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# Lessons, stories and ideas on how to integrate Land- Sea Interactions into MSP



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# Executive Summary

This report is aimed at people working with spatial planning at the land-sea interface, irrespective of whether they are municipal, regional or national planners. The nations and autonomous areas around the Baltic Sea are presently developing marine or maritime spatial planning (MSP) for the exclusive economic zone and territorial sea and are increasingly aware that this needs to be linked to what is happening on land. However, the planning systems look fairly different. With the exception of Germany and the federal states of Mecklenburg-Vorpommern and Schleswig-Holstein, no Baltic Sea country has so far experience all around the MSP planning cycle and has fully dealt with linking the marine and land-based planning systems and created the necessary processes and knowledge.

This report is the result of a two-year project that explored the issues surrounding land-sea interactions in practice. The common point of departure is the EU MSP Directive which requires Member States to take account of land-sea interactions in MSP, but is not very specific in what this actually means. Our definition of land-sea interactions (LSI) departs from 1) the actual uses and planning issues that reach across the land-sea boundary and need to be managed. These issues are then linked to 2) the planning systems that have to deal with them both on the sea and the landward side, 3) the processes necessary for organising and including all those with a stake in the process (both authorities and

others), and 4) the necessary knowledge and methods to collect and assemble information to make informed decisions.

Our intention is to share insights and lessons learned in the Baltic Sea area from countries at different stages of MSP - both at the beginning and the end of the planning loop. Our special host countries are Sweden, Åland, Finland, Estonia, Latvia, and Germany.

Overall, based on our insights and structured along the four main dimensions of LSI, the following are the most important aspects to address at present: 1) identifying land-sea issues and linkages in terms of spatial needs and interactions - also across sectors, over time and across borders, 2) getting the institutional mandates and structures right and promoting institutional capacity for multi-level governance across the land-sea boundary (especially with local authorities as crucial links), 3) identifying, informing and mobilising the relevant stakeholders and linking them (also across borders), and 4) getting spatial datasets that reach across the land-sea boundary at the right scale to produce planning evidence that can be shared across levels and borders.

Those who want to know more but have no time to read it all can take the initial bullet points in each chapter and check the boxes, figures, maps and tables.

# 1. Introduction

**“We have always taken land-sea interaction issues into account. If we consider this a basic planning principle, there is no need to think about it too much.” (Survey respondent, 2018)**

**“We currently have not solved the LSI discussion in [...] as it is a part of the archipelago day to day life and we cannot separate it as a concrete question/issue.” (Project Partner, 2019).**

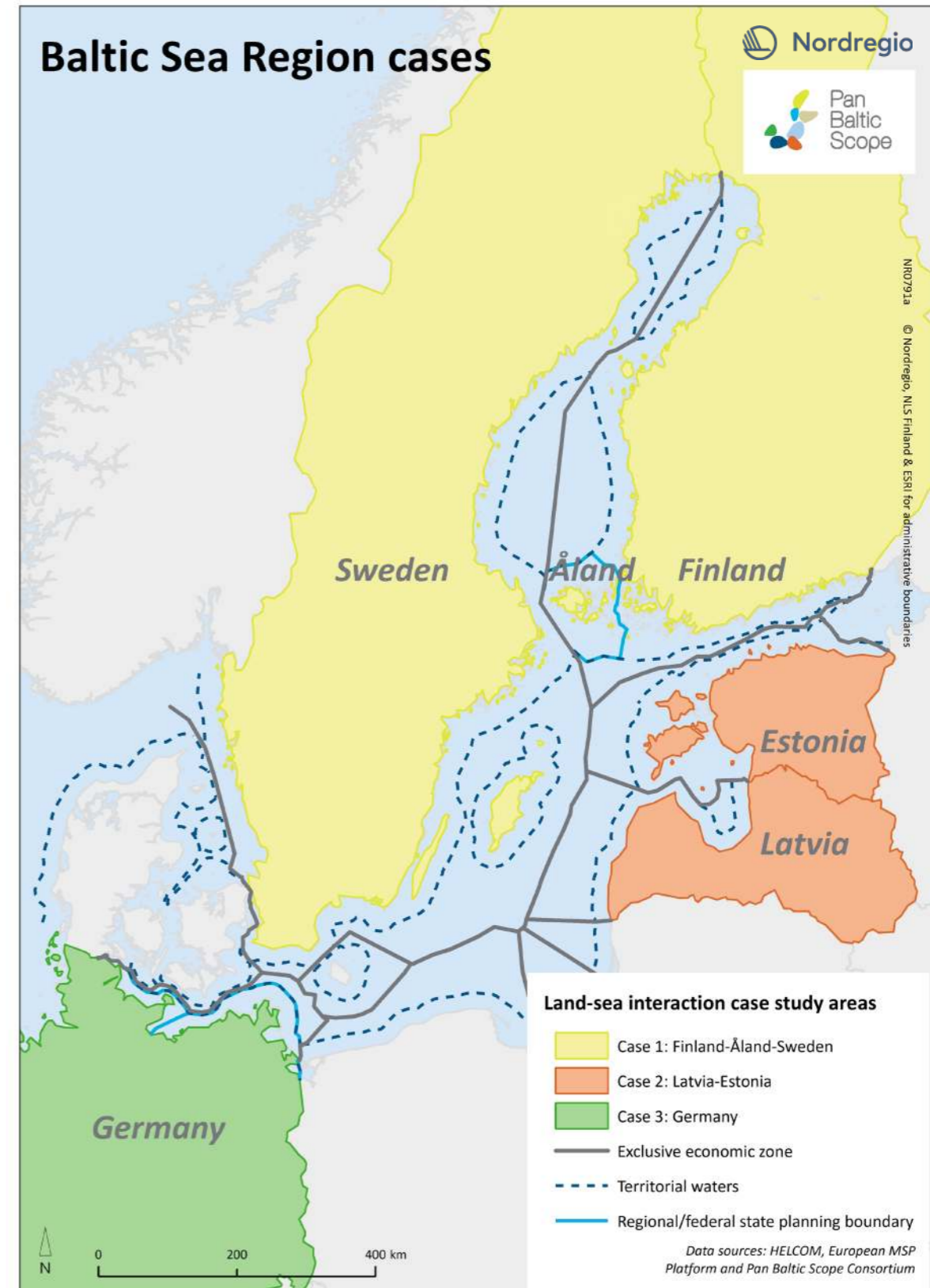
- The concept of land-sea interactions (LSI) is not entirely new. Nevertheless, its meaning is still unclear in a marine/maritime spatial planning (MSP) context, which has made it difficult to implement.
- With the MSP Directive of 2014, the European Union (EU) launched the concept formally for member states. Various EU projects have started to provide insights and ways ahead.
- Pan Baltic Scope has considered LSI from a practical, cross-border perspective. To be systematic, we propose thinking LSI in four dimensions, including 1) the social-ecological interactions, 2) the relevant governance frameworks, 3) the related governance processes, and 4) the necessary knowledge and methods to address them. This has to be done aware of both context, geographical scale and change over time.

## 1.1 What this report is about

The EU MSP Directive (2014) requires countries to include land sea interactions (LSI) in their marine spatial planning. However, talking to planners can result in two very different responses: an impatient “We have been doing this forever!” or “What is LSI and how do we do it?” Although this report mostly addresses those with question marks in their faces, it may still provide the impatient group with new insights on how they could also think about LSI. Its main target group are people working with spatial planning at the land-sea interface, irrespective of whether they are municipal, regional or national planners or other experts working in integrative management.

Presently, the nations surrounding the Baltic Sea are developing marine plans for their territorial waters and the exclusive economic zones (EEZ). As many marine uses affect land-based activities, processes and structures and vice versa, it makes sense to think of marine and land space together and to link marine and terrestrial planning. But this is easier said than done. Marine and terrestrial uses are diverse across countries and regions. There are different shore types and settlement structures, as well as different planning systems and associated processes and responsibilities. Moreover, with the exception of Germany and its federal states of Mecklenburg-Vorpommern and Schleswig-Holstein in the Baltic Sea, no Baltic Sea country has so far completed the full MSP cycle or created the necessary processes and knowledge for linking its sea and land-based planning systems.

**Figure 1-1: Land-sea interactions case study areas.**  
Map: Johanna Jokinen, Nordregio



Following on from Baltic SCOPE<sup>1</sup>, Pan Baltic Scope<sup>2</sup> is the second in a series of planning authority driven MSP projects in the Baltic Sea area. Financed by EU DG MARE (via EASME) and co-financed by the European Maritime and Fisheries Fund, it aimed to promote capacity development for cross-border collaboration and co-ordination of marine plans to facilitate the implementation of the EU Framework Directive on Maritime Spatial Planning (2014/89/EU). Pan Baltic Scope as a project, and in particular Work Package 1.3 “Integrating Land-Sea Interactions into MSP”, sought to explore and operationalise the concept of LSI through collaboration of the responsible national and sub-national planning authorities, supported by regional and knowledge organisations (HELCOM, VASAB, SYKE, NORDREGIO). At its heart is the development of a conceptual framework with four main dimensions of LSI, which are explored further in three case studies:

- 1) the Gulf of Bothnia shared between Finland (FI), Åland (AX) and Sweden (SE), focusing on cross-border MSP issues (FIAXSE) as well as the special case of coastal and marine areas between Åland and Satakunta (FIAX);
- 2) the Riga Bay shared between Latvia (LV) and Estonia (EE) which focused on local authority needs and opportunities for becoming involved in marine planning (LVEE case);
- 3) and Germany as an example of more advanced MSP (drawing on BaltSpace).

This synthesis report showcases stories, insights and lessons from countries at different stages of the planning process, and to present challenges and enablers for effective LSI in a range of cross-border contexts. In presenting our conclusions, we draw on qualitative and quantitative

data of various types, including literature study, interviews, surveys among project participants, observations of meetings, and facilitated discussions.

The collaborative mutual learning process enabled by the project has also resulted in further outputs, including a story map and guidelines for municipal planning in marine and coastal waters. The geographical focus of this synthesis report is on Sweden, Åland, Finland, Estonia, Latvia, and Germany, hoping that the insights presented here will also prove relevant to other regions.

Many stories that emerged in Pan Baltic Scope reveal the relevance of LSI to strategic planning on the coast and in the sea. The four examples in Box 1-1 illustrate that land-sea interactions are highly relevant both for land-based coastal planners and their marine colleagues. LSI imply a number of different dimensions that will be explored further and operationalised in this report.

As the concept of LSI has so far proven rather elusive, this report first describes its origins in the EU policy landscape and why it is considered important. Reference is made to recent literature and a first overall definition is provided. This is followed by chapter 2 which sets out how the project approached LSI in practice. Chapters 3-5 present the different cases in more detail, starting with their specific LSI issues and planning systems and then extracting case-specific challenges and enablers. Chapter 6 and 7 synthesise the challenges based on the countries’ experiences with LSI and stage in the MSP process. Chapter 8 provides general insights before concluding with concrete steps and recommendations on how to integrate LSI into MSP and an outlook.

<sup>1</sup> [www.balticscope.eu](http://www.balticscope.eu)  
<sup>2</sup> [www.panbalticscope.eu](http://www.panbalticscope.eu)

### Box 1-1: Why it is important to think LSI in planning

#### Offshore wind energy needs to be transported to land, sometimes across countries

Although offshore wind farms can be located a long way from the coast, they do bring with them a range of LSI issues. The most obvious is their grid connection, the infrastructure links from sea to land. In Germany, where administrative responsibilities are divided between the federal level (responsible for the EEZ) and the coastal states (responsible for territorial waters), this implies a multi-level approach as cables from wind farms in the EEZ need to cross territorial waters before arriving at connection points on land. Things become even more complex when thinking in larger renewable energy grids, e.g. connecting Germany and Sweden. Given that planning systems differ, with no way to plan for grid connection points in a standardised, predetermined manner in Sweden, this is a difficult international LSI challenge.

#### Maritime sector growth requires space in the sea and on land

A wind power stakeholder pointed out the importance of thinking across the land-sea interface in terms of future spatial and infrastructure needs. Renewable energy is a rapidly evolving sector that requires locations in the sea but also storage and assembling space in harbours with good transport links to production sites. Onshore space for storing, provisioning, and assembling is crucial for the long-term sustainability of many maritime sectors; however, due to the booming housing market in urban areas, many former customs harbours, shipyards and industrial areas close to city centres are being transformed into residential and office areas. Planning for offshore wind farming implies strategic sector-wide planning, while the strategic allocation of space and infrastructure onshore is the responsibilities of municipalities and regions who often plan for population growth. This is a multi-level governance challenge.

#### New maritime sectors can come into conflict with established sectors, affecting coastal communities

LSI can also be understood in terms of shifting or competing community values on the coast. Often, new and growing sectors (such as offshore wind) place pressure on traditional and declining sectors (such as small-scale

fishery), leading to value conflicts between sectors with very different types of LSI and LSI across sectors (e.g. offshore wind putting added pressure on a traditional but declining activity). In Finland, an offshore wind entrepreneur stated that in order to solve conflicts between wind power and coastal fisheries in the coastal zone of Finland, they could buy out the fishers by paying them 5,000 EUR to stop fishing in future offshore wind farming areas. This would put added pressure on the fishers, at a time when fisheries are already under multiple pressures and rapidly declining. Small-scale fisheries embody cultural heritage and traditional uses both for coastal communities and visiting tourists and possibly local production potential from a climate change resilience perspective; the LSI connection here is socio-economic and socio-cultural.

#### Capacity for cross-border and cross-boundary collaboration and stakeholder mobilisation

Although many human uses and environmental processes cross the land-sea boundary, this does not necessarily apply to authority mandates and management. In several countries (e.g. Germany, Finland, Sweden) regional or local planning has been in place for years, so the good news is that the respective authorities are mandated to act as coordinators. The problem is that mandates may not be with the same policy sector (e.g. SE environment, EE: finance, DK: shipping) or level of authorities across borders, leading to coordination challenges when trying to link up across the sea. This makes it difficult to deal with LSI from a governance perspective. There are a number of capacity issues, especially when marine planning has just started. Local authorities already have many tasks and are often not adequately staffed to deal with marine planning. Knowledge gaps surrounding specific LSI issues and administrative processes make it even more difficult to connect land and sea management in multi-level/multi sector administrative contexts. LSI in MSP is therefore not only a matter of identifying LSI issues, but also calls for adequate methods to govern space. Administrations need to be linked and their capacity developed to look across boundaries.

## 1.2 The evolution of LSI in its policy context

The concept of land-sea interactions has gained significance in Europe as a result of the EU Directive on Maritime Spatial Planning (2014/89/EU). Article 4 of the Directive states that “Member States shall take into account land-sea interactions” when establishing and implementing MSP, based on the understanding that marine and coastal activities are closely interrelated and that LSI are “important for promoting sustainable use of maritime space” (European Commission 2014/89 EU). However, the Directive does not provide any further interpretation or suggestion for how countries should take LSI into account, so operationalising Article 4 remains difficult. This is confirmed by a project survey (2018) among MSP practitioners covering all Baltic Sea countries except Lithuania and Russia, which indicated that the lack of a clear and common understanding of LSI was a major stumbling block for its integration in MSP.

Still, the idea of interactions between land and sea and considering them in planning is not new. It was an issue already in the 1990s through the global sustainable development discourse which pushed for integrated coastal and ocean management. Agenda 21 (chapter 17) calls for new approaches that are “integrated in content and are precautionary and anticipatory in ambit” (UNCED Rio 1992). The EU also began to promote so-called integrated coastal (zone) management (ICZM) in the late 1990s through a number of INTERREG projects, culminating in EU ICZM recommendations in 2002 (2002/413/EC).

Policy makers and researchers from many disciplines have engaged with various forms of integrated coastal and ocean

management (ICZM, ICOM, ICM) for decades. A wide body of good practice and experience surrounding ICZM has become available since the 1990s.

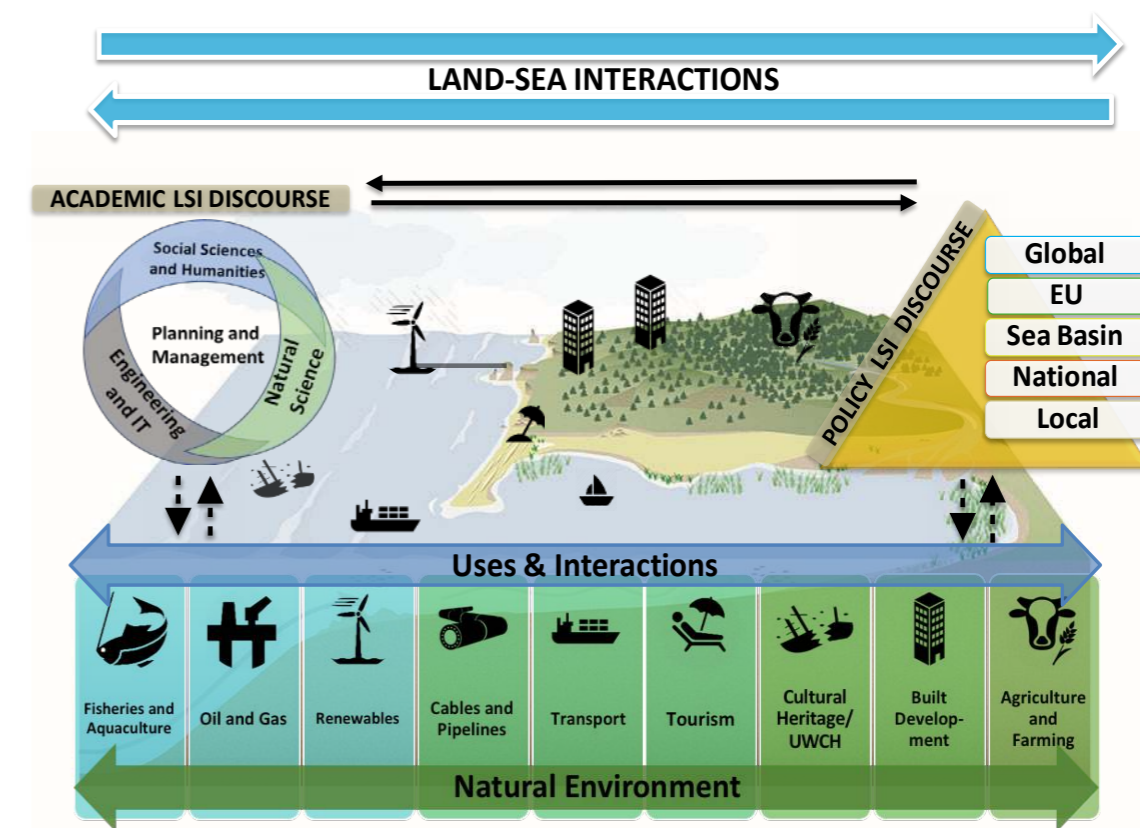
Given the long-standing experience with ICZM, one might ask why LSI is featured in the Directive at all. This goes back to a political compromise. The EU cannot tell its Member States how to plan in territorial waters, which became very clear in the 2013 review of a draft MSP Directive. Some countries, including Germany, Sweden and the UK, objected to a passage in the draft text that referred to ICZM. Their point was that ICZM is a national matter, and that any reference to it in a Directive would interfere with their sovereign rights over territorial waters. Thus, in the final Directive text of 2014, the passage on ICZM was removed and the text on LSI added instead. National sovereignty was emphasised, and existing coastal planning was recognised. Recital 17 of the Directive thus states “if Member States apply terrestrial planning to coastal waters or parts thereof, this Directive should not apply to those waters”. According to our literature analysis, at first, the scientific and policy discourses ran more separately; they have merged lately, also in connection with common MSP research and development initiatives through EU funding (Fig. 1-2).<sup>3</sup>

So, is LSI just another term for ICZM? The answer is yes and no. As stated above, the idea of land-sea interactions is not new, and neither is the idea of an integrated approach to management across the land-sea boundary. The new player is MSP, which encompasses territorial waters as well as the EEZ. Rather than integration per se, the challenge lies in linking the land to a new and still emerging way of (spatially) managing the ocean.

**Figure 1-2: Two merging discourses on land-sea interactions: an interdisciplinary academic and a multi-level policy discourse.**

At first, the discourses were separate, in different disciplines but presently there is increasing convergence also with the policy discourse.

Figure by Sarah Mahadeo & Andrea Morf, Nordregio.



<sup>3</sup> For our literature review in the Scoping Report, see Morf et al. 2019b, for further details, see Mahadeo 2018.

## 1.3 Understanding LSI

### Overarching questions

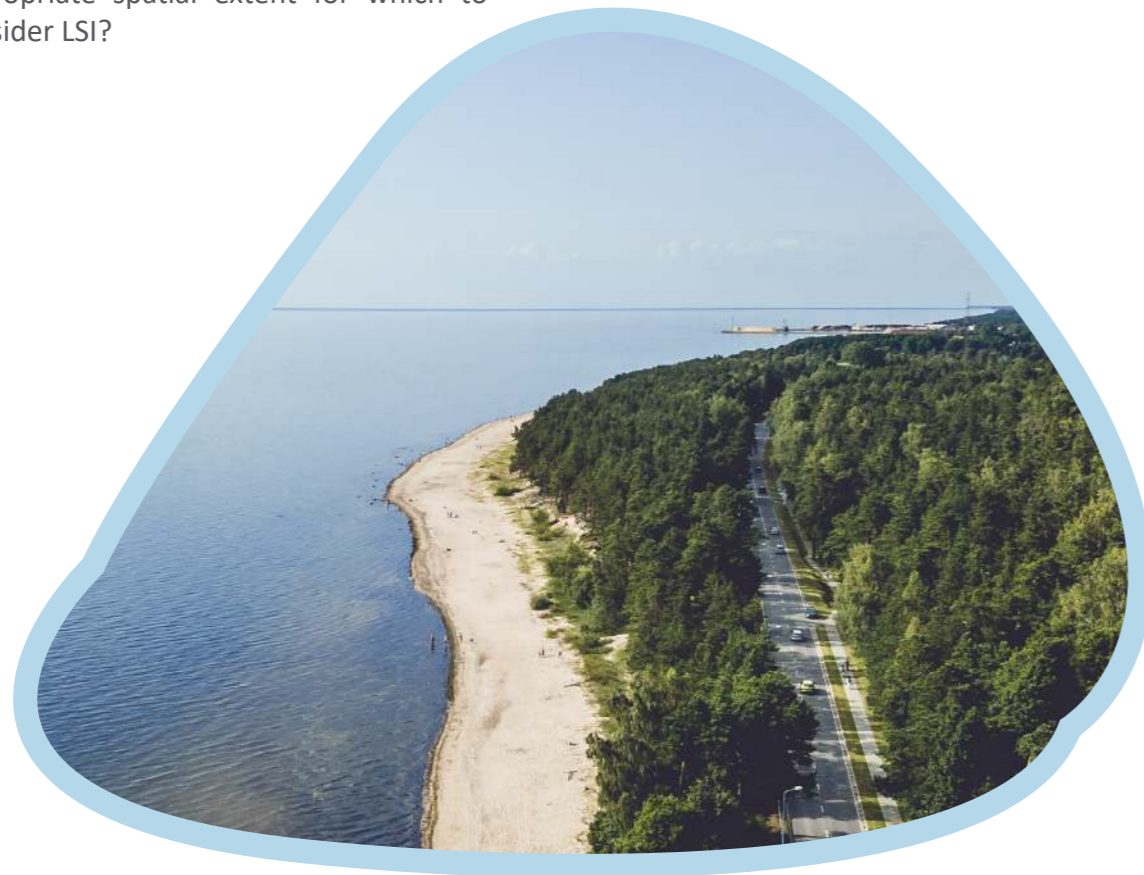
Based on the current state of knowledge and ongoing academic LSI discussions, three aspects need to be clarified in order to work with the concept of LSI in practice.

The first is what exactly is meant by LSI. This is not as easy as it may seem, as LSI has many names, ranging from “land-ocean interaction” to “terrestrial-marine interactions” and other variations (see also Morf et al. 2019a). What exactly are the interactions LSI describes?

The second is what geographical range LSI should encompass. Many terms are used to describe the spatial land-sea continuum, where land-sea interactions occur, e.g. the “land-sea interface”, “land-sea divide”, “coastal zone” or simply “the margin”, making it difficult to establish boundaries for LSI. As marine influences can extend far inland and vice versa, the spatial extent of land-sea interaction could potentially be huge. What is an appropriate spatial extent for which to consider LSI?

The third aspect, and most relevant for this synthesis report, is what can and should be done to manage these interactions. The practical complexities of managing LSI issues across administrative boundaries can be considerable, and there are many challenges in terms of the institutional and legislative arrangements involved, especially in cross-border contexts. What are the key challenges and enabling factors?

An added difficulty affecting all of the above is that places vary, and with them the interactions that might occur. The administrative systems that have already been put in place for terrestrial or coastal planning are also likely to vary widely. “Taking account of LSI” in the sense of the EU MSP Directive therefore means to bring together differing governance arrangements, in order to deal with a complex set of interrelationships that are context-specific and extend across multiple spatial dimensions.



### Insights from recent and current projects

A number of projects have recently been completed that help to elucidate the above. The most recent project, running in parallel to Pan Baltic Scope is the ESPON MSP-LSI project on maritime spatial planning and land-sea interactions.<sup>4</sup> It offers a comprehensive analysis of how LSI considerations can be defined and operationalised for the marine and terrestrial planning community.

Key achievements include greater conceptual clarity on LSI as well as a number of case studies designed to explore the landward impact of marine activities, e.g. by means of value chain analyses. LSI is described as involving “intricate and constantly shifting interconnections between socio-economic activities both in the sea and on land, with natural processes that span the land-sea interface”, and there is recognition that “the experience in both these dimensions is also influenced directly and indirectly by governance arrangements related to marine and terrestrial areas.” (Kidd et al., 2019:3)

Conceptually, the ESPON MSP-LSI project helps to make sense of LSI by unpacking it into four main elements: environmental LSI processes, human activities, and related opportunities and risks.

Processes encompass the various biogeochemical processes occurring across the land-sea divide – such as agricultural run-off reaching the sea via rivers (a land to sea interaction) or fish migrating upstream (a sea to land interaction). Fig. 1-3 summarises this as “interactions between natural bio-geo-chemical processes”.

Activities refers to relevant land-sea interactions in the socio-economic sphere, corresponding more or less to “interactions between socio-economic activities” shown in Fig. 1-3. They include physical infrastructure, such as cables and pipelines but also the jobs and income generated from blue sectors, or intangible land-sea connections, such as the role of the sea in mental well-being or in local sense of place.

In the ESPON MSP-LSI project, processes and activities are then linked to related opportunities and risks that manifest themselves both in the terrestrial and marine sphere. Whether an activity leads to opportunities, or whether the risks associated with an activity outweigh the opportunities depends on multiple factors, including the sustainability of the activity and the resilience of the environment.

Governance arrangements, stakeholder collaboration and knowledge and data availability play a key role in dealing with opportunities and risks. To bring together all of these factors, the ESPON MSP LSI project suggests “one space” territorial planning as a governance arrangement that encompasses both land and sea. “One space planning” could begin with LSI scoping as a useful first stage, discussing the nature of LSI with relevant stakeholders and identifying critical issues for a more detailed examination. Analysis of critical LSI dimensions and their relevance to MSP and terrestrial planning would then serve as a basis for concrete one space planning. The project also recognises the importance of a place sensitive approach, meaning there is no universal approach to identifying and managing LSI.

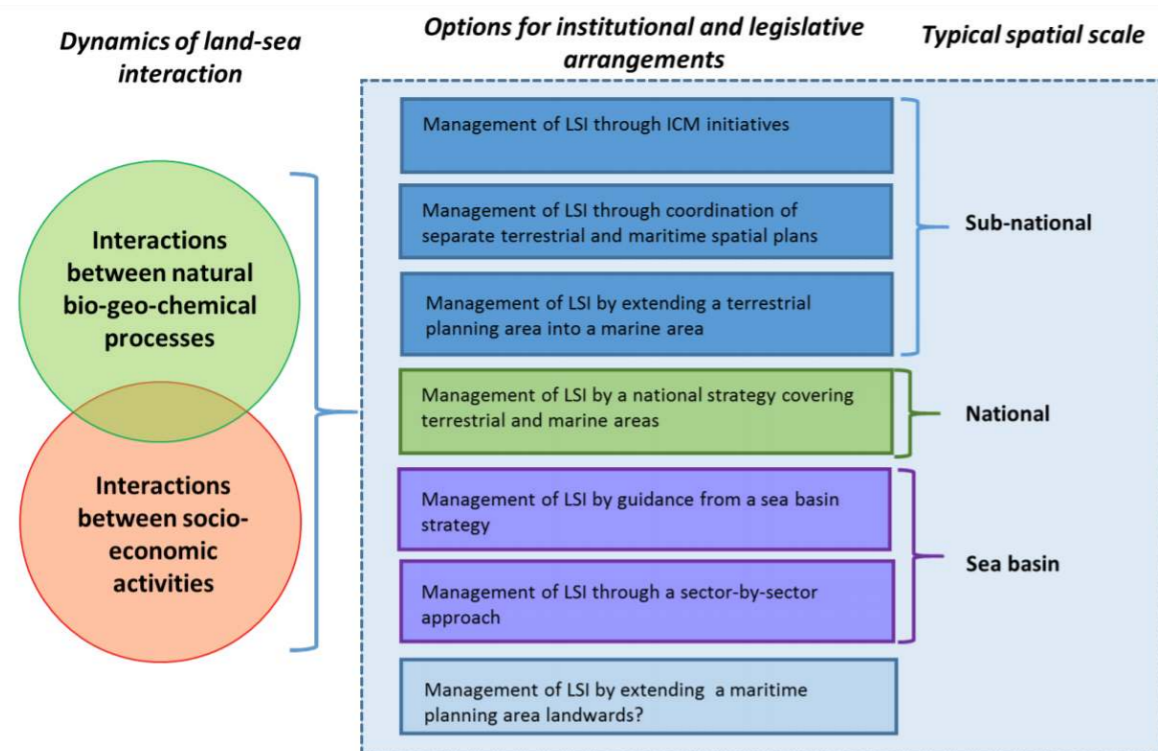
<sup>4</sup> Targeted Analysis MSP-LSI - Maritime spatial planning and land-sea interactions (<https://www.espon.eu/MSP-LSI>)

Further initiatives have contributed to analysing the “how” of LSI, in other words considered various governance and planning systems on land and in the sea. BONUS BALTSPEACE<sup>5</sup>, for example, investigated land-sea interactions through a spatial cost-benefit analysis of shipping and offshore wind farming in Germany and highlighted the locations where economic benefits from these sectors are realised onshore – often hundreds of kilometres from the seashore (Weig & Schultz-Zehden 2019). The COMPASS project<sup>6</sup> (Nadin et al 2018) analysed the planning systems in different European countries and considered coordination and cooperation needs across different levels of governance. It identified a total of 214 different planning instruments currently

in use across Europe – showcasing how great the diversity of systems is.

Last not least, a briefing paper published by DG MARE takes the dynamics of land-sea interaction as a starting point (Fig. 1-3, bearing in mind that the overlap between natural and socio-economic processes is probably larger than depicted). The particular value of this briefing paper is that it sets out various options for institutional and legislative arrangements that might be conceivable across various spatial scales. It highlights a range of opportunities for making existing institutional arrangements more connective across the land-sea interface, as well as options for a cross-border, sea basin wide approach (Fig. 1-3).

**Figure 1-3: Dynamics of land-sea interactions and options for institutional and legislative arrangements. (DG MARE, 2017)**



<sup>5</sup> www.baltspace.eu

<sup>6</sup> Comparative Analysis of Territorial Governance and Spatial Planning Systems in Europe. Land-sea interactions (<https://www.espon.eu/MSP-LSI>)

### Towards a definition and an analytical framework for LSI for Pan Baltic Scope

Many insights and aspects of the ESPON MSP-LSI project match the insights and the approach taken in Pan Baltic Scope. The added value of Pan Baltic Scope is its explicit cross-border focus. It is also directed at countries less experienced in MSP, focusing on actual challenges currently encountered with LSI and working through them in a problem based manner.

Although there is a danger of overthinking and overcomplicating the LSI concept, it soon became apparent that “land-sea interactions” may be more complex than the term suggests. From a planners’ perspective, working with LSI in MSP requires a more precise definition of what exactly is interacting - in what way, in what context and across which scales. It may make more sense to think in terms of locally specific LSI systems, which may be an offshore wind farming LSI system or a fisheries LSI system or a combined LSI system (see example 1). Like an ecosystem, each LSI system has its own spatial implications (e.g. areas in the sea suitable for an activity and spatial requirements on land). Each also has its own multi-level governance requirements encompassing sectoral and spatial governance at local, national and international levels.

In summary, the following emerge as important initial considerations for LSI:

- LSI is highly scale dependent, both in space and time, supporting the conclusions of Kidd and Jones (2017) and the ESPON MSP-LSI project. This is especially relevant for the Baltic Sea area, as LSI issues are highly dependent on local and regional conditions that can vary considerably.
- In the land and sea realms of the Baltic Sea area, there is a considerable diversity of multi-level institutional structures, both with respect to spatial planning and sector management that need to be considered.
- It is important to be aware of the relationships between and the context within which various actors (sector stakeholders, policy makers, experts and planners) operate.
- There is a need to better map and understand cross-sector interactions between land-based and maritime uses and activities.
- LSI may also encompass interactions between different institutions and spaces in the sea (e.g. territorial waters and the EEZ).
- Governance of land sea-interactions, especially when dealing with multiple LSI issues, also has specific process requirements, e.g. in terms of which stakeholders to include and which knowledge bases to draw on.



Our project-specific definition for LSI reflects these multiple dimensions and considerations (Box 1-2). The different dimensions are illustrated in figure 1-4. The green arrow represents the natural environment, the blue use interactions and the red integrated planning and management along the sea-land continuum. The grey arrows represent the interaction between these elements. The contextual factors are not included in the figure.

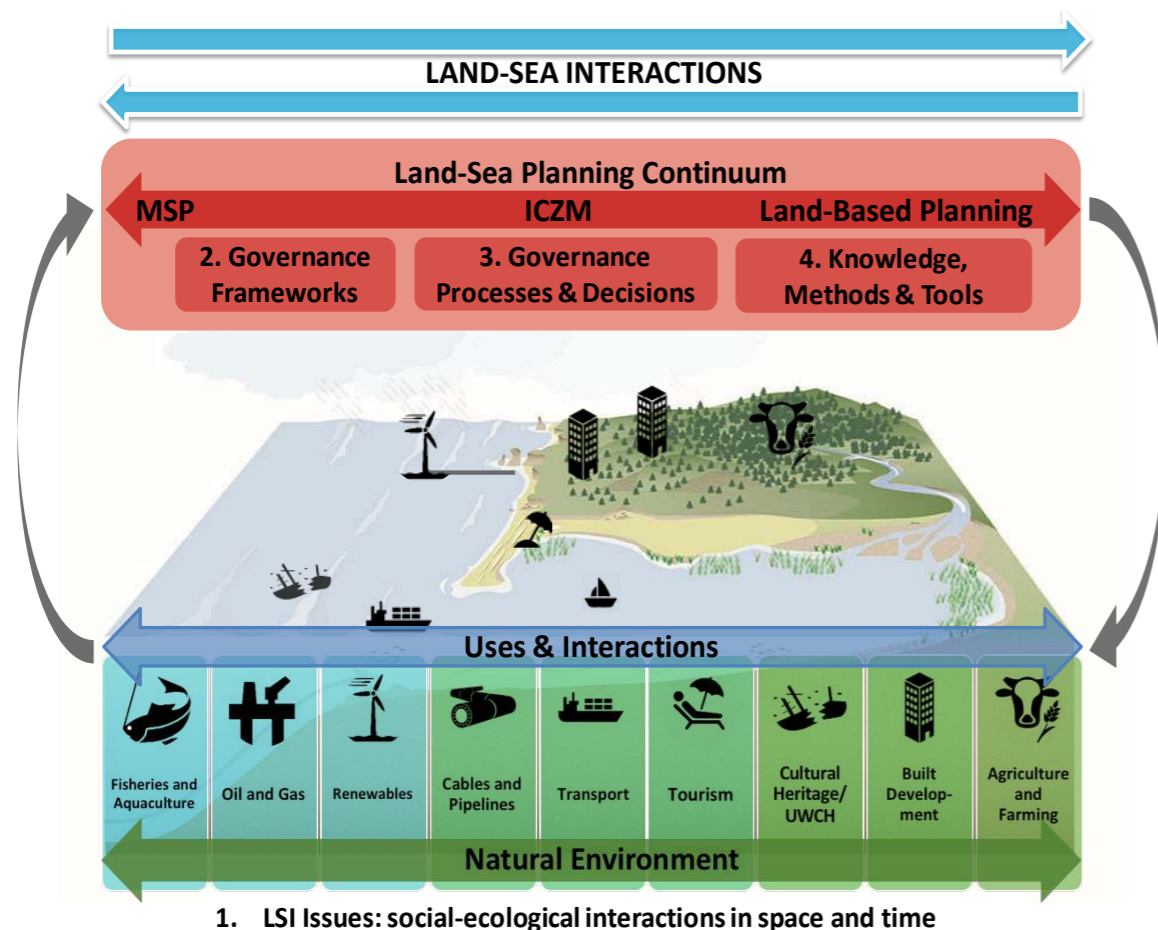
In parallel to the ESPON MSP-LSI project, the Pan Baltic Scope approach emphasises the land-sea planning continuum (“one space”) encompassing both MSP, ICZM and land-based planning. However, because we were working with initial LSI planning and across borders, there was a need to look more closely into four key

aspects that have proven to present different types of challenges, especially in cross-border MSP (see e.g. the Baltic SCOPE and BaltSpace experiences, Janßen et al 2018, Kull et al. 2017, Moodie et al. 2019). These are the governance structure, the planning process, stakeholder involvement and knowledge and methods needs. Understanding and addressing LSI issues systematically thus requires considering the four dimensions included here plus the relevant context shaping these (see Box 1-2).

So, how did we use the framework to drive ahead LSI thinking in Pan Baltic Scope concretely? The next four chapters first provide an overview of our cases and how we worked. Each case is then presented in more detail.

**Figure 1-4: A 4-dimensional visual framework for thinking about LSI including a land-sea planning continuum.**

Blue arrow: human induced land-sea interactions; green arrow: environmental processes; red arrow: planning and management action; grey arrows: influences between the blue-green land-sea interactions and the land-sea planning continuum managing them. Figure by Sarah Mahadeo & Andrea Morf, Nordregio.



**1. LSI Issues: social-ecological interactions in space and time**

**Box 1-2: The four main dimensions of a systematic land-sea interactions perspective for MSP/ICZM**

Our definition: The term land-sea interactions(s) in coastal and marine spatial planning encompasses all natural and human-induced flows and processes between marine and terrestrial environments in both directions, as well as how these interactions are perceived and managed by societies and their different actors through MSP and other governance frameworks and processes (i.e. authorities, enterprises, users, NGOs and what they do about these interactions).

**1. Uses and interactions with(in) the environment** (ESPON project: activities and processes): Considering the various sectors that shape marine space and the LSI issues arising from this. This bears in mind that all maritime sectors have LSI implications, although the nature of their LSI connections can differ quite substantially. For offshore wind farming, for example, important LSI issues include hardware such as cable connections, while for coastal and marine tourism, LSI issues may be more strongly related to aesthetics or coastal access or clean bathing water.

**2. Governance systems** managing different aspects of LSI, i.e. the institutional frameworks for managing spaces and sectors and how they interact (ideally across one space). This must bear in mind that planning in the sea is a relative newcomer that still has to find links to marine sector management at various levels, as well

as link up with coastal planning and wider spatial governance systems. The latter is a complex task as spatial governance systems have developed over decades and even centuries.

**3. Process management:** Organising the processes that manage LSI in such a way that the full range of relevant actors (users and other stakeholders) is included.

**4. Knowledge, methods and tools:** Ensuring the necessary knowledge is available for dealing with LSI issues, including the availability of methods to collect, process and integrate different types of knowledge. Knowledge not only includes data, but also awareness and management of uncertainties and knowledge gaps, as well as ongoing methodological development.

Moreover, contextual factors such as trends, societal values, or the history of a place can play an important role for how the four dimensions play out.



## 2. Approaching LSI in Pan Baltic Scope: the overall story

**“LSI is not a purpose in itself. It should be linked to what we want to achieve in our respective MSP process in the countries. It should be connected to overall MSP aim.” (Project Partner, 2019)**

**“There are a lot of good examples. Yes, we do need more. But there is not a complete lack of practices.” (Project Partner, 2019)**

- Pan Baltic Scope (PBS) focused on LSI issues that require a transboundary approach. It worked with case studies in different geographical areas and administrative settings, using a four-dimensional analytical framework as a basis.
- Many PBS countries are still new to MSP and many have not previously addressed LSI in MSP, or if so only in coastal planning not linked to the EEZ.
- The most important challenges of the Pan Baltic Scope work process included: agreeing on a common definition of LSI, finding ways to work across different planning stages and mandates, capacity constraints, and contacting and mobilising relevant stakeholders. Most could be resolved by developing a conceptual framework, taking an adaptive and learning approach in the various tasks, and taking the time to work with the issues

Pan Baltic Scope worked with both novice and more seasoned marine and coastal planners and used both old approaches and new methods. This chapter outlines the Pan Baltic Scope story, including the obstacles identified in the project and how we worked around them, as distilled from the Scoping report, Nordregio’s observations and the Lessons Learned surveys.

### 2.1 Pan Baltic Scope: the LSI working process

#### Scoping for LSI - towards an analytical framework

The overall working strategy was to start with a scoping phase for two parallel overall cases, one in the Gulf of Bothnia and one in Riga Bay. Approaching LSI based on different case studies in different marine and coastal planning contexts is key

as challenges, enablers and good practice differ across geographical boundaries, planning contexts and over time. The initial idea was for planners and researchers to discuss what LSI is or could be and what different partner priorities were in relation to LSI. It soon became clear that there was a long list of interests, interactions and issues in the case study areas, which first needed to be explored and then narrowed down. In parallel, a literature study on LSI comprising more than 270 texts was conducted, revealing a rather diverse discussion of LSI perspectives using many terms and definitions depending on the disciplinary context and policy area (Morf et al. 2019a).

In both working cases, planners agreed that it was important to gain a shared view of land-sea interactions as a concept and how it could be operationalised. For this, it was important to understand how each partner’s marine and coastal planning sys-

tems were addressing LSI. The planners in the different cases soon became aware that, due to different planning systems, stages and mandates, their needs and interests differed, which meant that concrete work with LSI might also have to differ. The scoping discussions also made clear that an LSI perspective needed to be multidimensional and aware of different geographical and institutional scales.

To serve as a basis for investigating LSI issues more systematically, Nordregio as the case leader developed a 4 + 1 dimensional analytical framework for LSI using the literature review, a thematic clustering of the topics raised in the scoping meetings, the first Lessons Learned survey and a special survey with focus on LSI among project partners (Fig. 1-3 and Morf et al. 2019a), also including knowledge from parallel LSI projects as far as possible. The framework was documented in a draft scoping report and discussed with case partners, the overall project and external project stakeholders.

### Identifying LSI issues and first related challenges to address - priorities and focus

A next step was to identify more concrete LSI issues so that detailed analysis could be made. The idea was to work on the issues from a practical perspective, as far as this is possible in a 2-year project. Planners identified the following challenges:

- How can we work across different governance systems and administrative levels with different approaches to marine space?
- How can we link MSP processes that might be at different stages of MSP across the land-sea interface?
- How can we build communication channels and planning processes that reach across borders, sectors, and levels, to include different stakeholders' needs, interests, and time frames in an efficient, fair and transparent way?

- How can we collect and compile different, often fragmented, knowledge of various types across borders and levels, and also address the related uncertainties?
- What methods are available to consistently map and analyse how activities on land affect the sea, and vice versa, and how can we evaluate whether MSP is achieving its goals?

These challenges are not new within cross-border MSP but re-emerge as central problems when considering them with LSI in mind. The challenges are even greater when the planning systems are still under development, as this implies unclear responsibilities and also lack of knowledge and capacity (Kull et al. 2017).

In the end, the scoping phase took almost one year, due to different views and needs of partners, and capacity constraints in the case studies (regular MSP had to continue in partner countries). Nevertheless, based on literature, project surveys and repeated group discussions facilitated by Nordregio, a first list of relevant LSI topics was drawn up. Although slightly different for both cases, depending on whether sandy shores or the archipelago and hard shores were included, it covered the following in both cases: blue growth and natural resource use in general, environmental quality and protection, energy, residency and recreation, transport and harbours.

To test combining existing onshore and marine data, Nordregio also developed an Excel-based data-sharing table for the LSI topics identified. This was linked to both Nordregio (an ESPON project on territorial monitoring, TeMo) and HELCOM data. It was used in mapping exercises and discussed in the socio-economic analysis group. However, it became clear that without concrete planning questions and a sector or planning authority driving an analysis, further data compilation would not be meaningful.

The 4+1 dimensional analytical framework for LSI (Fig. 1-3) was translated into questions for investigating LSI issues in the case studies (see also Box 8-1, chapter 8):

- 1. The LSI issues to plan for:** What are the key issues in each setting? Some of these are associated with specific geographic hotspots (see case descriptions).
- 2. Institutional aspects:** What planning systems and administrative settings need to be dealt with, and what challenges does this entail?
- 3. Process related aspects:** How can LSI be conceived of as part of the MSP process and who is to be involved?
- 4. Knowledge and methods-related aspects:** What knowledge and information is needed to successfully include LSI in MSP?
- 5. What relevant contextual factors and trends affect all of the above?**

To promote practical thinking about LSI in terms of problems and related solutions, a challenges-enablers perspective was adopted. To facilitate later compilation and comparison across cases and subcases, the mapping of insights was structured according to these dimensions.

### From general scoping towards concrete cases

The final Pan Baltic Scope case studies comprised two main cases with subcases:

- 1) The Gulf of Bothnia**, including coast and archipelago areas: a) the Gulf of Bothnia as a whole, focusing on identifying cross-border MSP issues and the development of a network of planners and marine stakeholders in the Gulf of Bothnia, and b) marine areas between Åland and Satakunta (FIAX), focusing on local stakeholder involvement, trust

and motivation, fisheries and aquaculture in connection with the ongoing Finnish and Ålandish MSP processes.

- 2) Riga Bay**, a large bay with predominantly sandy shores including larger islands, concentrating on the border municipality of Salacgrīva in Latvia, but also including other coastal municipalities in Latvia and Estonia as part of the wider project. The focus here was on local planning authority interests and their needs and opportunities related to planning in the coastal zone. Surveys and workshops with municipalities, and a pilot planning study were carried out in Salacgrīva with the aim of developing guidelines for coastal planning in municipalities. Here, the following topics were in focus: coastal recreation, nature protection, ports, pollution, real estate development and tourism, coastal erosion and energy.

A third case study was added based on work carried out in the previous BALTSPACE project:

- 3) Germany** as a country with divided administrative responsibilities for marine spatial planning, meaning LSI issues across geographical scales. Germany also has more experience with MSP and has entered the second planning loop, meaning that some LSI issues have already been addressed.

The three cases differ with respect to the LSI issues identified as relevant and the geographical and administrative setting. Most of them pick up on some of the institutional arrangements in figure 1-3. They are both complementary and interesting to compare. Table 2-1 provides an overview of the dimensions covered by each case. Chapters 3, 4 and 5 deepen these further.

**Table 2-1: Case overview**

| Case Dimension                                    | Chapter 3: Gulf of Bothnia  | Chapter 4: Riga Bay  | Chapter 5: Germany  |
|---|---|--|---|
| <b>1. LSI issues to plan</b>                      | Blue growth in the coastal zone & conflicts, e.g. fisheries, aquaculture, wind power, recreation, coastal communities, environment.   | Coastal recreation, nature protection, ports, pollution, real estate development and tourism, coastal erosion and energy.<br><br>Need to map and understand important interactions.  | Offshore wind farming, shipping, cables and pipelines, recreation and tourism, conservation, coastal protection, research.  |
| <b>2. Institutional aspects</b>                   | Different systems meet across borders, some including overlaps (SE, FI), others with adjacent responsibilities (AX).<br><br>Different status of MSP across borders but also across levels.<br><br>Institutions: Need to build up from scratch (AX), from existing (FI) or mobilise existing (SE). | Municipalities as key actors to consider LSI have so far limited experience and tools to plan in coastal/marine space. Latvian municipalities have recently received a planning mandate to 2km from the shoreline, Estonian municipalities haven't. Explore the needs of municipalities and how to interest and enable them. | Well-established federal system of multi-level governance in the sea (separate MSP in the EEZ and territorial waters, sectoral plan for offshore wind farm development across EEZ and territorial waters) 2nd round of MSP. |
| <b>3. Process related aspects</b>                 | Process needs to develop and trust to be built up - in AX from scratch and in FI building on regional governments.<br><br>In SE national planning almost done, whereas municipalities lag behind.   | Understand who should be included.<br><br>Need to enable municipalities to think across the land-sea boundary and borders. Map capacity development needs.<br><br>Enable international cross-border sharing and learning.  | Aligning federal and state MSP planning in terms of timescales, taking account of EEZ issues in state MSP plans, building LSI awareness among planners and stakeholders.  |
| <b>4. Knowledge &amp; methods related aspects</b> | Knowledge exchange across borders.<br><br>Basic mapping of needs and values for different sectors (especially the coastal ones).  | Map existing knowledge and knowledge needs for planning in the coastal zone.<br><br>Develop and enable knowledge exchange between national and local planning level.   | Understanding the constraints of the respective planning systems.   |

**Developing an LSI perspective - for the first time**

For most partners the main initial focus was less on identifying the actual issues and sectors, and diving into the interactions in detail (which comes later in a planning process) but rather on the following:

- a) to do some broader mapping of issues and understand what could be potentially relevant (planning pilot in Riga Bay);
- b) identifying and connecting the relevant institutions (Gulf of Bothnia cross-border collaboration network, Riga Bay case with focus on municipalities);
- c) creating the necessary contacts, networks and processes for this (Gulf of Bothnia cross-border collaboration network & Riga Bay cross-border and cross-municipal exchange);
- d) exchanging and assembling existing knowledge and starting to fill the most important knowledge gaps (Latvian planning pilot, Gulf of Bothnia case initial mapping and local knowledge collection);
- e) actual test planning (Salacgīva pilot done by a consultancy firm) and discussing with municipalities how they could become more engaged in coastal planning (Riga Bay case).

In an on-going MSP process, LSI-related work may not be main focus all the time. At times, it was difficult to separate general cross-border collaboration work (as part of another work package) from LSI-specific project work. So as to not get stuck, it was agreed that case work should continue with the interactive activities planned and that relevant LSI aspects - which seemed unpredictable in when and how they might arise - would be extracted afterwards through a process of reflection. This was done through updating the scoping report and a final updating of challenges and enablers extracted at the

outset of the project, after the case study activities had been concluded.

**Developing the LSI perspective further - project outcomes and beyond**

The outcomes from the Pan Baltic Scope cases can be found in this report, in a Story Map and a pilot study report on the Latvian-Estonian collaboration. Compared to Germany, where the internal system is already well aligned but there is less cross-border LSI experience, the two Pan Baltic Scope cases were faced with both the cross-border challenge and a need to establish their internal land-sea boundaries. In the two years of the project, they achieved the first successful steps, namely to interpret, adapt and integrate an LSI perspective into their respective planning systems and processes. They also established a network of contacts for further cross-border collaboration. Another indicator of success is a new cross-border project application building on the need to develop capacity, which involves new actors identified during Pan Baltic Scope. Both scoping and final results were also discussed at international expert workshops in Malmö (2018) and workshops 2 Engaging Local Actors and 7 Integrating Land, Sea and Society into MSP at the 3rd Baltic MSP Forum in Riga (2019).<sup>7</sup>

**Deepening the LSI perspective in the second planning cycle**

The German case provides an example of an early MSP and LSI adopter. It outlines the drivers for an LSI perspective in the country in the early 2000s and how a country can work around challenges in terms of institutional and process design. It also illustrates what challenges might remain over time or return at a later stage, especially when extending the LSI perspective across borders and marine basins.

<sup>7</sup> MSP Forum workshop 2 (<http://www.panbalticscope.eu/mspforum/workshop-session1/>) and workshop 7 (<http://www.panbalticscope.eu/mspforum/workshop-session3/>)

## 2.2 Working process related challenges and enablers

Below, important process related challenges and enablers are briefly presented and discussed.

**1. LSI as concept and approach:** Not surprisingly, at first, the different project partners had varying views on how important it was to deal with LSI and how this should be done. In the overall project, LSI proved to be a rather “unwieldy” perspective – either too broad and challenging or too normal and nothing new. Some partners felt LSI were obvious since ICZM was already part of their institutional system, or did not feel concerned as their responsibility was mainly in the EEZ. At the same time, the partner organisations who did sign up to the case studies went through a learning process and now see the value of an LSI perspective. Awareness of differences and the parallel need to find common grounds appears to have helped the planners in defining and exploring LSI. However, the differing responsibility for coastal planning and varying planning stages combined with time pressure and limited resources in the project, also created obstacles or weakened the drive to engage in more detailed work on LSI issues.

**2. Initial MSP development - complexity and gaps:** Early institutional development implies unclear mandates both for MSP and coastal planning and management and often also considerable data gaps, especially at the local level. This was first perceived as challenging, but then taken as a reason to “dive” into the details, e.g. in the Gulf of Bothnia case starting a local mapping exercise on important places and potential conflict areas in the sea. Here, the planners had to do everything at once: establishing authority contacts across bor-

ders, contact stakeholders and build trust, collect data and analyse conflicts to produce planning evidence and reflecting on how to approach different stakeholders to include their knowledge, including the mostly unaware local marine users and their needs and views. With an LSI perspective, known data gaps and quality issues become more challenging as even more types of knowledge are needed. “More capacity building for regional and local authorities and stakeholders to participate in MSP and engage across borders” is needed, as a survey respondent put it (2019).

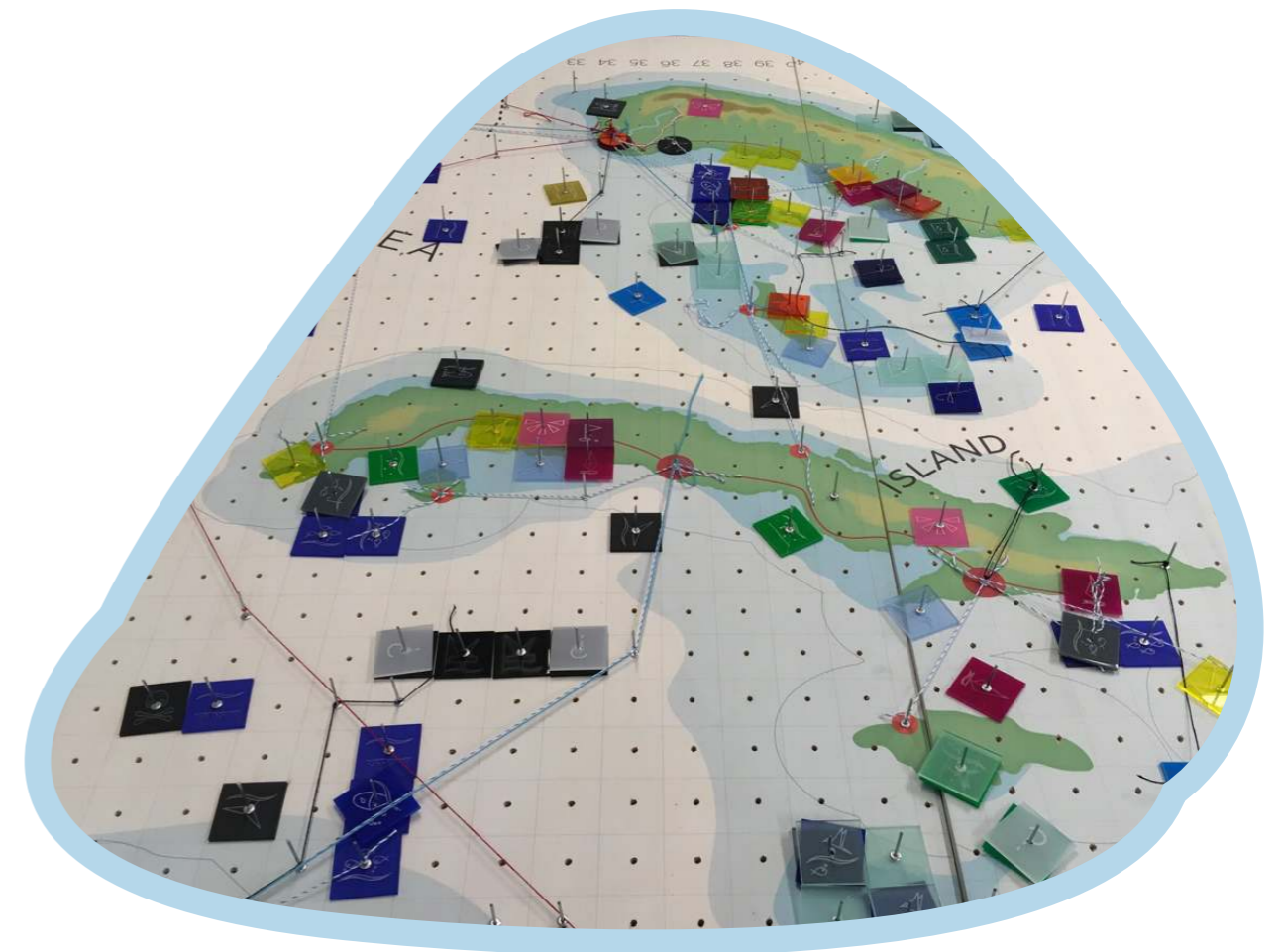
**3. Finding common grounds for LSI work:** While there was an agreement that a common definition was needed, it was slightly more difficult to find common ground for concrete transboundary planning for the partner organisations. This had to do with the mandate of those involved in the project, but also with the topics themselves. Extending the scoping phase was a first measure, followed by the delimitation of subcases and different intensities of partner involvement, adapted to partner interest and their capacity to contribute.

**4. Capacity and time:** A further challenge were capacity limits especially for authorities developing MSP during the project and with only few employees. Enablers have been resources to employ extra capacity, flexibility and readiness to help each other, adaptive process planning, regular communication and adjustment towards realistic targets. “Vulnerability/stress within the project due to too many activities that very few or one single person was supposed to participate in” and “Too many activities in too short a period (process based development work and network development needs to take time)”, as formulated by a survey respondent (2019).

**5. Mobilisation and contacts:** In both cases, it became clear that many cross-boundary issues and sectors lack contacts and networks and therefore are unaware of each others’ perspectives, both across sectors and levels. The Gulf of Bothnia case sought to address this with a number of local “stakeholder collision” exercises and with three larger cross-border “public meetings”. It was difficult to recruit participants from Swedish municipalities, and sector stakeholders still need to meet and understand each other and also understand power differences and implications across the land-sea boundary (Public Cross-border Meeting, 2019g). “Issues of interest for the stake-

holders”, “good facilitation skills”, “Closeness (meeting people where they are)”, “Speaking the language” were key issues raised (Survey respondents, 2019). Moreover, other events competed for the time of potential participants. Still, over time the network grew slowly.

This has been the overall story. In the following three chapters we present the LSI stories from our three cases. For a comparative overview on the respective national planning systems and MSP status, see tables 1-3 in the Appendix.





### 3. Cross-level and cross-border LSI in the Gulf of Bothnia

**“The interaction between [national] maritime spatial plans and [municipal and regional] comprehensive plans is important for the connection between sea and land to work well.” (SwAM, 2019: 29)**

- The Gulf of Bothnia case encompasses two subcases: a) the Gulf of Bothnia involving Finland, Åland and Sweden, focusing on cross-border collaboration and LSI issues, and b) FIAX including Finland and Åland focusing on involving local stakeholders in starting MSP. LSI was a concurrent, complementary perspective in both. The respective planning systems are very different in design.
- Important challenges included processes and uses that needed addressing across borders and the land-sea interface, the highly different and partially still developing institutional system (with the question on how to engender a multi-level cross-border approach) and to identify, connect and activate numerous local and regional and national stakeholders across borders and build trust among them.
- Enablers include conceptual clarification and practical case work, better mutual understanding of planning systems, development of cross-border and cross-level contacts to start sharing knowledge and improve coordination, building trust through direct contacts and the possibility to share knowledge.

#### 3.1 Case study objectives and approach

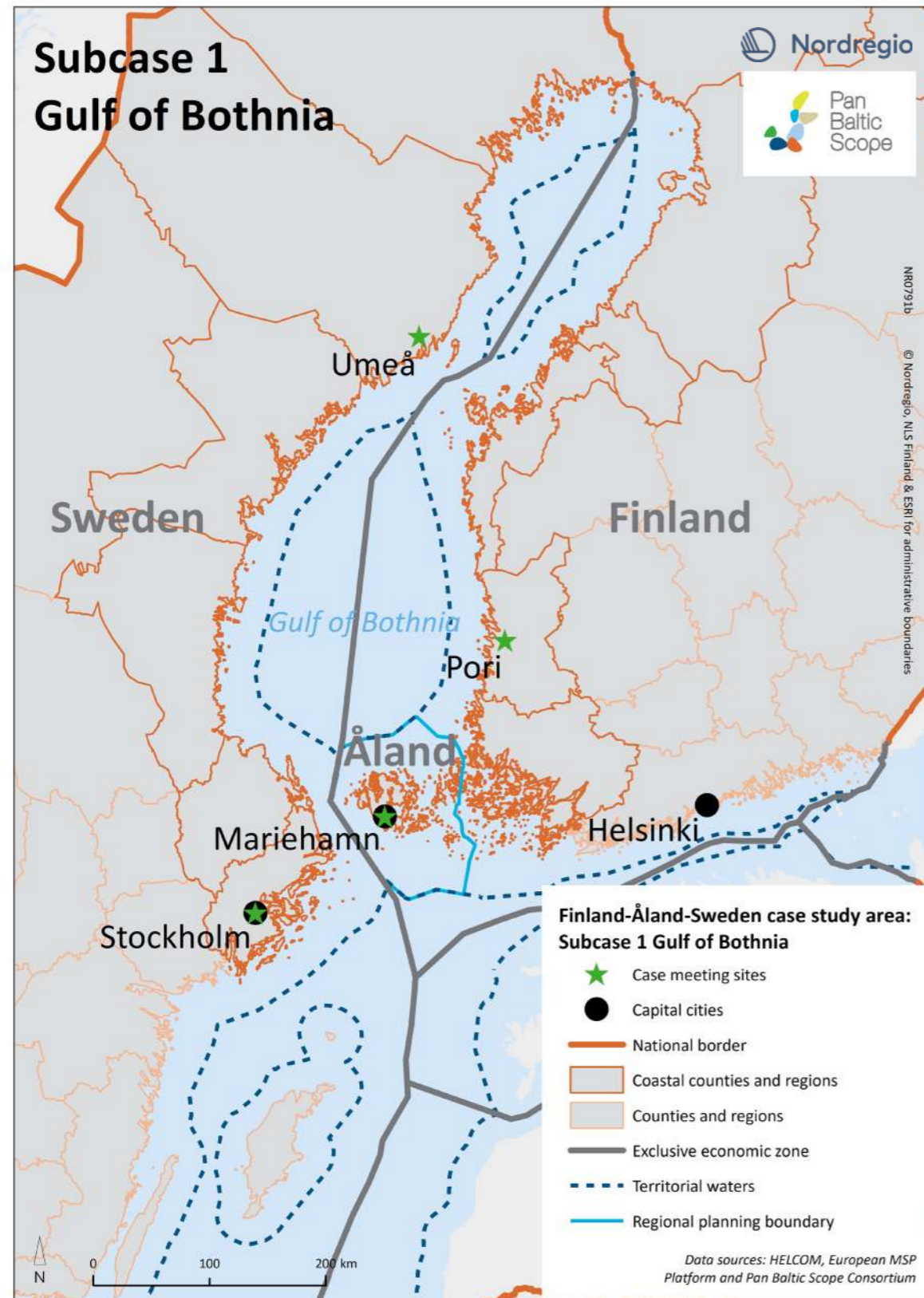
The case covered three different MSP systems in Finland, Åland and Sweden and their different embedding of LSI issues. The case partners included the Government of Åland (GoA), the Finnish Regional Council of Satakunta (RCS) and the Swedish Agency for Marine and Water Management (SwAM). The Gulf of Bothnia as an overall geographical setting encompassed an overarching subcase in the Gulf of Bothnia (focusing on cross-border networking amongst all three areas) and a subcase engaging local stakeholders and bottom-up MSP practices in the waters between Åland and the Region of Satakunta.

For further information on the case, see the Story Map<sup>8</sup>.

In Finland and Sweden and the autonomous region of Åland, the mandates and responsibilities for MSP are distributed differently across governmental levels. The legal status of the plans differs too. Finnish MSP is based at regional level, with the Regional Councils responsible for guiding marine planning both in territorial waters and the EEZ and binding regional land use planning in the territorial waters. On Åland, the municipalities are responsible for land-use planning, whereas the Government of Åland plans the sea (guiding, not binding). In Sweden, national MSP (guiding plans with possibilities to be binding) overlaps by 11 nautical miles (NM) with municipal planning in the outer territorial water zone (guiding and binding plans). These overall variations in responsibilities and plan types combined with differences in ownership rights make an interesting setting for cross-border case work on LSI in MSP.

<sup>8</sup> <https://aland.maps.arcgis.com/apps/Cascade/index.html?appid=e0f5913e7ab1415983db739abf0cdaad>

**Figure 3-1: The Finland-Åland-Sweden case study area: Subcase 1, Gulf of Bothnia.**  
Map: Johanna Jokinen, Nordregio



In Finland and Sweden and the autonomous region of Åland, the mandates and responsibilities for MSP are distributed differently across governmental levels. The legal status of the plans differs too. Finnish MSP is based at the regional level, with the Regional Councils responsible for guiding marine planning both in territorial waters and the EEZ and binding regional land use planning in the territorial waters. On Åland, the municipalities are responsible for land-use planning, whereas the Government of Åland plans the sea (guiding, not binding). In Sweden, national MSP (guiding plans with possibilities to be binding) overlaps with municipal planning by 11 nautical miles in the outer territorial waters (guiding and binding plans). These varying responsibilities and plan types, combined with differences in ownership rights make for an interesting setting for cross-border case work on LSI in MSP.

The Finland-Åland-Sweden case implied combining LSI and cross-border collaboration<sup>8</sup>, taking an interactive, process oriented approach. The three partner institutions were also at different stages of MSP development (see institutional challenges) with differing interests and needs in relation to how to work with LSI and across borders. Still, it was possible to identify common challenges to work on, such as a common definition

and operationalisation of LSI and that LSI required work across jurisdictional boundaries and levels of governance. Moreover, there was a common need for cross-level and cross-border knowledge exchange and stakeholder involvement.

Initially, the case study partners scoped for three different subcases, each with specific geographical scope, aims and questions.<sup>9</sup> Differences in LSI priorities, different planning systems and mandates (EEZ and territorial waters) and the differing MSP status in the countries (with Sweden ahead), as well as only few cross-border LSI linkages all the way down to the local level, ultimately led to only two main cases being delimited.<sup>10</sup>

**Subcase 1 Gulf of Bothnia Finland-Åland-Sweden** aimed at developing contacts and building a cross-border and cross-level network among planning authorities and stakeholder groups at different levels to promote knowledge exchange, coordination and collaboration for MSP and ICZM in the Gulf of Bothnia. The overall cross-border process implied three public meetings in interactive workshop form, each of which had a different thematic focus. Each was targeted at national, regional and local authorities, sector experts and researchers as well as, depending on the topic, marine user representatives within aquaculture, fisheries and energy production (Box/Fig. 3-1).

<sup>9</sup> As part of Pan Baltic Scope Work Package 1.1 Cross-border Collaboration and Consultation to Support National MSP-processes.

<sup>10</sup> 1) "PanBothnia" aiming to increase awareness and knowledge of cross-border issues/needs/conflicts/limits to better understand how collaboration between nations can increase the value of planning in the Gulf of Bothnia. 2) "Coast to Coast", scoping on common needs for regional and local sustainable development within e.g., transportation, tourism, energy, shipping, fisheries, aquaculture, as well as environmental protection and cultural heritage in the Bothnian Sea. 3) "Stakeholder collision to support collaboration" with focus on how involving local-level stakeholders can affect MSP processes and how social barriers between authorities and stakeholders are affected by such involvement.

<sup>11</sup> The Coast to Coast case turned into a parallel project of its own called "Three Archipelagos", driven outside of Pan Baltic Scope, partially including Pan Baltic Scope actors. For more information: <https://treskargardar.com/>

**Subcase 2 Finland-Åland (FIAX)**, implied cross-border interaction in the marine and coastal waters between Åland and the Region of Satakunta. With both Finland and Åland starting their MSP, it was important to establish contacts with coastal users, build relations and trust and map their needs. This was done through digital surveys and direct meetings in both partner areas. Planners met fish-related stakeholders (i.e. fishers, fish farmers and fish tourism entrepreneurs) locally face-to-face to raise awareness of ongoing MSP, to establish their needs and to share knowledge. Moreover, an electronic survey and

a digital mapping tool (participatory GIS) were used, to facilitate simple and effective knowledge sharing. This targeted a broader audience to collect local and regional level knowledge about meaningful places and processes in the coastal and sea area. It also identified user needs and potential conflict areas (Fig. 3-2).

The results on the two subcases were integrated into a common Story Map<sup>12</sup>, the present report, a list of recommendations for integrating Land-Sea Interactions in MSP<sup>13</sup>, and a section in the Pan Baltic Scope Lessons Learned report.

### Box 3-1: Workshops of the Gulf of Bothnia subcase

**Public cross-border meeting I, Åland (2018)** “Blue economy in the Gulf of Bothnia”: established contacts, mapped marine uses and interests in the Bothnian Bay, Kvarken and the archipelago sea based on sector experts (science, administration) and marine and coastal planners. Discussed a siting tool for aquaculture in the Finnish archipelago.

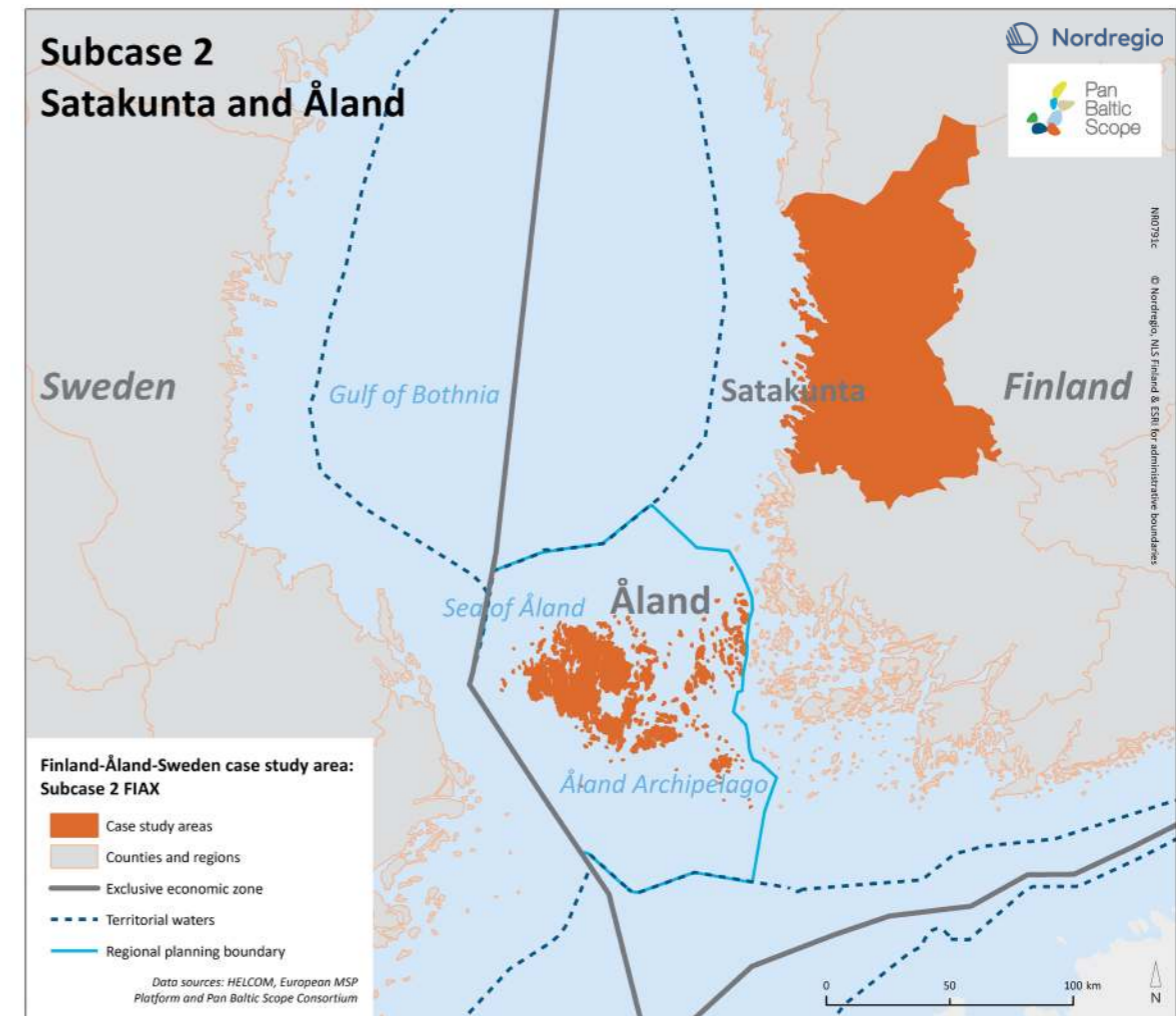
**Public cross-border meeting II, Sweden (2019)** “When fishing and energy meet in the Gulf of Bothnia”: focused on Blue Growth and explored trends, needs and linkages of fisheries and offshore wind energy across the Gulf of

Bothnia. The meeting mapped cross-border contacts for a network map and tested a spatial decision making tool.

**Public cross-border meeting III, Finland (2019)** “Stakeholder involvement and building networks”: dealt with collaborative governance and stakeholder involvement with special focus on coastal communities and fisheries. Also complemented a network map.

For more information, see: <http://www.panbalticscope.eu/category/finland-aland-sweden-case/>

**Figure 3-2: Finland-Åland case study area: Subcase 2 Satakunta and Åland.**  
Map: Johanna Jokinen, Nordregio



<sup>12</sup> As a report for the Pan Baltic Scope Activity 1.1.5 (Finland-Åland-Sweden case): <http://www.panbalticscope.eu/activities/cross-border-collaboration-and-consultation-to-support-national-msp-processes/finland-aland-sweden-case/>.

<sup>13</sup> For the Pan Baltic Scope Activity 1.3 Integrating Land-sea Interaction into MSP.



### 3.2 Different institutional systems and planning stages and LSI

An overview on the institutional frameworks can be found in the cross-country table in the appendix.

#### Finland: new EEZ-MSP – overlapping system and mandates at the regional level

**Structure and responsibilities:** In Finland, all three institutional tiers are involved in the MSP process, but the actual plans are drafted at the regional and local level, guided by a national coordination group to ensure coherence across marine planning areas. The eight coastal Regional Councils leading the development of the new maritime plans are politically guided regional coalitions of municipalities, also responsible for regional land use planning and regional development programmes related to national objectives and EU structural funds. Finnish MSP applies without distinction to territorial waters and Exclusive Economic Zone (EEZ) (Fig. 3-3). Planning in the EEZ is new in Finland,

while regional level land-use planning provides planning structures, competence and planning evidence in territorial waters, although the current format does not directly support MSP. The planning system is hierarchically nested, with regional plans legally guiding municipal planning in coastal areas and territorial waters (i.e. Comprehensive Master Plans and Detailed Development Plans). Thus, MSP overlaps with and complements regional and municipal planning in territorial and onshore waters. On a national basis, the National Land-Use Guidelines (approved by the Finnish Government) ensure that national interests are accounted for in regional and municipal planning.

**Status:** Three non-binding maritime spatial plans for territorial waters and the EEZ are presently being drafted by the regional councils, guided by the national coordination group. A public consultation on draft scenarios was conducted in 2019. The plans will be finalised in 2020 and are expected to be approved by the regional councils by March 2021.

Figure 3-3: Planning system and boundaries for coastal and MSP in Finland, provided by the Finnish MSP Coordination.

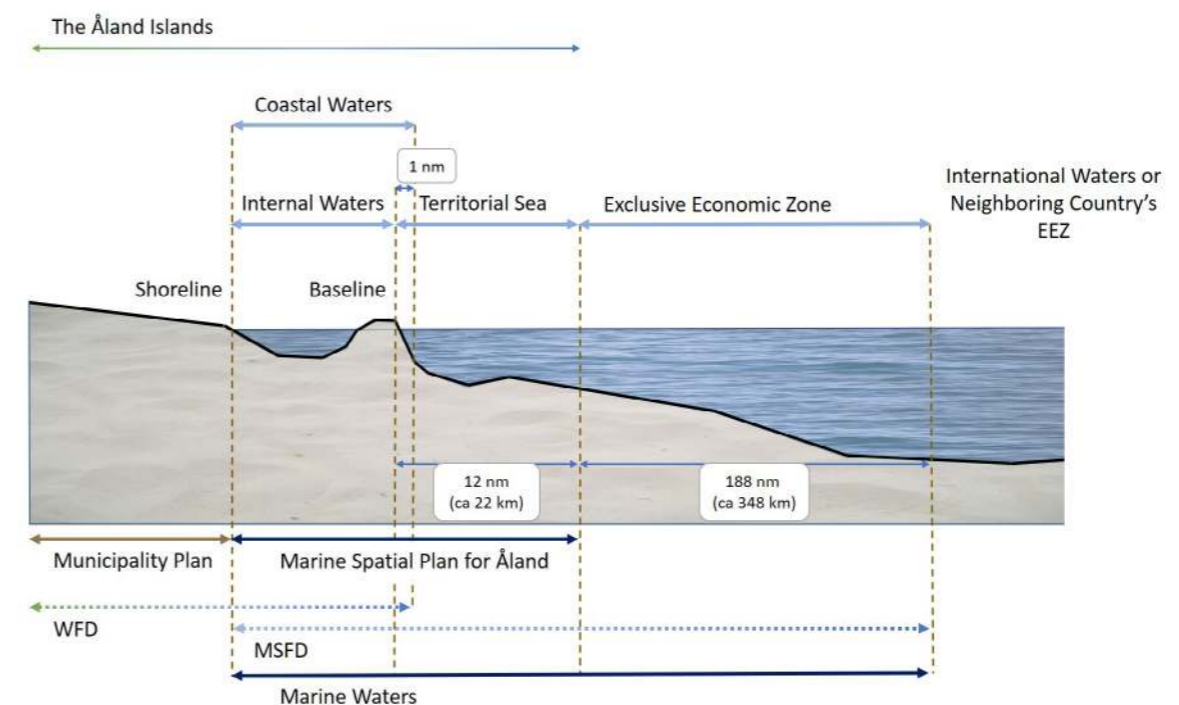


**Planning for land-sea interactions:** LSI is understood as a broader term, comprising human activities and natural processes with two-way connections between land and sea. The particular topics and issues differ regionally. However, e.g. regional development and blue growth as well as marine transport, ports and nature conservation are broad and general LSI themes (Interaction Plan for MSP). The Regional Councils are responsible for integrating LSI into planning and the LSI issues are defined together with regional and local-level stakeholders in workshops, face-to-face meetings and with participatory GIS methods. Here, regional strategies and development plans are particularly important (European Commission, 2019a). Common practice is to assess possible impacts, e.g. cumulative impacts of planned activities on the marine environment or how they restrict other uses. Impact assessment is integrated within land-use planning which also covers territorial waters.

#### Åland: new MSP in territorial waters adjacent to municipal land planning

Based on the Autonomy Act, the Government of Åland has the mandate to plan its territory, similar to mainland Finland. According to amendments of the Water Act of Åland, the maritime spatial plan is to cover the territorial sea, from the shoreline outwards to the inner borders of the Finnish EEZ, the Swedish EEZ, and the Swedish territorial sea. As Åland is a self-governed region of Finland, MSP can be considered equivalent to national level planning. The Government of Åland (GoA) is responsible for planning the sea area (from the shoreline outwards) whereas the municipalities are responsible for planning onshore (Fig. 3-4). The maritime spatial plans will have a guiding status, although there have been discussions to make the plan legally binding for publicly owned waters, which are mainly situated in the outer archipelago.

Figure 3-4: Planning system and boundaries for coastal and MSP in Åland, provided by the Government of Åland.



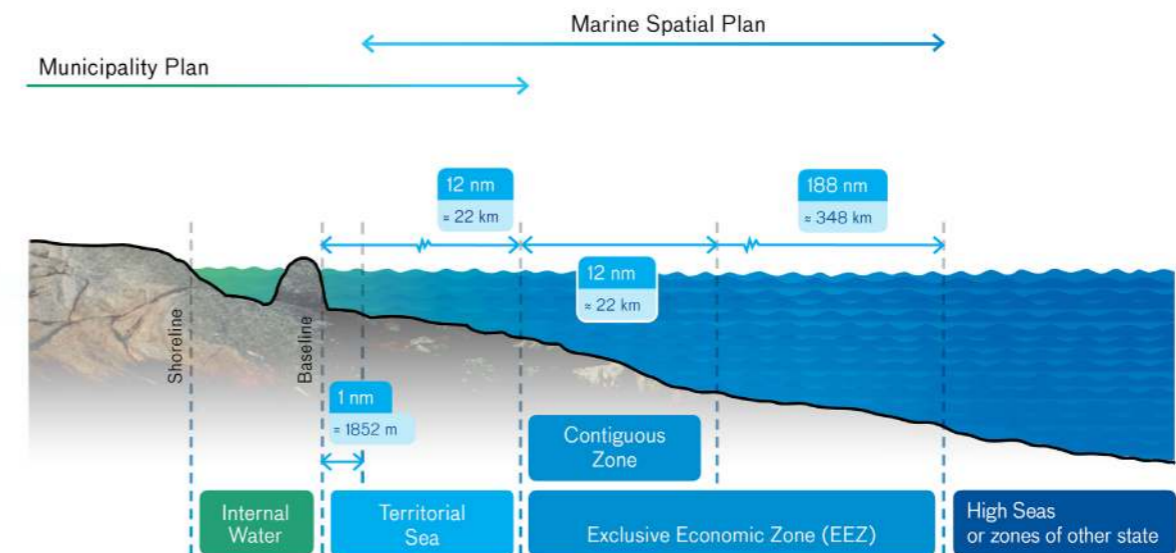
**Status:** MSP is new on Åland, making a first attempt to provide integrated use recommendations for all sea areas at once. A draft plan is under preparation and the first public hearings on a status report were held in 2019.

**Planning for land-sea interactions:** According to the amended Water Act, land-sea interactions need to be considered in MSP. There is also so-called physical structural development<sup>14</sup>, which does not overlap with sea use planning. The following issues are relevant for MSP in general: energy, material extraction, maritime transport, cables and pipelines, fisheries, aquacultures, tourism, recreation, maritime cultural heritage, environmental and nature protection. The themes of climate change and ecosystem services are also mentioned in the Åland Islands Water Act (1996:61), and have potential implications for an LSI perspective. Many activities have direct or indirect impacts on coastal areas. Here, closer collaboration between government and municipalities is needed to promote sustainable and ecologically effective uses on land and at sea, especially for those with implications across the land-sea boundary. Even though the municipalities of Åland have no mandate to plan the sea, they plan activities and infrastructure on the shore, such as piers, marinas, docks, and beaches. The municipalities can also contribute to MSP by posting requests on topics and future development needs as well as by comments during public consultation periods, as any other stakeholders. LSI are a key part of daily life in the archipelago and should be considered as inherent in overall MSP (Project Partner, 2019).

### Sweden: new national MSP overlapping with established municipal planning

**Structure and responsibilities:** In Sweden, responsibility for MSP is located at the national level with the Swedish Agency for Marine and Water Management (SwAM) as the competent authority. According to the Swedish Environmental Code, three national plans are to be developed (Gulf of Bothnia, the Baltic Sea and the Western Waters or Skagerrak/Kattegat), encompassing both EEZ and territorial waters one nautical mile seaward from the baseline. The national plans are to promote a comprehensive sustainable management of all sea uses, guide sector decision making (e.g. licensing) at different levels and municipal spatial planning. The plans are guiding, unless the Government issues binding regulations to limit activities in specific areas. In the territorial waters there is an overlap by 11 NM with the comprehensive planning of 65 coastal municipalities (Fig. 3-5). According to the Planning and Building Act, municipalities have the mandate to plan both land and water territory. Municipal comprehensive plans are guiding and cover both internal waters and territorial sea out to 12 NM. There are binding instruments as well, but so far they have not been widely used in the water. The County Administrative Boards (CAB), national authorities at regional scale, have a key coordination and enabling role, by coordinating national, local and in some cases regional planning. They also guide and support municipal spatial planning, coordinate across municipal borders and monitor that national interests are taken into account.

**Figure 3-5: Planning system and boundaries for coastal and MSP in Sweden, provided by the Swedish Agency for Marine and Water Management.**



**Status:** National marine spatial plan proposals for the marine basins and related strategic impact assessments have undergone a final public review in spring 2019 and are expected to be submitted to the Swedish government by the end of 2019.

**Planning for land-sea interactions:** “The interaction between [national] marine spatial plans and [municipal and regional] comprehensive plans is important for the connection between sea and land to work well. Comprehensive plans are important for showing local and regional considerations and claims that may be relevant to MSP.” (SwAM, 2019: 29).

Swedish planning does not have a specifically formalised approach to LSI. The national approach to MSP aims at a systems perspective, aware that most uses also can imply LSI aspects. Here, the overlap of national MSP with municipal coastal planning is emphasised as ensuring a “planning continuum”. In combination with the facilitation through the CABs this is seen as a

key to coordinate planning across both the land-sea boundary and institutional levels (Swedish Project Partner, 2019).

For the knowledge base, besides taking into account studies and literature covering preconditions on sea and land, SwAM also supported interested coastal municipalities in individual and shared projects to plan in coastal and territorial waters (County Administrative Boards, 2019a). Planning evidence was enhanced in coastal waters of the participating municipalities, but many municipalities have not come much further yet. The Swedish MSP process used both informal and formal review steps to collect municipal input. A spatial decision tool “Symphony” allows assessing cumulative environmental impacts of different planning options in the sea, also including land-based pressures such as eutrophication and pollution. However, the sea-land perspective is still under development - both in terms of methods, analyses and available data.

<sup>14</sup> <https://www.regeringen.ax/hallbar-utveckling/fysiskstrukturutveckling>

### 3.3 Challenges and enablers identified through case work

#### Sectors and planning issues with LSI implications

Scoping and case work identified a number of shared planning issues to address in territorial waters as well as the EEZ. Issues and sectors with strong crossborder implications and conflict potential included offshore wind power, fisheries and shipping, with varying LSI linkages at different levels and scales. In territorial waters and coastal and onshore spaces, interests and needs of local communities, fisheries, residency, recreation and the inherent institutional and knowledge gaps were identified as key (Morf et al., 2019a). In Table 3-1, the identified issues are described more specifically in terms of inherent internal and cross-sector challenges.

Physical linkages across the land-sea boundary are one aspect emphasised by the cases.

Offshore wind power exemplifies this in terms of grid connections and spatial needs for transportation, assembling and maintenance. Similarly, commercial and recreational fisheries need harbours and onshore infrastructure and services. Throughout the Gulf of Bothnia, leisure and commercial fisheries are linked to thriving coastal communities from a social, economic and cultural perspective. Moreover, the aquaculture sector implies LSI challenges in terms of genetic diversity, parasites and nutrient flows, however this is less directly linked to spatial management. Moreover, a broad array of marine transport activities in the Gulf of Bothnia has strong links to land. From a cross-border perspective, the shipping lanes across the sea basin connect industrial nodes and harbours onshore. In archipelagos such as Åland, regular year-round ferries transporting goods and passengers are

essential for local communities. Besides managing ports and harbours, LSI also implies dealing with impacts such as coastal erosion and pollution. Tourism, recreation and coastal residency imply diverse small-to large-scale activities impacting both on land and in the sea. These can be complex to assess and coordinate. Environmental and social and economic impacts and infrastructure needs across the land-sea boundary also require attention.

Overall, the partners acknowledged that LSI related sector challenges often have implications across sectors and borders. Conflicts between different sectors that operate at different scales and onshore and offshore areas are common. One example is wind power development, which may indirectly affect cultural and economic sustainability on land, e.g. by changing seascapes and the attractiveness of an area to coastal tourism and residents. It can also affect coastal fisheries by displacement and buyout.

#### Institutional challenges

The above table indicates that many issues reaching across the land-sea boundary are not just about the interactions themselves, but include an institutional dimension, with responsibility often not within the same planning level or even within spatial planning, making integrating across levels and borders a challenging necessity.

As stated earlier, Swedish national planning has to link up with municipal planning in territorial waters. The overlap implies a potential for coordination and harmonisation in all dimensions, however, the juridical implications are not yet fully resolved if priorities in municipal and national plans differ. There is also a potential of discrepancy between planning modes, as municipal planning tends to be more concrete and operate at smaller scales than the large scale and overarching national marine planning.

Table 3-1: Examples of planning issues with LSI components in Finland, Åland and Sweden.

|  | Finland  | Åland   | Sweden  |
|--|--|---|---|
| <b>Aquaculture</b>                       | Aquaculture has difficult to get permits, because it shares the overall permitted environmental load with other coastal polluters on land but the loads are not managed across the land-sea boundary and not by MSP. | Aquaculture depends on onshore infrastructure and connecting links such as harbours and ferry transportation for goods and services.  | Same as Finland. Establishment of aquaculture in the Gulf of Bothnia limited by legal restrictions that protects the estuaries of salmon rivers (SJVFS 2011:34), which run out in close proximity to each other in the coastal areas).  |
| <b>Fisheries</b>                         | Fish spawning upriver affects both marine fisheries and conservation, but cannot be regulated via MSP.   | Combined sector-institutional problem: many privately owned water areas where, the owners can regulate in detail (e.g. amount, minimum size, zoning), but not within MSP.   | Accessibility to ports and land-based infrastructure and services is central for fisheries.<br><br>Fisheries and its supply chain provide jobs and contribute to social and economic sustainability in coastal communities, but are under municipal jurisdiction and these links not necessarily planned for.   |
| <b>Shipping routes</b>                   | MSP supports established shipping routes, however, there is a need to develop main ports and consider future dredging needs.   | A lot of fairways and shipping routes are close to shores as Åland is located in the middle of the archipelago. Logistics, goods and services, one of the most important logistical pathways for people to get to and from Åland. | Similar issues as in Finland and Åland, but could as well be related to planning issues for risk consideration and prevention of accidents, spill and contamination of waters, which have implications on land and local economy. Shipping lanes important to connect industrial nodes onshore. (SwAMI, 2019). Ports under the umbrella of the municipal comprehensive planning, thus a need to connect between MSP objectives, national interests and local municipal planning (Transport Analysis, analys, 2019). |
| <b>Tourism, recreation and residency</b> | How can MSP support sustainable coastal development and what is its role (ports, ship lines, environmental protection).  | Tourism has high seasonal variation (mainly summer, fishing tourism in spring autumn) and reaches and have impacts across the land-sea boundary (activity, resources, infrastructure needs, pollution) in both directions.        | Similar challenges as in Finland and Åland. Tourism and recreation impact on marine planning and vice versa.<br><br>Marine national interest areas for mobile outdoor life and recreation are often located along coastline towards land, and therefore outside the MSP realm (SwAMI, 2019).  |
| <b>Wind power</b>                        | High need for infrastructure such as cables. Need to choose the most suitable places for offshore wind parks.  | Onshore and semi-offshore wind power (semi offshore on islets and land areas in the sea) usually require connections to the mainland areas (unless autonomous). Therefore, planning land and sea cables is a challenge.           | Similar challenge as in Finland. Seascape impact onshore: development of offshore wind power also require consultation with the municipalities who have veto right in examining permits for wind power (Boverket, 2019). Siting wind power onshore or offshore requires balancing and near the shore is often in conflict with coastal uses.  |

The two planning modes can be complementary, but how to make the best out of the overlap needs to be explored further (the case did not actively work with municipalities). With few exceptions, municipal planning in the sea is lagging behind, although many coastal municipalities have started to think about marine issues, both by the national MSP consultation process and national funding to develop local and cross-municipal coastal planning<sup>15</sup> (SwAM, 2019).

The Finnish and Ålandic partners needed to mobilise their municipalities, but also have mandate to work both across borders and in territorial and inner waters. The Finnish Regional Councils, managing both land-based, coastal and marine planning through different planning tools, have the advantage of already embedded marine responsibilities, and relevant contacts and planning practice. Still, partners mention initial confusion about the overlapping planning systems and responsibilities for LSI, as well as a challenge to find the right resolution to consider LSI and deciding how deeply it should be embedded in all systems.

Åland needs to clarify both land, sea and resource ownership and related mandates for planning and management. The complex ownership structures in coastal waters were emphasized as an institutional challenge, where a plethora of small-scale, individual actors can for example regulate fishing areas to a detailed degree, which in turn can be a challenge to consider in overall-MSP. However, the municipalities lack mandate to plan in coastal waters and Åland still needs to refine the mandates further.

Even if cross-level governance and connecting between land-based and marine spatial planning is key for all partners, the challenges still differ based on institutional context, governance traditions, distribution of mandate and of course relate to the actual planning issues needed to be governed.

### Process-related challenges

A large number of so far unaware, disconnected actors, both authorities and other, needed to be mobilised. With case partner institutions at different planning stages both the thematic needs and the kind of stakeholders to work towards differed (e.g. local users and municipalities, or higher level sectors and administration). The subcase between Åland and Satakunta Region aimed at mobilising local coastal stakeholders. Besides awareness raising and mobilisation, promoting mutual trust was both key challenge and potential enabler.

In Finland, a main process-related challenge has been to coherently involve local stakeholders across the country. To promote regional Blue Growth as a central element of LSI, collaboration networks needed to be initiated to collect stakeholder needs in marine and coastal areas. The Finnish partner emphasised both importance and challenge of engaging stakeholders throughout the whole planning loop, also lifting difficulties to discuss LSI with stakeholders (Finnish Project Partner, 2019). The concept proved to be elusive, as stakeholders interpreted it differently. On Åland, keeping up stakeholder mobilisation and finding the carrots driving engagement ahead was a challenge, but also managing expectations. “How to deal with the issue when participants are not satisfied with the outcomes when doing plans?” (Project Partner, 2019).

<sup>15</sup> Swedish municipal and cross-municipal comprehensive marine planning has been highly dependent on national, project based funding, coordinated and facilitated by the County Administrative Boards. The initiative KOMPIS, where municipalities alone or in cross-municipal/regional cooperation could apply for funding, has promoted the creation of better local-regional planning evidence, some to be included in the municipal comprehensive plans and other to be used less formally, as a knowledge platform for further coastal and maritime spatial planning work (County Administrative Boards, 2019a).

In Sweden, a combined planning and knowledge gap of MSP across jurisdictional and administrative levels (see also next) presented a major challenge also for planning processes. Marine activities are often missing in local plans and regional strategies. Addressing this gap would require involving and coordinating stakeholders of all types from all levels. In the project, linking across the Gulf of Bothnia mobilising both local and regional planning levels proved to be challenging. Activation and contacts intensified only late in the project.

### Knowledge and methods related challenges

In both subcases, LSI related knowledge, methods and capacity building are still under development. Gathering knowledge both from local stakeholders and exchanging across countries and regions and across borders.

An important lack was high resolution, locally specific knowledge on uses, needs, pressures, values and trends to be taken into account when linking onshore. Such data and planning evidence may be handled differently, even across areas in close proximity to each other (County Administrative Boards, 2019b).

The cases in the Gulf of Bothnia also showed that socio-economic and socio-cultural aspects need better integration into MSP. This particularly applies to the local and regional planning level, even though the partners may already have established coastal planning.

For Sweden, a need to assemble more knowledge across borders, e.g. fisheries in other countries' water, but also linked to coastal uses became apparent. Even if LSI might be implicit, with ongoing institutionalisation and highly dispersed data collection, there is no comprehensive

overview over LSI and how are managed. There are also various knowledge gaps related to marine uses and their effects, especially at a regional and local scale. Furthermore, many coastal municipalities do not necessarily have marine experts and marine knowledge is expensive to gather.

Åland generally lacks basic planning evidence on LSI in coastal areas. Together with Satakunta Ålandish planning needed to collect local knowledge, to cover knowledge gaps on local uses and values. Having the necessary capacity and skills of facilitation and data collection was a further challenge.

Promoting continuity and relevant institutional memory for both knowledge and methods is an initial challenge, over time enabling land-sea integration in planning. Especially informal mutual learning, sharing of methods and stakeholder work from projects needs to be systematised and stabilised in often fast evolving organisations with high personnel turnover.

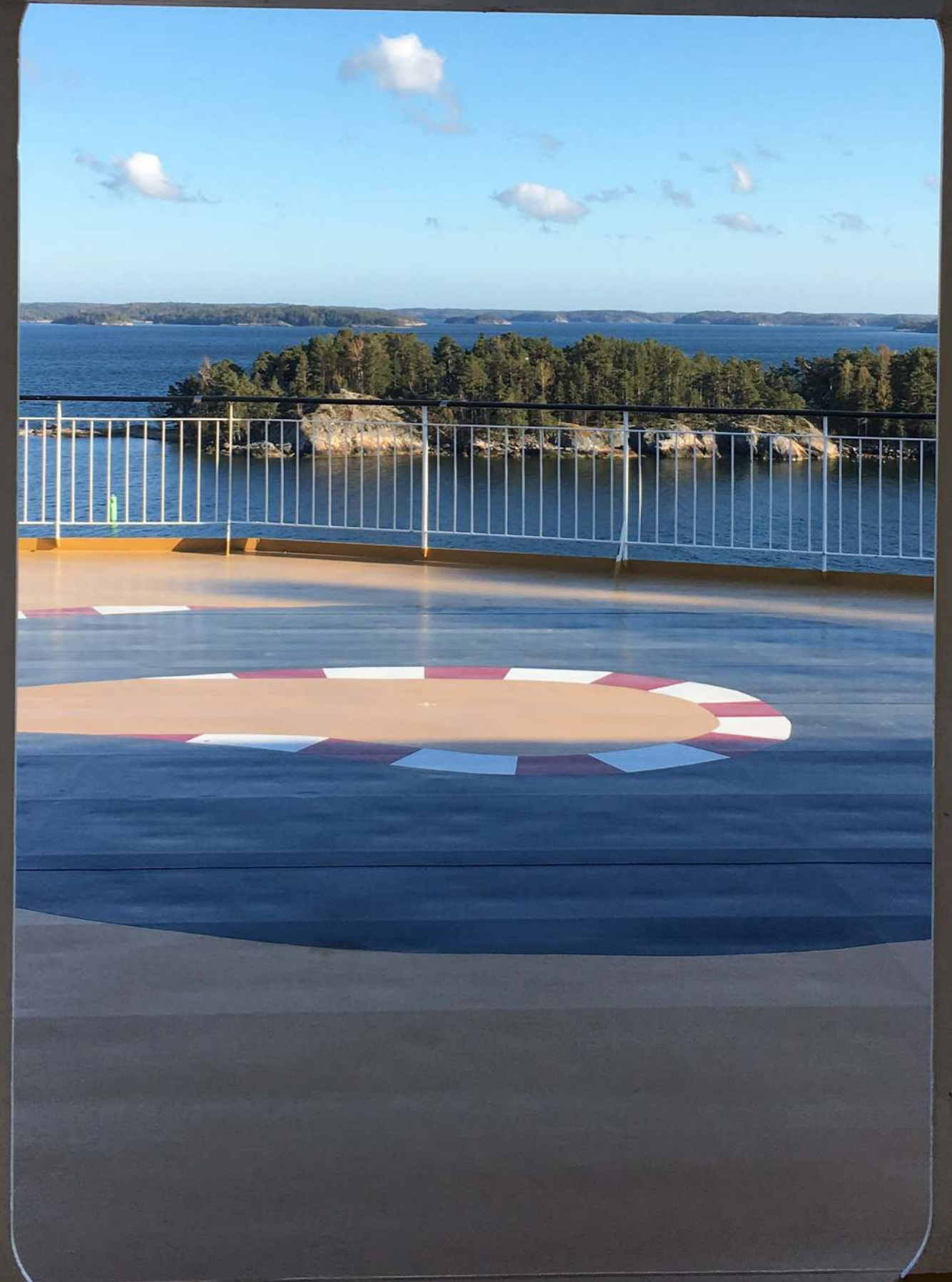
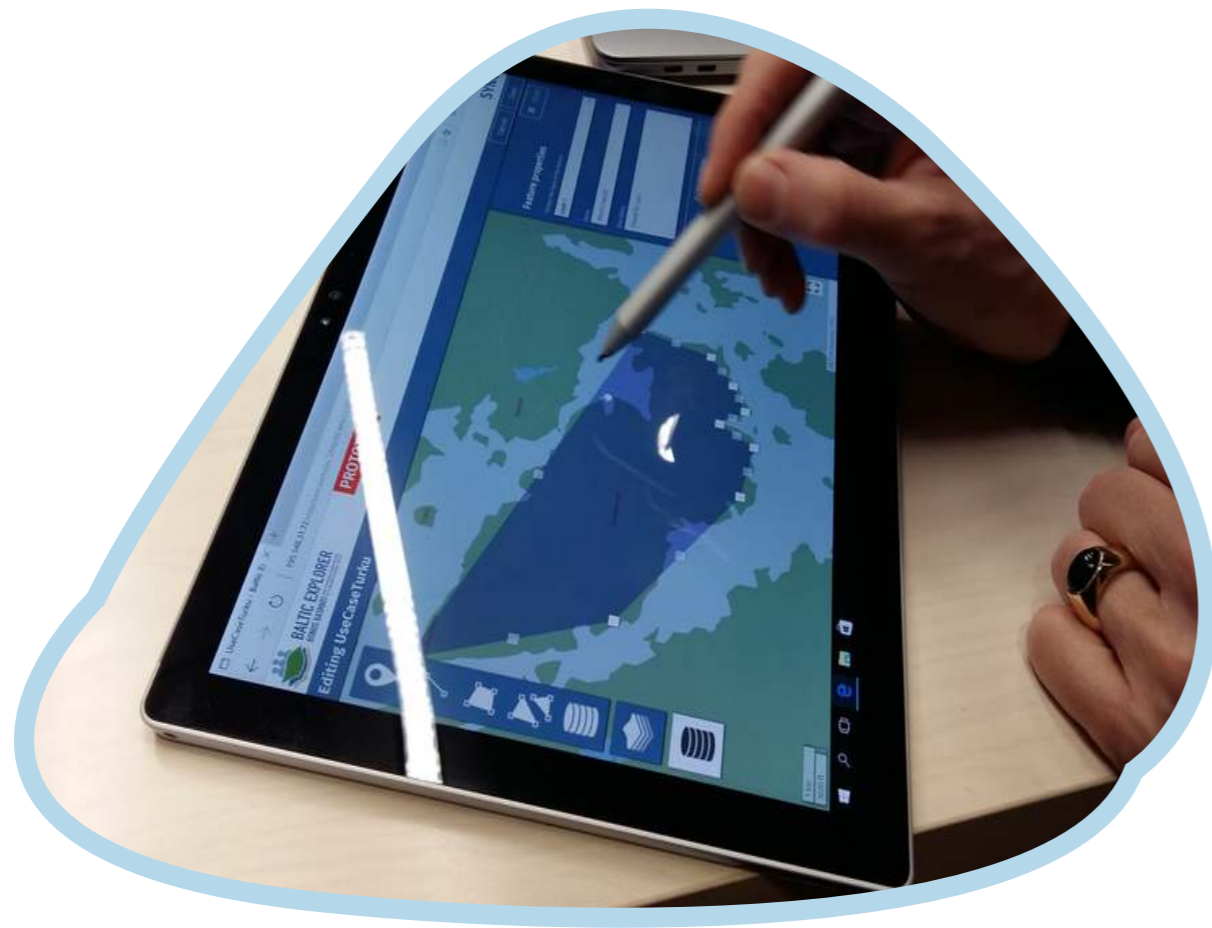
## 3.4 Enablers to work around the challenges and next steps

Finland, by using its existing hierarchical framework and departing from the regional authorities as nexus for both EEZ and territorial water planning may be able to catch up with the other countries and actually develop marine plans on time and establish a working LSI link in the institutional system from the very beginning, whereas Åland is still struggling and first needs to clarify mandates. Sweden needs to work with capacity development with the municipalities who are still lagging behind and investigate the juridical implications of the overlapping zone. From practical case work, the following concrete process related enablers can be listed:

- Learning by doing and doing it systematically: LSI as a term has become more familiar during the MSP process, and it has become easier for planners to understand the role of LSI issues in an overall picture. Here, the conceptual framework developed has been useful for systematising discussion and reflection within the group.
- Meeting and discussing among planners: Learning about each others planning systems and different/common interests within the group, especially in the beginning. Network building across borders: meetings and workshops, widening network stepwise and using different topics.
- Gaining a common picture through maps and figures as “boundary objects”, well illustrated by the maps used in some workshops and the 3-dimensional model Finland is now using to collect regional stakeholders’ LSI views.

- Knowledge sharing and mapping exercises: surveys and testing mapping tools to collect and share knowledge: Maptionnaire, Baltic Explorer, Data sharing table within the group, no further testing however. Workshops to share knowledge on maps and by Baltic Explorer. Talking and trust can also be expanded to stakeholders: “Make sure you ask the people who know. Then ask them again. Get to know them. Ask them again. Make them trust you. Ask them again” (Swedish Project partner, 2019).

Some cross-border challenges remain, but mobilisation and contact have become increasingly successful, even if only late in the project. So, there is a need to continue and start exchanging knowledge and coordinating. A follow-up INTERREG application has been submitted - but even there there are still quite a few Swedish municipalities to mobilise.



## 4. Working with LSI in Riga Bay

**“[...L]ooking into land-sea connections is something that partly attracts municipalities. So far it very much seems that the municipalities ... say the MSP is something that the state does, and it does not concern them too much except for offshore wind parks.” (National Planner, Estonian Project Partner, 2019).**

- The Riga Bay case covers a mostly sandy bay. Important LSI issues besides wind power, environment and ports include coastal recreation and residency and shoreline protection. Latvia has an adopted national maritime spatial plan and its municipalities can plan a coastal strip of 2km. The Estonian national marine spatial plan is under way, and the municipalities have no mandate to plan the sea. The main aim has been to assess what coastal municipalities as key LSI actors would need to plan for more across the land-sea boundary and in the water.
- Main challenges identified include both a lack of coastal use and conflict related drivers but also authority mandates and municipal capacity gaps in terms of strategic and marine planning and knowledge and methods to work with LSI.
- Enablers to get municipalities engaged include establishing a mandate, guidelines and good examples, capacity building among planners, cross-level and cross-border collaboration and learning e.g. through projects such as Pan Baltic Scope.

### 4.1 Case study objectives & approach and related challenges

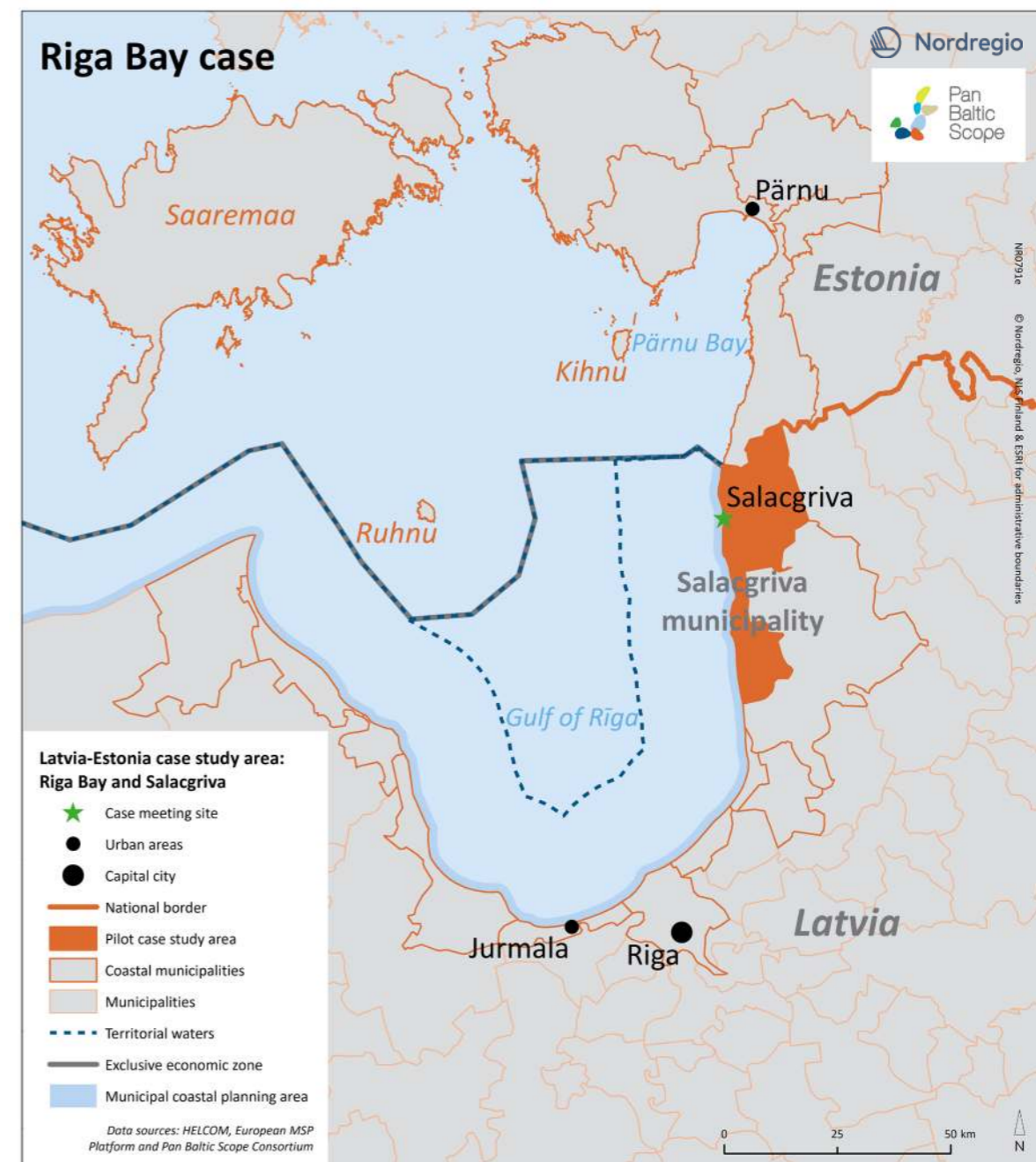
The Riga Bay case focused on the waters of the Bay of Riga, a sandy and relatively shallow bay shared by Latvia and Estonia. It explores the need to engage local authorities in MSP as a means to address LSI and coastal planning challenges. While the case work included all coastal municipalities in Riga Bay, the Latvian municipality of Salacgriva was a particular focus of an in-depth pilot planning study (Fig 4-1). The case work was led by the Latvian Ministry of Environmental Protection and Regional Development (MoEPRD) in collaboration with the Estonian Ministry of Finance, each leading the MSP process in the respective country.

The Riga Bay case work took a cross-level governance perspective focusing on how national MSP relates to local level coastal planning and management, as well as how to encourage municipalities to take the sea and coastal waters into consideration. At the outset of the case, several challenges were identified for linking planning across the land-sea boundary in Latvia and Estonia, including gaps and institutional mismatches regarding the mandates and tools to address various LSI issues. Uses in the marine coastal waters are defined/guided by national MSP, whereas coastal land areas are covered by municipal land use planning. The uses that cross the land-sea boundary need to be addressed and properly coordinated (MoEPRD, 2019).

In both countries, the municipalities are key representatives of local coastal interests in national MSP and responsible for a sustainable management of coastal resources. In Latvia, the municipalities have recently received a mandate to plan a 2km strip in coastal waters (see Fig. 4-1). However, most municipalities were not very actively planning the coast, but seemed to lack interest, capacity, as well data on marine and coastal areas (Morf et al., 2019a).

Thus, the main case objective became to explore to what extent municipalities would like to and can play a role in planning coastal waters and what would enable them to do so. The Latvian partners wanted to identify obstacles and find ways to promote active municipal coastal planning, meanwhile Estonian partners wanted to assess whether to open a discussion on providing municipalities with a mandate to plan in their sea space (Morf et al.,

**Figure 4-1: Latvia-Estonia case study area: Riga Bay and Salacgriva.**  
Source: Johanna Jokinen & Julien Grunfelder, Nordregio.



2019a). Another aim was to support unifying approaches across borders in the Bay of Riga. Key planning issues for the case study included coastal recreation, nature protection, ports, pollution, real estate development and tourism, coastal erosion and energy. Concrete case work was to address the following questions:

1. What are the present and future roles and opportunities of municipalities in the planning of marine and coastal waters?
2. What are the interests and needs (if any) of different stakeholders?

3. Is there a need to address cross-border interests (potential offshore wind farm) in Latvian and Estonian waters?

These questions were addressed by a number of activities including surveys, a pilot planning study and a number of meetings, resulting among others a pilot plan and municipal guidelines for Latvia (Box 4-1). Due to limited internal capacity, these were developed through consultancy under guidance and in close cooperation with the project partners.

#### Box 4-1: Case study activities and outputs in the Riga Bay case

**A situation study** using questionnaires to Latvian and Estonian coastal municipalities and focus group interviews explored existing, potential and desired coastal water uses and functions and scoped municipal interests to regulate it.

**A local level pilot thematic planning study** in the Latvian municipality of Salacgriva tested how to apply maritime spatial planning on a local level. It included analysis of the existing situation, development of the plan (incl. stakeholder involvement), testing plan implementation as well as recommendations for planning at the local level in Latvia.

**Guidelines for municipalities on how to work with LSI in Latvia**, providing an overview of the maritime and coastal planning process, the planning and administrative tools that could

be applied by a municipality, as well as the thematic aspects of planning and management of various uses of marine and coastal areas.

**Meetings and workshops:** A number of meetings with planners, thematic stakeholders and residents were held in Salacgriva.<sup>16</sup> Furthermore, objectives and preliminary results were repeatedly presented and discussed in formal meetings with a coastal coordination group comprising Latvian municipalities and related state institutions and NGOs. A final joint Latvian-Estonian workshop was held to let the municipal planners voice concerns, ideas and priorities as well as needs in terms of how the national MSP processes operates. The workshop participants were tasked to provide a vision for using the coastal zone.

<sup>16</sup> For more information: [https://www.salacgriva.lv/lat/salacgrivas\\_novads/novada\\_pasakumi/?calendar\\_id=1056&event\\_id=46014?calendar\\_id=1056&event\\_id=46014](https://www.salacgriva.lv/lat/salacgrivas_novads/novada_pasakumi/?calendar_id=1056&event_id=46014?calendar_id=1056&event_id=46014)

## 4.2 Riga Bay: Institutional systems, planning stages and LSI

After identifying the issue and sector related interactions, the next step is understanding the institutional structure addressing them starting with Latvia who was the driver of the case followed by Estonia (see also cross-country comparative table for the Riga Bay case in the appendix).

### Latvia: Complex jurisdictional and planning mandate structures between state and municipalities

**Structure and responsibilities:** The Latvian sea area is under national responsibility, with the Ministry of Environmental Protection and Regional Development mandated with MSP. Different national ministries provide sector planning and management in marine areas (i.e. setting targets and licensing, including establishing and managing marine protected areas). The Latvian maritime spatial plan applies to the whole marine territory, including internal waters, territorial waters as well as the EEZ. However, based on the Land Management Act (LMA adopted in 2015) there is jurisdictional overlap between municipal and national planning. Onshore, the municipalities are responsible for planning their territory through spatial plans and within Latvian territorial waters for an aquatorium of 2 km extending from

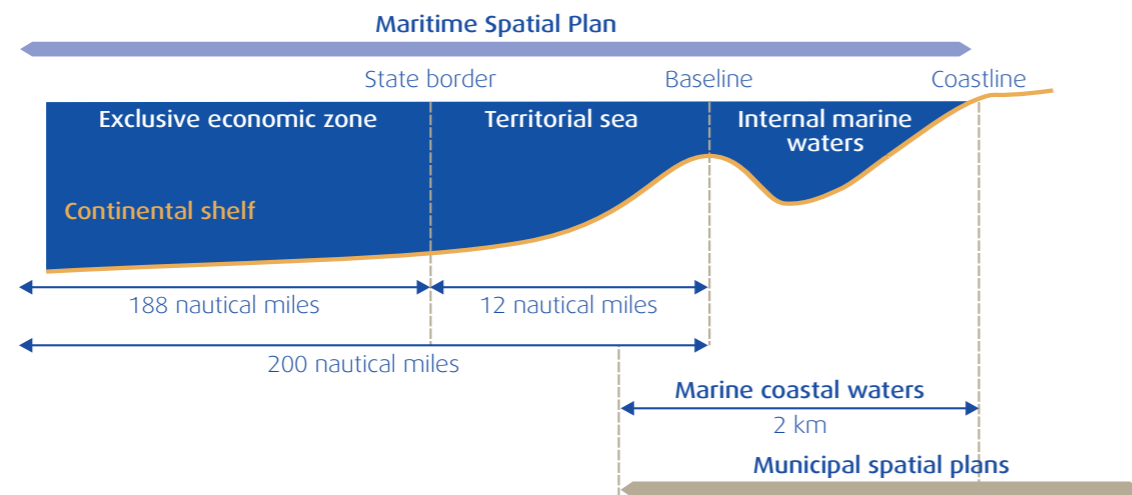
the shoreline (Fig. 4-1). This does not include licensing, which is under national responsibility.

**Status:** A first draft of the Latvian Maritime Spatial Plan was prepared in 2015. National and cross-border consultation was held in 2015-2016. A second round of stakeholder involvement was held in 2017 and by July 2018, a second draft of the Maritime Spatial Plan was prepared. After consultation and revision it was approved by the Government in May 2019.

**Planning for land-sea interactions:** The law requires MSP to take into account functional links with land use. Onshore, there are regional level strategic planning documents, taking into account linkages with the sea such as recreation, ports, and fisheries. A national coastal theme plan exists, but it focuses mostly on enhancing sustainable coastal tourism onshore. A transboundary cooperation project between Latvia and Estonia on MSP and ICZM led to a methodology on how to consider these linkages (European Commission, 2019). This methodology was elaborated in 2014 and, as a first attempt, only identified possible linkages that could be considered in maritime spatial planning. This methodology was a starting point for the Latvian pilot thematic plan and the guidelines within this activity.<sup>17</sup>

<sup>17</sup> For more information: [http://www.varam.gov.lv/lat/darbibas\\_veidi/tap/lv/?doc=19662](http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=19662)

**Figure 4-2: Latvian Planning System and boundaries for C-/MSP.**  
 Source: Ministry of Environmental Protection and Regional Development of the Republic of Latvia.



### Estonia: no planning overlap with coastal municipalities

**Structure and responsibilities:** In Estonia, prior to the amendment of the Planning Act in 2015, there was no specific legislation for MSP, instead, the Planning Act applied to internal waters and territorial sea as well as land areas. The current Planning Act attributes responsibility for MSP to the Estonian Government, which in turn is carried out through the Ministry of Finance’s Planning Department. In accordance with the Water Act of Estonia, the national government has full jurisdiction over marine areas, including coastal zone, territorial waters and EEZ. Likewise, the management of the marine areas, including natural resources, is under the responsibility of the Estonian state and delegated to different ministries and responsible authorities according to their respective field of focus, e.g. MPAs are under the Ministry of the Environment. As Estonian MSP covers the whole Estonian marine area up to the coastline there is no planning overlap with municipalities. The municipalities have two kinds of plans – comprehensive and

detailed. None of them specifically deals with marine areas, as municipalities have no planning mandate in coastal or territorial waters. Still, the municipalities control building activities related to infrastructure permanently connected to the shore (e.g. harbours). They can also limit the vessel speed according to the Water Act.

**Status:** The first MSP draft for the Marine Spatial Plan was ready for consultation in May 2019. Finalisation of the plan is expected in late 2020, and the approval of the final plan by the end of 2020.

**Planning for land-sea interactions:** In Estonia, the municipalities are key in planning for LSI. However, municipalities lack both mandate and plans for dealing with marine areas. During the national MSP process, a mapping exercise was carried out to find out what municipalities want and which sea uses they would like to plan for. Furthermore, the drafting of the marine spatial plan has considered the conditions for planning at municipal level, such as looking at cross-linkages and what the municipalities need to take into account in land-based spatial planning.

### 4.3 Challenges in Riga Bay case work

The central aim of the case was to link coastal with marine planning and explore how to facilitate the inclusion of an LSI perspective in municipal planning. Below, challenges of working with LSI issues throughout the case work are outlined according to the analytical framework presented initially.

#### Challenges related to planning issues with LSI implications

Municipal needs and interests were central in identifying the planning issues in the case (Planning Forum 7, 2019). Key topics included coastal recreation, nature protection, ports, pollution, real estate development and tourism, coastal erosion and energy. These were established from the situation study which scoped existing, potential and desired coastal water uses and functions as well as scoping the interests to regulate these topics in Latvian and Estonian coastal municipalities. Estonia placed particular emphasis on recreation and data related to these uses to build linkages to the municipalities (Estonian Project Partner, 2019). Throughout case work, an important challenge of the coastal municipalities has been to balance the development and conservation of marine and coastal areas (MoEPRD, 2019b). Domestic conflicts between various marine and coastal uses with LSI implications for both municipalities and MSP include nature protection and tourism, real estate construction/development and public access to coastal areas as well as offshore wind parks and tourism (Morf et al., 2019a).

However, the general character of MSP makes it difficult for local planning to respond to MSP designations. Moreover, there have been few tangible planning conflicts that might have functioned as

drivers for MSP. The conflicts identified were sector specific and managed through tools or agreements other than C/MSP (Morf et al., 2018). Thus, there were few incentives to prioritise marine issues, such as a specific development intentions or plans in place (see citation at the beginning of the chapter).

#### Institutional challenges to working with LSI

A central LSI challenge in the case was linking national MSP and other sectoral developments at sea with local level planning and related plans. The case work confirmed that coastal municipalities in Latvia and Estonia have a key role in managing the spaces at the land-sea interface and that municipal planning should not stop at the coastline. Rather, municipalities should have a planning horizon in the sea. However, in relation to this, a number of present challenges could be identified:

A first challenge to engage municipalities in planning the coastal zone is due to the differences in scale and perspective, i.e. the more detailed and operational character of municipal planning compared to the more general and strategic character of national marine planning. With the exception of port developments, there are no municipal planning documents with a marine perspective. The same applies to the focus and timescale of management tasks. Rather than planning ahead for marine/coastal issues, the municipalities need to prioritise practical management tasks such as permits and answering to civic councils. “Municipalities are implementers, not strategic planners” (Latvian Project Partner, 2019). This is similar with Estonian municipalities. An Estonian project partner confirmed the Latvian experience of seeing long-term and strategic planning in the municipalities as a challenge, particularly in small rural municipalities that lack resources.



“It is hard for them to think like that, their issues are often so practical. They have so much work and lack human resources” (Estonian Project Partner, 2019).

A second challenge, lifted by the same quote is a lack of capacity to plan strategically in the sea. Although there are some strategic planners, particularly in the larger municipalities in Latvia, there is a general lack of a comprehensive/master planning tradition with many municipalities in Latvia and Estonia, which also conditions how they can prioritise and engage in coastal/marine planning.

Thirdly, both as a challenge but also as potential enabler, the mandate to plan in the water appears important for steering planners’ perspectives on coastal plan-

ning. The Estonian municipalities have no planning jurisdiction over sea space<sup>18</sup> and can only express their interests during the ongoing MSP process while Latvian municipal coastal planning includes a 2 km strip along the coastline. The perspective is well illustrated by comparing the vision work at the final cross-border workshop in Salacgriva. Working in two country-based groups, the planners from both countries were tasked with providing a vision for using the coastal zone. Comparing the Latvian (LV in upper left corner) with the Estonian (EE) planners’ vision for the coastal zone (Figs. 4-3a and b) shows that the Latvian vision is considerably more elaborately drawn in the water than the Estonian version, which has more details and strong emphasis on land.

**Figure 4-3 a and b: Perspectives and mandates: pictures of the flipcharts from the final workshop in Salacgriva showing the outcomes of work in two groups with a) Latvian planners (LV in top left corner) and b) Estonian planners (EE) who had the task to provide a vision for using the coastal zone.**

Source: Margarita Vološina.



<sup>18</sup> Except for regulating vessel speed based on the Water Act.

### Process related challenges to working with LSI

In terms of process, there is a lack of linkages between local authorities and the national ministries leading MSP. “What we think in our ministries and at local levels is different. This is what is missing the knowledge and the link in between” (Latvian Project Partner, 2019).

Moreover, in the Riga Bay case, communication between different kinds of stakeholders and experts was found essential but challenging. Lifting planning issues to the political decision-making level was perceived as even more challenging. Even though discussions and collaboration were facilitated between spatial planners in municipalities in a shared coastal area, the political sphere needs to be involved to implement strategies, solutions and plans, but has so far not been very active.

### Knowledge and methods related challenges

“Most of our conclusions relate to local capacity and knowledge” (Estonian Project Partner, 2019).

Case work has shown that besides institutional capacity, knowledge gaps are also limiting to Latvian and Estonian municipal planning for coastal/marine issues (Planning Forum, 2019). “Municipalities would like to plan sea space, but they do not know how!” (Latvian Project Partner, 2019). Besides the differences in resolution referred to in the institutional part (see strategic planning challenge), linking higher level planning with local knowledge and strategies proved to be challenging.

Capacity problems of municipalities are emphasised in the whole case study, in terms of personnel but also in terms of skills to access and use knowledge. It is not necessarily always a lack of data but rather the lack of capacity, methods and procedures to wield such data in planning

practice: “it is not the lack of data that is the issue for the municipalities, but the limited knowledge on what data is available and how to apply it. The work specifics are different, and they just do not know how to use it and how to draw conclusions” (Latvian Project Partner, 2019).

The Riga Bay case included a cross-border component gathering Estonian and Latvian municipal experts in workshops. Working across borders, language barriers posed a challenge on how issues can be discussed and shared, for instance in cross-border meetings. Latvian and Estonian planners had difficulty speaking English when discussing technical and complex issues such as different planning and management systems (Latvian Project Partner, 2019).

### 4.4 Working around the challenges - enablers

Overall, case work was perceived as a general enabler, promoting both awareness of marine issues and showing the need to build stronger links across the land-sea interface and institutional levels. This concerns local, regional and national authorities on both sides of the border (Planning Forum 7, 2019).

Capacity development and proper guidance are still key. Latvia has come further towards activating its municipalities to plan in the coastal zone. Gaps in existing regulations were verified, too. In Estonia, after an administrative reform, a supplement to the Territory of Estonia Administrative Division Act came into force which aims to get the municipalities to make new comprehensive plans. Estonia is also investigating whether to assign a mandate to municipalities in the coastal zone. Here, more knowledge is needed on the needs and constraints of coastal municipalities. The national level lends support by discussing different themes, data and how to think more strategically.

A lesson from developing the thematic plan for Salacgriva municipality was that a plan needed to be specific enough to function as a platform to take issues forward - including the presence of specific LSI issues or conflicts as drivers and reasons for coastal planning. There is also a need to ask local authorities to commit to the planning process. At the outset of the case work, municipal involvement in planning the sea was seen to be based on concrete planning issues to react to, such as designating offshore wind farms areas close to coastal communities (Morf et al., 2019a). A project partner stated that: "The most important factor for the municipalities is the local benefit. What is in it for us? What can we get out of it? When it comes to municipalities - they are pragmatic." (Estonian Project Partner, 2019). The municipalities are also dependent on what happens in the sea for economic purposes. Thus, a plan for a specific development could provide a trigger. "Once it [i]s there - [a]... municipality can get involved and/or act" (Latvian Project Partner, 2019).

Overall, the joint case work between Estonia and Latvia was perceived as promoting cooperating on LSI issues across borders (Guidelines for municipalities, LVEE). Another enabler identified lies within the future potential cooperation between bordering municipalities which could promote municipal coastal planning (cross-border learning and identifying common planning issues). However, a lack of formal procedures might affect how this can be implemented. With little formal cross-border collaboration between municipalities so far, Latvian planning regions now try to mobilise municipalities with action programmes for joint topics, such as a blue growth

smart strategy<sup>19</sup> for specific actions in the Riga region. This might further promote municipal collaboration (Latvian and Estonian Project Partners, 2019).

### Next steps

Latvia (MoEPRD) will continue with PBS LSI results by popularising the thematic pilot plan and the Guidelines among coastal municipalities. Work on the gaps identified in regulations e.g. regarding the mandate of local municipalities for licencing in marine waters will be continued. Estonia will integrate the results from the case work in their national MSP. In terms of opening a discussion on a municipal planning mandate, there would have to be an initiator, e.g. the Association of Estonian Cities and Municipalities, to submit an official suggestion to identify and start discussions to change legislation. "We mapped our municipalities' wishes and the overall result was that municipalities would like to plan but there are a lot of uncertainties behind it, so first of all we need to open the discussion about that and then see if we have a real need" (Estonian Project Partner, 2019).



<sup>19</sup> [http://rpr.gov.lv/wp-content/uploads/2018/11/20181001\\_SBRplan\\_Summary\\_ENG.pdf](http://rpr.gov.lv/wp-content/uploads/2018/11/20181001_SBRplan_Summary_ENG.pdf)

## 5. The German LSI Story

**“We took the political decision to include territorial waters in spatial planning. There was no new specific legal base - we simply said the state [the federal state of Mecklenburg-Vorpommern] is responsible, so territorial waters can be treated like the land. We also transferred the method of spatial planning on land to the sea, bearing in mind the three-dimensionality of the sea. So it’s not just the surface of the sea but also other areas below.” (Interview with planner, BALTSPEACE project, 2017)**

- Among Baltic Sea countries, with almost 20 years of MSP experience, Germany is a pioneer and in its second planning cycle. Germany has two different types of marine plans, a national plan for the EEZ and federal state plans covering both territorial waters and land. Over time, these plans have become increasingly aligned.
- Present LSI planning issues for the EEZ include environment, shipping and offshore energy and in territorial waters coastal protection, recreation and tourism. Key challenges to work with LSI and achieve coherence of planning across the land-sea boundary included connecting different planning authorities, linking across competencies and different timings of adjoining marine planning cycles, but also addressing knowledge gaps related to the relevant sectors.
- Key enablers include both initially learning by doing and project based planning, working with sector plans across the land-sea boundary but also expanding existing institutional frameworks on the sea and using similar regulation of marine and coastal planning and providing forums for coastal and marine planners to interact.

With almost 20 years of experience, Germany is the most advanced country with respect to MSP in the Baltic Sea, making a highly interesting third case with a more long-term perspective. For Germany, as a federal country, key challenges to achieving coherence of planning across the land-sea boundary include dealing with different planning authorities, com-

petencies and not least different timings of adjoining marine planning cycles. While some of these challenges have been dealt with successfully, others remain, and new challenges have arisen in the context of sectoral developments and also as a result of MSP development in neighbouring countries. The second planning cycle provides opportunities to revisit earlier MSP decisions as well as the processes put into place, benefitting from much greater national and international experience with MSP.

Reflecting on the German LSI experiences over time requires drawing on several sources: data collected in Pan Baltic Scope through surveys and observations at meetings, work from BONUS BALTSPEACE ([www.baltspace.eu](http://www.baltspace.eu)) and earlier projects (such as BaltSeaPlan), as well as informal exchange with responsible planners.



Figure 5-1: Germany case study area: Schleswig-Holstein and Mecklenburg-Vorpommern. Map: Johanna Jokinen, Nordregio.



### 5.1 Institutional systems, planning stages and LSI

An overview over the systems can be found in the cross-country comparative Table 3 in the appendix.

**Structure and responsibilities:** In Germany, administrative responsibilities for marine space are divided, creating a “cross-border” planning situation within the country with separate jurisdictions and planning systems existing side by side. The Federal Maritime and Hydrographic Agency (BSH), an authority under the Federal Ministry of the Interior, Building and Community, is responsible for administering MSP in the EEZ both in the North and Baltic Sea.

The federal states, in the Baltic Sea Schleswig-Holstein (SH) and Mecklenburg-Vorpommern (MV), are responsible for MSP in territorial waters. MSP in the federal states is part of so-called state development programmes (LEP, short for “Landesentwicklungsplan”) which encompass land and the sea. Up to 12 NM, Germany thus has what could be termed “one space” planning, in the sense of an integrated state-wide strategic approach to land and sea use planning.

**Status:** Plans for the EEZ (one for the North Sea, one for the Baltic Sea EEZ) have been in force since 2009; they are currently being revised and new plans are expected to come into force in 2021/22. The first ma-

rine spatial plan came into force in MV in 2005; an amended second plan has been in force since 2016.

**Planning for land-sea interactions:** In the German example, two contextual aspects come into play when dealing with LSI issues. In MV, dealing with LSI issues is a matter of integrated planning across land territorial waters, which became possible by extending planning competencies to the sea and creating an overarching strategic development plan. In the EEZ, the problem is that the marine spatial plan has no direct spatial connection to the mainland, which means that LSI issues can only be successfully dealt with if there is close alignment with the MV plan. In both cases, offshore wind is a crucial LSI issue, although others such as shipping and nature conservation also come into play.

**Dealing with LSI issues in Mecklenburg-Vorpommern:** From an LSI perspective, a crucial step was taken in MV in the early 2000s. Anticipating increasing spatial conflicts in the sea, a political decision was taken to incorporate marine planning in the state development programme, which was about to be revised at that point. The Spatial Planning Act of MV was used as a basis, effectively extending the planning area to the sea and enabling land and sea (up to 12 NM) to be regarded as a single spatial unit. Importantly, the method of spatial planning was also transferred to the sea, enabling the same mechanisms (such as spatial designations) to be used. Although marine sectors and stakeholders are sea-specific and marine space is different in terms of the functions it can provide (no residential function for example), in terms of planning principles, land and territorial waters could now be treated in the same way. A slight difference is that the state development programme (1:250,000) is supported by additional regional plans (scale 1:100,000) on the landward side, while the LEP is the only spatial plan for the sea.

The guiding principle for the LEP in MV is to facilitate “sustainable spatial development which reconciles social and economic demands on space with the ecological functions of space and which leads to long-term spatial development that is balanced at a large scale” (Spatial Planning Act 2008, §1 para 2). For the territorial sea, the LEP 2016 implements this by means of a dual approach:

1. Distinct provisions are made for marine space, recognising the specific coordination needs arising in that part of the state’s territory. Specific needs are perceived with respect to offshore wind farming and associated cable routes, nature conservation, tourism, coastal protection, commercial uses, safety and ease of shipping, cultural heritage, fishery, aquaculture, military defence, and dumping of dredged materials. Area designations are provided for offshore wind farming, cables, nature conservation, tourism and raw materials extraction.
2. The LEP actively links marine and land-based issues in what could be termed an “integrated LSI approach”. Some of these links are infrastructural, such as ensuring that marine cables and pipelines can be connected to associated infrastructure on land, or ensuring access to ports from shipping lanes and ensuring ports are connected to the rail and road network on the landward side. The LEP also picks up on the landscape-seascape continuum in the context of coastal tourism, currently an important issue for the state and one that is related to the visual impacts of large turbines. The plan has responded to this LSI by limiting the height of offshore wind turbines and their distance from the shore, to make sure they are less visible from the mainland. MV has also designated specific areas for coastal protection in the most recent plan, dealing with another LSI issue. Ecological issues include ensuring coherence between marine and coastal conser-

vation areas. At a more general level, regulatory policies in the state’s waters specifically refer back to the overall principle of contributing to quality of life and sustainability, indicating a good level of spatial integration. The fact that this is one plan is underlined by the map that accompanies the text which shows all area designations across the entire territory.

**Dealing with LSI issues in the EEZ:** For the EEZ, the issue of offshore wind farming is one of connectivity and one that requires cohesiveness of the adjoining marine spatial plans across the administrative boundary. As the state development programmes occupy the territorial waters, the German EEZ has spatial plans without direct links to the shore, which restricts its ability to plan for LSI issues directly. Still, the EEZ plan deals with maritime uses that do require adequate access to land - such as shipping, cables and pipelines, and offshore wind power.

The level of collaboration required to achieve good spatial coherence (i.e. extending LSI from the EEZ to the mainland) is quite intense. The spatial arrangements between the state LEP and the EEZ plan need to line up: Shipping lanes need to be treated as a single unit, and varying spatial arrangements (such as the width of buffer zones, or different regulations that apply in priority areas for shipping) in the EEZ and in the territorial waters would be difficult. Also, cable corridors need to line up, meaning that “gateways” are required where the plans adjoin. The same applies to bird migration or ecological infrastructure in the sense that important ecological areas should not simply stop at an administrative boundary. Because of the different planning cycles – MV for example is ahead of the EEZ by about five years – this requires considerable advance thinking and mutual awareness.

## 5.2 Challenges in the German context

### Institutional and process-related

**Lack of spatial connectivity:** Specifically for the EEZ, an ongoing challenge is that the spatial plan has no direct links to the shore and must therefore deal with LSI issues indirectly.

During the first planning cycle, a key challenge for LSI was that territorial planning in MV and MSP in the EEZ were running at different timescales. Although the marine component was new, the planning authority of MV had years of experience in state development planning. In the EEZ, BSH had only recently been given responsibility for MSP and was still developing its approach, although the Federal Spatial Planning Act guided in terms of how the plan had to be structured. MV had finished its plan while the plan in the EEZ was still taking shape, limiting a fully joined-up approach at that time.

**Building up structures allowing planners to talk to each other to assure that LSI issues in the EEZ were understood by MV or SH and vice versa was another challenge.** For the EEZ, understanding needed to grow that LSI issues had to be dealt with “by proxy”, meaning that an indirect approach had to be taken (e.g. ensuring that the next edition of the MV or SH plan included gateways for offshore wind farm cables) which would possibly take longer to formally implement.

**Stakeholder involvement** is essential but also challenging for both MSP and LSI – both to raise awareness of LSI issues and to find acceptable ways of addressing them. During the first round of MSP, approaching the right stakeholders and the right level of involvement was a particular challenge for the EEZ plan as MSP was entirely new for the stakeholders and there were varying expectations.

## Knowledge and methods related

**Knowledge issues** were encountered with the new sector of offshore wind. As the sector was still developing, the specific needs, challenges and opportunities associated with building wind farms offshore were only emerging. This not only applied to the sector's spatial needs in the sea but also to technical issues, as well as the relationship of offshore wind farming to other uses and its environmental impacts. Landward implications of offshore wind farming such as the potential barrier effects of large offshore wind farms on migratory birds (another LSI issue) were only gradually becoming understood. Understanding also had to grow that space is needed in ports for assembling and maintaining wind turbines - and more recently, the various tasks related to servicing. For example, wider roads and access points may be required to transport large components such as blades to the assembly ports. Understanding these implications can be less a matter of available data but also asking the right questions of the right persons.

An ongoing challenge in Germany is that the EEZ plan only indirectly touches upon land-sea integration from a socio-economic perspective, e.g. by considering the economic impacts of activities in the EEZ on other regions and how these other regions may be affected spatially. The importance of this socio-economic perspective is confirmed both by a BaltSpace method study using spatial cost-benefit analysis (Weig & Schultz-Zehden 2018) and a value chain analysis in a ESPON project: While jobs in the offshore wind industry are an important focus in Germany's coastal states, many offshore wind jobs are also located away from the coast in non-coastal federal states (Kidd et al. 2019). Additional LSI issues that could be associated with growth

in offshore wind farming include impacts on land infrastructure, displacement of other sectors, impact on coastal processes, invasive non-native species, pollution, or noise (ibid. p. 13).

### 5.3 Working around the challenges – enablers

Similar legislation in terms of priorities and instruments: As outlined above, separate jurisdictions in Germany have resulted in three distinct marine plans in the Baltic Sea. Each has its own premise grounded in the respective legislation (federal and state planning law). However, a great advantage in Germany is that the spatial planning system in Germany is subsidiary. The Federal Spatial Planning Act (ROG) serves as a common basis from which the states cannot deviate, although they do have the option of introducing additional regulations that interpret the ROG in a particular way. As a result, the respective Spatial Planning Acts guiding MSP are actually very similar. For example, the overarching purpose of all three plans is to facilitate “sustainable spatial development which reconciles social and economic demands with the ecological functions of space and which leads to spatial development which is balanced in the long term.” The Acts also foresee the same options for spatial regulation (i.e. the designation of priority and reservation areas) facilitating for planners to talk to and understand each other and to align the respective plans in terms of spatial regulations. Priority areas for shipping, for example, are much easier to align across different jurisdictions when the same priority areas can be designated under all three Planning Acts, making it possible to achieve land-sea connectivity across all sea areas.

EU-funded MSP projects in the Baltic Sea region that involved planners from MV and the BSH enabled a quick development of experience, more or less in parallel to planning.

Another enabler is the establishment of a permanent exchange for German MSP planners. A group of planners meets regularly to discuss progress and any issues encountered in the respective processes. They also discuss new available knowledge or any new experiences obtained from international projects or international groups (such as the EU MSP Expert Group). This informal exchange has greatly helped to align the respective processes and plans. This is reflected in the latest MV plan of 2016, where the map not only shows area designations for the territorial sea but also how these designations link up with provisions in the EEZ (e.g. the continuation of shipping lanes or cable routes beyond territorial waters).

Another enabler has been the development of a dedicated offshore grid plan for Germany. This sector plan sets out where offshore wind energy is to be developed. Areas are then auctioned off in a process organised by the Federal Network Agency. The winning bidder is allowed to build offshore wind farms and connections to the onshore grid. In terms of LSI, the grid plan helps marine and land use planning to understand which areas are likely to be developed, and where associated infrastructure will be sited. This helps to planning for gateways between marine plans and landing points for bundled cable routes.

From coordinated towards increasingly joint planning: Overall, rather than an integrated process in the sense of joint planning, plans in Germany are developed independently and to different timescales. MV started its first process in 2001 and completed the first plan in 2005; the first EEZ process began in 2004 and was completed in 2009. At around the same time, MV began to think about revising its plan, a process that was completed in 2016, and first thought was given to revising the EEZ plan in 2018, with a revised plan expected in 2021. Nevertheless, planning is experienced as a continuous process rather than restricted to the actual planning phase, and there is also a sense of ongoing informal collaboration and mutual learning on the part of the responsible planners. As a result of the continuity of this exchange, the fact that the respective planning cycles are not aligned is not seen as an issue. It may in fact be an opportunity, in the sense that each plan can be an expression of the latest stage of joint learning. Over time the German plans in the Baltic Sea have become increasingly aligned, reflecting a shared understanding of overarching issues. Specific examples include the specification of so-called target corridors for electricity cables, linking offshore wind farms in the EEZ to grid connectors on the MV coast, and alignment of shipping routes between MV and the EEZ. Cross-border activities are thus guided by similar principles, resulting in a more coherent spatial framework for sea users, and there is a sense of informal joint planning although formally the processes are distinct.



## 6. Challenges for linking LSI to MSP

“How and where do people fit into our MSPs?” (Survey Respondent, 2019).

“We haven’t addressed any issues so far in regard to LSI due to the lack of a planning mandate and complications with regards to internal MSP discussions (private, public areas), for example, who plans what, how binding is the plan, where should we consider LSI and where not. These are still questions that we need to answer in [...] before we can give you an answer to what LSI means for [...]” (Project Partner, 2019)

- Consideration of coastal issues is not only required by the EU MSP Directive but also by national MSP legislation.
- Applying an LSI perspective in an intra-national, cross-border and cross-level governance setting means considering sectors, the wider planning environment, the respective governance setting and mandates, the distribution of responsibilities and the capacity to coordinate planning.
- An LSI perspective is therefore important for managing the Baltic Sea, but implies complexity in terms of scales and contexts to consider.

This section synthesises the challenges from the cases and other Pan Baltic Scope work (surveys and observations). These are structured into overall challenges relating to “LSI thinking” at a general level followed by the four analytical dimensions: sector and issue, governance system, process and knowledge related challenges. As the categories are interrelated, categorisation is not strict.

### 6.1 An overarching challenge: LSI awareness and thinking

Despite the range of recent projects, some planners still find the concept of “LSI” unclear. There is no commonly accepted, clear definition. As a result, LSI is either nowhere or everywhere, and it is difficult to explain LSI and its relevance to the public and stakeholders. Our work indicates that it might also be elusive because interactions can be very context specific.

“LSI thinking” is less obvious in offshore spaces where LSI issues may not be immediately visible. From the perspective of local government, few planning issues exist in offshore spaces, and there is less knowledge of potential conflicts across levels and sectors and how these may relate back to the land. This is in contrast to coastal contexts such as estuaries, bays or archipelagos where LSI interrelationships (and the need to deal with related pressures) are much more prominent.



## 6.2 Sector and issue-related LSI challenges

### General sector related challenges

A number of sector or issue-specific LSI challenges have been highlighted by the project, some at a more general level, while others are place-specific. These include:

- Environmental aspects and aquatic habitats as links across the land-sea boundary in among other conservation planning. Examples include migratory commercial fish and other species (e.g. eel, salmon) and how to provide space for safe migration, spawning and recruitment.
- Aquaculture requires ferries, landing harbours, and landward infrastructure to enable goods to be shipped to markets and servicing of marine infrastructure. Aquaculture also has negative environmental impacts, such as nutrient and parasite dispersal or potential impacts on other species such as wild salmon. The issue for aquaculture is how to physically coexist with other uses (including also infrastructure on land), but also how to share the permitted environmental load with other coastal polluters on land. These issues bring with them a number of LSI planning and management implications.
- Commercial and recreational fisheries require harbours and infrastructure onshore. Given that management issues (such as who, where, when and how to fish) and the often fragmented ownership (e.g. AX) cannot be addressed by spatial planning alone, the challenge is how to achieve a more coordinated overall perspective and coordination, also across the land-sea boundary.
- Hunting of wildfowl and mammals in the sea and along the coast is part of the traditional way of life in archipelagos and a place-specific activity. There are many links across the land-sea boundary, not least intangible values assigned to the sea and access to areas. A particular challenge is that knowledge on hunting activities is often unavailable to planners. Mapping activities together with locals can be a useful approach.
- Offshore wind power requires connections to the landward grid, but also assembling space and transportation routes onshore now and in the future. Like aquaculture, this is mostly an infrastructure issue, but offshore wind farming also results in indirect LSI issues such as potentially causing the displacement of coastal fisheries.
- Shipping encompasses a broad array of marine transport activities with strong links to the land, such as logistics for goods and services. In archipelagos, regular, year-round local ferries are crucial lifelines for local communities in terms of transportation of goods and passengers. LSI challenges resulting from shipping encompass not only coastal infrastructure management (ports, harbours), but also the management of shipping routes and environmental impacts including coastal erosion, pollution, invasive species.
- Tourism, recreation and residency and links to sustainable coastal development. The challenge here is to coordinate seasonally varying activities on water and on land, involving both visitors and permanent residents (such as leisure crafts of different types, fishing, water sports). The challenge is to also deal with related environmental impacts, infrastructure needs and economic impacts onshore, making this a very complex set of LSI issues that need to be carefully dissected.



### Challenges across boundaries

Specific sectoral and issue-related LSI challenges in cross-border contexts include:

- LSI are often thought of as domestic, regional or local rather than cross-border. In Finland, LSI discussions mostly took place in specific local contexts and were not taken to the next level. At the same time, some LSI issues might be considered too large to be discussed locally or regionally, such as the impact of coastal activities on pollution or salinity (Finnish Project Partner, 2019).
  - For islands and autonomous regions such as Åland, almost all LSI issues can be cross-border, as most sea-based activities depend on cross-border interaction and/ or collaboration. Fishing grounds in the open sea, transport, travel to and from Åland is via ports and marinas as connection points. Moreover, there is a need to connect this to other types of planning, such as regional (structural) development planning.
  - Cross-border impacts with LSI dimensions often occur across sectors, e.g. between Finnish pelagic herring fisheries, Swedish local fisheries, and offshore wind power and conservation.
- The specific issues in this case involve coastal communities, fish marketing, cultural heritage, fishing grounds, conservation and energy (e.g. Gulf of Bothnia case).
- Also potentially relevant is larger scale infrastructure, such as fixed connections (tunnels and bridges) that are regularly discussed. Examples include visions for a tunnel from Sweden to Finland across the north of Åland, or Baltic energy grids in the German case.

Dealing with these sector and issue related challenges requires planners and managers to think differently. One reason is the sheer complexity of the LSI issues involved, usually covering more than one sector and multiple spatial scales. Issues need to be understood and coordinated in both directions across the land-sea interface. In order to do so, MSP needs to be linked to integrated coastal management. The available knowledge and information, and the capacity to use it, also need to develop further, so that the sector specific LSI issues can be understood both at a general (and cross-border) and local or place-specific level (see challenges in upcoming sections 6.2-4).

### 6.3 Institutional challenges

The institutional challenges encountered can be divided into on the one hand challenges arising in the early phases of MSP development (as currently in many Baltic Sea states) and on the other hand ongoing challenges that will remain relevant also in the future.

#### Initial challenges: understanding and establishing basic roles and capacity building

Understanding and clarifying mandates and the division of responsibilities across the land-sea interface is a key challenge in a multi-level governance setting. Coastal and territorial waters and the EEZ mostly fall within different institutional responsibilities; in some countries land and marine planning meet at the shoreline (Estonia, Åland), while others have adjacent planning in the water (Germany) or even overlaps (Sweden, Finland). (Morf et al., 2019a, German case). If one lacks a clear understanding of mandates and responsibilities, this is further exacerbated when coordination across borders is needed. Examples from the cases include:

- It can be difficult to balance the development of national MSP institutions with the concurrent need to do cross-border work.
- For a centrally led MSP process such as in Sweden, the challenge is to link up with local level of planning and vice versa. Cross-coordination is difficult for several reasons, not least mismatches in terms of capacity and responsibilities, or problems with providing information and data at the right spatial resolution.
- There is a mismatch between the overarching and strategic nature of MSP and day to day municipal planning practices. For example, municipalities may wish to prioritise an issue that is not a priority for (national) MSP. There is a need to support municipal development perspectives in planning for coastal/marine uses and activities.

- Land and onshore areas are not always perceived as having the dynamics and cross-border impact of the sea. A project partner noted that LSI is too national –“as we talk about the land, it does not have the dynamics and cross border impact of the sea” (Survey respondent, 2018).

When it comes to working with MSP and LSI and engaging across borders, local level institutional capacity is a key issue. Constraints have been experienced with respect to resources, skills and knowledge required to work with LSI and to engage in networks and institutional interaction (Morf et al., 2019a). Differing institutional and planning cultures contribute to this challenge.

- In Finland, even though the planning mandate across the land-sea continuum is established, the overlapping planning system still causes confusion over responsibilities for LSI. It is also challenging to find the right ‘resolution’ to consider LSI and decide how deeply it should be embedded in the planning/MSP system.
- The coastal waters of Åland have complex ownership structures. Privately owned waters can be planned by the owners, as long as they follow legislation. At the same time, municipalities have no planning mandate in the coastal waters based on the current legislation. Therefore it is necessary to clarify both land/ sea/resource ownership and related mandates for planning and management.
- In Sweden, national MSP depends on municipal and regional spatial planning to fully address land-sea interactions. Although municipalities have a mandate to plan the territorial sea, coverage with up-to-date plans is still incomplete, even if improving.
- In Riga Bay, Latvian and Estonian municipalities also have a role in managing the coast at the land-sea interface. However, only in Latvia this role extends to the sea. Capacity issues are also a constraint to engaging in MSP.

#### Continuous challenges: collaborating and understanding each other across borders for multi-level LSI

The differences in planning systems and mandates create challenges when working across different governance systems and administrative levels. (BaltSpace; Survey respondent, 2019).

Different approaches to how to delimit the boundary of considering LSI are a challenge: “LSI is everywhere, or LSI is applied to each sector” (Survey respondent, 2019).

The most important institutional challenges for integrating LSI in MSP are related to two aspects. One regards the different mandates and ownership structures across the land-sea boundary. Dealing with this either requires new mandates to be set up or existing mandates to be clarified, so that responsibilities for dealing with different LSI issues can be clearly assigned and technical issues such as data resolution resolved. The other is the lack of capacity especially within local (and sometimes regional) authorities, whose onshore and coastal planning and management competence is key in the implementation of an LSI perspective in coastal planning.

### 6.4 Process-related challenges

Integrating LSI in MSP has numerous process-related challenges that are mainly related to stakeholder involvement and communication, especially in transboundary contexts. Many of these issues also apply to MSP generally but they have added relevance in the context of LSI integration.

Differing status and progress of MSP development in countries affects communication channels, and the ability to work across borders. The challenge is to align different stakeholder needs, interests and time frames. In the Gulf of Bothnia case, the different planning status of the coun-

tries influenced the ability to identify LSI topics and find ways to address them.

Finding the right resolution for collaboration and coordination across borders is difficult as priorities and needs may differ between geographical and institutional contexts (Morf et al., 2019a).

Stakeholder views and awareness: Even if stakeholder involvement is ensured throughout the planning loop, LSI can be a difficult topic for discussion because there may be different interpretations and understanding of LSI (Planning Forum 7, 2019):

- It is difficult to conceive of LSI for developments in the EEZ and even more difficult to organise an indirect process for dealing with them if the MSP authority is not the same (German case).
- It can be difficult to establish a regular exchange between relevant planners (terrestrial, marine) and also between marine planners working in different administrations (German case).
- The same stakeholders may be required for LSI in territorial waters and in the EEZ; this could lead to confusion between parallel processes and stakeholder fatigue (German case).

The most important process-related challenge is thus to create a practicable process that enables LSI issues to be dealt with across different scales, borders and mandates, as well as between countries at different stages of the MSP process. This is no easy feat and may have to be thought of as part of ongoing transboundary MSP processes. Key to a successful process is also to translate LSI into something meaningful and tangible for stakeholders, and to communicate the issues in a way that suits different actors (planners, experts, stakeholders, political decision-makers). The process also needs to be designed in such a way that solutions can be brought to the right level of political decision-making.





## 6.5 Knowledge and method-related challenges

A wide range of knowledge and method-related challenges could be identified in the Pan Baltic Scope project that affects the ability of planners and institutions to embed LSI in MSP. Mostly, they fall within two main categories, namely knowledge gaps and the process of data collection.

Multiple knowledge gaps still exist across administrative sectors, levels and boundaries with respect to LSI issues and contexts. These concern the natural environment, but also uses, users and interests on the coast and in the sea. Specific data and knowledge needs include:

- Understanding the local / regional characteristics of land, coast and sea and their interrelationships;
- A precise understanding of sectors and their needs, especially new sectors such as offshore wind; it takes time to develop that knowledge (German case);
- Knowledge on the terrestrial footprint of marine activities and vice versa (ecological, social and economic impacts, including cumulative impacts) (German case);
- High resolution, locally specific knowledge on local uses, needs, values and trends for local and regional level plans and strategies (Morf et al., 2019a, Riga Bay case and Gulf of Bothnia case) and socio-economic/socio-cultural uses/issues (Planning Forum 7, 2019). This particularly applies to the local and regional level, even in countries with established coastal planning. An evaluation of municipal and regional coastal planning in Sweden concludes that only a small share of the municipalities/municipal collaborations have managed to produce their own geodata to share with SwAM. Rather, most geospatial analyses have been conducted from already available data – often centrally distributed (County Administrative Boards, 2019a).

Another major issue is the process of data collection, and the need to assemble relevant data and knowledge for different purposes. Specific challenges include:

- There is a lack of literature and methods on how to systematically assemble LSI relevant data and use it in planning and management to consistently map and analyse how activities on land affect the sea and vice versa.
- It is difficult to include local/land-based data from other countries when drawing up MSP, even though it might be necessary to understand impacts of licensing decisions for marine uses. (Morf et al., 2019a).
- Collecting and compiling different, often fragmented knowledge of various kinds across borders and levels and addressing related uncertainties, such as anthropogenic pressures, uses and needs (Morf et al., 2019a).
- LSI aspects need further consideration in impact assessments (for example in Finland).
- There is (yet) no methodology for systematically collecting evaluation data. This applies to emissions and impacts (Gulf of Bothnia case) as well as overall evaluation of how well MSP is addressing LSI issues (Kull et al., 2019).

LSI are also complex in terms of understanding the linkages to different coastal planning and management systems and tools and how to apply them (link to institutions) and link this to evaluation and impact assessments (see the “blue-green” PBS work package 1.2).

Capacity problems in relation to knowledge production and management (Riga Bay case, Gulf of Bothnia case): Capacity problems with municipalities are emphasised in the Riga Bay case, both in terms of

personnel and skills. So, even where data in/on the municipalities are available, municipalities (especially more rural ones) are not sufficiently staffed (all cases) or planners do not know how to access and use the data (Estonia).

An evaluation of municipal coastal planning and its links to national MSP in Sweden indicates that only few persons have been tasked with MSP, often on top of other responsibilities, and that very few competences exist with respect to marine ecology/biology. The municipalities have argued for more long-term funding of these kinds of MSP work but would also need clearer instructions on what data is needed and how it would be used by SwAM in the overarching MSP process (County Administrative Boards, 2019a).

Overall, in terms of knowledge, there is a long to-do list and an enormous need both to assemble existing knowledge from an LSI perspective and to collect new, relevant data. Where methods for gathering and assembling data are available, they are not shared widely enough, meaning that proper planning evidence for decision making, impact assessment and evaluation is still lacking for LSI in MSP. Moreover, data collection and interpretation is scale-sensitive. Local authorities need high resolution data, while in national MSP overall LSI linkages and rougher resolution evidence may suffice. Collating and productively using LSI knowledge also implies the necessary capacity in terms of personnel and skills which is often insufficient, especially at the municipal level.

The knowledge dimension is crucial in that data and knowledge are the foundation for all LSI planning. The challenges in this dimension should therefore be given priority.



## 7. Enablers for including LSI in MSP

Cooperation between bordering municipalities has ... benefits. These are developing, but examples of formal procedures are limited” (Ministry of Environmental Protection and Regional Development of the Republic of Latvia, 2019).

- Including LSI in MSP can simply be a matter of slightly adjusting processes and perspectives - there is no need to invent entirely new systems or processes. Here, capacity development for local authorities to address LSI and link up with higher levels and across borders is particularly relevant.
- A clear purpose in LSI management and shared overall visions are helpful in overcoming institutional or process-related differences in cross-border settings.
- “Good collaborative practice” in MSP and ICZM across sectors and levels goes a long way to enable planners and stakeholders to also address LSI issues. Urgent to collaborate on are spatial data across the land-sea boundary and high resolution local and qualitative data.

This section assembles enabling factors for including LSI in MSP that have been identified in the cases and overall project work. As the planning processes in some cases (e.g. FI, AX) were still in the early stages, or the planning authority was working at a relatively large scale (e.g. SE), reflections tended to be more general rather than issue or sector-specific. The purpose was more to engage with and understand each other across borders and boundaries, and to create the necessary contacts and networks for future coordination and collaboration, accompanied by geographically focused pilot studies to work with knowledge and method development and capacity building. This chapter has a similar structure as the previous chapter, looking into: 1) overall enablers, 2) LSI issues as drivers, 3) institutional, 4) process and 5) knowledge and methods related enablers.

### 7.1 An overall enabler: LSI thinking

An integrative perspective on space and scale is an important enabler, i.e. considering a “land-sea planning continuum” (Morf et al., 2019a).

It is helpful to consider sectors from the perspective of horizontal and vertical integration, and to bear in mind the different scales that cross the land-sea divide. Cross-sector linkages can act as an enabler in that they reveal new land-sea interactions (Morf et al., 2019a).

Water bodies can play an important role in promoting LSI thinking, e.g. when considering the interlinkages of uses in rivers and inner waters (rivers and coastal lakes) and coastal waters (Project Partner, 2019).

### 7.2 LSI issues as drivers

Generally, the discussions and work in the project have helped to promote the understanding of linkages across the land sea boundary. Understanding has also grown that planning issues might differ between countries and cases. Most importantly perhaps, specific LSI issues can act as triggers for more integrated LSI thinking, paving the way for closer connections between MSP and ICM.

Offshore wind farms, cable connections to the mainland and associated negotiations with land owners have been an important LSI issue in Germany. Here, years of working with the sector (not least through licencing processes) have resulted in a clearer understanding of sector needs (spatial needs in the sea, spatial need for cables, cable connectors and gateways between adjoining plans, spatial requirements in ports etc.). A sector development strategy for the EEZ was helpful for providing an overall spatial picture for the EEZ and adjoining waters (German case).

Triggers for municipalities to become involved in LSI include:

- Accessibility issues on the coast, mixed use in public spaces and associated conflicts (Riga Bay case);
- Specific development proposals municipalities can get involved in or act on (Riga Bay case);
- Awareness of potential benefits to municipalities from large infrastructure developments in the sea (linked to equal distribution of benefits across the land-sea boundary) (Latvian Project Partner, 2019);
- Knowledge and data resulting from mapping exercises: In Finland, residents identified important nature values, including spawning areas in rivers, while fishers identified important landing ports and places also important for their livelihood.

### 7.3 Institutional enablers

Institutional enablers were identified in two main areas: firstly, identifying, understanding and/or creating responsibilities and mandates, and secondly, institutional integration and capacity development. Building on existing frameworks and capacities is a good point of departure, but it is also important to identify gaps and provide transitory or permanent fora for interaction and mutual learning.

Not surprisingly, a first, general and crucial enabler for working with LSI is to identify existing and/or establish new planning mandates and formal institutional roles across the land-sea continuum. This includes both a cross-border perspective (who is responsible for what in each country) and the multi-level institutional landscapes within countries, i.e. identifying the various responsibilities for the sea, the coast and the land.

The second enabler is to link the various institutional levels around a marine basin (e.g. Pan Bothnian/ Pan Baltic). All cases emphasise enhanced coordination between local, regional and national levels as a key enabler.

Institutional challenges can be overcome by making the best use of already established institutional options and to tackle particular challenges within the specific contexts in which they arise.

Since LSI in MSP takes place across multiple levels of governance, awareness of local, regional and national level enablers is helpful illustrated by the three cases.

Examples of local enablers include - keeping in mind that enabling municipalities is key for LSI integration:

- A key local enabler for municipal planning is to not stop at the coastline (ownership and mandate, Riga Bay case).<sup>20</sup>
- Cooperation between adjacent municipalities is advantageous both for including LSI in planning and for the general development of coastal planning practice and processes.
- Clear rules and requirements for the management and use of coastal waters can help ensuring benefits from shoreline development for coastal communities, providing an incentive to actively plan in coastal areas (Latvian Project Partner, 2019).

Examples of regional level enablers:

- In the Gulf of Bothnia case, highly different systems meet both overlapping and adjacent to each other. Here, the Finnish “overlay” of planning, i.e. locating MSP in the EEZ with regional authorities with existing practice and networks in territorial waters seems to play out as an advantage, in combination with ambitious stakeholder involvement and LSI work.
- Sweden has the CABs as links, but it seems more difficult to get the municipalities activated (County Administrative Boards, 2019a). State funding and regional coordination have been key factors to promote marine municipal planning (ibid.).
- Åland has the advantage of relatively small size and the potential to easily connect, more like a region or municipality in other countries.

Germany, with systems meeting at territorial/EEZ boundary, can serve as an example for applying various strategies at the subnational level. The most relevant enabler is to create a single planning authority to facilitate “one space” planning across the land-sea divide. Other institutional enablers for LSI in MSP in Germany include:

- Creating a permanent forum in Germany for planners to discuss LSI issues (and MSP more generally) where there is no direct opportunity for “one space” planning;
- Sector strategies/management and MSP are necessary in order to successfully deal with LSI (offshore grid plan and MSP);
- Aligning legislation to enable similar planning systems and provisions in the sea and on land;
- Integrating ICZM and MSP (ICZM as an informal process at the municipal level that supports MSP).

### 7.4 Process-related enablers

In terms of processes, enablers are related to good process management generally and are not necessarily LSI specific. Nevertheless, some enablers particularly helpful to support LSI management in practice.

- Early planning and coordination is essential in order to identify synergies and common denominators for those involved (including stakeholders) (Kull et al., 2019).



<sup>20</sup> Logical infrastructure can be used to strengthen existing and new land-sea interactions (Latvian Project Partner, 2019).

- Involving planners from neighbouring jurisdictions in planning is important to facilitate LSI management across scales (Germany).
- Developing a planning practice that facilitates LSI work. This implies a practice that is sensitive to the respective planning context and relevant uses (Researcher, Planning Forum) - but also adaptable to the transboundary and changing nature of the sea and society.
- Guidelines or checklists can support the LSI process and may represent a relatively simple solution for integrating LSI in MSP. In Finland first experience is expected to be available in March 2020 after the collaboration phase.
- Enabling planners and stakeholders to become familiar with the term LSI and even contribute to its definition ensures that LSI is understood and relevant to them. This can be done by means of visioning or target-setting workshops where stakeholders and planners can explain how they see LSI in practice.
- Existing formal consultation processes (MSP, ICZM) can be used to raise awareness of LSI issues, including cross-border consultation processes.
- Issues related to timing (different MSP cycles) or resources can be overcome by agreeing on overarching objectives and visions, which can then be reached through different (national or sub-national) processes (Riga Bay case).
- Community planning is suggested as an approach to meaningfully enhance decision-making and management in coastal areas.

## 7.5 Knowledge and method-related enablers

Section 6.5 identified a long list of knowledge and method-related challenges, which may seem daunting. At the same time, many steps can be taken relatively easily and immediately, making use of synergies and existing capacity. Specific enablers include the following:

- Data sharing and method development across sectors, levels and boundaries (Kull et al., 2019).
- Awareness of differences regarding geographical scales and resolution, specificities of marine use sectors, and the specifics of different countries/societies and marine-geographical and ecological regions.
- Strong collaboration with local stakeholders (e.g. fishing stakeholders) can engender feelings of trust towards MSP authorities. The increased levels of trust can then lead to a better and above all shared understanding of land-sea connections and their importance (Finnish Project Partner, 2019).
- Mapping of meaningful places and processes in the sea and coastal area through a web-based participatory GIS application (Maptionnaire) has provided local knowledge about LSI, irrespective of whether locals themselves recognize the concept of LSI (Project Partners, 2019).
- Very specific guidance for municipalities on how to plan in LSI contexts (e.g. in Estonia) is helpful (Riga Bay case).
- Negotiation skills and common language are critical to avoid or overcome ambiguities of information and knowledge on land-sea interactions between different sectors and stakeholders (Riga Bay case).

## 7.6 Synthesis: linking challenges and enablers

In the following table 7-1, we extract the essence from the challenges and enablers identified from literature and case study work (chapters 2-7), trying to generalise

beyond the cases, using the same structure as earlier but linking challenges with enablers. In the final chapter (8), we condense these insights further into advice and recommendations.

**Table 7-1: Synthesis of key challenges and related enablers to work with LSI in MSP within countries across borders.**

Sources: Pan Baltic Scope work using initial scoping through a survey with project partners and scoping meetings within the case study teams, checked with external experts, complemented after a final update of challenges and enablers from the case studies (ch. 6 and 7) and generalised.

| Type of challenge                  | Challenges within countries   | Challenges in cross-border contexts   | Enablers for addressing challenges   |
|------------------------------------|---|---|--|
| <b>1. General</b>                  | <ul style="list-style-type: none"> <li>• Missing LSI awareness with important authorities (local/regional).</li> <li>• All four dimensions are linked and dependent and affected by overall context and trends.</li> <li>• Coastal spaces often more complex than offshore (environment, stakeholders, uses).</li> </ul>  | <ul style="list-style-type: none"> <li>• Grasping LSI across borders is generally more difficult: language, differences in systems and timing, more actors need to be mobilised and involved, lack of knowledge, different data collection systems and lack of ways of sharing across borders.</li> </ul>   | <ul style="list-style-type: none"> <li>• Awareness of 4 dimensions, context and linkages between them.</li> <li>• Learning by doing.</li> <li>• Exchange and well-developed communication both in project form and more continuously.</li> <li>• Collect and describe good practices examples as inspiration.</li> </ul>   |
| <b>2. Sector and Issue-related</b> | <ul style="list-style-type: none"> <li>• Conflicts between uses across time and space.</li> <li>• Besides known MSP topics (energy, environment, fishing, shipping), many coastal uses reach across the land-sea boundary and need to be addressed: e.g. aquaculture, recreation, residency, cultural heritage, traditional livelihoods.</li> <li>• LSI perspective so far mainly applied per sector and topic</li> <li>• LSI conflicts and issues differ offshore and onshore, are context dependent.</li> </ul> | <ul style="list-style-type: none"> <li>• Many marine activities interact across borders: difficult to find right resolution to consider sector needs, synergies and conflicts and management measures.</li> <li>• Cross-border links are so far little perceived, due to a lack of knowledge and knowledge sharing across borders.</li> <li>• Cross-scale perspective: place specificity may obstruct seeing as international LSI topics. Large scale topics difficult to perceive regionally/locally</li> <li>• Cross-border/sector perspective missing</li> </ul> | <ul style="list-style-type: none"> <li>• A strong, developing sector that implies an LSI perspective (e.g. offshore renewables) as a driver.</li> <li>• A deepening a sector perspective starting at the coast and going both ways in space and time (e.g. spatial sector strategies).</li> <li>• Stakeholder involvement to identify uses and issues; working with sectors to understand needs.</li> <li>• Cross-border collaboration to establish appropriate resolution of issues and impacts.</li> <li>• Thinking future footprints, actors, processes and flows across land-sea boundary and sectors, when mapping and understanding needs and impacts</li> </ul> |

| Type of challenge                               | Challenges within countries  | Challenges in cross-border contexts   | Enablers for addressing challenges  |
|---|--|---|---|
| <b>3. Governance systems related</b>            | <p>Initial challenges when developing LSI in MSP:</p> <ul style="list-style-type: none"> <li>Confusion on the scale of planning</li> <li>Lack of LSI at municipal level and case by case decisions</li> <li>Lack of planning mandate across the entire land-sea continuum or many different mandates</li> <li>Lack of institutional linkages across sectors and levels</li> <li>Lack of institutional awareness and capacity for LSI, especially local/regional level</li> </ul> <p>Permanent challenges (remaining even if LSI perspective is more institutionalised):</p> <ul style="list-style-type: none"> <li>Guiding character of MSP (no exact space for new uses) makes local response to MSP designations difficult</li> <li>Different levels of jurisdiction</li> <li>Different scales and types of planning thinking</li> <li>Differing instruments, legislation, role of political system across levels</li> <li>Differences in responsibilities in planning.</li> </ul> | <p>Initial challenges when developing LSI in MSP:</p> <ul style="list-style-type: none"> <li>Unclear mandates across borders.</li> <li>Lack of linkages across borders and sectors.</li> <li>Lack of awareness and capacity for LSI.</li> <li>Different legislation and related roles and instruments.</li> <li>Differences in political systems.</li> </ul> <p>Permanent challenges (remaining with institutionalised LSI perspective):</p> <ul style="list-style-type: none"> <li>Different levels of jurisdiction across borders (local/regional).</li> <li>Different scales of planning and types of planning thinking in neighbouring countries.</li> <li>Differing national priorities.</li> <li>Different responsibilities in planning.</li> <li>Sector issues with cross-sector spatial implications managed outside of MSP.</li> <li>Keeping linked across levels and borders</li> </ul> | <p>Step 1 : Clarify responsibilities:</p> <ul style="list-style-type: none"> <li>Clarify jurisdictions and responsibilities within/outside of MSP</li> <li>Clarify planning mandates across the entire land-sea continuum</li> <li>Capacity development: enable especially local and regional authorities to engage in LSI thinking and to link to MSP</li> </ul> <p>Step 2: Integrate MSP/ICZM:</p> <ul style="list-style-type: none"> <li>Build on and complement existing structures/capacities (institutional capital).</li> <li>Overall instrument to promote “one space” planning (e.g. integrated development plan).</li> <li>Include linkages to a management perspective (beyond strategic planning which MSP often is).</li> <li>Align legislation to enable similar planning systems and tools across land/sea</li> <li>Establishing permanent internal LSI forums and involving planners from neighbouring jurisdictions in cross-scale LSI planning.</li> <li>Sector strategies/management combined with LBP/ICZM/MSP to address LSI.</li> </ul> |
| <b>4. Process related</b>                       | <ul style="list-style-type: none"> <li>Difficult defining LSI to public (complexity, linkages).</li> <li>Takes time.</li> <li>Stakeholder involvement &amp; mobilisation (unmobilised, different mandates, power, scale and interests; organised/ unorganised groups).</li> <li>Potential confusion if stakeholders need to get involved in many processes.</li> <li>Conflicts &amp; gaps: local interests (onshore) vs. international/national interests (offshore).</li> <li>More difficult to conceive of/organise process incl. LSI if responsible only for EEZ (and vice versa).</li> <li>Difficult to establish regular exchange with planners in other administrations.</li> </ul>  | <ul style="list-style-type: none"> <li>Countries are at different stages of the planning and institutionalisation process</li> <li>Stakeholder involvement across borders</li> <li>Difficult to establish regular exchange with planners in other administrations</li> <li>Multiple processes to participate in even across borders</li> <li>Difficult to organise “indirect” LSI coordination when not responsible across the land-sea boundary (e.g. EEZ authorities DE, SE).</li> </ul>  | <ul style="list-style-type: none"> <li>Define and implement a good LSI process in MSP.</li> <li>Guidelines or checklists to support the planning process.</li> <li>Cross-border consultation process.</li> <li>Forums for regular contact.</li> <li>Raise awareness on cross-border issues.</li> <li>Raise awareness on how MSP is conducted (neighbour country authorities and user stakeholders).</li> <li>Link sector management and spatial planning through ICZM, also across borders.</li> <li>Regular exchange of terrestrial and marine planners and sector experts.</li> </ul>   |
| <b>5. Knowledge, tools, and methods related</b> | <ul style="list-style-type: none"> <li>Lack of clear definition of LSI</li> <li>Resolution: unclear what scale of ecological and human impact data is needed to plan, local planning needs higher resolution.</li> <li>Data: missing, incomplete and/or fragmented.</li> <li>Lack of data on local uses and values, economic and socio-cultural aspects.</li> <li>Lack of good examples, practices and methods to integrate knowledge.</li> <li>Capacity problems (personnel, skills) to access and work on data (especially rural local authorities).</li> <li>Lack of knowledge on onshore footprint of marine activities and vice versa (ecological, social, economic impacts) spatial and other (general and cumulative and location/use specific).</li> </ul>   | <ul style="list-style-type: none"> <li>Difficult to get a common understanding of LSI issues.</li> <li>Data gaps/data exchange: Lack of knowledge on other countries.</li> <li>Data consistency across borders and boundaries</li> <li>Lack of literature and methods on monitoring, evaluation and impact assessment (cumulative and other) across land-sea boundary and borders</li> <li>Lack of knowledge on terrestrial footprint of marine activities and vice versa (ecological, social, economic impacts) spatial and other - both general and cumulative and location/use specific.</li> </ul>  | <ul style="list-style-type: none"> <li>Work towards establishing a clear and commonly approved definition of LSI in relation to marine and coastal planning and management.</li> <li>Thinking of LSI both ways from land to sea and sea to land, across sectors, over time and at different spatial scales.</li> <li>Guidance through common key principles and guidelines (adaptable to context).</li> <li>Clarification of what ecological human pressure and impact data are needed for planning, including at what scale.</li> <li>Working with mapping of local knowledge and assembling existing knowledge.</li> <li>Mapping responsible authorities’ needs regarding data, tools and methods.</li> </ul>   |

## 8. Conclusions, recommendations and outlook

**“For many countries, the first MSP round has been with a focus on the sea. However, when implementing the marine plans and coming into the 2nd round of MSP, this will imply [intensifying] LSI thinking.” (Nordregio researcher, 2019)**

- Different coastal and marine planning systems have different challenges and enablers for integrating LSI in MSP. The most important challenge at present is the awareness gap with respect to LSI, and the need to make LSI more tangible by identifying specific LSI issues.
- There is a strong need for communication, knowledge and capacity development within local and regional authorities and stakeholders, so that they can link up with marine planning and start filling in the considerable knowledge gaps.
- Overall, we recommend using a cross-sector and multi-dimensional perspective on LSI (issues/sectors, institutions, processes, knowledge and methods) and looking both ways, aware of different institutional levels, geographical ranges and directions of land-sea interactions (land <-> sea/ bottom <-> up/past <-> future) including cross-border perspectives.

Integrated planning and management across the land-sea boundary has been promoted by concepts such as ICZM or ecosystem-based management for decades. Still, as a result of the EU MSP Directive, it has become necessary to interpret and operationalise a “new” concept of land-sea interactions in the context of MSP. This new concept includes national and sub-national, but also cross-border, marine basin and ocean wide dimensions as MSP requires planners to think beyond their administrative boundaries.

Pan Baltic Scope contributed to linking LSI to MSP by working with concrete needs of planning authorities from the Central Baltic, asking two main questions:

- What does LSI mean in different national and sub-national settings, and how can LSI be integrated in MSP in a meaningful way?
- How do LSI play out in cross-border contexts, and what are the implications for MSP?



Based on the case studies and the analysis of challenges and enablers, this chapter now sets out a number of recommendations aimed at the LSI-MSP-ICZM community at large. Our conclusions and recommendations are largely based on the experiences and practices reported by planners and in the three case studies. They showcase LSI perspectives in different types of planning systems with varying degrees of maturity. The Gulf of Bothnia case shows the initial phase when countries are beginning to think about LSI. In Finland and Åland, this includes a local to regional perspective, as well as a cross-border perspective, establishing links to an almost finished national MSP process in Sweden.

The Riga Bay case (Latvia and Estonia) focuses on countries at an intermediate stage of MSP, where the issue is how to link local institutions to MSP. How can municipalities be encouraged to plan and learn across the land sea boundary? The German case covers a more advanced stage of MSP and thinking in land-sea connections. It is likely that similar planning issues, challenges and enablers to those identified in the Baltic Sea may also be encountered in other regions, although the actual solutions may need to be adapted in context-specific ways. Below, we first present general conclusions on LSI, then synthesise the more general challenges and enablers and provide recommendations and an outlook.

## 8.1 General conclusions

At the outset of Pan Baltic Scope there was no clear concept of LSI. After a literature study and project scoping, it became clear that it implied a complex set of phenomena and processes with a vast field of terminology encompassing natural and institutional processes as well as human activities across the land-sea boundary. Clarity is needed on the constituent processes and activities, but also on the opportunities and challenges associated with LSI. These might apply to sectors and sustainable blue growth more generally, but also to MSP as a process of integration.

Based on the Pan Baltic Scope case studies and the experiences gathered in the project, the following points are worth highlighting as general conclusions:

### LSI thinking as an enabler for MSP

Overall, an LSI perspective can be an important enabler for successful MSP because it highlights the wide range of human-ocean connections. LSI thinking is a way of connecting spatial management on land and in the sea to the benefits these spaces deliver to people. LSI thinking also helps to understand the threats and risks that might arise to human benefits as a result of land-sea interactions (see also Kidd et al. 2019). LSI mindfulness implies the consideration of socio-economic benefits that are derived from maritime sectors, or how goods and services produced in the sea are affected by natural coastal processes, or how infrastructure connections from sea to the mainland indirectly benefit people that live a long way from the coast (e.g. energy grid infrastructure).

### Links to land-based planning and management

Another conclusion is that land-based planning is not always aware of the landward footprint of marine activities, a finding confirmed by a parallel ESPON project on LSI (Kidd et al. 2019). With the exception of countries like Germany, where the state development programmes provide integrated “one space” planning, marine spatial plans do not yet exert much influence on land-based planning. However, this is likely to change once marine spatial plans have been more broadly adopted (ibid.). We conclude that MSP should seek to more actively connect to land-based planning, using projects as an entry point in discussions with land use planners and using the MSP process as an opportunity for joint learning.

### LSI issues are multidimensional

Another important finding is that LSI issues have multiple dimensions, implying that a single sector LSI approach only covers part of what LSI thinking is really about. Most of the LSI issues identified have both environmental and socio-economic dimensions, and each of these dimensions has different geographical and temporal implications. We therefore conclude that single sector or issue thinking can be a good start – not least to make LSI more tangible to stakeholders - but that a broader and more comprehensive approach is needed, considering more holistic LSI systems and linking MSP more readily to ICZM. Nevertheless, it is useful to really know sectors well and to work with the respective stakeholders to fully understand the LSI issues that surround them.

## Generic vs specific LSI issues

Our case analysis shows that some LSI issues are generic in the sense that they apply in similar ways in all countries and contexts (e.g. energy production, fisheries and shipping needing to be linked up to the land and environmental impacts in the sea based on conditions in the watershed). Others are more context dependent, such as planning for aquaculture, material extraction and dumping, cultural heritage, climate change, defence, oil and gas extraction, storage and bunkering or research.

## Transnational and cross-border implications

Some LSI issues, mostly those related to linear infrastructure, clearly cross national borders and even the entire Baltic, creating a complex set of LSI implications. The Baltic LINes project<sup>21</sup> illustrates transnational LSI challenges arising from the development of offshore wind and shipping. Shipping routes connect various ports in different countries, and offshore wind farms and cables are part of a wider pan-Baltic electricity grid. A scenario that assumes growing demand for renewable energy in e.g. Germany and Poland, for example, soon shows that this would imply a greater need for cross-border energy exchange, which in turn would require more power links between Sweden, Denmark and the Baltic States as well as Poland and Germany. Such growth in interconnectors, in conjunction with wind farm export cabling, would imply greater coordination and cooperation needs in MSP, but also increased consideration of landward impacts of offshore wind farming on both sides of such connections – e.g. regarding

port space or land grid infrastructure. National targets (such as renewable energy targets) can therefore have international implications (e.g. in terms of infrastructure needs), which in turn trigger new LSI issues in all affected countries (including displacement effects between established and new uses). Giving due consideration to all cross-border dimensions is a challenge especially for those planners and stakeholders only starting out in MSP.

## 8.2 Recommendations and tools

This report was written not least with novice planners and LSI-ers in mind – all those who need definitions, guidance and ideas on how to work with LSI across boundaries and borders. The following recommendations are our attempt at practical generalisation and contain the essence of our work. All is not necessarily new, but it has been deepened and strengthened by project work. We present six consecutive points or logical steps to take when first engaging with LSI. These very practical steps are complemented by analytical questions in Box 8-1 and an institutional “LSI-Learning Loop” in Figure 8-1. We also present more general recommendations for developing an “LSI mindset” and ensuring LSI is properly accounted for in MSP, even in the absence of fully integrated “one space” planning. An overview in the form of corresponding bullet point recommendations for specific target groups is provided in Table 8-1. For further concrete advice for planners, we recommend consulting existing and coming guidelines on LSI, ICZM, and MSP by the EU and the IOC.<sup>22</sup>

## 0. Choose an entry point for LSI

There are two entry points for considering LSI in MSP. One is to start with a specific connectivity issue or problem that comes to your or a specific sector’s attention. This might be that space is needed in ports to support a maritime activity, or that aquaculture is affected by river-based pollution. The main focus of this approach is likely to be on resolving the issue at hand. You will want to consider the spatial scales of the issue, and what stakeholders, institutions and knowledge are needed to fully address all the dimensions involved. What space exactly is needed in the port? What maritime and landward activities are involved and when do they take place? What are the knock-on effects of sea-land connections in terms of infrastructure in the hinterland? Are more jobs going to be required for a maritime activity, and where will these jobs be located? The advantage of this approach is to have a tangible starting point for considering LSI, and possibly also a first list of stakeholders to involve, all of whom might already have a basic understanding of the issue.

The other approach is to take a more general perspective and systematically explore LSI issues. One reason might be to map risks and opportunities associated with integrated “one space” planning (Kidd et al. 2019), or to consider the steps that would be necessary to achieve an integrated land-sea plan. The advantage of this approach is that you can take a holistic approach from the very beginning and tackle all types of LSI in a pro-active way. The disadvantage is that LSI might be fairly abstract at first and more difficult for stakeholders to understand its relevance for them.

## 1. Develop a systems perspective

Whichever entry point is chosen, it is crucial to then develop a systems perspective for LSI. In the problem-based approach the next step is to delineate the spatial and temporal dimensions associated with the issue or activity at stake. What are the environmental and socio-economic dimensions of the issue/activity, and what spatial scales come into play? The same questions would be asked in the encompassing approach. There, you might ask more generally what natural processes characterise the land-sea interface in your area, and what might be relevant linkages and activities of the socio-economic system. Here, you may also be thinking about value chains, or specific activities, or other forms of connectivity across the land-sea interface and link them to actors.

Issues and activities do not exist in isolation, but interact with each other and are also connected with specific stakeholders and institutional actors, each of whom has their own set of values, aims and knowledge. Actors are embedded in a system of institutional responsibilities and planning and management processes and a wider context. The next step would therefore be to ask which stakeholders need to be involved in addressing the problem and at what level. You would need to consider what processes are necessary to involve all these various stakeholders, and how existing institutions can come into play. Last not least, you would ask what type of knowledge and methods are required to enable you to fully address the issue or LSI more generally, and the scale and sensitivity of the issue to the context at hand.

<sup>21</sup> <https://vasab.org/project/balticlines/project-outputs>

<sup>22</sup> For LSI see European Commission 2017, Shipman et al 2018 and Kidd et al. 2019. For evaluating ICOM, see IOC UNESCO 2006, for evaluating MSP, see Ehler 2014, including important aspects to evaluate and defining targets, indicators, data needs in relation to these.

The systems perspective encompasses four interrelated dimensions: 1) The natural processes across the land-sea interface and the social-ecological processes that need to be managed, 2) the governance systems involved in planning and management, 3) the stakeholder involvement

and coordination process, 4) the necessary methods and knowledge to address these. An overall framework dimension to analyse are 5) scale and context and the sensitivity of activities and issues to both. Box 8-1 sets out analytical questions that can help to take these steps in practice.

**Box 8-1: Analytical questions to check for LSI across dimensions**

**1) Environmental and use interactions**

in a specific geographical entity and socio-ecological system (including goods, flows and processes):

- How do land-based activities, infrastructure and processes affect the marine environment and human uses in the sea and vice versa (e.g. direction, frequency, quality)?
- Which activities and interactions are relevant where? What drives them? What are the geographical hotspots for LSI activities and interactions?
- What are important interactions between activities and processes that should be considered?
- How do different stakeholders view LSI and related activities and drivers?

**2) Governance systems and 3) related processes** (specific for a region, country, society):

- How is the institutional system for planning and management structured in relation to the above interactions? How look like: what levels, boundaries, responsibilities exist? What works well, and what are important problems

- How are relevant management processes structured? What are the outcomes of such processes? What works/doesn't work and why?
- What are important relational and other factors that allow various stakeholder groups to be efficiently and meaningfully included in planning processes?

**4) Knowledge and methods to address the interactions and activities:**

- What knowledge and methods are needed to understand and address the above?
- Where are important gaps and uncertainties? How are/could they be addressed?

**5) Scale and context sensitivity:**

- To what extent does the above differ across scales and why?
- How should these differences be dealt with in coastal and marine spatial planning with regard to governance structure, process, data and methods?
- What wider trends and other contextual factors affect the above?

**2. Expect to deal with complex spatial arrangements**

Be aware that a systems perspective in LSI means that complex spatial arrangements may need to be dealt with. Local level LSI issues (such as runoff pollution) might turn out to need transnational approaches for addressing them (e.g. catchment management), or issues arising in the EEZ (such as offshore wind farming) might require very localised solutions on the landward side (such as space in ports). This is where the cross-border dimension comes into play, or an even larger regional or sea basin scale. Thinking in systems means to move beyond the single sector issue you may have started out with and consider the impacts of sectors on each other – which might trigger entirely new LSI issues (such as displacement effects or economic impacts).

Be aware that considering LSI issues can easily become complex and all-encompassing. It might be necessary to prioritise or at least helpful to agree from the outset on a specific focus in terms of issues or scales to address, also with respect to stakeholders.



**3. Develop LSI mindfulness within existing planning systems and beyond**

Pan Baltic Scope experiences also emphasise the value of “thinking LSI” in terms of institutional development. In countries that have not engaged in marine planning before, there is a particular opportunity to develop an LSI mindset.

This is especially relevant when it comes to institutional and process development. As MSP is still a new activity, most countries are currently busy either developing new institutions or adapting existing institutions to deliver marine spatial plans. The same applies to the processes that are used to deliver marine spatial plans. The key is to think integration not only from a cross-sector perspective, but to develop MSP institutions with an LSI perspective in mind – actively looking for connection points between administrations and tasks, or making use of the opportunity to align planning systems across land and sea (e.g. creating a single planning authority), or thinking in multiple dimensions also from the perspective of administrative integration – in particular when it comes to linking marine and terrestrial spatial planning. LSI thinking should continue throughout the planning and management process (Box 8-2).

LSI mindfulness means that land planners should give due consideration to marine issues and vice versa. A mindful approach on both sides implies that land and sea are treated as one space or a planning continuum even when planning systems are separate. Where it is difficult to integrate planning systems (which may take many years), creatively building on existing structures and processes should be found to overcome institutional barriers. In practice, LSI mindfulness in terrestrial and marine planning implies:



- Aligning the planning and management systems connected to these uses across institutional levels and sectors and borders;
- Awareness of planners, other experts and decision makers of such linkages (e.g. the impacts of developments in the marine realm on the land and vice versa) and that they should automatically also think about the needs for, and consequences of a decision across the boundary;
- Aligning the timing and coordination of licensing and other processes to this;
- People knowing how they fit in and able to have a dialogue with other users across the land-sea boundary, and knowing whom to connect to in the respective administration and how;
- All parts having the necessary information to make that kind of integrated decisions;
- Thinking in terms of institutional learning and development of practice and training (i.e. land and sea planners learning together and creating institutional memory together).

Relevant institutions and affected stakeholders need to be addressed, as sectors and planners need to learn from and with each other to become aware of the LSI issues at hand and their significance for the locality. Cross-sector communication across the land-sea boundary should be promoted, even if the institutional boundaries are at the shoreline, and policy-makers should be addressed to highlight the importance of “one space” spatial management – as well as the disadvantages of not coming to integrated solutions.

#### 4. Develop the knowledge base to deal with LSI

Given the many challenges identified in this dimension, knowledge development and the development of skills are crucial. There are multiple knowledge gaps across

administrative sectors, both regarding the natural environment and uses, users and interests in the sea. This not least refers to local knowledge and socio-economic and socio-cultural issues. Methods and practices for mapping such issues must also include consideration of the more intangible and tacit aspects of sea uses and impacts. Methodologically, both quantitative and qualitative data and methods need to be considered.

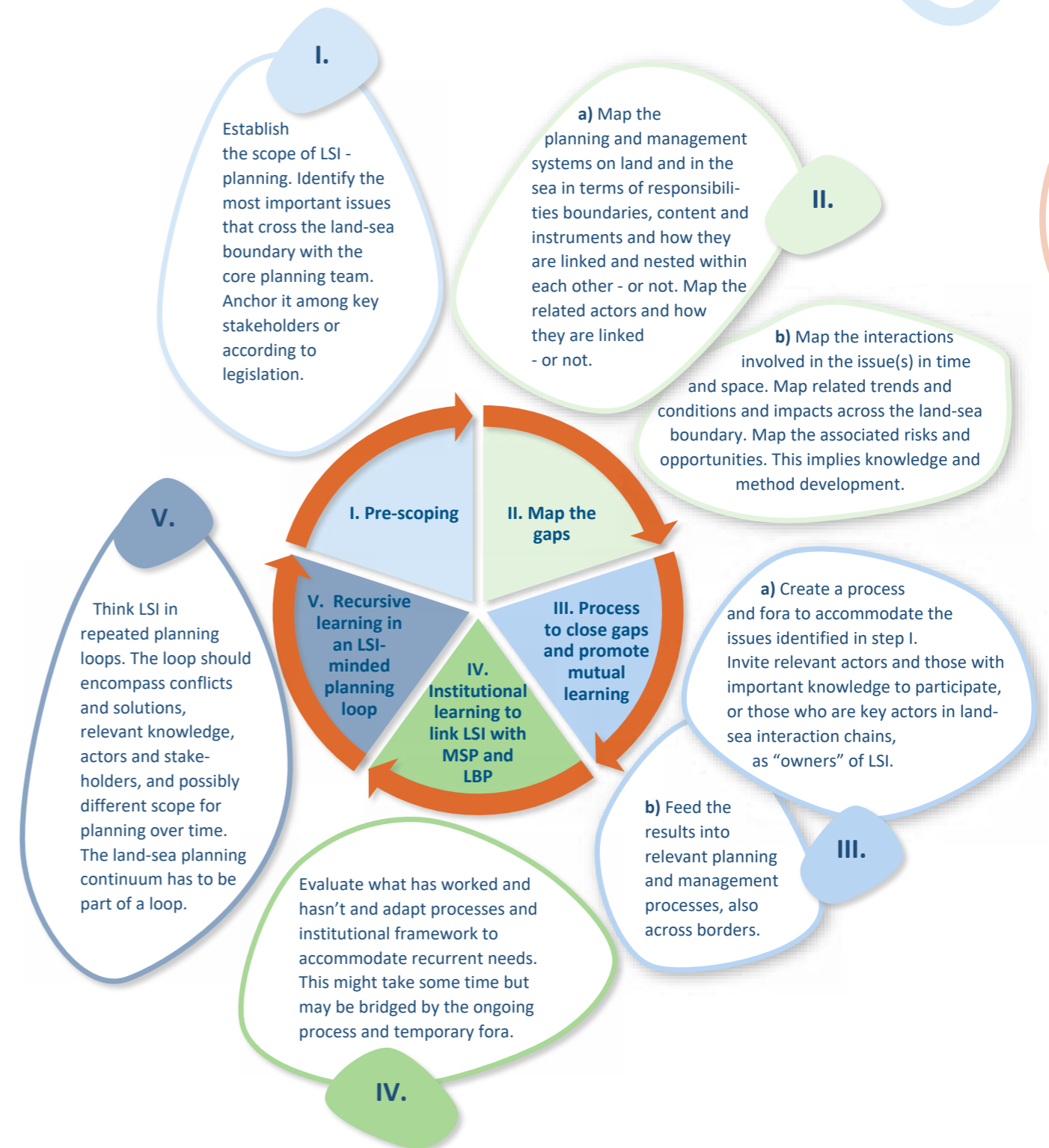
Moreover, much work is still needed to link this knowledge to a spatialised approach. What is the economic value generated by a particular sea area under different management scenarios? What ecosystem services are generated by what combinations of use and who benefits from them? Collecting and sharing relevant data across the land-sea boundary is essential to be able to answer these questions and include the answers in management decisions.

#### 5. Invest in capacity development and networking and share good practice

Where MSP and LSI thinking are new or not yet sufficiently established in existing institutional frameworks, resources and time for contact and capacity development for the necessary, often complex cross-interaction and knowledge sharing are needed. Moreover, established contacts and knowledgeable individuals should not be lost in reorganisation but used to boost development of trust and institutional memory.

At the same time, remember that LSI is context and scale dependent - as well as perceived differently across different countries and planning contexts. When thinking about sharing best/good practices it is important to remember the context in which LSI take place and need to be managed. “Practice in one area may not be best in another.” (Project Partner, 2019).

Figure 8-1: Institutional LSI Learning Loop: Linking LSI-LBP-ICZM-MSP



**Table 8-1: Recommendations on how to go forward to promote integration of LSI in MSP.**

| Recommendation   | Target groups   |
|--|---|
| <b>1. Awareness of land-sea interactions throughout the planning loop</b>  | Planners, sector experts and other decision makers  |
| <p>Raise awareness among authorities and stakeholders from an early stage and throughout the planning process on activities and processes that have implications across the land-sea boundary and in both directions.</p> <p>Find a definition of LSI that is both sensitive to the context and easy to share.</p> <p>Be especially aware that interactions can vary considerably in terms of their footprint and interaction across geographical scales, within different societal and institutional contexts and over time.</p>  |   |
| <b>2. A systems perspective for LSI</b>  | Planners, authorities at all institutional levels and stakeholders                                |
| <p>Promote a differentiated, systems-based understanding of LSI in marine and coastal planning and management, along the following interlinked dimensions:</p> <ol style="list-style-type: none"> <li>1. The social-ecological processes to plan and manage (mapping interactions in terms of areas, links, structures, needs, impacts, actors);</li> <li>2. The governance systems of planning and management to address them;</li> <li>3. The related processes of coordination and stakeholder involvement;</li> <li>4. The necessary methods and knowledge development to address them.</li> </ol> <p>Be aware of important context and trends affecting all of the above.</p>   |   |
| <b>3. LSI mindfulness in Institutional coordination and stakeholder communication for LSI</b>  | Planners and sector authorities at all levels, legislators, stakeholders                          |
| <p>Coordinate (and if possible, align) the planning and management systems on land and sea to facilitate planning and problem solving across the land-sea boundary. Existing structures and processes can provide a point of departure.</p> <p>Identify and include affected stakeholders, enable them to participate and share their knowledge and clarify their mandates and possible influence.</p>   |   |
| <b>4. Reliable and shareable knowledge on LSI</b>  | Planners, sector authorities, researchers, funding agencies, HELCOM, EU                           |
| <p>Promote the development of reliable and shareable knowledge on LSI, including maps across the land-sea interface. Incorporate different types of spatial data, and social, economic and ecological data.</p> <p>Develop a checklist of relevant issues and interactions and necessary data to cover them.</p> <p>Map the knowledge gaps as well and check which need to be addressed first.</p> <p>Develop the understanding of linkages in terms of characterisations and maps across the land-sea interface.</p> <p>Incorporate different types of spatial data, as well as other social, economic and ecological data (both qualitative and quantitative, scientific and other).</p> <p>Enable sharing of information across sectors and planning systems and coordinate future data collection between research, users and authorities.</p> |   |
| <b>5. Resources, capacity and networking for LSI in coastal MSP</b>  | Politicians and planners at all levels, national authorities, EU, training funders and providers. |
| <p>Allocate resources and build capacity to work across the land-sea boundary - in all dimensions under point 1, including understanding relevant sectors and issues, institutional frameworks, process management and knowledge and method development.</p> <p>Do this particularly with regional and local authorities and at the initial stage of institutional development.</p> <p>Share good practices.</p>   |   |

### 8.3 Outlook

Coherent integrative coastal and marine governance relies on enhanced awareness of the interconnections and dynamics between land and sea and their appropriate inclusion in planning and management processes. This applies to all maritime contexts but is particularly apparent in a small sea basin like the Baltic Sea with close interconnections between countries and across the sea. The long-term institutional development and application of the MSP Directive, as well as spatial ecosystem-based marine governance, all depend on ensuring that spatial planning and governance mechanisms across land and sea are well coordinated and aligned in space (Kidd et al., 2019, Morf et al. 2019b).

It might be too late or too early to fully implement a cross-border LSI perspective as a central feature in the present round of MSP, as time is running out at least for the EU member states. Still, this round could prepare for deeper future coordination and integration across the land-sea boundary - also across countries. The necessity of this is illustrated by the growth of cross-country and transboundary infrastructure, which implies a need for an even broader perspective on LSI, namely one that takes into account transboundary effects and impacts and different planning systems. In a sense, dealing with LSI as part of MSP might therefore force greater collaboration between planning authorities, as cross-border impacts of development become better understood and integrated thinking more prominent not only within national plans. This will not always be easy, as the case of Germany and Sweden illustrates and the difficulties experienced with aligning grid infrastructure, but it could start by taking the form of data collection or informal collaboration. Apart from the actual issues as crucial drivers, parallel focus on institutional structures and processes for collaboration and coordination could also be fruitful.

The recommendations and tools presented here may look complicated but are intended to encourage planners to use a LSI perspective to think about MSP more comprehensively. Considering LSI in more systematic ways not only leads to a more holistic understanding of the issues, but also active consideration of how to manage them. Stronger links between MSP and ICZM can result, or ideally one space planning, either out of a single planning authority or by effectively linking different planning units. Either way, the result is a more balanced and forward looking approach as MSP and ICZM move away from only considering the most pressing issues towards a truly integrated approach across the land sea boundary.

EU financed projects have been a very useful framework for discussing cross-border LSI issues. Without such funding, there is a risk that discussion space will be lost or at least diminished. There is also a risk that countries will be less invested in MSP, and concurrent transboundary processes, once the first MSP plans have been completed and the focus shifts to (national) implementation. Platforms urgently need to be found to continue the exchange between planners and academics on LSI and how to link MSP with overall ecosystem based coastal and ocean governance.

Most importantly perhaps, this report shows that MSP is not separate but needs to be connected with land-based planning (LSI planning continuum). This is all the more relevant as LSI has many faces and is ever changing, for example in connection with climate change and its implications.

We hope that you have liked our stories and are happy to share more with you.

Read more on [www.panbalticscope.eu](http://www.panbalticscope.eu)

*The Nordregio team and the Gulf of Botnia and Riga Bay case partners*

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# Appendix

## Abbreviations

| Abbreviations | Specification   |
|---------------|---|
| AX            | Åland   |
| BSR           | Baltic Sea Region   |
| DG MARE       | General Directorate for Maritime Affairs and Fisheries of the European Union        |
| C/MSP         | Coastal and Marine Spatial Planning   |
| EASME         | The Executive Agency for Small and Medium-sized Enterprises of the European Union   |
| EBM           | Ecosystem Based Management  |
| EC            | European Commission   |
| EE            | Estonia   |
| EU            | European Union  |
| BSH           | Federal Maritime and Hydrographic Agency of Germany                                 |
| FI            | Finland   |
| FIAXSE        | Finland-Åland-Sweden case of the Pan Baltic Scope project                           |
| GoA           | Government of Åland   |
| HELCOM        | Helsinki Commission   |
| ICOM          | Integrated Coastal and Ocean Management   |
| ICZM          | Integrated Coastal Zone Management  |
| IMP           | Integrated Maritime Policy of the European Union                                    |
| IOC           | International Oceanographic Commission  |
| LEP           | Landesentwicklungsplan (in Germany)   |
| LBP           | Land-based planning   |
| LSI           | Land-Sea Interaction(s)   |
| LV            | Latvia  |
| LVEE          | Latvian-Estonian or Riga Bay case of the Pan Baltic Scope project                   |
| MSFD          | Marine Strategy Framework Directive of the European Union                           |
| MV            | Mecklenburg-Vorpommern (federal state in Germany)                                   |
| MSP           | Marine/Maritime Spatial Planning  |
| MoEPRD        | Ministry of Environmental Protection and Regional Development of Republic of Latvia |
| NM            | Nautical Miles  |
| NGO           | Non-Governmental Organisation   |
| SH            | Schleswig-Holstein (federal state in Germany)                                       |
| SE            | Sweden  |
| SwAM          | Swedish Authority for Marine and Water Management                                   |
| UNESCO        | The United Nations Educational, Scientific and Cultural Organization                |
| UNFCCC        | Nations Framework Convention on Climate Change                                      |
| VASAB         | Vision and Strategies around the Baltic   |

## Overview tables

**Table 1. Maritime Spatial Planning Systems and Status for the Gulf of Bothnia Case.**  
Sources: Pan Baltic Scope compilation using national planning legislation.

| Country                         | Finland  | Åland   | Sweden  |
|---------------------------------|--|---|---|
| <b>Boundaries</b>               | Eight coastal Regional Councils draft a total of three MSplans that cover both territorial waters and EEZ. Three plans are 1) Northern part of the Bothnian Sea, Quark and Bothnian Bay, 2) The Archipelago Sea and Southern part of the Bothnian Sea, and 3) Gulf of Finland. Note: MSplans overlap land use planning in territorial waters. Regional councils draft regional land use plans that legally guide more detailed municipal local planning that covers also territorial waters. | The Government of Åland (GoA) plans the MSP for the territorial waters of Åland reaching between the coastline to the outer borders. Note: Åland has no EEZ. No overlaps with other plans. However, municipalities have mandate to plan land-use activities and shore infrastructure as related to land use planning, such as piers, marinas, docks, and beaches.   | National state plans the EEZ and the outer territorial waters until 1 NM from the base line. 3 plans for different marine areas: Gulf of Bothnia, Baltic Sea, Western Sea. Municipalities have the mandate to plan territorial waters, which implies a 11 NM overlap of national with municipal planning in the whole territorial waters and onshore. |
| <b>Enactment for MSP</b>        | Land Use and Building Act Chapt. 8a: 67a§, 67b§, 67c§, 67d§ (1999/132; (17.6.2016/482) (Maankäyttöä rakennuslaki)  | Water-Act (1996:61), amended in 2018 for MSP, 5 kap. 24a & 24b§§.   | National marine and land planning: Environmental Code (SFS 1998:808) Chapters: 3. National interest areas and sustainable land/water management principles, 4. MSP amendment in 2014 (§10) MSP ordinance (SFS 2015:400) Local and regional <sup>23</sup> planning: Planning and Building Act SFS 2010:900.  |
| <b>Level of obligation</b>      | General-level strategic plans that are non-binding.  | Guiding and directional plan. The government has management over common waters, located mainly in the outer archipelago, for which the MSP may later become binding. Privately owned waters on Åland are governed by the owners themselves, as long as they follow other legislations such as the fishing act and nature protection acts. Meaning that privately owned waters cannot be used against other legislation but the governing person or group for the privately-owned waters can be regulated more than is required by the other acts. | Directional for authorities (non-binding). The government can adopt binding provisions if they are needed to fulfil the purpose of a national marine plan. Municipal comprehensive plans are non-binding, whereas special area regulations and detailed development plans are binding.  |
| <b>Responsibilities for MSP</b> | Ministry of Environment is responsible for legislation, general development and international cooperation. Coastal regional councils draft MS plans. Regional Council Assemblies approve the plans. All three plans must be drafted in collaboration to ensure coherency. The MSP process must be done in collaboration with stakeholders.   | The GoA leads the national process; municipalities will have the possibility to contribute to the plan but have no planning mandate in the sea areas (Stefan's input). The plan and planning process shall collaborate with the municipalities and other authorities affected by the plan. The planning process shall include relevant stakeholders and authorities in an early stage.  | SwAM leads the national process, national sector authorities contribute. Coastal County Administrative Boards assist national MSP process, coordinated by 3 Lead CABs: Västra Götland, Kalmar, Västernorrland. The CABs also control municipal plans, monitoring national interests and cross-municipal harmonisation                                 |
| <b>Who adopts the plan (s)</b>  | Regional Councils for MSP and territorial waters.  | Government of Åland for MSP.  | Swedish government for national MSP. Municipal parliament for local MSP.  |

<sup>23</sup> According to the Planning and Building Act (Chapter 7), regional spatial planning take place in the Region of Stockholm and the Region of Skåne.

| Country                                    | Finland  | Åland   | Sweden  |
|--|--|---|---|
| <b>Stages of public hearing and review</b> | <ul style="list-style-type: none"> <li>Two public consultations will be organised.</li> <li>International consultation.</li> </ul>   | Twice. Once in the fall of 2019 and once in 2020.   | <p>National: Dialogue (non-statutory). Consultation (statutory). Review (statutory).</p> <p>Regional/municipal: Dialogue (depending on plan type) Consultation (statutory) Public exhibition (statutory)</p>  |
| <b>Timing of plan revision</b>             | Ten years is a minimum requirement. There will be an annual status check.  | The plan is to be updated at least every six years by the Government of Åland.  | Statutory revision as needed or at the latest every eight years. Municipal comprehensive plans have to be checked declared as up-to-date every period of political mandate (4 years) and revised every 10 years.  |
| <b>Process status</b>                      | <ul style="list-style-type: none"> <li>Overview of the current state including ecology (status of the sea, biodiversity), Blue Growth and characteristics of the three planning areas was done by May 2019.</li> <li>Future scenarios for Blue Growth and Impact Assessment were completed in fall 2019.</li> <li>Collaboration with stakeholders started in spring 2018 and is an on-going process. Collaboration continues beyond the planning phase.</li> <li>Target setting dialogues and roadmaps will be done during 9/2019 – 2/2020. The first consultation phase in 4-5/2019, second consultation phase in early 2020. Regional Council Assemblies approve the plans by March 2021.</li> </ul> | Fall 2019, a draft plan shall initiate the consultation/hearing process by inviting relevant sectors, stakeholders, and neighbouring countries/regions to discuss and give feedback on the background material and the proposed draft plan. | <p>Transboundary dialogue underway since 2013.</p> <p>Current status reports (2014), final version (2015).</p> <p>Sector interest mapping with national authorities and cross-sector conflict &amp; synergy analysis (spring 2016).</p> <p>Roadmap report final version (October 2016).</p> <p>Public dialogue with national stakeholders on 1st draft of maps (December 2016-spring 2017).</p> <p>Public review in spring 2018</p> <p>Cross-border consultation meeting June 2018.</p> <p>Cross-border consultation and public plan review in spring 2019.</p> <p>Plans to be submitted to the Government for adoption 2019.</p> |

**Table 2. MSP Systems and Status in the Central Baltic for the Riga Bay case.**  
Sources: Baltic SCOPE compilation using national planning legislation.

| Country                                    | Estonia   | Latvia   |
|--|---|--|
| <b>Boundaries</b>                          | A state plan is developed for the whole area of the Baltic Sea under Estonia's jurisdiction. This also includes the EEZ and coastal areas on land.<br>Note: There is no overlap with municipal plans, including terrestrial plans (see section "Level of obligation" in the current table).   | A state plan is developed for the whole area of the Baltic Sea under Latvia's jurisdiction.<br>Note: 2 km of marine coastal waters, overlap with municipal spatial plans (no plans adopted or in elaboration phase so far).  |
| <b>Enactment for MSP</b>                   | The plan is developed based on the Planning Act of Estonia. <sup>24</sup> Regulation for Maritime Spatial Planning is in force since July 2015. An ordinance from the Government of Estonia for the development of the plan has been given in order to start the official process. Expected adoption date: October 2020. Prior to the national MSP process, two legally binding marine county plans were adopted for Hiiu Island and Pärnu Bay area. These will remain valid also when the nation-wide MSP comes into force.<br>NB: in the Hiiu plan offshore wind energy has been abolished by the National Court of Estonia on August 8th 2018, all other sector-related aspects are still legally binding. | In accordance with the Spatial Development Planning Law (in force since December 1st, 2011). MSP has also been elaborated according to Regulation No. 740 of the Cabinet of Ministers on the Procedures for the Development, Implementation and Monitoring of the Maritime spatial plan (in force since 30 October, 2012). |
| <b>Level of obligation</b>                 | Guidance for authorities can include binding decisions, especially for construction works that do not have permanent connection to the shore. Recommendations are also given that should be followed when planning or developing coastal areas.   | Guidance for authorities can include binding decisions.  |
| <b>Responsibilities for MSP</b>            | The Ministry of Finance, and the Minister of Public Administration leads the process, national sector authorities contribute.   | The Ministry of Environmental Protection and Regional Development leads the process, national sector authorities contribute.   |
| <b>Level of obligation</b>                 | Estonian Government for national MSP.   | Latvian Government for national MSP.<br>Note: for 2km of marine coastal waters, overlap with Municipal spatial plans adopted by its councils.  |
| <b>Stages of public hearing and review</b> | <p>Statutory (preliminary dates):</p> <ul style="list-style-type: none"> <li>Terms of reference for the plan and SEA program (May 2017).</li> <li>1st draft of MSP and SEA report (April-May 2019). 2nd draft of MSP and SEA report (November 2019). Final MSP and SEA report (June-July 2020).</li> <li>Extra public hearings in regions and local governments during the process.</li> </ul>  | Consultations and hearings (2015-2016). 1st edition draft and SEA (May 2016). Inter-institutional consultations (June 2016-October 2017);<br>Final version of plan and SEA May 2019  |
| <b>Timing of plan revision</b>             | Statutory revision every 5 years.   | After adoption, revision of maritime spatial plan every 6 years.   |
| <b>Process status</b>                      | <ul style="list-style-type: none"> <li>Official process started in May 2017. Baseline studies carried out in 2016.</li> <li>Two pilot marine spatial plans developed in 2012 – 2016 around Hiiu island in Pärnu Bay area (both in territorial waters).</li> </ul>   | Plan adopted by the Latvian Government on May 14, 2019   |

<sup>24</sup> Planning Act of Estonia online: <https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/502012017006/consolide>

**Table 3. Maritime Spatial Planning Systems and Status for the German case study.**  
Sources: Pan Baltic Scope compilation using national planning legislation.

| Country                                    | Germany<br>Federal level EEZ plan  | Mecklenburg-Vorpommern<br>Territorial waters   | Schleswig-Holstein<br>Territorial waters  |
|--|--|--|---|
| <b>Boundaries</b>                          | The federal German MSP plans cover the EEZ only. There is one plan for the North Sea and another for the Baltic Sea. No overlaps with any other spatial plans.   | The LEP MV covers the entire territory of the state including its territorial waters up to 12 nm (1:250,000). No overlaps with other spatial plans.  | The SH plan covers the entire territory of the state including its territorial waters up to 12 nm (1:300,000). No overlaps with other spatial plans.  |
| <b>Enactment for MSP</b>                   | Raumordnungsgesetz des Bundes (Federal Spatial Planning Act) of 22 December 2008, last amended on 20 July 2017 (amended to include the requirements of the EU MSP Directive)   | Gesetz über die Raumordnung und Landesplanung des Landes Mecklenburg-Vorpommern (Landesplanungsgesetz/State Planning Act) of 5 May 1998, last amended on 5 July 2018   | Gesetz über die Landesplanung (State Planning Act) of 27 January 2014, last amended on 20 May 2019  |
| <b>Level of obligation</b>                 | Binding plan   | Binding plan   | Binding plan  |
| <b>Responsibilities for MSP</b>            | The Federal Ministry of the Interior, Building and Community (BMI) is responsible for MSP in the EEZ. The authority responsible for the planning process is the Federal Maritime and Hydrographic Agency (BSH).  | The state planning authority is the Ministry of Energy, Infrastructure and Digitalization.   | The state planning authority is the Ministry of the Interior, Rural Regions and Integration.  |
| <b>Who adopts the plan (s)</b>             | Federal government   | State government   | State government  |
| <b>Stages of public hearing and review</b> | <ul style="list-style-type: none"> <li>Informal consultation of sectors during sector-specific meetings.</li> <li>At least one round of formal public consultation on the draft plan; possibly a second round in case of significant amendments to the first draft.</li> <li>Consultation of authorities and other bodies acting in the public interest, including neighbouring MSP authorities.</li> <li>Comments received are considered by the planning authority and the draft plan is amended accordingly.</li> </ul> | <ul style="list-style-type: none"> <li>Informal ongoing conversations with sectors, other authorities and ministries and coastal municipalities.</li> <li>Formal consultation of authorities and other bodies acting in the public interest, including neighbouring MSP authorities.</li> <li>At least one round of formal public consultation on the draft plan; possibly a second round in case of significant amendments to the first draft.</li> <li>Public consultation takes the form of an online process and is accompanied by a series of information meetings. Comments received are considered by the planning authority and responses are published. The draft plan is amended accordingly.</li> </ul> | <ul style="list-style-type: none"> <li>Informal conversations with sectors.</li> <li>Formal consultation of authorities and other bodies acting in the public interest, including neighbouring MSP authorities.</li> <li>At least one round of formal public consultation on the draft plan; possibly a second round in case of significant amendments to the first draft.</li> <li>Public consultation takes the form of an online process and is accompanied by a series of information meetings. Comments received are considered by the planning authority and responses are published. The draft plan is amended accordingly.</li> </ul> |
| <b>Timing of plan revision</b>             | Statutory revision every 10 years.   | Statutory revision every 10 years.   | The next edition of the plan will have a life span of 15 years.   |
| <b>Process status</b>                      | <ul style="list-style-type: none"> <li>The first planning process began around 2004.</li> <li>The first plans came into force in 2009 (North Sea and Baltic Sea).</li> <li>The revision process began in 2019 with a series of informal sector meetings.</li> <li>The draft plan is set to be published in early 2020. Public review/formal consultation, follow, as well as cross-border consultation will follow in 2020.</li> <li>The new plans are expected to be completed in 2021</li> </ul>                         | The plan was last revised in 2016 so is currently in the implementation stage.   | <ul style="list-style-type: none"> <li>The first plan came into force in 2010.</li> <li>The revision process began in 2018. The state government approved the draft plan which was then put out for formal consultation.</li> <li>Online consultation for the public and for institutions took place in 2019.</li> <li>The responses received are currently under consideration. If necessary a second round of consultation will follow.</li> <li>The amended plan is expected to be completed in 2020 or 2021.</li> </ul>   |

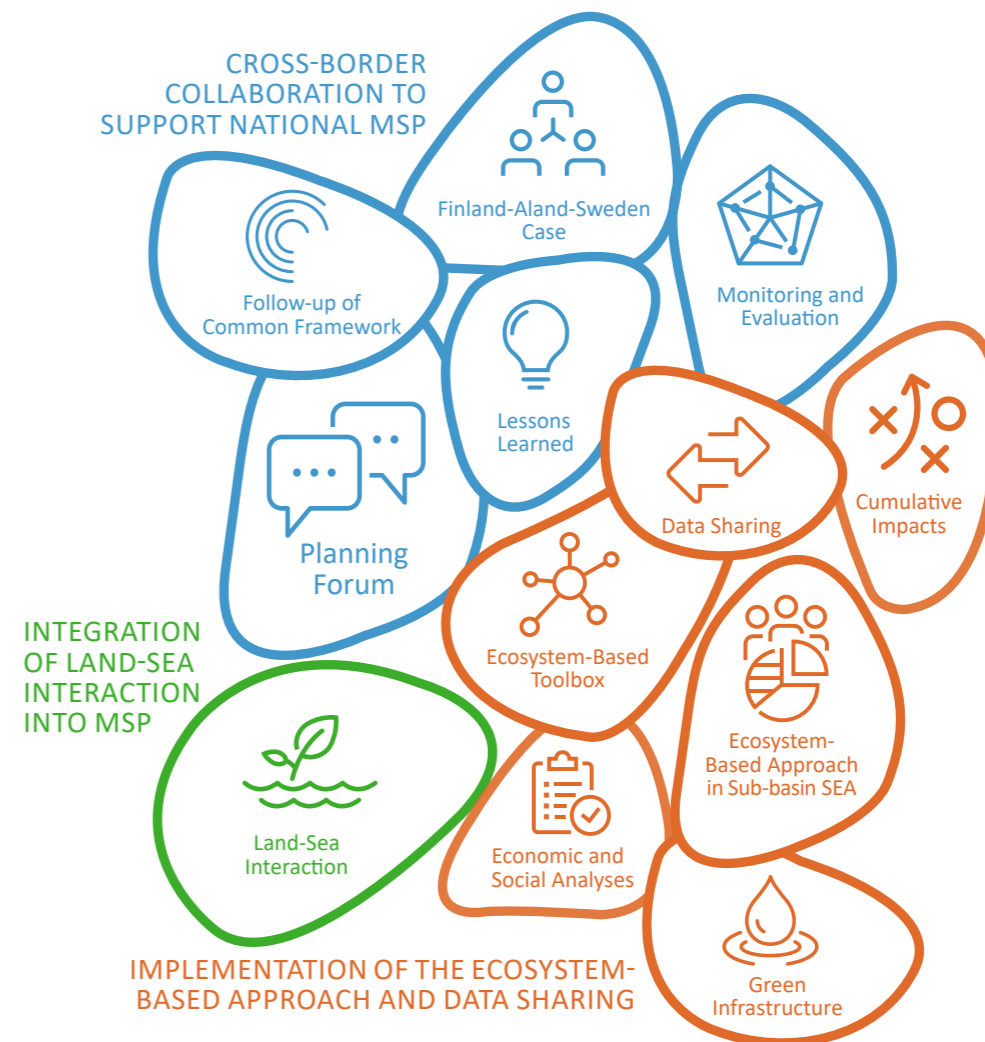
**Pan Baltic Scope** focused on cross-border collaboration and had three interlinked work packages with 12 activities.

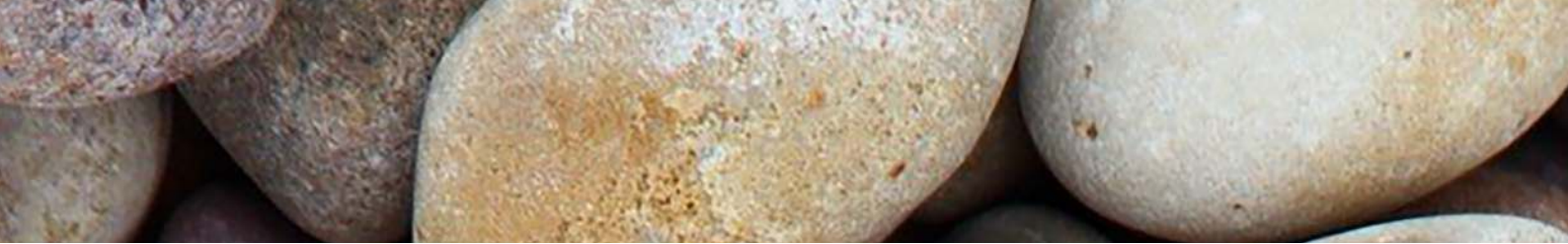
We established a **Planning Forum** as the central platform for our collaboration on specific planning issues identified by the planning authorities and regional organisations.

We carried out concrete cross-border activities at **different geographical levels** to meet the **needs of the national** maritime spatial planning processes and to support the successful implementation of the **EU MSP Directive**.

We developed **tools and approaches** at pan-Baltic level, to contribute to coherent maritime spatial plans in the Baltic Sea Region, including:

- implementation of an ecosystem-based approach;
- cumulative impacts;
- green infrastructure;
- land-sea interactions;
- socio-economic analyses.





**The Pan Baltic Scope Synthesis Report “Lessons, Stories and Ideas on how to integrate Land-Sea Interactions into MSP”** showcases how planners from the Baltic Sea have tried to tackle Land Sea Interactions (LSI) in countries and regions at different stages of developing marine and coastal planning. It presents experiences, challenges and enablers when integrating LSI in cross-border contexts, based on cases in Finland, Åland, Sweden, Estonia, Latvia and Germany. This report is aimed at coastal and marine planners and experts from all institutional levels working at the land-sea interface.

**Pan Baltic Scope** is a collaboration between 12 planning authorities and organisations from around the Baltic Sea. We work towards bringing better maritime spatial plans in the Baltic Sea Region.



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