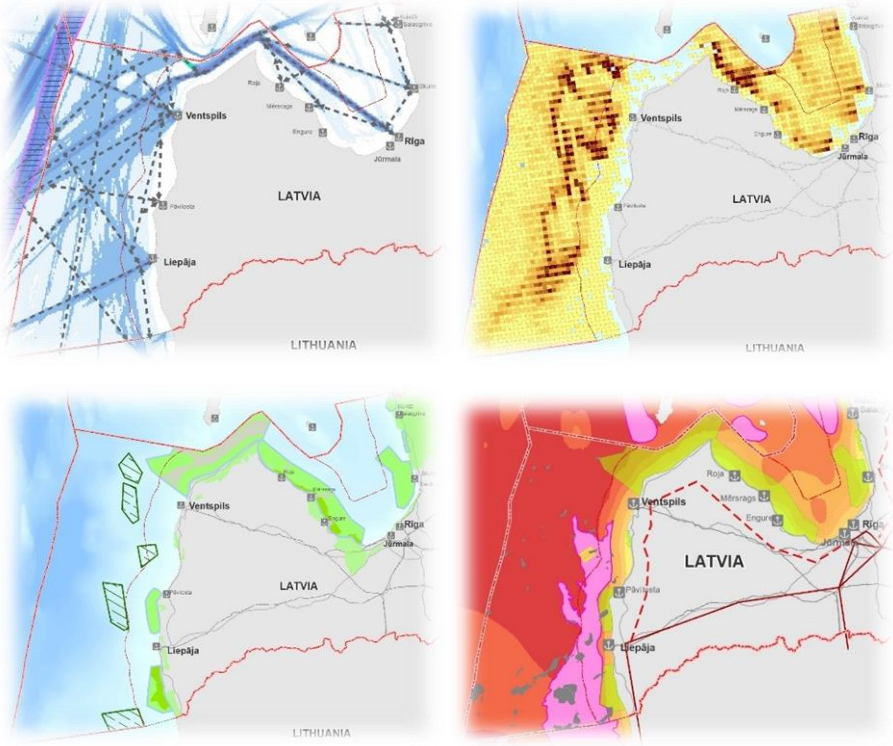
MARITIME SPATIAL PLAN

2030

Summary



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Explanation of terms used

Aphotic zone	The portion of the sea which receives less than 1% of sunlight.
Base line	The maximum low tide line and straight lines connecting the hydrotechnical structures or other structures located on opposite sides of the port concerned, which are farthest on the sea side.[1]
Benthic organisms	Organisms which live on the seabed and/or layer of the seabed.
Biologically active substances	Substances (including chemical elements) that are necessary for the existence of living organisms
Biotope	A habitat or a portion of a habitat characterised by uniformity in climate and distribution of biotic and abiotic components
Eutrophication	The process where a body of water becomes overly enriched with minerals and nutrients that induce excessive growth of plants and algae. This process may result in oxygen depletion of the water body.
Ecosystem	A biological community of interacting organisms and their physical environment.
Ecosystem services	All the benefits that ecosystems provide to humans and their welfare.
Photic zone	The part of the sea that is exposed to sunlight.
Inland waters	Sea waters from the coastline to the baseline[2]
Sea bottom sediments	Materials that have formed as a result of continuous wave and underwater current exposure.
Marine coastal waters	An aquatorium two kilometres in width from the marine coastal line [3] (Land Management Law)
Pelagic organisms	Organisms which live in the middle and/or upper part of the water.
Coastal fisheries	For the provision of efficient fishing management a separate area of waters - coastal waters - shall be determined in the territorial waters of the Republic of Latvia where the depth does not exceed 20 metres, except shallow water zones which are located further than the 20 metre isobath. [4]
Plankton	An aggregate of free floating, mostly microscopic organisms. Plankton are divided into two large groups: phytoplankton – microscopic algae and zooplankton – microscopic animals.

1 State Border Law of the Republic of Latvia (in force from 16.12.2009.)
2 State Border Law of the Republic of Latvia (in force from 16.12.2009.)
3 Land Management Law (in force 01.01.2015.)
4 (02.05.2007. CM Regulation No. 296)

Abbreviations used

BIOR	Institute of Food Safety, Animal Health and Environment "BIOR"
CM	Cabinet of Ministers
EC	European Commission
EEZ	Exclusive Economic Zone
EU	European Union
HELCOM	Baltic Marine Environment Protection Commission - Helsinki Commission
IMTA	Integrated multi-trophic aquaculture
KPR	Kurzeme planning region
LIAE	Latvian Institute of Aquatic Ecology
MAL	Maritime Administration of Latvia
MoA	Ministry of Agriculture
MoE	Ministry of Economics
MoEPRD	Ministry of Environmental Protection and Regional Development
MPA	Marine Protected Areas
MSP	Maritime spatial plan
MSP WG	MSP development working group
NCA	Nature Conservation Agency
NCHB	National Cultural Heritage Board
NM	Nautical mile
RPR	Riga planning region
Sea waters of Latvia	The internal sea waters, territorial sea and exclusive economic zone waters of the Republic of Latvia
UN	United Nations
VASAB	(Vision and strategies around the Baltic Sea) – the cooperation of 11 states in the Baltic Sea Region in the spatial planning and development. This is put forward by the ministries responsible for spatial planning and development and is led by the Baltic Sea Region's Spatial Development and Planning Committee.
WPP	Wind power plants

INTRODUCTION

The Maritime Spatial Plan (hereinafter - MSP) is a national level long-term spatial development planning document that defines in writing and graphical form the use and conditions for the use of the sea for the inland waters, territorial sea and exclusive economic zone waters of the Republic of Latvia.

The MSP has been formulated in accordance with the Spatial Development Planning Law (in force from 1st December, 2011) and CM Regulation No. 740 of 30th October 2012 on the Procedures for the Development, Implementation and Monitoring of the Maritime Spatial Plan.

The MSP has been developed for the entire part of the Baltic Sea under the jurisdiction of the Republic of Latvia up to the outer border of the exclusive economic zone. The outer borders of the MSP conform to the state border agreements and hydrographically defined sea borders under the jurisdiction of Latvia.

The aim of the MSP is to balance the interests of the environment, society and economy and to promote the sustainable development of the marine space, permitting or restricting specific actions in the sea and along the coast.

During the process of MSP elaboration, the interests of the state and local governments have been coordinated.

When determining the priority uses of the sea, the terrestrial area that is functionally interlinked with the sea has been taken into account.

The MSP comprises four sections: the explanatory note; strategic section; description of the planned use of the sea and the graphical part.

The explanatory note of the MSP contains the principles of development and methods of the MSP, the connection of the MSP with other development planning documents and legal enactments, a general overview of the existing situation and aquatorial division of the Baltic Sea, marine transport, fishery and marine aquaculture, as well as energy production, national defence interests, tourism and recreational development, the extraction of the mineral resources, environmental quality, including climate change characteristics, information regarding biological diversity and protected nature territories, ecosystem services. Besides the description of the existing uses of the sea, the explanatory note also provides an assessment on the existing condition and development trends.

The strategic section of the MSP provides the long-term vision and priorities for use of the sea.

The section describing the planned use of the sea defines the priority use areas, their functions and the restrictions in their use, as well as the strategic aims and measures of the MSP.

The summary of the MSP reflects the principles of development of the MSP, a general description and aquatorial division of the Baltic Sea, the long-term vision, marine space priorities, MSP solutions and implementation, incl. monitoring of implementation.

1. MSP development principles and methods

The development of the MSP is based on the MSP principles approved in the Spatial Development Planning Law (12.03.2014), the EU MSP Directive (2014/89/EC) and HELCOM-VASAB in 2010.

The final version of the MSP has been developed (see Fig. 1) based on the following: Version 1 of the MSP[5] and EU financed projects: „Towards harmonisation and cross-border solutions in the spatial planning of the Baltic Sea"[6] and „Harmonised Linear Infrastructure for Baltic Sea Spatial Planning (BalticLINes)"[7].

The maritime spatial planning process is based on the following conditions:

- The non-deterioration of the environmental condition and ecological parameters must be ensured for the use of the marine space and the ability of the ecosystem to adapt, as well as creating favourable conditions for improving the environmental condition and marine resources;
- The existence of existing, traditionally formed types of sea use must be ensured, which already occupy a defined marine space and thereby impact on and create conditions for the placing of new human activities at sea;
- The development of existing human activities must be supported and conditions created for the introduction of new types of use of the sea;
- Decisions regarding the introduction of new types of use of marine resources and space must be based on research regarding the technical and economic grounds thereof, impact on the environment and marine ecosystem, as well as assessing the compliance with state policy aims and priorities.

The MSP has been developed using the latest scientific research data regarding the status of the marine environment, nature assets and new data sets have been developed (for example, regarding distribution of fish species and fishery activity, sea bottom sediments and benthic habitat distribution and potential of ecosystem service supply etc.

Based on the precautionary principle, the available spatial data sets regarding the distribution of nature assets were used, using appropriate locations for human activities, and avoiding those where they could cause significant damage.

In the early stage of developing the MSP, four alternative scenarios were developed and their impact assessed according to the chosen environmental, social, economic, climate change and cross-border context criteria, as well as with regard to the distribution of species, biotopes and ecosystem services. The evaluation results were used for elaborating the optimal solutions for permitted uses of the sea.

A characterisation of the ecosystem services was carried out, as well as the biophysical cartography of the ecosystem services, based on the available spatial data sets and expert knowledge. The ecosystem service maps were used for impact assessments of the alternative scenarios and optimal solutions for the use of the sea.

[5] Development of Version 1 of the Maritime Spatial Plan and the strategic environmental impact assessment report has been co-financed by EEZ financial instrument 2009.-2014 programme "National climate policy" in the previously defined project "Development of recommendations for the National Climate Change adaptation strategy, identifying scientific data and measures to ensure adaptation to climate change, as well as performing an impact and expenditure assessment", activity 2.2. "Maritime spatial planning for the territorial and EEZ waters of the Republic of Latvia". Further information: http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=23102

[6] Financed by the European Union Maritime and Fishery Fund, Further information:: http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=23104

[7] Financed by INTERREG Baltic Sea region transnational cooperation programme. Further information:: http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=22660

The impact of human activities on various components of the marine ecosystem was assessed using the impact matrix (see Annex 2). The assessment results were used for mapping spatial impact scenarios and optimal sea use solutions. The interaction of commercial activities and the environment were considered at stakeholder and expert meetings, resulting in the formulation of criteria for use of the sea.

All stakeholders were actively involved in the development of the MSP, starting with the definition of the tasks of the MSP. Meetings and consultations with various stakeholder groups were organised, involving them in the configuration of the long-term vision, scenario assessment[8], definition of the criteria for the permitted use of the sea and commenting on the optimal solutions for marine uses (see Fig. 1).

Cross-border consultations[9] were also carried out with stakeholder representatives from Lithuania, Estonia and Sweden. Solutions in the context of the development of the Baltic Sea region have been evaluated, using criteria which are based on the EU strategy for the indicated priority areas for the Baltic region in realising the economic potential of the products and services of the marine ecosystem. The criteria offered are geared towards developing a unified approach between the Baltic Sea region states, promoting cross-border cooperation for improving the welfare of its inhabitants, which is dependent on the sustainable use of environmental resources, as well as emphasising the significant economic factors, security and the ecological condition of the Baltic Sea.

The suggested criteria for the unified development of the Baltic Sea region include:

- **Continuation of uses** in regard to shipping routes and infrastructure corridors;
- **Ecological balance**, ensured by preserving the protected territory network, „blue corridor" to ensure the migration of species, fishery policies and aquaculture development opportunities;
- **Regional attractiveness** provided by yacht and leisure boat jetty and marina networks and sailing opportunities along the coast, attractive tourism services and opportunities for viewing underwater cultural heritage objects;
- **Security,** based on appropriate military training and operation opportunities for national security, as well as the development of renewable energy resources;
- **Economic potential**, based on the development of ports and support of commercial activities related to maritime affairs.

The MSP of Latvia is a national level planning document and the development thereof is connected to the State's long-term thematic planning for the development of the public infrastructure of the Baltic Sea coast up to 2030 (hereinafter – Coastal Plan). Although local governments are entitled to plan their adjoining sea territory up to 2 km from the coast, they must take into account the solutions for use defined in the MSP. The defined tasks of the MSP include the necessary studies regarding the status of the marine ecosystem and nature assets and distribution of resources, as well as opportunities for using marine resources. Criteria have been recommended for the monitoring of the implementation of the MSP.

8 Insight into the experience of Latvia, working on the future scenario of the shipping and energy sector until 2050 in the context of the Maritime Spatial Plan. The harmonised linear infrastructure within the framework of the Baltic Sea spatial planning (Baltic LINes) project, is available at: http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=22660

9 National MSPs are developed in accordance with the requirements of EU Directive 2014/89/EU. For states to be able to fulfil the requirements of this Directive regarding cross-border cooperation consultations between EU Member States during the MSP development process within the framework of project "Towards harmonisation and cross-border solutions in Baltic Sea spatial plans (BalticSCOPE), Version 1 of the Latvian MSP was discussed with neighbouring states – Sweden and Estonia. Special attention was paid to 4 main MSP planning sectors: fishery, energy, shipping and environment, involving the main "players" and stakeholder groups of the sectors.

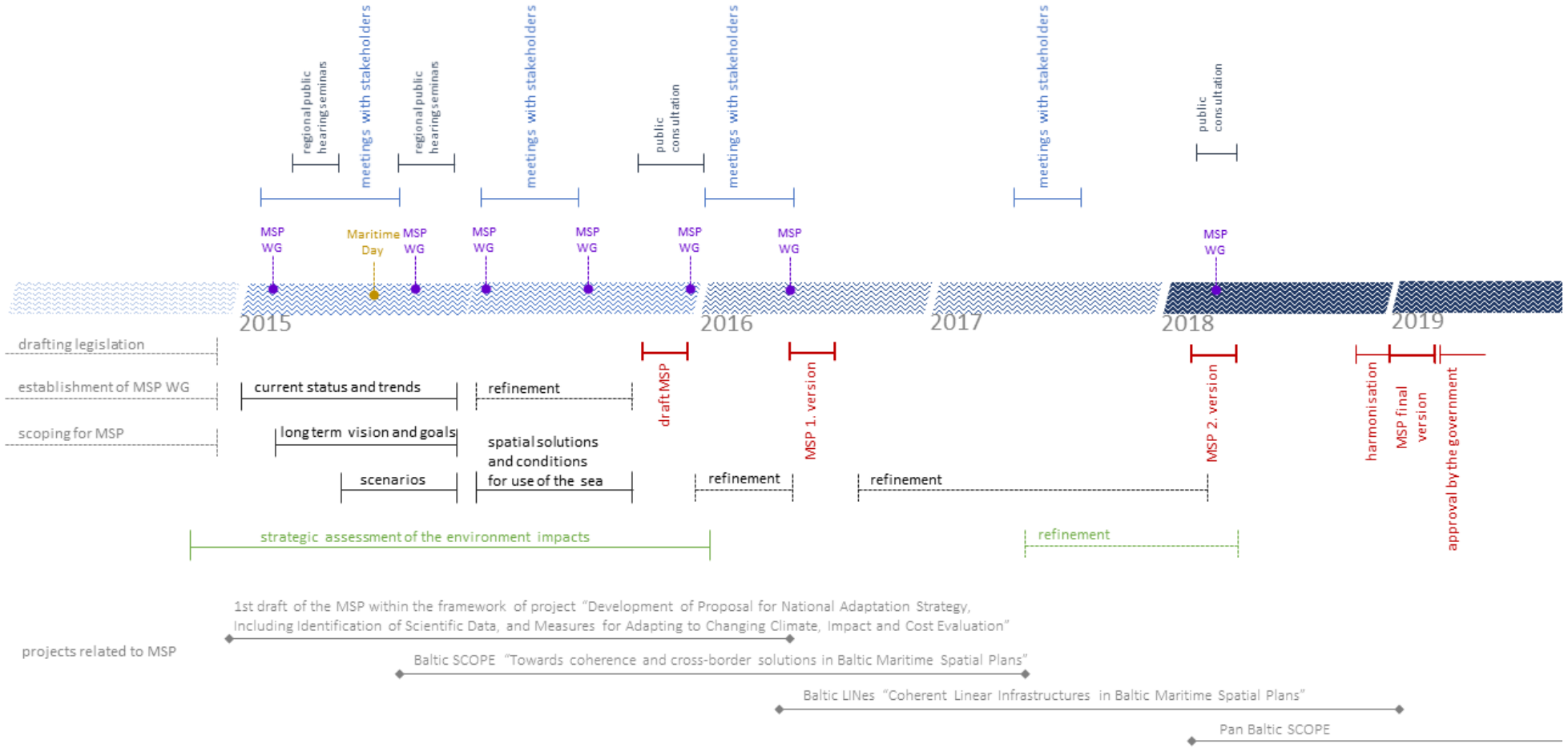


Figure 1. Progress of Latvia's MSP elaboration

2. Description of the existing situation

2.1. Description of the Baltic Sea and adjoining territory

The Baltic Sea, including the territorial sea waters of Latvia, is a unique asset of Latvia and the entire Baltic Sea region, where the interests of many economic sectors, nature and national security meet.

Its ecosystem is very sensitive and this is determined by the natural conditions and pressure caused by the activities of 85 million people living and working in its catchment basin.

A significant number of Latvia's inhabitants is also concentrated on the coast of Latvia – in parishes and republic cities, which border the sea and occupy approximately 6% of the territory of Latvia; in 2015, 843 369 inhabitants or 42,5% of the total number of the country's inhabitants were declared resident here, including 40,2% of the total number of inhabitants living in four of the large cities – Riga, Liepaja, Jurmala and Ventspils.

The Baltic Sea has a unique diversity of species, biotopes and landscapes. There are 100 known species of fish, 450 species of macro-algae, 1000 zoobenthos species, 3000 plankton species and many unknown bacteria and viruses, which form the biological diversity of the Baltics.

One of the EU protected biotopes – 1170 – Reefs (see. Fig. 25) can be found in the Baltic Sea territorial and EEZ waters of Latvia. Its current level of protection is assessed as unfavourable – poor.

The main type of threat to the EU protected biotope – 1170 – Reefs – is changes to the condition of the environment caused by eutrophication. The increase of nutrients in the water causes changes to the habitat species, and in turn the enlargement of organic substances in the water reduces the light penetration, and respectively reduces the depth zone available to the reef habitat.

2.2. Aquatorial division of the Baltic Sea

The regime of the territorial sea of Latvia is regulated by the State Border Law of the Republic of Latvia.[10] The territorial sea of the Republic of Latvia reaches 12 nautical miles (22,2 km) in width, counting from the maximum low-water line. Its external border is an uninterrupted and complete line and the vertical surface corresponding to this line which separates the land and water territory of the Republic of Latvia, the subterranean depths and air space thereof from neighbouring countries and from the exclusive economic zone of the Republic of Latvia[11] (see Fig.2).

The continental shelf and EEZ in Latvia is regulated by the Marine Environment Protection and Management Law[12], which prescribes that the continental shelf of Latvia is the seabed and the subsoil in submarine areas which are a natural prolongation of the land territory of Latvia, and are located immediately beyond the boundaries of the territorial sea of Latvia. The EEZ of Latvia is the territory of the Baltic Sea which is located immediately beyond the territorial sea boundaries of Latvia. According to the law, both territories extend to the sea boundaries, which Latvia has determined in international agreements with Estonia, Lithuania and Sweden. On 31st August 2005, Latvia submitted to the UN General Secretary the EEZ coordinates of Latvia and Sweden, in the form that they were determined in the 1998 agreement between the USSR and Sweden and which are observed *de facto* (see Fig.2).

The coastline length of Latvia is approximately 496 km along the Baltic Sea coast; from the border of Lithuania to the Cape of Kolka the gently sloping banks comprise 47% and the steep banks 33% of the

10 State Border Law of the Republic of Latvia (in force from 16.12.2010.)
11 Ibid, Section 1, Clause 1
12 Marine Environment Protection and Management Law (in force from 18.11.2010.)

coastline length. The gently sloping banks in the Gulf of Riga coast comprise 58% and the steep banks comprise 23% of the total coastline length.

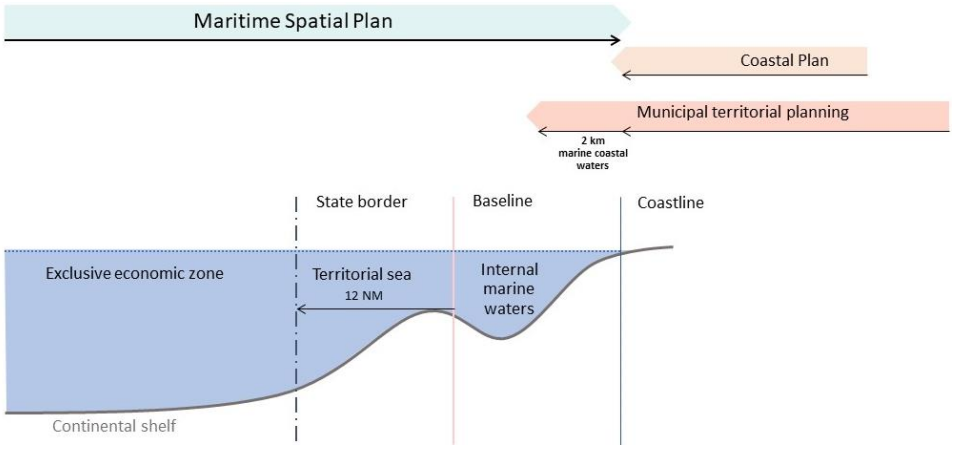


Figure 2. Distribution of the marine space of Latvia

3. Marine space priorities

The long-term vision is based on the recognition of the sea as a common space where everything (structures, processes and activities) is interlinked. The marine ecosystem provides the resources and conditions needed for the economy and for the welfare of the population. On the other hand, the pressures created by economic activity have an impact on the state of the marine ecosystem and thus on its ability to provide vital resources for society, including recreational facilities. In the same way, the economic sectors and their potential for development at sea are interlinked: they can be united by a common infrastructure, such as ports and electricity transmission networks, as well as an area where different economic interests can co-exist.

Long-term vision of the development of the use of the sea

The **long-term vision** for the use of the sea outlines the desired situation for 2030 (see Figure 3), reflecting the sustainable use of marine space and without endangering the existence of the marine ecosystem. The main priorities are a **healthy marine environment** and a **stable ecosystem**, as well as **national defence**. **Maritime development** and **safe shipping**, **sustainable fisheries** and **tourism**, as well as the **use of RESs** at sea have been identified as priorities in the sectors of the economy.

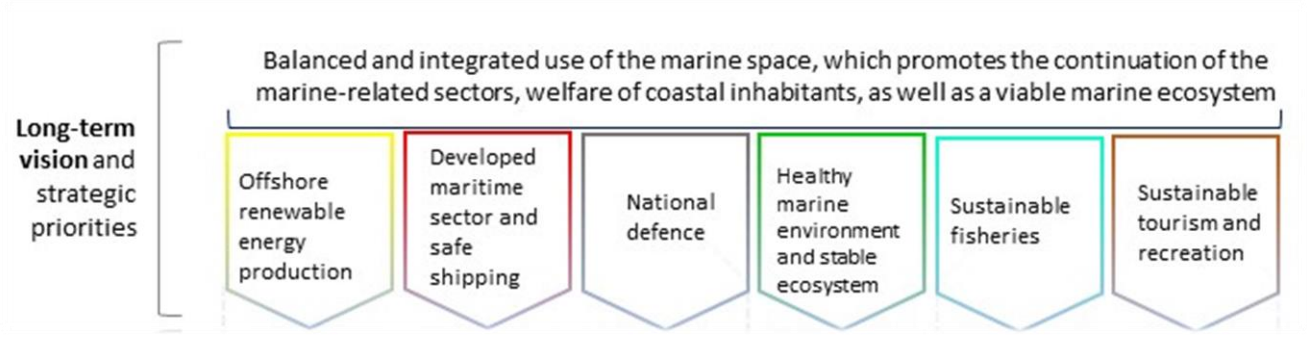


Fig.3. Priorities set out in the long-term vision

A healthy marine environment and resilient ecosystem

A resilient and renewable ecosystem of the Baltic Sea and Gulf of Riga will allow the provision of quality and diverse products and other ecosystem services, which serve for the welfare of people and form the basis of a sustainable economy. The ecologically most valuable areas are included in the network of marine protected areas, thereby ensuring the stability and viability of the marine ecosystem as well as retaining the biological diversity. The identified and preserved marine and underwater cultural heritage and the typical and unique coastal landscapes maintain the historical evidence and identity of the sea coast of Latvia.

National defence

The interests of national defence and protection are completely respected when carrying out economic activities at sea while ensuring the uninterrupted defence infrastructure and military training activities. An effective information system regarding the time of military operations (incl. neutralisation of mines) ensures free movement through military training polygons at times when they are not being used for military purposes. In order to prevent damage to the biological diversity of the sea, when planning military operations, the seasonal aspects of distribution of species are taken into account and activities are coordinated with ornithologists and other nature protection specialists.

A developed maritime sector and safe shipping

The large and small ports of Latvia serve a significant part of the cargo flow in the Baltic region and serve as a transport network, forming a coastal region and local scale economic centres. Regional/local scale shipping is developing. Shipping is organised effectively in the time and space along safe and economically viable routes, using modern and environmentally friendly technology, automated identification systems (AIS) and marine surveillance systems, thereby ensuring safe traffic and reducing/preventing the negative impact on the marine ecosystem. There are no obstructive structures in the most intensively used and strategically significant shipping zones; fishing and other types of use of the sea are regulated. The shipping zones are coordinated as much as possible across the borders, taking into account the use of the marine space in the neighbouring states.

Sustainable fisheries

The use of fish stocks is sustainable. Fishery management is flexible – takes into consideration the changes in fish stocks, and is able to adapt. Traditionally important fishing sites are maintained and areas for infrastructure of importance for fisheries are provided, as well as areas important for the recovery of fish stocks are concerved, avoiding as far as possible the effects of other economic activities. An integrated fish, mussel and algae aquaculture is developed, in areas where it does not pose a risk to the environment, and which helps to improve the quality of the marine environment.

Sustainable tourism and recreation

Tourism is a sector with high export potential, providing employment and income to the coastal areas. The sector complies with environmental quality standards for the Baltic Sea (incl. clean water, equipped swimming areas and suitable infrastructure), adapts to climate change and does not pose a threat to the coastal ecosystem, cause coastal erosion or interfere with coastal fishery. A varied offer of tourism products aimed at a higher added value in marine and coastal tourism is promoted. It reduces the seasonal negative impact and more effectively uses the nature assets and cultural heritage resources of areas. There is a unified approach towards the overall aim and a precise segmentation of offer for different lifestyles, both for the Baltic Sea region space and with regard to the Mediterranean. Yachting trips are supported by a unified network of ports and marinas; there is an increase in cruise ship traffic. The infrastructure, which has been developed for tourism, also raises the quality of life in local municipalities.

Use of marine RESs supporting the energy security of the country

Latvia reasonably uses the renewable energy sources available in the sea, supporting the energy security of the country, while causing no damage to the environment, marine ecosystem or significant losses to other users of maritime resources and space. Latvia is integrated in the unified energy market and electricity grid of the Baltic Sea region. When issuing licences and permits for the use of renewable energy resources, the cumulative impact

thereof is also evaluated and an incommensurable burden on the marine ecosystem and landscape or the cultural heritage is not allowed, nor does it interfere significantly with the navigational and coastal surveillance system operations.

In order to promote the implementation of the long-term vision and strategic priorities, three strategic objectives have been set:

SO1: **Rational and balanced use of the marine space, preventing inter-sectoral conflicts and preserving free space for future needs and opportunities;**

SO2: **The marine ecosystem and its ability to regenerate is preserved, ensuring the protection of biological diversity and averting excessive pressure from economic activities;**

SO3: **Integrated use of marine and terrestrial areas by promoting development of maritime related businesses and the development of the required infrastructure.**

Several measures are anticipated for the implementation of the objectives, which are described in the section on MSP implementation (6.1.).

4. Sectoral interests in the MSP

Shipping interests

For safe shipping and port development, **areas reserved for shipping** are defined in the MSP. **These zones will not affect the shipping practices adopted hitherto and the national obligations of Latvia in international conventions,** for example, the freedom of shipping in the sea waters of Latvia.

The width of the area reserved for shipping is defined taking into account the most significant shipping directions for ports and long-term development plans,[13] shipping intensity (AIS data) and international consultations,[14] 3 zone widths have been specified:

1) T1 – **for providing access to large ports**, where the width of area reserved for shipping is 6 nautical miles;
2) T2 – **for providing access to small ports**, where the width of area reserved for shipping is 3 nautical miles;
3) T3 – **for providing transit of the sea waters under the jurisdiction of Latvia**, where the width of area reserved for shipping is 6 nautical miles.

Energy interests

In order to promote the development of WPPs at sea, **research area for wind park development** which are suitable for the development of WPPs are defined in the MSP. Theoretically, it is possible to situate at least one WPP up to 800 MW capacity in each of the research area for wind park development transmitting the produced electricity to the electricity transmission system on shore. The research area for wind park development have been determined according to the following criteria:

1) the sea depth is up to 60 m;
2) the distance from the coast is not closer than 8 km;
3) they do not overlap the existing Natura 2000 territories, military training polygons, areas licenced for hydrocarbon research and extraction and dumped explosive sites;
4) the average wind speed at 100 m height is from 8m/s.

In the interests of safety, the research area for wind park development are situated outside **dumped explosive sites and military polygons**. As defined by international regulations, a safety zone of 500 m should be established around stationary objects at sea in EEZ waters. In cases where the most suitable place is however located in a zone reserved for shipping, coordination is required with the responsible authorities, as well as creating spatial solutions, in order to ensure shipping safety, changing the priority use of the area in question.

In order to ensure the connectivity of potential WPPs or wave energy at sea with the electricity grid on land and interconnections with neighbouring countries, the **potential electricity cable corridors** are defined in the MSP. The potential electricity cable corridors at sea, whose development may be initiated until 2030, are interconnections between Sweden and Latvia and between Estonia and Latvia, as well as the potential WPP connections to the onshore electricity grid.

The construction of an energy generation or transmission infrastructure at sea shall be performed in accordance with the conditions of the regulatory framework regarding the protection of the marine

13 Development of future shipping and energy scenarios by 2050 under the BalticLINes project, for which information is available at: http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=22660

14 In the Baltic Sea region, international consultations have been organised in Sweden, Poland, Finland and Estonia as part of the development of maritime spatial planning

environment and construction at sea, including CM Regulation No. 631 of 14 October 2014 „Construction Regulations for Structures in the Internal Waters, Territorial Waters and Exclusive Economic Zone of the Republic of Latvia" which prescribes the procedure by which a licence area at sea shall be determined and the procedure for issuing a licence, and the procedure by which a tender shall be organised regarding the right to use areas in the sea as well as the procedure for construction processes at sea.

Telecommunication interests

The MSP does not define corridors for the installation of telecommunication cables. The installation of new cables should be carried out in accordance with that prescribed in laws and regulations. However, in order to facilitate the installation of new telecommunication cables, the MSP includes recommendations for the coordination of cables with other uses.

National defence interests

The MSP anticipates that when carrying out economic activities in the sea, the interests of national defence and defence are respected. In order to ensure uninterrupted military training activities, an effective information system regarding the times of military operations (incl. clearance of unexploded mines) is in place, thereby ensuring the free movement through military training polygons at a time when these are not being used for military purposes. Similarly, the **national** defence **areas** are defined in the MSP, which, in addition to the restrictions in the military polygon areas, specified in regulatory enactments, prescribe the conditions for the coordination of new types of marine uses with the Ministry of Defence.

The interests of fisheries

The MSP does not regulate coastal fisheries, fishing in the Baltic Sea and the Gulf of Riga, and the interests of fishery are depicted in the MSP section regarding existing uses of the sea. In turn, the existing information regarding the most significant fishing areas has been assessed, determining other areas for the use of the sea.

The MSP does not determine specific places for the development of aquaculture in the sea. Each development opportunity is regarded individually, depending on the technology to be used and observing the recommendations in the MSP for the compatibility of aquaculture with other types of marine use. Construction of infrastructure for aquaculture at sea shall be performed in accordance with CM Regulation No.631 of 14 October 2014 „Construction Regulations for Structures in the Internal Waters, Territorial Waters and Exclusive Economic Zone of the Republic of Latvia", which prescribes the procedure by which a licence area at sea shall be determined and the procedure for issuing a licence, and the procedure by which a tender shall be organised regarding the right to use areas in the sea as well as the procedure for construction processes at sea.

Further analysis and mapping of fish-relevant habitats and major fishing areas should be carried out, taking into account their variability, but consultation of stakeholders is needed before taking decisions on the launch of new uses or the expansion of existing ones.

Tourism and recreational interests

The MSP does not anticipate conditions for the development of tourism and recreation, as the development of tourism primarily affects local governments and businesses providing tourism services. Therefore, the development of coastal tourism should be concentrated in the development areas specified

in the Coastal Plan; in turn the planned use of the coastal marine waters, incl. development of WPPs, must be assessed in terms of the potential impact of these activities on coastal and yachting tourism.

Interests of extraction of mineral resources

The extraction of mineral resources in the sea waters of Latvia is not currently taking place.

To date, several licences have been issued for the exploration or research and extraction of mineral resources, which partly confirms the interest regarding hydrocarbon deposits in the EEZ (mostly in the area near the Lithuanian border) and TS of the western coast of Kurzeme.[15]

The extraction of other mineral resources is not anticipated in the planning period.

Reflection of the biological diversity

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora prescribes that MPA shall be created for specially protected biotopes or species. In the case of Latvia an MPA has been created for biotope 1170 Reefs and for several of the bird species listed in the Annex to the Directive. All created MPAs are located in the territoral waters of Latvia and only one small part of the Irbe Strait's territory is located in the EEZ waters. By gaining new knowledge of the deeper layers of the Baltic Sea, it is understood that their role in improving the environmental status of the Baltic Sea is much more important than it was previously considered. The MSP does not change the conditions of use and regulations in respect of the requirements for the protection of bird species. Therefore, the MSP specifies the **investigation areas of nature values** (biological diversity research areas) in the EEZ of Latvia, in order to determine the existing natural values in these areas. The MSP does not change the conditions of use and regulations in respect of the requirements for the protection of biotopes and bird species. The information compiled in the MSP regarding the distribution of biotopes and species shall be taken into account when taking decisions regarding new uses of the sea.

Cultural heritage

An important task within the MSP is to preserve the existing underwater cultural historical heritage values (incl. wrecks). When performing research on a new use of the sea or construction, the cultural historical heritage values at sea shall be identified and activities planned so that there is no adverse impact on them.

Landscape values

The MSP does not regulate landscape protection, management or planning but the MSP takes into account landscape values in specific sectors. The identification of the potential values of underwater landscapes should be linked to further biodiversity research in a number of marine areas. The identification of the values of potential underwater landscapes should be linked to further biodiversity research in a number of marine areas. In turn, in order to define the values of coastal landscapes and the potential impacts of different uses of the sea (mainly offshore installations and their visibility from the coast), detailed landscape studies should be carried out at the level of coastal municipalities.

Climate changes

Although there is currently insufficient information on the distribution of habitats and marine species and the impact of climate change on them, changes in biogeochemical processes can also lead to changes in habitats and the food chain. Climate change by 2030 in general could have a relatively small but negative impact as the impacts of the change will result in a reduction in the stability of the marine

15 Information prepared by MoE, available at: https://www.em.gov.lv/lv/nozares_politika/zemes_dzilu_izpete/ (accessed 12.02.2018.)

ecosystem, as well as potential changes in the distribution of species and habitats, which may necessitate a reassessment of the existing and planned network of marine protected areas. Furthermore, in order to minimise the risks of coastal erosion when planning construction in coastal waters, the potential impact of the structures on coastal processes and also the impact of coastal processes (erosion) on the construction need to be assessed. In order to minimise the impact of the shipping sector on the climate, the reduction of GHG emissions from the operation of vessels should be encouraged, promoting the use of more energy-efficient vessels for example, by offering privileges (price tools, etc.) to such vessels at berths, as well as promoting the use of environmentally friendly energy resources in ports, for example, by setting up stationary electrical connections at port berths, thereby enabling vessels to use electricity in ports.

Ecosystem services

In the context of maritime spatial planning and ecosystem approaches, the relationship between ecosystem processes, functions, services, societal benefits and their value must be clearly visible, which is particularly important in order to facilitate the analysis of benefits and losses in human activities and environmental management strategies. This is the first attempt to apply this method not only to the marine waters of Latvia, but also at the level of the Baltic Sea as a whole. As a result, work on the ecosystem services approach in the MSP will continue intensively in cooperation with other Baltic Sea countries in the framework of various international projects and should be continued as part of new projects. In order to allow this cooperation to continue successfully, it is necessary to complement the knowledge base on the state of the marine environment and biodiversity by implementing the MSP measures to preserve the healthy marine environment and a stable ecosystem (see Table 4).

5. MSP solutions

The MSP must be considered when taking decisions regarding future use of the sea. In order to ease the coordination of sectoral interests, general conditions and principles are included in the MSP which must be considered when planning development in the marine space.

Main conditions when planning the marine space development:

1. The use of the marine space must be organised in accordance with the natural conditions, ensuring the preservation of the environmental conditions, ecological parameters and the ability of the ecosystem to adapt to changes; furthermore, creation of favourable conditions for improving the quality of the environmental conditions and marine resources must be ensured;
2. The continuation of the existing, traditionally developed marine uses, which already occupy a specific areas of the marine space and thereby affect and produce conditions for new economic activities in the sea, must be ensured;
3. The development of existing economic activities must be supported and conditions for introducing new activities must be created;
4. Decisions regarding the introduction of new uses incl. the exploration of resources shall be based on research regarding the technological and economic justification, the impact on the environment and the marine ecosystem, as well as assessment of the coherence with the national policies and priorities.

5.1. Conceptual framework

Based on the outcomes of discussions with the stakeholders, the long-term development vision and the priorities, and, taking into account the criteria for defining the priority uses of the marine space (see Appendix 2), and the priorities and objectives set for the achievement of these as well as the criteria for determining the **spatial priorities for the use of the marine space (**see Appendix 2), the **MSP defines three categories of marine space use:**

1. Priority uses – includes existing and planned uses of the marine space, which are essential for ensuring the spatial interests of the priorities defined in the strategic section.

2. Existing uses and objects, which are connected to the use of the marine space and whose location and management is determined by regulatory enactments.

3. General use, where all sea uses are allowed (incl. fishery, shipping, tourism and leisure, scientific research etc.) which do not contravene the restrictions defined in regulatory enactments and do not cause significant negative impact to the marine environment. In order to initiate new uses of the sea, it is necessary to apply for a licence area, obtain a licence for exploration, carry out the EIA procedure and obtain a licence for the construction works or/and exploitation of resources.

5.1.1.Priority uses of the marine space

The priority uses of the marine space (see Fig. 4) are defined by excluding or setting restrictions to other activities which may cause disturbances or damage the existence or development of the prioritised use. The areas of potential offshore wind energy development (RES) are also included in this category - suitable areas are identified, taking into account the natural conditions, possible impact to the marine ecosystem, as well as potential conflicts with other sea uses. The conditions for each type of use of the marine space are included in Table 3.

Table 3. Types of use of the marine space and conditions for use

Type of marine space use	Conditions of use
Area reserved for shipping (T1, T2, T3)	Stationary structures or constructions that are not related to the ensuring of safe navigation or not involved in the provision of shipping services are not allowed (incl. WPPs, wave power plants, hydrocarbon exploration and experimental extraction platforms, aquaculture fields). If the optimal position for construction identified during the exploration of wind parks overlaps the areas reserved for shipping, by agreeing on the spatial solutions for ensuring shipping safety, a displacement of the areas reserved for shipping is possible.
Area of interest for national defence (M1, M2, M3)	Stationary structures or constructions that are not related to ensuring safe navigation (incl. WPPs, wave energy stations, hydrocarbon extraction platforms, aquaculture fields) are not allowed, without the consent of the Ministry of Defence.
Investigation area of nature values (B1, B2, B3, B4, B5)	Until the exploration of respective zones, the issuance of licences for new uses of the sea that could potentially endanger protected underwater biotopes and species, (incl. WPPs, wave power plants, hydrocarbon extraction platforms, aquaculture areas) is not allowed. If the survey does not identify conservation nature values, the areas explored or parts thereof may be anticipated for issuing licences for new uses of the sea.
Research area for wind park development (E1, E2, E3, E4, E5)	New licences for the installation of a WPP and research required for it shall only be issued in these zones by the Ministry of Economics. Prior to the construction of a WPP all procedures specified in regulatory enactments shall be performed, incl. an Environmental Impact Assessment.
Potential electricity cable corridor (K1, K2, K3, K4, K5)	When planning the transnational interconnections and/or WPP connection to the onshore grid, planned directions should be investigated first.

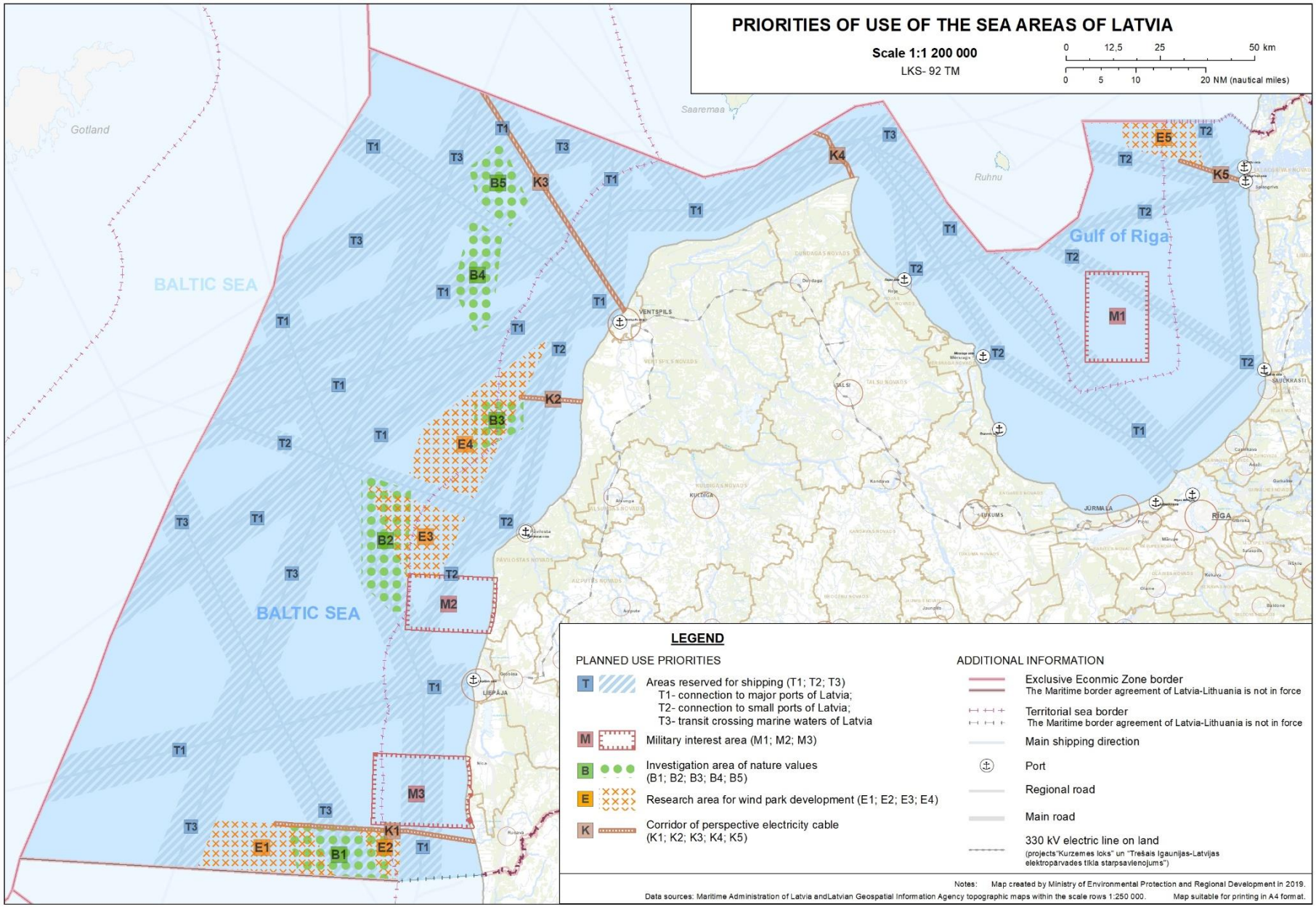


Figure 4. Priority uses of the marine space (source: MoEPRD)

In order to mitigate conflicts between offshore wind parks, other industries and existing uses, for example, shipping, fishing, extraction of mineral resources, tourism, landscape quality, as well as bird and bat migration, on issuing a licence in a research area for wind park development, the following aspects shall be considered:

- It is important to evaluate the impact of a WPP on the coastal landscape. In particular, a negative impact is anticipated in places with a natural landscape or places that have been altered little by human activity, as well as places of cultural significance. WPPs that are visible from the shore may reduce the touristic attractiveness, therefore it is recommended to situate WPPs at least 8 km from the coast, but in areas next to bluffs (for example, Jūrkalne) it would be more because the visibility increases from a higher viewpoint and a separate studies on optimal distance should be carried out.
- The installation of a wind turbine may cause damage to or destroy underwater biotopes, in particular, the biotopes formed in the rocky bottoms (limestone and boulders, as well as mixed bottoms). Therefore, WPPs are not allowed in areas designated for the protection of underwater biotopes or areas where protected biotopes are found.
- Where possible, WPPs should also be located outside the wintering grounds of migratory birds (loons, long-tailed ducks, common scoters, velvet scoters, black guillemots, little gulls), their migration routes, as well as their resting and feeding places during migration.
- When selecting a specific site for the installation of a WPP, the impact on shipping traffic shall be evaluated. In order to prevent risks to shipping, the WPP shall be installed outside areas reserved for shipping and the distance thereof from the areas reserved for shipping evaluated separately. In exceptional cases, there must be reasoned grounds for why the most suitable place for installing a WPP is in an area reserved for shipping. In such a case, the responsible authorities shall find spatial solutions, in order to ensure shipping safety and, where necessary, shift the areas reserved for shipping.
- In areas where WPPs are installed, fishing and the extraction of mineral resources shall be restricted, therefore, when determining the most suitable place, the interests of these sectors shall also be taken into account, where possible excluding areas which are important for fishery or that might potentially be used for the extraction of mineral resources. If it is not possible to agree on a mutually convenient solution, potential losses shall be evaluated and the existing practice of compensation shall be used.
- When selecting a site for the installation of a WPP, the opportunities for cooperating with Lithuania or Estonia, by involving co-financing to develop joint wind park development projects, should be assessed.
- In areas for which a licence has already been issued for the exploration and extraction of hydrocarbons, or other economic activities incl. aquaculture production, the issuance of a WPP licence is not possible.
- In areas for which licences for the use of wind energy have been issued, provisions may be made for the possibility to combine wind energy production with wave energy, aquaculture production or other production, if technically feasible.

5.1.2. Existing uses of the sea and marine features

Prior the elaboration and approval of the MSP, a number of sea uses have been identified and the use of marine space is already partially regulated (see Table 2). It is possible to distinguish between two types of areas defined by the regulatory framework – areas for which conditions or restrictions of use are specified in relation to other uses of the marine space and objects for which the actual location has been determined.

Table 2. Regulatory framework for the use of the marine space

Type of use of the marine space	**Regulatory enactments that determine the procedures for use**
Type of use of the marine space	• **Regulatory enactments that determine the procedures for use**
Marine Protected Areas, incl. reserves and neutral areas	• Law On Specially Protected Nature Territories. • CM Regulation of 5 January 2010 No.17 "Regulations Regarding Marine Protected Areas". • MPA "Nida–Pērkone" (CM Regulation of 23 August 2011 No. 652), "The west coast of the Gulf of Riga" (CM Regulation No. 653 of 23 August 2011) and "The Irbe Strait" (CM Regulation No. 807 of 19 October 2011).
Archaeological monuments and areas of State significance incl. . environmental and nature asset preservation	• Law On Protection of Cultural Monuments. • CM Regulation No.474 of 26 August 2003 "Regulations Regarding the Registration, Protection, Utilisation and Restoration of Cultural Monuments and the Granting of the Status of an Environmentally Damaging Feature"; • Marine Environment Protection and Management Law Section 19, Paragraph 2 prescribes the rights of public persons and private persons to use the sea determines the need to receive a licence for the exploration of wrecks and other submerged property.
Telecommunication cable lines and their protection zones	• Protection Zone Law Section 14, Paragraph two, Clause 2 determines that around/along sea telecommunication cable lines a protection zone is set 0.25 nautical miles in width on both sides of the telecommunication lines, in which it is prohibited to carry out any building, installation or blasting works; to perform geological and geodetic research which involves drilling, taking of earth samples and other similar activities; to arrange quaysides and floating jetties for ships and barges, to perform loading, unloading, dredging works and deepening of the seabed, to cast anchors, travel with cast anchors, chains, sea-gauges, towed nets and trawls, to determine fishing areas, to fish, or to collect plants using deepwater tools.
Surveillance towers and their protection zones	• Law On Protection Zones Section 21, Paragraph one defines the protection zones around the technical means of navigation and Section 21, Paragraph two defines the protection zones around the technical means of military marine surveillance.

	• Law On Protection Zones Section 50 Paragraph two prohibits the erection of buildings/constructions within the protection zones around the technical means of navigation and technical means of military marine surveillance, which can disturb their functioning. • CM regulations No 246 of 20 May 2014 "Regulations Regarding the List of the Technical Means of Navigation and Technical Means of Military Marine Surveillance for the Purpose of the State Security, which Requires the Establishment of the Protection Zones, the Width of the Protection Zones and the Restrictions for the Building Activities Therein" prescribes that within these protection zones no construction of buildings is possible without acceptance from the Ministry of Defence. • CM Regulation No. 508 of 27 July 2006 "Regulations Regarding the Protection Zones around State Defence Facilities and the Widths of These Protection Zones" prescribe the State defence facilities around which protection zones shall be established and the width of these protection zones.
Military training areas and their protection zones	• Maritime Administration and Marine Safety Law • CM Regulation No.1171 of 21 December 2010 "Regarding the Procedures for Using Latvian Waters and Navigation Regime Therein" determines that MAL may prescribe navigation regime restrictions at sea.
Port areas, incl. port outer roadsteads	• CM Regulation No. 253 of 9 May 2017 "Regulations Regarding the Construction of Individual Engineering Structures" prescribes the procedure for the construction process of engineering structures. Issued pursuant to the Construction Law. • Port borders incls. Port outer roadsteads shall be defined by CM Regulations regulating the respective port outer roadsteads. • Local government area planning documents and related regulations.
Technical means of navigation and protection zones for their operation	• CM Regulation No. 385 of 5 June 2012 "Regulations Regarding the Method for Determining the Operational Protection Zone Around the Technical Means of Navigation Intended for Shipping Safety" prescribes the territory of the operational protection zone around the technical means of navigation intended for shipping safety (around lighthouses and around other means of navigation) (coastal signs, coastal

	flares, pier lights, guiding signs etc.)). The economic activity of any kind in the area of the protection zone of the navigation means shall be coordinated prior to the commencement thereof. In order to ensure the operation and safety of marine navigation means, the landowners or users shall observe the limitations specified in Sections 35 and 50 of the Protection Zone Law, as well as the Maritime Administration and Marine Safety Law and laws and regulations on ensuring the functioning of means of navigation.
Restricted and forbidden areas for diving	• Marine Environment Protection and Management Law: On 1st March 2016 new amendments to the Marine Environment Protection and Management Law came into force and the law was supplemented with Section 19.[1] "Restrictions and Prohibitions Laid Down for Diving in the Sea". The amendments prescribe that, at places where shipwrecks or submerged objects are located in the sea, which endanger or may endanger the marine environment or cultural and historical values, restricted areas for diving shall be established. To dive in the restricted area a natural person shall need a permit from the Coast Guard Service of the Naval Forces Flotilla of the National Armed Forces. In accordance with CM Regulation No.133 of 1st March Regarding Diving in Restricted Areas of the Sea the permit is issued for 30 days and it shall indicate the specific restricted area, the diving time and conditions. CM Regulation No. 1171 of 21 December 2010 "Regarding the Procedures for Using Latvian Waters and Navigation Regime Therein" prescribes the restricted and prohibited areas for diving.
Licence areas and licence blocks for the exploration, research and extraction of hydrocarbons	• CM Order No. 377 of 1 July 2010 amends CM Order No. 272 of 7 June 2000 „On spatial units for the exploration, research and extraction of hydrocarbons to be included in the announcement of the first round of the tender". • CM Order No. 594 of 21 September 2007 "On allocation of licensing fields for exploration and extraction of hydrocarbons in the EEZ in the Republic of Latvia". • CM Order No.600 of 26 September 2007 „On allocation of licensing fields for search of hydrocarbons in the EEZ in the Republic of Latvia".

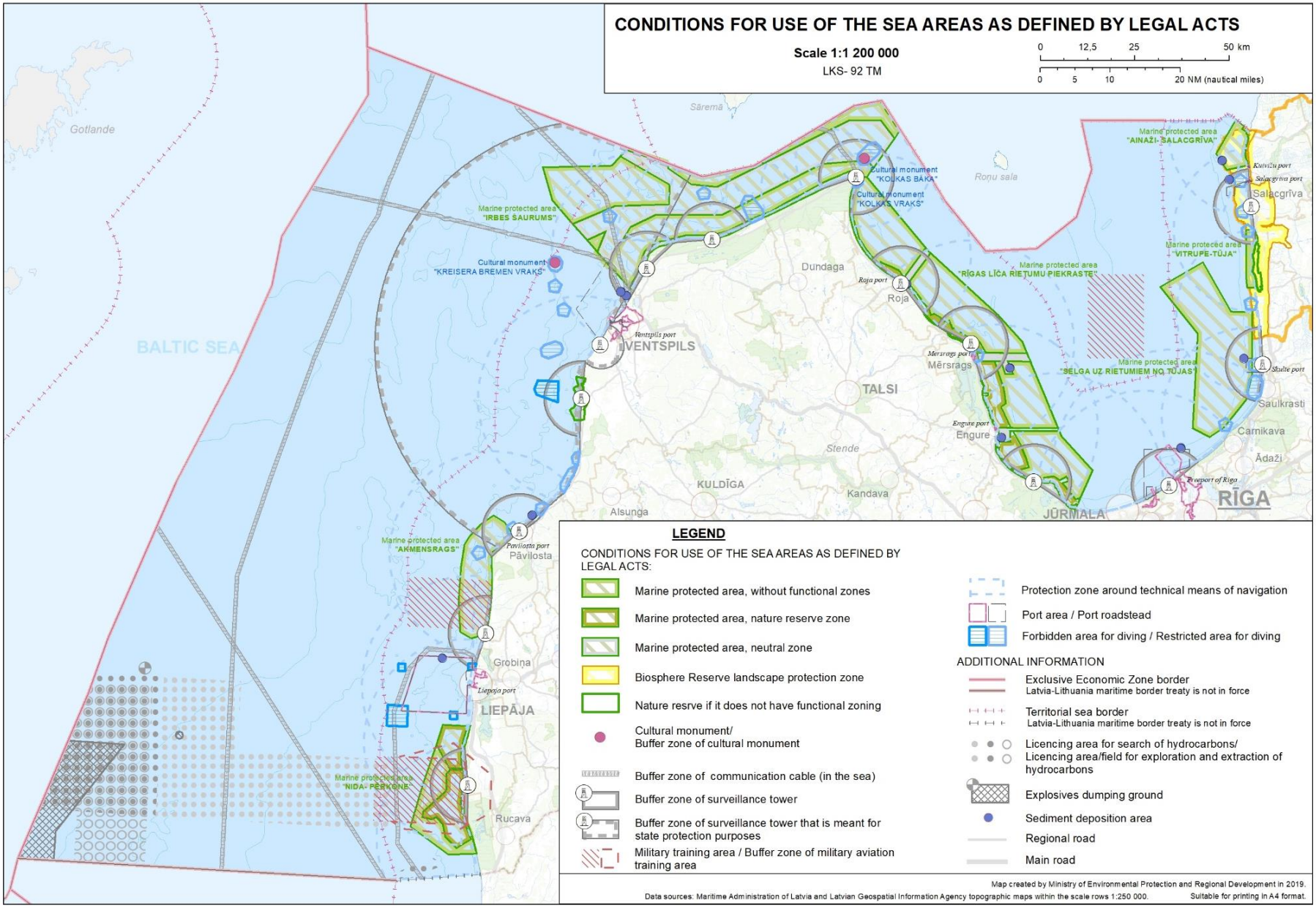


Figure 5. Conditions for the use of the sea specified by legal acts (source:MoEPRD)

The MSP map of planned uses of the sea (see Annex 1 of the MSP) also describes the navigation and port activities, coastal tourism, telecommunication, coastal erosion risks and other information that describes the actual use of the marine space and does not create new conditions for the use of the marine space. These thematic data are shown in Table 5.

Table 5. Additional information on the use of the marine space

Information on navigation and port activities
Navigation information: - Navigation lines - Recommended shipping routes - Recommended two-way routes (Traffic separation schemes) - Anchorage areas - Obstructions for navigation
Technical means of navigation: - Lighthouses
Navigation safety information: - Former mined areas, opened for shipping - Former mine exercise polygons - Areas prohibited for navigation
Ports
Fishery
Fish landing sites
Wrecks
- Wrecks - not dangerous for navigation - Wrecks - danger for navigation - Remains of wrecks - Wreck showing any portion of hull
Risk zones
- Coastal erosion risk areas (Coastal erosion risk Classes 4 and 5)[159]

The thematic data of the existing situation also include the information scoped during the development of the MSP regarding economic activities at sea and information regarding the biologically valuable areas. This information is not reflected in the map of planned use of the sea, however it should be used for specifying new uses of the sea:

Fishing activity[16]:

- Total catch on the coast of Latvia according to coastal parishes between 2004.-2013
- Total catch of all species (excluding herring) on the coast of Latvia according to coastal parishes between 2004.-2013
- The spatial distribution of catch of sprats in the open Baltic Sea between 2004.-2015.
- The spatial distribution of catch of herring in the open Baltic Sea between 2004.-2015.
- The spatial distribution of catch of cod in the open Baltic Sea between 2004.-2015.
- The spatial distribution of catch of cod in the open Baltic Sea between 2004.-2015 and separately in 2015.

16 Schematic map available in sub-section 3.7 of the MSP

Preservation of the biological diversity[17]:

- Distribution of biotopes, incl. EU protected biotope – *1170 Reefs.
- Fish spawning and nursery grounds.

5.1.3. General use

All types of sea use are allowed in the general use areas (see Annex 1) (incl. fishing, shipping, tourism and leisure, scientific research etc.), as long as they do not contravene the restrictions prescribed by regulatory enactments and do not cause damage to the marine environment.

In order to commence new types of sea use, application for a licence according to the procedures prescribed by regulatory enactments is necessary - to receive a licence for area research, perform the EIA procedure and receive a licence for utilisation of buildings or use of subterranean depths at sea. In turn, in order to ensure the balanced and coordinated use of the marine space, recommendations are included in the MSP for the designation of new types of use. Therefore, when determining the most suitable areas for sea use, along with availability of resources, it is also important to assess the impact on the environment, national defence, navigation and other interests of marine use, as well as take into account the various limiting factors.

5.1.3.1. Recommendations for the installation of wave power plants

MSP supports use of various energy resources available at sea. However, at the same time, the use of renewable energy resources must not cause irreversible damage to the marine ecosystem or significant losses to other users of the marine resources and space.

The impact of wave energy production on the environment, cultural heritage and the coastal landscape

The impact of wave power plants on the environment has currently not been investigated sufficiently. Wave energy power plants installed in the coastal area (up to 10 m depth), reducing the wave energy at shore, could affect the sediment flows, as well as coastal erosion and accumulation processes, thereby also affecting the underwater biotopes and fish spawning and nursery grounds at the coast. The level of impact must be assessed according to the chosen place and technology.

In order to assess the impact of each wave power plant project on the environment, coastal landscape and cultural and historical heritage and environmental impact assessment is also required, according to the procedures specified by regulatory enactments. This procedure should also include the cumulative impact assessment, taking into account already existing pressures on the marine ecosystem and best available scientific research.

The impact of wave power production on other marine use interests

One of the most important factors that shall be taken into account, when choosing an offshore site for the installation of a wave power plant, is the impact on shipping. In order to prevent the risk of shipping accidents, the wave power plants shall be installed outside the areas reserved for shipping, as well as port areas except for cases where there are grounds for the most suitable installation site to be located in a zone reserved for shipping. In such a case, the responsible authorities shall need to find spatial solutions, in order to ensure shipping safety and, where necessary, change the priority use of the site in question.

For safety reasons, wave power plants are not allowed in areas of dumped explosives. Former mined areas require additional investigation of the seabed in cooperation with the National Armed Forces (NAF). In areas where wave power plants are installed, fishery and extraction of mineral resources are restricted, therefore, when determining the most appropriate site, the interests of these sectors

17 Schematic map available in sub-section 3.11 of the MSP

must also be taken into account and areas which provide significant quantities of fish catches or could potentially be used for the extraction of mineral resources must be avoided where possible.

It is not allowed to establish wave power plant areas in areas which already have licences issued for the exploration and extraction of hydrocarbons, as well as structures, incl.WPP, except cases where the conditions of the issued licence allow it.

5.1.3.2. Recommendations for the installation of underwater cables

Impact of underwater cables on the environment and cultural heritage

When installing underwater cables, where possible, damage to the marine ecosystem and cultural and historical heritage must be prevented. An environmental impact assessment must therefore be performed, assessing the risks related to protected underwater biotopes and the damage (and its extent) to fish spawning grounds. Areas with wrecks and/or other features of cultural and historical significance should exclude cable placement.

Impact of underwater cables on other marine use interests

Underwater cables may be endangered by the deepening and maintenance of shipping routes, anchorage, benthic trawling, as well as the extraction of mineral resources. Therefore, when planning cable paths, where possible, shipping routes that require deepening and maintenance must be avoided, anchorage sites, disposal sites, important areas for benthic trawling, as well as areas that could be potentially significant for the extraction of mineral resources.
For safety reasons the installation of cables is not be allowed in areas of dumped explosives. The placement of cables in military training polygons and former mined areas should be very carefully considered in cooperation with the Ministry of Defence and the National Armed Forces, after all necessary safety procedures and investigations.

5.1.3.3. Recommendations for the installation of marine aquaculture

Considering the growing interest in developing aquaculture in the Baltic region and the significance of this sector in the context of the EU's „Blue Growth Strategy"[18] as well as the rapid development of technology in this sector, studies should be performed on the suitability of the environmental conditions for the cultivation of different aquaculture species. Scientific institutions of Latvia with longstanding experience of scientific work in the field of marine and aquaculture research should be involved in the studies. To avoid potential environmental risks, as well as conflicts with other sea use interests, when determining the areas appropriate for the development of aquaculture, the findings of the latest studies in the Baltic Sea region (preferably also carried out in Latvia) must be used.

Impact of the marine aquaculture on the environment

Fish farming in open cages has a significant negative impact on the environment, as the unused nutrients and other cultivation related products increase the sea eutrophication process and affect the natural populations. Therefore, because of the existing level of eutrophication, fish farming is not allowed in the Gulf of Riga. However, algae and mussel aquaculture may even have a positive impact on the environment, as the growth process absorbs nutrients and filters the water.

Fish farming in open cages may have a negative impact on all types of benthic biotopes, whereas more sensitive to algae and mussel aquaculture (or IMTA) will be photic zone biotopes and aphotic zone biotopes, which form on rocks, boulders or moraine. Aphotic zones with sandy and/or mud sediments would be more suitable for aquaculture. A significant negative impact would be expected

18 Growth of the marine sector, information available at: https://ec.europa.eu/maritimeaffairs/policy/blue_growth_lv

on fish spawning grounds and nurseries. Considering the potential environmental impact, aquaculture farms are not recommended in coastal waters up to 20 m depth.

Impact of marine aquaculture on other marine use interests

In order to avoid the risks of shipping accidents, aquaculture farms shall be located outside the areas reserved for shipping and port territories, except for cases where there are grounds for the most suitable site for installing an aquaculture farm being a area reserved for shipping. In such a case, the responsible authorities shall need to find spatial solutions, in order to ensure shipping safety and, where necessary, change the priority use of the site in question.

Aquaculture farms are also not allowed in military training polygons. Possibility for establishing aquaculture areas in former military training polygons shall be evaluated in cooperation with the Ministry of Defence and National Armed Forces, as well as performing enhanced investigation of the seabed. In order to avoid losses to other sectors, aquaculture areas must not be established in areas of intensive fishing, or in areas that could potentially be significant for the extraction of mineral resources.

In turn, the positioning of aquaculture farms is not allowed in areas which already have licences issued for the exploration and extraction of hydrocarbons, as well as structures incl. WPP, except for cases where the conditions of the issued licence allow it.

5.1.3.4. Recommendations regarding the exploration and extraction of hydrocarbons

Studies available in the State Geological Fund have shown that the amount of potential oil resources to be extracted in the Baltic Sea deposits could be between 0,2 and 10 million tonnes.[19] The largest deposits are concentrated in the southwestern part of the sea waters of Latvia. In total, approximately 50 local oil deposit sites have been discovered, of which 20 have been identified to be potential oil extraction sites. Calculations show that it could be beneficial to extract hydrocarbons from several of the larger oil sites, but the extraction in other sites could begin after the establishment of an appropriate infrastructure by greatest deposit sites.

Impact of hydrocarbon extraction on the environment

The extraction of hydrocarbons results in emissions of GHG and air pollutants from the following processes: controlled leaks, safety flare-burning, exploration, manufacturing, upgrading and transportation. These actions may negatively affect Latvia's compliance with the GHG emission reduction targets and air pollutant targets set out in EU legislation.

When installing oil drilling sites, there is a chance that hydrocrabons may enter the environment, thereby causing a threat to the marine ecosystem. Pollution caused by petroleum may negatively impact marine biotopes, fish spawning and nursery sites, as well as cause damage to fish resources. Petroleum pollution may be especially dangerous to birds – when swimming in polluted water, their feathers become clogged, thereby causing a loss in insulation and thermo-regulating abilities, as a result of which the birds are unable to dive, and die, either by freezing, overheating, dehydration or starvation. The death of birds may also be caused by poisoning, having swallowed the petroleum. Therefore, extraction of petroleum would not be permissible in areas developed for the protection of birds and underwater biotopes (especially the wintering sites of loons, long-tailed ducks, common scoters, velvet scoters, black guillemots, little gulls), in the biological diversity research zones until

19 Latvijas zemes dzīļu resursi, Riga: Valsts ģeoloģijas dienests, 1996, 17. p (only in Latvian) https://www.lu.lv/fileadmin/user_upload/lu_portal/projekti/vpp/mali_latvija/visp_geol/LATVIJAS_ZEMES_DZILU_RES_1998_pdf.pdf

the research is carried out, as well as fish spawning and nursery grounds (especially in the coastal areas up to 10 m in depth). Moreover, the extraction of petroleum on the coastal belt would also negatively impact on leisure activities on the beach, incl. a risk of polluting the bathing waters, thereby incurring losses to the tourism sector.

Impact of hydrocarbon extraction on other marine use interests

In order to prevent the risk of shipping accidents, the extraction of hydrocarbons should not be allowed in the areas reserved for shipping and in port areas. However, if commercially significant petroleum deposits are found in these areas, spatial solutions are required, in cooperation with the Latvian Maritime Administration and other responsible authorities, in order to ensure safe shipping and to change the priority use of the places in question. For safety reasons petroleum extraction would also not be permissible in military training areas. If commercially usable petroleum deposits are discovered in the protection zones of surveillance towers, equipment shall be installed on the petroleum drilling platforms that ensures coastal surveillance system operations. In order to commence extraction of hydrocarbons in areas of dumped explosives and former mine sites, the enhanced research of the seabed and neutralisation of mines is required, in cooperation with the Ministry of Defence and National Armed Forces. In places where dumped chemical weapons are found, extraction would not be permissible, until technological solutions are found for isolating or liquidating this source of pollution.

5.1.3.5. Recommendations for the extraction of mineral resources

Considering the relatively low interest regarding the extraction of mineral resources at sea, as well as the negative impact of the extraction equipment available on the marine ecosystem, there are no planned sites for the extraction of mineral resources until 2030. However, if any particular merchant shows an interest regarding the extraction of these resources, an environmental impact assessment would be required for the proposed activities, also considering the cumulative effect and preventing a decrease in the condition of protected underwater biotopes.

Impact of the extraction of mineral resources on the environment and cultural heritage

Extraction of mineral resources results in the mechanical destruction of underwater biotopes, therefore it is not permissible in marine protected areas, which have been created for the protection of biotopes and birds, as well as natural value research areas, which could potentially be assigned the protected status. Extraction of mineral resources should be avoided as much as possible in fish spawning and nursery sites, in the coastal zone up to depth of 10 m, as well as places where underwater cultural heritage assets have been identified.

Impact of the extraction of mineral resources on other marine use interests

In the interests of safety, as well as to prevent damage to the environment, extraction of mineral resources is not permissible in areas of dumped explosives whereas a thorough investigation of the seabed in former mine areas would be required, in cooperation with the Ministry of Defence and National Armed Forces. Extraction of mineral resources will not be possible in areas where a licence has been issued for the installation of a WPP or wave power plant, aquaculture or extraction of hydrocarbons.
Extraction of mineral resources would not be permissible in intensively used shipping routes, or in port areas except from sand that has been acquired due to the deepening or maintenance of a ship route.

5.1.3.6. Recommendations for the installation of new disposal sites

The sediment material obtained as a result of dredging, deepening and maintaining ports and shipping routes is traditionally used for construction processes or deposited at sea at officially designated disposal sites. Disposal sites are designated for all ports of Latvia. Currently the formation of a new disposal site is only anticipated at Freeport of Riga.

Impact of disposal sites on the environment

Disposal sites may cause significant damage to underwater biotopes, in particular, the biotopes that have formed on rocky bottoms (limestone and boulders), as well as biotopes that have formed on mixed bottoms, which are also included in the European protected biotope – reefs. Therefore, when determining a location for a disposal site, it must be ensured that it is located at a sufficient distance away from the protected biotopes, taking into account the hydrophysical parameters and nature of sediment flow. Similarly, the impact on fish spawning grounds and nurseries must be prevented, as well as places where underwater cultural heritage assets have been identified.

Impact of disposal sites on other marine use interests

In order to prevent the risk of shipping accidents, disposal sites must be installed at a sufficient distance from intensively used shipping areas and they are also not permissible in corridors of existing or planned underwater cables. When determining a location for disposal sites, the impact on fishing in the high sea and coastal fishing grounds must also be assessed. Disposal sites would not be permissible in priority areas for demersal trawling. The installation of disposal sites in military training polygons must be thoroughly assessed, coordinating it with the Ministry of Defence and National Armed Forces.
However, the dumping of sediment acquired through deepening works into disposal sites at sea, is considered as a wasteful use of natural resources. Depending on the granulometric composition of the seabed and the level of pollution, firstly, the opportunities for using these resources in construction and port development should be assessed, and also if quality requirements are being ensured for the increase in sediment transport patterns and beach nourishment, thereby reducing the risks of coastal erosion.

In cases where existing disposal sites are full and new ones are required, these shall be determined in accordance with the national laws and regulations and international requirements. The "Guidelines for disposal of dredged material at sea",[20] encourage states to use the good environmental practice both during the deepening of shipping routes and dumping. The guidelines incorporate the HELCOM requirements to assess the quality of the dredged material and recommendations to assess the opportunities for its use. The guidelines also indicate the environmental parameters which should be assessed when searching for a new location for the installation of a new disposal site for dredged material and evaluating the anticipated environmental impact.

20 HELCOM Guidelines for the Disposal of Dredged Material at Sea, 2007 http://www.helcom.fi/Documents/Action%20areas/Monitoring%20and%20assessment/Manuals%20and%20Guidelines/Guidelines%20for%20the%20Disposal%20of%20Dredged%20Material%20at%20Sea.pdf

6. Implementation and updating of MSP

6.1. MSP implementation

MSP is a tool for decision-makers – for national and local government institutions during the coordination process and final decision-making on the issuance of licences – as prescribed by the **Marine Environment Protection and Management Law.** The MSP creates a framework for decision-making regarding the further use of the sea waters of Latvia, using the best available knowledge and based on the ecosystem approach.

The MSP recommends the strategic and spatial development priorities with an outlook until 2030, as well as providing data and information regarding the marine environment status, ecosystem services and existing sea uses, incl. fishing interests. In order to balance marine space development, after the approval of the MSP, at the initial stage of the process of granting a new licence area, the strategic and spatial priorities specified in the MSP and recommendations for the establishment of new types of sea use shall be taken into account. Strategic objectives and measures have been defined for the implementation of the MSP strategic and spatial priorities (see Fig.4 and Table 4), which may be implemented within the budget framework of the involved institutions, or by attracting foreign financial aid.

The main instrument for the coordination of sectoral interests for the implementation of maritime planning is the Maritime Planning Working Group established by the MoEPRD, which shall ensure the exchange of the most up-to-date information and data for the purposes of the implementation of the maritime plan at least once a year, by organising a face-to-face meeting.

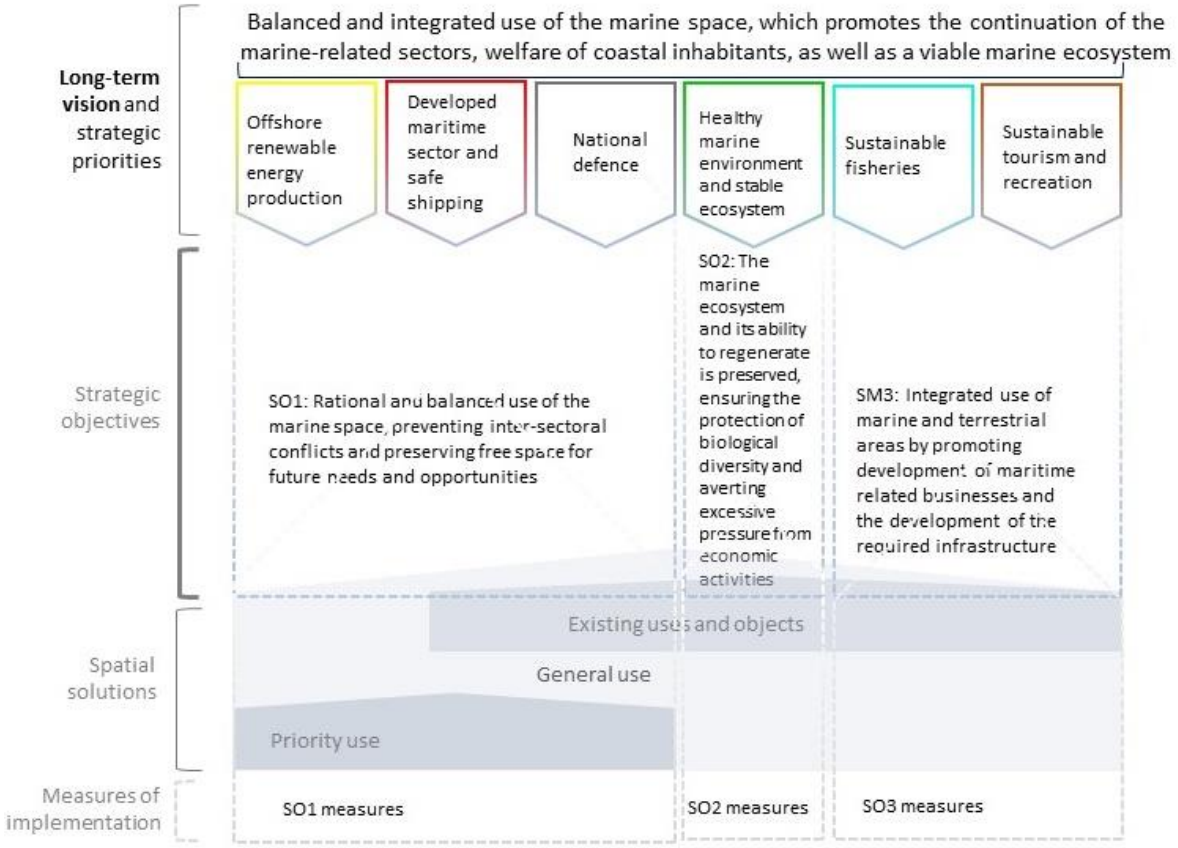


Figure 6. Interlinkage of MSP priorities and MSP implementation part

Table 4. Plan of measures for the implementation of MSP

	SO1: Rational and balanced use of the marine space, preventing inter-sectoral conflicts and preserving free space for future needs and opportunities				
Measure	*Result indicator*	*Assessment of measure implementation (Qualitatively/ quantitatively)*	*Responsible authorities*	*Deadlines*	*Source of financing*
1.1. Update data on fishing intensity in the Baltic Sea	• Regularly updated information on fishing activities of Latvian fishermen	Qualitatively	BIOR	Regularly	State budget (within the current budget)
1.2. To carry out scientific research regarding the suitability of environmental conditions for the cultivation of different aquaculture species in the sea, assessing potential environmental risks and developing environmentally friendly technology suitable for Latvia's conditions.	• Number of scientific studies that offer aquaculture manufacturing technology suitable for the marine conditions of the sea waters of Latvia.	Quantitatively Base value (2018):0	MoA in cooperation with BIOR, MoEPRD in cooperation with LIAE	Regularly	EU funds, State and local government budgets
1.3. To perform studies regarding the accessibility of marine subterranean depths resources in the sea waters of Latvia and the technology for the extraction thereof, which would not cause significant damage to the marine ecosystem.	• The number of research studies that offer an assessment of marine subterranean depths resources and environmentally friendly technology for the extraction.	Quantitatively Base value (2018):0	MoEPRD	Regularly	EU funds, State budget
1.4. To support the development of a public infrastructure for the growth of marine tourism in significant places in the territorial sea waters of Latvia and on the coast, to promote a more varied coastal tourism offer.	• An investment programme for the coast has been prepared.	Qualitatively	MoEPRD, MoE, KPR, RPR	By 2024	EU funds, State budget
1.5. To identify the underwater and marine cultural heritage assets of Latvia and develop guidelines for the management thereof.	• Research has been carried out and guidelines developed for the management of the underwater and marine cultural heritage assets.	Qualitatively	NCHB	By 2030	EU funds, State budget
1.6. To support renewable energy demonstration projects in the sea by raising eligible funds from foreign financial aid or State budgets	• Number of (wind, wave) energy facilities installed in the sea	Qualitatively Base value (2018):0	MoE, MoF	2030	EU funds, State budget

	SO2: The marine ecosystem and its ability to regenerate is preserved, ensuring the protection of biological diversity and averting excessive pressure from economic activities				
Measure	*Result indicator*	*Assessment of measure implementation (Qualitatively/ quantitatively)*	*Responsible authorities*	*Deadline*	*Source of financing*
2.1. To update information regarding ecologically significant areas and distribution and condition of biotopes/species, based on the latest studies and monitoring data.	• Report prepared on the distribution and conservation status of protected biotopes and species and identified potential marine protected areas identified.	Qualitatively	MoEPRD, LHEI, DAP	2030	State budget (within the existing budget), EU funds
2.2. To assess the distribution and supply of marine ecosystem services according to internationally approved methods.	• Assessment prepared on the services provided by the marine ecosystem.	Qualitatively	LHEI	2024	EU funds, State budget
2.3. To analyse and assess spatial distribution of significant fish spawning grounds and nursery grounds.	• Report prepared on the spatial distribution of fish spawning and fish nursery grounds.	Qualitatively	BIOR	2024	EU funds, State budget
2.4. To regularly observe and assess the status of the seal population and the areas important for them, as well as prepare a species protection and management plan.	• A species protection and management plan has been developed.	Qualitatively	NCA in cooperation with BIOR	2020	EU funds, State budget
2.5. To create a maritime information system to ensure efficient and timely exchange of data on the marine ecosystem.	• A marine data system is developed and regularly updated.	Qualitatively	MoEPRD	2020	EU funds, State budget
2.6. To develop methodology for evaluation of spatial cumulative impacts from the use of the sea using good environmental status indicators and to ensure application of the methodology within the EIA process.	• A methodology has been developed.	Qualitatively	MoEPRD	2020	EU funds, State budget

	SO3: Integrated use of marine and terrestrial areas by promoting development of maritime related businesses and the development of the required infrastructure				
Measure	*Result indicator*	*Assessment of measure implementation (Qualitatively/ quantitatively)*	*Responsible authorities*	*Deadline*	*Source of financing*
3.3. To develop a network of marinas and jetties by ensuring an appropriate range of services, safe navigation and positioning in the context of the Baltic Sea yachting routes and tourism destinations.	• Increased number of yachts served in ports	Quantitatively Base value (2018): 2262[21]	MoEPRD, MoT, KPR, RPR	2030	EU funds, State budget
3.2. By planing investments within port development programmes, to take into account the risks posed by climate change, the need to adapt infrastructure or port activities to mitigate climate change risks or to adapt to new conditions, and assess options for improving energy efficiency, building infrastructure and innovative solutions that reduce GHG emissions.	• Risks due to climate change are evaluated within the port development programmes and appropriate adaptation measures are included, and opportunities to reduce GHG emissions are evaluated	Qualitatively	MoT, port authorities	2024	EU funds, State budget
3.3. To create a model for determining the impact of economic activities on long-shore sediment flow, assessing the process of coastal erosion and accumulation.	• Study performed and model created	Qualitatively	MoEPRD	2030	State budget
3.4. To develop spatial solutions (measures) for minimising erosion effects, including identifying sites suitable for extraction of sand for beach nourishment, as well as places that require beach nourishment, without posing a risk of negative impact on the marine ecosystem.	• Spatial solutions (measures) developed for minimising coastal erosion in places with the highest risk of coastal erosion have been developed.	Qualitatively	MoEPRD	2030	State budget

The indicative amount of additional State budget financing for the implementation of the measures cannot be determined as it depends on the long-term variable factors (including the opportunities for raising funding from various foreign financial aid sources). Consequently, the amount of additional State budget financing needed to implement the measures should be determined during the implementation of the MSP. If it is possible to calculate the amount of the State budget needed for the individual measures in the first interim evaluation of the MSP, a request for funds for priority measures under the mid-term budget shall be submitted in accordance with the procedures specified in laws and regulations.

21 Sources: Data provided by the administration of Kurzeme planning region and Riga planning region regarding the number of yachts served in 2018

6.2.The role of local governments in implementing the MSP

Pursuant to the coming into force of the Land Management Law, the local government is the possessor of marine coastal waters in the marine coastal area, and carries out the planning of the area in the aquatorium within the possession thereof at a distance of 2 km from the coastline.

According to scale, the MSP also incorporates the use of marine coastal waters in the possession of local governments. Although the recommendations and interests of the local governments regarding the use of the coastal area in the possession thereof were evaluated during the elaboration of the MSP and Coastal Plan, considering the definitive scale and potential detail of this document, local governments should assess the need to develop more detailed thematic plans for the coastal area up to 2 km in distance from the coast.

The authorities responsible for the MSP – the MoEPRD, MAL and LIAE, as well as experts of the BIOR should be involved in the development of such thematic plans.

In turn, any type of building activity at sea at a distance of up to 2 km from the coastline, where the initiator of the work is a state or private stakeholder, should be coordinated with the adjoining local government.[22] This is required in order to avoid locating any features disturbing the development of tourism in significant coastal areas, either visually or impacting the environment, such as the quality of bathing water. Examples of such features might be WPPs or fish aquaculture.

6.3.Cross-border cooperation in implementation of the MSP

EU MSP Directive (2014/89/ES) prescribes that, as part of the planning and management process, Member States bordering marine waters shall cooperate with the aim of ensuring that maritime spatial plans are coherent and coordinated across the marine region concerned. Such cooperation shall take into account, in particular, issues of a transnational nature. The Baltic Sea of Latvia borders with Lithuania, Estonia and Sweden, and the MSP must harmonise the interests of Latvia with these states (see Annex 3) in all areas affecting maritime spatial planning.

An increasingly intense use of the sea means increasing pressure on the marine environment. The cumulative assessment of this impact and decision-making regarding the spatial distribution of economic activities and the interaction thereof, are some of the main aspects in cross-border cooperation. For example, an increase in fishing intensity endangers fish reproduction, a loss in fish nurseries and pollution endangers the ability of fish populations to reproduce etc. Bycatch poses risks to marine animals, various species of fish, diving birds and other organism communities, so cooperation at Baltic Sea region level would help find solutions for improving fishing gears and the use of innovative methods. The impact of benthic trawling on seabed biotopes is controversial. Similarly, increased construction work at sea, the dumping of sediment dredged during the deepening of ports, the impact of noise and vibration caused by ships on living organisms, various different types of pollution – these are the most significant impacts caused due to human activity.

In turn, MSP cross-border consultations are not limited solely to environmental aspects; the most important issues are the harmonisation of significant shipping directions between states, areas reserved for WPPs and extraction of mineral resources, the most significant fishing areas of Latvia and the neighbouring states in the waters of other EU countries, national defence interests, the construction of cables and pipelines, as well as aquaculture development and the technologies used for it.

The production of wind energy at sea, due to its relatively competitive costs, as well as in perspective of the creation of a new electricity transmission interconnection between Sweden and Latvia and Latvia and Estonia, may become pertinent in the MSP implementation phase until 2030. Important

22 In compliance with Section 15, Paragraph two of the Land Management Law

issues in the cross-border context for the development of WPPs are the reservation of the potential area, creation of connections onshore and existing and planned international electricity transmission interconnections offshore.

Fishery is a sector with long traditions; however, it is currently experiencing a downturn due to an insufficient amount of fish stocks. Fish stocks are managed with the aid of the national quota, however, all EU states have the rights to fish in the EEZ waters of EU states. Fishermen from Sweden, Denmark, Estonia and Lithuania fish in the waters of Latvia, and similarly fishermen from Latvia use these rights in the waters of the neighbouring states. Therefore, the accessibility of important fishing areas both in the waters of Latvia, and outside them, is the interest of the fishery sector of Latvia.

The competition between ports for cargo, both domestically, and internationally, makes this sector sensitive with regard to the restriction of free movement of shipping with the MSP. However, the neighbouring states must be able to cooperate in order to achieve appropriate planned or potential shipping corridor (reservation) zones, especially considering the development of the autonomous shipping technology. The criteria for defining these zones and their connectivity are the most important issues in the shipping sector.

It is anticipated that in future the number of ships and their carrying capacity will increase. However, there are limiting factors – the depth of the Danish straits (approx.17 m), which limits the maximum size of the ships that may enter the Baltic Sea.

The most significant issues in the shipping and energy sectors have been identified within the MSP (see Table 5), which may be resolved in the long-term, by cooperating with the Baltic Sea region states.

Table 5. The most significant issues identified during the stakeholder consultation process, for the subsequent resolution at BSR level (source: BalticLINes project[23])

In the shipping sector	In the energy sector
Future shipping intensity in the Baltic Sea The future shipping intensity, development and use of ships and shipping technology, changes in the types of cargo must be described for future forecasts and scenarios.	**Development of offshore WPPs in neighbouring states** What are the plans of the neighbouring states with respect to the marine (offshore) WPPs, and is mutual coordination possible and necessary? What are the examples of best practice?
Coordination of the LNG development plan with the BSR The LNG development plans and ship bunkering opportunities should be developed in a coordinated and mutually enhancing way, especially where development is being implemented by attracting public funding.	**The role of marine WPPs in the decarbonisation of the transport sector** What are the BSR country experiences for the development of a sustainable and effective transport system in the long-term, creating decarbonisation opportunities for all transport types, changing to new and innovative transport technologies with a low carbon emission? What are the opportunities and role in this process for marine WPPs? What are the examples of best practice?

23 Project information available on MoEPRD website: http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=22660

In the shipping sector	In the energy sector
The adapting of the Danish straits to allow for the passage of larger ships Clearer long-term signals are required for the shipping sector whether the deepening and adapting of the Danish straits or other shipping access opportunities in the Baltic Sea may become a regular agenda item. And, if so, whether this is an issue before or after 2050?	**Marine WPP support policy** The role of the public sector to ensure the investigation and data publishing of marine WPP construction sites. What are the balancing opportunities and conditions for marine WPPs (for ensuring energy production during periods of no wind)? State support in the development of WPPs (connection infrastructure, WPPs) especially in the development of those WPPs that have less impact on the environment, have a higher coefficient of performance and longer life cycle.
Adaptation to climate change Planning and implementation of shipping sector experience and best practice adaptation measures.	**Marine current studies** Marine current studies and models about the potential creation of sediment, which may be caused by the foundations of new structures (wind turbines) in the seabed, and how this affects shipping routes.

6.4. Monitoring of the implementation and updating of the MSP

In accordance with Directive 2014/89/EU of the European Parliament and of the Council establishing a framework for maritime spatial planning (adopted 23rd July 2014, came into force on 18th September) based on the monitoring of the implementation of the MSP, the review or updating thereof must be performed.

The MSP is maintained in electronic form to be user friendly and easily accessible. Once a year, the MoEPRD reviews the actual use of the sea and updates the geospatial data and maps of the MSP as required. In compliance with regulatory framework, once every six years, the MoEPRD prepares an informative report regarding the implementation of the MSP and submits it to the CM for reviewing.

Monitoring of the implementation of the MSP comprises two main concepts:

- MSP implementation;
- The impact of the activities defined by the MSP on the environment, economy and social aspects.

The implementation indicators of the MSP are as follows:

(A) Input indicators:

- The authority responsible for the MSP has been defined, it coordinates the development of the MSP and monitoring of its implementation and review or updating;
- The authorities that are involved in the MSP process and simultaneously ensure the implementation thereof have been defined;
- The necessary financing is ensured for the development, monitoring, review and updating of the MSP;
- The MSP process is assured with qualified specialists and experts.

(B) Process indicators:

- An MSP development and monitoring working group has been established;
- The stakeholders have been defined and are involved in the MSP process;
- The stakeholders are satisfied with their participation in the MSP process;

- A scientific consultation committee has been established for the MSP process.

(C) Output indicators:
- A policy and legal framework ensures the implementation of the MSP and intersectoral integration;
- Information and data are regularly collated and supplemented, ensuring the implementation, review and updating of the MSP;
- The issuance of permits and licences is straightforward, mutually coordinated and open;
- The objectives and priorities of various sectors for the use of the sea are harmonised during the MSP process;
- Cross-border cooperation is ensured in the planning and use of the marine space.

The interim assessment of the implementation of the MSP includes a qualitative assessment of the MSP implementation indicators and a description of the implementation of the MSP programme of measures (see Table 6). The indicators of measure implementation are assessed qualitatively, describing how the implementation of a specific measure affects the sustainable use of the marine space and quantitatively, describing the changes in the quantitative indicator against the base value defined in 2018.

MSP Indicators for the impact of the sea use activities on the environment, economy and social aspects

The marine environment monitoring programme for the implementation of sea use is implemented in accordance with the Environmental Monitoring Programme for 2014.-2020, arising from the European Parliament and Council Directive 2008/56/EC „Marine Strategy Framework Directive". In order to improve the monitoring programme after 2020, LIAE plans to obtain and analyse new environmental information by 2022, as well as prepare proposals for marine environmental indicators[24].

The economic and social aspect of the MSP impact is assessed, based on the economic and social analysis that is included in the marine assessment as required by the Marine Strategy Framework Directive.

In addition to the aforementioned monitoring and assessments, the MSP envisages regular coastal process monitoring in accordance with the State monitoring programme.

24 EU's European Maritime and Fisheries Fund Action Plan for the development of fisheries for 2014-2020 priority "Promoting the implementation of an Integrated Maritime Policy" supported measure "Improving knowledge of the marine environment" under project No 17-00-F06803-000001

USES OF THE SEA
SCALE 1:250 000
0 20 40 80 km
0 10 20 40 NM (nautical miles)
BALTIC SEA
Gulf of Riga
NORWAY
SWEDEN
FINLAND
RUSSIA
ESTONIA
LATVIA
LITHUANIA
DENMARK
GERMANY
POLAND
VENTSPILS
LIEPĀJA
RĪGA
JŪRMALA
SAULKRASTI
TALSI
KULDĪGA
TUKUMS
JELGAVA
DOBELE
SALDUS
Pāvilosta
Salacgrīva
LEGEND
PRIORITY USES
Areas reserved for shipping (T1; T2; T3)
T1- connection to major ports of Latvia;
T2- connection to small ports of Latvia;
T3- transit crossing marine waters of Latvia
Military interest area (M1; M2; M3)
Investigation area of nature values (B1; B2; B3; B4; B5)
Research area for wind park development (E1; E2; E3; E4)
Corridor of perspective electricity cable (K1; K2; K3; K4; K5)
General use area, planning area
CONDITIONS FOR USE OF THE SEA AREAS AS DEFINED BY LEGAL ACTS
Marine protected area, without functional zones
Marine protected area, nature reserve zone
Marine protected area, neutral zone
Biosphere Reserve landscape protection zone
Nature resrve if it does not have functional zoning
Cultural monument
Buffer zone of cultural monument
Buffer zone of communication cable (in the sea)
Buffer zone of surveillance tower
Buffer zone of surveillance tower that is meant for state protection purposes
Buffer zone around technical means of navigation - range of light
Buffer zone of military aviation training area
Military training area
Port roadstead
Port area
Forbidden area for diving
Restricted area for diving
LICENCING AREAS
Licencing area for search of hydrocarbons
Licencing area for exploration and extraction of hydrocarbons
Licencing field for exploration and extraction of hydrocarbons
BORDERS
Exclusive Econmic Zone border
The Maritime border agreement of Latvia-Lithuania is not in force
Territorial sea border
The Maritime border agreement of Latvia-Lithuania is not in force
Baseline
INFRA STRUCTURE OBJECTS
Port
Fish landing site
Surveillance tower
Underwater cable of electronic communications
Sewage pipe
330 kV electric line on land
(projects"Kurzemes loks" un "Trešais Igaunijas-Latvijas elektropārvades tīkla starpsavienojums")
Sediment deposition area
Mussel aquaculture pilot-farm area
NAVIGATION INFORMATION
Navigation line
Recommended shipping route
Traffic separation scheme
Deep water way
Anchorage area
Obstruction for navigation
Explosives dumping site
Explosives dumping ground
Former mined areas, opened for navigation
Former mined areas, opened for navigation
Obstruction for navigation
Lighthouse
WRECKS
Wreck - danger for navigation
Wreck - not dangerous for navigation
Remains of a wreck
Wreck showing any portion of hull
Wreck with important cultural heritage
Wreck with important cultural heritage outside the areas forbidden for diving
ADDITIONAL INFORMATION
Main shipping direction
Coastal erosion risk area
Isobath
Ministry of Environmental Protection and Regional Development Republic of Latvia
NOTES
Map created by Ministry of Environmental Protection and Regional Development in 2019.
Scale 1:250 000; LKS-92 TM coordinate system.
Data sources:
Maritime Administration of Latvia (VAS "Latvijas Jūras administrācija")
Latvian Geospatial Information Agency topographic map within the scale rows 1:250 000
Nature Conservation Agency's Natural data management system "OAK"
Ministry of Defence
AS "Augstsprieguma tīkls" (AST)

Annex 2

Criteria for defining priority uses of the marine space

The MSP uses two categories for defining the **priority uses of the marine space**:

I. Exclusion criteria – includes mandatory conditions that shall be respected when choosing an area for a specific type of use:

a. Compliance of the planned use with laws and regulations:

→ areas defined by legal acts;

→ areas where the particular use is prohibited.

b. Separating spatially incompatible uses of the sea.

c. Factors restricting economic activities:

→ Nature conditions/physiogeographical parameters (suitable depth for shipping or installation of wind turbines etc.);

→ Availability of resources (fish stocks, wind/wave energy, hydrocarbons etc.);

→ Preservation of especially sensitive ecologically valuable areas;

→ Technological capabilities (e.g. wind park location and anticipated capacity depending on possibilities for connection with inland electricity transmission grids);

→ Measures and restrictions important for ensuring national defence and security.

II. Coordination criteria for use of the sea – conditions that shall be taken into account in order to ensure the application of the ecosystem based approach in the maritime spatial planning process, as well as sustainable and balanced use of the marine space and resources:

a. Maintenance of the ecosystem integrity, ensuring the connectivity of the functionally related areas and respecting the Baltic Sea as one, unified ecosystem:

→ As far as possible to avoid fragmentation of underwater habitats;

→ To ensure preservation of areas important for diversity and distribution of species, respecting their lifecycle and different stages of development;

→ To maintain the „blue corridors" for ensuring migration of species;

b. Rational use of the marine space and reduction of the intersectoral conflicts:

→ To ensure sufficient space for existing uses of the sea, as well as allocating space for new, economically justified sea use interests;

→ To consider options for combining different sea uses with similar demands according to environmental conditions and infrastructure, without disturbing each other;

→ In cases of compatible sea uses, to define the priority use and the conditions arising for other uses;

→ When defining the priorities for the marine space use, priority shall be given to existing or non-movable sea use types

c. Promoting synergy between different types of use:

→ Where possible encouraging coexistence of the complementary or interdependent (functionally related) sea uses..

In order to identify incompatible uses, as well as types of uses which may coexist, under certain conditions or regulatory frameworks, a matrix for analysis of potential conflicts of use of the marine space has been developed (see Table 1). In some cases the existing legal framework already defines conditions or prohibitions that separate spatially incompatible sea uses. However, in some cases the existing regulatory framework is not sufficient to avoid conflicts in use of the sea space.

Table 1. Matrix for analysing possible conflicts in the use of the sea [1] (the types of use which have been defined by the MSP as the spatial priority uses of the marine space are marked in bold)

Compatible uses that do not disturb but may even support each other

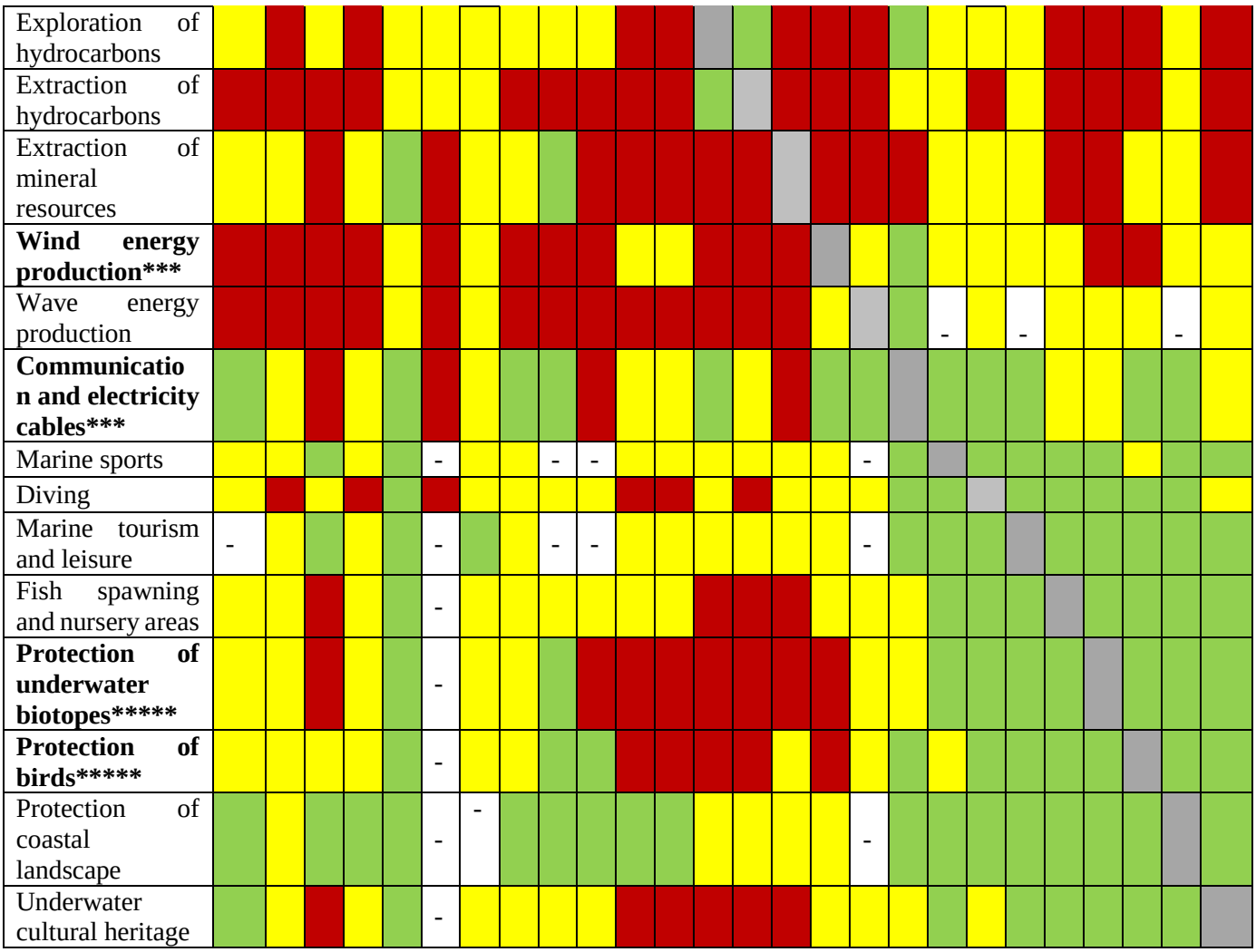
Sea uses that are compatible under certain conditions

Sea uses that are not compatible (one of the activities is to be designated as priority)

\- *Sea uses that do not spatially overlap*

	Shipping traffic*	Port areas, inc. port outer roadsteads	Disposal sites	**Military training polygons****	Militārā jūras novēršana	Areas of dumped explosives	Former mined areas	Coastal fishery	Pelagic trawling in open sea	Benthic trawling in open sea	Fish aquaculture	Algae and mussel aquaculture	Exploration of hydrocarbons	Extraction of hydrocarbons	Extraction of mineral resources	**Wind energy production*****	Wave energy production	**Communication and electricity cables********	Marine sports	Diving	Marine tourism and leisure	Fish spawning and nursery areas	**Protection of underwater biotopes*********	**Protection of birds**********	Protection of coastal landscapes	Underwtaer cultural heritage
Shipping traffic*																					-					
Port areas inc. port outer roadsteads						-																				
Disposal sites						-																				
Military training polygons**						-																				
Military marine surveillance						-																				
Areas of dumped explosives		-	-	-	-			-			-	-							-		-	-	-	-	-	-
Former mined areas																									-	
Coastal fishery						-			-	-																
Pelagic trawling								-											-		-					
Benthic trawling								-											-		-					
Fish aquaculture						-																				
Algae and mussel aquaculture						-																				

[1]Ehler, Charles N., and Fanny Douvere, 2009. Marine Spatial Planning: A Step-by-Step Approach toward Ecosystem-based Management. IOC Manual & Guides No. 53, IOCAM Dossier No. 6. Intergovernmental Oceanographic Commission, UNESCO: Paris, France. 99 p.



* Areas reserved for shipping; **National defence areas; ***Wind park research areas; ****Potential electricity cable corridors; *****Biological diversity research areas.

Minister for Environmental Protection and Regional Development, J. Pūce

Interests of the neighbouring states in the marine space

The interests of Lithuania with regard to the MSP

In 2015, the Seima of the Republic of Lithuania adopted a comprehensive part of the plan of the Repbulic of Lithuania "Marine areas". [1]

Shipping – the MSP of Latvia anticipates three zones reserved for shipping which cross the border of Latvia-Lithuania, and provide the connections according to the Lithuanian MSP between Klaipeda and Liepaja, as well as ensuring a transit corridor from the Butinge oil terminal through the EEZ waters of Latvia and a transit corridor in the Poland – Finland direction (T3 parallel to the Latvia-Sweden border).

Nature protection – the MSP provides for **biological diversity research areas** near the Latvia-Lithuania border, thereby increasing knowledge regarding the potential cohesion with protected areas in the territory of Lithuania.

The wind park research area and **potential electricity transmission cable corridor** in the southern part of the EEZ of Latvia conforms to a similar planning concept on the Lithuanian side, thereby creating favourable conditions for implementing a common project in this field of marine economy. However, when applying with specific wind park projects the cumulative impact should be assessed, including in respect of bird migration.

Fishery – the Lithuanian MSP does not indicate significant areas for fishery.

Lithuania is not planning **marine aquaculture development** in its MSP.

Exploration and extraction of hydrocarbons at sea between Latvia and Lithuania is necessary at the level of government working group to coordinate the separate interests, as the licence areas are situated along the Latvian and Lithuanian border, where the most significant petroleum reserves are also situated.

The MSP of Lithuania points to the need to develop **coastal** tourism by introducing more leisure services, such as boat jetties and a network of yachting marinas along the coast also by the Lithuania – Latvia border.

The interests of Sweden with regard to the MSP

The MSP of Sweden is currently in the development phase.[2]

Shipping – The Swedish Maritime Administration recommends performing enhanced research, in order to define the main shipping route for commercial ships, which could be determined a priority. In order to create safer shipping routes from/to the Irbe Strait, a future solution might be the introduction of one or several traffic separation schemes (TSS) in the Irbe Strait. The introduction of such regulation may have a potentially positive impact on the environmental status of the Irbe Strait, which is a significant site for birds during migration and wintering.

Nature protection – The marine protected areas in the waters of Sweden (MPA) occupy ~13%, some of these are located in the EEZ. These areas do not directly affect the Latvian MSP solutions.

Potential wind energy extraction sites – in 2018 there were three WPP parks in the Baltic Sea waters of Sweden, located in the vicinity of Gotland and Oland islands, in the territorial sea waters. Several permits have been issued for WPP parks however they have not yet been constructed. The planned energy output per year is 5TWh and in 2013 the Swedish Energy Agency defined the national interests, identifying 27 areas.

The planned WPP areas of the Latvian MSP are located at a considerable distance from Sweden, similarly the wind parks of Sweden are closer to the coast of Sweden, therefore their location does not pose a threat to the interests of Sweden, or a negative impact on the environment – it is thought that, thanks to the

[1] Comprehensive plan of the Republic of Lithuania (with supplementary part – Marine areas approved on 11.06.2015, Resolution No. XII-1781; http://www.am.lt/VI/index.php#r/1829

[2] 23 Proposal for the Marine Spatial plan Baltic Sea Plan consultation document (one of three plans – the others are the 23 Proposal for the Marine Spatial Plan Bothnia Bay Plan and are the 23 Proposal for the Marine Spatial Plan Kattegat Plan (published 02.02.2018.) https://www.havochvatten.se/en/swam/eu--international/marine-spatial-planning.html

considerable distance between the wind parks of Latvia and Sweden, no cumulative impact is likely. The current energy sector plans (ENTSO-E) until 2025 do not anticipate the construction of an interconnection between Latvia and Sweden.

Fishery – in compliance with the assessment data on the existing situation of Sweden, the pelagic fishery interests of Sweden affect the greater part of the EEZ of Latvia in the open part of the Baltic Sea. However, it is not expected that in this considerably deep section of the sea, structures could be built that might affect the fishery interests of Sweden in the sea waters of Latvia.

Aquaculture – Fish aquaculture farms already operate on the coast of Sweden, and the Kalmar region of the Baltic Sea is home to a mussel farm. These are situated in coastal waters therefore have no direct connection with the Latvian MSP. The Swedish Environmental Code does not contain conditions in respect of national interests in the field of aquaculture. Sweden has developed the "Marine and fishery programme for 2014-2020" and the National aquaculture programme for 2020, which anticipates further growth. Sweden has set out an environmental objective that determines that no pressure must be placed on aquaculture biogenes. In turn, the Latvian MSP areas for aquaculture at sea are not determined.

The Swedish Geology Service has marked the geological structure *(Dalders)* of the petroleum in the southeastern part of the Baltic Sea as an important area for the extraction of petroleum and gas. In Sweden, one company has been granted a licence since 1969 to carry out petroleum and gas research in the Baltic Sea. The Swedish government has extended this licence nine times. In 2007, the company applied for a licence to carry out investigative drilling in the geological structure *(Dalders)* of Sweden's south-eastern part of the continental shelf. However, in 2009, the Swedish government decided to reject the request, taking into account the interests of environmental protection of the Baltic Sea.

Exploration and extraction of mineral resources at sea – Sweden has a certain interest in the acquisition of sediment and sand at sea, as an additional resource for sand stocks on land. The Latvian MSP in turn does not plan the acquisition of these materials.

Tourism According to the assessment of Sweden, tourism development in the sea waters of Sweden are connected to the coast, therefore the Latvian MSP solutions do not directly affect them. When planning yacht marina development on the coast of Latvia, it should be assessed in the context of the whole of the Baltic Sea, also taking into account yachting tourism in Sweden, considering the services on offer for facilitating the long interstate journey.

The interests of Estonia with respect to the MSP

An MSP has been developed and approved for the Parnu region in Estonia[3], which will be a part of the existing national level MSP which is at development level.

The location of the zone reserved for shipping of Latvia and Estonia are on the whole compatible, however, when the MSP of Estonia is developed, the following will be required:

- to consider the shipping direction from Salacgriva/Kuivizi, as a wind park is being planned on the Estonian side, near the Latvian border and Estonia, when planning wind parks in the sea, should take into account the zones reserved for shipping in Latvia's MSP;
- to review the shipping priority zones near Ronu island, which may be necessary due to intense shipping.

Nature protection – MPAs in the Irbe Strait have been created both at the Latvian and Estonian sides. Both states have defined similar management solutions for these areas, which include nature protection and shipping and do not conflict with the offered solutions for the use of the sea.

Next to MPA "Ainazi – Salacgriva" (a distance of not less than 6 km) on the Estonian side, the MSP for the Parnu area includes a potential wind energy development area, which would need to take into account the potential impact on the nature assets of the protected areas on the Latvian side.

[3] Plan for the marine area which borders on the region of Parnu (approved 17.04.2017. Decision No. 1-1/17/152) http://parnumeri.hendrikson.ee/

Potential wind energy extraction sites and construction of engineering networks – the MSP anticipates a **wind park research** area near the Latvia-Estonia border, which spatially matches the potential wind park development area in the region of Parnu. However, when applying and/or assessing the specific wind park projects, the cumulative (inc. cross-border) impact on the environment should be assessed. The offered electricity transmission interconnections from Kolka and Ventspils may be connected with the electricity transmission system of Estonia and the planned wind parks in the sea waters of Estonia.

Fishery – the solutions offered by the Latvian MSP are compatible with the interests of Estonia's fishery.

Aquaculture – the Estonian MSP solutions for the Parnu area match the Latvian MSP and allow the development of aquaculture in the Gulf of Riga only in cases where it does not have a negative impact or risk to the marine ecosystem, fish populations and fishery (for example, increased pressure on eutrophication, distribution of invasive species) – aquaculture must be "negative or neutral to nutrients".[4]

Exploration and extraction of mineral resources at sea – the licence areas of the Latvian MSP for the exploration, research and extraction of hydrocarbons are at a considerable distance from the waters of Estonia, so there is no direct impact on the interests and environment of Estonia. However, in connection with the potential extraction of hydrocarbons, Estonia, similarly to Latvia, is interested in the thorough management and prevention of potential risks to the ecosystem of the Baltic Sea (pollution, accidents).

Tourism – the Estonian MSP for the Parnu area anticipates the development of coastal tourism, introducing new leisure services, inc. boat jetties and a network of yacht marinas for sailing along the coast. In this area, the states have common interests.

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[4] this means that nutrients from the sea must be used for aquaculture; the nutrients leaked into the environment must be less than those absorbed