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SYNTHESIS ABOUT COASTAL GOVERNANCE: BASED ON LAND-SEA-ACT PROJECT CASES

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Summary

The synthesis report provides an overview on challenges and solutions for operationalising land-sea interactions (LSI) within planning and governance of coastal and marine spaces. Findings on this report are based on the multiple embedded cases in six countries of Baltic Sea Region, which through contextual processes describe tendencies of coastal governance and generate thematic suggestions for policy design. The cases address co-existences and tensions between coastal landscapes, coastal ecosystems, seascapes and fields of blue economy (e.g., coastal tourism, renewable energy production, aspects of marine mobility). Coastal tourism and recreational economies bound to marine spaces are presented across all Land-Sea-Act (LSA) cases.

The approached interactions between land and sea indicate various tensions and also potentials in sustainability transitions and regional development. Local and regional cases have their potentials for upscaling, at the same time there also are limits for direct generalisations. However, the LSA cases demonstrate useful ways of public engagement and of assessment in mapping values and in finding solutions bound to coastal challenges and Maritime Spatial Planning (MSP) processes. For example, some cases applied scenario-based approaches to understand possible tensions and coexistences in coastal change. The mitigation of seasonal marine tourism and the perspective of marine entrepreneurs did reveal needs for co-used spaces and infrastructure in planning the interfaces between land and sea. The role of culture and art was valorised for generating a dialogue between stakeholders in revitalisation of coastal areas.

The local inhabitants and communities can become heavily impacted by wider scale initiatives of marine policy. Thus, there is a crucial need to translate values and knowledge bound to coastal places across the scales of spatial planning and across branches of the blue economy. The synthesis report brings up lessons learned and possible solutions from LSA cases, which have potentials of upscaling and of applications across diverse regions in coastal governance.

1

Introduction

The synthesis report provides an overview on challenges and solutions for operationalising land-sea interactions (LSI) within planning and governance of coastal and marine spaces. Furthermore, it reflects on their application in the six demonstration cases conducted in the Land-Sea-Act (LSA) project.

THE REPORT BRINGS THE RESULTS OF THE CASES TOGETHER IN ANALYSING THE FOLLOWING THEMES OF COASTAL GOVERNANCE:

1. Governance complexity and possible trade-offs in planning of coastal areas and blue economy spaces;
2. Applied planning approaches for addressing LSI;
3. Obstacles and synergies towards sustainability transitions of coastal area and maintenance of related landscapes and seascapes;
4. Potentials for replicating and upscaling knowledge on LSI in planning.

The synthesis is complementary with the compendium of methods and the reports of the six LSA demonstration cases, which present diverse aspects of maritime values and coastal planning in more detail[1]. The synthesis report provides analysis across the cases, which will be used in drafting the Multi-level Governance Agenda (main output of the LSA project).

LSA project cases include coastal planning processes and land-sea connections from the following six areas of the Baltic Sea Region: Southwestern Kurzeme coast (Latvia); Fehmarn Island (Germany); Gulf of Gdańsk area (Poland); middle section of the Northern coast (from Hara to Aseri settlements in Estonia); Gothenburg region (Sweden); Holbæk harbour area (Denmark) (see additional information in chapter 3).

The syntheses work was carried out within the time frame between January 2020 and November 2021 and was carried along number of project phases of which we highlight: elaborating themes of comparing/synthesising; feedback in LSA partner meetings; compiling the draft LSA case reports; discussions based on the draft case reports; LSA partner's feedback on the draft of the Synthesis Report; all LSA partners update the Synthesis Report based on the final case findings. A thematic journal manuscript on key spatial governance issues was also synthesised based on three of the LSA cases.

1 The case reports, the compendium of methods, and Multi-level Governnace Agenda can be found on the project webpage: https://land-sea.eu/

2

Brief methodological and theoretical framework

Findings on this report are based on the multiple embedded cases[2] in six countries/regions (including several units of analysis), which through contextual processes describe tendencies of marine and coastal governance and generate thematic suggestions for policy design. Individual cases were designed by the respective country-based experts according to the relevant contextual issues and challenges of coastal and marine planning. Therefore, the LSA cases contain multiplicity of concepts, methods, practice-based interventions and data registers in engaging with the dynamics of coastal governance. Some LSA cases focus thematically on a dimension of maritime planning (e.g., Poland) while other are oriented towards applied solutions (e.g., Denmark) (see more in chap. 3 and chap. 4). The territory and the extension of marine space in land-sea interactions vary across the cases, e.g., the Swedish case includes the whole region with coastal-marine space, whereas the Danish case focuses on the town's historical harbour area.

Although all cases address co-existences and tensions between coastal landscapes, experienced marine spaces and fields of blue economies (e.g. coastal tourism, renewable energy production, aspects of marine mobility), the cases do not cover the full spectrum of blue growth (including aquaculture, biotechnology, coastal and maritime tourism, mineral resources, renewable energy) equally, the EC approach[3] to blue economy would even add to the list additional sectors (fisheries, marine transport, shipbuilding, offshore oil and gas). However, coastal tourism and recreational economies bound to marine spaces are present across all LSA cases. This highlights that the challenges in framing distinctive fields of blue economy within thematic analysis and spatial planning[4] remained insuperable. The shift in the conceptualisation from blue growth to blue economy took place during the LSA project period, which was influenced by EU policy guidance and recently published research as well.

The regional cases are approached as bounded systems, which involve diverse scales (e.g. micro, macro, meso) of social organising and provide practice related knowledge[5]. The linkages (or splinters) across the scales are formed in spatial planning and in experienced landscapes. For example, the allocation of off-shore wind parks (OWP) brings together EU level policies and landscape values of local people. The synthesis work draws together the demonstration cases related practices by integrating horizontal (locational context) and vertical (scale dynamics) analysis of case-based processes[6]. It means that the cases make it possible to follow certain LSI challenges (e.g., sustainability of coastal tourism) across different locational context in Baltic Sea area. And additionally, the cases render visible vertical inter-scalar connections and tensions related to particular LSI challenges (e.g., mitigating tourism flows or allocating OWP). It means that the synthesis work compares and traces the dynamics of coastal-marine governance across diverse sites, and also analyses the relations and/or obstacles across socio-political scales (local, regional, national, international) of operationalising coastal governance.

Coastal governance related cases address diverse aspects of LSI demonstrating how everyday life, values, spatial planning and economies are related to maritime and marine spaces. Therefore, from the perspective of LSI, the marine space includes marine ecosystem and cultural, aesthetic and socio-economic dimensions to the sea, and also land-based nodes/places shaping its spatial development[7]. Thus marine/maritime space also covers the coast. It means that coastal governance processes are shaping futures of complex marine spaces entangled to material and non-material interfaces between land and sea. The phenomenon of coastal governance explicitly brings marine space into the process of spatial planning and of decision-making. From the broad perspective governance includes the following aspects of policy making[8]:

a) dealing with the resolution of collective problems;
b) working at the intersections between state, civil society and market;
c) policy making for which institutions of representative democracy may be held accountable.

These aspects of decision-making and value formations embedded into LSI are present across all six LSA cases.

2 Yin, R. (2003). *Case study research: design and methods.* Sage, London.
3 European Commission. Blue Growth, https://ec.europa.eu/assets/mare/infographics/
4 Eikset, A.M. et al. (2018). What is blue growth? The semantics of "sustainable development" of marine environments. *Marine Policy* 87, 177-179.
5 Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry* 12 (2): 219-245.
6 Bartlett, L. and Vavrus, F. (2017). Comparative case studies: an innovative approach. *Nordic Journal of Comparative and International Education* 1(1): 5-17.
7 Jerzak, K., Shrayer, M.D., Krośnicka, K.A., Lorens, P., Zaucha, J., Pardus, J. (2019). The essence of marine and coastal space – an interdisciplinary perspective. *Europa XXI* 36: 15-33.
8 Gualini, E. (2006) The rescaling of governance in Europe: new spatial and institutional rationalities. *European Spatial Planning* 14 (7): 881-904.

The analysis of coastal governance processes would benefit from a following relational understanding of scale[9]:

a) scale embodies political, social, economic and discursive processes that cannot be reduced to a particular institution,
b) scales intersect and influence one another to such an extent that social practice can hardly be understood without considering cross-scalar relations,
c) scales should not be assumed to easily find their place in a nested hierarchy, resembling a Russian doll.

Spatial dimensions of LSI in planning are socially produced along interfaces and boundaries mediating complex relations in emerging seascapes and coastal landscapes. For example, MSP can include certain linkages between marine space and culturally significant coastal areas. These kinds of dynamics are evident in mobilising 'soft spaces'[10] in coastal and maritime spatial planning, which reach beyond formal administrative borders. Knowledge about marine ecosystems and cultural values of marine spaces are entangled with coastal governance. Therefore, LSA cases addressed multiple role of situated culture(s) and spatial representations of culture[11] in formulating land-sea interactions across planning processes.

9 Bouzarovski, S and Haarstad, H. (2019). Rescaling low-carbon transformations: towards a relational ontology. *Transactions of the Institute of British Geographers* 44: 256-269.

10 Allmendinger, P. and Haughton, G. (2009). Soft spaces, fuzzy boundaries, and meta governance. *Environment and Planning* A 41: 617-633; Jay, S. (2018). The shifting sea: from soft space to lively space. *Journal of Environmental Policy and Planning* 20: 450-467.

11 E.g. Gee, K., Kannen, A., Adlam, R., Brooks, C., Chapman, M., Cormier, R., Fischer, C., Fletcher, S., Gubbins, M., Shucksmith, R., Shellock, R. (2017) Identifying culturally significant areas for marine spatial planning. *Ocean & Coastal Management* 136: 139-147.

3

The focuses of the LSA cases

THE SIX LSA CASES FOCUS ON THE FOLLOWING ASPECTS OF BLUE ECONOMY AND COASTAL GOVERNANCE [12]:

- Latvia (Southwestern Kurzeme coast): mapping and assessing the ecosystem services and landscape qualities of coastal area, and developing proposals for balancing national interest in offshore wind park development with that of local communities in preserving the landscape and boosting coastal tourism and recreation;
- Germany (Fehmarn Island): developing a set of climate change mitigation and adaptation measures with local actors; avoid spatial conflicts between tourism and nature to create positive impacts for the island;
- Poland (Gulf of Gdansk area): assessment of marine cultural values, which are recognised as the region's marine culture, exploring scenarios towards more environmentally and culturally oriented tourism;
- Estonia (Middle section of the Northern coast): understanding land-sea interactions within emergent spaces of maritime-coastal planning and experienced coastal landscapes by focusing on recreational economies/tourism and mobilities. Discussions of future trajectories based on thematic scenarios.
- Sweden (Gothenburg region): developing the basis for a regional maritime strategy for improved cooperation and innovative methods for sustainable development of coastal economies. Main question addressed: how to better integrate a blue growth (maritime business) perspective in coastal and maritime spatial planning?
- Denmark (Holbæk harbour area): revitalisation of the historic harbour and its connections to Holbæk city space through cultural heritage activities and design of public space.

The two last mentioned demonstration cases were part of the work-page focusing more explicitly on entrepreneurial perspectives in coastal governance dynamics.

Figure 1.

Allocation of the six LSA cases

(map by Anu Printsmann)

12 More information about the concepts and methods applied in the case studies/demo cases can be found in the LSA compendium of methods and in the reports of LSA case studies.

4

Governance complexity and possible trade-offs in planning of coastal areas and blue economy spaces

The cases indicate that coastal areas and embedded stakeholders are entangled in tensions between ambitious goals of climate-neutrality of 2050, blue economies and value-based coastal landscapes (e.g., see cases of Denmark and Latvia in Table 1). The implementation of these ambitious goals to green transition is often expected to take place at the municipality level. The municipalities, as well as regional and national planning authorities need to navigate between partly controversial development policies involving marine spaces, e.g., expansive tourism vs strict nature conservation, open sea wind-parks vs. landscape-based values. The sustainability dimensions can be mobilised for supporting partly controversial means of development. The conflicts and challenges merge when wider (regional, national) interests of blue economy are spatially projected over the place-based values of communities. Within MSP process, the coastal municipalities can have a rather strong mandate, but they do not always want to use it (e.g., in the case of Poland). Coastal communities may need thematic knowledge and motivation to take part in the planning of marine space. The power and responsibilities in planning coastal waters and improving marine ecosystems depends on the state level regulations. In some cases (e.g. Latvia and Sweden) municipalities have the right to plan coastal waters, and in other cases (e.g., in Estonia) this responsibility is given to the state level. These administrative frames influence the awareness and motivation for dealing with coastal challenges on the municipality level.

Accessibility to seashore and mobilities are central issues in addressing LSI within coastal planning (e.g., in the cases of Estonia and Sweden). People enjoy the seaside character in everyday living environments and in recreational practice. However, diverse fields of cultural practice and of blue economies require infrastructural nodes of accessibility making LSI and mobilities possible. The LSA cases show that coastal areas have come under pressure due to intensive uses. However, this intensity of conflicting LSI often concentrates around certain localities and fields of (potential) blue economy resources. The habits and dependencies related to private car-use generates several problems to coastal areas (in case of Latvia, Germany, Poland), e.g., damages to habitats, littering and problematic seasonal parking issues in high tourism season. The sharing of coastal infrastructure (e.g., ports, storages, repair facilities) and land-uses is also a wider challenge of advancing blue economy in densely populated and used coastal areas (see the case of Sweden).

Mobility patterns and partly changing seasonality of coastal areas is indicated through uses of summer-homes which is rather widespread in Nordic and Baltic countries. The seasonally used summer-houses can be seen as part of extended recreational spaces linking urban life-styles with the countryside (e.g., the case of Estonia). The Covid-19 pandemic regulations indicated some potentials of distance-working, which can prolong active season of summer-house use period. However, beside some contributions, second-home users also provide pressures on public local infrastructure and services. Municipalities (e.g., in the case of Sweden) may see the part-time residents as a prerequisite for being able to offer some of the commercial service at hand. Therefore, coastal municipalities have to mitigate between unstable seasonal use of local services, increasing house prices and lively year-long community life. The advancement of marine recreational culture has generated tensions between elitist leisure spaces and mobility nodes (e.g., small private harbours) vs everyone's rights to coastal cultural milieu in the countries where marine culture was disrupted for several decades in Soviet-era.

LSA cases address the values of marine landscapes in personal experiences and in spatial planning. Several cases bind through scenarios actual present values with long-term trajectories of coastal-marine spaces related to blue economies. Tensions appeared in short-term political gains and long-term perspectives of sustainable marine spaces. The periodical cycle of public elections influences the visibility of coastal sustainability issues in political agendas. The adaptation to climate changes and planning of one nautical-mile coastal sea (e.g., in Latvia and early discussions in Estonia) poses new responsibilities to local municipalities, who may feel reluctant because of their lack of knowledge and skills in coping with these responsibilities. This tendency may be increased by the weakening of regional level of spatial planning (e.g., in Estonia and Latvia), which generates gaps between local and national level of (maritime) spatial planning.

Data about marine spaces is scattered and divided along jurisdictions, which hinders thematic integration and comparison of data-bases in spatial planning. The priority is given to quantitative and spatially representative data in the MSP process, and the role of culture forming meanings of marine spaces/landscapes is formulated only in rather narrow ways (see the case of Poland). Therefore, the LSA cases revealed some discrepancies between land-based and marine related spatial planning[13].

Social trust and some openness towards alterations are important for mobilising good/participatory coastal governance processes between stakeholders and across diverse scales of decision-making. A wider consciousness about sustainable lifestyles related to the sea exists, but people are rather tentative to make adjustments in their recreational practice or preferences of coastal landscape views. Tourism related initiatives revealed tensions that inhabitants of coastal villages (or towns) can be rather careful in making layers of costal heritage and "hidden" beaches publicly visible in tourism promotion, because increased flows of visitors would disturb quiet places of dwelling. In some coastal villages (in Latvia and Estonia) this tension appears in creating physical limitations to the public access to beach (e.g., no public parking lots or no public road to shore) and keeping it only for private owners and guest-house clients.

The mapping of ecosystem services (ES) can indicate tensions and potentials in integrating diverse functions of coastal areas. LSA cases indicate the importance of socio-cultural dimension of ecosystem services for sustaining coastal-marine landscapes. Tension appeared between publicly attractive beaches with amenities vs. wilderness, because people appreciate wild coastal areas free from disturbing amenities. In some locations (e.g., in the German case) there is a challenge to de-intensify seasonal uses of popular coastal areas for preserving environmental values. But often people are attracted exactly by these maintained and previously experienced coastal-marine sites. Preliminary analyses about coastal landscapes indicated that provisioning ES connected to intensive agriculture creates trade-offs in relation to the regulating ES (flood control, erosion control, wind control, pollination and global climate control); provisioning ES connected to forestry and energy generate trade-offs with cultural ES (recreation, aesthetics, cultural heritage). A reduction in intensive agricultural practices on the coast can lead towards a more natural coastline and more attractive tourism destinations and hotspots of ES supply. On the other hand, small-scale agriculture can positively contribute to sustaining open (not forested) views on coastal landscapes with higher biodiversity.

13 Kidd, S. and Ellis, G. (2012). From the land to sea and back again? Using terrestrial planning to understand the process of marine spatial planning. *Journal of Environmental Policy and Planning* 14: 49-66.

Table 1.

Challenges, practices and needed capacities in coastal governance based on LSA cases

	Challenges and possible trade-offs in coastal planning and governance	Governance practice/knowhow in dealing with challenges	Obstacles and needed capacities towards sustainable coastal governance
LATVIA, South-western Kurzeme coast	1) Offshore wind energy vs. coastal landscape and tourism; 2) A desire for an increasing number of tourists and income from the tourism sector vs. anthropogenic pressure created by tourists.	Determining suitable areas for offshore wind parks by considering impacts on ecosystem and landscape. A participatory approach in addressing conflicts between offshore developments and coastal interests of municipalities, mapping of landscape and recreational values and development of strategic and spatial solutions for balancing both interests.	Lack of (or insufficient) cooperation and coordination among municipalities, state authorities and entrepreneurs in order to support sustainable coastal tourism development. Uncertainties with regard to policy objectives and vision for offshore wind energy development.
POLAND, Gulf of Gdansk area	1) Tourism vs. more sustainable/quality nature- and culture-based tourism; possible tensions with nature conservation; 2) Sustaining marine culture (often related to the coastal fisheries) but limited trade-offs are expected here (perhaps how and what to support).	How to include cultural values into MSP on the sea; how to make emotions, traditions and lifestyles be spatially explicit and be protected by MSP; how to develop and adopt methods that would allow that: are methods available and are planners ready to adopt these methods; also issues related to fisheries management and controlling mass tourism.	Lack of well-established methods, preferences for quantitative data, need for skills and competencies, trust and time issues. There should be some issues to be identified in relation to required change from mass to quality tourism.
ESTONIA, middle section of the Northern coast	1) Co-existences and tensions between landscape nature-culture heritage and coastal recreational economies/tourism; 2) Balancing different means of accessibility and mobilities related to coastal and marine spaces.	1) The role of vernacular knowledge and incentives of community collaboration in the field of coastal landscape care; 2) Governance dynamics and spaces (e.g. municipal districts, MSP framework) establishing inter-scalar connections; 3) Approaching small harbours, smaller landing sites on shore and military heritage as part of marine culture and blue economies.	Lack of capacities and concerns to communicate between municipalities. Lack of awareness and tested competences to integrate terrestrial planning and marine spaces. Need of frameworks and initiatives supporting sustainable and community-based entrepreneurship.

	Challenges and possible trade-offs in coastal planning and governance	Governance practice/knowhow in dealing with challenges	Obstacles and needed capacities towards sustainable coastal governance
Germany, Fehmarn Island	1) Wildlife vs tourism; 2) Agriculture vs wildlife is also a significant issue on the island, as it is almost completely covered with extensively used monocultures which limits the island's biodiversity; 3) Mass tourism vs quality tourism which includes the critical allocation of spatial function (coastal but also inland).	Sometimes national regulations on MSP and coastal planning set a framework that makes it impossible or at least difficult to implement new ideas and projects if they cannot be executed in accordance with existing regulations. Challenge of having to alter livelihoods of coastal stakeholders if institutions are not convinced by new ideas or are fine with the status quo (i.e. coming in as an outsider and pushing for projects that were not sufficiently discussed with locals).	Stakeholders should propose what challenges they want to address first. Lack of fund and a need to communicate about common goals - economic development, nature protection, the kind of tourism the island wants to have in the future. A lack of transparency and active consultation possibilities regarding decisions that are not made locally, but have huge effect on the region (e.g., the Fehmarnbelt tunnel). The dependency of short-term thematic projects, whereas implementation of ideas need continuation.
Denmark, Holbæk harbour area	1) How to combine coastal cultural heritage with economic development of the historical harbour area; 2) How to generate synergies between entrepreneurship, arts and tourism in revitalisation of coastal environments.	The arts and artistic expressions have potential in making visible valuable associations related to coastal and harbour environments. The arts and events supporting dialogue between different stakeholders in planning and tourism development. It is needed to make cultural heritage and related skills (e.g., ship building) visible for decision makers.	Lack of experience for communicating the conflicts of interest around LSI. This issue relates to different levels of governance at the same time, which makes it very complicated to be solved.
Sweden, Gothenburg region	1) How to harness the potential in developing maritime businesses while preserving sensitive coastal marine areas; 2) High demand and spatial claims on land close to sea, areas that are often sensitive to human activities; 3) Competition within maritime sector, e.g., between tourism and marine food production.	1) Strengthen capacities to integrate business perspective in MSP and coastal planning; 2) Establishing maritime business clusters, for sharing of knowledge and experience and functioning as a natural platform for collaboration and exchange of ideas. Cluster would be especially valuable for small-scale businesses which constitute the majority of companies in the region. For these maritime related companies, the local and regional markets are most important. Therefore, interactions with municipalities, (regional) stakeholders, and experts are very important for generating knowledge (e.g., licencing issues) and sustainable spaces for blue economies.	Better collaboration between businesses and the public sector (municipality, regional authority) in early stages of coastal and marine planning. Need for increased understanding of maritime businesses needs and preconditions (incl. opportunities and motivations for sharing spaces and infrastructure) in coastal and marine planning. Also need for increased understanding about spatial planning process for of maritime business stakeholders. In addition, increased understanding among business stakeholders about overall ecological and environmental preconditions.

5

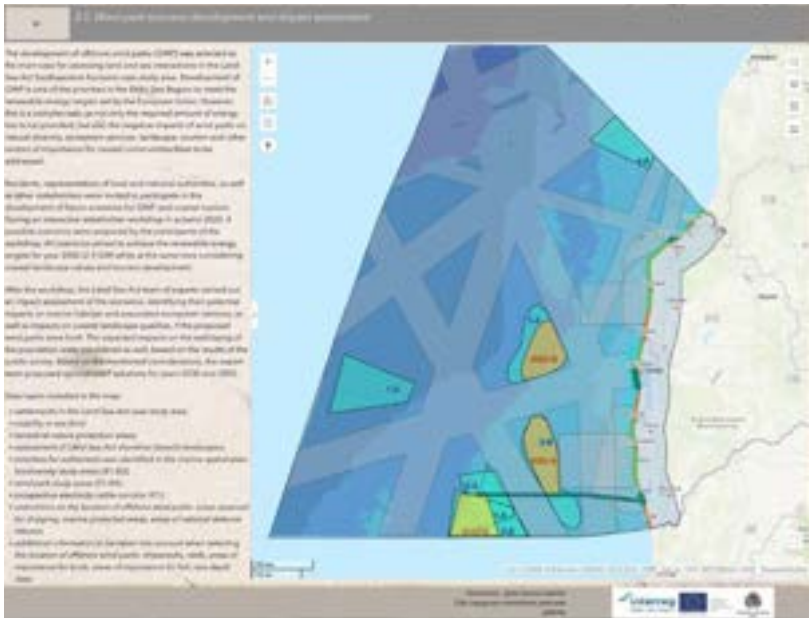
Considerations on the applied planning approaches towards sustainable LSI

In addition to the thematic analysis, the LSA cases elaborated and tested selected tools for sustainable planning solutions in a coastal-marine context. Some applications of possible planning solutions extend beyond the LSA project. However, the cases demonstrate preliminary potentials and possible effects in applying the elaborated approaches and tools in planning of coastal and marine areas.

Three LSA cases (Estonia, Latvia, Poland) used scenarios[14] for analysing thematic tendencies and testing some solutions in planning/advancing sustainable coastal and marine spaces.

In Southwestern Kurzeme coast (Latvia) target-seeking scenarios were elaborated with stakeholders to find suitable and sufficient spatial allocations for offshore wind parks to satisfy the climate-neutrality goals and sustainably intensify coastal tourism development by integrating ecosystem service and landscape quality assessment results. The results of the target-seeking scenario work are presented in an online map explorer (Figure 2). Although the identified pathways accomplished the planning tasks, preliminary findings show that there are important trade-offs between perceived aesthetic value, as well as naturalness of seashore landscapes and visibility of offshore wind parks. The lessons from the scenario building process for coastal-marine planning in Latvian context highlight that multi-level and multisectoral participation and dialogue among stakeholders and planners are indispensable to create and to understand the complexity of LSI.

Figure 2.
Wind park scenario development[15] based on the Latvian case study



Exploratory scenarios with a focus on the marine culture and state of the natural environment were assessed in the context of the Polish case. The stakeholders in the Vistula Lagoon, similarly to those representing the Gulf of Gdańsk, have a relatively pessimistic view of the future of their region(s). The concern of losing influence over the future of the region is shared for both case´s sub-regions. This perceived lack of 'power to influence' manifests itself in disappearing local identity, unification of the tourist offers, depopulation and lack of opportunities for a 'good life' in smaller towns and villages. In one optimistic scenario it was articulated that a new modern marine identity is created, and that the region is still quite attractive in terms of ecological and cultural heritage. It is clear from this research that there is a need for the empowerment of local communities and larger influence on the decision-making concerning one´s own region both at individual and local administrative levels.

14 More information about scenario-based approaches see in LSA compendium of methods, and more specific process of scenario work in LSA case study reports, https://land-sea.eu/

15 Land-Sea-Act Map Explorer: the Southwestern Kurzeme coast. https://experience.arcgis.com/experience/2447e76e-306a4e68bf82323e33b72b26/page/page_5/?views=view_87

The exploratory scenarios visualising possible future trajectories and tensions of coastal tourism were elaborated in the Estonian case. The small harbours and wider accessibility issues were part of the tested change's trajectories. The study indicates that local people see the important role of municipality and communities in advancing of coastal tourism. There appeared tensions related to the present coastal change and preferable landscapes of coastal futures. Beside articulated challenges, the respondents supported mainly the continuation of current trends as 'place-based vacation' in maritime tourism (Figure 3) and three other scenarios projecting wider transformations in coastal landscapes were less favourable. The collaborative visualisation and public survey in testing the scenarios provides good lessons for further applications in coastal governance.

Figure 3.
Scenario-image of "Place-based vacation" in Estonian case study

(illustration in collaboration with Aleksandra Ianchenko)

On Fehmarn (the German case) mapping of potential coastal conflicts within the blue economy sector of marine and coastal tourism was undertaken. The mapping has so far highlighted the existence of spatial conflicts between nature and water sports, particularly between algae population in surf spots with intensive water sports activity. Biological evaluations determined that measures are to be taken to limit water sports at the current level/no further increase. Surfers have received the outcomes of the investigation in a positive manner as it will allow them to continue making use of the spots.

As a result, traditional and new solutions have been proposed such as
a) defining the maximum capacity for surf-spots together with stakeholders from water sports, tourism and nature conservation;
b) construction of entry ramps, for the protection of underwater vegetation in the shore areas;
c) reduction of parking space at surf spots and the development of an app (Surfers Island App) with the objective of minimising the negative impacts to the coastal flora and fauna from water sport activities by centralising surfing activities to dedicated spots and preventing the overcrowding of surf spots with the app. The conceptualisation of a water sports guidance app was elaborated in the German case[16] (see the app´s layout design on the Figure 4, elaborated by BEF-Germany).

16 for a more detailed conceptualization of the app and data sources please see the Fehmarn case study report, https://land-sea.eu/

Figure 4.
Illustrative concept of the Surfers Island´s app to manage tourist flows
(image by BEF-Germany)

The app is connected to physical barriers at the parking spaces of the surf spots and will discourage the surfers to visit the spots that are already at the maximum capacity by hindering access. For example, for spots that are free the app will allow the surfer to pay the car park fee and the tourism taxes in advance. In doing so it will bring benefits for nature conservation and coastal wildlife protection and improve the experience of surfers coming to Fehmarn Island. The preliminary lessons of this exercise – that spans the stages of mapping of conflicts to the search of solutions via communication with stakeholders – is that making the conflicts spatially explicit and founded on scientific evidence facilitates the communication with stakeholders and the definitions of solutions. The potential elaboration of a full 'Surfers Island' app exceeds the timeframe of the LSA project.

The regional maritime strategy of Gothenburg region (Swedish case) formulated planning potentials towards shared interfaces (e.g., land, infrastructure) between land and sea. This strategy-oriented mapping indicated that co-sharing of these interfaces is mainly seen within one sector of blue economy (e.g., tourism or fishery). The stakeholders of coastal tourism were keen to look for options of ways to share marine spaces, and some branches of blue economies already have many co-operation links (e.g., aquaculture and fishery). The practice towards common land-sea interfaces would require collaborations in bringing perspective of marine-based entrepreneurship into coastal planning. The maritime strategy contributes to developing a local understanding of the preconditions of the regional blue economy and the importance of developing maritime clusters. They, in turn, can constitute important arenas for collaboration between the public and private sector and facilitate the inclusion of a maritime business perspective and experiences in planning processes. The mapping exercises within the case also contributed to the maritime business actors reflecting on the need and potential for co-sharing.

The project activities contributed to the development plan of Holbæk harbour area (Danish case), these include diverse municipality supported initiatives in revitalising the old port and connecting the city centre with the port and the sea. The active communication between planners, artists, event organisers and diverse types of entrepreneurs generated a fruitful dialogue and inspiration for the development of the harbour district. The public visibility of marine heritage was promoted through seasonal activity spaces and events (Figure 5) in the Holbæk harbour area. Additionally, the Land-Sea-Art[17] webpage/tool was preliminary elaborated to support revitalisation processes and share information about art-related interventions in development of lively coastal areas.

17 Land-Sea Art tool, https://land-sea-art.eu/

Figure 5.
Event in the Coast Life Center for the Land-Sea Art inspirational cases
(photo by Jorgen Grubbe)

6

Obstacles and needed capacities of governance towards sustainable coastal-marine spaces

Obstacles to effective governance – among other governance issues – come in the form of regional and/or national structure. Local level stakeholders are heavily impacted by higher level regulations, which they can influence to a certain extent (e.g. under sea tunnel, offshore wind parks). There is a potential to improve transparency and consultation regarding decisions that are not made locally, but have a huge effect on the region. True multi-level stakeholder engagement and equity of power would need to be improved. The gaps in consultations can lead to fears of losing biodiversity and local character of places.

- Therefore, there is a need to ensure adequate and efficient knowledge exchange and knowledge co-creation between stakeholders across diverse scales of decision-making about agreed goals concerning economic development, nature protection, as well as trajectories of coastal tourism in the future. Such dialogue takes time and resources which most frequently are not adequately allocated in the planning process. The existing structures and procedures of planning consultations could ensure the proactive possibilities of municipalities and local stakeholders.

LSA cases indicate a common use of narrow definition of 'culture' in MSP frameworks. Polish MSP focused more on tangible objects in the sea, additionally, the heritage of coastal fisheries was recognised by the planning team. The coastal identity has been lifted as an intangible value that is worth preserving in the Swedish case, and diverse aspects of marine culture are mapped in the context of Estonian MSP. The application of these marine cultural values into concrete planning solutions would be seen later. However, the narrow gaze to marine culture would hinder more holistic approaches for considering LSI in spatial planning.

- Therefore, there is a need to strengthen knowledge-based and elaborate procedures on how to approach culture in MSP and overcome differences in data formats that the planners are used to working with. These experimental procedures could indicate ways of bringing together detailed databases/maps of marine environments and experience-based stories entangled with marine spaces/landscapes. MSP is increasingly aiming to incorporate an ecosystem service approach. Therefore, capacities of working with socio-cultural dimensions of nature's contributions in coastal-marine spaces would enrich planning perspectives.

There is a lack of systematic and permanent involvement of marine-based entrepreneurship's perspective in coastal and marine planning coordinated by public institutions on diverse scales of decision-making.

- The cases indicate potentials to integrate a business perspective in MSP and also increased understanding of spatial planning process for the business side. The existing and newly established regional maritime business clusters could function as a useful platform for sharing of knowledge, experiences, and for establishing collaborative initiatives.

The realisation of the project case activities indicates the importance of trust and social capital in building collaborations towards sustainable LSI.

- It was important to identify where interventions should take place, key-stakeholders and their actual challenges. The participatory dynamics in planning of marine spaces indicate the importance of agency and knowledge in stewardship or care of coastal landscape. Stewardship can be seen as a linking object/purpose, which brings together stakeholders and approaches in finding sustainable trajectories of coastal landscapes we inhabit[18].

18 Enqvist, J.P. et al. (2018). Stewardship as a boundary object for sustainability research: linking care, knowledge and agency. *Landscape and Urban Planning*, 179: 17-37.

The capacity building towards care of coastal landscapes and marine spaces could take more into account cultural identities and knowledge-based agency for supporting the participation in spatial planning processes.

- The coherence and power dynamics in planning of marine spaces can be approached along diverse dimensions: policy and sector integration, stakeholder integration, knowledge integration, multiscale and transboundary integration[19].
- It is important that temporary (often project-based) initiatives of coastal planning are supported by continuous evaluation and revision cycles, which would allow for accumulation and realisation of acquired know-how about sustainable marine spaces. The sharing of project-based thematic knowledge across organisations contributes to institutional know-how within the complex field of spatial maritime planning.

19 Piwowarczyk, J., Gee, K., Gilek, M., Hassler, B., Luttmann, A., Maack, L., Matczak, M., Morf, A., Saunders, F., Stalmokaitė, I., Zaucha, J. (2019a). Insights into integration challenges in the Baltic Sea Region marine spatial planning: implications for the HELCOM-VASAB principles. *Ocean & Coastal Management* 78: 98-109.

7

Potentials for replicating case-based knowledge

7.1 The gained knowledge and practice-based solutions from LSA cases to be up-scaled and implemented in other regions/contexts:

- involving maritime related entrepreneurship perspective to a larger extent in knowledge creation and mapping of spatial aspects of blue economies. The qualitative interviews and participatory GIS-mapping to be applied across different regional contexts,
- elaborating IT solutions (app) for managing coastal tourism flows could be used in other regions. But as the conceptualised solution focuses on the needs of a specific community (Fehmarn Island), replication would take a certain time to adapt and it depends on local networks,
- methodology and suggestions on how to approach wider cultural values in the planning processes of marine spaces can be adapted across various contexts,
- inspirational know-how about the role of arts in advancing vibrant maritime waterfront areas. The realisation of this know-how would also depend on financial and human capacities,
- trade-off analysis between different values and qualities of coastal landscapes and uses of marine spaces. The participatory mapping of landscape values and qualities, application of an ecosystem approach in assessing trade-offs and participatory scenario building (as alternative ways in formulating policy goals) can be applied in diverse regional contexts.

7.2 Obstacles in using knowledge at wider governance scales and in different regional contexts:

- difficulties in finding the “right” level of representation of maritime business actors on the higher governance level as entrepreneurship-based stakeholders may have a very micro-scale perspective. Some obstacles can be generated by the availability of data about blue economy, which are characterised by considerable differences across local and regional contexts in the EU,
- the materialisation of lively public spaces of maritime culture includes diverse stakeholders, which generates a particular context difficult to be replicated,
- data about marine cultural values is gathered at the local level(s) therefore the transferability of the case specific results is limited. Adjustments in the methods would be required to conduct an analysis on a wider spatial scale, e.g., pilot studies. One option would be to bring together the knowledge gained from diverse local cases on the regional level for further planning processes,
- spatial accuracy of the data analysis - individual assessment of each landscape unit might be too resource demanding to be performed on a national level. However, it depends on the specific character of the country, e.g., the length of shoreline, types, and diversity of land cover. Conducting a holistic assessment of seascape and landscape units and their land-sea interactions is a rather time-consuming task.

8

Lessons learned about coastal governance

The LSA project cases indicate diverse dimensions of situated culture in experiencing and maintaining coastal landscapes, e.g., engaging with cultural heritage, preserving beauty of coastal sceneries, sense of place for identity and for well-being. Diverse blue economy stakeholders in the context of a coastal municipality may have conflicting concerns on cultural sustainability because blue economy stakeholders simultaneously try to maintain traditional heritage and promote expansive tourism. However, the planning of marine spaces (including the MSP process) tends to approach culture in a rather narrow way focusing on tangible objects located in the sea. Therefore, the cultural functions and their land-sea constellations should be made more explicit in MSP processes. There is a challenge to enrich quantitative data-based analysis with qualitative approaches in mapping values and human-nature co-existence related to marine spaces. This would require promoting capacity building for planners and also empowering diverse stakeholders who can make values visible in planning processes.

The local level of negotiating and decision-making about futures of coastal landscapes is often entangled with lived cultural values, which can create tensions with some projections of blue growth trajectories. The LSA cases indicate that in harnessing the potential for blue economies, there is an obvious scope of preconditions which can be improved at local and regional level. The local stakeholders and inhabitants can be heavily impacted by wider scale initiatives of marine space usages. Therefore, it is important to translate values and knowledge across the scales of spatial planning and across branches of the blue economy. The LSA cases tested some participatory planning tools (e.g., scenarios, app for tourists) for integrating cultural-environmental values and trajectories of blue economies in longer time perspectives and in actual management of tourist flows. There remains the challenge of integrating seasonal volatilities and different time perspectives towards sustainable spaces of the blue economy.

Coastal areas are under pressure because of climate change dynamics and increasing usages of blue economy, which in addition to sea space also requires mooring nodes on land (e.g., harbours, storage, repair). There is a need to explore the potential for sharing existing nodes/interfaces of land-sea interactions towards a sustainable blue economy. The LSA cases indicate possible tensions, collaborations and synergies in integrating different usages of marine space. This integration would require making embedded potentials and networks of blue economy visible during the process of spatial planning. The LSA cases also highlight the difficulties in mapping, measuring and delimiting the blue economy fields, because of scattered data-bases and different classifications across regions in Baltic Sea area. The sharing of land-sea interfaces for sustainable spaces of the blue economy could be supported by more coherent databases, elaborated tools of holistic analysis and integrated future perspectives of cross-border marine spaces. The ambivalent role of technology (e.g., personalised and smart mobility services) in contributing shared and sustainable land-sea interfaces of blue economies would require further studies.

Planning of marine spaces is still a rather new field for local municipalities and stakeholders. MSP processes have increased the awareness and motivation for considering land-sea linkages in spatial planning of coastal municipalities. The enthusiasm about planning the near-shore sea becomes mixed with a certain degree of hesitation due to limited know-how. The LSA cases indicate that the experimentation in planning marine spaces takes place across all levels of institutionalised spatial planning. The role of regional or inter-regional scale in maritime spatial planning emerged as an important but rather undefined platform in mediating between national and municipality planning levels. Therefore, planning of marine spaces has evolved and is becoming dependent on informal processes of consultations, which can mobilise (temporary) associations going beyond institutionalised scales of decision-making. Compared to multi-level plans of land-use (detail, general/municipal, regional, national, pan-EU), MSP process lacks these know-how-based scales of planning, and often a remarkable mandate is given directly to the national level. The LSA cases indicate that these settings of spatial planning constitute permanent tensions hindering the consideration of local/situated values into more generalised usages and co-existences of marine spaces. Thus, there is a need to approach MSP as a process with related revision's phases because the MSP dynamics draw wider sketches of marine spaces on the state level by leaving options open for more detailed mapping in allocating long-term usages. Instead of allocating bounded sites of blue growth, there is a need for holistic planning approaches which integrate current (and potential) infrastructure, cultural values and complex land-sea associations towards wider sustainable spaces of blue economies should be pursued.

Covid-19 restrictions affected the blue economy related processes in the LSA case areas and also forced to modify research methods to find alternatives to face-to-face meetings since spring 2020. The international travel and tourism sector decreased remarkably due to the global spread of pandemic situation, meanwhile the LSA cases indicate that Covid-19 settings highlighted importance of the coastal areas for recreation, increase of holiday and weekend travelling within a country, (temporary) shift of tourism seasons, and longer seasons of summer-home usages because of (unequal) distant-work options. Thus, the pandemic situation posed wider questions about resilience and potentials of recreational economies in coastal areas.

The project Land-Sea-Act (#R098 Land-Sea-Act Land-sea interactions advancing Blue Growth in Baltic Sea coastal areas) aims to bring together stakeholders involved in coastal management and planning, to find solutions to Maritime Spatial Planning and Blue Growth challenges around the Baltic Sea and to elaborate Multi-level Governance Agenda on Blue Growth and Spatial Planning in Baltic Sea Region. The project will guide national, regional and local authorities, as well as stakeholders of various sectors to:

- improve transnational cooperation and facilitate knowledge exchange to foster Blue Growth
- raise awareness, knowledge and skills to enhance Blue Growth initiatives and integrated development in coastal areas
- balance development of new sea uses with coastal community interests by improving coastal governance

Project implementation duration:	January 2019 – December 2021
Project budget:	2.21 million EUR, including European Regional Development Fund co-financing 1.76 million EUR
Project is financed by:	Interreg Baltic Sea Region Programme

Our project homepage: www.land-sea.eu
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