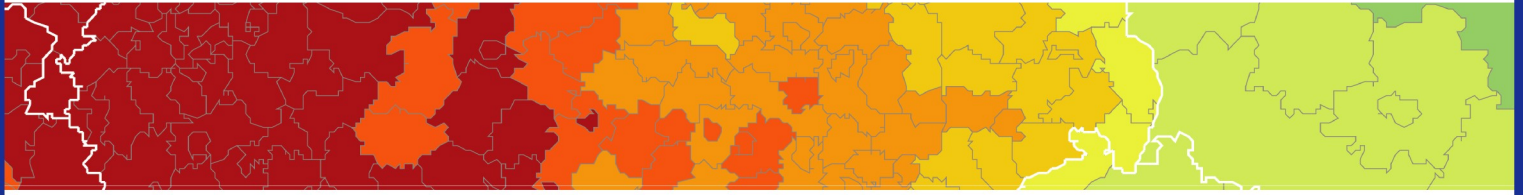


Inspire policy making by territorial evidence



MSP-LSI – Maritime Spatial Planning and Land-Sea Interactions

Targeted Analysis
Version 20/02/2020

**Guidelines for Good Management
of LSI in MSP**

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Abbreviations

EEZ	Exclusive Economic Zone
LSI	Land Sea Interactions
MSP	Marine Spatial Planning
NUTS	Nomenclature of Units of Territorial Space
ZERP	Ecological and Fisheries Protection Zone

1 An Approach to Exploring LSI in MSP

The 2014 Maritime Spatial Planning Directive requires coastal states of the European Union to establish complete coverage of maritime plans by 2021 taking land sea interactions (LSI) into account in order to promote sustainable and integrated development and management of human activities at sea (Box 1).

Box 1: EU MSP Directive – MSP and Land-Sea Interactions

Recital 16) Marine and coastal activities are often closely interrelated. In order to promote the sustainable use of maritime space, maritime spatial planning should take into account land-sea interactions. For this reason, maritime spatial planning can play a very useful role in determining orientations related to sustainable and integrated management of human activities at sea, preservation of the living environment, the fragility of coastal ecosystems, erosion and social and economic factors. Maritime spatial planning should aim to integrate the maritime dimension of some coastal uses or activities and their impacts and ultimately allow an integrated and strategic vision.

Making sense of LSI for the MSP community (including MSP and terrestrial planners where relevant) presents significant challenges and the MSP-LSI project has investigated how LSI considerations may be defined and operationalised (see Figure 1). Based upon an examination of existing LSI research and practice related to MSP/terrestrial planning, an approach to exploring LSI has been developed. This includes:

- a framework for considering LSI in MSP;
- proposed working definitions of LSI, Coastal Area and LSI Core Area ; and
- a method for more detailed investigation of LSI with a particular focus on understanding the main socio economic impacts on land of key maritime sectors.

The approach been tested in 5 pilot case studies (Slovenia, the Gulf of Gdańsk, the Croatia Coast and Islands, The Dutch North Sea Coast and The Pomeranian Bight) covering different LSI contexts and scales of analysis. These activities have informed the Guidelines for Good Management of LSI in MSP set out here.

Figure 1: Maritime Spatial Planning and Land-Sea Interactions



Source: Willemijn Lambert

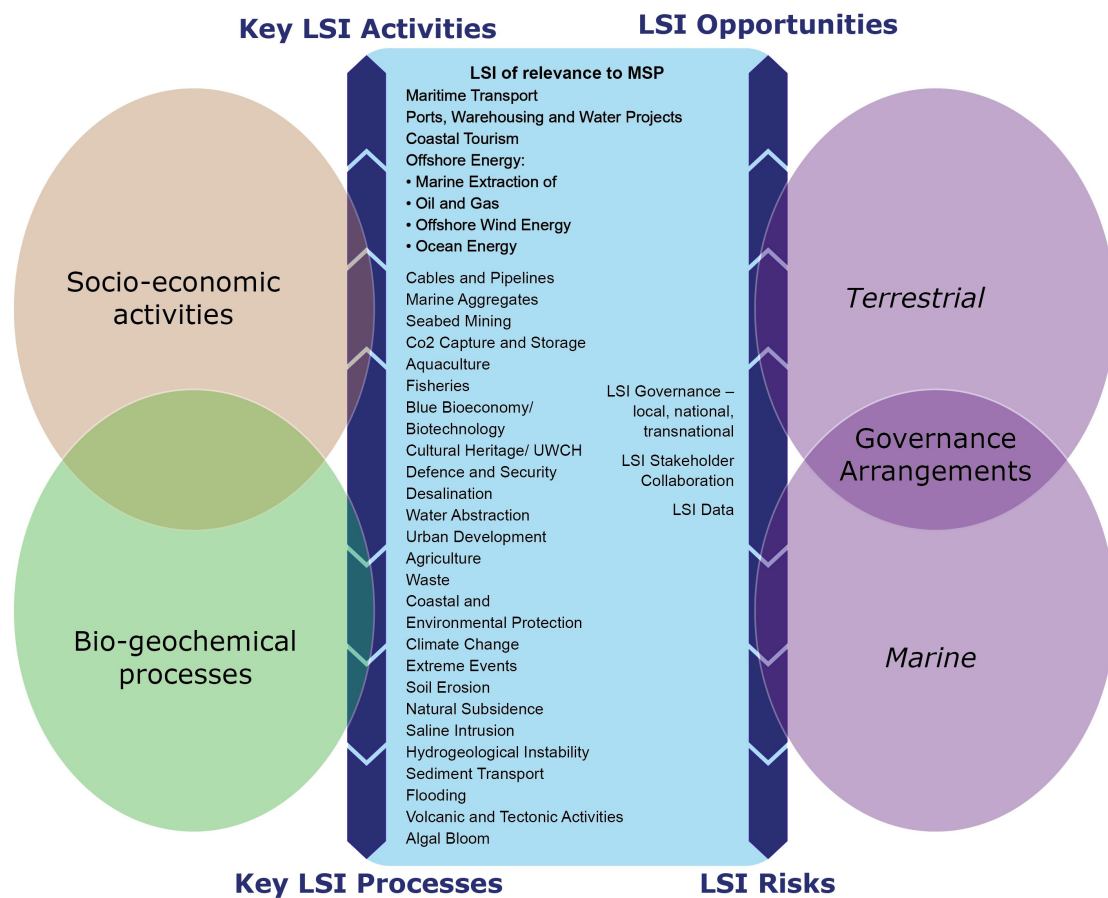
2 A Framework for Considering LSI in MSP

A general framework for LSI consideration is provided in Figure 2. This could be used as reference point for initial scoping of LSI issues in different MSP contexts.

The framework illustrates that LSI entail deeply complex and dynamic phenomena but provides a means of stepping into this complexity in a structured way. It shows that LSI involve the intricate and constantly shifting interconnection between socio-economic activities both in the sea and on land with natural processes that span the land-sea interface. The experience in both these dimensions is also influenced directly and indirectly by governance arrangements related to marine and terrestrial areas. These form part of the framework conditions that affect the realisation of LSI opportunities and management of LSI risks.

Beyond this initial disentangling of different LSI dimensions, the framework also provides a listing of LSI issues that have been recognised as being of potential MSP concern. This could act as an initial checklist in identifying which LSI issues merit particular consideration in a local context. With this in mind it is worth noting that four maritime sectors were most commonly mentioned in the MSP/LSI literature/practice review which informed the development of the framework: Maritime Transport; Ports, Warehousing and Water Projects; Coastal Tourism; and Offshore Energy (including marine extraction of oil and gas, offshore wind energy and ocean energy).

Figure 2: MSP-LSI Framework for Considering LSI in MSP



3 LSI Definitions

The framework set out in Figure 2 can provide an initial reference point for exploring LSI in MSP. Complementing this, working definitions of key related terms are suggested which could be the focus of discussion at an early part of any LSI investigation and might help deepen understanding of LSI and associated issues.

LSI: The MSP-LSI literature/ practice review revealed the absence of a widely recognised definition of LSI but a number of useful examples to reflect upon. All these drew attention to the interactions between environmental and socio economic factors across the land sea interface, while some also include reference to governance connections. In addition the need for a two way LSI perspective looking from the land to the sea and from the sea to the land is encouraged. Reference was also made to ‘influence and impact’ which reflect central concerns in MSP related to both LSI opportunities and risks. Drawing together these insights, a working definition of LSI of relevance to Territorial Planning is presented in Box 2 which connects with the key LSI dimensions outlined Figure 2.

Coastal Area: In terms of Coastal Area the definition set out in the Barcelona Convention is a useful starting point in LSI exploration. The Convention presents a geomorphological based definition encompassing natural boundaries extending either side of the seashore. However, beyond ecological considerations the Convention notes that social, economic and governance factors may also be taken into account in defining ‘coastal areas’ and depending upon the criteria being applied the extent of areas to be covered can vary significantly. This suggests the merits of adopting a ‘fuzzy’ definition of coastal area boundaries.

LSI Core Area: The inherent complexities in defining ‘coastal area’ however reveals the potential difficulties in assigning clear governance responsibilities in relation to LSI issues. This is particularly relevant to MSP and its concern for sustainable and integrated management of LSI related issues. The Barcelona Convention addresses this by setting out guidelines for a more limited delimitation of ‘coastal zone’ coverage based on governance factors. With these in mind Parties to the Convention are typically expected to define seaward coastal zone limits that encompass their entire territorial sea and landward limits that encompass the jurisdictional boundaries of defined ‘competent coastal units’. From an MSP perspective it is felt that delineating an LSI Core Area could also assist in providing a focus for LSI investigation and making this task more manageable.

Building on and adapting these Barcelona Convention distinctions for consideration of LSI in MSP, suggested definitions of Coastal Area and LSI Core Area are also set out.

Box 2: MSP-LSI Definitions of LSI, ‘Coastal Area’ and ‘LSI Core Area’

LSI: *The complex and dynamic interactions through which land-based bio-geochemical processes, socio-economic activities and governance arrangements present opportunities and risks to the marine environment, resources and activities and through which marine bio-geochemical processes, socio-economic activities and governance arrangements present opportunities and risks to the terrestrial environment, resources and activities.’*

Coastal Area: *‘an area of land and sea extending either side of the seashore in which the interaction between the marine and land parts occurs in the form of complex social-ecological systems and the relevant geographic area to be included will vary according to ecological, social, economic and governance factors’*

LSI Core Area *‘An area of sea defined by relevant marine planning boundaries (for example extending to a nation’s EEZ, or marine plan boundary) and adjoining land area defined by relevant landward planning or data gathering boundaries (e.g. terrestrial planning or NUTS regions) where LSI might be anticipated to be most evident’.*

4 A Method for Investigating LSI in MSP

To help operationalize LSI investigation particularly with key maritime activities and socio-economic impacts on land in mind the following method is suggested (see Figure 3).

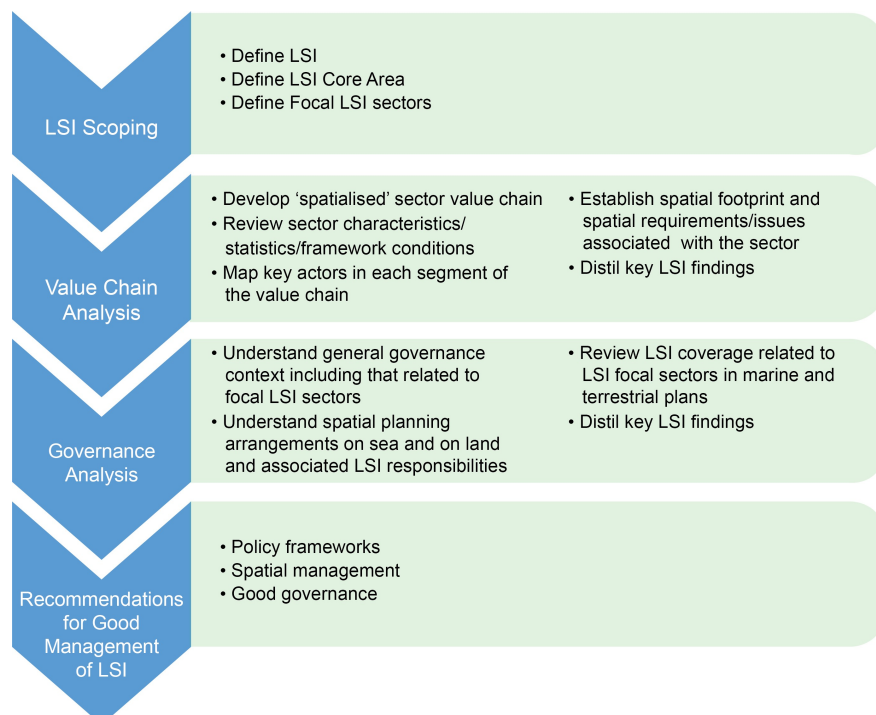
LSI Scoping: LSI scoping is a useful first stage. With reference to the framework for considering LSI in MSP and the LSI definitions set out above, this might involve an initial discussion with relevant stakeholders about the nature of LSI and what might be meant by the coastal area/core area in order to identify focal LSI issues for further examination.

Value Chain Analysis: Based upon established value chains used by the World Trade Organisation and DG Mare, the MSP LSI project has developed a spatialized approach for considering LSI associated with maritime sectors. This structures investigation of sector characteristics, statistics and framework conditions affecting the operation of the sector. It then involves mapping of key actors in each segment of the value chain and building up of a picture of its spatial footprint, the spatial connectivity between different segments and the relative 'stickability' of economic and other benefits within coastal communities. From this, key LSI issues can be distilled and areas where action may be beneficial can be identified.

Governance Analysis: This can begin with an overview of the general governance context including that related to the selected focal sectors. This is followed by a review of spatial planning arrangements on land and sea, and the relationships between them as well as establishing who has the competence to deal with LSI and in what way. Subsequently more detailed examination can be undertaken of the treatment of focal LSI sector issues in terrestrial and marine plans and strategies. Analysing these governance findings may again help to identify areas where action may be beneficial and who has responsibility for action.

Recommendations for Good Management of LSI: In this final element, findings from the different aspects of investigations can be brought together to draw out key messages and develop recommendations for good management of LSI.

Figure 3: A Method for Investigating LSI in MSP



5 Applying the Method

The 'MSP-LSI method for investigating LSI in MSP' has been tested and refined following case study piloting at local, regional, national and transnational scales. This has revealed the value of adopting a structured and focussed approach to LSI investigations, but also of the need for adaptation - tailoring activities to the resources and information available in different MSP/LSI contexts. In applying the method, experimentation and innovation is therefore encouraged along a spectrum ranging from in depth research to lighter touch investigations in the form, for example, of stakeholder workshops. Below are some examples of applying aspects of the method drawn from the MSP-LSI pilot case studies which may provide inspiration to others. Further details of the method and case study findings can be found in the MSP-LSI project reports.

5.1 LSI Scoping

Key outputs from the initial scoping stage in the MSP-LSI case studies are shown in Box 3. These included the definition of a LSI Core Area and Focal LSI Sectors to help focus the LSI investigations and make them more manageable.

Table 1: Case Study LSI Core Area and Focal LSI Sectors

MSP-LSI Case Study	LSI Core Area	Focal LSI Sectors
Slovenia	Sea core covers all of the marine waters that are currently claimed as being part of Slovenia territory and are not disputed. Land core includes the coastal strip and in particular the area of Piran Bay, and for statistical purposes the coastal NUTS 3 region.	Coastal Tourism Mariculture
Gulf of Gdańsk	Sea core covers the Gulf of Gdańsk, which was an MSP Pilot area. Land core includes coastal NUTS 2 regions (Voivodeships) which have regional planning responsibilities.	Maritime Cargo Transport Coastal Tourism Cruise Shipping
Croatian Coasts and Islands	Sea core covers Croatia's maritime areas along the whole of the coastal strip as far out as the Ecological and Fisheries Protection Zone (ZERP). Land core includes all the coastal communities at NUTS 3 level and excludes parts of the national territory that are inland.	Coastal Tourism Cruise Shipping
Dutch North Sea Coast	The Core Area includes all of the territory which the Dutch government claims territorial control over, both on land and in the North Sea.	Maritime Cargo Transport Offshore Wind Energy
Pomeranian Bight	Sea core reflects the transnational MSP pilot area. Land core includes coastal NUTS 2 level regions within both countries, corresponding with regional bodies with significant planning responsibilities.	Coastal Tourism Offshore Wind Energy

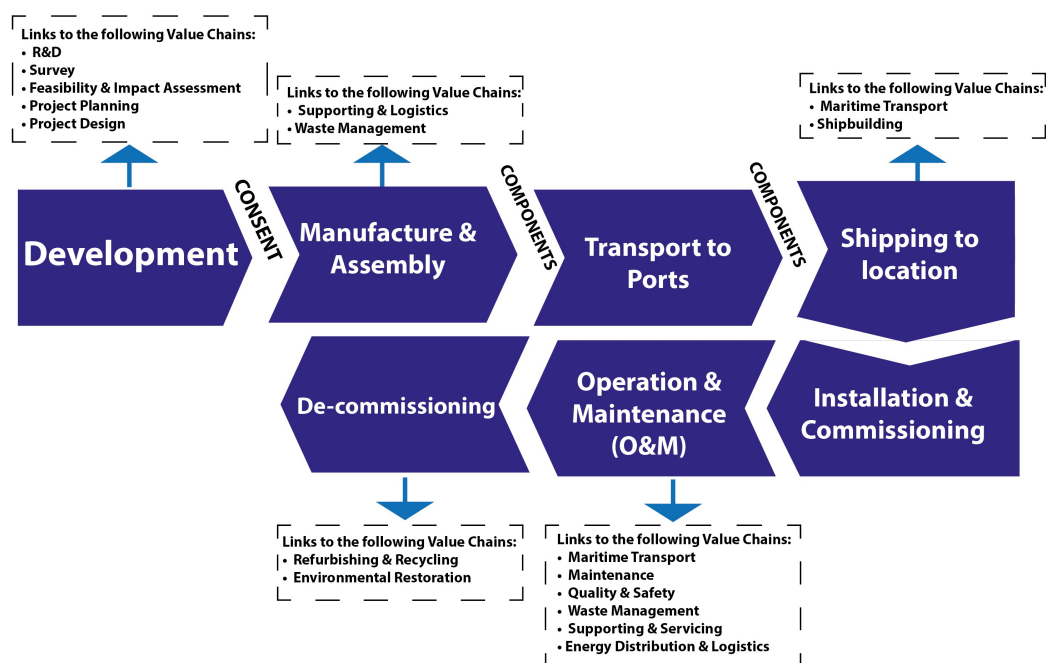
5.2 Value Chain Analysis

Value Chain Analysis in the case studies covered Coastal Tourism, Cruise Shipping, Maritime Cargo Transport, Offshore Wind Energy and Mariculture. (See Annex 1 for Value Chain Data Collection Sources) Some key messages in relation to Offshore Wind Energy are presented here.

Offshore Wind Energy and Europe's Blue Economy

Offshore wind energy is emerging as a key element of Europe's Blue Economy with EU ambitions of it contributing to economic growth in coastal regions, as well as inland. It is also a sector where there is increasing synergy between Blue Economy, climate change and energy policies as European nations seek to transform their electricity production. It is estimated that the North Sea alone could play an important role in the decarbonisation of Europe's energy supply, offering the potential to provide up to 12% of the EU's electricity by 2030.

Figure 4: Offshore Wind Energy Value Chain



Following the Value Chain

The Offshore Wind Energy value chain begins with the **Development** of wind farm proposals that leads to the **Manufacture and Assembly** of components, which then require **Transport/Shipping** to their seaward locations for **Installation and Commissioning**. Subsequent **Operation and Maintenance** activities will be ongoing during the lifetime of the scheme before final **De-commissioning** takes place. The value chain also highlights the connectivity to related value chains including shipbuilding and maritime transport.

Mapping of key actors in different segments of the value chain for the Dutch North Sea Coast case study area reveals that while some local employment may be derived by coastal communities from offshore wind farm development, operation and maintenance, the local 'stickability' of the economic benefits associated with the sectors is relatively low. Indeed economic as well as social and environmental benefits associated with a decarbonised energy supply can be seen to be spread over a wide area, nationally and internationally (See Map 1).

What does this mean for Territorial Planning?

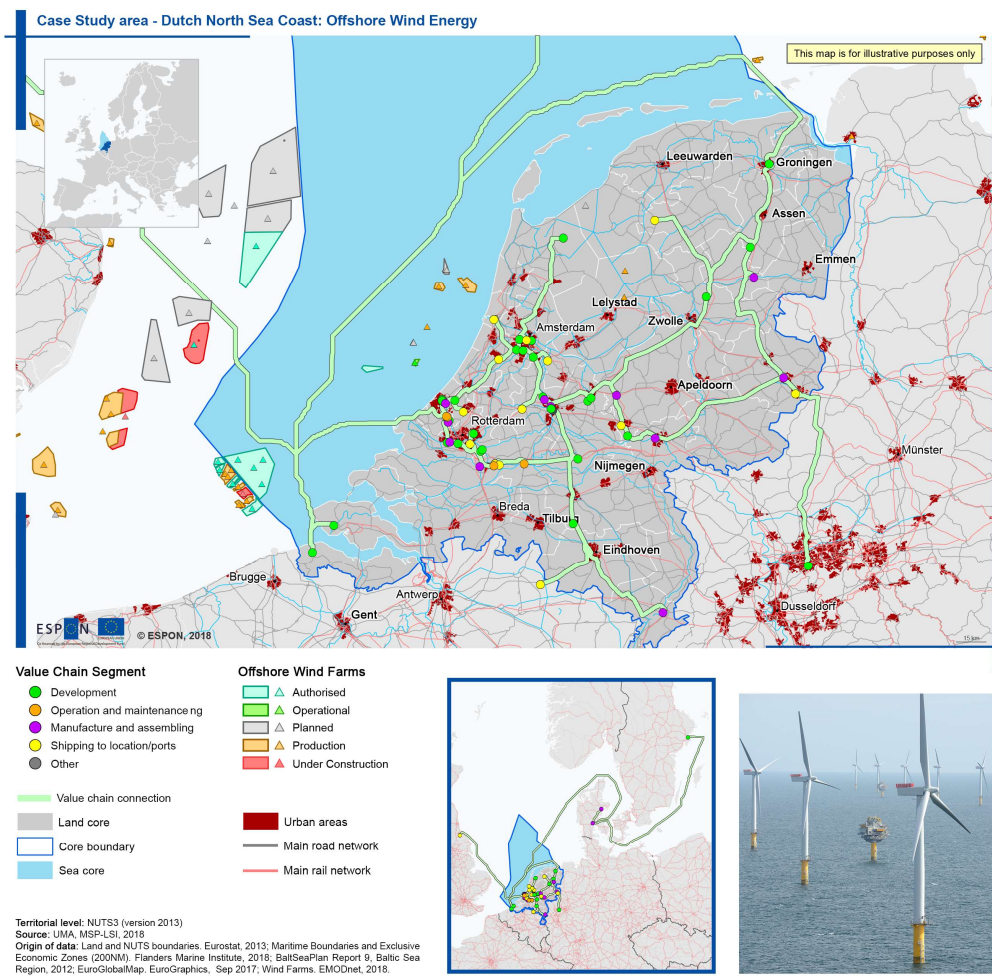
Offshore Wind Energy raises a range of LSI issues for those engaged in territorial planning.

Looking to the future, MSP has a particularly important role to play in supporting the development of the sector through space allocation in plans and possibly redirecting activities away from favoured development locations and sensitive areas. The Dutch experience of realigning shipping lanes and locating windfarms well beyond coastal tourist areas are examples of what might be needed here.

MSP and wider sea basin strategies are also seen as key mechanisms to realise the renewable energy potential of European seas by facilitating efficient energy connectivity and distribution between nations

For terrestrial planning the main direct issues to consider relate to coastal or inland infrastructure associated with the sector, including grid connections and provision for high power cable networks up to and beyond these points. In addition, redevelopment of redundant energy generation infrastructure may present planning challenges and opportunities in some areas.

Map 1: Dutch North Sea Coast: Offshore Wind Energy Actors



5.3 Governance Analysis

The Governance Analysis includes a review of spatial planning arrangements on land and sea and the relationships between them as this understanding is important in considering the effective planning and management of LSI. The case studies revealed a common concern for integration of landward and seaward planning activities but a variety of approaches to this reflecting their different legal, and administrative contexts.

Table 2: Land and Sea Spatial Planning Arrangements in the MSP-LSI Case Studies

	Spatial Planning Legislation	Degree of Integration
Slovenia	Spatial Planning Act 2017 (came into force June 2018)	Integrative approach envisaged through a single body, the Ministry for Environment and Spatial Planning who is preparing national spatial documents for land and sea.
Gulf of Gdańsk	Spatial Planning and Management Act of 2003 (recently modified in 2018) and the Act on the Sea Areas of the Republic of Poland and maritime administration 1991.	Currently separation of planning for the land and sea, albeit within an integrated national policy context with vision out to 2030.
Croatian Coast and Islands	Physical Planning Act of 2013, (amended in 2017 to take into account the EU MSP Directive 2014/89/EU) looks at planning for the whole territory, and in the absence of an EEZ, out to the Protected Ecological and Fishing Area.	Integrative approach at national regional and local levels, with both the regional and local administrations having boundaries extending into the sea.
Dutch North Sea Coast	Spatial Planning Act (2008) re-defined the legal framework for spatial planning for the land, territorial waters and out to the Exclusive Economic Zone. The notion of an integrated space also evident in the National Water Act.	Integrative approach and further streamlining planned. Environment and Planning Act (Omgevingswet) streamlining the current system expected in 2019.
Pomeranian Bight	Germany- Länder have had responsibilities out to the limits of territorial waters at least since 2001. The Spatial Planning Act 2017- gives the nation state responsibility for MSP in the EEZ. Poland- Spatial Planning and Management Act of 2003 (recently modified in 2018) and the Act on the Sea Areas of the Republic of Poland and maritime administration 1991.	Germany: Länder spatial planning includes territorial sea areas, and close collaboration between national and Länder bodies for planning across marine space. Poland: Currently separation of planning for the land and sea, albeit within an integrated national policy context with vision out to 2030. Transnational/cross-border collaboration working across land/sea integration facilitated by well-established networks VASAB etc.

5.4 Recommendations for good management of LSI in MSP

The MSP-LSI case studies revealed a range of examples of good practice in relation to managing LSI in MSP. These again reflected different approaches and illustrated that integrated planning across land and sea and associated planning for LSI is not new, and that there is experience at transnational, cross-border, national, regional and local levels of both non-statutory and statutory approaches that can be learnt from and adapted to specific local contexts. Some examples are outlined below. These might inform critical reflection elsewhere.

Good Management of LSI at Transnational Level

At a transnational level, the Vasab (2009) Long-Term Perspective for The Territorial Development of the Baltic Sea Region as a non-statutory transnational strategic spatial planning document, remains a leading example of integrated planning across land and sea. Consideration of LSI is reflected in many aspects of the document including in the concluding statement of its vision with its aim of developing as 'a veritable European sea macro-region, which demonstrates integrated land and sea-space planning and management'.
https://vasab.org/wp-content/uploads/2018/06/vasab_ltp_final-2.pdf

Good Management of LSI at Cross Border Level

The German-Polish Governmental Commission for Regional and Border Collaboration has produced a "Joint Future Concept 2030 for the German-Polish Interdependence Area" (2016), which involves close collaboration on many blue economy sectors in the interconnected maritime space. A joint MSP working group has intensified cross border collaboration, although planning on both land and sea remains embedded in national practices.

<https://www.bbsr.bund.de/BBSR/EN/Home/top-news/2018-regional-development-cooperation.html>

Good Management of LSI at National Level

At a national level the Netherlands' National Policy Strategy for Infrastructure and Spatial Planning published in 2011 incorporates both land and sea areas. The associated maps set out roughly which areas and structures are of national importance in view of central government's goals concerning competitiveness, accessibility, liveability and safety, thus giving a visual impression of a coherent spatial structure. LSI issues are prominent and the Dutch North Sea is recognised as being of major economic importance to the Netherlands in terms of shipping. There is also future potential for the generation of wind power as well as fisheries, extraction of natural resources and an important wildlife habitat. Finally, the North Sea is a defining feature of the Dutch landscape.

<https://www.government.nl/documents/publications/2013/07/24/summary-national-policy-strategy-for-infrastructure-and-spatial-planning>

Good Management of LSI at a Regional Level

At a regional level, since at least 2001, the German Länder have been required to adopt the objectives and principles of land-based spatial planning to take into account the special circumstances in the territorial sea (12 nautical mile zone). Mecklenburg-Vorpommern in the Pomeranian Bight was one of the first Länder to achieve this level of integration through its Spatial Development Plan, which came into force in 2005. The new Spatial Development Plan 2016 represents the second round of integrated planning for land and sea in Mecklenburg-Vorpommern.

<https://www.regierungmv.de/Landesregierung/em/Raumordnung/Landesraumentwicklungsprogramm/Maritime-Raumordnung>

In Slovenia the requirement for the municipalities to formally adopt the marine spatial plan once approved by central government means that it will formally be a marine based regional plan. This has interesting implications for collaborative working in the preparation of the plan.

<https://www.msp-platform.eu/countries/slovenia>

Good Management of LSI at a Local Level

In Croatia, since the adoption of the Physical Planning Act in 1994 spatial plans at county and municipal levels have covered adjoining marine areas (including of all islands and areas extending 1,000 m from the mainland). The updated Physical Planning Act of 2013, transposing the EU MSP Directive into Croatian law, explicitly recognises LSI as being part of the key principles for spatial planning and requires an updating of all existing spatial plans, including those that encompass marine areas.

<https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2017-01-2915>

Good practice examples of approaches to considering LSI issues in MSP

In Poland, 'The Study of Conditions of MSP of the Polish Sea Areas' provided a foundation for LSI consideration in the preparation of the Polish Marine Plan. This study defined a coastal area comprising local authority jurisdictions adjoining the Polish coastline and undertook detailed investigation of the conditions stemming from physical geography of the region, and included an analysis of local and regional strategic and planning documents. The study has informed LSI policy and management approaches in the draft MSP for Polish Sea Areas, which include for example sub-zone designations, orders and limitations regarding the character of the sea space zones, and allowable functions for the sea space zones.

https://www.msp-platform.eu/sites/default/files/study_of_conditions_of_spatial_development.pdf

In the Netherlands, the North Sea Policy Document 2016–2021 presents a different approach – one that looks from the sea to the land. Here, in a separate section on interaction between land and sea an indicative overview of sectors/usages with their spatial land-sea interactions/connections is set out, thereby highlighting to landward planning authorities LSI issues that they may need to address

<https://www.noordzeeloket.nl/en/policy/noordzeebeleid/beleidsnota-noordzee/>

Good practice examples of building capacity to address LSI in MSP

The Slovenian and Croatian case studies highlighted the value of European funding opportunities to build capacity to address LSI in MSP. This was the subject of one aspect of the *Supporting Implementation of Maritime Spatial Planning in the Eastern Mediterranean (SUPREME)* project. This has entailed the development of methodological guidelines for LSI analysis within MSP and also explored how such analysis can be embedded in the wider ICZM context.

<http://www.msp-supreme.eu/files/c-1-3-7-lsi.pdf>

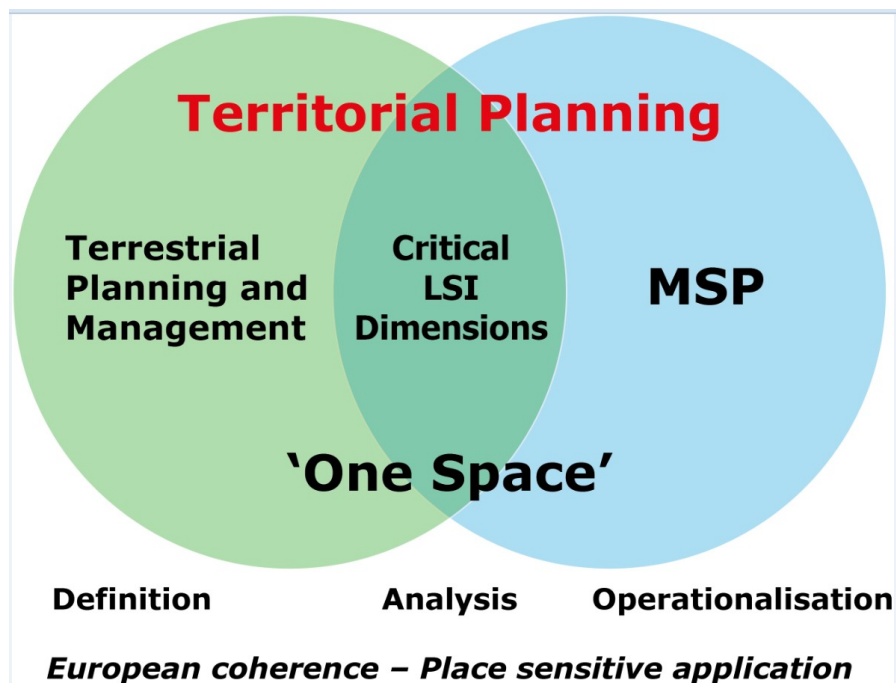
Similarly, the Gdansk Bay and Pomeranian Bight case studies revealed LSI capacity building efforts being funded through the European Union funded Baltic Sea SCOPE project. Its aim is to support the development of cross-border planning practice. The project's LSI activities aim to identify important aspects and challenges when practically working with LSI in Baltic Sea marine planning, and to test ways to address them practically, based on concrete needs of those countries that are now developing their marine and coastal planning.

<http://www.panbalticscope.eu/activities/integrating-land-sea-interaction-into-msp/land-sea-interaction/>

6 Developing a 'One Space' Territorial Planning Perspective

Finally, this MSP-LSI study has provided examples of the complex and deep relationship between the land and sea with interactions that extend beyond the coastal interface to cover all land and sea areas. Consequently developing a 'one space' territorial perspective can be seen to be key to better addressing LSI issues in MSP and other planning and management regimes. The study has also provided examples of the varied ways in which such a perspective is being developed in different country contexts reflecting different geographical, historical, cultural, political, legal and institutional experiences. It is apparent that 'one space' land-sea territorial perspectives are longstanding in some areas. However, both in these cases and elsewhere development of MSP under the 2014 MSP Directive is bringing a new impetus and European coherence to LSI endeavours. The MSP-LSI study highlights the value of developing a 'one space' territorial perspective not just in MSP but more widely (See Figure 5).

Figure 5: Addressing LSI and a 'One Space' Perspective in Territorial Planning



Annex 1: MSP-LSI Value Chain Data Collection Sources

This Annex provides examples of the types of data sources which can be used in an LSI value chain analysis.

Value Chain Sources
<p>General:</p> <p>Ecorys. (2012). Blue Growth Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coast: Final Report. Rotterdam / Brussels: DG MARE. Retrieved from https://webgate.ec.europa.eu/maritimeforum/system/files/Subfunction%202.3%20Marine%20aquatic%20products_Final%20v140812.pdf</p> <p>Aid for Trade and Value Chains in different sectors – WTO / OECD. Retrieved from http://www.oecd.org/dac/aft/aidfortradeandvaluechains.htm</p>
<p>Maritime Transport:</p> <p>World Trade Organisation. (2013). AID FOR TRADE AND VALUE CHAINS IN TRANSPORT AND LOGISTICS. Geneva. Retrieved from http://www.oecd.org/dac/aft/AidforTrade_SectorStudy_Transport.pdf</p> <p>Ecorys. (2012). Blue Growth Scenarios and Drivers for Sustainable Growth from the Oceans, Seas and Coasts Marine: Profile Report Coastal tourism and yachting. Brussels / Rotterdam: DG MARE. Retrieved from https://webgate.ec.europa.eu/maritimeforum/system/files/Subfunction%204.1%20Coastal%20tourism_Final%20v130812.pdf</p>
<p>Coastal Tourism:</p> <p>World Trade Organisation. (2013). AID FOR TRADE AND VALUE CHAINS IN TRANSPORT AND LOGISTICS. Geneva. Retrieved from http://www.oecd.org/dac/aft/AidforTrade_SectorStudy_Transport.pdf</p> <p>Ecorys. (2012). Blue Growth Scenarios and Drivers for Sustainable Growth from the Oceans, Seas and Coasts Marine: Profile Report Coastal tourism and yachting. Brussels / Rotterdam: DG MARE. Retrieved from https://webgate.ec.europa.eu/maritimeforum/system/files/Subfunction%204.1%20Coastal%20tourism_Final%20v130812.pdf</p>
<p>Cruise Shipping:</p> <p>World Trade Organisation. (2013). AID FOR TRADE AND VALUE CHAINS IN TRANSPORT AND LOGISTICS. Geneva. Retrieved from http://www.oecd.org/dac/aft/AidforTrade_SectorStudy_Transport.pdf</p> <p>Ecorys. (2012). Blue Growth Scenarios and Drivers for Sustainable Growth from the Oceans, Seas and Coasts Marine: Profile Report Coastal tourism and yachting. Brussels / Rotterdam: DG MARE. Retrieved from https://webgate.ec.europa.eu/maritimeforum/system/files/Subfunction%204.1%20Coastal%20tourism_Final%20v130812.pdf</p>
<p>Mariculture:</p> <p>World Trade Organisation. (2013). AID FOR TRADE AND VALUE CHAINS IN AGRIFOOD. Geneva. Retrieved from http://www.oecd.org/dac/aft/Agrifood_Full_04July.pdf</p>
<p>Offshore Wind Energy:</p> <p>ECORYS. (2012). Blue Growth Scenarios and Drivers for Sustainable Growth from the Oceans, Seas and Coasts Maritime Sub-Function Profile Report Offshore Wind Energy. Rotterdam / Brussels: DG MARE. Retrieved from https://webgate.ec.europa.eu/maritimeforum/system/files/Subfunction%203.2%20Offshore%20Wind_Final%20v120813.pdf</p>

MSP-LSI Case Study	Focal Sectors
Croatia Coast and Islands	<p>Coastal Tourism</p> <p>All of the statistical data used in the value chain analysis of coastal tourism in the Croatian Case Study area came from national sources, namely the Croatian Bureau of Statistics and the Ministry of Tourism. The website for the Croatian Bureau of Statistics provides access to numerous databases providing statistics on a number of sectors¹. In addition to the statistical databases available annual reports are published by the Ministry of Tourism².</p>
	<p>Cruise Shipping</p> <p>The statistical data for the Cruise Shipping Sector came from a number of sources. Information for many of the segments for this value chain were only partially available. Data on the revenues and expenses came from the financial reports of the Ports within the core case study area, namely Port Rijeka³, Port Split⁴, Port Dubrovnik⁵, Port Šibenik⁶ and Port Zadar⁷. It should be noted that it was not possible to further establish what proportion of these revenues could be directly attributed solely to cruise shipping as opposed to all port users. The Cruise Lines International Association (CLIA) produces regular economic reports highlighting the contribution of cruise tourism to the economies of Europe, which is able to provide statistic on numbers of passengers as well as employment figures.⁸. Employment and data related to tourism more generally was available from the reports of the Ministry for Tourism of Croatia⁹. Qualitative estimates drawn from academic thesis were also used to inform the analysis¹⁰.</p>

¹ Croatian Bureau of Statistics. Available at: https://www.dzs.hr/default_e.htm

² Ministry of Tourism. Tourism in Figures 2018. Available at : https://htz.hr/sites/default/files/2019-06/HTZ%20TUB%20ENG_2018_0.pdf

³ Data source: Annual Report for the year ended 31 December 2017; http://www.lukarijeka.hr/_Data/Files/196_20180427145241355/Annual%20financ.report%202017%20consolid.%20.pdf

⁴ Data source: Financial report for NGO's for 2017; https://portsplit.hr/wp-content/uploads/295516_1.pdf

⁵ Data source: Financial and revision reports on revision of financial reports for 2017; http://www.portdubrovnik.hr/assets/Financije%20i%20revizija_2017.pdf

⁶ Data source: Financial report for NGO's for 2017; <http://www.portauthoritiesibenik.hr/dokumenti/pdf/izvjescja/2018/27-06-2018/LUS-Izvjestaj-revizora-2017-NO.pdf>

⁷ Data source: Financial report for NGO's for 2017; http://www.port-authorityzadar.hr/download/SKMBT_C22017062915230.pdf

⁸ Contribution of Cruise Tourism to the Economies of Europe 2017, available at <https://es.cruiseexperts.org/media/2971/2017-europe-economic-impact-report.pdf>

⁹ Ministry of Tourism. Tourism in Figures 2018. Available at: https://mint.gov.hr/UserDocsImages//AA_2018_c-dokumenti//180608_HTZTUBENG_2017.PDF

¹⁰ Nadramija, Mislav (2018), Cruise Tourism in Dubrovnik: Economic Benefits and Social Impacts, Rochester Institute of Technology Croatia.

MSP-LSI Case Study	Focal Sectors
<p>The Gulf of Gdańsk</p>	<p>Coastal Tourism Examination of the statistic information on Coastal Tourism for the Gulf of Gdańsk focused on information available via the 2017 OECD report “Greening the blue economy in Pomorskie, Poland”¹¹ supported by information available from the Statistical Office in Gdańsk provided in their five-year cycle study Tourism in Pomorskie Voivodship in 2013-2017¹². Reports from the Pomeranian Development Agency (Agencja Rozwoju Pomorza) were also used. 13</p>
	<p>Maritime Transport of Cargo The examination of statistical information for Maritime Transport in the Gulf of Gdańsk utilised information available in the 2017 OECD Report “Greening the blue economy in Pomorskie, Poland”¹⁴. This was again supported by information from the Statistical Office in Gdańsk¹⁵ and the Gdańsk City Portal¹⁶. Additional information was gathered from Port Authorities themselves including Port Gdańsk¹⁷.</p>

¹¹ OECD (2017): Greening the blue economy in Pomorskie, Poland.
https://read.oecdilibrary.org/employment/greening-the-blue-economy-in-pomorskie-poland_9789264281509-en#page1

¹² <https://gdansk.stat.gov.pl/en/publications/sport-tourism/tourism-in-pomorskie-voivodship-in-2013-2017,1,2.html>

¹³ Agencja Rozwoju Pomorza (2009): Gospodarka Wojewodztwa Pomorskiego, available at:
https://www.paih.gov.pl/files/?id_plik=12088

¹⁴ OECD (2017): Greening the blue economy in Pomorskie, Poland.
https://read.oecdilibrary.org/employment/greening-the-blue-economy-in-pomorskie-poland_9789264281509-en#page1

¹⁵ Statistical Office in Gdańsk <https://gdansk.stat.gov.pl/en/>

¹⁶ Portal Miasta Gdańsk (2018): Rekordowo niskie bezrobocie na Pomorzu w czerwcu 2018. Available at:
<https://www.Gdańsk.pl/wiadomosci/rekordowo-niskie-bezrobocie-na-pomorzu-w-czerwcu-2018-raport,a,119634>

¹⁷ Port Gdansk: Accessed at: <https://www.portgdansk.pl/about-port/development-plans>

MSP-LSI Case Study	Focal Sectors
Slovenia	<p>Coastal Tourism</p> <p>The majority of the data for Tourism in Slovenia was provided by the Statistical Office for the Republic of Slovenia¹⁸ who produce periodic reports and statistics on tourism within the region¹⁹ on the number of overnight stays within the region, along with nationalities of visitors and their mode of arrival. Data for specific resorts within the case study areas were also utilised for example the Tourist Board of Portorož²⁰. Information regarding specific activities relating to tourism were obtained from private organisations operating within those sub-sectors including yachting²¹ and information on cruises within the area²². Local news articles relating to tourist activity was also used as a source²³.</p>
	<p>Mariculture</p> <p>The majority of data used in the value chain analysis for mariculture in the Slovenia case study was obtained from the Agricultural Chamber of Slovenia²⁴ and the National Strategic Plan for the Development of Aquaculture in the Republic of Slovenia for the Period 2014-2020 produced by the national government²⁵. Other sources of qualitative data sources included persons interviewed as identified by local knowledge brokers (see Case Study Report) and local organisations such as the Association of Breeders of Aquatic Animals (Društvo Rejcev Vodnih Živali Slovenije)²⁶</p>

¹⁸ Statistical Office: Republic of Slovenia. Accessed at: <https://www.stat.si/statweb>

¹⁹ It is Nice Everywhere ... – Tourists and Tourism in Figures; Povesod je lepo ... – Turisti in turizem v številkah. 2017. Statistical Office of the Republic of Slovenia, Ljubljana. ISBN 978-961-239-371-7. Available at https://www.stat.si/StatWeb/File/DocSysFile/9626/It_is_%20nice_everywhere.pdf

²⁰ Portorož. Turist Biro. Available at <http://www.turistbiro-ag.si/?choice=portorozinfo&lang=eng>

²¹ Yatch Center Izola - Jahtni Center Izola. 2011. Available at <http://en.yachtcenter.si/>

²² Cruise Terminals. 2015. Luka Koper, Port of Koper. Available at <https://www.lukakp.si/eng/terminals/single/cruise-terminal-255>

²³ Slovenian Saltworks - Immeasurable pride and tragic fate - Slovenske soline - Neizmeren ponos in žalostna usoda. 2012. MMC RTV SLO, Sečovelje. Available at <https://www.rtv slo.si/tureavanture/novice/slovenske-soline-neizmeren-ponos-in-zalostna-usoda/287325>

²⁴ Aquaculture – Ribogojstvo. Agricultural Chamber of Slovenia. Available at: <http://www.kgzs.si/gv/kmetijstvo/ribogojstvo.aspx>

²⁵ National Strategic Plan for the Development of Aquaculture in the Republic of Slovenia for the Period 2014-2020 -- Nacionalni Strateski Nacrt Za Razvoj Akvakulture v Republiki Sloveniji Za Obdobje 2014-2020. 2014. Government of the Republic of Slovenia. Available at http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/podrocja/Ribistvo/NSNA_2014_2020.pdf

²⁶ Association of Breeders of Aquatic Animals - Društvo Rejcev Vodnih Živali Slovenije. Available at <https://www.bizi.si/DRUSTVO-REJCEV-VODNIH-ZIVALI-SLOVENIJE/>

MSP-LSI Case Study	Focal Sectors
Netherlands	<p>Maritime Transport of Cargo</p> <p>The majority of statistical data used in the value chain analysis of maritime transport of cargo in the Netherlands came from the 2018 study conducted by Ecorys on behalf of the Ministry of Infrastructure and the Environment in conjunction with joint initiative for maritime sectors in the Netherlands, Maritime by Holland, Maritime Monitor 2018²⁷. Background information providing some of the key characteristics of the value chain was also obtained from Eurostat data on ports in Europe²⁸. The National Statistics office, Statistics Netherlands (CBS) also provided a great deal of statistical data used in the value chain analysis²⁹. The CBS was able to provide data relating to recent and future trends affecting various segments of the value chain. Statistics highlighting direct added value and employment figures for the port of Rotterdam were obtained directly from the Port Authority³⁰.</p>
	<p>Offshore Wind Energy</p> <p>The data sources used for the Offshore Wind Energy in the Netherlands were probably the most varied of all value chains examined. Several of the sources used in the value chain analysis were national organisations including the National Statistics office, Statistics Netherlands (CBS)³¹ and the website for the Netherlands Energy Agreement (energieopwek)³² providing energy consumption and production data and the Netherlands Enterprise Agency on potential for growth within the sector³³. Many of the statistics used in the value chain analysis were sourced from international trade organisations such as the Global Wind Energy Council (GWEC)³⁴ or internationally based companies and organisations including 4C Offshore³⁵, The International Trade Administration (ITA), U.S. Department of Commerce (known as export.gov)³⁶ and the multinational Price Waterhouse Coopers (PwC)³⁷.</p>

²⁷ Ecorys (2018). "De Nederlandse Maritieme Cluster Monitor 2018". Available at: <https://www.maritiemland.nl/maritieme-sector/publicaties/maritieme-monitor-2018/>

²⁸ Eurostat Statistics Explained (2018). Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Maritime_ports_freight_and_passenger_statistics#Rotterdam.2C_Antwerpen_and_

²⁹ National Statistics Office, Netherlands (CBS) Available at: <https://www.cbs.nl/en-gb/about-us/organisation>

³⁰ Port of Rotterdam Authority (2018). "Facts and Figures". Available at: <https://www.portofrotterdam.com/en/our-port/facts-figures-about-the-port>

³¹ CBS: Figures – Energy. Available at: <https://longreads.cbs.nl/trends17-eng/economy/figures/energy/>

³² The Energy Agreement. Available at: <http://energieopwek.nl/#over-het-energieakkoord>

³³ Netherlands Enterprise Agency (2015) Offshore wind energy in the Netherlands: The roadmap from 1000 to 4500 MW offshore wind capacity. Available at: <https://www.rvo.nl/sites/default/files/2015/03/Offshore%20wind%20energy%20in%20the%20Netherlands.pdf>

³⁴ Global Wind Energy Council (GWEC) (2018). "Annual Market Update 2017". Global Wind report. Brussels, April 2018. Available for download at: <http://files.gwec.net/register?file=/files/GWR2017.pdf>

³⁵ 4C Offshore. Available at: <https://www.4c offshore.com/about-us.aspx>

³⁶ Export.Gov (2018). "Netherlands- Energy". Available at: <https://www.export.gov/article?id=Netherlands-Energy>; PwC (2018).

MSP-LSI Case Study	Focal Sectors
Pomeranian Bight	<p>Coastal Tourism</p> <p>The Pomeranian Bight Case Study was the only transboundary case study and as such required examination of data sources from both Germany and Poland. National data sources from Germany included studies and reports commissioned by the Ministry of Energy, Infrastructure and Digitalization Mecklenburg-Vorpommern for example on the development of marinas³⁸, the Statistical Office for the State Office Mecklenburg Vorpommern³⁹ and their reports including the Statistical Yearbook 2018⁴⁰ and the Tourism Association Mecklenburg Vorpommern⁴¹ where data could be obtained for example on the number of visitors and their country of origin. Sources from Poland included the Polish Trade and Investment Agency website⁴² and official documentation from the Ministry of Sports and Tourism⁴³, the Statistical Yearbook of the Maritime Economy 2018 published by the Statistical Office of Szczecin⁴⁴ and the website of the West Pomeranian Voivodeship⁴⁵ and reports they have published⁴⁶. Data sources from the private sector were also used such as the Annual Report on Tourism of the</p>

³⁷ PwC (2018). "De economische bijdrage van windenergie op zee". Available at: <https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/rapporten/2018/08/31/de-economischebijdrage-van-windenergie-op-zee/20180606+Economische+bijdrage+van+windenergie+op+zee.pdf>

³⁸ http://app-rpv.de/rpv-vorpommern/wpcontent/uploads/sites/2/2017/05/Standortkonzept_Sportboothafen_Planungsregion_Vorpommern_gesamt_2017.pdf

³⁹ Statistical Office Mecklenburg Vorpommern: Accessed at: <https://www.laiv-mv.de/Statistik/>

⁴⁰ Statistisches Amt Mecklenburg-Vorpommern, Schwerin (2018). "Statistisches Jahrbuch Mecklenburg-Vorpommern 2018". Available at: <https://www.laivmv.de/static/LAIV/Statistik/Dateien/Publikationen/Statistisches%20Jahrbuch/Z011%202018%2000.pdf>

⁴¹ Tourismusverband Mecklenburg-Vorpommern e.V. (2018). "Incoming-Tourismus". Available at: <https://www.tmv.de/incoming-tourismus/>

⁴² Polish Trade and Investment Agency. Accessed by: <https://www.paih.gov.pl/regiony/wojewodztwa/zachodniopomorskie>

⁴³ Polish Ministry of Sport and Tourism (2015). "Resolution No. 143/2015 of the Council of Ministers of 18 August 2015 on the adoption of the Tourism Development Programme until 2020". Available at: <https://www.msit.gov.pl/download/3/12550/TourismDevelopmentProgrammeuntil20201f3c.pdf>

⁴⁴ Statistical Office in Szczecin (2017) Statistical Yearbook of Maritime Economy, p. 344

⁴⁵ Pomorze Zachodnie (2018). "Turystyka"

⁴⁶ Frąckiewicz, A. (2017). "Problemy i potrzeby zachodniopomorskich pracodawców reprezentujących sektor usług turystycznych". Available at: https://www.wup.pl/images/uploads/II_DLA_INSTYTUCJI/badania/gospodarka/Raport_z_badania_pn_Problemy_i_potrzeby_zachodniopomorskich_pracodawc%C3%B3w_reprezentuj%C4%85cych_sektor_us%C5%82ug_turystycznych.pdf

	<p>East German Savings Banks Association (Finanzgruppe Ostdeutscher Sparkassenverband)⁴⁷. The Organisation for Economic Cooperation and Development (OECD) report 2018 on tourism performance and policy trends across 49 OECD countries and partner economies was also used in providing background information and context⁴⁸.</p>
<p>Pomeranian Bight (continued)</p>	<p>Offshore Wind Energy</p> <p>Much of the data for the Offshore Wind Energy value chain in the Pomeranian Bight came from national or government organisations. In Germany the most valuable sources of data were the Federal Association of Wind Farms Offshore (BWO eV)⁴⁹ and the German Offshore Wind energy Foundation⁵⁰ who have produced numerous reports on sector growth and current statistics. A report published by the Federal Ministry for Economic Affairs and Energy (BMWi) also provided data on potential future trends in the region⁵¹. For data on the Polish part of the case study area data was gathered from trade organisations such as the Polish Wind Energy Association who have published reports on the status of the industry⁵². International sector associations such as Wind Europe⁵³ also provides a wealth of statistics and news items focusing on specific countries⁵⁴. Industry publications such as energy Voice also provided data on segments within the value chain showing periods of growth and decline⁵⁵.</p>

⁴⁷ Ostdeutscher Sparkassenverband (2017). "Sparkassen-Tourismusbarometer: Jahresbericht 2017". Available at: http://www.osv-online.de/fileadmin/osv/dateien/tourismus/STourismusbarometer_2017_komplett.pdf

⁴⁸ OECD (2018): COUNTRY PROFILES: TOURISM TRENDS AND POLICIES – POLAND <https://www.oecd-ilibrary.org/docserver/tour-2018-en.pdf?expires=1542710597&id=id&accname=guest&checksum=71FB6CFEE79BFB7A03292E99813F>

⁴⁹ The Federal Association of Windfarm Offshore. Accessed at: <https://bwo-offshorewind.de/wer-wir-sind/>

⁵⁰ German Offshore Wind Energy Foundation. Accessed at: <https://www.offshore-stiftung.de/en/about-us>

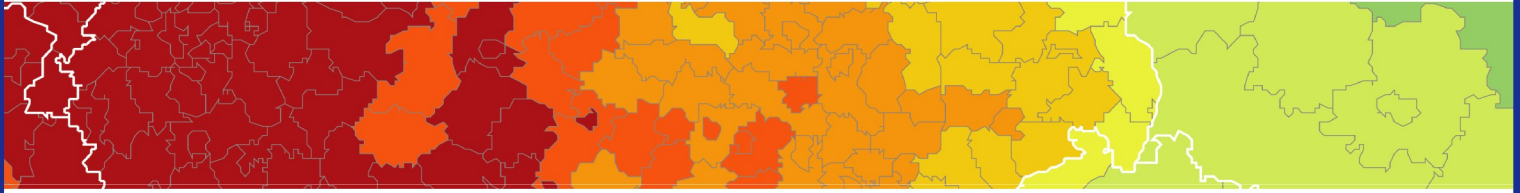
⁵¹ O Wehrmann, B., (2019) Clean Energy Wire, Factsheet: German offshore wind power - output, business and perspectives 21 January 2019 <https://www.cleanenergywire.org/factsheets/germanoffshore-wind-power-output-business-and-perspectives>

⁵² The Polish Wind Energy Association (2017). "The State of Wind Energy in Poland in 2016". Available at: <http://psew.pl/wp-content/uploads/2017/06/Stan-energetyki-wiatrowej-w-Polsce-w-2016-r.pdf>

⁵³ Wind Europe. Accessed at: <https://windeurope.org/about-wind/>

⁵⁴ WindEurope (2018). "Ambitious 8 GW of offshore wind planned that will put Poland back on wind energy map". Available at: <https://windeurope.org/newsroom/press-releases/ambitious-8gw-of-offshorewind-planned-that-will-put-poland-back-on-wind-energy-map/>

⁵⁵ Energy Voice: "For Heiner Kleen, Germany's renewable energy revolution looks like it will end in redundancy." Available at: <https://www.energyvoice.com/otherenergy/181001/job-losses-mount-in-germany-as-wind-companies-look-for-growth-abroad/>



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