EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

Maritime Spatial Planning: Addressing Land-Sea Interaction A briefing paper

This document was developed by the European MSP Platform for the European Commission Directorate General for Maritime Affairs and Fisheries.

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1. Introduction

Many maritime uses have an onshore component or implication, such as the ports need for shipping, or grid connections needed for offshore wind arrays. Similarly, many terrestrial activities and development, especially in coastal areas, also impact on the sea, such as waste water discharge from urban areas. Natural processes also involve interaction between land and sea, such as coastal accretion and erosion being caused by currents and weather events. Human activities and natural processes can therefore interact with each other in complex ways along the land-sea interface.

When carrying out maritime spatial planning (MSP), it is important to consider the dynamics between land and sea, and to ensure that spatial planning is conducted in an integrated manner across maritime and terrestrial areas. This is in the interests of both environmental protection of coastal areas and the effective development of maritime and coastal economies. It is a requirement of the 'MSP Directive' to take land-sea interactions into account when preparing maritime spatial plans

There are a number of possible ways of addressing land-sea interaction (LSI) in MSP. These include building on the experience of integrated coastal management (ICM), harmonising terrestrial and maritime spatial plans, and carrying out spatial planning at a scale that crosses the land-sea border. Where practice has already developed within Member States, different approaches are being taken, reflecting those nations' geographies and institutional and planning frameworks. Other Member States are now considering how best to deal with LSI in their MSP processes. All Member States could benefit from understanding the options that are available and considering how to develop their practice further.

2. LSI in the MSP Directive

Art 6 para 2(a) sets out as one of the minimum requirements of MSP that LSI should be taken into account (also Art 4 paras 2 and 5).

Art 7 para 1 states that Member States may achieve this through the MSP process itself or by other formal or informal processes, such as ICM (in which case, the outcome must be reflected in the maritime spatial plans). In this context, para 2 states that MSP should aim to promote coherence with other relevant processes.

LSI is also referred to elsewhere:

'Maritime spatial planning… should take into account land-sea interactions and promote cooperation among Member States' (recital 9).

'Marine and coastal activities are often closely interrelated. In order to promote the sustainable use of maritime space, maritime spatial planning should take into account land-sea interactions. For this reason, maritime spatial planning can play a very useful role in determining orientations related to sustainable and integrated management of human activities at sea, preservation of the living environment, the fragility of coastal ecosystems, erosion and social and economic factors. Maritime

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spatial planning should aim to integrate the maritime dimension of some coastal uses or activities and their impacts and ultimately allow an integrated and strategic vision' (recital 16).

3. ICM and MSP

ICM (also referred to as integrated coastal zone management) is a longer-standing practice than MSP. It is also concerned with spatial management, but there are differences of emphasis between it and MSP.

ICM generally focuses on collaboration between, for example, civil society, businesses and government, and may result in strategies and management plans, but does not usually lead to the allocation of space to particular activities in the way that MSP may. ICM tends to include land based activities, areas and bodies, whereas MSP does not extend its remit further inland than the high-water mark. Also, ICM is, in most contexts, a voluntary practice, rather than a statutory requirement, in contrast to MSP in the EU.

In the EU, the uptake of ICM by Member States is encouraged through a Communication[1] and Recommendation[2], where it is defined as a dynamic, multi-disciplinary and iterative process to promote the sustainable management of coastal zones. The need for informed participation and co-operation of all stakeholders is stressed. However, practice varies considerably according to local conditions.

Importantly, for the Mediterranean, a common binding framework for ICM has been agreed within the Mediterranean Action Plan[3]. The geographic scope of this protocol extends seaward to the limit of territorial seas, thus overlapping with the MSP area of responsibility of the Member States that are signatories.

More generally, it is recognised that MSP and ICM should be linked where possible, as they both seek to address the problems of fragmented governance in coastal and marine settings, and include similar principles, such as the importance of stakeholder participation. They may therefore work together in addressing issues such as nature conservation, coastal flooding and defence and local economic development.

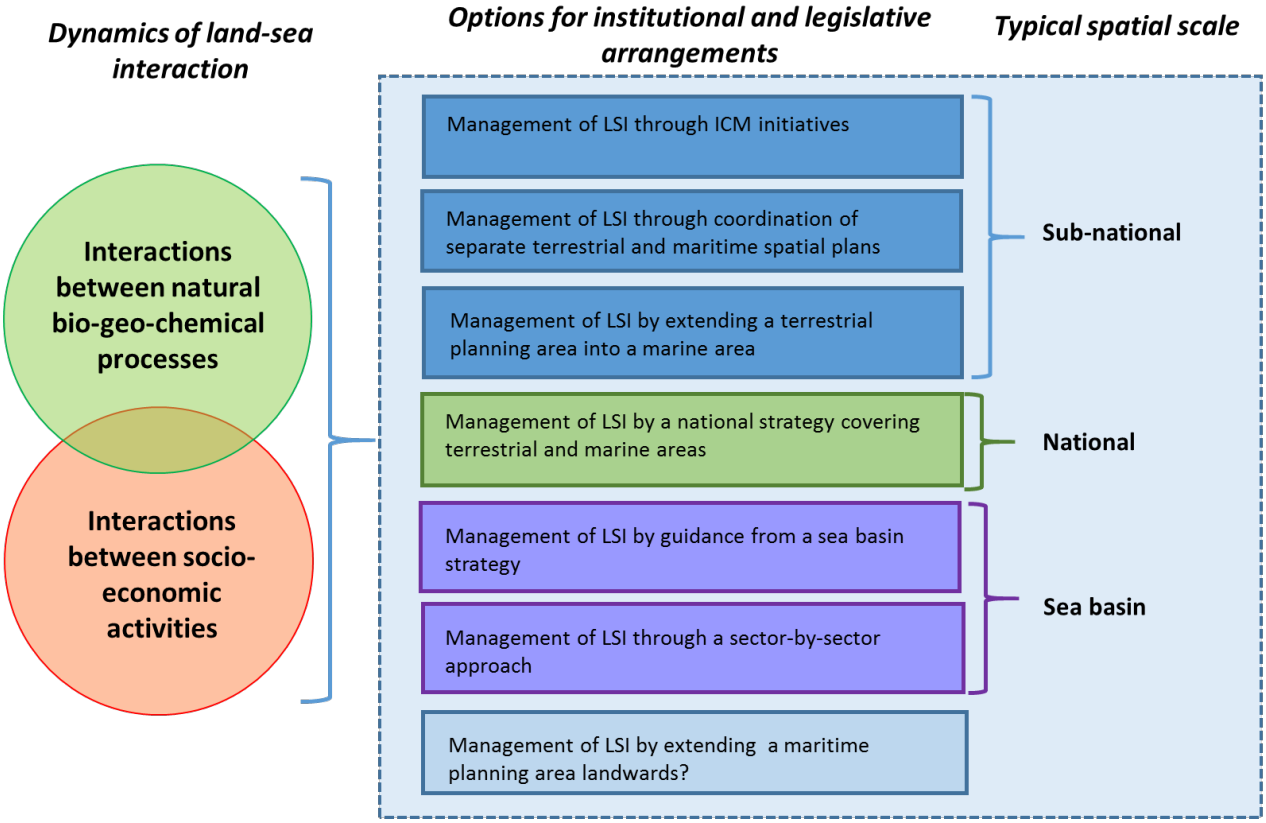
1 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2000:0547:FIN:EN:PDF

2 http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002H0413&from=EN

3 http://www.pap-thecoastcentre.org/pdfs/Protocol_publikacija_May09.pdf

4. A general Framework for Land-Sea interaction

LSI is a complex phenomenon, involving both natural processes across the land-sea interface and the impact of human activities in this zone. When undertaking MSP, authorities should, firstly, seek to understand the dynamics involved, and, secondly, find institutional mechanisms that are most suited to addressing LSI within their governance context. There may be a range of options available, involving different spatial scales of intervention. The figure below sets out a general framework to address LSI within MSP.



4.1 Dynamics of land-sea interaction

4.1.1 Interactions due to bio-geo-chemical processes

Interactions between the land and sea can be driven by a number of bio-geo-chemical processes, such as agricultural run-off resulting in eutrophication of coastal waters. Another example is the land-based pollution associated with agricultural and industrial activity. The coastlines subject to

the highest environmental pressures are those surrounded by the Atlantic Ocean, the North Sea and the Baltic, while other hotspots are evident along the northern shores of the Mediterranean and in the Black Sea. River discharges affecting coastal tourism and recreation activities at sea also need to be identified and assessed. This is also related to fish migration up-stream and the need for blue corridors. These may impact directly on human activities; for example, currents and climate affects decisions on port infrastructure and maritime routes.

A number of EC funded projects and national studies have sought to investigate the nature of these interactions and develop best practices which can be used by marine and terrestrial planners to manage LSI. For example, the Celtic Seas Partnership project promoted a better understanding of the environmental pressures on the marine environment which can arise from landward development.

Another example is the INTERREG MED-funded project CO-EVOLVE, which will analyse and promote the co-evolution of human activities and natural systems in coastal areas in the Mediterranean, encouraging the sustainable development of tourism, based on the principles of ICM and MSP.

4.1.2 Interactions between socio-economic activities

Many maritime uses need support installations on land. Some uses existing mostly on land (e.g., tourism, recreation, ports) expand their activities to the sea as well. These interactions need to be understood, in order to assess their individual and cumulative impacts and potential conflicts and synergies.

The Channel and southern North Sea are typical examples of regions with high levels of maritime activity. This is due to the concentration of population and economic activity on the London, Paris, Amsterdam axis, the presence of mega ports such as Rotterdam and channels such as the Nord-Ostsee-Kanal, one of the main trade routes between Europe and the rest of the world.

Similarly, transnational 'regional hubs' show strong land sea interactions and host important maritime clusters. Frequently, they are related to more than one European sea, as is the case of the UK, Ireland and northern France regional hub, which spans both the Atlantic and the North Sea.

These interactions have been studied on national and regional scales in government and EC funded projects. For example, the ESaTDOR project (part of the ESPON 2013 programme) sought to understand development opportunities and risks through the lens of land sea interactions in Europe. The project created a map of European Seas showing where land-sea interactions are at their most intense.

4.2 Options for institutional and legislative arrangements to address LSI

4.2.1 ICM initiatives

LSI interactions may be managed through ICM initiatives which are already established. For example, Croatia is developing a Joint Management Strategy for Marine Environmental and Coastal Zone Areas and the related Action Programme. The strategy links the ICM Protocol obligations with MSFD ones.

4.1.2 Coordination of separate terrestrial and maritime spatial plans

Some countries have chosen to maintain separate terrestrial and marine planning systems whilst still ensuring land sea interactions are taken into consideration. An example of this can be seen in Finland where land-sea interactions are strongly reflected because the Land Use and Building Act is implemented in territorial waters as well, and plans cover usually both land and sea. Still, there are also some regional plans covering only sea areas. In other cases marine areas are planned in the frame of regional plans covering both terrestrial and marine areas like in Uusimaa, Varsinais-Suomi, Satakunta or Keski-Pohjanmaa.

4.2.3 Extending a terrestrial planning area to a marine area

Local and regional scale territorial plans can also extend to the marine environment with a view to include land sea interactions within these areas. For example the Spatial Planning Act of Mecklenburg-Vorpommern covers land and sea areas (12nm-zone), so that the Spatial Development Programme of Mecklenburg-Vorpommern contributes to integrated land-sea spatial development.

4.2.4 National strategy covering terrestrial and marine areas

Another approach is to manage LSI through the creation of a national strategy which encompasses both the terrestrial and the marine environment. This is the approach taken by the Netherlands, for instance. Malta also has a similar approach through their Strategic Plan for Environment and Development, an overarching document covering both land and sea which also acts as the national Maritime Spatial Plan.

4.2.5 Guidance from a sea basin strategy

LSI can also be managed on a larger, sea basin scale. For example, in the Baltic Sea Region, VASAB develops long term strategies and visions for the region, including spatial planning and development. In the Mediterranean, UNEP-MAP is taking LSI on board, in particular through PAP/RAC, which is specifically focused on the implementation of the ICZM protocol. This protocol expressly includes territorial waters within its geographic scope, creating a direct link to MSP.

4.2.6 Sector-by-sector approach

LSI can also be managed within sectors themselves, such as oil and gas, and tourism, sometimes operating at a sea basin scale. The above mentioned CO-EVOLVE project, which started in early 2017, is doing something similar for tourism.

4.2.7 Extending a maritime planning area landwards?

It is also technically possible to address LSI by extending the remit of MSP inland, landwards of the high-water mark (in contrast to extending a terrestrial planning area seaward). However, this would impinge on existing terrestrial planning systems. This is not an approach that appears to have been adopted so far.

4.3 Spatial scales to address LSI

It is clear from the above examples that LSI can be addressed at a variety of spatial scales. These include:

- Local areas, such as ICM partnerships and economically-driven initiatives, involving municipalities and other local interests
- Sub-national planning territories, such as maritime plan areas, involving MSP authorities working in collaboration with coastal and maritime stakeholders
- National territories, where a national strategy or plan, covering the whole of the nation's waters, and possibly its land area as well, may guide LSI efforts
- Sea-basins / transnational regions, where transnational cooperation may produce a strategy or protocol for guiding national LSI efforts and ensuring ongoing cross-border cooperation

These scales are not mutually exclusive. For example, a higher-level strategy may be implemented or supplemented at a sub-national or local level by other instruments. It should also be recognised that spatial scales vary between Member States. In some contexts, the sub-national (regional) scale of governance is of great importance, whereas for others only the local and national scales of governance exist.

It is for each Member State / MSP authority to decide on the most suitable level(s) of governance to take LSI into account, giving consideration to existing institutional arrangements for spatial planning and management.