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## Pan-Baltic stakeholders' dialogue on MSP : Synthesis report from PartiSEApate single-sector workshops held in 2013

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# Pan-Baltic stakeholders' dialogue on MSP: Synthesis report

*from PartiSEApate single-sector workshops held in 2013*

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## Introduction

For a sustainable and integrated planning of the sea space across the Baltic Sea region, planners and stakeholders have to be engaged in holistic, pan-Baltic thinking where the whole Baltic Sea is considered as one ecosystem and one planning space. However MSP related experiences so far shows that interests are often expressed from one sector or one national or regional perspective only. There is a lack of information exchange between the different maritime sectors as well MSP support structures (i.e. data providers and researchers) and spatial planners. And at the same time there is insufficient communication within the sectors at pan-Baltic level. Therefore the PartiSEApate project has launched the transnational stakeholders' dialogue series to address these shortcomings and to encouraging a pan-Baltic approach for those topics whose spatial dimension transcend national borders.

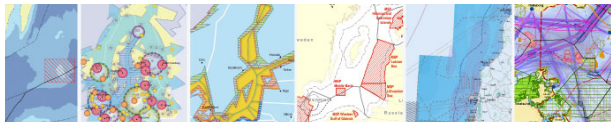
During the first year of the project (2013) the project has organised the following single-sector workshops:

- Aquaculture, 15-16 April, Gdansk , Poland (42 participants from 7 countries);
- Climate change, 13-14 May, Skanör, Sweden (24 participants from 7 countries);
- Research, 28-29 May, Klaipeda , Lithuania (30 participants from 8 countries);
- Underwater Cultural heritage, 3-4 June, Riga, Latvia (37 participant from 9 countries);
- Data network building, 15-16 October, Hamburg, Germany (21 participants from 6 countries);
- Shipping/ports, 24 October, Brussels, Belgium (28 participants from 9 countries);
- Nature/ Environment, 31 October - 1 November, Riga, Latvia (42 participants from 10 countries);
- Offshore wind energy, 12-13 November, Vilnius, Lithuania (24 participants from 9 countries);
- Fisheries, 14 November, Vilnius, Lithuania (in co-operation with HELCOM) (25 participants from 10 countries).

The overall objectives of the single-sector workshops were to introduce the MSP principles and expectations to the MSP envisaged in the BaltSeaPlan vision 2030; to identify and evaluate sectoral priorities, objectives with regard to sea use as well as topics for consultation at a transnational level; to review expectations and potential fears with regard to the MSP; to identify the specific nature of conflicts and synergies with other sectors as well as to explore the range of MSP tools potentially available for sea use solutions.

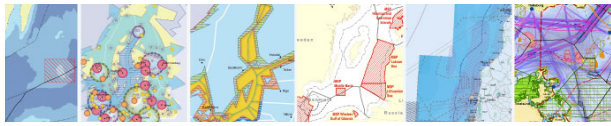
In order to obtain personal view on MSP as well as cross-sectoral and transnational consultation issues a questionnaire was developed and distributed to participants of all single -sector workshops. In total 160 filed questionnaires were collected, which makes ca. 65% response rate. 51 % of respondents were representatives of different sectors, 22% were marine spatial planners, while 27 % did not identify to which of these groups they belong. Respondents were representing 14 different countries: Poland (34), Latvia (30), Sweden (26), Germany (14), Lithuania (10), Denmark (5), Estonia (4), Finland (4), Norway (4), The Netherlands (3), Canada (2), Russia (2), UK (2), Belgium (1) and 3 international organisations: VASAB, HELCOM, NGO WG UCH (CBSS).

Based on results of these workshops a cross-sectoral workshop on “Resolving of Sea Use Conflicts in the Baltic Sea and Opportunities provided by a transnational MSP Perspective” was arranged on 10 April, 2014 in Habmurg, where the transnational consultation needs, procedures and issues were



discussed between representatives of four sectors – fishery, offshore energy development, shipping and environment.

This report is summarising results of the discussions at the workshops as well as answers from the questionnaires, giving an overview on developments in different sectors that have to be respected in MSP context, specific conditions set by these sectors towards MSP as well as describing the interest in pan-Baltic stakeholders dialogue and consultation needs between the sectors.



# 1. Characteristics of sectors and their expectations and conditions towards MSP

## 1.1. Sea use sectors: aquaculture, shipping, offshore wind energy and fisheries

MSP is acknowledged as a valuable forum to represent the interests of particular sectors as well as to stimulate their development (e.g. aquaculture, shipping, offshore wind energy). In case of aquaculture and offshore energy, which are new sea users, MSP gives an opportunity to compete for the sea space and negotiate the interests of sectors with other sea space users. However in difference from offshore energy developments, which are often seen as drivers for MSP process, the aquaculture sector considers itself as “the forgotten sector”, which gets only “left overs” after other users have made their claims. Therefore there is expectation towards MSP to serve as a platform, which provides equal role to all players in competing for sea space.

The current and future developments of the sea use sectors were reported and discussed at the workshops, which have to be taken into account in national as well as pan-Baltic MSP context.

### **Aquaculture**

Presently, there is no “agreed” target on demand for space from the aquaculture sector at pan-Baltic scale - development interests may differ substantially depending on the regional/national situation of the sector. But even under optimistic scenarios, not more than 1% of the Baltic Sea area is expected to be taken by the aquaculture farms. The strict environmental requirements, e.g. “zero” nutrient discharge policy (e.g. in Denmark), are seen as one of the main limitations for development of the sector. However, due to decreasing fish resources and, in the same time, increasing demand for fish, as well as thanks to development of new, more environmentally technologies, like recirculating water system technologies, it is expected that marine aquaculture could expand from Danish, Finnish and Swedish marine waters also to other regions in the Baltic Sea. Plans for aquaculture development depends on political will and decisions at the EU and MS's governments' level. The recent initiatives of the European Commission (Blue Growth and bio-based economy) might be expected as important stimulus for aquaculture development in Europe. Still the specific Baltic conditions will have an impact on development potentials of the sector in the BSR. For example, due to comparatively low salinity and low temperature in the Baltic Sea is the reason why the mussels industry is still on pilot level and products for large consumer markets are not available.

Development possibilities of the sector also depend on specifics of natural conditions within particular areas of the sea and spatial requirements differ between seaweed/algae, mussel and fish cultivations. Most aquaculture sites developed so far in the Baltic Sea are located in territorial (close to the coast) waters, while offshore aquaculture is not yet developed. However, so far the site selection for aquaculture in the Baltic Sea has not been based on environmentally most suitable sites. First attempt to compile criteria for site selection has been tried within the AQUABEST project; however, further research on selection of optimal sites needs to be promoted. At the same time it shall be taken into account that aquaculture sites are not “permanent” infrastructure; they can be moved in case of changing future demands. In future aquaculture sites potentially could be searched further in offshore areas.





Nevertheless the spatial implications of the sector will depend on what kind of aquaculture will be wanted/ promoted in the BSP. The existing developments are mostly focusing on fish farming, which does not require much space, however, it is expected that in future larger fish farms would become larger and more productive in order to be economically viable. In case the seaweed or mussels farming would be promoted as environmental remediation measure by introducing the nutrient payment schemes, this would lead to much larger scale spatial implications and might ma open prospects for developing aquaculture within offshore wind parks.

### ***Port development and shipping:***

Currently the potential of port development is challenged by enormous pressure from city developers (i.e. cities are taking over port areas). As result ports are moving out from the city centres into coastal sea areas, closer to the shipping lanes. There is also a tendency of concentration to fewer and highly developed ports as well as specialisation and co-operation between the ports, driven by national strategic considerations, efforts for improvement of economic performance and cost efficiency of ports. MSPs have to build on the reality of an increased demand for seaborne transports. Shifts in global/regional trade have huge impacts on shipping volumes and patterns, but these shifts are predictable. A big increase is expected in general cargo, but most of all in container shipping. The container ships are becoming larger, which leads to deeper and wider shipping lanes.

New future navigation structures and corridors are required, that would take into consideration the new pipelines and cables as well as other developments in the sea. The example of changing ship traffic lanes in Norway, driven by the needs to protect marine environment and fishing areas, illustrates a successful integration of data and collaboration for planning and execution between national MSP planners and industry.

### ***Offshore wind energy:***

The offshore wind energy production is emerging sea use interest in the all Baltic Sea Region. The national MSP developments often are being driven by interests in development of offshore energy, which might be supported by national targets and regulative systems. At the same time MSP can also serve as a tool to prepare ground and accelerate offshore energy development as well as providing integration with terrestrial spatial planning through grid connection etc. (though, for example, in Denmark offshore energy is developing rapidly without MSP being in place). The planning should be based on very good factual data and inventories, environmental information, taking into account technical developments and potential solutions.

A Pan-Baltic offshore grid could serve as backbone to more refined MSP solutions – intergovernmental approach of the North Sea Countries Grid Initiative (NSCOGI) was seen as a role model for developing such a grid for the Baltic Sea. However, presently countries are not yet ready for pan-Baltic energy planning since national interests are prevailing. Lack of connectivity of the regional markets as well as lack of coordination of regulatory systems and energy tariffs is hindering more integrated transboundary/transnational approach to offshore wind energy.

### ***Fisheries***

Fisheries same as shipping belongs to the oldest sea use sectors in the Baltic Sea, but often it is neglected in MSP process. Reason for that may be low interest from the side of sector to go in dialogue with MSP planners and providing information on actual sites of fishery activities. For MSP purpose data are needed on spatial extent, resolution and distribution of fishing activities as well as essential habitats for fish and their connectivity. Fish spawning grounds and nursery areas should be





taken into account in MSP and treated as priority areas. More information is needed also on recreational fisheries. Controlled harmonized data systems are necessary. Lack of international access to anonymised VMS has been noted as a significant problem.

## 1.2. Sectors setting conditions for MSP

Essential actors in MSP are also the sectors that are not related to use of the sea space or exploitation of its resources, but setting conditions or limitations for other sea users. These are environmental protection and nature conservation, underwater cultural heritage as well as climate change adaptation.

### ***Environmental protection and nature conservation***

The sector is in charge for ensuring viability of marine ecosystem and services it provides for benefits of society, including natural resources, e.g. fish stocks, mussels, algae, etc. The ecosystem approach to management of human activities in marine areas has been endorsed by the Marine Strategy Framework Directive (MSFD) - the environmental pillar of the EU Integrated Maritime Policy as well as recently by the proposal of the directive on Marine Spatial Planning. It is also listed among the HELCOM-VASAB "Baltic Sea Broad-scale MSP principles". Although the concept of the ecosystem approach has been widely described in many documents and projects, still there is a lack of sufficient knowledge, understanding and practical application. Therefore the upcoming HELCOM-VASAB "Guidelines on the application of Ecosystem Approach in transnationally coherent MSP", to be adopted by 2015, is seen as an urgent need for ecosystem based MSP. For ensuring the ecosystem based approach and recognising/respecting limits of the resilience of the Baltic Sea, MSP would have to be based on a Baltic Sea wide environmental assessment and, where applicable, a socio-economic cost-benefit analysis in order to identify the most suitable areas of sea uses. Therefore spatially relevant ecological information is an essential need.

MSP is seen as an important tool for nature conservation in marine areas – it contributes to protection of ecological and cultural assets inside and outside of protected areas by organising the sea uses and avoiding conflicts with protection goals. However, it shall not be used as a tool for designation of MPAs, which shall be based on expert work and in-situ surveys. The most important task of MSP in relation to nature conservation is to ensure the connectivity of the marine ecosystem. The BSPA network provides an appropriate platform for the establishment of a coherent MPA network in the Baltic Sea. Although the coverage of BSPAs in coastal areas is fairly good, the coverage in the EEZ (4.6%) should be improved. Spatial and thematic protection requirements of MPAs must be included in MSP as reservation or/and priority areas, but still bearing in mind that protection is not the only layer within MSP. Management plans/zoning of MPAs is required that define other uses that can co-exist in the MPAs, especially at the coastal areas with intense economic and social interests. Temporal (instead of permanent) restrictions should be considered in dialogue with other sea-users. A coherent approach to these management plans as well as measures in line with MSP development should be developed in close inter-action between the given actors across the BSR.

MSP is also an important tool for achievement of the objective of MSFD – good environmental status of the sea. Considering the available knowledge and understanding, part of the MSFD descriptors directly could be applied in MSP process as an objective (defining threshold values for certain economic use) as well as a tool for monitoring the MSP implementation/effectiveness and following



the rate of change spatially. However application of descriptors in MSP context is limited by the fact that most of them are so far not defined spatially.

### ***Underwater cultural heritage (UCH)***

The UCH protection goals potentially conflict almost with all sectors, which can cause physical destruction of the UCH sites. However co-operation and synergies are possible. UCH assets (including wrecks and other artefacts, submerged sites, relict cultural landscapes) can be found everywhere, therefore the precautionary principle has to be applied - areas which are not yet investigated, should not be left without regulation – there is a need for general rules/guidelines how to act when UCH artefacts are found. More active information exchange with other sectors is needed and MSP can serve as a platform for such cooperation.

Problems with identification of spatial solutions (zoning / sites designation) to present UCH interests in MSP have been notified. The possible approaches have to be further discussed with planners at pan-Baltic level.

### ***Climate change adaptation (CCA)***

Same as MSP - climate change adaptation in the Baltic Sea is still at the beginning stage. There is a lack of strategic approach, coordination and governance as well as lack of competence among local planners, institutional capacity and lack of relevant requirements on the integration of climate change impact in spatial planning. Also the group of players which are engaged in these questions today is rather limited.

For promoting integration of CCA aspects into MSP an adaptive and flexible planning process is required, which would ensure that the uncertainty of climate change, prognoses, of demographic, socio-economic as well as the environmental changes are taken into account. The integration of climate change impact in relevant legislation was noted as an important aspect. Legislation related spatial planning needs a higher degree of flexibility, when facing climate change issues, i.e. “adaptive licensing”. Multifunctional perspective shall be integrated in the planning process. Besides traditional focus of the impacts of the sea level rise on housing and “hard” infrastructures, CCA actions should integrate such aspects as maintaining and even strengthening the basis for ecosystem services, for fisheries, for recreation and tourism, for energy production, for aquaculture and other maritime uses and services.

Coordination and guidelines at European level for MSP and ICZM related to CCA as well as a structure and a strategic framework for processes on the different levels, especially the transnational cooperation was regarded as necessary. A pan-Baltic strategy on MSP in the context of CCA should integrate the Baltic Sea Action Plan and other strategic approaches.

## **1.3. Sectors supporting MSP process**

Research and data network building are sectors that support the MSP in stocktaking process, assessing the suitability of the sea areas for different sea uses and defining of the zoning solutions.

### ***Research***

MSP is seen by researchers as an incentive for new data collection in the marine environment, resulting in development of systematic surveys and data collection of environmental parameters at



sea. There is an interest in development of joined databases for MSP purposes including biological and socioeconomic data, biological mapping techniques, which are fundamental aspect for implementation of the ecosystem based approach in MSP.

Research should investigate the role of networks of MPA and possibly assess the ecosystem service provision derived from the ecological networks. Ecosystem services can be applied as performance indicator on how different ecosystem – based management measures or planning scenarios can affect human wellbeing. There is the need to develop and apply tradeoff analysis tools based on ecosystem service provided by a specific sea use. Tradeoff analysis system should enable to assess tradeoffs not only between two conflicting uses (2 dimensional perspective) but be capable to address multiple uses conflicts/benefits.

### ***Data network building***

In order to ensure transnational co-ordination of the MSP process and easy exchange of relevant data a Pan-Baltic Spatial Data Infrastructure for MSP shall be set up, involving all relevant BSR states agencies and institutions, HELCOM, VASAB, ICES, EMODnet etc. The marine data infrastructure of Germany was presented as a good model. Participants of the meeting supported development of a decentralised system, in which data storage and updating is provided by the national authorities, while data products and services are accessible via a joint BSR MSP data portal. For development of such a system national MSP data contact points shall be assigned and common data standards for data exchange, at least for issues of transboundary relevance, has to be agreed. The priorities for data compilation of transboundary relevance have to be set with the aim to reduce the number of datasets as much as possible (UK experience). A sufficient set of Metadata have to be provided to ensure transparency on data significance, reliability, quality, etc. Data from publicly funded work should be freely accessible.

The further tasks include setting up of an expert group on harmonisation of data and metadata for data exchange (focussing on transboundary MSP issues) and initialising national inventories of main MSP issues and available data/metadata, etc. The meeting proposed to establish a subgroup on MSP data exchange under the HELCOM/VASAB MSP working group (DE volunteered to make proposal for TOR, objectives, milestones etc., in line with EUSBSR). The proposal was presented to HELCOM/VASAB WG on MSP-meeting 28/29th January 2014.



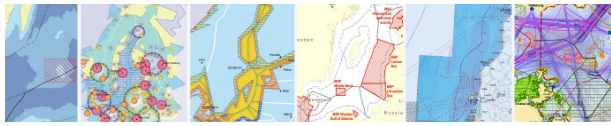
## 2. Towards pan-Baltic stakeholders dialogue stakeholders': needs for cross-sector consultations, expectations and constrains

### 2.1. Interest of sectors in pan-Baltic stakeholders dialogue on MSP

Establishment of pan-Baltic stakeholder dialogue (within as well as between the sectors) is essential precondition for enabling in a long term perspective a coherent and integrated approach to MSP within the Baltic Sea region. Transnational coordination and consultation is listed among the HELCOM-VASAB "Baltic Sea Broad-scale MSP principles" calling for joint pan-Baltic dialogue that should be conducted in a cross-sectoral context between competent organisations and stakeholders from all coastal countries and noting that MSPs should be developed with Baltic Sea Region perspective in mind.

However, implementation of such pan-Baltic cross-sectoral dialogue within the MSP process seems to be one of major challenges, if looking at present day situation. **The single sector workshops have revealed insufficient dialogue and co-ordination of sea uses at pan-Baltic scale even within the sectors.** For example, **aquaculture** as one of new sea use sectors have admitted that so far no targets and demands for sea space has been communicated at pan-Baltic level. Also the participants of the **offshore wind energy** seminar have noted that a real pan-Baltic cooperation between political as well as economic sectors with regard to coordinated offshore energy and grid development is not in place. At the same time also such traditional sea use sectors as **shipping and ports** are lacking a common platform for a pan-Baltic dialogue on MSP related issues. Representatives of the sectors have noted that ports are commercially competitive, individual players that are operating in a complex context of local, regional and national level actors, on the inland side as well as on the seaside. Also the shipping sector is rather scattered in terms of stakeholders (in average 1-2 ships per single owner, a large number of shipping agents) thus creating a challenge with regard to stakeholder involvement in MSP.

A bit different situation is observed within sector of **underwater cultural heritage**, which has already a cooperation platform at pan-Baltic level – a working group established under the Council of the Baltic Sea States (CBSS), providing a system of information exchange between the UCH sector and other sectors and can be used for co-ordination with MSP process. Although the UCH sector is a new actor in MSP within the Baltic Sea region, so far not considered and involved at equal extent compared to other sea use sectors, it has a common policy goals defined for protection of the UCH assets and willingness to be actively involved in pan-Baltic MSP dialogue for ensuring its interests. A common platform also exists for protection of marine environment and nature conservation, ensured by the HELCOM work – implementation of the Baltic Sea Action Plan, co-ordination of marine monitoring and forming the common Baltic network of protected areas – BSPA. Also the HELCOM-VASAB Working Group on MSP provides platform for co-ordination of the environmental issues in MSP as well as the pan-Baltic co-operation on MSP in general.



**The sectors are lacking information and understanding of MSP, however benefits for being more involved in this process are realised, therefore enhanced communication with planners is deemed as essential.** Particular communication needs or solutions have been stressed at the following workshops:

- **Climate change:** a need to strengthen Pan-Baltic collaboration between MSP and experts on climate change both at practical as well as policy level. There should be an appropriate communication and information strategies developed, tailored for the different focal group of players (e.g. visualisation of climate change data and transform them into information in form of accurate maps, which can be easily interpreted by spatial planners; down-scaling global and regional trends to local situation).
- **Fisheries:** in order to foster consultations and involvement of fisheries in MSP a transparent process and clear pattern of expectations shall be created, stressing the possible synergies. An independent facilitation of dialogue might be considered. Involvement of fisheries in MSP could be organised through good practices cases such as pilot projects, cross-border fora as well as stocktaking.
- **Ports and Shipping:** Early involvement of shipping authorities in MSP process is required because of the long licensing procedures for port development. It is essential to find smart compromises between offshore energy strategies and shipping, avoiding long detours for ships and risk for collisions. A dialogue shall be established also **with the transport market players** (cargo-owners), who are drivers of the port development, to learn about future developments and needs of ports/shipping. Individual shipping companies are not the major players - they are instructed by cargo-owners, setting conditions to reach the destination as soon as possible.
- **Research:** a pan-Baltic consultation/sharing of knowledge is need on planning and different management approaches for marine protected areas (MPAs) to find out – “What works and what doesn’t?”

**The limited human and financial resources were mentioned as the main constrains for participation in pan-Baltic stakeholder’s dialogue/consultations and in the continuous planning process.**

It has been recognised that most of ports and shipping companies lack interest, resources and competence to be part of the MSP process and thus are left to react to the changes incurred by MSP. A need for external funding sources was stressed also by representatives of the fisheries sector. To improve this situation, new dialogue mechanisms to communicate between the sectors were deemed as necessary.

**The existing international platforms/organisations, which are representing the sea use sectors, shall be addressed to bring up the MSP issues of transnational relevance at the pan-Baltic level.**

This includes the International Maritime Organization (IMO) - the United Nations specialized agency responsible for the safety and security of shipping and the prevention of marine pollution by ships; the Baltic Sea Region Energy Cooperation (BASREC), representing regional forum for dialogue on energy policy and global climate change; the European Network of Transmission System Operators for Electricity (ENTSO-E); the Baltic Sea Advisory Council (BSAC), set up by the EU to create so-called Regional Advisory Councils in the fisheries sector for successful running of the EU’s Common Fisheries Policy and many others. Important role in bringing together different sea use sectors has also the Council of the Baltic Sea States (CBSS) - an overall political forum for regional inter-governmental cooperation between the 11 states of the Baltic Sea Region as well as the European Commission.





## 2.2. Identified needs for cross-sectoral discussions on national and trans-national level

So far trans-national consultations between the sectors have been limited to few international development projects, e.g. NordStrem. Most of experience with cross-sectoral consultations are related to national or pilot MSP cases. Newer the less there is interest in cross-sectoral consultations, particularly from the side of new sea users (e.g. aquaculture, offshore wind energy).

The results from the questionnaires distributed at the PartiSEApate single sector workshops indicates that the sector representatives are mostly interested to consult with the following sectors (see tables 1 and 2):

- Environment;
- Research;
- Climate change;
- Fishery;
- Offshore energy;
- Data networks.

However, the results also indicate that all sectors see the need for transnational consultation with their colleagues from the same sector (Table 1). For example, the participants of the workshops on climate change, data network, fisheries, nature/environment, research and underwater cultural heritage were the most interested in dialogue with their own sector, while for aquaculture the first priority was consultation with nature/environment sector, for offshore energy – with research and data network and for shipping sector – offshore energy.

**Table 1** Interest to discuss at transnational level (dark blue or 2.1-3– essential; blue or 1.1 – 2.0-very important, lightly blue or 0.1-1.0 – somewhat important)

Workshop Sector	Aqua- culture	Climate change	Data Networks	Fishery	Nature/ Environment	Offshore Energy	Research	Shipping/ Ports	Underwater heritage
<b>Aquaculture</b>	2.2	1.0	1.3	1.4	1.4	0.3	0.3	0.7	0.6
<b>Climate change</b>	1.8	2.2	1.6	1.8	2.1	2.2	2.0	2.0	1.4
<b>Data network</b>	2.0	1.4	2.5	1.5	1.9	2.5	1.5	1.3	1.9
<b>Fishery</b>	2.1	1.4	2.1	2.5	2.1	1.0	2.0	1.3	1.4
<b>Nature/ Environment</b>	2.5	1.7	2.1	2.2	2.6	2.2	2.1	2.0	1.8
<b>Offshore Energy</b>	2.0	1.2	2.1	1.9	2.1	2.3	1.4	2.2	1.5
<b>Research</b>	2.2	1.5	1.8	1.9	2.4	2.5	2.3	1.3	1.7
<b>Shipping</b>	1.7	1.2	2.0	1.7	1.8	1.4	1.6	2.0	1.1
<b>Underwater heritage</b>	1.2	0.8	1.2	0.9	1.3	0.5	0.5	0.7	1.9
<b>Mineral extraction</b>	1.3	0.3	1.3	1.2	1.5	0.6	0.7	1.2	0.9
<b>Oil extraction</b>	1.2	0.1	1.7	1.3	1.8	1.4	1.6	1.5	0.9
<b>Tourism</b>	1.1	1.1	1.2	0.9	0.8	1.3	0.9	1.3	1.5

Similar opinions were expressed with regard to national level, where also the first priority in the most of cases was for communication within the sector (Table 2).



**Table 2** Interest to discuss at national level (dark blue or 2.1-3– essential; blue or 1.1 – 2.0-very important, lightly blue or 0.1-1.0 – somewhat important, no colour or 0.0 – difficult to say)

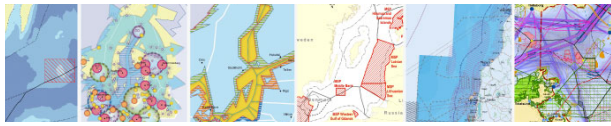
Workshop Sector	Aqua- culture	Climate change	Data Networks	Fishery	Nature/ Environ.	Offshore Energy	Research	Shipping	Underwater heritage
Aquaculture	2.3	0.8	1.0	1.9	1.6	1.3	0.6	1.0	0.8
Climate change	1.6	2.4	1.5	1.8	2.2	2.4	1.8	2.0	1.3
Data Networks	2.1	1.5	2.5	1.6	2.0	2.3	1.9	1.3	2.1
Fishery	2.0	1.6	2.1	2.5	1.8	1.6	2.0	1.3	1.4
Nature/ Environment	2.5	2.1	2.1	2.2	2.2	2.3	2.2	2.0	1.7
Offshore Energy	1.9	1.8	2.1	2.0	2.1	2.5	1.6	2.2	1.4
Research	2.2	1.7	1.7	1.8	2.1	2.8	2.3	1.3	1.9
Shipping	1.6	1.3	2.0	1.6	1.9	1.8	1.7	2.2	1.1
Underwater heritage	1.3	0.9	1.6	1.2	1.2	1.5	0.8	1.3	2.0
Mineral extraction	1.1	0.6	1.7	1.4	1.5	1.2	1.2	1.5	0.9
Oil extraction	1.3	0.0	1.5	1.0	1.6	2.0	1.2	1.5	0.9
Tourism	1.4	1.3	1.6	1.4	1.1	1.8	1.2	1.7	1.6

The discussions during the sector workshops reveal the issues to be consulted with other sectors, where again the research and environmental issues are prevailing along with consultations about allocation of space and possibilities for combined uses (see Table 3).

**Table 3**

Sector	Sectors to be consulted	Issues for consultations
Aquaculture	Researchers & nature conservation, environmental sector	<ul style="list-style-type: none"> <li>Allocation of sites based on natural conditions</li> <li>A need for common regulation on environmental standards</li> <li>impacts on marine environment due to growing spatial demand</li> </ul>
	Fisheries	<ul style="list-style-type: none"> <li>Allocation of space</li> <li>potentials for use of fisheries infrastructure</li> </ul>
	Tourism	<ul style="list-style-type: none"> <li>Allocation of space (sailing, other recreational activities, SPA centres)</li> <li>Synergies: tourism attraction, local food production</li> </ul>
	Offshore wind energy	<ul style="list-style-type: none"> <li>Possibilities/ limitations for combined uses</li> </ul>
Offshore wind energy	Pipeline & cable constructors/ transmission system operators:	<ul style="list-style-type: none"> <li>Development of Baltic offshore electricity grid system and a joint market</li> <li>Connections to onshore transmission grid</li> <li>Safety buffers along the cables and pipelines</li> </ul>
	Coastal municipalities and industries:	<ul style="list-style-type: none"> <li>Local tourism development, impacts on landscape and coastal protection</li> <li>Nearby energy-intensive industries, infrastructure and related supply chains</li> </ul>
Shipping and ports	Environmental sector	<ul style="list-style-type: none"> <li>Impacts on air quality, noise, marine biodiversity;</li> </ul>
	Pipeline constructors	<ul style="list-style-type: none"> <li>Deepening of fairways</li> </ul>
	Transport market players	<ul style="list-style-type: none"> <li>Future prospects of shipping and related port infrastructure</li> </ul>





	Land based planners and industries	<ul style="list-style-type: none"> <li>• Port and related infrastructure development, new logistic solutions (road/rail infrastructure)</li> </ul>
	Offshore wind energy	<ul style="list-style-type: none"> <li>• Allocation of space to avoid long detours for ships and risk of collisions</li> </ul>
Underwater Cultural Heritage	All sea use sectors , impacting sea bottom, e.g. shipping, offshore industry, fisheries	<ul style="list-style-type: none"> <li>• Investigation of potential impacts (to be part of EIA procedure);</li> <li>• Conditions for removal of wracks or transfer to designated location;</li> <li>• Designation of UCH protection areas.</li> </ul>
	Tourism	<ul style="list-style-type: none"> <li>• Legal regulation of diving activities to ensure protection of UCH and security;</li> <li>• Designation of areas not accessible for diving;</li> <li>• Designation of areas where removed wracks are stored (underwater museums)</li> </ul>
	Researchers/ nature conservation experts	<ul style="list-style-type: none"> <li>• Impacts of environmental conditions and invasive species (shipworm) on UCH artefacts</li> <li>• Synergies in designation of protected areas for protection natural and UCH assets</li> </ul>
	Coastal municipalities	<ul style="list-style-type: none"> <li>• Information on UCH assets at the coast</li> <li>• Information how to act in case of looting of UCH sites</li> </ul>
Climate change	Researchers - MSP & land based planners	<ul style="list-style-type: none"> <li>• New modelling approaches integrating long-term changes in natural conditions and socioeconomic drivers;</li> <li>• Elaboration of new (adaptive) planning instruments, which take into account CC impacts</li> </ul>
	Researchers/ planners - policy makers & society	<ul style="list-style-type: none"> <li>• Raising awareness on impacts of CC (visualisations, maps)</li> <li>• Adaptation needs, strategic approaches</li> </ul>
	Researchers/planners - economic sectors	<ul style="list-style-type: none"> <li>• Adaptation of fisheries and aquaculture management strategies</li> <li>• Changes in recreation/tourism patterns</li> </ul>
	Researchers/planners – coastal municipalities	<ul style="list-style-type: none"> <li>• Holistic, multifunctional perspective + adaptive approach to planning of coastal areas;</li> <li>• Land-sea integration in the planning process</li> </ul>
Researchers & nature conservation experts & data experts	Researchers - MSP planners – sea users	<ul style="list-style-type: none"> <li>• Scenario based impact assessments</li> <li>• Stakeholder involvement/consultation methods for sea use planning and development of bio-economic models</li> <li>• Ecosystem service concept for assessing conflicts, benefits and trade-offs between different uses</li> </ul>
	Researchers – nature/environmental sector – MSP planners	<ul style="list-style-type: none"> <li>• Application of MSP for achievement of GES (addressing of MSFD descriptors in MSP)</li> <li>• Assessing ecological effects of MPA designation and management, appropriate size of MPAs, coherence of MPA network</li> </ul>
	Researchers-planners – data people	<ul style="list-style-type: none"> <li>• Providing data/developing of existing data basis/systems (e.g. MSFD data basis to be linked with MSP);</li> <li>• Decentralised data systems to be coordinated at international level</li> </ul>



### 2.3. Identified conflicts and synergies between maritime space users

Participants of the workshops were asked within the questionnaires to name 3 main conflicts with other sectors using the marine space. Most often mentioned sectors as conflicting with other sectors are fishery (20%), wind farms or offshore wind energy (19%), aquaculture (13%) shipping (10%) and nature protection (10%) (see Table 4).

The sectors that are mutually conflicting are fishery and offshore wind energy (indicated 33 times), offshore wind energy and shipping (18 times), aquaculture and tourism (17 times), offshore wind energy and nature protection (16 times).

**Table 4** Conflicts between sea space uses mentioned by responders

Sector	Aquaculture	Fishery	Nature protection	Environment (water quality)	Research	Shipping	Offshore wind energy	Tourism (also recreation)	Bottom infrastructure	Climate change	Data network	Underwater cultural heritage	Ports	Dredging/dumping	Military uses	Coastal erosion	Mineral, oil extraction	Natural landscape	Total
<b>Aquaculture</b>		12	7	6		13	5	17				1	1						65
<b>Fishery</b>	12		2	12		1	10	33	4	1	1	2	12		3	2	1	3	99
<b>Nature protection</b>	7	12				5	16		1			1	1	2			7		52
Environment (water quality)	6					1	1										2		10
Research		1					2												3
<b>Shipping</b>	13	10	5	1			18			1	1	2					1		52
<b>Offshore wind energy</b>	5	33	16	1	2	18		6		1	1	3			9		1	1	97
Tourism	17	4					6	2			1								30
Bottom infrastructure		1	1									1	1						4
Climate change		1				1	1					1	2						6
Data network		2				1	1	1											5
Underwater cultural heritage	1	12	1			2	3		1	1		3	3	2			2		31
Ports	1		1							2		3							7
Dredging/dumping		3	2						1			2							8
Military uses		2					9												11
Coastal erosion		1																	1
Mineral, oil extraction	3	3	7	2		1	1					2							19
Natural landscape							1												1
<b>Total</b>	<b>65</b>	<b>99</b>	<b>52</b>	10	3	<b>52</b>	<b>97</b>	30	4	6	5	31	7	8	11	1	19	1	



Participants were also asked to name 3 possible synergies between sectors using the same marine space. Most often mentioned sectors with potential to make mutual synergies were offshore wind energy and fishery (43 times), fishery and aquaculture (17 times), fishery and tourism (16 times) (see Table 5).

**Table 5** Mentioned synergies between sea space uses

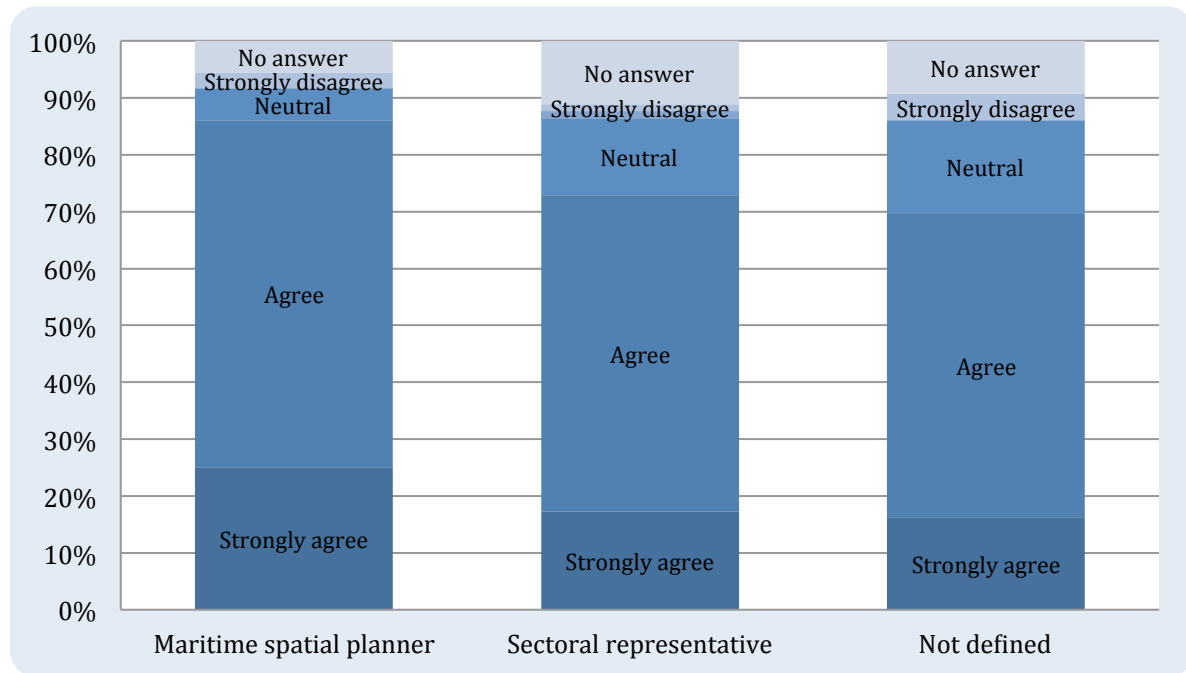
Sector	Aquaculture	Fishery	Nature protection	Environment (water quality)	Research	Shipping	Offshore wind energy	Tourism	Offshore industry	Bottom infrastructure	Climate change	Data network	Underwater cultural heritage	Wave energy	Ports	Dredging/dumping	Military uses	Coastal erosion	Mineral, oil extraction	Natural landscape	Total
<b>Aquaculture</b>	1	17	4	7	2	3	43	10	1	2		1			1						92
<b>Fishery</b>	17	6	8		4	3	8	16			2	3	4								71
Nature protection	4	8			1	3	8	9		1		1	4				1				40
Environment (water quality)	7							1			1	1	3								13
Research	2	4	1				4	1				1	1						1		15
Shipping	3	3	3				2	3		4	1	2	1								22
<b>Offshore wind energy</b>	43	8	8		4	2		7		1	2	1	3	3	2	1	1	1	2		89
<b>Tourism</b>	10	16	9	1	1	3	7					1	11						1	1	61
Offshore industry	1											1									2
Bottom infrastructure	2		1			4	1			3		2									13
Climate change		2		1		1	2					1						1			8
Data network	1	3	1	1	1	2	1	1	1	2	1		2	1	1	1	1	1	1	1	24
Underwater cultural heritage		4	4	3	1	1	3	11					2				1				30
Wave energy							3					1							1		5
Ports	1						2					1									4
Dredging/dumping sites							1					1						1			3
Military uses			1				1					1	1								4
Coastal erosion							1				1	1				1					4
Mineral, oil extraction					1		2	1				1		1							6
Natural landscape								1				1									2
<b>Total</b>	<b>92</b>	<b>71</b>	40	13	15	22	<b>89</b>	<b>61</b>	2	13	8	24	30	5	4	3	4	4	6	2	

The results of the survey shows that fishery, aquaculture and offshore wind energy are the sectors that are most often mentioned as conflicting sectors and as sectors with largest synergy potential with other sectors. Aquaculture and fishery as well as aquaculture and tourism are sectors that are most often mentioned as mutually conflicting with each other and in the same time have also potential to make synergies in using the same space.



## 2.4. Solutions for conflict resolution

MSP has been recognised by the participants of the workshops as important tool for conflict resolutions, information exchange and building of co-operation and synergies between the different sea use sectors. This has been also proven by results from the questionnaire, where 75 % from all responders agree to prioritise allocation of space between users if necessary. Figure 1 shows no significant differences between maritime spatial planners and sectoral representatives.



**Figure 1** Allocation of space should be prioritised between different users if necessary

Responders were asked to evaluate importance of different statements for achievement of a good maritime management. Statements were grouped in 4 groups related to: i) achievements of ecosystem based approach, ii) coherent pan-Baltic energy, iii) safe, clean, efficient maritime transport 2030 and iv) sustainable fisheries & aquaculture. Results in general show that all statements given in questionnaire were evaluated as essential or very important (Table 6). However, the statements on ecosystem based approach in MSP (e.g. ensuring protection of fish spawning and nursery sites as well as habitat connectivity) have been assessed within the highest scores, while the statements for achievement of coherent pan-Baltic energy were rated comparatively lower. The valuation of the sea use impacts across the borders was also considered as very important, which highlight recognition of the Baltic Sea as one ecosystem.



**Table 6** Importance evaluation of given different statements for achievement of a good maritime management (where 1.1-2.0 – very important and >2.0 – essential)

Statement	Importance
Spawning & nursery areas are protected	2.4
Habitat connectivity is ensured	2.2
Impacts of uses are evaluated across borders	2.1
Research is more spatially focused; natural science research forms basis for quality objectives whereby environmental data is translated into spatial information	2.1
Port development and shipping lanes are based on integrated view	2.0
Co-uses are based on environmental pre-screening & risk assessment of sites	1.9
Transnational evaluation criteria have been developed	1.9
Land- / sea-based grids are well integrated	1.9
Areas are designated where shipping is to be avoided, not possible, or only possible with compulsory pilotage	1.9
Areas for marine aquaculture have been carefully selected	1.9
Transnational contingency planning is in place	1.9
Blue Corridors for fish are guaranteed	1.9
Intelligent corridors / routes; which are not impeded by fixed installations, are established	1.8
Fisheries management legislation has been revised according to MSP needs	1.8
No-takes rules and management practices have been implemented	1.8
Sufficient space is set aside for renewable energy developments	1.7
Cable connections / oil & gas pipelines are bundled in corridors	1.6
A pan-Baltic energy infrastructure (SuperGRID) is in place	1.5



### 3. Lessons learned & discussion

- **Growing interest in MSP as tool for steering development in the BSR**

The workshops have revealed increasing importance of MSP as a platform to communicate the interests of the sectors, an opportunity for the new sea uses to compete for the sea space and, consequently, to stimulate their development. For example, MSP is seen as a tool to prepare ground and accelerate the offshore energy development in the Baltic Sea. Currently MSP is steering the offshore energy developments through identification of optimal sites and thus increasing the safety and cost-efficiency, however, in future it could contribute through co-ordination of the pan-Baltic grid developments. This is also the case for aquaculture, where MSP in collaboration with researchers could define environmentally the most suitable sites for particular type of aquaculture (fish, mussels or seaweed). In relation to shipping sector the future navigation structures and corridors should be identified, that would take into consideration developments in the sector (e.g. increasing demand for container shipping that leads to increase in size of the container ships, deepening and widening of shipping routes etc.) as well as needs for space of other sea uses (e.g. new pipelines and cables, offshore wind parks etc.).

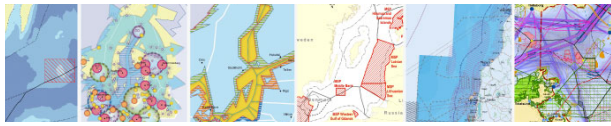
The results of the survey show that representatives of the sectors agree on prioritisation of the sea space between different sea uses when necessary, thus acknowledging the steering role of MSP in development of the sea uses (see Figure 1).

- **Environmental considerations and application of ecosystem approach in MSP**

The series of single sector workshops and survey among the participants indicated recognition of the environmental concerns and importance of the MSP for introducing the ecosystem based approach to management of human activities in the Baltic Sea. The workshop on the role of MSP in safeguarding marine environment and nature was one of the best attended (42 participants). Participants of the workshop have acknowledged the MSP as an important tool for nature conservation in marine area as well as for achievement of the objective of the Marine Strategy Framework Directive (MSFD) – good environmental status of the sea. The environmental considerations were addressed also in other workshops, noting importance of specific environmental conditions and habitats for development of such sectors as fishery and aquaculture as well as discussing impacts on environment and resilience of marine ecosystem as limiting factor for growth of the sea uses. Moreover, the results of the survey have demonstrated that most of the sector representatives see a need for a dialogue with environmental sector both on national as well as on transnational level (see Tables 1 and 2).

The workshops have highlighted the great role of the research for achieving the ecosystem based approach in management of the sea space. In order to respect the limits of the resilience of the Baltic Sea and to identify the most suitable areas of sea uses, the MSP would have to be based on a Baltic Sea wide environmental assessment, as well as require understanding of complex interactions between social and ecological systems and consideration of economic values of ecosystem services in decision making.





- **Data sharing for supporting transnational co-ordination of the MSP in the BSR**

Participants of the stakeholder workshop on data network building agreed that a Pan-Baltic Spatial Data Infrastructure for MSP shall be set up to ensure transnational co-ordination of the MSP and easy exchange of the relevant data. Data network building was also acknowledged by representatives of other workshops as a very important issue to be discussed at transnational level and participants of the offshore energy workshop even noted it as essential for transnational communication (see Table 1). Though, the common data network would be needed not only for co-ordination of MSP and steering the economic growth, but also for addressing the environmental issues in cross-border context and at pan-Baltic level (i.e. to view the Baltic Sea as one ecosystem). Therefore the MSP data network would have to be linked to the data basis for assessment of MSFD Descriptors, and thus contribute to development /adjusting of the programme of measures as well as assessing the efficiency of MSP as a tool for achieving good environmental status in the Baltic Sea.

- **A need for dialogue within and among the sectors at pan-Baltic level**

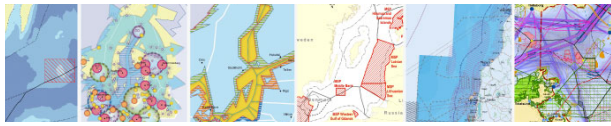
Although a need for pan-Baltic stakeholder dialogue between the representatives of different sectors has been realized, the workshops have revealed also the insufficient co-ordination of the sea uses at pan-Baltic level within the sectors. Results of the survey showed great interest in transnational and national communication with colleagues of the same sector, which in many cases was prevailing interest in communication with other sectors (see Tables 1 and 2).

The purpose for pan-Baltic communication within the sector includes: i) setting common vision/objectives for the use of the Baltic sea space (particularly important for such sectors as offshore wind energy development; shipping and port development; nature conservation); ii) information exchange about developments in the sector; iii) establishment of new contacts and co-operation networks; iv) strengthening position of the sector in the MSP context at pan-Baltic level. The sectors are interested to be involved in the MSP process as early as possible, to ensure that their interests are recognised and taken into consideration. It is also important for sectors in order to adjust their development, e.g. reorganisation of the shipping routes, which is a long and costly process.

The main interests for cross-sectoral dialogue at pan-Baltic level are related to the following aspects: i) demand for space from new sea users (e.g. offshore wind energy, aquaculture) and avoiding conflicts with already established sea users; ii) possible synergies between different sea users (e.g. offshore wind energy and aquaculture; fisheries and aquaculture; fisheries and tourism; tourism and underwater cultural heritage; tourism and nature conservation); iii) impacts of sea uses on marine environment and resilience of the Baltic Sea ecosystem; iv) impact of climate change on sea uses and marine environment/biodiversity; v) land-sea integration in the planning process; vi) cross-border impacts of the sea uses.

The overall goal for a pan-Baltic dialogue within and among the sectors is to achieve more co-ordinated, holistic and ecosystem based approach to the use of the sea space. The main challenges are related to competition within and between the sea use sectors, lack of trust and understanding of conditions related to sharing of the sea space, lack of information and understanding of the MSP process and possibilities to contribute to it as well as insufficient human and financial resources for active participation in MSP process.





## 4. The main conclusions form the series of the single-sector workshops

- MSP is acknowledged as a valuable forum to represent the interests of particular sectors as well as to stimulate their development (e.g. aquaculture, shipping, offshore wind energy). It also helps to communicate to other sectors the interests of nature conservation as well as protection of marine environment and underwater cultural heritage.
- MSP serves as an incentive for new data collection and research on the functioning of the marine ecosystem and assessing the services provided by it, which could serve as performance indicators on how ecosystem-based management measures or planning scenarios can affect human wellbeing.
- Although a need for pan-Baltic cross-sectoral stakeholder dialogue is realized, also the dialogue and co-ordination of sea uses within the sectors at pan-Baltic scale shall be strengthened.
- As the main issues for corsss-sectoral dialogue are related to environment, research, data exchange, climate change as well as such sea uses as fisheries and offshore energy development.
- To facilitate the transnational co-ordination of the MSP in the Baltic region a Pan-Baltic Spatial Data Infrastructure would have to be developed, applying common data standards and established procedures for data exchange.
- The sectors shall be involved in MSP at a very early stage, which would help to find smart compromises or win-win situations between different interests.
- The existing international platforms/organisations, which are representing the sea use sectors, shall be addressed to bring up the MSP issues of transnational relevance at the pan-Baltic level.