

Identification of maritime spatial planning best practices in the Baltic Sea Region and other European Union maritime regions

**(comments of WWF, Estonia, Latvia, Germany.
HELCOM Secretariat accomodated,Finland added)**



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Executive summary

This report identifies good practices in implementation of the BALTIC SEA BROAD-SCALE MARITIME SPATIAL PLANNING PRINCIPLES jointly developed by VASAB and HELCOM. in 2010¹. The main aim of this exercise is to support planning process in the Bothnian Sea and share experience on maritime spatial planning (MSP) among the VASAB and HELCOM stakeholders and other relevant actors.

The first part of the report is devoted to presentation of the most important planning activities in the Baltic Sea Region covering marine waters. The following plans draft plans and planning projects have been analysed: Pilot maritime spatial plan for the Southern Middle Bank, Pilot maritime spatial plan for Western part of the Gulf of Gdańsk, Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters, Spatial plan for the German EEZ of the Baltic Sea, Spatial Development programme of Mecklenburg-Vorpommern, Pilot Project Pomeranian Bight / Arkona Basin, Pilot maritime spatial plans for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay, The regional spatial plan for the Kymenlaakso region in Finland. Swedish experience in maritime spatial planning has not been described so far due to lack of relevant materials in English. In addition to that also the most important maritime planning efforts outside the Baltic Sea Region have been included as a benchmark such as: Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands, Maritime Spatial Planning in the Netherlands and the UK Marine Policy Statement.

In the second part of the report the aforementioned plans and planning projects have been screened with regard to their complacency with the VASAB-HELCOM principles. On those basis a long list of good practices have been developed. Out of those good practices the most important ones for enhancement of cross border maritime spatial planning have been chosen and described in detail in the third part of the report. Those good practices concern the following themes: stakeholder participation, preparation of the SEA reports for maritime spatial plans, preparation of plans under high level of uncertainty (insufficient information), handling and coordination of MSP data flows at the level of Baltic Sea Region, elaboration and use of the basin wide vision for marine waters development, and finally launching and running of the conscious research programmes in support of the MSP.

Introductory

In the HELCOM Baltic Sea Action Plan which was adopted in November 2007, HELCOM Contracting Parties committed themselves to develop, as well as test, apply and evaluate, in co-operation with other relevant international bodies, broad-scale, cross-sectoral, marine spatial planning principles based on the ecosystem approach. To this end HELCOM adopted Recommendation 28E/9 on development of broad-scale marine spatial planning principles.

Broad-scale MSP can help in meeting the ecosystem-based management objectives set by the HELCOM Action Plan, as well as objectives set by EU initiatives such as the European Marine Strategy Framework Directive and European Maritime Policy. Due to the relative novelty of the concept of comprehensive Spatial Planning in the marine field, there are yet no commonly agreed definitions or standards for the subject. The main aim is to widen the marine interventions beyond purely sectoral policy measures towards integrated spatial approach within the Baltic marine area.

¹ The principles can be found in Zaucha Matczak 2011

In 2010 joint VASAB-HELCOM group was established to prepare the joint VASAB-HELCOM maritime spatial planning principles. Such principles have been agreed (see annex 1) and the joint work has started on enhancement and establishment in all BSR countries necessary preconditions for introduction of the MSP based on such principles. The principles were ready by the end of 2010 and adopted by the HELCOM Heads of Delegations and VASAB Committee on Spatial Planning and Development.

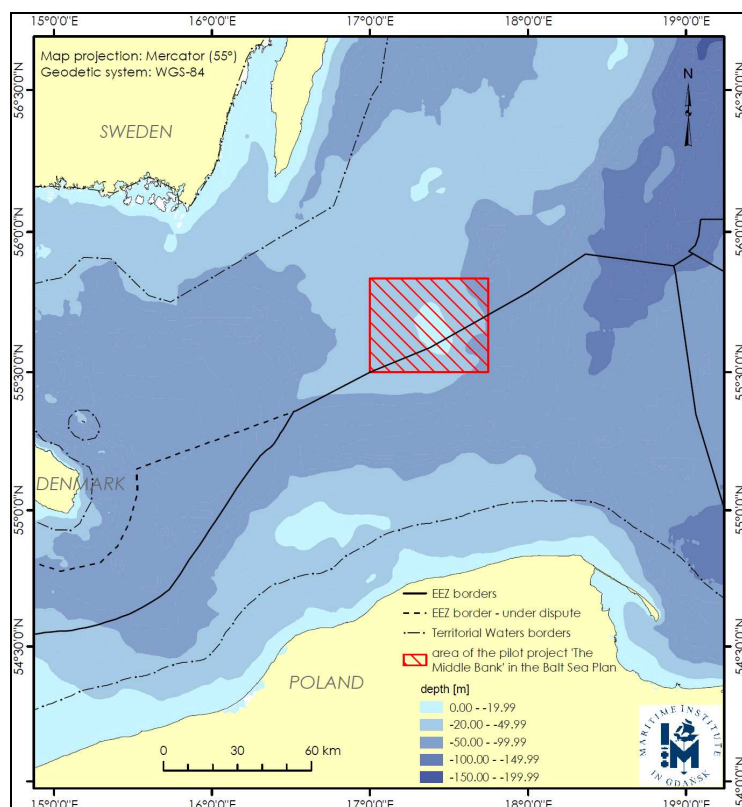
In the meantime HELCOM launched the Bothnia Plan project in co-operation with DG Mare and relevant stakeholders from Sweden and Finland. The project ambition is to start planning process of the Bothnian Sea. Naturally such a planning effort should be compliant with aforementioned VASAB-HELCOM principles. Therefore project looks for existing good practices in implementation of those principles already tested in the Baltic Sea Region and in other countries.

Therefore this report aims at identification of the most suitable and promising vehicles for implementation key ideas covered in the principles such as sustainable development of marine waters, ecosystem integrity, stakeholders participation or cross-border planning coherence. By examining existing planning initiatives (described in detail in the part I of the report) the most relevant good practices have been identified (long list in part II of the report) and then described in depth in part III of the report with focus on those most relevant for enhancement of the cross-border maritime spatial planning in the Baltic Sea Region.

I. Plans

A. Pilot maritime spatial plan for the Southern Middle Bank

The draft plan was prepared in 2011 under the BaltSeaPlan Project. The area of the plan covers a part of the sea area of the Southern Middle Bank. The surface area is about 1751,5 km² (in acc. with azimuthally equal-surface Lambert projection) and lies at the contact of the Polish and Swedish EEZs.



Map A. 1. Location of the Pilot maritime spatial plan for the Southern Middle Bank

The planned sea area is delimited by the coordinates of its corners: **A:** 55°50'N, 17°00'E; **B:** 55°50'N, 17°45'E; **C:** 55°30'N, 17°45'E; **D:** 55°30'N, 17°00'E.

Due to legal constraints the plan is still treated as a draft one. It is of non-binding nature, however it has been used by Maritime Administration in Poland, as a best available knowledge, for guiding its management decisions.

The draft spatial development plan of the Southern Middle Bank sea area is of a strategic character. It is a tool for balancing the different interests of sea space use. It is a structure plan, because it diagnoses the spatial conditions of development, determines components of the spatial system and their relationships/interactions and indicates their desired “shape”. In principle, the plan awards priority for some uses and ensures cohesion of the whole system of proposed solutions. The draft spatial plan includes a graphic and a text part. The graphic part is done in scale 1:200 000, in azimuthally equal-surface Lambert projection (ETRS 1989 LAEA), with possibility of easy transformation to projections required for sea maps. The textual part contains determinations concerning the principles of development and use of sea space by the users, and indicates priorities for some parts of the space, as well as limitations and admissions within the distinguished in the plan sea basins (subareas). Limitations are introduced only in a few cases, and only with the objective of assuring the above mentioned cohesion.

B. Pilot maritime spatial plan for Western part of the Gulf of Gdańsk

The draft plan was prepared in 2008 under the PlanCoast Project. The plan covers part of internal sea waters of the Gulf of Gdańsk. The area has the surface of about 40,550 ha, situated to the west of the line connecting the head of the Hel Peninsula with the Gdynia/Sopot boundary, with the exclusion of the area of harbours of Gdynia, Puck, Jastarnia and Hel, closed by breakwaters and submitted to limitations concerning land areas. The draft plan covers part of the internal Gulf of Gdańsk.



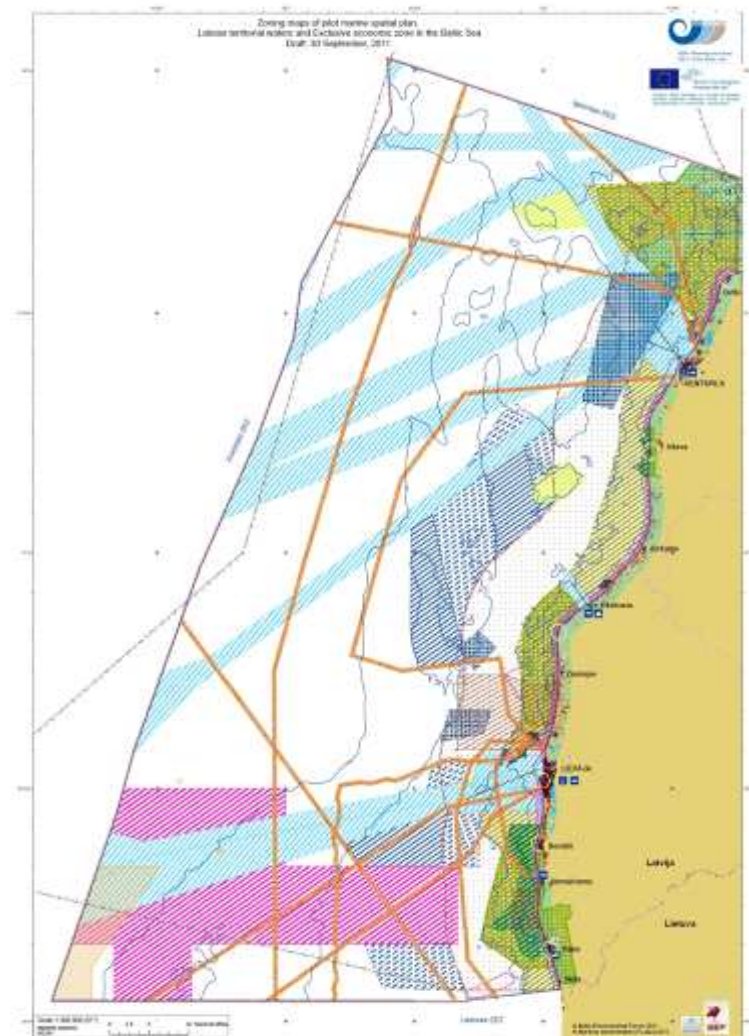
Map B. 1. Zoning map of the Pilot maritime spatial plan for Western part of the Gulf of Gdańsk

Due to legal constraints the plan is still treated as a draft. It is of non-binding nature, however it has been used by Maritime Administration, as a best available knowledge, for guiding its management decisions.

The draft plan is of comprehensive nature. It includes a graphic and a text part. The draft drawing of the plan has been made in a 1:25 000 scale, under the "92" state coordinate system, with the possibility of easy transformation to the representation required in nautical charts. The draft text of the plan comprises, in particular, provisions concerning principles of management and use for water areas determined in the plan. On the one hand the plan is a structural one, as it provides a diagnosis of spatial conditions of development, specifies components of the spatial system and their mutual relationships and points out to their desired shape in a vast sea area (equal to the territory of 2-3 rural communes). On the other hand as land use local plans it settles detailed conditions, requirements and certain specific limitations in the utilization of sea space divided in small sea basins (subareas).

C. Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters

The draft plan was prepared in the years 2010-2011 under the BaltSeaPlan Project. It is expected to be completed in the autumn of 2011. The area of the plan covers the Western coast of Latvia and the adjacent waters both territorial and EEZ (without the Gulf of Riga and Irbe Strait). The plan has both pilot and strategic character. The pilot plan and its preparation process serves as a demonstration case to lay the basis for establishment of a legal MSP framework in Latvia. First steps have been taken and necessity to develop MSP is set in spatial planning legislation. Secondary legislation - Regulation for MSP process, content and participation of stakeholders is planned to be ready till end of 2012. Development of MSP for all Latvian jurisdiction sea waters is planned to start not later than in 2014. The pilot plan was carried out by the Baltic Environmental Forum. Responsible public authorities (regional and national ones) actively participated in the process in the framework of the coordination group and large share of stakeholders were involved in consultation process.



Map C. 1. Drawing of the maritime spatial plan for the Western coast of Latvia and the adjacent waters

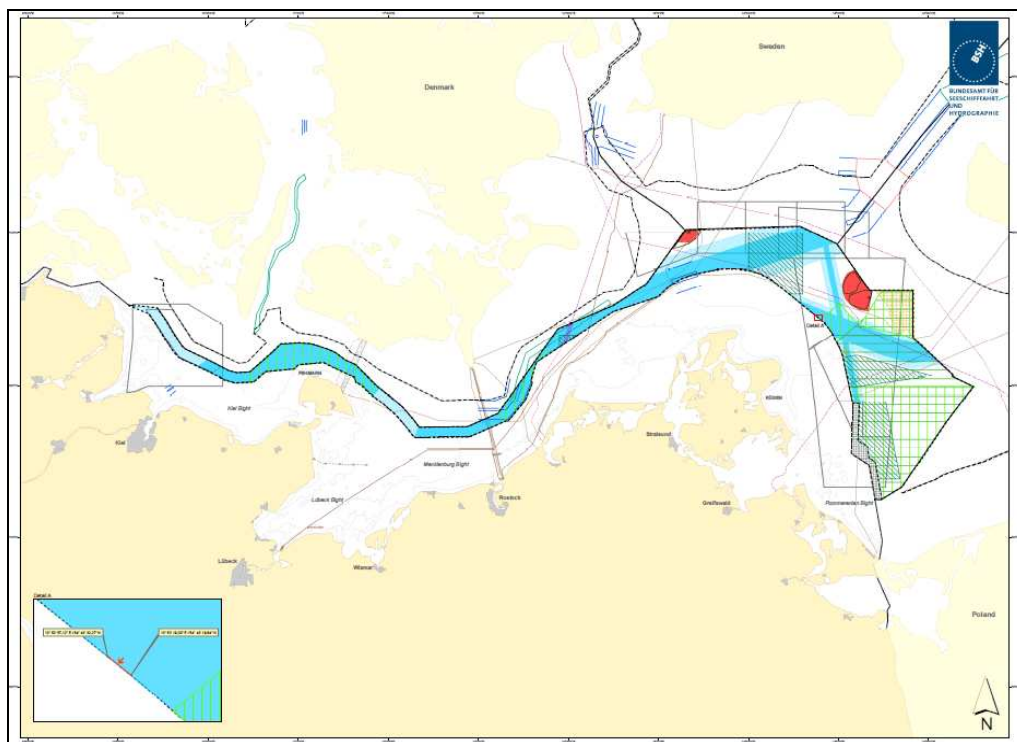
The plan is of a strategic character. The pilot plan includes a graphic and a text part. The graphic part is done in scale 1:450 000. The textual part contains determinations concerning the principles of development and use of sea space by the users, and indicates priorities for some parts of the space, as well as limitations and admissions within the distinguished in the plan sea basins (subareas) – zones with limitation for certain uses.

The most important provisions of the plan have been elaborated in the course of an intensive stakeholder participation process.

The Ministry of Environmental Protection and Regional Development has also prepared a draft Concept of Institutions Responsibilities in MSP. It defines institutions and their competences that are involved in maritime spatial planning processes. The Concept also suggests enlarging planning responsibility for local governments beyond their administrative borders in the territorial sea. (The concept is going to be approved by the Government in ca max 5 months).

D. Spatial plan for the German EEZ of the Baltic Sea

The Federal Minister of Transport, Building and Urban Affairs mandated in 2005 the Federal Maritime and Hydrographic Agency (Bundesamt für Seeschifffahrt und Hydrographie (BSH)) to develop the marine spatial plan and an environmental report for the EEZ. The first stage was preparation of the scoping report (the stakeholders were involved). The plan was prepared in the years 2007-2009 as multiple-use marine spatial plan. It covers German exclusive economic zone of the Baltic Sea (c.a. 4,500 km²) i.e. sea area adjacent to the sea waters of Poland, Sweden and Denmark. This was the first maritime spatial plan covering EEZ in Europe.



Map D. 1. Drawing of the German EEZ spatial plan

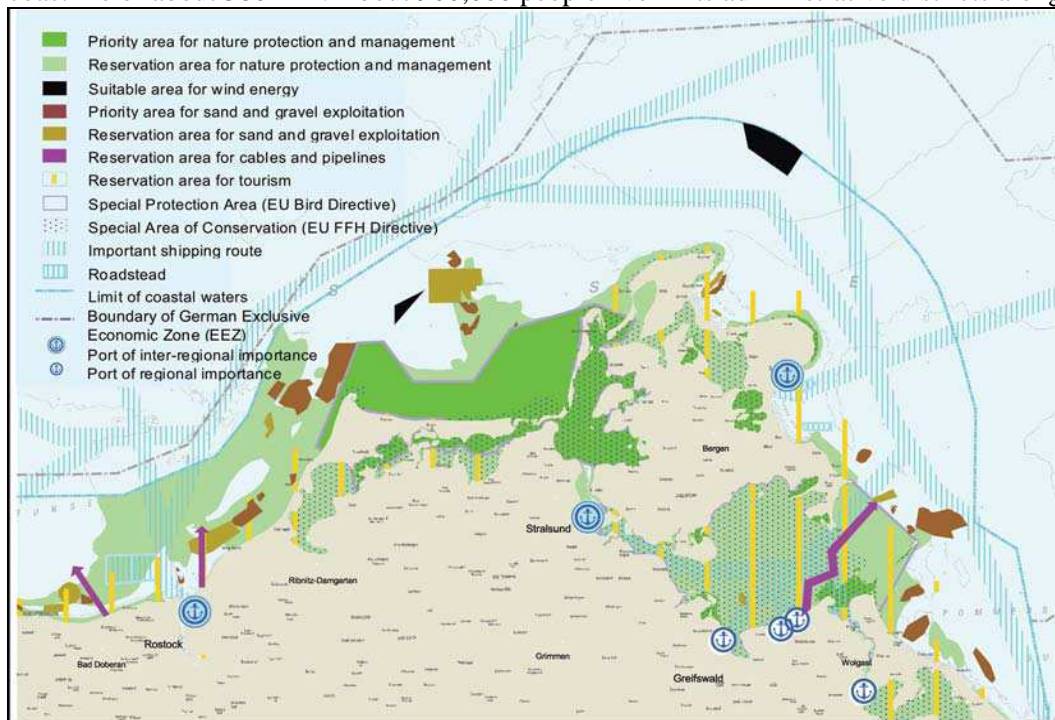
The plan is of binding nature. It was adopted by the legal ordinance of the Federal Minister of Transport, Building and Urban Affairs of 10th of December 2009.

The plan is of a strategic character. It is a tool for balancing the different interests of sea space use as in the case of the Southern Middle Bank draft plan. The plan includes a graphic and a text part. The graphic part is done in scale 1:400 000 in Mercator(54°N) projection (WGS84). The textual part contains determinations concerning the principles of development and use of sea space by the users, and indicates priorities for some parts of the space. The plan contains:

- planning targets (legally binding),
- planning principles (guideline that needs to be particularly considered in the decision process).

E. Spatial Development programme of Mecklenburg-Vorpommern

Mecklenburg-Vorpommern is the first German coastal state that has integrated designation for single uses in the 12-nm zone into its regional development program. Mecklenburg-Vorpommern extended in 2005 its Spatial Development Programme to cover also sea space (coastal waters). Mecklenburg-Vorpommern has a territorial sea of about 5700 km²—about a fourth the size of its land area—and a coastline of about 380 km³. About 900,000 people live in its administrative districts along the coast.



Map E. 1. Drawing of the Spatial Development Programme Mecklenburg-Vorpommern

The Spatial Development Programme Mecklenburg-Vorpommern is of legally binding nature. The plan (prepared 2003-2005) covers both sea and land i.e. the whole territory of the Mecklenburg-Vorpommern. The preparatory works for the maritime part of the plan were partly elaborated under BaltCoast Project. The plan was adopted by the ordinance of the Ministry of Transport, Building and Regional Development of Mecklenburg-Vorpommern. The ordinance came into force in May 2005. This was the first BSR spatial plan of supralocal character covering sea space. The process of amending the plan was started in 2009.

The functions and the legal nature of the plan is similar to the plan for German EEZ of the Baltic Sea. The plan is of a strategic character. It is a tool for balancing the different interests of sea space use as in the case of the Southern Middle Bank draft plan. The Spatial Development Programme

² As the borderline to Schleswig-Holstein is not defined its very difficult to fix this area.

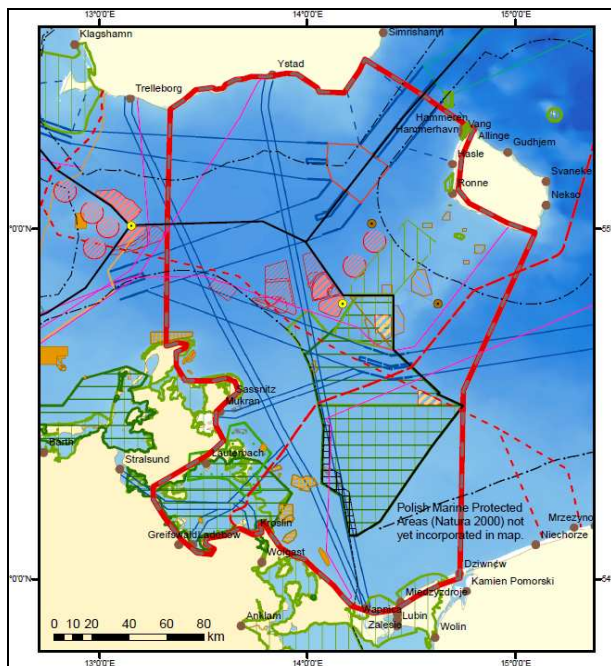
³ Pure coastal Border without bays or lagoons : 340 km.

Mecklenburg-Vorpommern includes a graphic and a text part. The graphic part is done in scale 1:250 000 in ETRS 89 (GRS80) UTM-Abbildung, Zone 33. Both parts contain determinations concerning the principles of development and use of sea space by the users, and indicates priorities for some parts of the space. The Spatial Development Programme Mecklenburg-Vorpommern contains:

- planning targets (legally binding),
- planning principles (guideline that needs to be particularly considered in the decision process).

F. Pilot Project Pomeranian Bight / Arkona Basin

The draft plan was prepared under the BaltSeaPlan Project. The plan will be completed by the end of 2011. The area of the Pilot Project Pomeranian Bight / Arkona Basin comprises shares of territorial sea as well as of the EEZ of four countries: Denmark, Sweden, Poland and Germany.



Map F. 1. Drawing of the draft maritime spatial plan for the Pomerania Bight

The project area encompasses ca. 14.100 sqkm - its outlines are defined by a line running from Southwestern Bornholm southwards to the Wolin peninsula at the western coast of the Polish County of Zachodniopomorskie, westward to Germany / Mecklenburg-Vorpommern along the coast of peninsula Usedom and the island of Rügen to its northernmost headland - Arkona, and then North to and along the Southern coast of Skane in Sweden, finally crossing the Traffic Separation Scheme/IMO Shiproute Bornholms gets back to Bornholm.

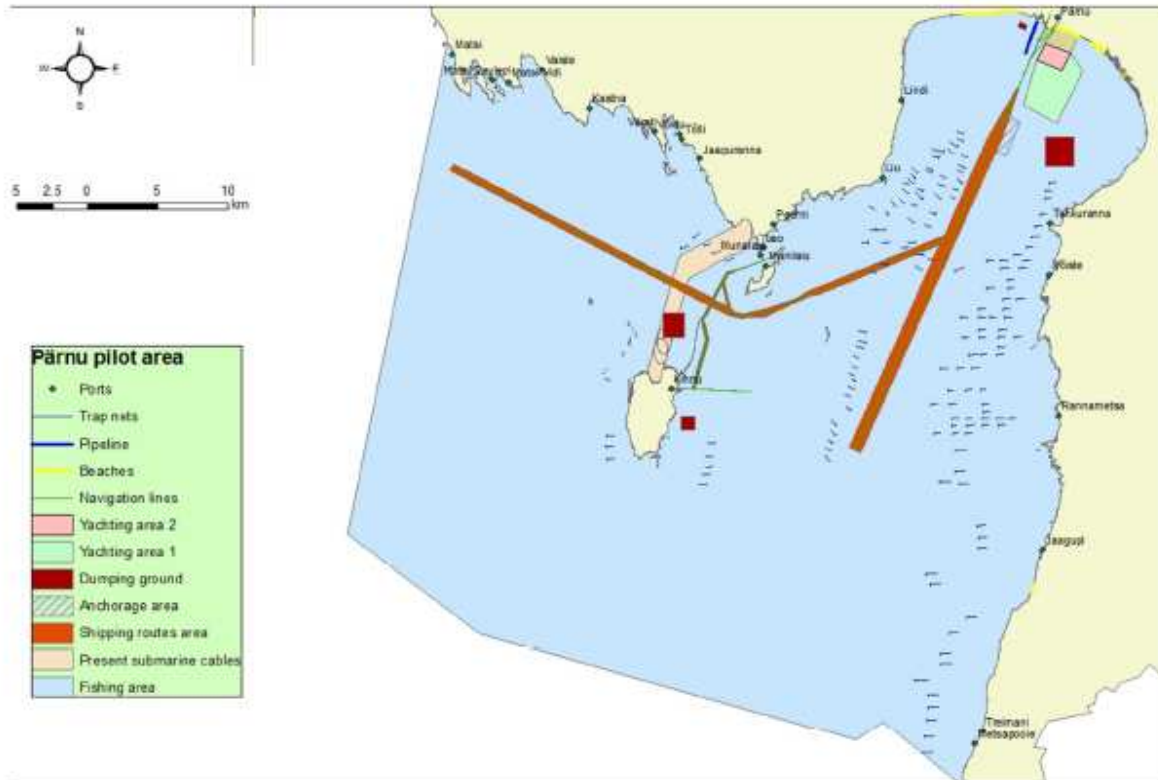
It is one of the first draft maritime plans worldwide encompassing sea areas of four states. It is being conducted as a project in itself, and thus of a non-binding nature. Nevertheless some partners will use the outcomes of the project as input into their preparation of legally binding plans within their area of responsibility and competence. The plan with its transboundary approach should thus promote a more comprehensive and cohesive planning for the whole area., regardless of actual different planning systems and stages .

The plan is of a strategic character and has been prepared in line with the methodology used for two already described German plans. The plan is a tool for balancing the different interests of sea space. The plan includes a graphic and a text part. The graphic part is done in scale 1:2.000.000 in Mercator(54°N) projection (WGS84). The textual part contains determinations concerning the

principles of development, use and protection of sea space, and indicates priorities for some parts of the space. It will deal for example with conflicts between shipping and wind energy and deal with the protection of tourism and with the requirements by nature conservation. It will also include recommendations regarding issues not to be regulated by the plan's regulations itself, but within other fields of policy and sectoral planning.

G. Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay

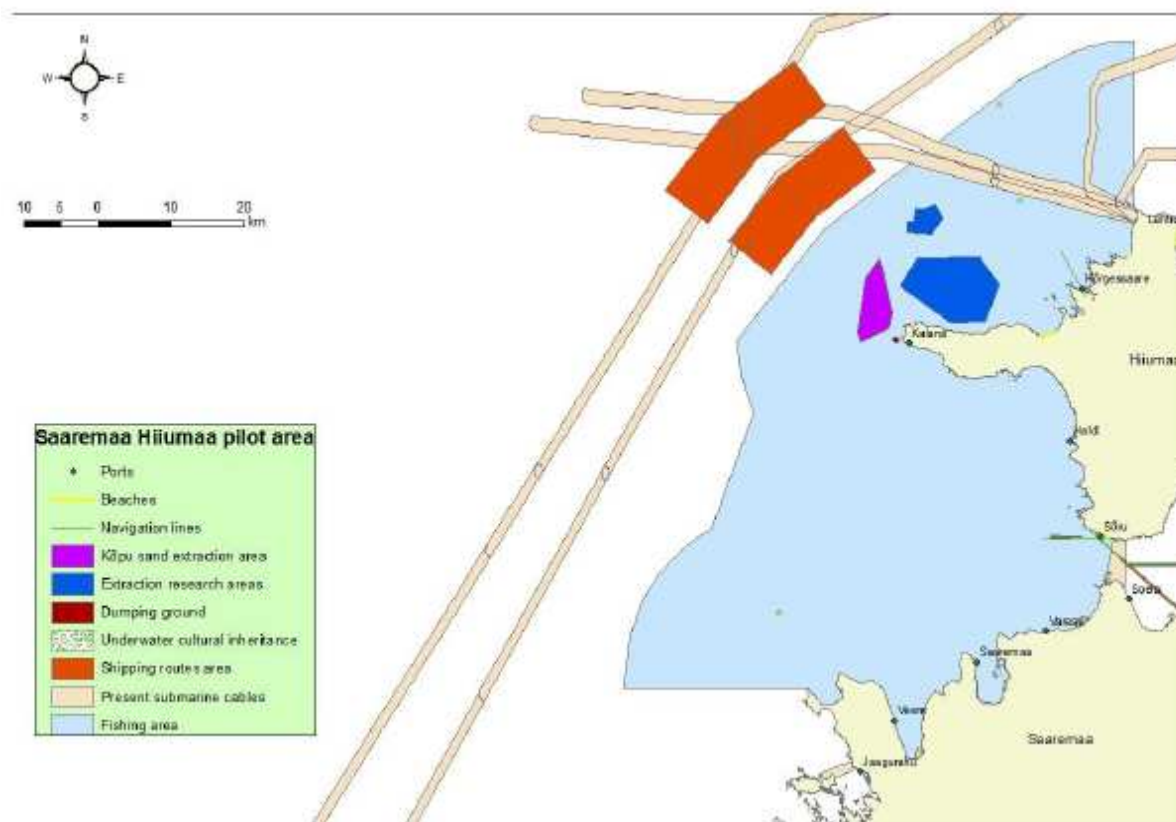
Pärnu Bay area in Estonia is both environmentally sensitive and under growing human use pressure. Pärnu Bay is located in the eastern part of Gulf of Riga, it is shallow coastal sea with high nutrient content and low salinity (0-5,8 PSU).



Map G. 1. Legally ensured human uses of the marine area of the Pärnu Bay pilot maritime planning area

For the Bay the planning process covered stock-taking, identification of future uses, and analysis of conflicts and preparation of measures for conflict solving. The stock-taking covered such uses as recreation, fisheries, offshore wind energy mining and sea transport. The planning process ended with identification of the conditions for establishment of new uses e.g. offshore windfarms or military areas.

The sea area around the Hiiumaa and Saaremaa islands in Estonia is both environmentally sensitive and under growing human use pressure. The human use pressure is however much lower than in Pärnu Bay and also environmental conditions are different – it is open, deep sea with the salinity of 5-7,2 PSU. The main conflicts are related to the planned wind farms and their potential impact on wave conditions (wind surfing), the view from coast and birds. Also a conflict between trawling and coastal fisheries (lack of fish in coastal areas) and conflict between the planned wind farms and fisheries.



Map G. 2. Legally ensured human uses of the marine area of the Hiiumaa and Saaremaa pilot maritime planning area

Similar to the Pärnu Bay also this planning processes covered only stock-taking, conflict analysis and identification of future uses. The planning process ended with identification of the conditions for establishment of new uses e.g. military areas.

For both cases the planning process was led by the Estonian Marine Institute of University of Tartu and Baltic Environmental Forum (BEF) Estonia. One should note that the genuine spatial plans have not been prepared within the frame of aforementioned planning processes. The planning methodology was only partially in line with the proper process of planning as established in the Estonian Planning Act (only some initial steps implemented). In addition, the planning process have not been carried through by institutions that hold the right planning competence. Therefore it should be treated as mainly a stock-taking exercise and stakeholders mobilization process starting debate about future use of the aforementioned important maritime areas. The planning process in both cases does not have any legal consequences. The intention of the Estonian government is to initiate a pilot project for maritime spatial planning soon in line with the existing legal requirements. This means that Pärnu County Governor will initiate a maritime spatial plan with SEA for Pärnu Bay area not later than 2012.

H. Finnish MSP

The regional spatial plan for the Kymenlaakso region was prepared in two phases. The first phase was accepted by the Regional Council in 2006 and ratified/confirmed by the Ministry of Environment in 2008 and the second phase (covering the sea space) was accepted by the Council in 2009 and

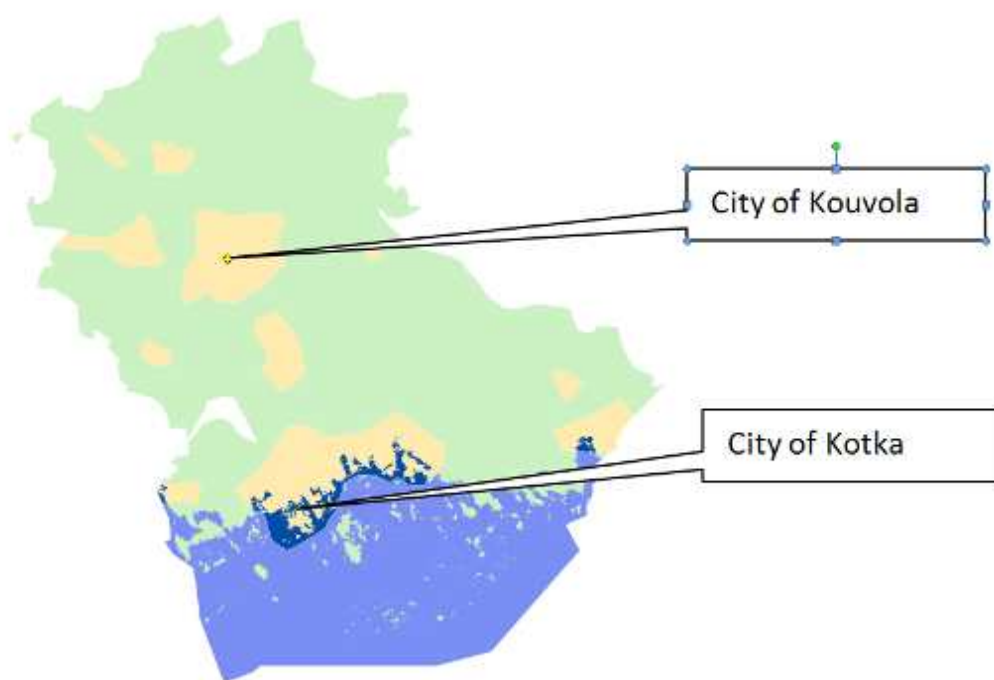
ratified/confirmed by the Ministry in 2010. The plan is only an example how Finnish regional plans cover sea space. It is one out of several others.

The Kymenlaakso region is located in South-East Finland including the areas of seven municipalities including the cities of Kouvola and Kotka. Regional plans cover the whole area of the Kymenlaakso region both land and sea area (12 nm zone). The plan deals separately with built up environment and rural environment and nature. Therefore there are:

- 1 The regional plan covering built up environments (Taajamaat ja niiden ympäristö-
maakuntakaava)
- 2 The regional plan covering rural environments and nature (Maaseutu- ja luonto-
maakuntakaava)

A regional plan dealing with energy issues is currently under work (windmill parks etc.). The regional plan covers 741 825 hectares out of them 183 215 ha are located off-shore (25%). The territory covered by the plan is presented below.

Regional plan	total area of the regional plan (ha)	sea area (ha)	percentage of the sea area
built environment	101802	10728	11 %
rural environment	640023	172487	27 %
both (total)	741825	183215	25 %



Map H. 1. Area covered by the regional spatial plan for the Kymenlaakso region

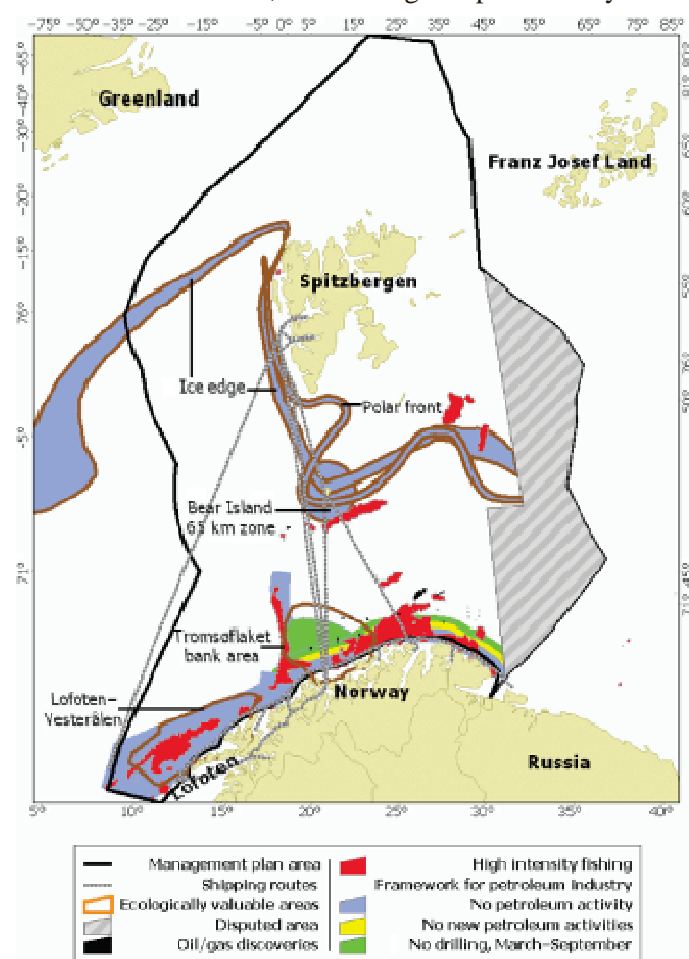
The plan is of comprehensive nature. It is a strategic plan which underlines spatial priorities and reserve space for their implementation. Therefore it contains a general zone not regulated by the plan. The plan includes a graphic and a text part. The drawing of the plan has been made in a 1:100 000 scale. Land use designations and planning reservations shown on the map provide a concrete spatial expression of the regional development strategies prepared by the Regional Council. They are legally binding for detailed local plans of municipalities and they ensure that municipal plans are in line with

the regional strategies. The plan covers all issues of which effective planning solutions cannot be developed at the local level alone. The plan directly controls land uses in selected sites (areas) through conditional building restrictions and protection orders limiting construction and other land uses that would endanger valuable natural or cultural features of the landscapes. As far as sea are is concern the plan address the following priorities: ports, military areas, nature protection areas, landscape protection areas, wind mills areas, different types of recreation and tourist areas requiring different planning measures and allowing for different use intensity. The plan also contains shipping routes and boating routes but only as exogenous information (cannot be regulated by the plan). It can also contain existing and planned power lines but so far it is not the case.

I. Swedish MSP – will be elaborated when inputs received

J. Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands

The “Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands” (2006) provides a framework for the sustainable use of natural resources and goods derived from the Barents Sea and the sea areas off the Lofoten Islands and at the same time maintains the structure, functioning and productivity of the ecosystems of the area.



Map J 1. Zones in the Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands

The plan is intended to clarify the overall framework for both existing and new activities in these waters. The Government considers it very important to encourage broad-based and varied industrial development in North Norway. The plan facilitates the co-existence of different industries, particularly the fishing industry, maritime transport, and petroleum industry (in fact, it is one of the few

“integrated” MSP programs anywhere that incorporates the fishing industry in the plan). The management plan highlights issues where further work is required to ensure that these industries continue to co-exist satisfactorily. The plan is also intended to be instrumental in ensuring that business interests, local, regional and central authorities, environmental organizations and other interest groups all have a common understanding of the goals for management of the Barents Sea–Lofoten marine area.

Two other integrated management plans have been or are being developed for Norwegian marine waters: a Norwegian Sea plan (approved in 2009) and a plan for the Norwegian sector of the North Sea (planned for 2013). This case study focuses only on the Barents Sea-Lofoten marine plan.

The Dutch case is specific. It is the only case described in the report of consequent adaptive planning with a sequence of different documents reinforcing each other.

Map K 1. Zones in the Dutch Maritime Spatial Plan

The Dutch government initially (2005) chose a “strategic” maritime spatial planning approach that defined ‘use zones’ only where necessary (e.g., shipping routes, military exercise, ecologically valuable areas). This approach allowed a considerable amount of freedom to the private sector by giving them the latitude to develop initiatives within certain constraints. Spatial planning was considered as a means of fostering sustainable use while simultaneously allowing as much scope as possible for private sector initiatives (IMPNS 2015, 2005).

In 2009 even a more strategic and forward-looking plan was made with a greater focus on spatial development (Policy Document on the North Sea, 2009). This policy document is part of the National Water Plan (NWP) and should be read with it. It details and substantiates the policy choices about human uses of the North Sea and their implementation in the NWP.

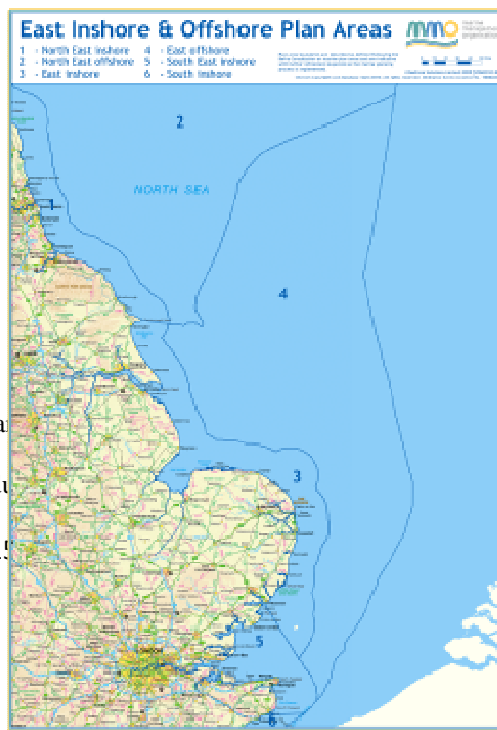
Finally, in 2010 the National Water Plan, also a strategic framework based on the Dutch Spatial Planning Act, replaced certain policy sections of the National Spatial Strategy, including the spatial plan for the North Sea.

L. The UK Marine Policy Statement

While the United Kingdom⁴ was one of the first countries to propose spatial planning in the marine environment in 2002, it has only now begun to implement MSP. Rather than use existing authorities to initiate marine planning, the UK took five years to pass national legislation—the Marine and Coastal Access Act of 2009—that authorizes marine planning. The Act also established the Marine Management Organization (MMO) that has responsibility for marine planning in English territorial waters.

The UK Marine Policy Statement (MPS), released in 2011, is the framework for preparing marine plans and taking decisions affecting the marine environment. It will contribute to the achievement of sustainable development of all UK marine area. The Secretary of State, Scottish Ministers, Welsh Ministers, and the Department of the Environment in Northern Ireland have jointly adopted the MPS. This is a key step towards achieving the vision shared by the UK Administrations (UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive) of having ‘clean, healthy, safe, productive and biologically diverse oceans and seas’.

Marine plan areas cover inshore and offshore marine regions. There are eleven marine plan areas across England, encompassing an area of about 253,000 km², and the MMO will in time, produce marine plans for each of these plan areas (see Map I.1). The first areas to have marine plans will be the East Inshore and East Offshore areas. The East Inshore plan area includes an area of coastline that stretches from Flamborough Head in the north, down to Felixstowe in the south taking in some 6,000 km² of sea to the East of England (see Map I. 2). The East Offshore plan area includes the marine area from 12 nautical miles (nm) to border territorial waters, a total of approximately 49,000 km² of The Netherlands, Belgium and a small part of France border the East Offshore plan area.



sea.

Northern
marine and

⁴ The United Kingdom, a member state of the European Union, consists of four countries: England, Wales, Scotland and Northern Ireland. Each of the four countries has its own government and is responsible for its own marine and coastal policy. The Marine and Coastal Access Act of 2009 in a different way and scheduled



Map I.1 Marine Plan Areas in England Map I.2. East Inshore and Offshore Plan Areas

The first two marine plans will be adopted by 2013

II. Principles

Comparative analysis of different planning efforts seems not an easy task. One should compare more or less matured maritime planning systems (Netherlands and Germany) with those that started to be operational only recently (Poland), or are still under construction (Latvia). Ad hoc plans (Estonia) should be compared with outcomes of the comprehensive multi-governance planning systems (e.g. Germany). On top of that UK case is about law not about plans themselves. Therefore the conclusions given below should be taken with caution because sometimes reality is compared with intention, hard facts with legal provisions. But such comparison is necessary if one wants to push forward the VASAB-HELCOM principles on the MSP in order to achieve minimum level harmonization of maritime spatial planning in the Baltic Sea Region (BSR).

The meaning of the symbols used in the tables is given below:

++ high level or innovative way of compliance

+ compliance

+- compliance in some aspects but several shortcomings in some others

– low level of compliance

– – lack of compliance

. cannot be assessed

The benchmark for assessment is content of each principle summarised at the beginning of each section. Mark (+) means full compliance. Also mark(++) indicates full compliance but in addition to that it informs about some innovative approaches worthy to be shared with the others. All assessments, from their nature, are biased by subjective opinion of those conducting them. Therefore please do not treat them as an ranking exercise but rather as indication of possible improvements in the cases marked (+-) and (–). The mark (– –) indicates some systematic problem of structural nature that calls for careful re-thinking of the planning process.

1.Sustainable management

Sustainable management is operationalised within the Principles by: achieving balance between economic, environmental, social and other interests in spatial allocations, coherently integration of sectoral planning, by application of the ecosystem approach and by paying attention to long term perspective. Since the long term perspective and the ecosystem approach are covered by separate principles only the remaining aspects of sustainable management are analysed below.

1.1.Balance between economic, environmental, social and other interests

Such balance can be seen in the goals of the plan and in the way how conflicts between different interest have been handled.

In general all the plans seem to pay attention to the concept of sustainable development as far as their goals are concerned. The problem is that some plans present a very comprehensive and sophisticated approach to goals setting (e.g. positioning the MSP goals versus national ones – e.g. in Poland) whereas some others took very general approach acknowledging some obvious directions of development of contemporary societies (e.g. Mecklenburg Vorpommern -MV). Some plans contain very elaborated set of goals (e.g. Norway, some others try to achieve a kind of synthesis (Poland, Finland, Pomerania Bight) and some others just acknowledge sustainable development as a guiding principle (e.g. MV). Some goals are more future oriented (Pomerania Bight, Poland, Finland German

EEZ cases) whereas some others deal more with the current state (e.g. in case of Estonia the focus is on preservation of existing values and conflict mitigation).

Only in few cases (Netherlands) the goals are translated into specific, measurable objectives within the plan. This is mainly due to high level of uncertainty about the use of the sea space in the future and focus on conflict mitigation rather than genuine development. This makes the assessment even harder because one can suspect that balanced set of goals can lose its comprehensive (sustainable) character at the implementation (practical) stage.

General shortcoming is insufficient focus on social aspects of the sustainable development and its long-term dimension. Here one should acknowledge the case of UK, Poland (Gulf of Gdańsk), Pomerania Bight as a kind of a blue print in this field. However, in some cases lack of social dimension is justified. For instance the impact of EEZ plans on community cohesion, wellbeing and health seems to be limited e.g. to new job creation.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+-	Comprehensive goals but not covering social dimension (EEZ plan), lack of specific, measurable objectives, sufficient analysis of conflicts, instruments for conflict mitigation
B.	Pilot MSP for Western part of the Gulf of Gdańsk	++	Comprehensive goals covering all aspects of sustainable development but lack of specific, measurable objectives, interesting instruments for conflict mitigation
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+-	Tentative objectives only but huge effort for identification of conflicts and handling them in a decent way,
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Comprehensive goals but not covering social dimension (EEZ plan) , lack of specific, measurable objectives, conflict management biased towards some sea uses (some uses not considered at all)
E.	Spatial Development programme of Mecklenburg-Vorpommern	+-	Very general formulation of objectives for sea space, lack of measurable objectives, innovative conflict management
F.	Pilot Project Pomeranian Bight / Arkona Basin	++	Comprehensive goals covering all aspects of sustainable development but lack of specific, measurable objectives, interesting instruments for conflict mitigation (modelling tools).
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	+-	Tentative objectives only, identification of conflicts mainly within the stakeholders process (but a lot of attention paid to conflict identification and conflict solving)
H.	Finland	+	Comprehensive goals covering human, and ecological aspects. Comprehensive mechanism for eliminating conflicts at the planning phase through extensive consultations at national level conducted by the Ministry of Environment as a part of ratification process and thanks to detailed consultations with interest groups as obligatory part of the planning process. For conflict solving the priorities of National land Use Guidelines are used in line with existing legal requirements.
I.	Sweden		

J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+-	Comprehensive set of goals but not translated into specific, measurable objectives (but attempt to quantify environmental goals foreseen), social dimension not covered (goals for biodiversity, combating pollution, and ensuring safe seafood, profitable gas and oil production, safe shipping),
K.	Maritime Spatial Planning in the Netherlands	+-	Concrete goals translated into measurable objectives ⁵ but social dimension hardly covered (focus on economic, ecological and landscape objectives),
L.	The UK Marine Policy Statement	++	General goals without measurable objectives/targets, but covering all aspects of sustainable development including the social one.

Good practice: know how on maritime spatial planning in Natura 2000 areas (Gulf of Gdańsk) – source: Maritime Institute in Gdańsk http://www.im.gda.pl/images/ksiazki/2010_pilot-draft-plan_zaucha.pdf

Good practice: methodology for socio-economic impact assessment of different sea uses. (Western coast of Latvia) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Latvian-EN;104/1>

1.3. Integration of sectoral planning

Integration of sectoral planning can be judged on the basis of strategies and strategic document of sectoral and cross-sectoral nature taken into consideration in the maritime planning process.

In general all the plans seem to pay attention to the concept of sustainable development as far as cross-sectoral integration is concerned. However, proper assessment of extent of integration of sectoral and horizontal policies is rather difficult. One can only check what type of strategies were incorporated and screened. In fact almost all plans described in this note referred to some sectoral and horizontal policies and their strategic/guiding documents. The question arise whether the policies considered where the right ones in relation to the developmental context of each country. This cannot be answered without in depth examination extending the scope of this note and research capacity of its authors. However, thanks to the templates of the BaltSeaPlan, the methodology of such investigations were improved, awareness has been raised and the attention of maritime spatial planners towards importance of integration of different policies has been increased. This gives hope that the VASAB-HELCOM principle under consideration will be easier observed in the future at least by the BSR spatial planners.

Finland offers and interesting case how cross-sectoral character of the plan can be secured thank to proper administrative routines within the frame of the planning process. All regional spatial plans in Finland should be ratified by the Ministry of Environment. The ratification process includes also consultations with sectoral Ministries.

⁵ E.g. the Dutch Government programme, ‘Clean and Efficient’, targets a sustainable energy generation of 20% by 2020, with the target increasing to 40% by 2050. In addition, a target figure of an installed power capacity of 6,000 MW of wind energy in the North Sea in 2020 has been formulated. The target of 6,000 MW has been translated into a spatial requirement of at least 1,000 km², equivalent to approximately 1,200 5 MW wind turbines or 2,000 3 MW turbines.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	++	Comprehensive analytical framework of the BaltSeaPlan used for reviving policies
B.	Pilot MSP for Western part of the Gulf of Gdańsk	-	Only developmental trends analysed plus strategies of regional, local and port authorities
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	++	Comprehensive analytical framework of the BaltSeaPlan used for reviving policies
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Authorities responsible for sectoral planning, as well as other public bodies involved in the plan preparation at every stage
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Authorities responsible for sectoral planning, as well as other public bodies involved in the plan preparation at every stage
F.	Pilot Project Pomeranian Bight / Arkona Basin	++	Comprehensive analytical framework of the BaltSeaPlan used for reviving policies
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	++	Comprehensive analytical framework of the BaltSeaPlan used for reviving policies
H.	Finland	++	Cross-sectoral considerations of the plans ensured by the inclusion of sectoral ministries in the plan ratification process.
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	Extensive description of sectoral plans and strategies for petroleum, maritime transport, fishing, marine protected areas and coastal activities affecting marine areas
K.	Maritime Spatial Planning in the Netherlands	+	Extensive descriptions and analyses of sectoral plans
L.	The UK Marine Policy Statement	+	Reviewing all sectors considered relevant

Good practice: template on integration of sectoral planning into MSP (Pomeranian Bight / Arkona Basin, Middle Bank, Western coast of Latvia, Hiiumaa and Saaremaa and Pärnu Bay) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/National-Maritime-Strategies;15/1>

2. Ecosystem approach

Under the principle on the ecosystem approach the focus is on: good status of the Baltic Sea ecosystem⁶, (including impact of human activities) related to the concept of ecosystem services and seen as contribution to achievement of the goals of *EU Marine Strategy Framework Directive (MSFD)* and *HELCOM Baltic Sea Action Plan*, as well as on protection and enhancement of marine environment via the MSP.

2.1. Good status of the Baltic Sea ecosystem

The EU Member States in the BSR have not agreed yet on a Baltic set of environmental targets and associated indicators for the marine waters to guide progress towards achieving good environmental status in the marine environment. Therefore the most feasible way of assessing to what extent a given plan takes into consideration the necessity to ensure good status of the Baltic Sea ecosystem is to examine the extent of addressing qualitative descriptors for determining good environmental status listed in the *EU Marine Strategy Framework Directive*. One should check whether those descriptors have been used in systematic way for analysing planning area and to what extent planning provisions have been formulated in relation to the findings from the analytical phase. However, only some descriptors are sensitive to the MSP instruments and measures (see table 2.1). Therefore only those relevant should be subject to further examinations⁷.

Table 2.1. The MSP and qualitative descriptors for determining good environmental status

Qualitative descriptors for determining good environmental status	To what extent can be influenced by the MSP
1) Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.	MSP should pay attention to the need of protection of areas designated to that end. MSP should also ensure connectivity and coherence of habitats, can pay attention to securing desirable mix of marine underwater landscapes.
(2) Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.	Limited influence of MSP. However MSP in the future can use available data and information (e.g. developed by HELCOM ⁸) for assessment of location of shipping routes and of areas of ballast water exchange in the context of the risk of introducing alien species in particular into the indigenous plankton communities.
(3) Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.	MSP can safeguard places for fish well-being (e.g. spawning and nursery grounds)
(4) All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels	MSP can safeguard habitats necessary for maintenance of food -web

⁶ According to *Marine Strategy Framework Directive* environmental status' means the overall state of the environment in marine waters, taking into account the structure, function and processes of the constituent marine ecosystems together with natural physiographic, geographic, biological, geological and climatic factors, as well as physical, acoustic and chemical conditions, including those resulting from human activities inside or outside the area concerned.

⁷ *It cannot be the task of MSP to integrate all sectors and descriptors of the MSFD or even to mirror them in the field of MSP. It would be rather advisable to have a closer look at those descriptors which describe a spatial dimension respectively to look at pressures which result in a reduced suitability of marine areas for certain uses or functions.* (Jochen Lamp, WWF Germany, September 2011).

⁸ HELCOM has introduced recently an evaluation method for assessing alien species introduction into the indigenous plankton communities

capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.	
(5) Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.	MSP can formulate recommendations toward land-base activities. MSP should also collect and use the information ⁹ about areas affected by eutrophication. This is important for allocating functions to sea areas in line with their capability to accommodate certain uses
(6) Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.	MSP can safeguard sea-floor integrity. This helps in safeguarding the structure and the function of the ecosystem and prevents benthic ecosystems from being negatively affected.
(7) Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.	MSP can control alteration of hydrographical conditions resulting from different types of constructions ¹⁰
(8) Concentrations of contaminants are at levels not giving rise to pollution effects.	MSP can formulate recommendations toward land-base activities - see D5
(9) Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards.	Limited influence of MSP
(10) Properties and quantities of marine litter do not cause harm to the coastal and marine environment.	Limited influence of MSP (except dumping)
(11) Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.	MSP can be used for noise control if necessary, however this should be controlled by building and construction permits as well ¹¹

Source: own elaboration

Summing up it seems that MSP can be charged for enhancement of good environmental status described by descriptors. D1,D3, D4, D6,D7, D11 to some extend also D5, D8, D10 and in the future perhaps also D2 when proper methodology for assessing sea routes is agreed. This proposal is consistent with the findings of already quoted WWW study, however putting more attention to MSP role in ensuring connectivity of habitats and spatial conditions for food-web maintenance.

HELCOM Baltic Sea Action Plan (BSAP) specifies four goals, associated with them ecological objectives and detailed targets for each objective. In the preamble of the plan it has been pointed out that the targets, which are associated with the objectives are defining the good environmental/ecological status of the Baltic Sea. The targets are described in depth in a separate document entitled: *Indicators and targets for monitoring and evaluation of implementation of the Baltic Sea Action Plan*. However majority of those targets are very specific and can be hardly enhanced directly by the MSP or implemented directly through any MSP provisions. This concerns e.g. targets for summertime water transparency related to eutrophication, targets for maximum

⁹ Relevant map layers could be maps on oxygen content of the water and in bottom areas, distribution maps for sea grass or other macrophytobenthos as well as the regularly monitored data of distribution of chlorophyll A in coastal areas, layers about the photic zones. (Jochen Lamp, WWF Germany, September 2011).

¹⁰ From the planning ambitions of the different sea uses' perspectives and from trend analyses of those uses maps should be developed that allow a forecast of how the sea floor structures and benthos communities may be affected and how hydrological changes might be the result of certain use scenarios. (Jochen Lamp, WWF Germany, September 2011).

¹¹ Even though the research on submarine noise is a relatively new scientific field, it should be possible to derive maps of noise introduction and noise spreading scenarios and their spatial distributions from the knowledge about noise target values specific for offshore installations, from ship specific noise patterns as well as from experiences with military activities and explosives. In the form of underwater noise maps which are correlated with sensitivity patterns of marine species (marine mammals) these information can be directly used for zoning, routing and permitting decisions in MSP. (Jochen Lamp, WWF Germany, September 2011).

allowable concentrations of hazardous and radioactive substances, efficient emergency and response capability as well as targets on pollution and introductions of alien species from ships. The MSP relevant targets concern mainly one goal of the BSAP i.e. *Environment conservation and biodiversity*. They are related mainly to habitats their connectivity coherence and protection. The MSP relevant targets of the BSAP are listed in the table 2.2.

Table 2.2. The BSAP targets that can be directly implemented by maritime spatial planning provisions

Objective	Targets	Deadline for achieving targets
Natural marine and coastal landscapes	to have an ecologically coherent and well-managed network of Baltic Sea Protected Areas (BSPAs), Natura 2000 areas and Emerald sites in the Baltic Sea;	By 2010
	to have common broad-scale spatial planning principles for protecting the marine environment and reconciling various interests concerning sustainable use of coastal and offshore areas, including the Coastal Strip as defined in HELCOM Rec. 15/1;	By 2012
	to ensure that “natural” and near-natural marine landscapes are adequately protected and the degraded areas will be restored.	By 2021
Thriving and balanced communities of plants and animals ¹²	to ensure that the spatial distribution, abundance and quality of the characteristic habitat-forming species, specific for each Baltic Sea sub-region, extends close to its natural range;	By 2021,
	to halt the degradation of threatened and/or declining marine biotopes/habitats in the Baltic Sea, and by 2021 to ensure that threatened and/or declining marine biotopes/habitats in the Baltic Sea have largely recovered.	By 2010

Source: own elaboration based on the BSAP of HELCOM.

The targets under the third objective of this goal i.e. related to *viable populations of species* similarly to the targets of other three goals can be influenced by the MSP only indirectly via robust network of different habitats (for sheltering, spawning etc. for different types of species and ensuring proper functioning of the food web).

However, this frequently mentioned indirect influence of the MSP on HELCOM targets is also worthy to be considered. The MSP can for example diminish eutrophication by securing space for specific type of mariculture, can concentrate shipping in intelligent (i.e. monitored) corridors to diminish number of accidents or can formulate recommendations towards land base activities. This indirect impact is presented in table 2.3. at the level of the BSAP goals and objectives.

Table 2.3. How the BSAP goals and objectives can be enhanced by the MSP in order to secure the good environmental/ecological status of the Baltic Sea

The BSAP goals and objectives	How those goals and objectives can be enhanced by the MSP
1) A Baltic Sea unaffected by eutrophication, characterised by - Concentrations of nutrients close to natural levels, - Clear water, - Natural level of algal blooms, - Natural distribution and occurrence of plants and animals, - Natural oxygen levels. Clear water was chosen as the primary ecological objective with	MSP can formulate recommendations toward land-base activities and shipping MSP can allocate sea space for reducing amount of nutrients (e.g. Mariculture for combating eutrophication)

¹² The third target related to *prevention of adverse alterations of the ecosystem by minimising, to the extent possible, new introductions of non-indigenous species* is also hardly connected to MSP.

water transparency as the indicator	
(2) A Baltic Sea with life undisturbed by hazardous Substances, characterised by: - Concentrations of hazardous substances close to natural levels, - All fish safe to eat - Healthy wildlife, - Radioactivity at pre-Chernobyl level.	MSP can formulate recommendations toward land-base activities and shipping
(3) A favourable conservation status of Baltic Sea biodiversity, characterised by: - natural marine and coastal landscapes, - thriving and balanced communities of plants and animals, - viable populations of species	MSP should ensure connectivity of habitats and the ecological coherence of protected areas MSP can safeguard habitats necessary for maintenance of food -web MSP should be based on Ecosystem Approach MSP should be based on sound environmental information and knowledge
(4) Maritime activities in the Baltic Sea carried out in an environmentally friendly way, characterised by: - Enforcement of international regulations - No illegal discharges - Safe maritime traffic without accidental pollution - Efficient emergency and response capability - Minimum sewage pollution from ships - No introductions of alien species from ships - Minimum air pollution from ships - Zero discharges from offshore platforms - Minimum threats from offshore installations.	MSP can formulate recommendations toward shipping MSP allocate priority areas and recommended areas for human activities MSP formulate principles for managing of human activities and conflicts.

Source: own elaboration

By merging provisions of the BSAP and *EU Marine Strategy Framework Directive* one can come up with following the MSP relevant¹³ qualitative descriptors for determining good environmental status of the Baltic Sea.

- (1) Biological diversity ,
- (2) Protection of valuable habitats and coastal landscapes,
- (3) Populations of commercially exploited fish and shellfish ,
- (4) Elements of the marine food webs,
- (5) Human-induced eutrophication,
- (6) Sea-floor integrity,
- (7) Permanent alteration of hydrographical conditions,
- (8) Concentrations of hazardous substances,
- (9) Safe shipping and incident prevention,
- (10) Properties and quantities of marine litter,
- (11) Introduction of energy, including underwater noise.

¹³ It means that the one can influence (improve) them using the MSP.

After screening application of the quoted above concepts (descriptors) in each plan one can conclude that all plans have paid attention to the good status of the ecosystem. But the quality and scope of those attempts differ. All plans addressed somehow the need to enhance biological diversity but none of them discussed an issue of habitat connectivity. All plans paid attention to protection of valuable habitats e.g. through restricting economic activities in Natura 2000 (German EEZ, Estonian plan) or introducing some innovative measures for promoting sea uses in a way that was not harming for marine nature (MV). Also shipping safety was addressed by many plans. But only few plans (Polish, Latvian, Norwegian) ensured special spatial provisions for fish well-being, for securing sea floor integrity (Polish), reducing human induced pollution (Polish), noise control (Polish, and Finnish to some extent). No single plan was able to formulate spatial measures for securing the food-webs. It seems that additional research is needed in these fields as postulated by BONUS.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+-	Failure to address: food web, permanent alteration of hydrographical conditions, concentrations of hazardous substances, noise pollution (main reason low probability of occurrence of those risks in the EEZ).
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Only food web not properly addressed.
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+-	Failure to address: food web, permanent alteration of hydrographical conditions, concentrations of hazardous substances, noise pollution, sea-floor integrity.
D.	Spatial plan for the German EEZ of the Baltic Sea	+-	Only shipping safety, biodiversity and protection of habitats, integrity of sea floor, marine litter taken into consideration (main reason low probability of occurrence of some risks in the EEZ).
E.	Spatial Development programme of Mecklenburg-Vorpommern	+-	Only shipping safety, biodiversity and protection of habitats taken into consideration.
F.	Pilot Project Pomeranian Bight / Arkona Basin	+-	Only shipping safety, biodiversity and protection of habitats populations of commercially exploited fish and shellfish, human-induced eutrophication, sea floor taken into consideration in a stock-taking phase.
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	-	The good environmental status approach only in general way.
H.	Finland	+-	Only few descriptors assessed properly: i.e. those related to noise, marine litters (dumping areas) and first of all to biodiversity (information on all existing species gathered).
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the	+	The Barents Sea is considered to be in 'good environmental status' and this status is expected to be maintained in the future. The Norwegian Government

	Barents Sea and the Sea Areas off the Lofoten Islands		commissioned the Institute of Marine Research (IMR) and the Norwegian Polar Institute (NP) to propose indicators for the establishment of a system that enables continuous monitoring of the state of the ecosystem ¹⁴ .
K.	Maritime Spatial Planning in the Netherlands	+	On the basis of the MSFD, “good environmental status” of the North Sea will be defined in 2012, and subsequent objectives specified. The package of management measures required will be ready in 2015, and implemented from then on ¹⁵ .
L.	The UK Marine Policy Statement	+	Marine planning will be a key tool for ensuring that the targets and measures to be determined by the UK for the Marine Strategy Framework Directive (MSFD) can be implemented ¹⁶ .

Good practice: template for ecosystem based management of sea areas including also elaboration of a set of coherent indicators necessary for the establishment of a system that enables continuous monitoring of the state of the ecosystem (Barents Sea and the Sea Areas off the Lofoten Islands) – source: The Royal Norwegian Ministry of the Environment http://www.regjeringen.no/upload/MD/Vedlegg/STM200520060008EN_PDF.pdf

2.2. Protection of the marine environment.

The attention given in the plans to the need to protect marine environment can be assessed only indirectly by analysing methodology of the plan, planning process, and planning objectives. In particular one can check whether any ecologically and biologically important areas within planning area have been identified and how conflicts between human activities and biologically important areas have been handled.

All plans paid due attention to preservation of ecologically important areas indicated or established under ecological (nature conservation) policies and international agreements. Nature protection received absolute prioritisation over all other uses in areas designated for nature protection. However, all the plans failed to recognize the question of integrity of habitats, blue corridors have not been established (exception are terrestrial blue corridors in Finland). It seems that this issue requires more efforts in terms of planning routines and methodology as well as available knowledge and information. In conflict handling priority is usually given to the natural environment (nature) at least in the ecologically valuable areas.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	Ensuring good state of marine ecosystems recognized as one of the most important priorities of the plan. Concrete ways of preventing environmental conflicts proposed in the plan
B.	Pilot MSP for Western part of the Gulf of Gdańsk	++	Many innovative measures for protection of marine environment, noise free zones, no-go reed field areas, no-go seal areas etc.
C.	Pilot maritime spatial	+	Ensuring good state of marine ecosystems recognized

¹⁴ Qualitative descriptors for determining good environmental status not assessed yet

¹⁵ Qualitative descriptors for determining good environmental status not assessed yet

¹⁶ Qualitative descriptors for determining good environmental status not assessed yet

	plan for the Western coast of Latvia and the adjacent waters		as one of the most important priorities of the plan. Concrete ways of preventing environmental conflicts proposed in the plan
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Specific principles formulated in the plan in order to secure protection and care of the marine ecosystem and open <u>seascapes</u> .
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Innovative methods for conflict management concerning nature protection and conservation (e.g. voluntary agreements) installed. Land-sea integration with regard to nature protection ensured.
F.	Pilot Project Pomeranian Bight / Arkona Basin	+	Important measures for the protection of the marine environment discussed, e.g.: no-go zones, buffer areas around artificial constructions, delineation of protective areas outside NATURA 2000 zones for instance for fish well-being.
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	+	The plan identifies ecologically valuable areas, Some important conflicts have been identified but yet not solved.
H.	Finland	+	The plan identifies ecologically valuable sea areas: nature reserves and NATURA 2000 sites. Preserving nature and biodiversity among key goals of the plan. Important role of the Regional Consultative Committee on environmental politics in the planning process.
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	The plan identifies ecologically valuable areas and requires strict regulation of activities in these areas. Innovative methods for protection of marine environment used (e.g. moving shipping routes via IMO)
K.	Maritime Spatial Planning in the Netherlands	+	Natura 2000 areas recognized in the plan, however decision-making biased towards activities of national importance, e.g. shipping, oil and gas recovery, CO2 storage, wind energy, sand extraction and replenishment, and defense.
L.	The UK Marine Policy Statement	+	Environment protection recognized as key task by Marine Statement, new type of marine protected area called a Marine Conservation Zone under designation,

Good practice: noise free zones (Gulf of Gdańsk) – source: Maritime Institute in Gdańsk http://www.im.gda.pl/images/ksiazki/2010_pilot-draft-plan_zauch.pdf

Good practice: joint addressing such phenomena as nature conservation, protection of open spaces with respect to functional soils, water budget, and climate change (German EEZ) – source: BSH http://www.bsh.de/en/Marine_uses/Spatial_Planning_in_the_German_EEZ/documents2/Spatial_Plan_Baltic_Sea.pdf

3. Long term perspective and objectives

The principle of long term perspective stresses the need of such perspective in relation to goals and effects. Plans should be based on long term visions of a comprehensive nature. This principle also protects planning provisions being spoiled by the short term benefits. To assess compliance of the plans with this principle one should ask for existence of an underlying comprehensive vision for maritime space development, vertical and horizontal coordination of the given plan with other policies, planning horizon and existence of alternative scenarios of the future use of the sea area. The way and extent of taking into consideration long term phenomena such as climate change or technological progress should be screened as well. Since the coordination of the plan with other policies has been partially covered under the first principle (point 1.2) here only planning horizon, existence of underlying visions/strategies and addressing long-term phenomena such as climate change, technology change is checked.

3.1. Long term vision and other long term strategies

As the rule visions and other long term strategies have been used for preparation of the plans. The authors of this note have considered reference to such type of strategies as sufficient indicator of a due attention paid to the long term perspective by the elaborators of the plan. It was impossible to assess to what extent the plans succeeded in making actual reference to all important visions and strategies existed during the plan preparation and what was the actual result of such attempts. However, it seems that in the countries where appropriate long term horizontal strategies do exist at national level (Poland, Latvia, Estonia, Finland) they were properly used in the course of the plans preparation. It also seems that the lack of such strategies could tempt the maritime spatial planners for paying larger than one could expect attention to some sectoral strategies such as a wind energy development (case of Germany). Analysis also point out towards only shallow references to the EU Strategy for the BSR. Perhaps the reason is the character of the strategy (a kind of drop down menu without concretely spelt out priorities). Another reason can be publication of this document in 2009 when some maritime plans were ready or advanced. However, as a rule an impact of international visions and strategic documents seems weaker than of the national ones. Only in one plan the VASAB principles paid prominent role in a take-off (conceptual) stage.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	Poland's Spatial Development Strategy, Swedish National Maritime Policy Bill, international strategies (EU, VASAB, HELCOM) taken into consideration to different extent
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Poland's Spatial Development Strategy used for determination of the goals
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+	Strong reference to Sustainable Development Strategy of Latvia and the National Spatial Development Strategy for Coastal Zone 2011-2017. VASAB, HELCOM strategies analysed within the general frame of the BaltSeaPlan.
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Several national and international long term strategies (EU, VASAB, HELCOM) taken into consideration to different extent
E.	Spatial Development programme of Mecklenburg-	+	Reference to several long term land oriented strategies and documents of international character e.g. CEMAT Guiding Principles, ESDP, VASAB

	Vorpommern		2010 Plus, the Van-Miert report on TEN-T long term development and some strategic documents of the European Commission
F.	Pilot Project Pomeranian Bight / Arkona Basin	+	Several national and international long term strategies (EU, VASAB, HELCOM) taken into consideration to different extent
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	+	Reference to the National Development Plan “Estonian Maritime Policy” 2011-2020, National Plan “Estonia 2030+” and , regional and local development plans. VASAB, HELCOM strategies analysed within the general frame of the BaltSeaPlan.
H.	Finland	+	The plan based on long term strategic national document: National Land Use guidelines of Finland.
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	Use of scenarios that were developed for each important maritime sector through 2020 and assessed with regard to their environmental impact, as well as cross-sectoral impact.
K.	Maritime Spatial Planning in the Netherlands	+	Reference to National Spatial Strategy, the Policy Programme for Biodiversity (Beleidsprogramma <i>Biodiversiteit</i>), National Adaptation Strategy ‘Make Room for Climate’
L.	The UK Marine Policy Statement	+	Reference to the Climate Change Strategy

Good practice: relating maritime spatial plans to the overall spatial development visions and strategies. Influencing preparation of national visions of such types (Gulf of Gdańsk) – source: Maritime Institute in Gdańsk http://www.im.gda.pl/images/ksiazki/2010_pilot-draft-plan_zauch.pdf

Good practice: elaboration of joint Baltic wide vision for spatial development of maritime areas (Pomeranian Bight / Arkona Basin, Middle Bank, Western coast of Latvia, Hiiumaa and Saaremaa and Pärnu Bay) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/BaltSeaPlan-Vision-2030;494/1>

3.2. Planning horizon and forward looking approach

Long term planning horizon, addressing long term phenomena, presence of long-term oriented planning provisions can be treated as an evidence of a forward looking planning approach.

Only two plans (MV, Finland) have clearly specified planning horizon. However majority of plans took into consideration some long-term phenomena such as climate change, technological change. This is more frequent for plans covering territorial waters since the need to take into consideration the impact of e.g. climate change in the EEZ can be less evident. The pity is that (as already mentioned) some long term phenomena such as habitat fragmentation, food web maintenance have not been addressed at all.

The objectives of majority of the plans seem to be of a long-term character as already described. However, there have been only three cases (Latvia, Pomeranian Bight, Norway) of preparation of alternative scenarios (both Baltic cases concerned wind mills location).

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	Lack of specification of the planning horizon, provisions taking into consideration technological changes, need of re-using the sea space
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Lack of specification of the planning horizon, provisions taking into consideration the climate change and the coastal erosion
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+	Lack of specification of the planning horizon, however plan considered as a long-term one, different scenarios with regard to location of the wind mills parks under elaboration, coastal erosion addressed but no reference to the climate change
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Lack of specification of the planning horizon, the climate change referred many time in the SEA report but only once in the plan, many genuine long-term provisions with regard to research, maintenance of open spaces, re-use of the sea space
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Clear long term planning horizon, genuine long term provisions e.g. on use of the sand supply
F.	Pilot Project Pomeranian Bight / Arkona Basin	+	Lack of specification of the planning horizon, different scenarios with regard to location of the wind mills parks.
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	+	Considered as a long term plan as the planning horizon is 10-20 years. No alternative scenarios for the sea space development have been prepared so far (but it is planned).
H.	Finland	+	Clear long term planning horizon – the year 2030.
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	++	Clear long term planning horizon, wise use of scenarios, assessment of cumulative (up to 2020) ecological impact of several interacting human effects, genuine long term provisions (e.g. attempt with shifting shipping lanes)
K.	Maritime Spatial Planning in the Netherlands	+	Clear long term planning horizon, long term provisions on protection of the sand supply for coast nourishment
L.	The UK Marine Policy Statement	+	Clear long term planning horizon, since plans do not exist assessment of provisions addressing the long term phenomena not possible

Good practice: planning provisions on re-use of the sea space e.g. on dismantling structure and infrastructure out of use or broken down (German EEZ, Middle Bank) – source: BSH

4. Precautionary Principle

This implies that planning has an obligation to anticipate potential adverse effects to the environment before they occur, taking into account Article 3 of the Helsinki Convention, and take all precautionary measures so that an activity will not result in significant harm. A similar, but distinct, forward looking perspective should be applied with respect to the economic and social dimension. To assess compliance of plans with this principle one should ask for: existence of the Strategic Environmental Assessment (SEA), as well as identification of adverse effects to the natural environment, culture, society and economy and relevant precautionary measures addressing those effects.

4.1. SEA

The SEA reports have been prepared so far for six plans i.e. for the matured ones usually of a binding nature. Other plans are of a pilot character but also for them the SEA will be conducted in the future in line with the legal requirements. This will happen when those plans gain formal character. Three interesting methodological examples of the SEA and the SEA related research were discovered by the author of the note. All of them are worthy to be discussed at the BSR level to reach a kind of minimum common Baltic denominator in preparation of the SEA reports. This would facilitate future cross-border debate on the SEA reports. Such cross-border debate and consultations are required by law on maritime plans (and their SEA reports) for plans covering sea areas located close to the national and EEZ sea borders.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	-	SEA not ready yet but foreseen in the future
B.	Pilot MSP for Western part of the Gulf of Gdańsk	++	Interesting example of the SEA methodology and content. SEA broadly consulted
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	-	SEA not ready yet but foreseen in the future
D.	Spatial plan for the German EEZ of the Baltic Sea	++	Interesting example of SEA methodology and content. SEA was broadly consulted.
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	SEA prepared and consulted
F.	Pilot Project Pomeranian Bight / Arkona Basin	-	SEA not ready yet but foreseen in the future
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	-	SEA not ready yet but foreseen in the future
H.	Finland	+	SEA prepared and consulted as a part of the planning process in line with requirements of the Finnish law.
I.	Sweden		

J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	++	SEA prepared and broadly consulted. Interesting example for measurement of cumulative impacts
K.	Maritime Spatial Planning in the Netherlands	+	SEA prepared
L.	The UK Marine Policy Statement	.	SEA is envisaged in the course of the plan preparation .

Good practice: methodology for SEA for maritime plans (Gulf of Gdańsk, German EEZ of the Baltic Sea) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/SEA-Western-Gulf-of-Gdask;225/1>

4.2. Precautionary measures

All plans equipped with the SEA (see point 4.1) contain description of possible adverse significant effects to the natural environment. The others will follow since the SEA is required by planning law of all EU member states. Latvian planners conducted such type of investigations even not waiting for the SEA report. Description of the adverse effects to culture, society and economy are less frequent although the recently prepared plans (e.g. in Poland, Germany) started to pay attention to the underwater cultural heritage or impact of off-shore activities on development of the coastal societies. Many plans contain some genuine precautionary measures addressing those effects. Such measures facilitate coping with the environmental uncertainties but also with those related to the social and cultural (underwater heritage) challenges. Almost all plans did not dare to plan areas under border disputes which speaks for their attention to staying conscious. This is also an evidence for the right formulation of the VASAB-HELCOM precautionary principle i.e. extending this principle to societal and cultural sphere.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	Precautionary measures related to environment and underwater cultural heritage
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Precautionary measures related to environment, noise and infrastructure
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	++	Precautionary measures related to environment, landscapes and border disputes
D.	Spatial plan for the German EEZ of the Baltic Sea	++	Precautionary measures related to environment, open spaces, cultural heritage and border disputes
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Precautionary reservation of sand for coast nourishment and flood prevention, requirement of TIA as a precautionary measure
F.	Pilot Project Pomeranian Bight / Arkona Basin	+	Precautionary measures similar to those of the German EEZ plan
G.	Pilot MSPs for the	--	The plan as a such has not been elaborated so by

	Western coast of Hiiumaa and Saaremaa and Pärnu Bay		definition precautionary measures are missing.
H.	Finland	+	Precautionary measures related to port development and noise prevention
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	++	Numerous examples of applications of the precautionary approach, particularly to fisheries management and petroleum activities
K.	Maritime Spatial Planning in the Netherlands	++	Precautionary measures related to environment and human health
L.	The UK Marine Policy Statement	.	The intention was expressed in the UK Marine Policy Statement to apply precautionary principle in the UK maritime spatial plans.

Good practice: planning under high level of uncertainty with regard to ecological value of the planned area (Middle Bank) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Middle-Bank;100/1>

5. Participation and Transparency

The principle stress the need to secure participation of all relevant authorities and stakeholders as well as general public in maritime spatial planning initiatives at the earliest possible stage. To allow that planning processes should be open and transparent and in accordance with international legislation. To asses that, one should examine what stakeholders have been involved, how they have been involved and at what stage of the planning process.

Participation has been secured in the course of preparation of all plans. But its extent and intensity has varied. For instance the Latvian plan has been based on genuine public participation as a backbone of plan elaboration methodology. Norwegian plan, Finnish plan, and Pomerania Bight project made room for stakeholders participation at an early stages of their elaboration. Some other plans (Polish, MV) were prepared by the experts and only than consulted with the stakeholders. General public was involved even less frequently (internet consultations in Poland, meetings on spot in Latvia). Since the SEA procedure requires public participation the main issue is not to secure stakeholder involvement but rather to secure the plan ownership by stakeholders themselves. This would require much more sophisticated methods supporting stakeholder participation that should go beyond internet display of documents and organisation of routine meetings.

Another challenge is public participation in cross-border context. So far it was tested only by one project (Pomerania Bight). It seems that such participation would require a new language (use of jointly agreed pictograms) for discussing planning provisions.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	Traditional way of consulting stakeholders
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Traditional way of consulting stakeholders, attempt to involve general public via internet
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	++	Public participation as a core of the planning process led by the cross-sectoral team
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Traditional way of consulting stakeholders, impressive effort to consult foreign authorities
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Traditional way of consulting stakeholders
F.	Pilot Project Pomeranian Bight / Arkona Basin	++	Transnational character of the planning team, testing cross-border involvement of stakeholders, involvement of stakeholders secured at an early planning stage
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	+	Strong but traditional involvement of stakeholders
H.	Finland	+	Participatory process is required by Finnish law on spatial planning. Huge effort is paid to this issue. About 40-50 authorities working on regional / local /national level participated in the plan preparation.

			Also several working groups (gathering the most important stakeholders) and the Regional Consultative Committee on environmental politics were active in the planning process.
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	Focus on transparency of the planning process, wide scope of issues consulted with stakeholders, involvement of stakeholders secured at early planning stage, the whole work led by an interministerial group
K.	Maritime Spatial Planning in the Netherlands	+	Spatial planning as a collective process, involving all authorities—the central government, provinces, municipal councils and water boards.
L.	The UK Marine Policy Statement	+	Stakeholder participation (rules procedures) was elaborated in depth as a key element of preparation of the maritime spatial planning in the UK

Good practice: methodology for stakeholder involvement in the entire planning process (Western coast of Latvia) – source: BaltSeaPlan

http://www.baltseaplan.eu/index.php5?node_id=Latvian+SEA;104&lang_id=1

Good practice: template and know-how on cross-border stakeholder involvement (Pomeranian Bight / Arkona Basin) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Pomeranian-Bight;98/1>

Good practice: visualisation of planning provisions in order to enhance stakeholder dialogue (Hiiumaa and Saaremaa and Pärnu Bay) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Paernu-Bay;116/1>

6. High quality data and information basis

The principle recalls that Maritime Spatial Planning should be based on the best available and up to date comprehensive information of high quality that to the largest possible extent should be shared by all. Presented quantified information should cover both historical baselines, present status as well as future projections of both environmental aspects and human activities. To assess whether a given plan meets those requirements one should check the scope, quality, reliability of data collected, methods of data analysing and processing (use of “decision support tools”) and existence of information gaps and data constraints.

It seems that all plans tried to use high quality, reliable data and information. However, the main methods applied for verification of data validity were debate with stakeholders or/and ad hoc expert verification. It seems that data available at public domain i.e. revealed by national or international (Helcom) providers were treated by definition as the reliable ones. Conscious independent peer review was used only once (UK). However also Norwegian plan used some mechanism for data and knowledge validation through broad scientific debate. In one case (Gdańsk Bay) at spot research has been conducted but this was possible only thanks to luckily coincidence of the planning process and a research project founded outside the planning domain. One should also keep in mind that Gulf of Gdańsk is among rare examples of comprehensive maritime spatial plans requiring more information for their proper elaboration. Only in Finland one can find a conscious attempt to collect necessary data and information for MSP (The Finnish Inventory Programme for the Underwater Marine Environment, VELMU etc.).

As a rule planning teams searched for interdisciplinary data covering different aspects of functioning of marine ecosystems however, particularly in the cases when the SEA was conducted a whole effort was slightly biased towards data and information on marine environment with less emphasis on e.g. social issues. Lack of data was frequently referred as a planning constraint. But only Norway (also Finland has just started) invested time and resources for conscious data collection for the sake of the plan accuracy and reliability. Norwegian plan therefore has baseline information and quantitative targets. In few cases the failure to find necessary data resulted in the comprehensive analysis of information gaps (German EEZ, Middle Bank). Missing or inaccurate data (low resolution) e.g. on habitats were substituted with outcomes of models (e.g. Middle Bank, Pomerania Bight) or by more intensive work with stakeholders (qualitative information). But the lesson learned is that the information gap is among key constraints for maritime spatial planning in the BSR and spatial planners should better familiarize themselves with tools for data validity and intelligent data processing (decision support tools). In particular tools and procedures for impacts assessment should be developed.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	An intensive work devoted to classification of information gaps and researching their main causes
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Extensive information collected thanks to at spot research, traditional data processing (pen and pencil)
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+	Excellent data mining from stakeholders, traditional data processing (pen and pencil)
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Inspiring classification of data gaps hampering the SEA process
E.	Spatial Development programme of	+	First attempt to assess importance of accurate data for

	Mecklenburg-Vorpommern		success of the maritime planning process and for conflict mitigation
F.	Pilot Project Pomeranian Bight / Arkona Basin	++	Use of modelling techniques and decision support tools for data processing, attempt for improving international (cross-border) compatibility of data
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	+	Use of all available data and information, retrieving missing information within the frame of the stakeholder process. The focus of the planning process was on stock-taking.
H.	Finland	+	Use of all available data and information, retrieving missing information within the frame of the stakeholder process, but some important barriers with data availability for sea areas still perceived (e.g. habitat modeling data has not been available during the past planning stages but the research is currently carried out under the lead of the Finnish Environmental institute)
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	++	All three aspects of sustainable development covered, intensive scientific effort to support the plan preparation
K.	Maritime Spatial Planning in the Netherlands	-	Emphasis on collecting comprehensive information on selected uses, modern data processing but no use of decision support tools
L.	The UK Marine Policy Statement	+	A significant body of evidence compiled and verified, emphasis on accuracy and reliability of knowledge and information.

Good practice: identification and classification of information gaps (Middle Bank) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Middle-Bank;100/1>

Good practice: innovative use of Marxan for allocation of wind mill parks (Pomeranian Bight / Arkona Basin) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Pomeranian-Bight;98/1>

Good practice: improving international compatibility of marine data in the BSR (Pomeranian Bight / Arkona Basin, Middle Bank, Western coast of Latvia, Hiiumaa and Saaremaa and Pärnu Bay) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Marine-Database;50/1>

Good practice: identification and classification of information gaps with regard to SEA (German EEZ) – source: BSH http://www.bsh.de/en/Marine_uses/Spatial_Planning_in_the_German_EEZ/documents2/Spatial_Plan_Baltic_Sea.pdf

Good practice: comprehensive research programme in support of MSP (Finland) – source: Finnish Ministry of Environment <http://www.ymparisto.fi/default.asp?contentid=191683&lan=en>

7. Transnational coordination and consultation

The principle reminds about necessity to coordinate maritime spatial plans between the Baltic Sea states and to take into consideration international legislation and the Baltic Sea Region perspective while developing such plans. To assess compliance of the plans with this principle one should examine whether the plan has been consulted with the immediate sea neighbours (country and regional level), how cross-boundary effects with the neighbouring marine areas have been taken into consideration, and to what extent international legislation and Baltic Sea region perspective has been referred and applied.

7.1. International legislation

Since compliance with pan-Baltic visions have been assessed under point 3.1. here reference to international legislation should be only checked.

All plans refer to some kind of international legislation first of all to the EU environmental Directives and regulations (on fishery). UNCLOS is frequently referred too but it is missing in some cases. Also HELCOM/OSPAR recommendations and various environmental convention (e.g. the Bonn Convention) and those dealing with safety of navigation (IMO) have been frequently mentioned as the plan foundations. In the provisions of many plans (German, Middle Bank, Pomerania Bight) one can find direct influence of those international legal documents. Only few plans, however contain references to international regulations on underwater cultural heritage. This seems the main deficit in this field. The same observation applies to the Convention on Climate Change although the climate change has been addressed in many plans without mentioning the Convention.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	++	Template of international pieces legislation that should be referred to. Legislation analysed in relation to different issues (navigation, environment, linear infrastructure, underwater heritage, fishery and mariculture, research, mining, power production).
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Reference only to key pieces of international legislation
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+	Reference to key pieces of international legislation, weak references to UNCLOS
D.	Spatial plan for the German EEZ of the Baltic Sea	++	Model implementation of international legislation as a source of the provisions of the plan
E.	Spatial Development programme of Mecklenburg-Vorpommern	+/-	Mainly environmental international legislation considered
F.	Pilot Project Pomeranian Bight / Arkona Basin	++	Detailed references to all relevant pieces of international legislation. Legislation analysed in relation to different issues (navigation, environment, linear infrastructure, underwater heritage, fishery and mariculture, research, mining, power production).
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa	+	References to: Maritime Policy of the EU, several EU environmental directives, UNCLOS, HELCOM recommendations, Convention on Biological Diversity, the Espoo Convention) and some other

	and Pärnu Bay		pieces of international legislation .
H.	Finland	+ -	Mainly environmental international legislation considered, lack references to UNCLOS
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	References to UNCLOS, the OSPAR Convention, Convention on Climate Change, Kyoto Protocol, and the international agreements on emissions of nitrogen oxides, sulfur dioxides, and volatile organic compounds, and some other conventions related to trans-boundary chemical pollution
K.	Maritime Spatial Planning in the Netherlands	+	Reference to key pieces of international legislation
L.	The UK Marine Policy Statement	+	Reference to key pieces of international legislation

Good practice: Comprehensive list of international legislation relevant for MSP in the EEZ. (Middle Bank, German EEZ) – source:

BaltSeaPlan <http://www.baltseaplan.eu/index.php/Middle-Bank;100/1>,

BSH http://www.bsh.de/en/Marine_uses/Spatial_Planning_in_the_German_EEZ/documents2/Spatial_Plan_Baltic_Sea.pdf,

7.2. Cross-border coordination

Only one plan (Southern Middle Bank) contains specific provisions for a cross-border co-ordination of the sea space activities in the planned area. Although such provisions seem imperfect and questionable this is a right direction of enhancement of a coherent use of the sea space. Also one plan (Pomerania Bight) has been prepared by the cross-border planning team with an active use of cross-border procedures (e.g. stakeholder involvement, data compatibility, data exchange etc). Two plans (German) were consulted with the neighbouring countries as an indispensable part of the planning process in line with the German law. Other plans did not pay sufficient attention to a cross-border coordination. However, it should be noted that this principle will be fulfilled anyway thanks to the legal requirements to consult the Strategic Environmental Assessment (SEA) reports. The SEA Directive requires consultation with other EU member states, (and European Economic Area states), where maritime plans are likely to have a significant effect on the environment in their territories.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	Genuine cross-border provisions ensuring joint management of the coastal zone area, lack of cross-border stakeholder participation
B.	Pilot MSP for Western part of the Gulf of Gdańsk	.	Cross border aspects hardly considered due to location of the planned area far from external Polish sea borders
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	-	Cross-border consultations planned in the future when relevant national legislation is adopted in LV.
D.	Spatial plan for the German EEZ of the	+	Cross-border consultations of the plan and the SEA report

	Baltic Sea		
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Cross-border consultations of the plan and the SEA report
F.	Pilot Project Pomeranian Bight / Arkona Basin	++	Genuine cross-border preparation of the plan. Four different national teams co-operating. Four national stakeholder processes run and co-ordinated.
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	+-	Potential cross-boundary effects have been considered and will be stressed in the draft MSP (to be implemented when the official planning procedure will start)
H.	Finland	-	Russian officials have not been involved in the planning process. The Regional Council of Kymenlaakso maintains cooperation with Russian officials (St Petersburg area and Leningrad oblast) on a general level and on project base. The regional plans did not include activities or planning initiatives that would have demanded international consultations for example according to the Espoo (EIA) Convention
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	Proposals for strengthening cooperation between Norway and Russia, particularly through the new Norwegian-Russian working group on the marine environment under the Joint Norwegian-Russian Commission on Environmental Protection
K.	Maritime Spatial Planning in the Netherlands	+	Initiative to formulate an international strategy for the southern part of the North Sea
L.	The UK Marine Policy Statement	+	Institutional arrangements for cross-border coordination

Good practice: delimitation of ‘Transborder area’ along maritime border with requirement of transborder consultations (Southern Middle Bank) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Middle-Bank;100/1>,

Good practice: template for four-lateral planning (Pomeranian Bight / Arkona Basin) – source: BaltSeaPlan <http://www.baltseaplan.eu/index.php/Pomeranian-Bight;98/1>

8. Coherent terrestrial and maritime spatial planning

The principle reminds about necessity to coordinate maritime and terrestrial spatial plans and strategies. Since coordination with national plans, strategies and policies has been discussed under point 1 and 3.1 here the focus will be limited to coordination with local and regional terrestrial spatial plans and strategies. To examine the compliance of a given plan with this principle one should ask what terrestrial plans and strategies have been analysed while preparing maritime spatial plans and how they influenced provisions of the maritime spatial plan and vice versa.

This principle is of little relevance for plans covering EEZ exclusively, although here one can expect some linkages in terms of e.g. technical infrastructure. So it is clear why EEZ plans paid less attention to that question. However some improvements can be envisaged in this respect. Other plans paid due attention to such type of coordination. This could be seen at stock-taking phase when terrestrial aspect where analysed as a preconditions for sea space management (Gulf of Gdańsk, Pomerania Bight, Latvian plan). It can be also judged on the basis of active participation of genuine terrestrial stakeholders such as tourism sector representatives. Only few plans (Finland, MV, Latvia) cover both sea and terrestrial part and therefore have strong methodological mechanisms ensuring sea-land coherence. In Finland and M-V the plan covers entire territory of the county or federal state accordingly whereas in Latvia the pilot plan covers sea area plus land that functionally is bounded to the sea.

The main weakness in the sea-land planning coordination is lack of legal requirements on coordination between maritime and terrestrial plans. The exception is Germany and Finland (to some extend also Estonia) where relevant law guides coherent preparation of land and sea parts of plans of the federal states or counties. In Poland (Gulf of Gdańsk) new legal provisions (expected soon) will ensure proper coordination between maritime and terrestrial spatial plans during the planning process. However as indicated by UK example land-sea coordination is more complex than only clear legal division and coordination of responsibilities. It requires also consistency of policy documents and guidance, liaison between authorities included in plan development, implementation and review stages, and sharing the evidence base and data.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	-	Location far away from the coast
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+	Via analysis of terrestrial developmental plans and strategies and via stakeholder participation
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+	Via analysis of terrestrial developmental plans and strategies and via stakeholder participation
D.	Spatial plan for the German EEZ of the Baltic Sea	-	Location far away from the coast
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Both sea (12nm zone) and land covered
F.	Pilot Project Pomeranian Bight / Arkona Basin	+	Via analysis of terrestrial developmental plans and strategies and via stakeholder participation
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa	+	Via analysis of terrestrial developmental plans and strategies and via stakeholder participation

	and Pärnu Bay		
H.	Finland	+	Both sea (12nm zone) and land covered
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	-	Impacts on the coastal zone caused by activities in the Barents Sea–Lofoten area as the only mean of land-sea coordination
K.	Maritime Spatial Planning in the Netherlands	+	National Water Plan as a sea land integrator
L.	The UK Marine Policy Statement	+	Comprehensive system for ensuring integration of marine and terrestrial planning (consistency of documents, liaison between authorities, sharing the evidence base and data)

Good practice: joint elaboration of the maritime spatial plan by terrestrial and maritime planners (Gulf of Gdańsk) – source: Maritime Institute in Gdańsk
http://www.im.gda.pl/images/ksiazki/2010_pilot-draft-plan_zaucha.pdf

9. Planning adapted to characteristics and special conditions at different areas

The principle calls for acknowledgement of the characteristics and special conditions of the different sub-basins within maritime spatial plans. It applies mainly to large strategic plans covering vast sea spaces but can also be used in the plans of limited spatial size. To examine the compliance of a given plan with this principle one should ask whether different sea basins (subareas/zones) have been identified in the plan and what methodology has been used for delimitation of the sea basins (subareas/zones).

In almost all plans different sub-areas (zones) there have been created. Under stock-taking a lot of effort have been paid to this question. In particular the search was for the most suitable subareas for different sea uses. In Pomerania Bight plan decision support tools (MARXAN) were used to facilitate this process. The most comprehensive attempt to delimitate functional grid of subareas has been done in the plan of Gulf of Gdańsk. This was possible since the planned area has been well researched in advance and ecological connections were identified. Preparation of the comprehensive plan for Gulf of Gdańsk, and separate plan only for the Pomerania Bight, delimitation of boundaries for English plans, delimitation of boundary for Latvian plan can also be treated as an evidence of planning adapted to characteristics and special conditions of different areas.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+	Different characteristics of the planned area examined in depth to find the most suitable sea basins for different uses
B.	Pilot MSP for Western part of the Gulf of Gdańsk	++	Delimitation of sea basins (subareas) based on their features and properties, sea basins constituting functional grid covering the whole planned area
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	+	Different characteristics of the planned area have been examined in depth to find the most suitable sea basins for different uses
D.	Spatial plan for the German EEZ of the Baltic Sea	+	Different characteristics of the planned area examined in depth to find the most suitable sea basins for different uses,
E.	Spatial Development programme of Mecklenburg-Vorpommern	+	Different characteristics of the planned area examined in depth to find the most suitable sea basins for different uses, but limited number of uses considered
F.	Pilot Project Pomeranian Bight / Arkona Basin	+	Comprehensive analysis of characteristics and special conditions of the different sub-basins
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	-	Mainly environmental characteristics (habitats) have been analysed in depth but plan has failed to use those characteristics to formulate conditions for location of new uses.
H.	Finland	+	Different characteristics of the planned area examined in depth to find the most suitable sea basins for different uses
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the	+	The delimitation of the area partially based on ecological considerations, measures and activities

	Barents Sea and the Sea Areas off the Lofoten Islands		adapted to conditions in different areas, zoning approach based on vulnerable areas
K.	Maritime Spatial Planning in the Netherlands	+	Considerable analysis was conducted to allow the delimitation of various zones within the Dutch EEZ. In 2005 a report („Areas with Special Ecological Values on the Dutch Continental Shelf”) proposed boundaries of the areas with special ecological values that were eventually incorporated into the Integrated Management Plan for the North Sea.
L.	The UK Marine Policy Statement	+	Marine area boundaries identified using information, expert advice and stakeholder views from a number of public consultations

Good practice: delimitation of ‘sea basins based on functional characteristics in a type of maritime spatial plan similar to local land use comprehensive plans(Gulf of Gdańsk) – source: Maritime Institute in Gdańsk http://www.im.gda.pl/images/ksiazki/2010_pilot-draft-plan_zauchy.pdf

10. Continuous planning

The principle reminds that planning is a continuous process that will need to adapt to changing conditions and new knowledge. Therefore monitoring and evaluation should form an immanent part of the planning process. Public participation is essential for their success. To examine the compliance of a given plan with this principle one should ask whether legal responsibility for preparing maritime spatial plans has been clearly assigned, what are the legal provisions for monitoring and assessment of the results of the plan including methodology, indicators (targets), and what is the role of stakeholders (also international ones) in this process.

10.1 Right to plan (ownership of the planning process)

Legal responsibility to plan is important for avoiding situation of ad.hoc plans prepared on demand of sectoral interest or societal groups. Without “ownership” of the planning process one cannot ensure continues planning in which new plans draw on the lessons of their predecessors. Therefore one should examine whether the planning body had legal competences for preparation of the given plan.

Sufficient legal basis securing ownership of the planning process have been secured in Germany, Sweden, UK and to some extent also in Poland where the change of the planning law enabling fully binding maritime spatial planning is expected soon. Also In Finland and Estonia the current regulations enable county level to plan the sea but this is limited to territorial waters. Moreover in Estonia there is a need to delimitate first sea border between counties to start the MSP process. This will be done soon. Some stimuli from business or/and national government would encourage the counties to exercise more vigorously their sea planning rights both in Finland and in Estonia. In other countries legal provisions are under preparation or in some cases need reformulation or sometimes awareness rising measures to convince responsible authorities to make full use of the possibility to plan the sea space. The most interesting is case of Norway. The Norwegian plan has no legislative authority and is not directly legally binding, but is enforceable through concerted action of different public authorities.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	+-	Legal responsibility assigned but more complex legal provisions still under preparation
B.	Pilot MSP for Western part of the Gulf of Gdańsk	+-	Legal responsibility assigned but more complex legal provisions still under preparation
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	- -	Lack of proper legislation, lack of legal responsibility to plan
D.	Spatial plan for the German EEZ of the Baltic Sea	++	Sufficient legal basis for ensuring legal responsibility to plan
E.	Spatial Development programme of Mecklenburg-Vorpommern	++	Sufficient legal basis for ensuring legal responsibility to plan
F.	Pilot Project Pomeranian Bight / Arkona Basin	+-	Different situation in different countries (e.g. no legal basis for MSP in Denmark)
G.	Pilot MSPs for the Western coast of	+-	The current regulations enable counties to plan maritime areas in Estonia and some counties plan to

	Hiiumaa and Saaremaa and Pärnu Bay		exercise this right in the years to come (e.g. Pärnu county in 2012). Delimitation of sea borders between counties is expected in the nearest future.
H.	Finland	+	The current regulations enable counties to plan maritime areas in Finland and some counties has already exercised this right in the recent years
I.	Sweden	++	Sufficient legal basis for ensuring legal responsibility to plan
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	Enforceability of plan despite lack of legislative authority
K.	Maritime Spatial Planning in the Netherlands	++	Sufficient legal basis for ensuring legal responsibility to plan
L.	The UK Marine Policy Statement	++	Sufficient legal basis for ensuring legal responsibility to plan

Good practice: the comprehensive attempt to create a new body of legislation in support of MSP (UK, Sweden) – source: The UK Department for Environment, Food and Rural Affairs (Defra) <http://archive.defra.gov.uk/corporate/consult/marine-planning/110318-marine-planning-descript.pdf>, Swedish Agency for Marine and Water Management <http://www.havochvatten.se/en/start/marine-planning.html>

Good practice: extension of existing planning legislation towards sea (Finland, Germany) – source: BSH http://www.bsh.de/de/Meeresnutzung/Raumordnung_in_der_AWZ/Artikel_Hansa.pdf

10.2. Monitoring and evaluation

Almost all BSR plans (exception is Finland and to some extent Germany) lack concrete provisions in relation to their monitoring and evaluation. Although Norwegian and Dutch plans are equipped with monitoring systems, they are focused on monitoring situation of the planned area (e.g. state of marine environment or climate change) rather than “performance” of the plans. A system of the genuine “performance” monitoring of the maritime plans perhaps will be created in the UK in the future.

	Plan	Assessment	Remarks
A.	Pilot MSP for the Southern Middle Bank	–	No specific provisions for monitoring, evaluation and amendments.
B.	Pilot MSP for Western part of the Gulf of Gdańsk	–	No specific provisions for monitoring, evaluation and amendments.
C.	Pilot maritime spatial plan for the Western coast of Latvia and the adjacent waters	–	No specific provisions for monitoring, evaluation and amendments.
D.	Spatial plan for the German EEZ of the Baltic Sea	+–	No specific provisions for monitoring, evaluation and amendments with exception to environmental impacts. But the plan will be revised in regular intervals.

E.	Spatial Development programme of Mecklenburg-Vorpommern	+-	No specific provisions for monitoring, evaluation and amendments with exception to environmental impacts. But the plan will be revised in regular intervals.
F.	Pilot Project Pomeranian Bight / Arkona Basin	--	Monitoring, evaluation and amendments not covered by the plan since it will remain of non binding (e.g. guiding) nature
G.	Pilot MSPs for the Western coast of Hiiumaa and Saaremaa and Pärnu Bay	--	No specific provisions for monitoring, evaluation and amendments since the planning process did not end with the genuine maritime plan and only with recommendations for location of new uses.
H.	Finland	+	According to the Finnish land use and building act implementation of the plan is monitored and reviewed at appropriate periods by the Regional Council in cooperation with the stakeholders. Review of the appropriateness of the plan policies is evaluated in every legislation period (4 years). A short overview on implementation and monitoring of the regional plan is given every second year ("Aluekehityskatsaus"). Monitoring and need for reviewing the plan is reported to the Board of the Regional Council and the Assembly of the Council.
I.	Sweden		
J.	Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands	+	An integrated monitoring system (although focused on ambient environmental monitoring and not "performance" monitoring)
K.	Maritime Spatial Planning in the Netherlands	+	Plans revised, if deemed necessary, every six years, but performance monitoring and evaluation missing
L.	The UK Marine Policy Statement	+	Effectiveness of maritime plans under review not less than every three years after each plan is adopted

Good practice: advanced plans to introduce a monitoring system for systematic assessment of ecosystem quality i.e. use of indicators, reference values and action thresholds to provide a basis for more systematic evaluation of trends in ecosystems in the area (the Barents Sea and the Sea Areas off the Lofoten Islands) – source: The Royal Norwegian Ministry of the Environment http://www.regjeringen.no/upload/MD/Vedlegg/STM200520060008EN_PDF.pdf

Good practice: the concept of the permanent monitoring plan as an implementation support instrument (UK) – source: The UK Department for Environment, Food and Rural Affairs (Defra) <http://archive.defra.gov.uk/corporate/consult/marine-planning/110318-marine-planning-descript.pdf>,

Conclusions

The compliance with the VASAB-HELCOM principles on the broad scale MSP of the planes analysed seems pretty high. The most troublesome seems the last principle on continues planning.

For cross-border coordination so far traditional methods of consultations have been mainly used whereas more interactive solutions (joint preparation of plans, cross-border involvement of stakeholders) have been discovered and tested only recently. The methodology of cross-border planning also needs further development in order to enhance implementation of the principle on cross-border co-ordination. The same is true for stakeholder involvement that requires new and fresh approach. However, few plans have already provided a kind of a blue print how it should be organised in line with contemporary planning knowledge.

Another important observation is insufficient attention in many plans to the social aspects of sustainable development. This might hamper full-fledge implementation of the first principle.

For better implementation of the principle dealing with ecosystem approach more work is necessary in order to develop qualitative descriptors for determining the good environmental status and translating them into the MSP activities and decisions. Baltic debate on the SEA methodology would also facilitate implementation of the precautionary principle in the cross-border context.

Implementation of the VASAB-HELCOM principles might seem even more difficult in the cross-border context, in particular in the situation when the entire Baltic Sea is covered by different national maritime plans impacting each other. It seems that following is necessary to ensure that those principles would have sufficient power to maintain its guiding role in such circumstances of intensive planning by all nations:

1. Existence of a vision of spatial development of the Baltic Sea,
2. Tentative agreement on the main targets to be achieved under different policies¹⁷ (e.g. how much energy we want to produce in the Baltic Sea, what maritime landscapes should be protected etc.).
3. Tentative agreement on the joint qualitative descriptors for determining the good environmental status.
4. Minimum common denominator in the SEA reports structure and layout facilitating cross-border conceratations.
5. Joint communication frame for presentation of plans and their debating (pictograms?).
6. Joint Baltic research agenda facilitating collection and processing data necessary for the MSP.
7. Blue prints of /good practices on:
 - monitoring and evaluation systems of performance of the maritime spatial plans,
 - planning provisions (methodology) for enhancement of the cross-border co-operation in the sea space management and reducing negative cross-border impacts and risks,
 - application of precautionary provisions in different planning circumstances,
 - assessment of impact of planning provisions on long term phenomena such as the climate change, eutrophication, biodiversity, food web etc/ or alternatively on the ecosystem services.

Some good practices outlined below can provide answer to the listed above challenges and suggested directions of the further development of the MSP in the BSR.

¹⁷ Fishery Policy can be treated as a blue print

III. Good Practices in depth

In the previous chapter several good practices on implementation of the VASAB-HELCOM principles have been identified (see also table below).

Name of principle and related good practice	Location	Source
Principle 1. Sustainable management		
1.1 Balance between economic, environmental, social and other interests		
Good practice: know how on maritime spatial planning in Natura 2000 areas	Gulf of Gdańsk	Maritime Institute in Gdansk
Good practice: methodology for socio-economic impact assessment of different sea uses.	Western coast of Latvia	BaltSeaPlan in particular BEF Latvia
1.2. Integration of sectoral planning		
Good practice: template on integration of sectoral planning into MSP	Pomeranian Bight / Arkona Basin, Middle Bank, Western coast of Latvia, Hiiumaa and Saaremaa and Pärnu Bay	BaltSeaPlan
Principle 2. Ecosystem approach		
2.3. Good status of the Baltic Sea ecosystem		
Good practice: template for ecosystem based management of sea areas including also elaboration of a set of coherent indicators necessary for the establishment of a system that enables continuous monitoring of the state of the ecosystem	Barents Sea and the Sea Areas of the Lofoten Islands	The Royal Norwegian Ministry of the Environment
2.2. Protection of the marine environment.		
Good practice: noise free zones	Gulf of Gdańsk	Maritime Institute in Gdansk
Good practice: joint addressing such phenomena as nature conservation, protection of open spaces with respect to functional soils, water budget, and climate change	German EEZ	Maritime and Hydrographic Agency (BSH)
Principle 3. Long term perspective and objectives		
3.1 Long term vision and other long term strategies		
Good practice: relating maritime spatial plans to the overall spatial development visions and strategies. Influencing preparation of national visions of such types	Gulf of Gdańsk	Maritime Institute in Gdansk
Good practice: elaboration of joint Baltic wide vision for spatial development of maritime areas	Pomeranian Bight / Arkona Basin, Middle Bank, Western coast of Latvia, Hiiumaa and Saaremaa and Pärnu Bay	BaltSeaPlan
3.2 Planning horizon and forward looking approach		

Good practice: planning provisions on re-use of the sea space e.g. on dismantling structure and infrastructure out of use or broken down	German EEZ, Southern Middle Bank	Maritime and Hydrographic Agency (BSH), BaltSeaPlan in particular Maritime Institute in Gdansk
Principle 4. Precautionary Principle		
4.1 SEA		
Good practice: methodology for SEA for maritime plans	German EEZ, Gulf of Gdańsk	Maritime and Hydrographic Agency (BSH), BaltSeaPlan in particular Maritime Institute in Gdansk
4.2. Precautionary measures		
Good practice: planning under high level of uncertainty with regard to ecological value of the planned area	Southern Middle Bank	BaltSeaPlan in particular Maritime Institute in Gdansk
Principle 5. Participation and Transparency		
Good practice: methodology for stakeholder involvement in the entire planning process	Western coast of Latvia	BaltSeaPlan in particular BEF Latvia
Good practice: template and know-how on cross-border stakeholder involvement	Pomeranian Bight / Arkona Basin	BaltSeaPlan in particular WWF Germany
Good practice: visualisation of planning provisions in order to enhance stakeholder dialogue	Hiiumaa and Saaremaa and Pärnu Bay	BaltSeaPlan in particular University of Tartu (Estonian Marine Institute)
Principle 6. High quality data and information basis		
Good practice: identification and classification of information gaps	Southern Middle Bank	BaltSeaPlan in particular Maritime Institute in Gdansk
Good practice: using modelling techniques for maritime spatial planning	Southern Middle Bank	BaltSeaPlan in particular Danish National Environmental Research Institute (NERI)
Good practice: innovative use of Marxan for allocation of wind mill parks	Pomeranian Bight / Arkona Basin	BaltSeaPlan in particular Aarhus University
Good practice: improving international compatibility of marine data in the BSR.	Pomeranian Bight / Arkona Basin, Southern Middle Bank, Western coast of Latvia, Hiiumaa and Saaremaa and Pärnu Bay	BaltSeaPlan
Good practice: Identification and classification of information gaps with regard to SEA	German EEZ of the Baltic Sea	Maritime and Hydrographic Agency (BSH),
Good practice: comprehensive research programme in support of MSP	Finland	Finnish Environment Ministry
Principle 7. Transnational coordination and consultation		
7.1. International legislation		

Good practice: Comprehensive list of international legislation relevant for MSP in the EEZ.	Southern Middle Bank, German EEZ of the Baltic Sea	Maritime and Hydrographic Agency (BSH), BaltSeaPlan in particular Maritime Institute in Gdansk
7.2. Cross-border coordination		
Good practice: Delimitation of “Transborder area” along maritime border with requirement of transborder consultations.	Southern Middle Bank	BaltSeaPlan in particular Maritime Institute in Gdansk
Good practice: template for four-lateral planning	Pomeranian Bight / Arkona Basin	BaltSeaPlan
Principle. 8 Coherent terrestrial and maritime spatial planning		
Good practice: joint elaboration of the maritime spatial plan by terrestrial and maritime planners	Gulf of Gdańsk	Maritime Institute in Gdansk
Principle 9. Planning adapted to characteristics and special conditions at different areas		
Good practice: delimitation of ‘sea basins based on functional characteristics in a type of maritime spatial plan similar to local land use comprehensive plans	Gulf of Gdańsk	Maritime Institute in Gdansk
Principle 10. Continuous planning		
10.1 Right to plan (ownership of the planning process)		
Good practice: The comprehensive attempt to create a new body of legislation in support of MSP	UK, Sweden	The UK Department for Environment, Food and Rural Affairs (Defra), Swedish Agency for Marine and Water Management
Good practice: Extension of existing planning legislation towards sea	Finland, Germany	Maritime and Hydrographic Agency (BSH), Finnish Environment Ministry
10.2. Monitoring and evaluation		
Good practice: advanced plans to introduce a monitoring system for systematic assessment of ecosystem quality. This will use indicators, reference values and action thresholds to provide a basis for more systematic evaluation of trends in ecosystems in the area.	the Barents Sea and the Sea Areas off the Lofoten Islands	The Royal Norwegian Ministry of the Environment
Good practice: the concept of the permanent monitoring plan as an implementation support instrument	UK	The UK Department for Environment, Food and Rural Affairs (Defra)

Majority of the listed above good practices have been generated under the BaltSeaPlan project due to its methodological breadth and impressive geographical coverage. One should also keep in mind that

the project has been characterised by relatively high budget and comprehensive partnership. However, several good practices have also been indicated outside the BaltSeaPlan domain.

Out of them the five most important practices for ensuring cross-border maritime spatial planning have been chosen for in depth presentation. Those practices concern following issues:

- SEA methodology – due to need of joint common denominator of the SEA reports for the maritime spatial plans at the Baltic sea basin level;
- Information gaps and ways of their alleviation – since only Baltic-wide coordinated effort in this field can allow to produce evidence based maritime cross-border spatial plans;
- BSR data model – since cross-border maritime spatial planning needs joint data standards for easy data exchange;
- Conscious Inventory– since cross-border maritime spatial planning needs conscious decision among BSR countries on priorities with regard to maritime research uncoordinated action in this field will only add to the existing information gaps;
- Regional Strategy – since existence of such Baltic-wide vision is an important prerequisite for coherent cross-border planning in particular deciding about priorities, ensuring synergies among plans and safeguarding proper conflict mitigation.

On top of that a good practice on stakeholders involvement has been also described in depth. The reason is lack of convincing good practices on stakeholder cross-border involvement from the very start of the planning process. Therefore the national good practices should be analysed first since proper stakeholder involvement is an important prerequisite for the success of the planning process.

1. Stakeholders involvement

Title of good practice: Methodology for stakeholder involvement in maritime spatial planning in the case of insufficient legal procedures and provisions

Location of good practice: Latvia

Short Summary:

This good practice illustrate how to involve stakeholders into the maritime spatial planning process from the very beginning. It also shows how to use efficiently stakeholder participation for: (1) ensuring broad ownership of the plan (this is important for securing implementation of non-binding spatial plans), (2) increasing information base for producing meaningful planning provisions, (3) avoiding conflicts in decision making process and implementation of MSP, (4) increasing awareness on different sea uses, their needs and problems. Moreover this good practice illustrates how to combine stakeholders and general public participation. The experience was accumulated and verified within the frame of the BaltSeaPlan project.

Issue (importance of a good practice)

In many BSR countries responsibility for preparation of maritime spatial plans have not been legally decided. In such a case MSP is possible only as a voluntary effort based on co-operation of different stakeholders and interest groups. Moreover one should remember that public participation in spatial planning in particular in E-BSR countries, in many cases is of narrow (passive) character. It is frequently limited (in many cases in line with legal requirements) to consultation of the plans prepared in advance by the experts or professional planning teams. Stakeholders are rarely involved at the early planning stage. Latvian good practice shows that this can be changed and that plan gains in quality from early involvement of stakeholders. . The Latvian practice encourages to move planning process

from the solely expert based towards the stakeholder driven. The only requirement is a comprehensive mix of stakeholders to avoid favouring any interest.

Lessons learned

1. Stakeholders bring relevant knowledge and information and are instrumental in genuine consensus seeking which is the essence of the spatial planning process.
2. The stakeholder participation from an early stage ensures broader ownership of the plan and improves their willingness to comply with jointly elaborated provisions. This allows also stakeholders to learn the real reasons and meaning of MSP (the aims, steps, of the process etc).
3. Stakeholder participation need wise management. There is need for different channels of involving stakeholders to the planning process. In Latvian case there was a clear difference between authorities, NGOs and general public. Competent authorities (regional and national having stake in maritime space development) were invited to the coordination group. The group was responsible for coordination of the entire maritime spatial planning process. The local and regional interests (e.g. the municipalities, the harbour/port authorities, scientists/experts on habitats and species conservation, fishermen, representatives of tourism sector and developers from the companies in charge of the cable and linear infrastructure) were involved via different events organized at spot. For some stakeholders (e.g. local fisherman) targeted communication was necessary to bring them to the process. For a broad stakeholder involvement different stakeholders' events were organized. There were following types of those events:
 - methodological workshops,
 - stakeholders meetings,
 - thematic meetings.

The essence of those events was in informing stakeholders and joint elaboration of some important brick stones of the plan (stock-take, conflict identification and management, zoning). To deepen dialogue with the most important stakeholders also four thematic meetings were organized in the course of three months. They covered:

- Fishery sector,
- Wind park developers,
- Port administrations,
- Local authorities and tourism sector.

For details see Fig. III. 1.

4. Extremely important is proper identification of stakeholders. The stakeholders have been identified by the following criteria:
 - Decision makers and relevant competences with regard to sea uses on national, regional or local level,
 - Main sea users (representatives of economy sectors, through associations) based on the analyses of the existing situation with sea uses,
 - Potential sea users – energy sector, mineral oils investigation areas,
 - Local coastal municipalities and their union – to ensure sea-land interface,
 - Environmental NGOs,
 - Scientists and scientific institutions working on marine issues.
5. Stakeholders process should not be of a decorative nature. Stakeholders can be used for elaboration of planning provisions. In Latvian case the most important planning provisions were elaborated during those meetings (see point 6).

6. Stakeholder process should follow a logical sequence showing stakeholders importance of their inputs and the progress achieved. In Latvian case the first meeting served as a forum for presentation of reasons and benefits out of the MSP. The second meeting was used for discussing conflicts and possible ways of their mitigations and alleviation. The third meeting was devoted to elaboration of zones and related requirements on sea uses. This was important for outlining possible solutions for cross-sectoral conflicts and balanced sea use e.g. for preparation of tentative provisions of the plan. Also the goals and zoning of the sea space was discussed and negotiated between the stakeholders and authorities jointly during the stakeholders events.
7. Innovative methods for stimulating discussion can improve the outcome of the planning process. In Latvian case for stimulating discussions some interactive methods have been used (e.g. World Café Method, round tables, maps etc.) and they were assessed positively by the stakeholders.
8. Place of location of meeting with stakeholders matters. In Latvian case the meetings were organized in different parts of the Latvian coast. This was important to ensure participation of local stakeholders. Only national and regional stakeholders took part in all meetings whereas local ones usually limited their presence to the meetings held nearby. Therefore for instance fishermen participated in all three meetings but there were different people.
9. Stakeholder process need driving force behind and careful preparations. In Latvian case the driving force was BEF. Between the stakeholders meetings methodological seminars were organised. They were attended by the most active and devoted stakeholders. During those seminars the methodology for analysing and handling conflicts and for zoning has been elaborated. This methodology was then used during stakeholder meetings.
10. The following conclusions outlining key conditions for successful stakeholder participation process have been formulated by the planning team:
 - A key prerequisite is transparency and openness of the process as such.
 - It is important that all information is shared with stakeholders, that planning team is open to all stakeholders and treat their interests equally.
 - To achieve consensus the negotiations of the spatial division shall be conducted with active involvement of all stakeholders.
 - To avoid failures in identification of all relevant stakeholders it is important to make press releases before the stakeholder events or to ask other participants to disseminate the information further on.
 - The participation in different events with presentations related to marine issues also increases the transparency of the process and might result in involvement of some new stakeholders.

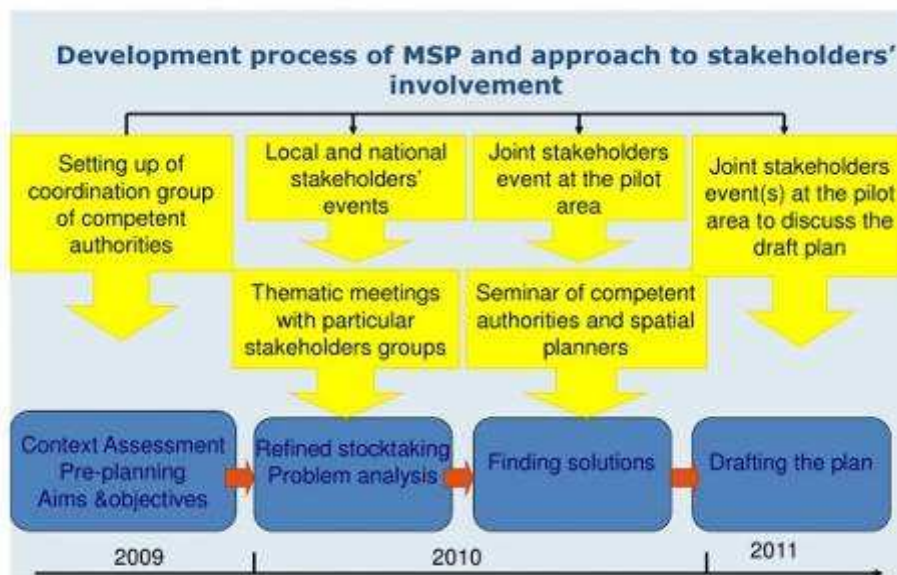


Fig III.1 Latvian stakeholder process

Source BEF Latvia

2. SEA

Title of good practice: Methodology for SEA for maritime spatial plans

Location of good practice: Poland

Short Summary:

This good practice illustrates how to prepare the SEA report for maritime spatial plans in line with the spirit of the SEA Directive when the planned area contains Natura 2000 sites. The SEA prepared in Poland clarifies methodological differences in preparation of the SEA for Natura 2000 sea basins and other waters, examines impact of the plan implementation on human beings as part of the environment and it covers sea land interactions (e.g. impact of implementation of the maritime plan on the terrestrial environment). The experience was accumulated and tested within the frame of the BaltSeaPlan project.

Issue (importance of a good practice)

Many maritime spatial plans have started to be produced in the Baltic Rim recently. Therefore the BSR countries face similar challenge to prepare methodology for SEA for such type of plans. It seems that the demand on know-how on preparation of the SEA for maritime plans will grow in the BSR. Polish case has strong methodological part describing all problems the SEA team coped with during preparation of the document. Moreover due to high probability of transboundary consultations of the SEA for maritime spatial plans it would be desirable if those plans could have at least joint methodological roots (followed similar logic of assessment) or could be based on joint BSR methodological denominator (similar typology of impacts, similar approach to BSR strategies and documents etc). Polish case can serve as a starting point for such discussions among the BSR countries.

Lessons learned

1. For conducting a proper SEA process the starting point should be in identification of all sea uses with significant effects on the environment. For proper identification of all those uses there is a need for a multidisciplinary team, intensive involvement of the stakeholders and co-operation or availability of the planning team who already conducted

the stock-taking exercise. In the Polish case planning team (those elaborating the given maritime plan) supported the SEA process answering questions, explaining provisions of the plan. The example of sources identified in the Gdańsk Bay is provided in Fig III.2. Some sources of impact (mariculture, extraction of oil and gas) have not been analysed due to the plan provisions excluding them at the whole area of the plan.

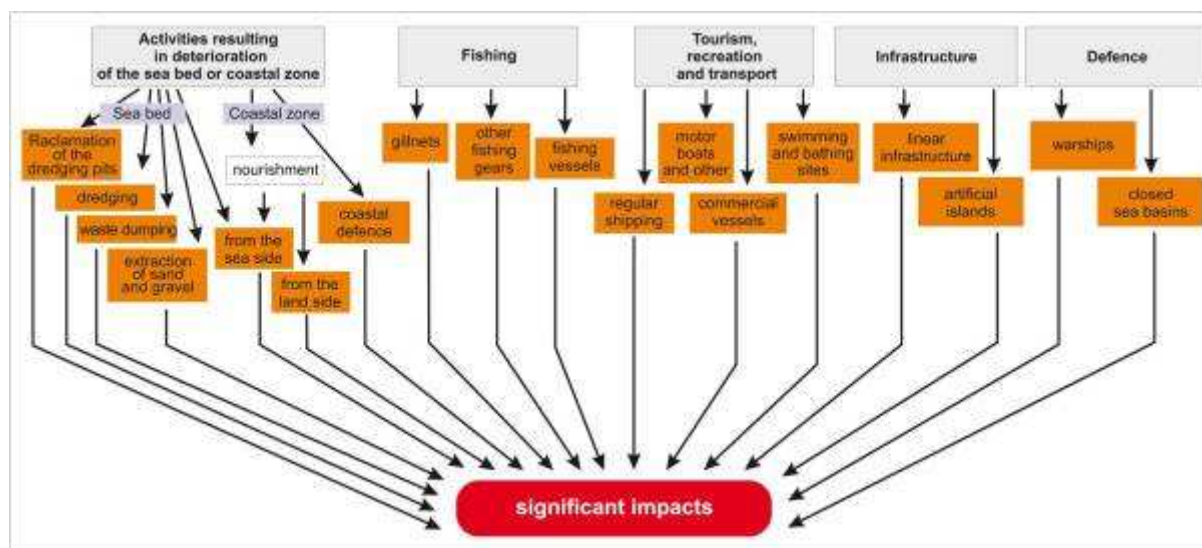


Fig.III.2. Sources of potentially significant impacts on environment

Source: L. Kruk-Dowgiałło, R.Opioła, M. Michałek-Pogorzelska (EDs.), *Prognoza oddziaływania na środowisko Pilotażowego projektu planu zagospodarowania przestrzennego zachodniej części Zatoki Gdańskiej*, Wydawnictwa Wewnętrzne Instytutu Morskiego w Gdańsku Nr 6603, Gdańsk 2011 p.11

3. When the SEA covers Natura 2000 areas equally important is understanding the reason of their creation (what is to be protected) and critical verification of those ambitions with the reality of habitats. It is crucial to have a clear picture of conservation objectives subjects of protection, and integrity of Natura 2000 sites/areas and of all other important components of the natural environment. At this stage close collaboration with nature protection authorities is the must. Also literature review in particular screening all relevant existing analysis is important part of this process of building the ecosystem understanding. Without these one can risk serious gaps in the SEA analysis.
4. The previous steps (interactions with stakeholders, environmental authorities, planning team literature review) allowed for preparation of the detailed list of objects (elements of the environment) that should be subject to the assessment of the impact of plan implementation. It was decided to make separate assessment for the elements (components) of the environment and for objectives and subjects being under protection of the Natura 2000 network. This was important to pay due attention to the existence of the Natura 2000 sites in the planned area.
5. One of the most critical steps is elaboration of typology of impacts with clear definitions behind. From the point of view the function of the SEA, crucial issue was to define of significant negative impacts. In Polish case this process have been divided into following stages:
 - stage 1. – identification of potential significant impacts ,
 - stage 2. – analysis of expected significant impacts,
 - stage 3. – assessment of expected significant impacts,

Identification of the potential impacts was based on the available literature, knowledge of experts and the know-how of stakeholders. At this stage definition of significant impact has been agreed. Such impact has been described as negative (in comparison to the starting point) measurable

change of the state or function of elements of the environment caused directly or indirectly by activities of the entity/body making use of the environment. The significance of the impact has been assessed as a joint effort of the whole SEA team. This was the only way to ensure at least some objectivity of this category.

6. The analysis at this stage start to be complex. For their easier communication (SEA first of all is a communication process between interests) it is critical to use some tools for clear presentation of different impacts, their location and intensity. In Polish case different types of matrixes were elaborated for presentation of cumulative significant impacts of different types on conservation objectives subjects of protection, and integrity of Natura 2000 sites/areas and on all other components of the natural environment. The following tools have been used:
 - description matrixes,
 - calculation matrixes.

For each source of impact potential significant effects have been listed with concrete name of the sea basin/sea subarea (taken from the plan) and with calculation of the sea area and length of the coast line affected. This allowed for calculation of the share of the planned are affected positively, negatively or not affected at all by the impact from the analysed source.

An example of the description matrix for the selected impact source (i.e. coastal infrastructure) is given below.

	Source of impact	Potential effects	Provisions of the plan	Sea basins (numbers)	Length of the coastal line in km
	Coastal infrastructure	<ul style="list-style-type: none"> • destruction of sea bad and bottom habitats • diminishing water transparency, • changes in landscapes (both terrestrial and maritime) • development of periphyton 	not allowed	no	0
			allowed	02, 11, 15, 16, 17, 22	17, 38
			not regulated	01, 03-10, 12-14, 18-21, 22-30	58, 80
		Reduction of negative impact		no	no
		Lack of reduction of negative impact		all basins	76,18
		Not relevant		–	–

Calculation matrix have been used for calculation of the total areas affected by selected source of impact.

7. According to the SEA Directive all impacts should be classified as:
 - direct or indirect one,
 - short or medium or long-term or permanent or temporary one,
 - strong, medium or weak,
 - positive or negative.

This is not an easy task since the Directive gives no clear definition of those notions. Polish case offers unique definitions of the following notions that have been clarified and precisely defined in relation to sea processes: negative and positive effects, direct and indirect (secondary) effects, cumulative effects, short, medium and long-term effects permanent effects and-temporary effects.

8. Different types of impacts should be communicated to stakeholders in relation to the objects of impact (identified under step 4) This part of the work is critical since forms a core of stakeholder debate in case of cross-border impacts also debate with transnational stakeholders. It is of utmost importance to present the impacts in a clear and decent way. In Polish case as a communication tool a matrix of cumulative impacts (presented below) has been used.

	Sources of impact listed here							
Objects of impact listed here								
		Impacts described in the cells and classified according to step 7.						

Those findings served for formulation of the SEA conclusions regarding necessary changes in the plan (alternatives) in order to eliminate the most acute sources (by changing planning provisions) or alleviate or compensate their negative impacts on environment. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme have been proposed. In the final the measures envisaged concerning monitoring have been described.

9. For SEA success a vigorous stakeholder process is necessary. Stakeholders should be involved at the beginning (as a part of the plan preparation) for identification of different impacts and for discussing the cumulative matrixes. Such discussion should have an iterative character as a stakeholder learning process.

3. Information gaps

Title of good practice: Dealing with information gaps

Location of good practice: Poland

Short Summary:

This good practice illustrates that information gaps are different and each gap needs different measures in order to cope with the problem of lack of necessary information while preparing maritime spatial plans. It capitalises on Polish experience related to MSP based on such projects as PlanCoast and BaltSeaPlan.

Issue (importance of a good practice)

One of the main constraints in preparation of the maritime spatial plans is lack of relevant information necessary for wise allocation of space, protection of its unique values and conflict settlement. One of the MSP peculiarities is high costs of acquiring such information requiring on spot investigations in four dimensional sea space. Such costs usually are the function of the data accuracy. From the other hand insufficient information should not prevent preparation of maritime spatial plans. An alternative therefore would be development on the basis first come first served in many cases lacking wider strategic considerations. On top of that one should note growing demand from the side of developers to use sea space more intensively due to appearance of a new business opportunities (e.g. shale gas, renewable energy, international transmission infrastructure).

Lessons learned

1. Although information gaps in the planning process at the first glance look similar (lack of information) their overcoming requires fine tuned measures related to the nature of a given map. There are information gaps related to the stock-taking phase and those related to other phases of the planning process e.g. communication, stakeholder dialogue, monitoring and evaluation etc. Polish experience indicates that there are four main gaps related to the stock-taking i.e. state of knowledge (existence of data and evidence):
 - (A) lack of information – this issue has not been analyzed sufficiently (lack of knowledge);
 - (B) lack of spatial attribution of information – this issue has been analyzed but the spatial framework has been omitted (spatially irrelevant knowledge);
 - (C) disclosure gap – the issue has been analyzed sufficiently, but there is no incentive for sharing accurate information more broadly (hidden knowledge);
 - (D) temporal gap – the issue exists and can be analyzed in the present time-frame but its future development remains unclear (static knowledge).
- There are also two gaps related to the communication and stakeholder dialogue but affecting also quality of monitoring and evaluation:
- (E) communication deficiency gap – the existing cognitive artifacts/modalities (e.g., language) and information channels are unable to diffuse and communicate precisely produced and processed information and/or knowledge (e.g., due to its complexity). This gap can result from difference of the planning procedures and planning culture between countries or insufficient integration of different disciplines within the planning process (e.g. economics not integrated with ecology);
 - (F) institutional gap – lack of proper information within regulatory frameworks resulting from institutional deficiencies. The ultimate result of the institutional gap is the lack of the

necessary policies, regulations, and policy integration, i.e., lack of information that regulates real processes through the communication of the intentions and goals of regulatory bodies (lack of targets, objectives etc.).

2. For each gap there is a need for a different approach in order to continue the planning process. Some emergency solutions can be applied at a short notice but there is also a need for more coherent pan-Baltic approach to closing information gaps that will secure integrity of the planning process in a long run. The solutions tested by the Polish planning team to overcome those gaps and the long term suggestions for the future (for structural changes) are presented in the table below.

Gap	Short term solutions	Long term solutions
Lack of information	Modeling the marine environment (e.g. habitats) Precautionary measures – provisions in the plan spelling out the need for further research Request to prepare detailed plans before large scale investments TIA (or TIA like) procedures for other investments	Shaping EMODNET in line with the MSP needs as the joint action of the BSR countries Joint BSR research Agenda for MSP BSR agreement on the minimum scope inventories done in relation to localization of large scale investments
Lack of spatial attribution of information	Extracting expert knowledge via stakeholder process	Promotion of interdisciplinary research Concertated BSR research – e.g. BONUS BSR Agreement
Disclosure gap	Genuine stakeholder process	Awareness rising on benefits of maritime spatial planning
Temporal gap	Reserving some space for unknown future developmental purposes.	Introducing multi-year maritime programming as a rule Regular exchange of know-how and experience on maritime spatial plans of other countries Joint BSR vision on the use of the marine space
Communication deficiency gap	Interdisciplinary and transnational planning teams	Minimum common denominator on MSP methodology in the BSR Regular exchange of know-how and experience on maritime spatial plans of other countries Joint BSR vision on the use of the marine space Joint BSR work on methodology of valorisation of marine space
Institutional gap	Recommendations for development of the institutional system for MSP Examination of background reports relevant for MSP and draft legislation proposals (and their justifications)	Agreement on the comprehensive objectives or visions, targets, and goals regarding the use of marine space at national and international levels. Operationalization of the agreed targets in line with the MSP specificity Development supportive tools for decision making in MSP (as proposed under

		BONUS)
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4. BSR data model

Title of good practice: Creation of an integrated pan-Baltic data model for maritime spatial planning purposes

Location: BSH/Germany

Short Summary:

This good practice illustrates how to solve the problem of compatibility of the marine data in the Baltic Sea Region and how to foster better use of existing data for improving stakeholder dialogue and transnational understanding of the MSP process role and importance.

Efforts were taken to outline a framework for such harmonised datasets under the BaltSeaPlan project. This included definition of technical and content-related requirements, asking partners to send their respective data with the objective to compile common datasets on some of the most important activities and functions: offshore wind energy, pipelines, submarine cables, platforms, marine aggregates extraction locations and nature conservation areas. Other important activities such as shipping and fisheries were excluded as they are more difficult to link with space and/or data is difficult to access. Collected jointly data has been then processed to create common datasets – making it necessary to deal with inconsistencies and data and information gaps.

Another exercise is basin sea wide standardisation of visual approach for the human activities and protected areas to enable the MSP maps to become comparable across-borders.

Issue (importance of a good practice)

Data compatibility and joint ways of information visualization are of great importance for coherent sea basin maritime spatial planning. Preparation of cross-border maritime plans is difficult without compatible data and can lead to different type of misunderstanding. Cross-border consultation process and cross-border debates are hampered by different visualization techniques also. Compatible data helps in monitoring of development of the sea space also. Joint graphical design (use of joint legend and pictograms) can diminish still existing language barriers and encourage participation in debates the important stakeholders with limited language skills and knowledge on MSP methodology (e.g. fishermen, small and medium enterprises etc.).

Lessons learned

1. Standardization of information for MSP and ensuring their cross-border compatibility is impossible without prior agreement on pan-Baltic data model for maritime spatial planning. Such model should provide conceptual design of the databases used for data provisions. Model should be based on existing experience both at national and sea-basin level (e.g. HELCOM, EMODNET) and pay attention to national and international regulations (e.g. INSPIRE) and output requirements (MSFD, EU integrated maritime policy etc.).
2. Development of the information basis for MSP should be policy and not research driven. The starting point for model preparation should be inventory of information needed by maritime spatial planners in their daily work i.e. what should be analysed and presented on the maps. This would allow for identification of necessary outputs and MSP categories.

3. The important ingredients of the model are following: MSP categories, MSP data basis and data provider included in the basin-wide data system, quality check procedures, IT tools (database engines) and outputs. The data flows postulated within the model are presented in Fig. III.3.

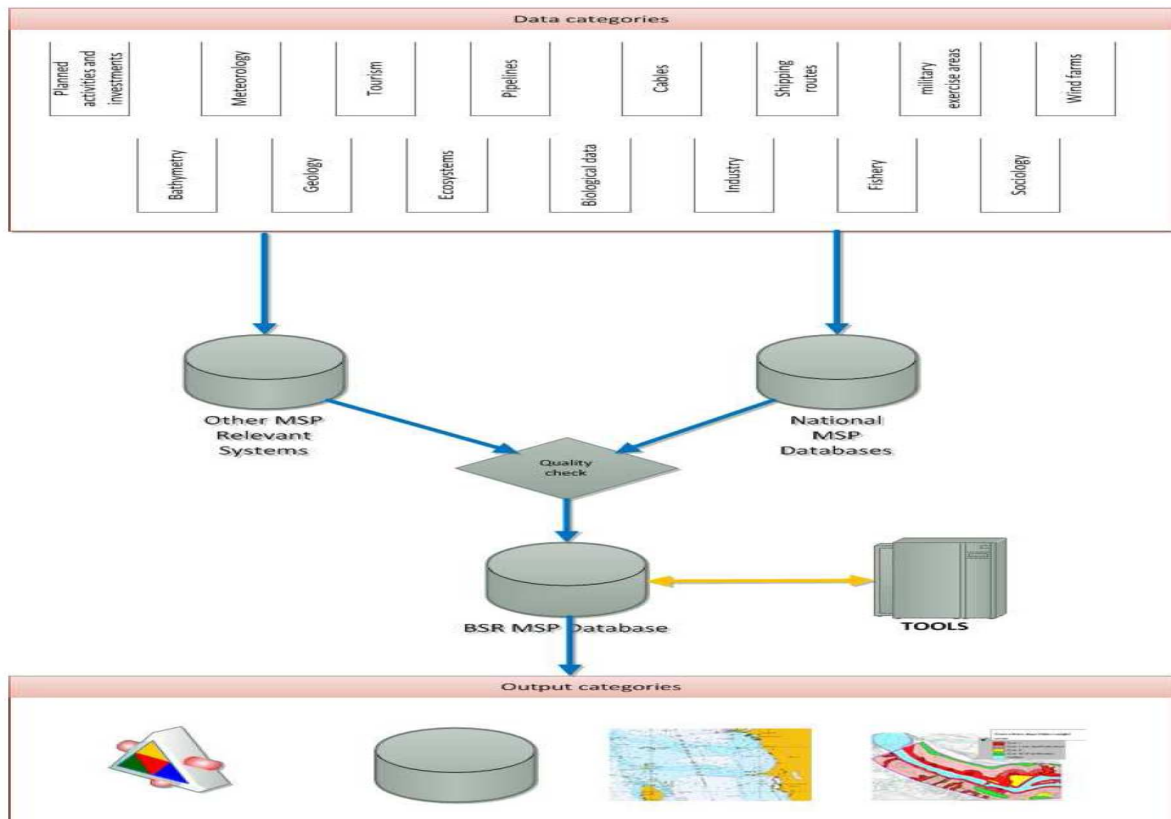


Fig. III.3 Data flow within the data base.

Source: BaltSeaPlan elaborated by Fidler, Wichorowski,

The main principle of the model is propagation of the requested data objects acquired from variety of sources and collected both by MSP responsible bodies and third party system to the sea basin MSP collection.

4. For success of the integrated database at the sea basin scale there are some technical prerequisites requiring transnational agreements and close collaboration of the bodies responsible. Among them the most important are following:
 - sea-basin agreement on one meta data format (such meta data format has been tested and proposed under BaltSeaplan project – cf. Fig.III.4)

INSPIRE Part			Example
B 1	Identification		
B 1.1	Resource Title	Title	Image2000 Product 1 (n2l) Multispectral
B 1.2	Resource	Description	IMAGE2000 product 1 individual orthorectified scenes. IMAGE2000 was produced from ETM+ Landsat 7 satellite data and provides, ...
B 1.3	Resource Type		Dataset
B 1.4	Resource Locator	Location of the Data	http://image2000.jrc.it
B 1.5.	Resource Unique Identifier		
	code		image2000_1_nl2_multi
	codeSpace	URL	http://image2000.jrc.it
B 1.7	Resource language*	Language abbreviation, code list* (i.e.: Danish - dan, English - eng, Estonian - est, Finnish - fin, German - ger, Latvian - lav, Lithuania - lit, Polish - pol, Swedish - swe)	eng
B 2	Classification of data and services		
B 2.1	Topic Category*	choose from GEMET Thesaurus	imageryBaseMapsEarthCover
B 3	Keyword		
B 3.1	Keyword Value	choose from GEMET Thesaurus	Land cover
B 3.2	Originating Controlled Vocabulary		
	title*	GEMET Thesaurus, INSPIRE themes	GEMET Thesaurus version 1.0
	reference date*		
	date		2001-01-01
	date type		publication
B 4	Geographic Location		
B 4.1	Bounding Box	define a rectangle containing the area covered by data	
	West	westBoundLongitude	+3,93
	East	eastBoundLongitude	+7,57
	North	northBoundLatitude	+52,1
	South	southBoundLatitude	+54,1
B 5	Temporal Reference		
B 5.1	Temporal extent		(for example: From 77-03-10T11:45:30 to 2005-01-15T09:10:00)
B 5.2	Date of publication		2000-01-01
B 6	Quality and validity		
B 6.1	Lineage	General explanation of the data producer's knowledge about the lineage/quality aspects of the dataset	Product 1 scenes correspond to the path/row of the Landsat orbit. All Image2000 product 1 scenes are ortho-corrected
B 6.2	Spatial Resolution		25.0
B 7			
B 7.1	Specification		
	title		INSPIRE Implementing rules laying down technical arrangements for the interoperability and harmonisation of orthoimagery
	publication date		2011-05-15
B 7.2	Degree	Information about the degree of conformity with the implementing rules provided in Art. 7-1. ISO 19115	true
B 8	Constraints related to access and use		
B 8.1	Condition applying to access and use	description of terms and conditions, including where applicable, the corresponding fees (i.e. link)	no conditions apply
B 8.2	Limitation on public access		no limitations
B 9	Responsible Organisation		
B 9.1.	Responsible party		
	organisation		Joint Research Centre
	e-mail		image2000@jrc.it
B 9.2	Responsible party role		custodian
B 10	Metadata		
B 10.1	Metadata point of contact		
	organisation		Joint Research Centre
	e-mail		image2000@jrc.it
B 10.2	Metadata date		2005-04-18
B 10.3	Metadata language	see B 1.5	eng

Fig. III.4. Metadata input template

Source: ibidem

- compatibility with GIS tools developed either by commercial companies or as a freeware (the most popular systems and libraries and GIS tools have been examined

as a part of good practice and strong points of such freeware as Grass and GDAL have been pointed out),

- integration of relevant spatial data from the existing networked data basis instead of replacing them,
 - application of modern external data storage destinations like the world data centres or other cloud like solutions to store the relevant raw data as back-up.
5. There are also some important procedural prerequisites for creation of the integrated data base at the sea basin scale. The most important are following actions:
- the first step should be to implement INSPIRE Directive in all coastal countries ensuring a kind of common denominator,
 - further issues concerning explicitly marine data should be specified on the basis of relevant themes listed in INSPIRE Annexes II and III and implemented into national legislation (covering technical requirements for metadata and data input formats and data exchange procedures),
 - data flows should be formalised at national level and a regularly updated coastal and maritime information infrastructure should be created that pulls together data from different sources and acts as the basis for spatial planning decisions,
 - the most desirable would be elaboration of a binding international law (part of EU Directive) regulating data exchange and access to MSP data, but as a starting point one can postulate a sea basin wide memorandum of understanding regulating data policy, data storage and exchange and dynamics of data actualization which can be joined voluntarily by new members.
 - countries should also agree on drawing together some data on the most acute spatial problems (e.g. infrastructure corridors).
6. Content wise it is important to:
- examine first the MSP validity of different models and model techniques and only then examine their demand for data and information,
 - strengthen alignment of SEA and MSP stock-taking phase as far as demand for data and information is concerned,
 - reach basin wide consensus on scales of different types of the MSP maps since those scales imply the minimum resolution of data on each level (different information should be visualised/used/required at different levels).
7. Pushing forward work on the integrated data base at the sea basin scale also requires a long term goal (vision) of the data and information collection, processing exchange and accessibility. The following long term goals in this field have been proposed under the BaltSeaPlan case:
- National data should be publicly available so that they can be used by all stakeholders for the MSP process. As far as data have been generated with public funding, they should be available free of charge in connected Baltic-wide databases.
 - A network of data networks should ensure data quality by agreeing joint standards and comparability of data at different scales. An BSR agreement should be reached on a baseline scale in order to map at Baltic Sea-wide level.
 - Data gaps (ecological, social, economic data) should be jointly identified and filled. The most important gaps concern in particular: human activities and sea uses, ecosystem services, information of lifecycles and demands of species, indicators for good environmental status, economic value of ecosystem benefits.

- A joint integrated information base should bring together data on uses, pressures and their impacts as well as environmental information and habitat maps.

5. Regional Strategy

Title of good practice: BaltSeaPlan Vision 2030

Location of good practice: BSR (BaltSeaPlan)

Short Summary:

The BaltSeaPlan Vision 2030 takes an integrated perspective of sea uses and the Baltic Sea ecosystem. It deals with spatial aspects, complementing existing visions and policies for the Baltic. Grounded in existing trends and policy objectives, it tries to anticipate future developments and changes. The Vision aims to provide more coherence and certainty to all users of Baltic Sea space. It is also there to secure all those processes that guarantee the well-being of the Baltic Sea as a living and healthy ecosystem. It is transnational, but linked to national MSP. It is part of a holistic approach to MSP across scales. It shows how MSP could ideally have been translated into practice by 2030.

Issue (importance of a good practice)

Maritime Spatial Planning has become a widely acknowledged and necessary tool for co-ordinating spatial use in the sea. It should serve the sustainable development of the Baltic Sea by balancing interests and by acknowledging the underlying natural processes and values in the sea.

If individual countries or sub-regions act and plan jointly as a macro-region, they can increase their influence on international economic, social and environmental trends and developments. As a result, they can become better prepared for the unexpected that may arise in a globalized world. The role of the BaltSeaPlan Vision 2030 is to help this process of joined-up forward thinking. Joint vision also helps in conflict mitigation at pan-Baltic level and in coordination of developmental efforts that require transnational co-operation. Therefore it is essential step to achieve an ambition of coherent MSP at the level of the BSR.

Lessons learned

1. There are two possible different types of transnational visions on MSP at sea basin level: vision of the maritime spatial planning process¹⁸ and vision of the state of the sea space in a long run. Both visions are different but the latter one is broader and requiring wider debate and agreements. In the Baltic case the vision tries to combine both elements. It has been strongly acknowledged that “how we see Baltic Sea space, and how we think it should be used for human activities, is crucial for developing general rules for MSP”.
2. Three are important prerequisites for the vision to become successful:
 - Taking an integrated perspective of sea uses and the Baltic Sea ecosystem (vision should not be biased by a single use).
 - Dealing with spatial aspects, complementing existing visions and policies for the sea basin (such as VASASAB, HELCOM etc.).
 - Being grounded in existing trends and policy objectives, trying to anticipate future developments and changes.
 - Trying to provide more coherence and certainty to all users of the sea basin sea space.
 - Being related to the well-being of the given sea as a living and healthy ecosystem.

¹⁸ cf. e.g. VASAB principles on MSP adopted in 2008

- Being transnational, but linked to national MSP as a part of a holistic approach to MSP across scales.

But the key prerequisite is striking a balance between the environment, the economy and the social sphere. On the Baltic case the corner stone of the visioning process was given by separate socio-cultural vision, economic vision and ecological vision that were merged into one vision of the healthy Baltic sea.

3. Development process matters. To fulfil the above listed prerequisites the vision should be developed by an international team of a broad range of different backgrounds and perspectives with practical experience in MSP and if possible including those legally responsible for the MSP in their countries.
4. The vision should be developed with concrete tasks in mind. It cannot substitute legal agreements and international conventions on sea space use nor transnational policies run at sea basin level (e.g. fishery policy). However, the vision can become a starting point for reformulating existing legal and decision-making frames if necessary. An MSP vision seems well suited to serve the following tasks:
 - The vision can make clear why forward-looking thinking is important and why it pays to take action now rather than later.
 - The vision can provide a holistic cross-sectoral view on issues that are often regarded separately.
 - The vision can help to communicate the benefit of the MSP.
 - The vision can be used to facilitate stakeholder dialogue.
 - The vision can help to achieve transnationality in MSP and cooperation between states on matters of sea use.
5. The vision should be general enough to stay valid with time passing. One of the options can be agreement on key principles for allocating sea space agreed by all stakeholders. In the Baltic case three principles of such nature have been proposed:
 - Sea basin thinking. It regards the sea basin as ONE planning space and ecosystem at all stages of the MSP process. It also has a temporal dimension, meaning that long-term implications are considered just as much as the short-term impacts of planning decisions.
 - Spatial efficiency: Sea space is understood as a valuable public good that must be used sparingly, both to minimize the impacts of sea uses on the wider scale and to keep back as much space as possible for future sea uses. Another guiding principle is that ecological functions must not be jeopardized, such as water exchange, currents and other functions essential for environmental services in the sea.
 - Connectivity thinking: It means focus on connections that exist to other areas or uses. Connectivity thinking is adapted to the specific topics. E.g. for the natural environment and for fish for example, connectivity means availability of . migration routes and blue corridors for sea species.
6. Although remaining general, the vision should be focused. Christmas tree vision is hardly appealing to anybody. In the Baltic case the following four topics have been chosen as a mean of vision concentration:
 - A healthy marine environment
 - A coherent sea basin energy policy
 - Safe, clean and efficient maritime transport
 - Sustainable fisheries and aquaculture.

For selecting those particular topics two important criteria have been applied:

- transnationality of topics – to what extent they need genuine sea basin co-operation and actions,
- importance of the topics for all coastal states – the topics listed above were chosen due to conviction that all coastal states will be affected by future developments in these topic areas due to the already known tendencies in transnational and national policies.

Objectives and targets have been set for these four topics. Baltic Sea space is allocated to each of these 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.

7. The vision should be implementable. Lack of implementation power turns vision into a shelf dust collector. In the Baltic case the following key elements for implementing MSP have been identified:
 - Data management and information as a key to success;
 - Maritime spatial plans as main implementation tools (vision identifies national and transnational prerequisites for establishment of MSP system);
 - The transnationalisation of the MSP process (adding transnational element to well known MSP planning cycles);
 - Transnational cross-border cooperation and governance (since MSP cooperation takes place at several levels: (i) the methodological level (agreeing on a joint vision, joint principles for MSP, joint objectives and targets, as well as common methods), (ii) the strategic level (cross-sectoral spatial planning), (iii) the operational/implementation level (project planning and implementation of transnational infra-structure, information and data exchange) - there is a need for different authorities and institutions to take on different shares of these tasks at the sea basin level – vision gives example of such division of labour).
8. The vision properly used can trigger important real sphere processes. In the Baltic case the good practice is in bringing up the vision to the policy making level via different important sea basin processes and co-operation networks such as HELCOM, VASAB, EU Integrated Maritime Policy, national strategies etc.

6. Conscious Inventory

Title of good practice: The Finnish Inventory Programme for the Underwater Marine Environment (VELMU)

Location of good practice: Finland (cf. Fig. III.5)

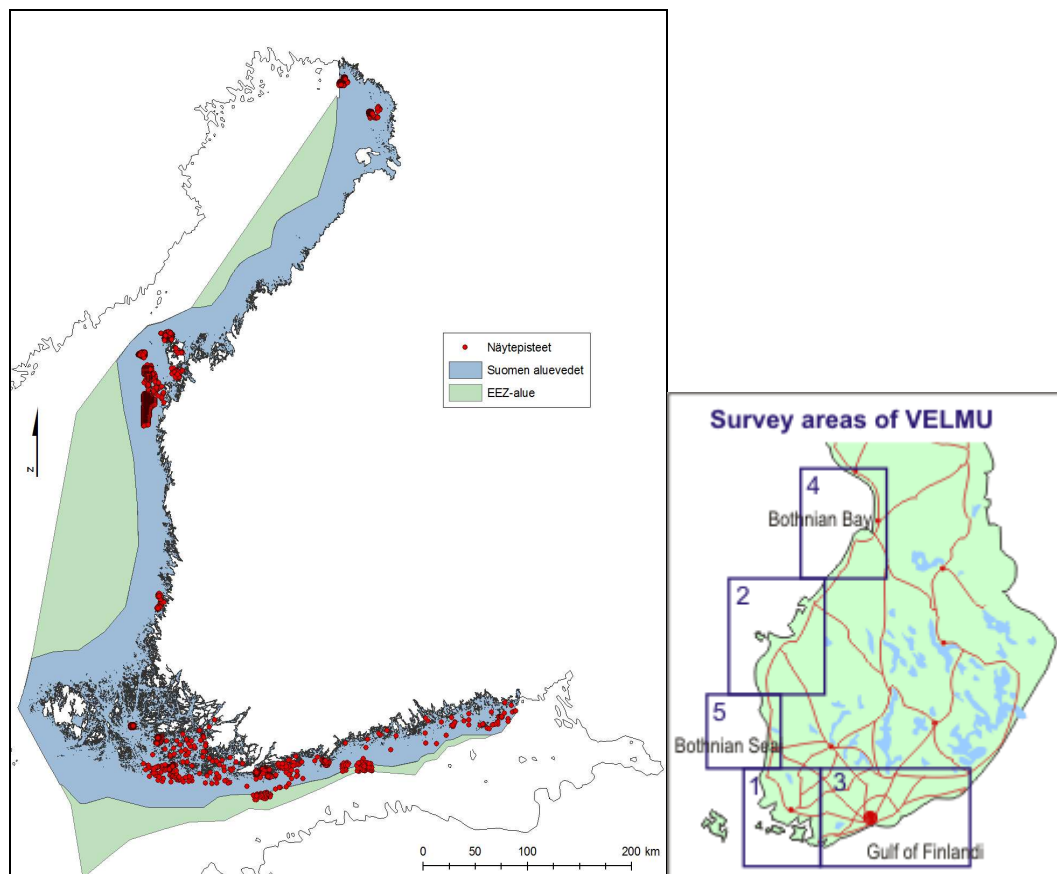


Fig. III.5. Survey areas of VELMU

Source: available at <http://www.ymparisto.fi/default.asp?node=14974&lan=EN> retrieved on November 04, 2011

Short Summary:

VELMU's objective is to survey marine habitats in Finnish waters, give an overview of species occurrence and develop a management system for data collected on the benthic marine environment. The Programme collects data on the diversity of underwater marine biotopes and species. It is an umbrella programme encompassing many local projects. The Ministry of Environment is responsible for the overall coordination. The inventories are being conducted in the Archipelago Sea, the Quark area, the Gulf of Finland, the Bothnian Bay and the Bothnian Sea during 2004-2014.

Issue (importance of a good practice)

Before it is possible to take measures to protect the environment it is necessary to gather adequate information on the distribution and composition of the underwater habitats. The VELMU programme is: 1) enhancing knowledge of the marine environment by producing an overview of the most important marine habitats and species in Finland; 2) collating existing data into a database; 3) promoting the exchange of information between different institutions and making the marine data

more easily available; 4) establishing a web-based resource for marine environment information, including a map service.

Under VELMU abiotic (geological and physical-chemical features) and biotic variables (species and habitats) are monitored. The research concern mainly the seabed and partly also the water column.

The information gathered under VELMU - programme will be of central importance both for the planning of nature conservation, the exploitation of natural resources and utilisation of the sea space in Finland. The acquired information will also be used for regional integrated coastal zone management plans that are drawn up for coastal zones within the European Union, and for environmental impact assessments. More information on valuable nature areas is also needed for planning oil and chemical combating and clean up.

The information gathered under VELMU will also be applied for reaching the objectives on the biodiversity and sustainable development of the Baltic region, described by European and regional directives and strategies.

VELMU is a co-operational programme between seven ministries (internal affairs, defence, education, communication, agriculture and forestry, trade and industry and environment). It is implemented in cooperation between many data producers and stakeholders.

Lessons learned

1. Location. The VELMU Programme began with the pilot stage of the Archipelago Sea in 2003, where the variation of underwater biotopes and species is the largest on Finnish coast. It provided good preconditions to develop and test inventory methods as well as the data management system. The inventories will be extended throughout Finland's sea area, including the EEZ.
2. Methods. VELMU surveys both abiotic and biotic elements of the marine environment. To get a complete picture a variety of methods are used – from scuba diving to remote sensing and modelling. Geological survey include echo sounding and bottom sampling. Biological inventories include such methods as e.g. underwater photography, sampling of fauna, dive transects or specific tools for fish sampling in shallow waters (like white plate, scoop or seine net).
3. GIS technology in use. VELMU uses the state-of-the-art GIS technology and statistical modelling methods to produce maps of the distribution of benthic species and habitats.
4. Different scaling. Gathered information is shown on a map in three different scales:
 - a. the common features of the sea areas (geological formations, biogeographical areas) are shown on a national level (scale: 1:1 000 000- 1:500 000) – it creates basis for more specific work;
 - b. underwater landscapes and biotopes are represented in a areal level (1:200 000-1:100 000);
 - c. more detailed information is shown on a local level (1:25 000-1:5000) for a very limited area, where the distribution and characteristics of specific habitats or spawning areas can be described.
5. Wide ranging cooperation. VELMU is implemented through cooperation between seven ministries. The Programme is coordinated by the Finnish Environment Institute (SYKE), other partners include the Geological Survey of Finland, the Finnish Game and Fishery Research Institute, Metsähallitus Natural Heritage Services, the Naval Research Institute, Centres for Economic Development, Transport and the Environment located in coastal areas and Abo Akademi. Some other universities, institutions and consulting companies are also involved in many aspects of VELMU Programme.

6. International commitments. VELMU Programme supports the implementation of number of international conventions like Convention on Biological Diversity, the fulfilment of obligations under EU legislation like EMSFD, HD, BD, WFD and achievement of HELCOM BSAP objectives.
7. Programme Organisation (cf. Fig. III.6).

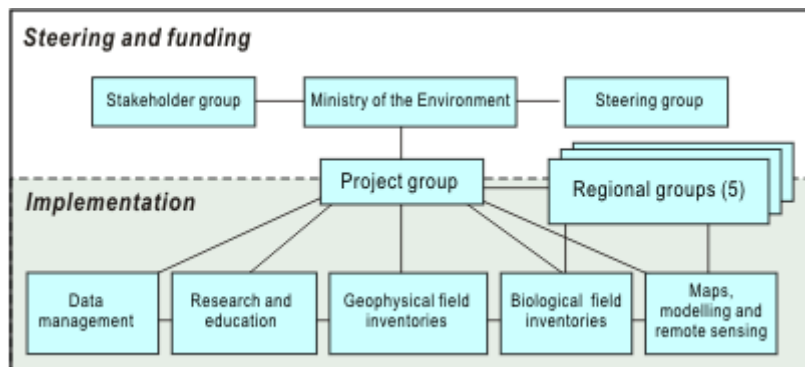


Fig. III.6. VELMU Programme Organisation

Source: available at <http://www.ymparisto.fi/default.asp?node=14973&lan=EN#a3> retrieved on November 05, 2011

The VELMU Programme is implemented in cooperation between many data producers and stakeholders. The Steering Group supervises and steers the implementation and it consists of the representatives of the seven Ministries involved.

The Stakeholder Group gathers the stakeholders with interests in marine biodiversity and intends to ensure communication between VELMU and various actors bring about a dialog between the data producers and end-users.

The Project Group is responsible for practical implementation of the Programme and oversees the work of 5 Working Groups. It is responsible for flow of information between the Groups and ensuring their complementarity.

Five Regional Groups bring together important regional stakeholders and data producers. Each Group is responsible for identifying special features of its area and pressures as well as for the prioritisation of areas for mapping.

8. Umbrella Programme. VELMU encompasses many local inventory projects like e.g.:
 - BalMar (Baltic Marine Biotope Classification System)
 - MERVI (The Quark area underwater species inventory)
 - BIOGEO (Links between marine key biotopes and specific geological features: pilot survey of macrophytes in sublittoral moraine areas)