focus of the European policy of the Free and Hanseatic City of Hamburg. A sustainable and cross-sectoral maritime policy is intended to harmonise economic and ecological interests. Ensuring the operability of the Port of Hamburg and the competitiveness of the maritime economy is of special importance to Hamburg. Measures for reducing ships' emissions and for implementing EU climate targets are also being implemented. Other key points of maritime policy in Hamburg are an increasingly environmentally-friendly energy supply for cruise liners and to support maritime research and science. From Hamburg's viewpoint, maritime research and science are necessary in order to broaden the knowledge of the sea and thus allow a sustainable use and protection of the seas and oceans. Participation in the Maritime Cluster Northern Germany is also part of Hamburg's maritime policy. In the Maritime Cluster Northern Germany, the states of Hamburg, Bremen, Lower Saxony, Mecklenburg-Western Pomerania and Schleswig-Holstein pool their strengths for the benefit of the maritime economy.

Mecklenburg-Western Pomerania

Due to the maritime character of Mecklenburg-Western Pomerania, maritime issues have regularly been the object of analyses and concepts by the federal state government (BMVBS 2011). Consequently, maritime spatial planning is of special importance to this federal state. The "Landesraumentwicklungsprogramm" (LEP - state spatial planning programme) for Mecklenburg-Western Pomerania was established in 2005. For the first time, this LEP includes cross-sectoral, cross-sectionally-orientated spatial planning for the coastal seas. The LEP represents an integrated plan for both land and sea in Mecklenburg-Western Pomerania. IKCM is also anchored in the Mecklenburg-Western Pomerania LEP. The LEP is currently being revised within the framework of a multi-stage process. One of the things to be noticed in the first draft of the Mecklenburg-Western Pomerania LEP is that the ecosystem services approach for Mecklenburg-Western Pomerania's coastal seas is strengthened

– along with positive effects expected on fisheries as fish resources are protected. Also apparent in the first draft of the Mecklenburg-Western Pomerania LEP is that for the aquaculture sector, aquaculture facilities should be established and trialled on a spatially compatible basis and also in combination with other permanent facilities. The concept of dual use for wind energy and aquaculture has been implemented here.

Lower Saxony

In Lower Saxony, maritime spatial planning plays a significant role in the development of Germany's coastal sea. In 2002, the Cuxhavener Erklärung (Cuxhaven Declaration) was implemented according to which the existing interrelationships between sea and land were integrated into a spatially coordinated overall development and the area of responsibility up to the 12 nautical miles limit was incorporated into the overall spatial plan. The partial update of the "Landes-Raumordnungsprogramm" (LROP – federal state spatial plan) was thus started, which included to test offshore wind energy and to connect the EEZ to the grid. The partial update of the LROP was finished in June 2006. The "Raumordnungskonzept für das niedersächsische Küstenmeer" (ROKK - spatial planning concept for the coastal seas of Lower Saxony) was developed as the conceptual basis of this LROP update. With the participation of all relevant authorities, institutions and interest groups, a concept was developed that forms the foundation of an integrated coastal zone management policy and that is to this day used as a point of reference and orientation framework. Below the formal and legally binding level of the LROP and the "Regionale Raumordnungsprogramme" (RROP - regional spatial planning programmes) of Lower Saxony's coastal counties, the ROKK formulates spatial planning statements in eleven thematic areas for the whole coastal sea of Lower Saxony. A fundamental amendment to the LROP was completed in 2008 including a new chapter „integrated development of the coast, of islands and the sea“ with principles and objectives relating to the different protection and usage demands of Lower Saxony's coastal zone. At present, the ROKK chapter on coastal protection is being updated initiated by the requirement of the LROP 2012 – which is also currently being updated – to deal with issues of clay protection for

dyke construction in order to preventively take account of the consequences of climate change.

Schleswig-Holstein

The state initiative „Zukunft Meer - sea our future“ has been a central element of the Integrated Maritime Policy in Schleswig-Holstein since 2004. This initiative networks different areas of political responsibility in Schleswig-Holstein that cover all aspects of the seas and oceans so as to achieve a coordinated approach in maritime-related policy topics. The primary responsibilities lie with the respective ministries. The interministerial working group „Zukunft Meer - sea our future“ forms the operative basis for the state initiative. A maritime action plan for Schleswig-Holstein came into being in 2008. This action plan includes the central guidelines on the basis of which integrative maritime policy is implemented within the state. It covers concrete actions and measures in the fields of „further developing strategic instruments“, „increasing awareness of the seas“, „supporting future maritime technologies“, „researching the seas“, „using the seas responsibly“, „sustainably protecting the marine environment“, „maintaining safety for people and coastal zones“, „utilising maritime career and employment possibilities“, „promoting maritime culture“ and „strengthening super-regional cooperation“. The maritime action plan was updated in 2012. In addition to the state initiative „Zukunft Meer - sea our future“, Schleswig-Holstein also has a maritime spatial plan. Instruments of maritime spatial planning in Schleswig-Holstein are the "Raumordnungsbericht Küste und Meer" (coast and sea spatial planning report) of 2005 and the "Landesentwicklungsplan Schleswig-Holstein 2010" (state development plan Schleswig-Holstein 2010), which is currently being updated. The "Landesentwicklungsplan" defines the principles and objectives of spatial planning for the entire territory of the state - on land and at sea - including the coastal waters and for integrated coastal zone development. In addition, special importance is attached to activities within the framework of the integrated coastal zone management.

Knowledge generation: identification of spatial requirements, cumulative effects and interactions

Considering spatial interests in the Integrated Maritime Policy enables the expansion of knowledge related to spatial usage interests, interactions and development dynamics. By considering the spatial interests of the various maritime key players, social, ecological and economic interests are disclosed. This enables to identify both maritime areas for individual usages and objects of protection as well as areas for spatially compatible usages. Maritime data and information are of great importance in filling knowledge gaps in this context. Improved quality and improved accessibility to maritime data thanks to the spatial interests of maritime players being considered enable interactions and cumulative effects of usages to be better analysed, better understood and taken into account more effectively. In the ecological sphere for example, studying the interactions of the marine ecosystem in its spatial entirety may contribute towards greater protection of the environment, since spatial usages and other effects can be determined early on. Especially the maritime context is precisely where the complete system is highly dynamic and characterised by a wide range of interactions. Even if the Integrated Maritime Policy and maritime spatial planning (as a part of the Integrated Maritime Policy) cannot record all systemic interactions due to their complexity, considering a systemic-spatial concept increases the gaining of knowledge in the long term. If once recorded, the maritime data is stored for a long time and is constantly available to the players involved in the Integrated Maritime Policy, this also reduces the costs of searching for and retrieving the information. A greater understanding of spatial interrelationships and interactions enables to make spatially-relevant maritime decisions and rulings even more closely based on facts, since the knowledge of existing development dynamics is also taken into account in the decision-making process. In this way, knowledge generation contributes towards objectifying discussions, particularly where conflict-prone subject areas are involved. However, it is also common for knowledge generation to take place over longer periods in which data is recorded, analysed and interpreted in order to generate new and meaningful knowledge. At the same time, in the case of spatial conflicts, data and the knowledge obtained from it is often immediately required so that balanced

decision-making is possible. This „dilemma“ shows that knowledge generation must be a continuous process in order to continuously increase the knowledge about spatial usage interests, interactions and development dynamics. This makes knowledge generation a basic prerequisite for balanced decision-making, and it positively and directly affects the other potential types of use. Firstly, the political and the administrative sector profit from knowledge generation as they are able to make better decisions based on the facts. Secondly, science plays a special role in knowledge generation. Science generates the knowledge required for decision-making and on this basis continuously expands the general level of knowledge. In the end, all other target groups such as the economy, non-governmental organisations and citizens can profit from this expanded knowledge.

Coordinating and balancing interests: improved decision-making

Another potential benefit of considering spatial interests in the Integrated Maritime Policy is an improved coordination and a better balancing of different spatial interests, the consequence of which leads to improved decision-making. Early consideration and management of the spatial needs of the various subareas of marine policy enable to improve the identification, evaluation and balanced judgement of the objectives of the different maritime key players with the diverse usage and protection demands on maritime space. This does not only lead to a reduction in conflicting uses, but may also create synergies between different uses and activities. For example, initial research findings indicate that local biodiversity is increasing around offshore wind farms. Firstly, wind farms are closed to shipping and fishing, which means that the undersea flora and fauna can develop without being disturbed. Secondly, the foundations of the wind turbines enrich the habitat because new species can inhabit them (However, these initial research results must still be supported by long-term studies). By considering the spatial aspects of the maritime players' various interests, it is possible for the Integrated Maritime Policy and maritime spatial planning to be better strategically aligned than was previously the case by coordinating and balancing interests, and to play a strategic role. This means to react less to developments and instead to positively shape developments in the

common interest of the maritime players involved. Coherence between specialist planning at different spatial levels can be facilitated by coordinating and balancing interests, which supports the place-based approach.

Legal and planning reliability: transparent strategic decision-making

The Integrated Maritime Policy, particularly within the framework of the formal instrument of maritime spatial planning, offers the benefit of a high degree of legal and planning reliability from the explicit consideration of spatial interests. Spatial determinations in maritime spatial plans (usually) create both long-term legal and planning reliability due to the formal regulatory nature of these spatial plans. As such, the procedure for considering the spatial interests for maritime spatial plans is regulated in a transparent way, i.e. it is shown how decisions are made and what compromises were reached. When the maritime spatial plans are implemented later, approval and certification procedures for maritime projects can be simplified because basic consideration and coordination decisions have already been taken during the course of the planning. Simplified approval and certification processes help to reduce costs for maritime projects. Legal and planning reliability in the shape of clear rules, transparency and a certain degree of predictability create a positive environment for long-term investments. This is clear from the example of offshore wind energy in the German exclusive economic zone. Legal and planning reliability is of great benefit to the economy in particular, because it enables costs to be reduced along with uncertainties in the realisation of projects. Politics and administrations also profit from legal and planning reliability because it enables processes and decisions to be simplified.

Cost reduction through efficiency: reducing transaction costs

Considering spatial interests in the Integrated Maritime Policy and its subareas can potentially lead to a reduction in costs. The integrative approach to maritime policy enables conflicts – most of which involve costs – between individual maritime subareas to be identified at an early stage and to be either coordinated or avoided. The Integrated Maritime Policy - and maritime spatial planning as part of the Integrated Maritime

Policy - enables to coordinate the development of various maritime activities with one another even more effectively and economically. It also improves the coordination between authorities in the individual countries. As described in the previous section „Legal and planning reliability“, maritime spatial planning in particular contributes towards the transparency of decision-making processes. Administrative management as a whole is therefore improved, and the administrative time required and workload are reduced for maritime users and planners. As already shown by the benefit of knowledge generation, data and information are of great importance for gaining a deeper knowledge of the usages of the space and their interrelationships and interactions. Costs can be reduced by saving maritime data for a long time once it has been acquired and by making it constantly available to the Integrated Maritime Policy players. This reduces the cost of searching for and retrieving the data and information.

On behalf of the MARE Directorate-General of the European Commission, a study about the possible economic effects of maritime spatial planning at the European level was carried out. This study was based on the assumption that the 10 principles of maritime spatial planning formulated by the European Union are implemented. The aim of the study was to quantify the benefits of maritime spatial planning for the economic players using the sea for different purposes. This was done by measuring the economic effects of maritime spatial planning (on the basis of the potential impact of a reduction in the transaction costs) on the maritime economy within the framework of a sensitivity analysis. The transaction costs refer to the costs that arise from the transfer of information and goods on the market and the associated conflicts. It is assumed that reducing transaction costs directly brings about an increased value growth in the maritime economy. The authors of the study explain that a reduction in transaction costs at the European level of about 1 per cent is realistic based on the implementation of the maritime spatial plan. To measure the total value-added that results from reducing the transaction costs by 1 per cent in the European Union, the study assumes an estimated maritime activities value-added of 104 billion euros in Europe for 2010 as a starting point. The study comes to the conclusion that assuming a 1% reduction in transaction costs and depending

on scenario assumptions (ranging from only isolated conflicts through to severe conflicts over maritime usages), the potential total economic contribution of maritime spatial planning in the European Union is between 418 million and 1.8 billion euros by 2030. The study shows that the legal and planning reliability resulting from spatial planning with respect to the associated reduction in transaction costs and conflicts may achieve an economic benefit for the maritime economy and its players.

Optimisation of sector interests: strengthening socio-ecological matters and ecological interests

Through the integrated approach of maritime policy and its subareas as well as by considering spatial interests, the assertion of individual sector interests in coordination with the interests of other sectors is strengthened. Participatory decision-making processes are essential here, which involve not only the various maritime policy sectors, but also maritime key players from different (hierarchical) levels (multi-level and cross-sectoral). This allows to strengthen sector interests while balancing economic and ecological interests. In order to optimise sector interests, a sector should „speak the language of the space“, in other words link its thematic objectives and interests to spatial claims and also address them in this way. For sectoral policies for example, this does not only mean to formulate what should be implemented in a sector in terms of content, but also which spatial claims are associated with it. Here, the sector interests should be formulated with a prioritisation of suitable areas that can then become a part of discussions with other sector interests in these areas. Even though decisions in an area can go against a sector, it is advantageous for the sectors to declare their spatial interests because it ensures that they are noticed in the overall picture of the spatial interests. Optimising sector interests is of potential benefit particularly to sectoral policies and sectoral administrators, the economy and non-governmental organisations. One example of an optimised sector interest can be found in the update of the “Landesraumentwicklungsprogramm” (federal state spatial planning programme) of Mecklenburg-Western Pomerania. Marine priority areas for safeguarding the natural basis of fishing and considering the main breeding grounds for herring in the Bay of Greifswald are defined

in this programme. It supports both species conservation and the possibilities for developing fishing, along with „fish“ as its production resource. In this context, the Integrated Maritime Policy may contribute towards considering ecological limits against the backdrop of strengthening economic and social objectives.

Benefits for the Europe 2020 strategy

In addition to the potential benefits described above that arise from considering spatial interests in the Integrated Maritime Policy for individual projects, for spatial development and for sectoral policies, there is also an over-arching benefit for the society as a whole. Considering spatial interests in maritime policy makes a positive contribution towards realising the sustainability objectives of the type also formulated in the Europe 2020 strategy:

- To implement ecological, economic and social objectives
- Employment effects
- Economic growth/investment acceleration
- Strengthening EU competitiveness
- Environmental protection (implementing the energy transition)

In addition, considering spatial interests in the Integrated Maritime Policy may have a positive influence on the territorial, social and economic cohesion. The sea is a dynamic space, the development of which does not stop at administrative borders. Spatial interests therefore are also of special importance in the supraregional and transnational context and in some parts require a coordinated approach between two or more countries. In this context, transnational cooperation projects can play a special role – they are already making a contribution towards understanding spatial interests across national borders and sounding out possible synergies. This contribution can be further intensified and strengthened in future. Basically, cross-border cooperation - whether at the formal or the informal level - is a suitable instrument for balancing interests at the transnational level and for shaping spatial development by mutual agreement.

The need to act in order to consider spatial interests more closely

In relation to considering spatial interests, the studies carried out show that there is a need to act with regard to the further development of the Integrated Maritime Policy in Germany.

The maritime-related sectoral policies formulate individual interests and objectives that are coordinated within the framework of the Integrated Maritime Policy. The spatial coordination of usages on the basis of already defined strategies and objectives is only strategic in parts – in other parts it is necessary to react to defined strategies and objectives. Sectoral policies should therefore record and publish the spatial demands of the planned use and its spatial impact from the very beginning when developing strategies. This procedural step can help to identify conflict potential between users of the maritime space even earlier, and in the framework of “better governance” the search for alternative solutions and participatory processes can be discussed, coordinated and resolved. The same should be done for the development of sectoral policy scenarios. For the ex-ante recording of the spatial effects, the sectoral policies could for example show and explain their strategic objectives and the associated spatial requirements more clearly in a separate process step.

On this basis, strategy documents of the relevant sectoral policies could be evaluated and commented on by spatial planning experts. Introducing such a process enables the amount of administrative work to be kept to a minimum by introducing defined procedures and time scales. This method aimed at the disclosure of spatial requirements will not solve maritime usage conflicts on its own, but it teaches sectoral policy to speak a „spatial language“ and to think even more in spatial terms. To support this, administrators and planning institutions should receive targeted instructions in the rules of spatial planning language and in the technique of thinking „spatially integratively“. Assessing spatial needs allows potential spatial usage conflicts to be identified at an early stage and thereby helps to reduce conflicts of objectives.

The developments on the ocean are decisively influenced by developments on land. The coastal areas are the interface between developments on land and at sea. Dry land and the maritime area represent a cohesive

system; many interrelationships and interactions between these living spaces are not yet known and therefore require more precise research. Current studies for example show a relationship between population density in the coastal areas on land and the intensity of use of the corresponding maritime spaces (Janßen, Kidd and Kvinge, 2013). Even agricultural activities far away from the coast affect the maritime space, for example through nutrient discharge via the soil into lakes, rivers and the groundwater. There is potential for the further development of spatial and sectoral planning, in that further efforts can be made to better integrate the spatial planning on land and the spatial planning on the ocean. The time perspective must be taken into special consideration in this regard. Dynamics and interactions on the ocean or between land and ocean can occur at different times. Foresightedly, we should also allow scope to remain open for new future uses that cannot yet be foreseen today and for uses for which demand could be greater in the future than is the case under the present conditions (for example in the offshore oil and gas sector).

In particular, the ocean as a system does not adhere to administrative boundaries. This is why there is also a need for transnational coordination processes as well as formal and/or informal cooperation structures when dealing with projects and plans with a spatial impact. These processes have been widely implemented in the northern German coastal states. Some neighbouring countries such as Denmark only just start to deal more intensively with the subject of maritime spatial planning in relation to the EU maritime spatial planning directive. The Federal Government and the coastal states see a need to aim for even greater coordination of cross-border cooperation in the future as well. They for example see a need to work towards adapting application procedures and evaluation criteria to each other across borders despite different administrative responsibilities. In addition, local stakeholders should be actively involved, particularly in the case of cross-border projects.

Due to the limited maritime space and taking regional factors into account, the aim should be multiple usages of areas that are either largely neutral (because for example they occur in different spatial levels of the sea) or - in best-case scenarios - even trigger synergy

effects. This also requires a deeper knowledge of the interrelationships and to further strengthen the systematic thinking in spatial planning. This knowledge can be incorporated into processes for examining the spatial compatibility of measures. Within the framework of a spatial compatibility assessment it is determined how, from the point of view of spatial planning, spatially-relevant plans and measures can be adapted to each other or carried out. Carrying out strategic spatial compatibility assessments could encourage multiple usages of the oceans. The instrument of spatial compatibility assessments is available to the coastal states within the framework of the spatial planning process.

The systematic acquisition of maritime data and the generation of knowledge via interrelationships allows decision-making supported by facts when usage conflicts arise. Often it is necessary to objectify the arguments against the backdrop of emotional discussions. The socio-cultural components in the perception of conflicts should be taken into consideration when searching for solutions and channels of communication. For example, a study of the effect of expanding renewable energies on tourism in Schleswig-Holstein came to the conclusion that the tendency of tourists to avoid Schleswig-Holstein as a holiday destination due to the presence of renewable energy facilities is extremely low. Based on the high level of acceptance for energy transition among the majority of the population, the associated impact on the landscape is seen as being far less disturbing than was previously assumed by individual tourism organisations.

The aim of the maritime strategy framework directive is for the seas and oceans to be in good condition by 2020. In this context, a reduction in the level of use of the seas by different players is required so that achieving this objective can be guaranteed. This approach works in the opposite way to the Blue Growth strategy, which specifically supports maritime economic sectors and usages. Conflicting political objectives of both strategies require further concrete harmonisation in terms of content. Instruments to assist in the reduction of conflicts between environmental and economic objectives can be both socio-economic analyses and strategic environmental studies.

The coordination of maritime-related sectoral policies requires to completely record all maritime players and their interests. Only this overall picture enables all positions to be considered in a balanced way. The expert discussions held have shown that, when plans and strategies are drawn up, sectoral policies with a weaker administrative support are currently not considered to the same degree as sectoral policies with a strong administrative support (for example in the field of the economy or the environment). This should be actively counteracted by also actively incorporating sectoral interests with a weak administrative support (for example in the field of culture) into maritime-related planning and strategy processes.

Both the free availability of data and the active communication of findings to other sectoral communities play a role in the dissemination of data and knowledge. This means that new data and new knowledge should be actively communicated and also made available when enquiries are received from interest groups. In this context, managing project results after the end of the project could be introduced in the sense of an „obligation to deliver“ under the key word „legacy“ as a requirement for project plans and proposals. This means that at the start of a project, later communication and use of the project results (e.g. in sectoral communities) should be explicitly planned for and taken into account.

At present, the knowledge about successful conflict resolutions between maritime usages is mostly not yet sufficiently recorded. The existing but “hidden” knowledge could be analysed as part of studies about best-practice solutions and made transparent. The mandatory introduction of a monitoring system when undertaking projects and initiatives in the maritime space would be helpful in this context. The best-case and worst-case scenarios thereby revealed should be passed on to the relevant political decision-makers and the responsible administrative players so that regulatory procedures can be optimised on a practical basis (incorporation of a feedback mechanism).

Although currently there is no direct action required, there is a perspective for the future development of maritime spatial planning. This could be in the form of

increased socio-economic and socio-cultural analyses for projects and plans with a spatial impact. Such a possibility is fundamentally provided for in the spatial planning process, but it could be more forcefully applied. With the socio-economic analysis, the key focus is on the regional effects of projects or planning on the economy and population. The socio-economic or socio-cultural analysis would be a supplementary instrument for enabling a better estimation of the regional effects of a measure that has a spatial impact, thereby allowing the implementation of a place-based approach supported by the facts.

It is important to consider that calling for spatial interests to be better taken into account is not just directed towards sectoral policies but also towards the political decision-making level, on which maritime-related usage and protection interests are weighed up and prioritised on the basis of value judgements. These prioritisations of objectives – but also of spaces – are fundamental to the handling of conflicts between different uses of the seas and oceans at both the regional and the local level. This means that the players involved in maritime spatial planning can only act on the basis of legally binding standards, as they do not take any political decisions themselves.

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